# **GAO ENERGY DIGEST**

A BIBLIOGRAPHY ISSUED BY THE COMPTROLLER GENERAL OF THE UNITED STATES

SEPTEMBER 1977



U.S. GENERAL ACCOUNTING OFFICE WASHINGTON, D.C. 20548

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# Contents

Citation Section	PAG
How Do Federal Efforts Affect Energy Conservation Actions?	
What Are the Problems and Potential Solutions Associated with Making Nuclear Fission a Substantial Energy Source?	;
What Will Be the Role of Fossil Fuels in Meeting Future Energy Needs?	10
How Do Financial Incentives, Tax Policies, and Regulatory Policies Affect Energy Supply Actions?	22
How Can the Executive Branch Organization and Processes for Dealing with Energy Problems Be Improved?	38
What Are the Prospects for Transition to Essentially Renewable Energy Resources (Geothermal, Solar, Fusion)?	4
Is the Federal Government Wisely Exercising Trusteeship over Energy Sources on Federal Lands?	51
Do our Domestic and International Energy Policies Adequately Reflect the Domestic and International Energy Situations?	50
Appendix Section	
APPENDIX 1	
Federal Program Evaluations on Energy	6
APPENDIX 2 Requirements for Recurring Reports to the Congress on Energy APPENDIX 3	6
Federal Information Sources and Systems on Energy	7.
APPENDIX 4 Mejor Energy Legislation	11.
Index Section	
Subject Index	11
Agency/Organization Index	
Law/Authority Index	
Congressional Index	20

# Introduction

The Energy Digest, the first in a series of planned topical digests, brings together all of the available universitized documents on energy-related matters that GAO has issued from July 1972 through March 1977. For the most part, this publication was derived from computatived GAO data bases.

Designed to serve as a desk reference, the Energy Digest contains over 200 audit reports, special studies, letters, speches, and testimory. Topics covered include energy conservation, nuclear fusion, forsil fusis, Federal financial incentives, regulatory matters, executive branch energy organization and decisionnessing, remembel resources, energy sources on Enderal lands, and cornests and international energy polidies. Also Included in the appendices are pertinent references from GAO's Congressional Sourcebook Series.

### HOW TO USE THE ENERGY DIGEST

The Digest is organized into three sections: a CITATION section, an APPENDIX section, and an INDEX section.

# Citation Section

The CITATION section consists of trief descriptions of the documents, arranged under broad abject estagories for easy browsing. See the Table of Contents for a lating of the subject consignists. Among called the incorporate informative abstracts. Some or all of the following information is contained in each callions: necession number, title, document number, date, appeared number, title, advanced number, and the properties of the properties

### Appendix Section

This sectioh contains four appendices, Appendices 1.3 were derived from the machine-readable data bases developed by GAO's Program Analysis Division for the Congressional Sourcebook Series, Appendix 4 was compiled by GAO's Energy and Minerals Division. All Items in each of the appendices are in sequential accession number order. The four appendices are described below.

- Federal Program Evaluations on Energy. Contains executive agency energy program evaluation reports, arranged alphabetically by title.
- (2) Requirements for Recurring Reports to the Congress on Energy. Contains bibliographic citations of energy reports submitted to the Congress, ananged by agency. Both required reports and those would never be Paderal dearmants and searcies are included.
- (3) Federal Information Sources and Systems on Energy. Lists by agency Federal energy Information sources and systems. A contact and telephone number are given for each entry.
  (4) Motor Energy Legislation, Includes abstracts of stantineant energy legislation enected through the

# 94th Congress

Index Section
The INDEX section is comprised of four separate indexes, enabling the user to search for information
but any one or combination of the following points:

- (1) Subject Index
- (2) Agency/Organization Index
- (Includes both Federal agencies and nongovernmental corporate bodies)
- (3) Lew/Authority Index (Includes entities under Public Law names and numbers, U.S. Statutes-at-Large references, U.S. Cockereference. House and Senate bill names and numbers, and other statutory authorities)
- (4) Congressional Index (Includes entities under relevant congressional committees/agencies and individual Representa-
  - (Includes entities under relevant congressional committees/agencies and individual Representatives and Senators to whom documents are addressed)

### HOW TO OBTAIN DOCUMENTS

Please order documents listed in the CITATION section by their accession numbers. All such documents are available on request from the following unit:

Distribution Section U.S. General Accounting Office

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Documents and information cited in Appendices 1-3 are not stocked at the General Accounting Office, Contact the originating agency indicated,

Public Laws cited in Appendix 4 may be found in the U.S. Code or the Statutes-at-Large. If the laws have not been codified, copies may be obtained from:

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### SAMPLE ENTRY



#### HOW DO SEDERAL EFFORTS AFFECT ENERGY CONSERVATION ACTIONS?

[Dust Feel Program], B-114807, May 31, 1973, 2 pp.

Resort to Arthur F. Sampson, Acting Administrator, General Services Administration; by J. K. Fasick, Director, Logistics and Com-

Organization Concerned: Federal Supply Service.

Weakserns were found in the menasoment and control of the Dual Fuel program, an experimental effort to reduce automobile ongine emissions by converting vehicles to use both natural gas and gasoline, which is administered by the Federal Supply Service of the General Services Administration (GSA). Findings/Conclusions: On the bass of initial results from tests of 12 converted vehicles which showed reductions in emission and operating costs, over \$2 million was authorized to convert and test 1,400 additional vehicles. of which about 1,000 were actually converted. Only limited data were gathered and analyzed. The data were not necessitated primarily because GSA did not insure that the vehicles would be run on astural ass. Most operators continued to use assoline: others used natural sas less than one third of the time. In planning for this expanded test. GSA did not adequately consider the control needed over vehicles being tested, since most oars were assigned to other agencies, and fueling facilities were limited. A smaller, more closely controlled fleet under realistic fuel servicing conditions could have produced more useful data, (DJM)

Energy Conservation in Federal Office Buildings in Cultivrala). B-176205, Sentember 12, 1973, 4 pp. Resort to Arthur F. Sampson, Administrator, General Services Administration; by Robert G. Rothwell (for Fred J. Shafer, Director, Logistics and Communications Div.).

Substantial improvement could be made in energy conservation in General Services Administration operated Federal office buildings in California. Findings/Conclusions: The major energy consuming operations in centrally air conditioned buildings were illumination. air bandling, cooling, and heating. Utility costs per square foot varied by more than a factor of two for buildings in the same class and climate. While such things as 24-hour operation and opennuter soulpment explained some of the higher costs, the chief reason was ineffective building operations. Examples cited include cooling buildings in winter, heating in summer, around the clock operation for a 5% nighttime occupancy, ventilation of unoccupied? buildings, and overillumination, (DJM)

West in Which Department of Housing and Urban Development Can Promote Energy Conservation). B-114860. January 3, 1974. 8 pp. Report to Secretary, Department of Housing and Urban Development; by Henry Eschwege, Director, Resources and Boonomic Development Div.

The Department of Housing and Urban Development's (HIID) minimum property standards for achieving maximum energy conservation in new single-family homes could be strengthened, and thermal standards should be formulated for existing single family homes. Findings/Conclusions: HUD minimum property standards for thermal insulation, also used by the Department of Agriculture and the Veterans Administration and widely influential in the private construction industry, are too week. Significant energy savings would result if thermal standards similar to those established for multifamily dwellings were extended to single-family benes. For example, in the Washington area, research reveals that a 32% saving would be achieved with greater insulation. Recommendations: Curcent thermal standards for new single-family homes should be revised to equal the multifamily standards. Similarly, thermal standards for existing housing to be insured under Federal geograms should be ostablished and should include criteria for caulking and weatherstrinelnz. (DJM)

| Federal Efforts to Conserve Fire! in the Movement of Men and Materistel, B-178205, March 29, 1974, 10 pp. Reser to William R. Simon, Administrator, Foderal Energy Administration; by Phillip S. Hughes, Assistant Comptroller General.

Poleral efforts to conserve fuel in the movement of men and materials affect the Government's shifty to provide leadership in fire! conservation efforts. Findings/Conclusions Concion efforts are being made to conserve fuel, but certain measurement aspects of the conservation program sequire attention or improvement. These aspects concern the adequacy of the data used to measure the success of conservation actions, the information aystem for collecting this data, the role of the individual agencies' energy conservation officers, and the efforts to reduce motor vehicle feel consumption. A number of deficiencies in data supplied by the agencies likustrate the need to develop adequate information systems to quantify fuel usage to its volume can be known and the effect of various conservation estions can be measured. Instructions have been issued to reduce gasoline consumption of Government vehicles, but continuing attention is needed to ensure that they are implemented in netual practice. Recommendations: The Federal Buergy Administration should issue guidelines for the development of energy-use information systerms and monitor agency progress. The role of agency energy conservation officers should be broadened. Motor vehicles-their numbers, size, and gas consumption-need continuing attention. (DIM)

[Energy Efficiency Ratios of Window Air-Conditioners], B-132396. May 28, 1974, 3 pp. + enclosure (1 pp.). Report to Arthur F. Sampson, Administrator, General Services Administration; by Fred J. Shefer, Director, Logisties and Communications Div.

Organization Concerned: Federal Supply Service.

Window air-conditioning models available from manufacturing must meet General Services Administration (GSA)-specified minimum energy officiency ratios for purchase by Pederal agencies. Findings/Conclusions: While energy-efficient air-conditioners cost more initially, the cost is more than offset by the savings in electricity over their useful life. Government agencies bought about 2,660 less officient units in the past few years. Had more officient units been procured, the Government would have saved \$236,000 over the 12-year life eyels, figured on very conservative electricity costs. The Pederal Supply Service (PSS) has already revised its procurement specifications with this in mind. Recommendations: The PSS should consider whether minimum standards should be raised for other major energy-using products now being nurchased by the Governament. (DJM)

[Euerge, Conservation Practices Encouraged by States], B-178205. Appetet 15, 1974, 11 pp. Report to John C. Sawhill, Administrator, Federal Energy Adminis-

tration; by Monte Canfield, Jr., Director, Office of Energy and Specist Projects.

#### Organization Concerned: Federal Power Commission. Authorities P.L. 93-275. F.P.C. Order 495.

Several problems were identified in a survey of the energy conservision practices being encouraged by State utility commissions and public ptilities. Fledings/Conclusions These problems involve the need for (1) evaluation of the effectiveness of existing or plenned correy conservation practices of utilities: (2) additional authority for State utility commissions to require or promote energy conservation practices; and (3) intensification and coordination of the Federal effort In addition to voluntary efforts by the public, several other conservation actions were being taken by public utilities and commissions involving race-structure changes and the installation of energysaving devices. A number of State regulatory agencies do not consider conservation their responsibility or lack authority to regulate utilities. Recommendations: The Office of Conservation and Energy should increase its efforts to evaluate and advocate energy conservation practices by utilities, provide technical assistance to utilities and regulatory agencies in setting standards for evaluating results of conservation, and advocate legislation to strengthen the authority of State regulatory agencies. All such efforts should be coordinated with the Federal Power Commission. (DJM)

How Federal Agencies Can Conserve Utilities and Reduce their Cast. B-178205, Sentember 17, 1974, 40 pp. + 7 appendices (16 pm.). Resert to Secretary, Department of Defense: Administrator, Genent Services Administration; by Fred J. Shafer, Director, Louistics end Communications Div.

### Organization Concerned: Federal Energy Administration.

Responsibility for utility management in Federal Government facilities rests mainly with the General Services Administration (GSA) and the Department of Defense (DOD); energy assure is monitored by the Office of Energy Conservation (OEC), Federal Farray Administration (FEA), Findings/Conclusions: The OEC reported an overall reduction of 23% and a reduction of 11% in escray used in building and facility operations during the first half of FY 1974. Of 19 installations reviewed by GAO, 12 had no utility conservation and management plans, and conservation was being given insufficient attention at the installation level. Although there was an acceleration of energy-related activity after April 1973, planning in building design and construction needs improvement. Also, irstallations did not have the necessary information for making the most economic selection in utility procurement, and lacked trained personnel with expertise in the utility area. Since completion of GAO

fieldwork, energy guidelines have been issued by FBA and OSA. Recommendations: GSA, in coordination with DOD, FEA, and, where necessary, the Office of Management and Budget, should: (1) consider using utility rate consultants ustil in-house expertise has been developed: (2) provide and train personnel for managing utilities effectively; and (3) advise Federal sgencies to disseminate informetion on utility management within their organizations. (HTW)

[Energy Conservation Program of Five Government Contractors). B-178205, October 29, 1974, 7 sq. Report to James R. Schlesinger, Secretary, Department of Defense; by Richard W. Gutmann, Director, Procurement and Systems Acquisition Div.

A survey of energy conservation programs of five Government contractors indicated that the contractors were taking some actions to conserve energy. The Department of Defense (DOD) has also taken some stems to have contractors establish energy conservation programs. Findings/Conclusions: The need for greater commitment toward conservation by contractors was evident from the orgenitation and personnel assigned to some of the programs. Capital expenditures for conservation projects had to be recovered through savings in a short time, and there was a lack of baseline data on energy use that would provide a basis for planning and setting goals. For these contractors to achieve energy reductions, the DOD and other agencies will have to become more directly involved in contervation and improve and coordinate their actions to achieve max-Imum benefits. Recommendations: A formal Government-wide energy conservation policy should be developed for contractors, and the responsible Federal spendes should coordinate their actions with respect to monitoring and following up on the contractors' implementation of programs, (DJM)

[Efforts to Encourage Conservation in the Private Sector]. B-178205. tration: by Monte Canfield, Jr., Director, Office of Special Programs.

The Federal Energy Administration (FEA) should expend its leadership role within the Federal Government to encourage participation by all agencies and departments in identifying actions that encourage and effect energy conservation in the private sector. Fin-dians/Conclusion: The FEA and several departments surveyed implemented extensive promotional and educational energy conservation programs. However, there were inconsistent and unsystematic efforts emong departments, and some had done relatively little. This indicated the need for an overall plan designed to marshall the resources of the Federal Government to effect changes in laws affecting private energy use. Considerable benefit could come from further improving FEA's interagency coordination and guidence in identifying specific energy conservation programs that will significantly save energy in the private sector. Some Federal officials believed that the problem of obtaining the resources needed to evaluate and implement conservation measures could be alleviated by FEA leadership. Recommendations: FEA must develop and coordinate a commentensive Federal effort to expluste and, where necessary, change the many Federal laws, regulations, and policies which touch on private energy use; and provide guidelines to other fiederal bodies setting forth their roles and responsibilities. (DJM)

#### [Federal Efforts to Conserve Energy], B-178205. November 14, 1974. 4 pp. + enclosure (2 pp.). Reser to Rep. Henry S. Reues, Chairman, House Committee on Government Operations: Conservation, Energy and Natural Resources Subcommittee; by Elmer B. Staats, Comptroller General.

Organization Concarned: Federal Energy Administration. Congressional Ralayancas House Committee on Government Operations: Conservation, Energy and Natural Resources Subcommittee.

A 1974 report on Federal efforts to conserve energy recommended that: (1) the Administrator of the Pederal Energy Administration (FEA) issue guidelines for Pederal agencies to use in developing energy-use information systems; and (2) attention be paid to instructions involving reductions in motor vehicle fuel consumption. Findings/Conclusions: Federal efforts to conserve energy have been only pertially successful. The FEA has not issued the type. of guidelites recommended by OAO pertaining to the development of energy-use information systems and their monitoring. FBA has issued a memorandum on the responsibilities of energy conservation officers. Instructions for the purchase of compact vehicles in lieu of crestize vehicles and driving fewer miles have had some affect. The

instructions provided for exemptions to mileage reduction, but only

2 out of a total of 30 requests for exemptions were approved. The milesge reduction requirement has been lowered from 20% to 15%. (DJM)

#### 011

[The Energy Impact of Moving Department of Defense Activities from the Military Ocean Terminal, Brooklyn, New York, to Bayonne, New Jersey]. LCD-74-353; B-178205. December 31, 1974. 4 pp. + enclosucce (3 pm.) Report to Rop. Hugh L. Carey; by Elmer B. Staats, Comptroller

General Organization Concerned: Department of Defense: Department of

the Army: Department of the Navy.

Congressional Ralayaness Res. Hugh L. Carcy. The Army estimated the changes in energy consumption resulting from the move of Department of Defense activities at the Millitary Ocean Terminal, Brooklyn, New York, to Bayonne, New Jersey, and GAO made estimates from the information provided. Findings/Conclusions: Army estimates show savings of from 1.6 to 2.2 million gallons of heating oil annually regulting mainly from the heat's being turned off in the Brooklyn space, and the Bayonne space's being either fully heated or being heated to 55 degrees. The savings in heating-oil consumption will be partly offset by an increased gaseline requirement of about 196,500 gallous annually by commuting employees. There will be a net increase of about \$0,000 kilowatt-hours of electricity consumption assually. The total costs of moving the Army activities are expected to be \$4.87 million. The Army expects savings of about \$2.3 million a year as the result of eliminating 147 personnel associated with base operation functions at Brooklyn and reducing overall fuel requirements. The Navy does not expect any savings from the move. Moving the Bayonne activities to Brooklyn instead of the reverse does not senear feasible be-

at Brooklyn, (OM)

couse of the lack of space and poorer layout and condition of facilities The Desertment of Defense's Conservation of Petroloum), LCD-75-430; B-178205. February 24, 1975. 10 pp. + enclosures (5 pp.). Report to Son, John C. Stennis, Chairman, Stnate Committee on Armed Services; by Elmer B. Staats, Comptroller General.

Organization Concerned: Department of Defense; Department of the Navy; Department of the Army; Department of the Air Force, Congrassional Relevance: Senate Committee on Armed Services.

During 1974, the Department of Defense (DOD) used 185.7 million barrels of petroleum fuels, about 3% of the national consumption. DOD expected to use 203.7 million barrels in fiscal year 1975 shout 3.6% of national openimetics. Findings/Conducious DOD established the following organizations to deal with energy matters: a Defense Facrey Task Group to review energy-colated problems and recommend solutions; a Defense Energy Policy Council to deveion broad energy solloy guidalines; and a Defense Roscay Action Group to help coordinate the implementation of the Council's guidelines and to provide a forum for exchanging information. These is also a Director for Beergy whose responsibilities include: developing a netroleum logistics notice; assisting in the development of DOD energy budgets; serving as DOD's principal point of contact on all energy matters and on implementation of energy policy; managing DOD's energy conservation program; monitoring the implementation of the task group's recommendations; and developing a Defense energy information system. During fiscal year 1974 DOD showed a 29% reduction in petrojeum usage from the previous year, largely due to a reduction in flying hours and ship-steaming hours and other actions to conserve aircraft and ahip fuel. Rising fuel prices have however, put DOD in the position of spending more while using less.

Recommendations: An additional way to promote energy constrvation in DOD might be to give residents of military housing an allowance for energy costs and charge them for energy actually consumed. DOD should continue to keep its conservation programs

alive and active. (OM)

012 Unine Solid Weste to Conserve Resources and to Create Exercis

RED-75-326; B-166506. Pebruary 27, 1975. 62 pp. + 3 appendices Report to the Congress; by Bimer B. Stasts, Comptroller General.

Organization Concerned: Energy Research and Development Administration. Congressional Ralevance: Congress

Authority: Resource Recovery Act of 1970 (42 U.S.C. 3251), Solid Waste Disposal Act of 1965 (42 U.S.C. 3251). P.L. 93-14. P.L.

Resource recovery can help solve problems of energy consumption and conservation, but most importantly of solid waste disposal. Solid waste threatens to become a severe environmental problem in terms of both cost and public concern. Findings/Conclusions: Though the Environmental Protection Agency (EPA) has been slow in implementing the resource recovery provisions of the Resource Recovery Act of 1970, improvement has been made, particularly with respect to the required studies and investigations. The key to resource recovery is economics. The Government can take several actions to make secondary materials more attractive for recovery such as product controls, and Pederal procurement, tax, and froithi rate policies to provide incentives to promote recovery. Develorment of systems that recover metals and glass from solid waste and convert the remainder into energy needs to be encouraged. About 80% of municipal waste can be burned to generate energy. Several demonstration projects for resource recevery have been funded by the Pederal Government. Recommendations EPA should provide expanded Federal espistance to States and local communities to solve their solid waste problems via resource recovery systems in such wave as: determining whether a system would be appropriate for a particular community, selecting a particular system, obtaining markets for the system's products, getting a number of communities to perticipate lointly in a system, and providing assistance in the initial operating phase of a system. (DJM

Bulk Fusts Need To Be Better Managed. LCD-74-444; B-163923. April 8, 1975. 21 pp. + appendices (6 pp.) Report to the Congress; by Elmer B. Statts, Comptroller General.

Organization Concerned: Department of Defense; Department of Defense: Defense Fuel Supply Center, Alexandria, VA. Congressional Rajevance: Congress

Much of the Department of Defense's (DOD's) total fuel storage requirements are not supported by an investory of fuel because fuel storage is unavailable. Findings/Conclusion: DOD has been unable to lease additional storage and has no plans to construct storage. The military services did not always furnish contractor-operated terminals with continuously plans for delivering fuel during an emergency. Some estimates of fuel needs for U.S. military forces in the United States and overseas are excessive because DOD's formula for computing requirements uses factors such as predetermined levels rather than levels based on usage and provides for increases in requirements to include quantities in pipelines and storage tank bottoms. Fuel requirements in the United States and the Pacific Theatre are corretated by at least 2.6 million barrels. Recause the acryless have final authority over which product should be stored in their tanks, the Defense Fuel Supply Center has not been able to obtain full use of storage, meet the services' fuel requirements, or improve overall storage management. Recommendations: The services should revaluate war reserve requirements and implement a plan to provide adequate storage capacity. The Secretary should give the Defense Fuel Supply Center more authority over the assignment of products to storage facilities. The Defense Fool Supply Center should: take steps to insure timely preparation and distribution of the "Inventory Management Flon"; change its procedure for computing

peacetime operating stockage objectives; and review the use of Government-owned storage to determine the need for lessed storage, develop specific plans for covering current lacks in fuel quantities. and coordinate the funding for the fuel and storage capability. The Navy should count usable stocks in tank bottoms and pipelines in computing its war reserve requirements. (Author/QM)

# 015

Energy Conservation. April 16, 1975. 12 pp. + 2 appendices (4 pp.). Turingay before the Senate Committee on Government Operations: by Phillip 3, Hughes, Assistant Comptroller General.

Congressional Relevances Energy Research and Development Administration: Pederal Energy Administration.

Energy conservation must be a key element of a national energy policy which will significantly after recent patterns of energy consumption. A variety of conservation measures will have to be taken. In the traesportation area, changes in the Nation's driving habits can be brought about by rebates for energy efficient cars, mandatory fuel atandards for new cars, a sus tax, and a sus suzzler tax on large inefficient automobiles. Tax credits can be extended for home and business insulation and for energy efficient industrial equipment. Thermal performance standards for homes should be upgraded. Import greates can belo reduce oil imports by two million barrels over a 2-3 year period. A new Department of Energy and National Resources consisting of the key energy-related agencies of Government should be established. The Government can play two conservation roles-as a consumer itself, and by laws, programs, and policies in the private sector. A formal Government-wide mandatory contractor conservation policy should be developed with monitoring and follower. State utility commissions and public utilities could be provided information and assistance in evaluating conservation practices. (DJM)

Review of the Progress and Problems of Resource Recovery Since the Passage of the Resource Recovery Act of 1970. April 16, 1975. 11 pp. Testimony before the House Committee on Interstate and Foreign Commerce: Transportation and Commerce Subcommittee; by Henry Eschwege, Director, Resources and Economic Davelorment Div.

Organization Concerned: Environmental Protection Agency. Congressional Relayonea: House Committee on Interstate and Foreign Commerce: Transportation and Commerce Subcommittee. Authority: Resource Recovery Act of 1970. Solid Waste Disposal Act of 1965, H.R. 5487 (94th Cong.).

The Resource Recovery Act of 1970 redirected waste programs from disposal to recycling. Under this tegislation, the Environmental Protection Agency (EPA) awarded grants for demonstration prolects, but noue had been completed. Issues noted relating to the teanomies of resource recovery were: (1) discrimination in freight rates in favor of virgin over recovered materials; (2) Federal procurement policy toward products containing recovered materials; and (3) taxes which favor virgin materials. Another area recommended for consideration was the use of solid waste as every by combustion or conversion. Enhancement of EPA assistance to State and local governments was recommended through determination of the appropriateness of resource receivery systems, obtaining markets for products, joint participation of communities, and assistance in initial phases. Although analysis of H.R. 5487 was not complete, it was felt that provisions for the Comptroller General to participate in arbitration between propuring agrecies and suppliers should be deleted and provisions should be developed for GAO soctss to records. (HTW)

# 017

[Comparison of Energy Un in Five Federal Office Buildings]. LCD-75-341; B-178205, April 18, 1975, 2 pp. + enclosures (20 Repart to Rep. Charles A. Vanik; by Robert G. Rothwell (for Fred J. Shafer, Director, Logistics and Communications Div.).

Organization Concerned: General Services Administration. Congressional Relevance: Rep. Charles A. Vanik.

Energy consumption and post information for five Federal Office Buildings was obtained from utility bills and General Services Administration records the Anthony J. Celebrezze Federal Building in Cleveland, Ohio; the John F. Kennedy Pederal Building in Boston, Massachusetts; the Federal Building in Kansas City, Missouri; the Pederal Building in Los Angeles, California; and Federal Building 10A in Washington, D.C. Findings/Conclusions: Energy use in the five buildings, principally electricity and steam, was substantially lower in 1974 (although the cost was in some cases higher) than in the same months of 1972. Electricity use quantity was 16% under and out was 32% above the 1972 figures for the Cleveland building, while steam/eas quantity was 40% lower and cost was 15% lower. In the Boston building the quantity of electricity use was 24% below the 1972 figure and the cost was 38% above it. The quantity of steam/gas use was 22% below and the cost of the steam/gas was 78% over the 1972 figures in that building. The Kansas City building showed a reduction in all quantity and cost figures: a 25% quantity and 10% cost reduction in electricity use in 1974 and a 36% quantity and 12% use reduction in steam/gas use. Electricity use quantity was 40% below and cost was 62% above the 1972 figures for the Los Angeles building, while steam/gas usage was 79% and 70% lower for usage and cost. The Washington, D.C., building showed a 37% reduction

# osst. (Author/QM)

Improvements Needed in Controls and Accounting for Ground Vehicle Petrofeam. LCD-75-218; B-163925. May 20, 1975. 2 pp. + appendioes (15 pc.). Report to Secretary, Department of Defense; by Fred J. Shafer, Director, Logistics and Communications Div.

and a 42% increase in electricity are quantity and cost, respectively

and a 3% reduction and 6% increase in steam/gas usage quantity and

Occomization Concerned: Department of the Navy: Department of the Army: Department of the Air Force.

Unaccounted-for petroleum shortages of 114,000 gallons were found at three out of four audited Army installations, and petroleum issues totaling 2.3 million gallons could not be validated because the records and/or documentations were not available. Findings/Conclusions: These conditions occurred because: the prescribed system did not promptly identify shortages, practices did not conform to prescribed accounting procedures; controls did not adequately insure that issues were made only for authorized purposes; and, in some instances, dispensing and storage facilities did not function properly or were antiquated and inadequate. In contrast to the poor management at most of the Army activities, management controls and acocuntability practices were generally good at Fort Bragg. The audited Navy and Air Force activities managed and followed procedures which provided much better control over and accountability for petroleum. Recommendations The Secretary of Defense shouldstudy the fessibility of establishing and implementing a uniform DOD awatem for actroleum management natterned after the Air Perce and Navy systems; direct the Secretary of the Army to take immediate action to enforce the Army's existing procedures for control over and accountability for petroleum gending the results of the Secretary of Defense's study; and direct the Secretary of the Avery to have the Army Audit Agency perform an Army wide audit of the management of petroleum used by ground vehicles to insure that the actions are implemented promptly and properly. If the audit indicates possible improprieties in the handling of petroleum, the Secretary of the Army should direct the Army's Criminal Investigation Command to determine whether any criminal actions were involved. (Author/OM)

#### 110

National Standards Needed for Residential Energy Conservation. RED-75-377; B-178205. June 20, 1975. 28 pp. + appendices. Report to the Congress; by Elmer B. Strats, Comptroller General.

Organization Concerned: Department of Housing and Urban Develogment: Energy Research and Development Administration

Congressionel Relevance: Congress.

Authoritys Energy Reorganization Act of 1974 (P.L. 93-438) Solar Heating and Cooling Demonstration Act of 1974 (P.L. 93-409).

The residential sector consumes over 19% of the total energy used in the United States. A national program is needed to achieve maximum energy efficiency in the residential sector. Findings/Conclusions: Most existing housing units are in need of thermal improvements, and new construction is not concentrating on energy efficiency. According to estimates, energy conservation measures could result in savings of 30% and 60% for old and new buildings. respectively. Ressons for failure to utilize such measures include emphasis on initial costs, technological problems, limited use of Department of Housing and Urban Development's (HUD) minimum property standards, and limited research. Comprehensive logislation is necessary to achieve energy-efficient housing. Bills before Congress require policy decisions related to costs, lifestyles, and Federal incentives to industry. Legislation could include actions such as establishing a national energy conservation program, requiring establishment of national energy performance standards, providing incentives for retrofitting homes, and requiring efficiency labeling of appliances. Recommendations: Refore enactment of new legislation. HUD should stress energy conservation by emphasizing operating costs as well as initial construction costs, establishing thermal standands for Pederally-Insured housing, and contracting for more energyofficient housing subsystems. (HTW)

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The Novy's Practice of Discharging Fuel at Sex. LDC-76-420; B-146333. December 12, 1975. 8 pp. + 2 enclosures. Report to Rep. Ralph H. Mescalfe; by Elmer B. Staats, Comptroller General.

Organization Concessed: Department of the Navy. Congressional Relevance: Rep Raiph H. Metcalit.

It is a common practice for Navy vessels to discharge fuel into the ses. Findings/Conclusions Puels are discharged into the sca when (1) water is removed from tanks, (2) tanks are flushed and cleaned, and (3) residue is pumped from bilge and ballast tanks. Navv records were not adequate for calculating the exact quantities of fuch discharged. Available records showed that, during fiscal years 1974 and 1975, oilers and earriers discharged from fuel tanks at least 13 million gallors of a water and fuel mixture, with estimated fuel value of about \$500,000. The Nevy has developed procedures to stop dumping aviation gasoline and has set a goal of ceasing all oily discharges from all ships through this alterations. Recommendstions: Fuel management and control of fuel discharges should be improved by: (1) requiring survey reports to be submitted; and (2) expanding reporting systems to show discharges from all vessels, include more details, and show estimated volumes of fuel against water dispharged, (HTW)

# 021 Process and Problems of the Government's Utility Conservation Pro-

gram, LCD-76-311; B-178205, December 30, 1975. 19 pp. + 2 appendices (5 pp.). Report to Rep. William S. Moothead, Chairman, House Committee on Government Operations: Conservation, Energy and Natural Resources Subcommittee; by Elmer B. Staats, Comptroller General.

Organization Concerned: General Services Administration: Depart-

ment of Defense.

Congrassionel Relevence: Hour Committee on Government Operations: Conservation, Energy and Natural Resources Subcommittee.

Authority: Federal Management Circular 74-1, as supplemented.

The General Services Administration (GSA) and the Department of Defense (DOD), who manuse the greatest proportion of Government buildings, have taken steps to improve design and construction for energy conservation, but further improvements are needed. Findings/Conclusions: The process for selection and review of utility rates and charges would be improved by computer satisfance. Conservation programs have resulted in large reductions in energy use, but greater reductions would result from more stringent enforcement. Record maintenance for stillity contract administration was adequate at DOD installations, but inadequate at GSA regions, and personnel skilled at procuring and managing utilities was lacking at most of the locations. Recommendations: GSA and DOD should: (1) make greater use of computers in reviewing utility charges; (2) enforce prescribed Federal lighting and heating standards; and (3) provide for personnel trained in utility management, GSA should ensure satisfactory maintenance of utility records. (HTW)

#### 022

Potential for Using Electric Vehicles on Federal Installations. LCD-76; B-135945. March 3, 1976. 3 pp. + appendix (17 pp.). Report to Rep. Gilbert Gode; by Elmer B. Stasss, Comptreller General.

Organization Concurred: Environmental Protection Agency. Congressional Ratevance: Rep. Gilbert Gude.

Many conventional, high performance vehicles restricted to onthe-facility use at Federal installations gould be replaced by electric vehicles or low-performance, gasoline-powered vehicles. Replacing conventional vehicles with low-performance vehicles of either electrical or conventional design would result in lower energy consumption and lower air politotion levels. Findings/Conclusions: There are more than 400,000 off-the-road electric vehicles in service in the United States, and their market is well established. Electric vehicles are special purpose vehicles, and low performance characteristics such as short ranges, low acceleration, and poor hill climbing ability restrict their usefulness. While electric vehicles do not produce exhaust gas emissions, they do contribute to air pollution when they use electricity generated in powerplants (ueled by cost or oil. Electric vehicles use less petroleum and will conserve energy as they replace high-powered conventional vehicles, particularly in low-speed, multistop driving. Off-the-road electric vehicles are likely to be economically attractive because their acquisition cost is comparable to the conventional vehicles they replace. On-the-road electric vehicles are less likely to be economically attractive because their acquisition costs are often two to three times higher than the conventional vehicles they replace. (RRS)

# 023

Policies and Programs Being Descioped To Expand Procurement of Products Constaining Recycled Materials. PSAD-76-139; B-166306 May 18, 1976. 19 pp. + appendices (7 pp.). Report to the Congress; by Elmer B. Staats, Comptroller General.

Organization Concerned: Department of Defense; General Services Administration; Environmental Protection Agency.

Congressional Relevances Congress.

023 Citotion Saction

Authority: Energy Policy and Conservation Act of 1975 (P.L. 94-163), Resource Recovery Act of 1970 (P.L. 91-512). Solid Waste Disposal Act. Federal Property and Administrative Services Act of 1949.

Efforts are being made within the Government to increase the use of recycled materials in products being purchased by Federal agencies. The banefits of using recycled products include: significant savings in energy, conservation of scarce natural resources, reducing the volume of weste requiring disposal, and alleviating dependency on foreign sources of supply. Findings/Conclusions: Federal initiatives for the use of recycled products involve; (1) a Cleneral Services Administration (GSA) program to purchase recycled paper; (2) exidelines by the Environmental Protection Agency for procuring products containing recycled materials; and (3) enactment of an act promoting the use of recycled oil. There is a need for more management emphasis by GSA and the Department of Defense (DOD) to further executed procurement of seconded products. Recommenda-Noes: GSA should establish a formal program for procuring recycled products and insure that the efforts it has made in nurchasing recysled paper products are extended to other commodity areas. The DOD should develop a coordinated program to appressively promote the decourement of products with recycled material content (RRS)

#### . . .

O24
[Department of Commerce's "SarSheergy Chistions"]. OSF-76-24;
B-193205 May 27, 1976, Released June 8, 1976, 3 pp. +3 enclosures
(7 pp.)
Report to Rep. Philip R. Sharp, by Monte Canfield, Mr., Director,
Farry and Minerals Div.

Organization Concerned: Department of Commerce, Federal Energy Administration. Congressional Relayones: Res. Philip R. Sharp

The "Swiftnergy Coation" activity of the Department of Commerce van deligned to encourage companies to commit themselves to the adoption of effective energy management programs. A "Swiseldered companies of deligned to the control of the position. The land of the control of the control of the position. The land of the control of the control of the position of the control of the control of the control of the Department has received ment of the expected responses and sent our man of the the landson. Dr the 4,200 companies constacted in 1973, from a COO responded and serviced citizenes whose 17,000 the 170 control of the theory of the control of the control of the control of the theory of the control of the contr

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mately \$42,000 (RRS)

Satus of Federal and Private Research and Development Efforts to Course Energy by Reducing Electric Power Transmission Losses RED-76-107 June 1, 1976. 15 pp Staff study by Henry Eschwege, Director, Community and Economic Development Div.

Organization Consernad: Energy Research and Development Administration.

Authority: P.L. 93-438

Reducing electrical energy Joses during transmission would combine to the energy observation (Findings/Confeculations). Electric energy is lead during transmission because of certain away of leading transmission because of certain away of the least of electric energy during transmission; resistance, at least effect, corens, and isosalation. Resistance and skills effect came must power less during overhead transmission; resistance, at least electric except during contend of the content of the content of the content during the content of the content of the content during the content of the content of the content during the content of the content

reduced by increasing the conductor's cross-section areas, raising transmission vottage levels, and lowering the line's temperature. Lowering conductor temperature will also reduce resistance losses. Opportunities for large reductions in transmission losses in the enfance are flutter are limited without new technological breakthroughs. Pour research emphasis may change depending on changing needs. (RPS.)

#### 026

Opportunities for More Effective Use of Animal Manure. RED-76-101; B-166506. June 14, 1976. 27 pp. + 5 appendices (13 pp.). Report to the Congress, by Elmer B. Staats, Comptroller General.

Organization Concessed: Environmental Protection Agency; Department of Agriculture; Energy Research and Development Administration.

Manure is a valuable economic asset which can be used as fertilster or from which byproducts can be recovered. Findings/Concluriens: About half of the animal manure (1 billion fbs.) produced annually in the United States is generated in feedless and confinement areas and is easily recoverable. Many farmers do not realize the full notential of manure as fertilizer, or misapply it, alone or in conjunction with chemical fertilizers. The need exists for readily available soil and manure testing for farmers. Manure can be used to produce methane sas and ammonia, converted into fuel by pyrolysis or high pressure with residues turned into industrial products as carbon black or insulation, processed and refed to animals, or composted Recommendations: The Department of Agriculture should educate farmers as to the benefits and use of manure as fertilizer, and facilitate soil and manure testing for agricultural users. The Environmental Protection Agency should promote intrasgency agreements directed toward making animal manure use technology commercially vable (Author/DJM)

### 27

Energy Conservation Financing, July 26, 1976. 7 pp. + enclosures (7 pp.)

Testimony before the House Committee on Banking, Corrency and

Housing: Economic Stabilization Subcommittee; by Monte Canffeld, Jr., Director, Energy and Minerals Div.

Organization Consumed: Pederal Energy Administration; Energy Research and Development Administration Consumericant Reference: House Committee on Banking, Corrency

and Housing Economic Stabilization Subcommittee. Authority: Federal Energy Administration Extension Act; H.R. 12169 (84th Cong.). Energy Policy and Conservation Act. H.R. 1430S (94th Cong.).

Both H.R. 14205 and H.R. 12169 would increase national attention and activity in energy conservation. Neither bill, however, addresses conservation opportunities available in the transportation sector. Subsidized public transportation for low-income persons, the purchase of buses, and the development of fringe parking lots and express bus lanes should be considered. The bills provide loan guarantees for energy conservation measures and direct loans for small business concerns. Direct Federal assistance is also provided to stimulate conservation in the residential and commercial sectors Other financial incentives abould be considered such as low interest loans, and tax writeoffs or rebates for conservation improvements No single financial mechanism is universally accentable for all energy activities. Loan guarantoes would not necessarily induce conservation investments by large integrated corporations if they believed that they had an opportunity to receive more return on investment in other activities. The Federal Energy Administration and the Energy Research and Development Administration should be abolished and a new energy organization to be called the National Energy Administration should be created as an interim step toward the establishment of a Department of Energy and Natural Resources, Certain clarifications and changes should be made to the reporting and review requirements of the Comptrollor General under the Federal Energy Administration Extension Act. (Author/OM)

#### me

Energy Conservation at Government Field Installations: Progress and Problems. LCD-76-229; B-178205. August 19, 1976. 25 pp. + ap-

Report to the Congress: by Elmer B. Staats, Comptroller General, Organization Concerned: Department of Defense; Federal Energy Administration, General Services Administration.

Congressional Relovance: Congress. Authority: Encrey Policy and Conservation Act (42 U.S.C. 6201). Federal Management Circular 74-1. B-178205 (1974).

In June 1973, the President started a program to reduce energy use in the Federal Government, which can produce a savings of about \$30 million for every 1% of reduction. During 1975, GAO visited 77 military and civil installations and found that, although there had been a general attempt to conserve, much more could be done. Implementation of the provisions of the Energy Policy and Conservation Act will further strengthen the convergation program. Findings/Conclusions: Deficiencies included a lack of conservation plans, an absence of any individual or group to manage the program, and improper or nonexistent internal and external audits. A need for greater leadership and more agressiveness in promoting conservation was indicated by the lack of idea interchange amone installations and the general unawareness of antagonism, or aputhy of employees towards conserving energy. Despite the Federal Energy Administration's statement that the Government, generally, was meeting the energy conservation goals, GAO found many installations to be falling short of the goals. The situation was compounded by the continuation of the problem of measuring energy usage completely and accurately. Greater conservation offorts were needed in the size of and frequency of use of vehicles. Further effort was needed in reducing lighting, heating, and cooling usage levels. Mission and training operations needed to be modified to conserve more energy Recommendations: Program management should be lenproved to promote better procedures and practices, ressues the adoquacy of energy conservation goals, review and inspect conservation activities, and stimulate employees to cooperate. Energy consumption data should be better coordinated among secucies and guidelines should be improved. Government regulations concerning vehicle use and size should be better enforced, as should submission of miteage reports to General Services Administration. Some facilities should be modified and lighting, heating, and cooling standards adhered to. Mission and training operations should be studied to determine methods of conserving energy, without adversely affecting their objectives. (Author/SS)

On Conservation and Innovation. November 30, 1976. 6 pp. Speech before World Wildlife Fond, Pourth International Congress. San Francisco, CA; by Monte Canfield, Jr., Director, Energy and Minerals Div.

Government use of public policy to stimulate both conservation and innovation in the use of energy is explored. If we squander our resources, those in the future will pay for our excesses. Innovation in the search for energy can be consumed with conservation. Conservation will not work voluntarily, but will have to be imposed by government. Direct action is seen in rationing, import cuotes, automileage requirements, and indirect action in excise taxes, investment tax credits, loan guarantees, etc. A mix of both may be necessary. With respect to international coordination of energy policies, it is suggested that the "have" nations do much more than the token pestures to date. (DJM)

[Federal Efforts to Improve the Fuel Economy of New Automobiles]. B-178205, January 13, 1977, 6 pp. Report to Elliot Richardson, Chairman, Energy Resources Council; by Monte Canfield, Jr., Director, Energy and Minerals Div.

Organization Concerned: Department of Transportation; Environmental Protection Agency.

Congressional Relevance: House Committee on Spience and Tochnology; Senste Committee on Interior and Insular Affairs. Authority: Energy Reorganization Act of 1974, § 108 (42 U.S.C. 5818).

A Federal task force completed a comprehensive study of the long range energy goals for motor vehicles. The draft report of the task force attempts to present a balanced view of the tradeoffs that may be feesible and necessary among automobile goals beyond 1980. Findings/Conclusions: The need for balancing Federal emissions

standards, safety, and fuel economy is stressed. The United States could achieve, by 1985, feel savings of four million barrels per day relative to 1975 if a reasonable approach to Pedoral Government regulation of the eutomobile occurs. Three types of Federal assistsuce are identified: (1) relaxation of the standards of their implementation schedule; (2) actions to increase consumer demand for foel-efficient vehicles: and (3) financial assistance to the automobile manufacturing industry. Recommendations: The Energy Resources Council should: establish a followup program to develop and recommend to Congress a balanced set of sutamobile standards that address feasible levels and timing of Federal emissions, safety, and fuel economy standards beyond 1980. These standards should be reviewed and updated periodically as changes occur in technology and the nation's energy situation. (RRS)

#### WHAT ARE THE PROBLEMS AND POTENTIAL SOLUTIONS ASSOCIATED WITH MAKING NUCLEAR FISSION A SUBSTANTIAL ENERGY SOURCE?

# [The Reactor Inspection Program of the Atomic Energy Commission].

B-164105 January 19, 1973. 6 pp. Report to James R. Schlesinger, Chairman, Atomic Energy Commission; by Henry Eschwege, Director, Resources and Economic Develorment Div.

## Authority: 10 C.F.R. 50.

The Atomic Energy Commission (AEC) carries out its atatutory responsibility for insuring that nuclear power reactors are constructed and operated in a safe and healthy manner through its reactor inspection program. Findings/Conclusions: AEC has 18 quality assignme criteria which licensees are expected to follow. Analysis of the 18 quality assurance criteria showed that 21 terms are subject to considerable subjective interpretation. AEC did not formally ask 13 milities determined to be inadequately complying with the criteria to ungrade their quality assurance plans. ABC has not emphasized reviewing licensee quality assurance audits at plants which have been under construction for quite some time because the quality assurance manuals for these reactors did not clearly define provisions for performing quality assurance audits. Recommendations: AEC should: provide its inspectors with suidence as to what constitutes acceptable methods of implementation of the 18 quality ssegrance criteria; develop a well-defined minimum inspection program that would provide inspectors with the guidance needed to carry out program objectives; require the operating reactor licensons to upgrade their quality assurance plans to improve the basis for evaluating the adequacy of licentees' quality assurance programs: and require its reactor inspectors to systematically and consistently review and evaluate licensees' quality assurance audits. (Author/QM)

#### 032

Proposed Changes to the Atomic Energy Commission's Armogeness for Carrying Out the Liquid Metal Fast Breeder Reactor Demonstration Project. B-164105. Pebrusry 27, 1973. 6 pp. + appendix (19 pp.). Report to Rep. Melvin Price, Chairman, Joint Committee on Atomic Energy by Elemen B. Stasas, Contribulier General.

Organization Concerned: Atomic Banegy Commission; Tennessee valley Authority; Breeder Reactor Corp.; Project Management Corp.; Commonwealth Edison Co. Cangessional Relevance: Joint Committee on Atomic Beergy. Authority; P.L. 91-273. PL. 92-54.

The Atomic Beergy Commission (AEC) sumbitted a memorandum of understanding, later amended, to the Joint Committee on Atomic Energy proposing a cooperative arrangement for designing, constructing, and operating the liquid metal fast breeder reactor demonstration project. Proposed changes concerned consolidation of contracts, management, indemnity provisions, funding, and licensing. Findings/Conclusions: The parties agreed to consolidate seven contracts into two, eliminating one which would have given ABC direct legal rights against the Breeder Resotor Corporation. Certain provisions related to resolution of disagreements could lead to termination of the project or cost overruns. Indemnification provisions of the original memorandum were expanded to include all expenses. whether or not they related to claims and liabilities. In addition to ABC costs calculated at \$422 million, costs will be incurred for program direction, administration, and use of AEC personnel. Other proposals deal with the use of AEC funds for interest expense on protect loans, the independence of ficensing review, and cost principles to be applied to AEC funds. (HTW)

#### 433

Parther Comments on Atomic Energy Commission's Proposed Arrangement for the Liquid Metal Fast Breader Reactor Demonstration Project. B-164(03. April 30, 1973. 2 pp. + appendixes (19 pp.). Report to Rep. Melvin Price, Chairman, Joint Committee on Atomic Energy; by Binner B. Stasts, Compteeller Georstal.

Organization Concerned: Atomic Energy Commission; Tennessee Valley Authority; Breeder Reactor Corp.; Project Management Corp.; Commoowealth Edison Co. Congressional Relayance: Jose Committee on Atomic Energy. Authority P. J. 91-273. Pt. 9-24.

In response to concerns expressed in a GAO report and by the Joint Committee on Atomic Energy, the Atomic Energy Commission (AEC) submitted changes to proposals for a cooperative arrespendent with the Project Management Corporation, the Tennessee Valley Authority, and the Breeder Reactor Corporation for carrying out the liquid metal fast breeder reactor demonstration project. Findings/Conclusions: A proposed contract provides for an interim management arrangement and another arrangement to operare after legislation permits AEC board representation. The contract would allow majority decisions of the steering committee to be final under certain conditions, but does not specify application of conditions. Concerns were expressed about legal questions involved in provisions for referral of actions by the Project Management Corporation to heads of agencies and in having AEC employees serve on its board. Some changes were proposed for responsibilities for technical procryision of the nuclear steam supply system to meet objections to lack of ABC central, GAO believes that modifications to standards for this system should require ABC approval. Language should be clarified in provisions for funding certain unallowable costs and relating to interest from investment. It was suggested that AEC should have greater control over indemnity and that modifications are needed with reference to costs of termination. (HTW)

#### 034

Improvements Needed in the Program for the Protection of Special Nuclear Meterial. B-164105. November 7, 1976. 34 pp. + 3 appen-

dices (18 pp.).

Report to the Congress; by Elmer B. Stants, Comptroller General.

Organization Concernad: Atomic Energy Commission

Congressionel Relevances Congress.

Authority: Atomic Energy Act of 1974, as amended (42 U.S.C. 2011; 42 U.S.C. 220(i)) 10 C.P.R. 73. AEC Manual Appendix 2401.

AEC Manual Appendix 2405.

A review of in-plant protection systems of three licensed contractors holding special ourless material (SNM) disclosed a peop for the Atomic Energy Commission (AEC) to strengthen its program to protect SNM. Findings/Conclusions: A number of deficiencies significantly limit the plants' capability to prevent, detect, and respond to a possible diversion of material: weak physical security barriers. ineffective guard patrols, ineffective alarm system, lack of automatic detection devices, and lack of planning in case of diversion of material. There are differences in security requirements on licensees and those on contractors, the latter being less stringent. Inspection responsibility was divided, and inspections were made only to determine compliance with AEC requirements and not to determine the oversil effectiveness of the protective system. Recommendations: AEC should: issue the proposed changes to its protection requirements; refine the expected capability of a protection system for the complete security of SNM and upgrade the requirements to the extent necessary; impose the same protection requirement on licensees and contractors holding unclassified material or justify the differences: and improve inspection as planned, by conducting one overall evaluation of protection measures at licensee/contractor plants for classified and unclassified material, and by developing new inspection procedures which emphasize evaluating the effectiveness of protection at licensed facilities. (Author/DJM)

#### 035

Protecting Special Nuclear Material in Transit: Improvements Made and Existing Problems. B-164105. April 12, 1974–17 pp. + appendix (1 pp.).

Report to Rep. Melvin Price, Chairman, Joint Committee on Atomic Energy; by Elmer B. Staats, Comptroller General.

Organization Contormati Atomic Energy Commission.
Congressional Retoveness Joint Committee on Atomic Energy.
Authority: Atomic Energy Act of 1954, as amended (42 U.S.C.
2011), 42 U.S.C. 2201(b), 10 C.F.R. 73, 10 C.F.R. 70, 12, AEC
Manual Appendix 2401, AEC Manual Appendix 2405.

The protection given unclassified and confidential special nuclear material (SNM) while in transit, specifically three large shipments shipped by truck or held at an airport in September and October 1972, was inadequate and the material was susceptible to a diversionary attennet. Findings/Conclusions: The Atomic Rosray Commission has been slow to adequately protect SNM in transit. A few of the deficiencies observed in transit included: a sole unarmed driver. open cargo area on truck, no periodic call-in, easily duplicated seals on containers, easily portable containers, and the use of regular common carners. Since December 1972 the AEC has taken important new steps in its safaguard program. Recommendations: AEC should make a detailed study of the fessibility of using Government. operated or controlled (licensed) transportation systems for the shipment of SNM. The Joint Committee on Atomic Power should consider amending the Code to give the AEC the authority to predetermine the trustworthiness of the vehicle drivers and econtine queeds (DIM)

### Linerar Efficience of Nuclear and Conventional Fuels Used to Produce Electricity1, B-178205, May 20, 1974, 3 pp. Report to Rep. Pierre S. du Pont; by Robert F. Keller, Acting Comp-

troller General Organization Concurred: Atomic Energy Commission.

# Congressional Ralayance: Rep Pierre S. du Pont.

The Atomic Energy Commission (AEC) uses large quantities of electricity to operate its facilities for enriching uranium for nuclear weapons and for nuclear power reactor fuel. Pledings/Conchaices: Statistics for 1967-1973 for electricity used to earlich smedium for power uses and the amount of electricity produced by nuclear resotors indicate a steady growth in the miclear power industry. These statistics are not a reasonable measure of the energy efficiency of nuclear fuel. One way to measure energy efficiency is to subtract the electricity required to produce the first from the total electricity produced, which shows that wassiom is the least efficient means Another way is to compute the quantity of raw material needed to produce a given amount of electricity, by which measure a ton of uranium ore yields over 35 times the electricity of a ten of coal. Anticipated future developments such as new processes for enriching uranium and the use of plutonium will increase the ratio of ejectricity produced by reactors to the electricity used to produce the uranium. (DJM)

[Future Structure of the Uranium Enrichment Industry], 3-164105. June 26, 1974, 9 pp. Tenimsey before Joint Committee on Atomic Energy: by Elmer B. Staats, Comptroller General.

Congressional Relevance: Joint Committee on Atomic Records Authority: Government Corporation Control Act (31 U.S.C. 841). B-114858 (1974).

Issues related to establishing a Government-owned corporation for accomplishing national granium enrichment objectives were discussed. Early transfer of the three existing earlichment plants to private ownership would be less favorable than continued Government ownership. Because of funding delays from the budgetary process. Congress should consider a salf-financing arrangement for an enrichment program if Government ownership is to continue. Manassement of the uranium enrichment activity should operate as a business-type enterprise, and an independent Government corporation is a way of providing the necessary flexibility. Treasury borrowings are the most common financing measure used by Government corporations. The return to the Government of the full investment value in the existing plants should receive careful attention. Barning power of the plants is the best method of fixing economic value of plants. Some of the advantages of operating the enrichment activity as a business-type enterprise under a Government corporation can be achieved through other organizational arrangements. (DJM)

# ment Div

[Manpower Needs of the Nuclear Power Industry]. B-164105. July 22, 1974. 4 pp. Report to Dixy Lot Ray, Chairman, Atomic Energy Commission; by Henry Eschwege, Director, Community and Economic Develop-

The lack of trained manpower does not appear to be a serious cause of delay in bringing nuclear powerplants into operation. Findines/Conclusions: Representatives of the nuclear power industry found the greatest difficulty in obtaining organers with nuclear experience, such as those in the quality assurance area, and certain skilled craftsmen, such as pipefitters and welders. The representatives stated almost unanimously that they expected shortages of trained manpower to become a more serious problem in the future. Stens taken to prevent such shortages include: establishing training courses for skilled graftsmen, conducting special training programs for engineers and other professionals who lacked nuclear experience, and where possible, using more technicians to perform engineering duties. The Atomic Energy Commission (ABC) has conducted and sponsored education and training programs to ensure a continuing supply of trained manpower in the nuclear energy field. In recent years, however, the education and training activities of the ABC and other Federal agencies have decreased for budgetary reasons and some major programs have been terminated. Although the ABC and the Federal Government have been promoting nuclear power to help solve the energy problem, they have placed decreasing emphasis on programs for insuring the continued availability of trained meapower. (RRS)

# [Security Systems at Commercial Nuclear Powerslants], B-164105.

Desober 16, 1974, 5 pp. Report to Dixy Lee Ray, Chairman, Atomic Bnersy Commission: by Henry Eschwege, Director, Community and Economic Development Div.

Concern has been expressed about security systems at nuclear nowcrolants: the consensus is that security throughout the industry needs to be improved. Findings/Conclusions: The following were noted during site visits to several nuclear newerplants; unlighted protected-area perimeters, unlocked outside doors, lack of intresion slarms, and poermed watchmen. Security systems at Atomic Recray Commission (AEC) licensed plants could not prevent a takeover for sabotage by a small number of armed individuals. According to officials, the used-fuel storage facility at a nuclear powerplant is more accessible and uninerable to ashotore than is the mactor over. ABC licensors have not been given guidance on the difference between threats posed by small groups of individuals and those posed by trained paramilitary groups. AEC's review and approval of licensee's proposed security systems are not based on specific performance criteria; without such criteria, there is no way to measure the effectiveness of the licensees' total security systems. Recommendations: The AEC should clarify the differences between assaults by small groups of Individuals and by paramilitary groups and clarify the Government's responsibility for protecting nuclear powerplants against sabotage by paramilitary groups. ABC should also determine what additional interim security systems requirements can be established to strengthen licensees' security. (RRS)

## Problem Areas Which Could Affect the Development Schedule for the Clinch River Breeder Reactor. December 1974. 13 pp.

Staff study. Organization Concernad: Atomic Recrey Commission.

One of the principal objectives of the Clinch River Breeder Resctor (CRBR) project is to verify that broader reactor powerplants can be Hoensed for commercial operations. The Atomic Barray Commission (ABC) regulatory organization's licensing schedule calls for a pre-application review of CRBR project information including site suitability, environmental, and selety information. Findings/Conclauseus: Problem areas of the project which could affect schedules and costs are: (1) slow progress in transmitting occessary design information to AEC's regulatory organization; and (2) a difference of opinion between the regulatory organization and CRBR project participants concerning ABC's offerts to resolve a safety issue. The regulatory organization's 14-month review schedule was contingent upon receipt of high quality, adequately documented safety information, and early identification and resolution of key safety-related design lasses. An ABC Commissioner expressed concern about the timeliness and quality of information being submitted. An unresolved safety issue was whether the CRBR will be designed so that It will acceptably accommodate the consequences of a core disruptive accident. The regulatory organization held that such an accident

had not been proved incredible. The project participants held that it

was incredible and that additional features to accommodate such an accident were not seeded. The regulatory organization befored that AECs current research program neight not be sufficient to resolve this question. Means were being sought so resolve the agreement of the resolve the superior of information. CHTW)

#### 641 Fast Flux Test Facility Program. January 1975. 33 pp.

Staff study.

The Atomic Presey Commission's (ARC) Fast Flux Test Pacifity (FFTF) is being planned as a key testing facility for fuels and materials used in figured metal fast breeder reactor programs. Findings/-Confesions: Since connectsional authorization in July 1967, the estimated otes of the accorner has grown from \$87.5 million to \$42.6 melbon Current estimates may again have to be increased because of higher escalation rates than anticipated and because of ingroupate estimating, design changes, inadequate scope definition, changes in standards, and schedule delays. A EC's estimated date of completion of the FFTF has slinned 5 years to November 1972 and further slipses could result if severe problems are encountered. A number of design changes have been made since authorization. Including combining examination and maintenance facilities, but AEC officials believed these changes have not adversely affected performance characteristics of the facility. GAO was unable to determine the full impact that changes could have on the schedule but believed they could be substantial Recommendations: Congress should consider requiring that AEC's supporting cost and schedule estimates be: (1) complete as to the includen of all major associated period coasts and (2) based upon relatively firm designs. The Joint Committee for Atomic Borrgy should consider exploring with the AEC the desirability of adding separate examination and maintenance facilities (Author/HTW)

# 642 Operating Cost and Environmental Radiation Munitaring at the Ship-piagnort Annals Power Station, RED-75-325; B-164105. January 13, 1975. 19 pp. + appendixes (2 pp.). Report to Sen., Richard S. Schwarten; by Elmer B. Statis, Comp.

troller General.

Organization Concerned: Duqueste Light Co., Pittsburgh, P.A.
Cananasianal Relationses: See Richard S. Schnerber.

The Shiroingport Atomic Power Station, spinily owned by the Rederal Government and Duqueson Light Co., was the first large nuclear powerplant in the United States. It is primarily a research and development facility, but began generating electricity for commercial sale in December 1957. Findings/Consistence: The total Government cost for Shuccingport is estimated at \$596.9 million thorough fiscal year 1980. Government cost has been partially offset by \$20.3 militan in revenue from the sale of steam to Doquetne through fiscal year 1974 In 1973, Shappingport produced 1.4% of Duquesne's total electricity. The cost of this electricity to Ductions represented 1.7%. of the total cost of electricity produced that year. The sale of steam has not provided Duqueson with any significant occupanie advantage because the amount of electricity produced by steam from Shippingport is a relatively small part of Doquespe's total production and because the unit cost to produce electricity at Shippingport as higher than the average unit cost to Duquesae at its other facilities. The environmental radiation monitoring in the Shippingport area has not been extensive enough to determine whether hazardous radiation levels exist in the area. A consolidated monitoring program is being developed by the Asomic Energy Commission and the State of Pentastvazia which should improve munitoring in the Shippingport area. (Author/QM)

### Sequepah Nuclear Plant. March 1975. 16 pp. Staff study.

Organization Concerned: Environmental Protection Agency; Nuclear Regulatory Commission; Tennessee Valley Authority. Authority: Regray Recreanization Act of 1976 (P.L. 93-438).

Review of the design and construction of the Semaovah Nuclear Plant by the Tennessee Valley Authority (TVA) indicated that it might be easible to reduce or avoid some modifications to appelear powerplants if the Nuclear Regulatory Commission (NRC) maintained surveillance over critical features of a plant's design during the internal between its two resules england which more shout 42 months apart in the case of the Sequevah plant, Except for safety, its main concern should be to excist the utility in evolding future increased costs and delayed schedules. Findless/Conclusions: An increase in cost estimate of over 100% from 1968 to 1974 was attributed to changes during construction, inflation, higher interest, and schedule delays. TVA's estimates for start of commercial operation slipped about 40 months because of unrealistic time assessments. Sequovah's power output will be only slightly reduced in soite of engineering changes, but other safety-related changes which may become necessary may restrict its canacity. Concurrent design and construction of nuclear plants is a normal industry practice, and plants are often custom-designed, making an extensive NRC review necessary to ensure public health and safety. Recommendations: The NRC should re-examine its licensing review procedures and practices with the objectives of maintaining surveillance over nuclear plant designs during the interval between its two regular reviews. particularly in the case of designs prepared concurrently with construction, and of finding ways to provide concurrent assistance to utilities in order to reduce costs and maintain schedules. Congress may wish to continue reviewing the advantages and disadvantages associated with standardization and pre-selected plant sites and to consider appropriate legislation to help roduce nuclear plant lead time (SC)

#### Comments on Energy Research and Development Administration's Proposed Arrangement for the Clinck River Brender Reactor Decounting from Pinter Psych, RBD-75-561; B-164105. April 4, 1975. 14 pp. Report to Sen. John Passiore, Chirimse, Jeint Committee on Atomio Energy; by Blunt B. Stats, Compitables Constrail.

Oponisotion Consumad: Energy Restarch and Development Administration, Annie: Energy Commission: Project Management Corp.; Commonwealth Edison Ca; Tennesser Velley Authority. Compassional Ediswanes. Java Commistee on Atomic Bergy, Authority: P.L. 91-273. S U.S.C. 2105(a). The Energy Research and Development Administration (ERDA), bublished heliablish to the Joint Commistee on Atomic Energy.

involving major revisions to the authorization for the Clinch River Breeder Reactor Demonstration Plant project along with pronound changes to the existing underlying documents governing the project. Findings/Conclusions: Utility participants will be allowed to wish. draw their support from the project if there is a disagreement our major changes in reference design and specifications. This could allow the utility participants to terminate their involvement over design changes which may be brought about by actions of the Nuclear Regulatory Commission. The documents submitted by ERDA do not clearly delineate the manner in which the project will be managed. They contain ambiguous and seemingly inconsistent language regarding responsibilities and management. It is not clear whether the legislative history authorizing the project supports the ERDA view that the Government's share of the total project cost is now authorized and that the proposed legislation would continue such authorization by virtue of one of the underlying documents before the Joint Committee for 45 days, as required by the basic enabling legislation. The proposed legislation seeks spending authority, however, for only one year. (Author/OM)

The Liquid Metal Fact Reader Reactor Program, Pact Present, and Future, RED-75-352; B-164105. April 28, 1975. 44 pp. + appendices (22 pp.). Report to the Congress; by Elmer B. Stauts, Comptroller General.

Organization Concerned: Energy Research and Development Administration; Atomic Energy Commission. Congressional Relevance: Congress.

The liquid metal fast breeder reactor (LMFER) is a high priority energy program because a becoder reactor can create more fuel than Findings/Canclusions: Since 1968 the expected costs of the LMPRR program have increased by \$6.9 billion, \$3.5 billion of which the Paerry Research and Development Administration (ERDA) attributes to inflation. In addition to Federal funding of the breeder reactor, over half a billion dollars of private funds have been or will be spent over the next 5 to 10 years to develop the breeder reactor and build a demonstration plant. The overall breeder reactor program consists of six major program areas, each of which contributes an important element of technology. There are 22 major facilities in use or being built in support of the program, ERDA management problems in the breeder program brought about the development of a new management system which, if properly implemented, should reasonably assure that ERDA will have greater visibility over the LMFRR program. The management of the demonstration plant project remains cumbersome. Federal funding for breeder reactor development was 40% of the total energy research and development funding in 1971 and should be 26% in 1976. There are high priority breeder programs in five other industrial nations; France and the Soviet Union have the most advanced of them. Recommendations: If the Congress wants to know whether greater reliance can be pieced on the use of foreign LMFBR technology, it abould explore with ERDA in greater depth the advantages and disadvantages of using such technology. (Author/OM)

[Liquid Metal Fast Breeder Reactor Program-Past, Present, and Future]. April 30, 1975. 9 pp Tentimony before Joint Economic Committee; by Eimer E. Staats, Comptroller General.

Organization Concerned: Energy Research and Development Administration; Atomic Energy Commission. Congrassional Relevances Joint Boonomic Committee.

The Clinch River liquid metal fast breeder reactor will be this Nation's first project to demonstrate the value of the breeder concept and is scheduled to operate by mid-1982. It is hoped that it will lead to a strong, competitive, commercial breeder industry. The first large commercial breeder will begin operating in 1987 according to the Energy Research and Development Administration. Total expanditures through fiscal year 1974 were \$1.8 billion, with estimated additional funding of \$8.9 billion needed through 2020. A number of major (solities will be built to support the project, costing about \$3 billion or 30% of total costs. There of the most important powerplant projects have experienced large cost increases and schedule delays. Estimated costs for the Clinch River demonstration plant itself have increased from \$699 million to \$1.7 billion from 1973 to 1975, and the start up has been delayed from 1980 to 1982. (DJM)

Cost and Schedule Estimates for the Nation's First Liquid Metal Fast Breeder Reactor Demonstration Powerplant. RED-75-358: B-164105. May 22, 1975. 33 pp. + appendices (15 pp.). Report to the Congress; by Elmer B. Staats, Comptroller General.

Organisation Concurred: Recess Research and Development Administration; Tennessee Valley Authority; Reseder Reactor Corp., Project Management Corp.; Commonwealth Edison Co.; Nuclear

Congressional Ralevence: Congress. Authority: Energy Reorganization Act of 1974 (P.L. 94-438).

The cost and schedule estimates for constructing and operating the Nation's first liquid metal fast breeder reactor demonstration plant, the Clinch River Breeder Reactor Project, merit review because of: the importance of the liquid metal fast breeder reactor program to the Nation's future energy posture; the contribution the demonstration powerplant is expected to make in providing data on the economic and environmental value of the liquid metal fast breeder concept; the significant Federal funds involved; and congressional concern over increases in the estimated cost of the project. Findings/Conclusions: It was not possible to determine which of the project construction and operation cost estimates, \$2.1, \$1.5, or \$1.7 hillion, was more accurate, because the project was only in an early design stage; the project was a first-of-a-kind and sufficient and useful data were not always available to develop firm estimates: professional orgineering judgment was a factor in estimating project costs; cost escalation for a long-term project is very speculative; and failure to meet the schedule could increase cost. Project participents identified several notential problems that could lead to schodule delays. They include: failure to receive adequate funding; delays in the licensing process; delays in delivery of long-leadtime material and components; unavailability of craftsmen; and major design changes. The Energy Research and Development Administration has estimated that early delays in the project could cause an increase in the project cast of about \$10 to \$15 million for each month of delay. (Author/OM)

#### Efforts to Develop Two Nuclear Concepts That Could Greatly Improve This Country's Future Energy Situation RBD-75-35ft; B-164105. May 22, 1975, 37 pp. + appendix (1 pp.). Report to the Congress; by Elmer B. Staats, Comptroller General,

Ornanization Concernad: Energy Rosearch and Development Administration. Constrainment Relayance: Constrass.

Two mucleur concepts-fusion and laser isotope separation-hold great promise for improving the energy situation in this country. Findings/Conclusions: These approaches could produce electricity with fuel that is virtually inexhaustible and enrich uranium chesply and with less energy than at present. Pusion efforts by either of two methods (magnetic or inertial confinement) are managed by two separate divisions of the Energy Research and Development Administration (ERDA) with different management philosophies. Laser isotope separation offers tremendous advantages over the gas diffusion process-less than 10% of the cost to build and only 5% of the cost to operate, with additional savings from greater enrichment potential. Early private involvement in developing and demonstrating the economic fensibility of laser fusion could expedite this Nation's energy goals. Greater funding is necessary. The Atomic Energy Commission would accelerate development if funding were available and a principal program manager could be secured to administer the nmaram. (DJM)

### The Liquid Metal Fast Reeder Reactor: Promise and Uncertainities. OSP-76-1; B-164105. July 31, 1975. 95 pp. + 8 appendices (49 PP.).

Sinff study the Congress; by Blimer B. Stasts, Comptroller General.

Organization Concerned: Energy Research and Development Administration; Atomio Baergy Commission; Federal Energy Administretton.

Congressional Relevance: Congress.

Authority: Geothermal Energy Research, Development, and Demonstration Act (P.L. 93-410), Solar Heating and Cooling Demonstration Aut of 1974 (P.L. 93-409). Energy Reorganization Apr. of 1974 (P.L. 93-438).

Regulatory Commission

Development of the liquid metal fast breeder reactor (LMFBR) is one of the Nation's high priority energy research and development projects and one of the most controversial projects. Findings/Conchaices: Critical uncertainties surround questions of: future electrical needs; how much nuclear fission will be needed; senount and price of recoverable transum; economic feesibility of LMFBRs; eavironmental, safety, and safeguard concerns; and foreign programs and their implications for the United States. The United States should not shandon the LMFBR research and development effort at this time. The program should be understood for what it is-a research and development program. It is not reasonable to attempt to accelerate the program's schedule. Problems of nuclear safety and safeguards exist for foreign governments as well; they will not go sway, but must be resolved favorably. The most logical course of action is to continus the research sod development program for the LMFBR, and at some point in the future decide whether to commit the Nation to it. Recommendations: The responsible Federal agencies, (Energy Research and Development Administration, Nuclear Regulatory Commission, Environmental Protection Agency) and the Congress should obtain adequate information on domestic wranium resources: resolve environmental and safety questions; establish permanent underground storage for wastes; improve knowledge of said cooperation with foreign efforts; research the environmental and health aspects of coal use; and improve projections of demand for electrical energy. Congress should periodically reassess the Nation's major energy options. (Author/DJM)

#### Selected Aspects of Nuclear Proverplant Reliability and Economics. RED-76-7; B-164105, August 15, 1975, 3 pp. + 5 appendices (25 90.).

Report to Sen. Lee Metcalf. Chairman, Senate Committee on Goverament Operations: Reports, Accounting and Management Subcommittee: by Elmer B. Stasts, Cometroller General.

Congressional Relevances: Small Committee on Government Opersticus: Reports, Accounting and Management Subcommittee Authority: Price-Anderson Act, as amended (P.L. 85-256) Private Ownership of Special Nuclear Materials Act of 1964 (P.L. 88-489) Atomic Energy Act of 1954 (42 U.S.C. 2210), P.L. 91-560, S. 2035 (94th Cong ). The Energy Research and Development Administration (FR DA)

and others believe that ouclear power can provide more than half of the Nation's electricity by the end of the century. As of June 1975. 53 quelter powerplants were licensed for commercial operation and accounted for about 7.7% of the United States' electrical capacity. Hadings/Conclusions: Generally, nuclear powerplants showed an upward performance trend during their first seven years of commercial operation. Only three small, first-generation powerplants have been operating for more than seven years, and their performance has been erratio. Data from these three plants are not a reliable predictor for future quoless powerplant performance. Considerable Government assistance to nuclear power enterprises exists in the form of indirect subsidies for stomic entrgy issuesace and indemnity, manarcment of radioactive waste, and oranium enrichment. Removestsint used commercial auclear fuel and decommissioning nuclear powerplants are the responsibility of private industry, and little or no Federal involvement exists in these areas. It is not possible at this time to accurately estimate the total cost of safely managing nuclear

# waste because of uncertainties in future waste management occ-(Nuclear Regulators Commission's Proposes for Evaluation Empiresmental Impacts of Construction and Operation of Nuclear Powerplants]. October 22, 1975, 4 no.

Report to Lee V. Gassick, Executive Director for Operations, Nuclear Regulatory Commission; by Gerald H. Elaken, Assistant Director, Researces and Economic Development Div.

## Authority: National Environmental Policy Act of 1967

A review of the Nuclear Regulatory Commission's (NRC) program for evaluating the environmental impacts of the construction and operation of nuclear newernlants revealed specific needs. Pladlarge/Conclusion: In the past, many unsuitable or unrestistic sites have been suggested as locations for nuclear power plants because of environmental or economic criteria. Commission personnel have no guidelines to verify amilgants' data and there are differences amoug NRC staff concerning the need to do so. Licensees are required to implement their environmental protection plans, and enforcement actions are recommended where needed, but these procedures were not applied to 55 projects which already had construction permits. Personnel of the NRC can improve their independent reviews of impact reports. Recommendation: NRC should emphasize to applicants that only restirtic sites should be chosen and avaluated develop avatematic procedures for identification and verification of environmental data critical to the acceptability of recoverd projects: inspect projects not govered by revised procedures for monitoring curvimmental protection activities to ensure compliance and periedically monitor such activities throughout construction. (Author/DJM0

# [Energy Research and Development Administration's Contingency Plan

for More Enrichment Casactiv et Partsmouth, OH1, RED-76-55; B-159687. November 28, 1975. Released June 22, 1976. 4 pp. + enclosure (3 pp.). Report to Sen John O. Pastore, Chairman, Joint Committee on Atomic Energy: by Elmer B. Stasts, Comptroller General.

Organization Concerned: Energy Research and Development Ad-Congressional Relevance: Joier Committee on Atomic Energy.

Authority: Nuclear Fuel Assurance Act of 1975

The Energy Research and Development Administration's (ERDA) contagency plan for constructing additional uranium enrichment capacity involves expansion of its giseous diffusion plant at Portsmooth, Ohio, if private indestry does not provide the next increment of excelement capacity. Hadises/Conclusions The place also includes design work on a stand-slope contribute at Oak Ridge. Tennessee, if the succeeding increment is not forthcoming. The Portsmouth add-on is in line with section 4 of the proposed Nuclear Pinel Assurance Act of 1975, which will authorize only planning and desian efforts, but not full scale procurement and construction. A schedule presents the plan from conceptual design through procurement and testing of equipment on a month-by-month basis, from July 1975 through August 1978. The cost of conceptual design through fiscal year 1976 is \$7.6 million. ERDA's cost and obligations for the add-on plant total \$2,390,000,000 through fiscal year 1985. (DJM)

The Ecologica of the Administration's Proposal for Government Assistance to Private Uranium Enrichment Groups, December 10, 1975, 16 pc. Testimony before Joint Committee on Atomic Energy; by Elmer B. Stuats, Comptroller General

Organization Concurred: Energy Research and Development Administration; Uranium Emichment Associates. Congressional Relevance: Joint Committee on Atomic Energy. Authority: Nuclear Fuel Assurance Act of 1975.

Since 1971 the Executive Branch has encouraged private industry involvement in greature enruthment. The Administration's proposed Nuclear Fool Asserance Act would: authorize the Esergy Research and Development Administration (ERDA) to enter into cooperative serangements with as many private firms that wish to build, own, and operate enrichment plants as the ERDA Administrator believes necessary to develop a competitive industry; authorize ERDA to provide various assistances and assurances: limit the Go-

cesses. (Author/DJM)

Otelian Section

vernment's total potential liability to \$8 billion in the event the private ventures fail: authorize ERDA to start construction observing and design activities for extending one of the Government's existing plants as a continuency measure; and provide for congressional review of the basis for the cooperative arrangements. There should be a serious effort made to "privatize" the gapoous centrifuge uranium enrichment process. The use of a Government-assisted Usanium Fo. richment Associates plant to demonstrate the success potential of such an effort would not be as effective if the plant is of the more antiquated gaseous diffusion type. The Congress should consider authorizing ERDA to construct the next increment of the earlish. ment capacity utilizing the proven enrichment process; establishing a self-financing Government corporation to manage uranism enrichment facilities; and legislatively authorizing ERDA to enter into cooperative agreements with private enrichers using advanced technologies. (QM)

#### 654 Bellefonte Nuclear Plant, PSAD-76-86. March 1, 1976. 37 pp. Staff midy by Richard W. Gatmann, Director, Procurement and Systems Acquisitions Div.

Organization Consumed: Tennessee Valley Authority; Nuclear Regulatory Commission.

The Tennessee Valley Authority (TVA) has one of the strongest commitments to nuclear power of all U.S. utility systems. Construction on Bellefonte, TVA's fourth nuclear powertiant, was about 6% completed as of August 31, 1975. The Nuclear Regulatory Commission (NRC) is responsible for licensing and related regulatory functions that assure safe operations of nuclear powerplants. Findings/Conclusions: In August 1975, TVA completed a preliminary detailed construction estimate for Bellefonte totalling \$1.2 billion, an increase of \$550 million over the original estimate caused by Inflation, schedule delays, higher interest costs, and additional construction man-hours. TVA estimated a schedule delay of 35 months from its original construction schedule. In building powerplants, TVA overlaps the design and construction schedules so that some construction occurs during a plant's design. TVA forecasts electrical demand annually to assure that it will have the generating capacity to meet future demands. Future TVA forecasts of electrical demand will determine whether the preliminary 1975 forecast of lower demand is an observation or a new trend in electrical demand. Recommendations: TVA should continue in its efforts to reduce the amount of concurrency in the construction of its nuclear plants. The Congress may wish to be kept informed of the latest electrical demand forecasts and trends in connection with requirements for additional nuclear powerplants. (Author/QM)

# Development of Interagency Relationships in the Regulation of Nuclear Materials and Facilities. RED-76-72; B-92288. Match 10, 1976. 20

Report to Seo. Abesham A. Riblooff, Chairman, Senate Committee on Government Operations; by Elmer B. Staats, Comptroller General.

Organization Concerned: Energy Restrict and Development Admilitations, Noticer Regulatory Commission. Congressional Relevances: Street-Committee on Government Operations. Authority: Energy Recognization Act of 1974 (42 U.S.C. 5801). Export Recognization Act of 1976; S. 1499 (44th Cong.). Assession

Boergy Act of 1954.

The Energy Reorganization Act of 1974 assigned certain functions related to the davelopment of various energy sources and the recalation of atomic energy and other uses of radioactive materials.

tions related to the davelopment of vacious energy sources and the regulation of atomic energy and other uses of radioactive materials to the Energy Research and Development Administration (READ) sed the Nuclear Regulatory Commission (PRC), Interagency agreements, mesonands, and other understandings have been negotiated between the two agencies. The agreements and memorands on research and technical assistance, international and domestic safeguards, and safety reviews of ERDA's reactors are directly related so NRC's erincipal functions and responsibilities for research, safegeneds, and reactor safety. Findings/Conclusions: The agencies have not formally agreed to detailed operating procedures for ornducting NRC's research nor have they sereed on procedures for promptly resolving disagreements between them. Until such procedures have been formally surged to, there could be an adverse impact on NRC's research program. NRC is limited in its shility to make an independent regulatory evaluation of whether an export would be harmful to the common defense and security of the United States. NEC has not named to any changes in its responsibility for establishing and evaluating domestic safeguards for mixed facilities. The proposed interagency agreement with ERDA on use of the New Pronomick Laboratory gives NRC control over analyses of its arcois. nuclear materials, and NRC has agreed to determine its fair share of support for the laboratory beginning with fiscal year 1977. Recommendetions: The agencies, in all negotiations on NRC's use of ERDA's facilities and technical expertise, should saree to detailed procedures for conducting the research or technical assistance project and to detailed procedures for promptly resolving disagreements between them. The agencies should also develop an interagency agreement under which NRC personnel would regularly participate in inspections of the physical security measures to be applied to U.S.-supplied modern materials, equipment, and facilities in importint countries. (Author/OM)

# Q56 [The Energy Research and Development Administration's Propos

Contract with Project Management Corporation, Commenwealth Edison, and the Tennessee Valley Authority). B-164105. March 26, 1976. 9 PP.
Resert to Rep. John E. Mosz: by Birner B. Staste, Comptroller Gen-

ersl.

Organization Concurred: Project Management Corp.; Comstonwealth Edison Co.; Tennessee Valley Authority; Energy Research and Development Administration; Broder Restor Corp. Congressional Relevances Rep. John B. Moos.

Authority: 5 U.S.C. 2105(s). The Energy Research and Development Administration's (ERDA's) proposed modified contract with Project Management Corn., Commonwealth Edison, and the Tennessee Valley Authority would change the present arrangement for designing, constructing, and operating the Clinch River Breeder Reactor Demonstration Pient by giving the energy agency, rather than the corporation, overall management responsibility. Findings/Conclusions: The energy agency's inshility to obtain, during the negotiation process, the corporation's agreement on more specific language defining the role that the corporation's board of directors will have in managing the project so sket any design change required for licensing would not be a basis for project termination could cause serious problems if the energy agency attempts to exercise its management prerogative during performance of the contract. The proposed management arrangement also could lend to a situation where the private employees are being directly supervised by Federal employees in their daily project do ties. Recommendations: The Administrator of ERDA should negotiate with the other parties to the contract to revise the proposed modified contract so that it; more clearly states the extent of the corporation's involvement in managing the project; eliminates options permitting contract termination because of project delays caused by dealen obvinges to meet licensing requirements; and include, provisions penalizing private participant's employees if they are involved in conflicts of interest, bribery, and/or graft in relation to the project. (Author/QM)

[Survey of Federal Programs and Policies for Dissasing of Obsolute and

Universi Nuclear Facilities | RED-76-102: B-164052, April 9. 1976, 2 np. Report to Robert C. Seamans, Jr., Administrator, Energy Research

and Davelonment Administration; by Henry Eschwege, Director. Resources and Economic Development Div.

Organization Concerned: Atomic Energy Commission

In an action directed to those past Atomic Energy Commission (AEC) activities for which available data were insufficient to insure that any residual radioactivity did not present a hazzed to the environment and public health and safety, AEC field offices identified 49 sites which the Manhattan Engineering District and AEC had used for various radiological operations. The Energy Research and Development Administration (ERDA) has initiated a program to study the radiological condition at each site. Findings/Conclusions RRDA mans to use one contractor to make the surveys: thus all 49 sites will not be surveyed until 1980. The only way to insure that there were no existing or potential radiation hazards at these sites is to survey each one. Surveys will be initiated at three of the sites in

1976 at a total cost of about \$150,000. An expedited program to complete all surveys by 1978 would require a total of \$850,000. Recommendations: The surveys should be completed as soon as possible ERDA should expedite completion of the surveys so that it can either promptly certify that none of the identified sites represents a radiation danger or begin corrective actions where required.

(Author/QM)

The Proposed Contract for the Clunch River Breeder Reactor Project. April 14, 1976, 6 pp. Tentimony before Joint Committee on Atomic Energy; by Paul G Dembling, General Counsel

Organization Concerned: Project Management Corp., Commonwealth Edison Co : Tennessee Valley Authority: Energy Research and Development Administration; Breeder Reactor Corp Congressional Ralayonea: Josef Committee on Atomic Energy.

The Energy Research and Development Administration's (ER-DA's) proposed modified contract with Project Management Corp., Commonwealth Eduson, and the Tennessee Valley Authority would change the present arrangement for designing, constructing, and operation the Clinch River Brander Reactor demonstration tlant by giving ERDA, rather than the corporation, overall management responsibility. Despite some confusion in language, it appears that FRDA will have ultimate management responsibility for the prosect. Any design change required for licensing could be a basis for project termination because of the delay such a change might entail. The proposed management arrangement, in light of the obvious interrelationships between RRDA and non-Government personnel which will exist, will require close attention to be applied to the administrative strangements, procedures, and policies governing all personnel engaged in the project, ERDA should establish appropriate criteria governing the approval and retention on the project of private parlicipant employees and precise administrative controls over the manner in which Government and private employees relate to each other. (OM)

0.50 This Country's Most Expensive Light Water Receips Safety Test Facility

RED-76-68; B-164105, May 26, 1976 54 pc. + appendices (22) cp.) and coclosures (185 pp.). Report to Sen. Abraham A. Ribicoff, Chairman, Senate Committee on Government Operations; by Elmer B. Staats, Comptroller Gen-

Organisation Concerned: Energy Research and Development Administration; Atomic Bnergy Commission; Nuclear Regulatory Commission.

Congrassional Relevance: Sensir Committee on Government Operations

Authority: Energy Recognization Act of 1974 (P.L. 93-438). The Loss-of-Pleid-Test (LOFT) facility, this country's most expensive light water reactor safety test facility, was authorized in 1963. Located at the Energy Research and Development Adminsttration's (ERDA's) Idaho National Engineering Laboratory, it will produce one-sixtieth the heat output of a commercial reactor. The facility will study the adequacy of analytical techniques used to evaluate emergency core cooling systems. These systems are intended to prevent nuclear fuel from melting should a reactor lose its normal contant. Findings/Conclusions: The Nuclear Regulatory Commission (NRC) estimates that the total project costs will be \$350 million. The project redirection (dropping the nuclear fuel meltdown test) and the many design changes to the facility while it was being built were major contributors to the cost overrun and schedule slipcase. Most safety research and development responsibilities have been given to NRC. The LOFT facility tests should indicate the applicability of small-scale experiments and complex computer analytical techniques in calculating the events during a loss-of-coolant accident, but will not by themselves prove or disprove the actual effectiveness of emergency systems in a commercial reactor. Nuclear consultants did not see any benefits in using the facility to conduct melidown experiments. Four of the five experts believed NRC should increase its research on meltdowns and three believed that the commercial nuclear powerplant licensing process should not be changed pending the facility's test results. Recommendations: The Administrator of ERDA should include, as part of the semiannual report to the Congress on the status of construction projects, total project design and construction costs including that portion funded from the operating appropriation (Author/QM)

The Safesyards and Security of the Energy Research and Development Administration's Rocky Flats Platonium Facility]. B-183920. June 4, Report to Robert C. Seamans, Jr., Administrator, Energy Research

and Development Administration; by Monte Canfield, Jr., Director, Energy and Minerals Div.

The status of safeguards and security at the Energy Research and Development Administration's (ERDA's) Rocky Plats Plutonium Pacility warrant immediate attention. Findings/Conclusions: ERDA does not require its contractors to make current analyses and prepare Safety Analysis Reports (SARs) for existing facilities handline special nuclear materials to determine whether all safety risks have been identified and reduced to an acceptably low level. No SARs have been completed at Rocky Flats. An ERDA headquarters requirement for safety evaluations in a uniform manner with headcounters overview responsibilities will better assure that its workers and the public are adequately protected from unsafe conditions.

Recommendation: FRDA should develop a uniform and documented system to assure safe operations, identify unacceptable risks, and, where necessary, implement corrective action for all nuclear facilities under its control. (Author/QM)

Certain Actions That Can Be Taken to Help Improve This Nation's Electrical Printers. EMID-76-1: B-178205. July 2, 1976. 31 np. + 6 amendioss (11 np.).

Report to the Congress; by Elmer B. Staats, Comptroller General Organization Concerned: Energy Research and Development Ad-

ministration. Congressional Raisvancer Congress. Authority: Atomic Energy Act of 1954 (42 U.S.C. 2153). Federal

Energy Administration Act of 1974 (15 U.S.C. 761-786). Foreign Investment Study Act of 1974 (P.L. 93-479), 10 C.F.R. 40.

Energy Digest SEPTEMBER 1977

Nuclear power now accounts for about 8% of the total U.S. electrical generatine capacity. Uranium to fuel nuclear nower may soon he in short supply and actions must be taken to improve its continued needuction. Eindenst Conclusion: Mars reliable data apply halp in formulating sound uranium export policies, particularly the amount exported, and the extent and effect of foreign investment to our domestic supply. The Bnergy Research and Development Administration (ERDA) has already began action to improve reporting into its management information system, in order to control the original sources and oftenute destination of granium. It may become necessum to more lower duality one introvery of which exold be enhanced by the research and development of new, lower cost technology, Research and development funding is very inadequate. Recommendealoss: RRDA must collect adequate information from the uranium industry, supplied on a voluntary or mandatory basis, on foreign investment in the U.S. industry and the amount controlled by foreign investors. Congress should require reporting of ERDA's efforts ERDA should also increase funding for uranium mining and milling research and development. (DJM)

# 062

Shartcowings in the Systems Used to Control and Protect Highly Dangerous Nathur Maurial. Billy 176-5a. July 22, 1976. 5 p. Report to the Congress by Bilmer B. Sharts, Comparoller General. This is an unclassified digest furnished in lieu of a report containing classified security information.

Organization Concerned: Energy Research and Development Administration.

Concressional Relevance: Concress.

The basic systems used by the Energy Research and Development Administration (ERDA) to control and protect nuclear material are: accountability and material control systems for detecting thefts, and physical security systems to prevent or respond to thefts or unauthorized uses. The interaction of these two systems is relied ones at medear facilities to proclude the loss or theft of special nuclear material. Findings/Conclusions: Accurate measurements of materials cannot be obtained because of uncertainties in measurement instruments and difficulties in measuring nuclear materials held up in cipes, machinery and filters. As a result, discrepancies normally occur between physical and book inventories. ERDA's accountability and material control system contains vague and outdated requirements which have resulted in inconsistent inspection practices and lack of specific numerical criteria when responding to missing special nuclear material ERDA needs to attempthen and clarify its existing security requirements regarding the placement of nuclear material detectors and the protection of windows to buildings housing this special material. The agency has not communicated effectively to its operations offices and contractors the nature and dimensions of the threat of theft. Physical accurity requirements have not been estab-Taked for unclassified special nuclear materials in quantities smaller

than 5 kilograms of enriched uranium and 2 kilograms of plutonium. Recommendation: ERDA's Administrator should: immediately ardate accountability and material control system requirements to reflect current needs and canabilities and specify the minimum seceptable levels of measurement precision; develop and implement inspection practices that eliminate existing inconsistencies and provide inspectors with uniform, well-defined avidelines explicitly distinguishing between the various special nuclear material environments; develop specific numerical criteria for determining when a "material unaccounted for" becomes significant; strengthen and clarify assertity enquirements concerning the placement of special nuclear material detectors and the protection of windows; improve inspection practices by incorporating specific threat criteria in the physical security manual; and expedite the study of the protection needs for small quantities of plutonium and issue protection requirements to the extent necessary. (Author/QM)

#### 063

Poor Management of a Nuclear Light Water Reactor Sufety Project. EMD-76-4; B-164105. August 25, 1976. 26 pp. + appendices (8 pp.).

pp.).

Report to the Conserse by Florer B. Strats. Comptroller General.

Organization Conterned: Energy Research and Development Administration; Nuclear Regulatory Commission.

Congressional Relavoren; Congress.

The Plenum Pill Reperiment was a Nuclear Regulatory Commission (NRC) repetor safety test project designed to tell NRC whether its beensing regulations for emergency corn cooling systems and reacter newer entruts were too stringent. When the project was cannelled in 1976, it had wasted about \$5 million. Fludings/Courbssions: The Pienum Pill Experiment was plagued by management deficiencies. All parties involved failed to agree upon firm program requirements. This resulted in a detailed design which did not meet NRC requirements. NRC and the Energy Research and Develorment Administration (ERDA) also failed to establish firm baseline designs and to control design changes. The two secucies did not adequately define their respective management roles and responsibilities so the project was poorly managed by both. There are some indications that the two spencies are having problems developing suitable arrangements to identify manage research facilities. GAO is not convinced that NRC's present approach to hullding another such facility is sound. In fact, NRC is in the act of remesting some of the same mistakes that led to the cancellation of the original project. Recommendations: The Chairman of NRC should: postnone all decisions on the new project until a conceptual design is completed which provides a rea latic scope, schedule, and total estimated cost. and until an agreement is reached with ERDA for managing the project as well as future reactor asfety projects; institute measures to hold to a minimum the use of operating sporopriations for construction activities and alert the Congress to any construction activities for which more than \$1 million of operating appropriations is obligated. The Administrator of ERDA should: reach an agreement with NRC for managing the new Flonum Fill Buseriment as well as the future reactor safety projects; healn steps to minimize the use of operating appropriations for construction activities; and alert the Congress to similar appropriations obligations. The Joint Committee on Atomic Entray should make sure that NRC and ERDA carry out the above recommendations. (Author/OM)

#### 064

Evaluation of the Publication and Distribution of "Shelding Light on Facet about Nuclear Energy", EMD-76-12; B-130961. September 30, 1976. 37 pp. 4 appendices (14 pp.). Report to the Congress; by Elmer B. Stuste, Comptroller General.

Organization Concurred: Energy Research and Development Ad-

ministration.

Congressionel Relavante: Congress.

Authority: Price-Anderson Act of 1957 (P.L. 94-197; 42 U.S.C.

Authority Proceedings and a 1979 (FLL 34-197) (FLL 34-197) (SL 34-

"Stadding Light on Parts shout Nuclear Energy," an Energy Research and Development Administration (EDDA) spilletten, was distributed to EEDA offices and constructors in Culferium prior points in the State Contention have been rained regarding the objectivity of censis instensest made in the penspilet, and the entireless, militation, and legality of the pullettent, Prolifery, and the proof of the Contention have been rained to the penspilet, and the entireless, militation, and legality of the pullettent, Prolifery, and a proper document for release to the public or to employees within the Light deal Parts Benefice Reserve program. The penspilet was distributed beyond the stone of ERDA's Performance Advancent Program and was and by Journ employees and the properties of the Parts Performance Advancent Program and was and by Journ employees and the Parts Performance and the Parts Performance Advancent Program and was and by Journ employees and the Parts Performance Advancent Program and Was and Cylon and registers to influence the Parts Performance Advancent Program and Was and Cylon Charles Santas

plant construction ERDA did not violate any applicable laws or regulations, with the exception of the Government Printing and Binding Regulations, in publishing and distributing the numbles. Recommendations: The ERDA Administrator should: avoid nublishing, or assisting others to publishing, additional copies of "Shed-

ding Light on Facts about Nuclear Energy" without significant revision; recover and destroy undestributed copies at various ERDA offices and participating contractors to assers that the namehlet in not misused easie; and prohibit the use of educational materials which have not been subjected to established internal review procedures in any program such as the Awareness Program. (Author/OM)

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Evaluation of the Status of the Fast Flux Test Facility Processes. EMD-76-13; B-164105. November 15, 1976. 35 pp. + 2 appendices (3 np.). Report to the Congress: by Elmer R. Stants. Comptroller General

Organization Concerned: Energy Research and Development Administration.

Congressional Palevance: Congress Authority: Energy Reorganization Act of 1974 (P.L. 93-438).

The Fast Flux Test Facility (FPTF) was authorized by Congress in 1967. The PFTF is intended to test nuclear feels and materials most and to work safely and connunically in future breeder reserves Findings/Conclusions: The Entray Research and Development Administration believes that 37- and 19-pin tests will be adequate for closed loop test purposes; and 37-nin tests will provide valid and useful data for establishing design and operating limits. The construction project is now estimated to cost \$\$40 million instead of the \$87.5 million originally projected, and supporting costs are estimated at an additional \$613 million. More than \$200 million in beauter reactor program costs should also be recognized as FFTF costs. Since suthorization, the project's completion date has been extended by more than 5 years to August 1978. Technical problems with major components of the heat transport system remain. Recommendasions: All barge construction projects must be closely monitored to determine that sufficient design, development, and component testing has been completed. Congress should be provided with a current estimate and breakdown of all costs associated with the FFTF, including the cost of facilities being built or planned that directly support the test program (RRS)

### Considerations for Commercializing the Lagued Metal Fast Breeder Reactor, EMD-77-5, B-164105. November 29, 1976. 61 pp. Report to the Congress; by Elmer B. Stasts, Comptroller General.

Organization Concerned: Excrev Research and Development Ad-Congressional Relevance: Severe Committee on Public Works: Con-

The liquid metal fast breeder reactor (LMFBR) is regarded as an essentially menhaustible source of energy. A July 1975 Report by GAO and a subsequent statement by the Administrator of the Energy Research and Development Administration (ERDA) concurred in the opinion that the LMPBR program is still in a research stage, and that in the mid-1980's, a determination could be made about the acceptability of widespread commercial deployment of LMFRRs. The current status of the LMFBR program is reported, along with a discussion of the technical, financial, scheduling, and institutional factors which must be adequately entolved for successful commerelalization. Findings/Conclusions: Successful commercialization of the LMFBR will require not only the development of reactor technology but the supporting technologies of fuel febrication, plutonium reprocessing, and radioactive waste disposal. The year 1990 may be the earliest by which licensibility and routine performance can be demonstrated for all four required technologies. GAO, in a conservative estimate, feels it is most likely that four to six commercial-size LMFBRs could be in operation by the year 2000 if

a decision is made in the mid, to late-1980s to commercialize the LMFRR Retirected total earliest costs would be about \$150 billion. measured to 1974 delivers. Recommendations: The Administrator of ERDA should: fully develop a management and planning framework which integrates the research, development, and demonstration approach for the four key technologies; review and report annually to Congress the status of the development of all technologies needed for an LMFBR industry; and include in the annual report to Congress the relationship of these technologies to other energy programs in terms of the budgetary cost and other priorities. (SW)

An Unclassified Direct of a Classified Report Entitled "Safety and Transacriation Seleguends at Rocky Flats Nuclear Weenens Plant". PMD-77-9s. January 11, 1927. Report to Rep. Timothy E. Wirth; by Elmer B. Stasts, Comptroller General

Organization Concerned: Energy Research and Development Administration. Congressional Relevance: House Committee on Interior and Involut Affairs: Sensor Committee on Interior and Insular Affairs. Res. Timothy E. Wirth

Offsite releases of radioactive materials at the Energy Research and Development Administration's (ERDA) Rocky Flats Nuclear Wespons Pisnt in Colorado have aroused public concern. Pindiegz/Conclusion: Plutonium and cariched uranium shaments are made in approved containers and are relatively free of radiation. The seency continuously reviews its safeguards system, including provisions for additional security and the use of more export vehicles and corners. The Albuquerous Operations Office, however, is not reviewing shipments in accordance with agency requirements. The 22 buildings where plutonium is handled either do not meet design enters to withstand disasters or their canability has not been determined. Although radiation releases from normal operations have declined and have not exceeded established exposure standards, pubhe confidence can be increased. Recent accidents can be partly atinbuted to a lack of adequate or complete operating procedures.

Reconstendations: ERDA's management should improve safeguards to prevent loss of control of radioactive material during transportation. Independent organizations should continuously monitor the plant's release of radiation. (RRS)

# [Junes of Nuclear Fuel Reprocessing and Disposal of High Level Nuclear Wastel, January 31, 1977, 13 nn

Speck before California: Energy Resources, Conservation, and Development Commission; by J. Dexter Peach, Deputy Director. Engray and Minerals Day.

Organization Concerned: Energy Research and Development Administration: Nuclear Regulatory Commission

As part of its responsibility for reviewing Federal programs, GAO has been analyzing the Nation's nuclear research and development programs. Major issues facing nuclear fuel reprocessing include: (1) the shillty to protect and account for special nuclear material: (2) concern over proliferation of a nuclear technology which could produce weapons-grade material; (3) the ultimate impact of still evolving regulatory requirements; and (4) the absence of a commercial-sized reprocessing demonstration plant. The Nuclear Regulatory Commission has yet to reach a final conclusion on the environmental acceptability of nuclear fuel reprocessing. GAO has continually monitored Pederal radiosctive waste management programs. A recent public survey concluded that the general public views radioactive waste disposal as the most serious problem connected with nuclear power. The Energy Research and Development Administration has taken action to overcome adverse public reaction by developing a public affairs plan and making plans for earlier involvement of State and local officials in the site selection process. (RRS)

Reducing Nuclear Powerslant Leadtimes: Many Obstacles Remoin EMD-77-15; B-127945 March 2, 1977 14 pp. + 2 appendaces (4 Report to the Congress, by Robert F Keller, Acting Comptroller

General.

Organization Concerned: Nuclear Regulatory Commission Congressional Relevance: Hover Committee on Science and Technology; Senste Committee on Energy and Natural Resources; Congress.

Authority: Energy Reorganization Act of 1974 (42 U.S.C. 5876, 42 U.S.C. 5801). National Environmental Policy Act of 1969 (42 U.S.C. 4321), Federal Water Pollution Control Act Amendments of 1972 (33 U.S.C. 1151).

A review of the Nuclear Regulatory Commission's (NRC) program for licensing the construction and operation of nuclear powerplants revealed many unsolved problems. Utilities need 10 or more years for the completion of the plants, from the planning phase, through Roensing procedures, to construction. This long leadtime contributes greatly to the high posts of building mades; powerplants. Findings/Conclusious: NRC has changed some administrative practices and proposed legislation to reduce leadtimes. One change allows construction following completion of a portion of the permit application review. NRC is also encouraging the development of standard powerelant designs, and is proposing review of sites before receiving permit applications. State and local requirements are incompatible with some of these efforts and limit their effectiveness. Other factors contributing to long leadtimes are: (1) problems in assuring compatibility of parts of plants, (2) public opposition; (3) new safety technology; and (4) court decisions. Recommendations: The chairman of NRC should work jointly with the states to identify requirements in order to develop some commonality in the licensing

# process (HTW)

Issues Related to the Closing of the Nuclear Fuel Services, Incorporated Reprocessing Plant at West Valley, New York, EMD-77-27, B-151475. March 8, 1977 15 pp. + enclosures (34 pp.). Report to Rop. Leo J Ryan, Chairman, House Committee on Goverament Operations: Conservation, Energy and Natural Resources Subcommittee by Robert F. Keller, Acting Comprolice General.

Organization Concerned: Nuclear Regulatory Commission: Energy Research and Development Administration Congressional Relevance: House Committee on Government Operations: Conservation, Energy and Natural Resources Subcommittee. Authority: Energy Reorganization Act of 1974 (42 U.S.C. 5841).

The Nuclear Fuel Services, Inc. (NPS) plant at West Valley, NY. the only commercial nuclear reprocessing facility operated in the United States, was closed in 1972 for modifications aimed at limiting offluent releases, reducing personnel exposures to radiation, and increasing plant capacity. Recommendations: To help in formulating an appropriate waste disposal technology for this waste, the Nuclear Regulatory Commission (NRC) should: develop waste performance criteria; developeriteria for decommissioning waste storage facilities; identify alternative processes for waste management and determine their technical and economic feasibility; characterize the physical and chemical properties of this waste studge; proceed on a priority basis in the current analyses to assess the seismic integrity of the waste tanks; include a review of the stress relieving data in determining tank life to assure that the proper techniques were used; and arsess the condition of the yoult system and the surrounding polcharacter. In addition, NRC should: require New York State to report its plans on the future use of the West Valley size; prepare for NFS and State guidelines for decommissioning the plant and site and require a plan from them for decommission and correcting problems at the low-level waste burial site; and require the State to set up long term care requirements for the site. (Author/QM)

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lissues Related to the Closing of the Niclear Fuel Services, Inc., Reprocessing Plant at West Valley, New York, March 5, 1977. 15 pp. Testimory before the House Committee on Government Operations: Conservation, Energy and Natural Resources Subcommittee; by Monte Canfield, Jr., Director, Energy and Minerals Div.

Organization Concerned: Energy Research and Development Aduninistration; Nuclear Regulatory Commission; Nuclear Puel Services, Inc.; New York: Energy Research and Development Anthority. Congressional Relevance: House Committee on Government Oper-

ations: Conservation. Emergy and Natural Resources Subcommittee

The West Valley, New York, nuclear reprocessing plant operated by Nuclear Fael Services, Inc., was the only commercial reprocessing facility operating in the United States. The plant was closed in 1972. While the Nuclear Regulatory Commission (NRC) believes that the waste tanks at West Valley are in good condition, estimating tank life is ampredictable. The waste tanks may not most current NRC solumie criteria. Physical and chemical characteristics of the high-level waste sludge cuntained in the tanks are not completely known, and removal of the sludge presents a large problem. Technology is being developed for solidifying and disposing of nuclear waste, but such information will not be explishe for several years. It is publicly that the West Valley plant will ever operate again because of: (1) substantial nosts (\$615 million) needed to expand plant reports and to meet NRC standards; and (2) the plant design may not be susceptible to modifications to lower radiation exposure to workers. No plans have been developed to decommission the West Valley Site; the State of New York is ultimately responsible for managing and disposing of radioactive waste. (RRS)

### WHAT WILL BE THE ROLE OF FOSSIL FUELS IN MEETING FUTURE ENERGY NEEDS?

Capability of the Naval Patroleum and Oll Shale Reserves to Men Emergency Gil Needs. B-66927. October 5, 1972. 44 pp. + enclosurcs (14 pp.)

Report to the Congress; by Elmer B. Stasts, Comptroller General. Orneelsellen Cansarand: Department of the Interior: Department of the Nexy. Congressional Relevance: Congress.

Authority: 10 U.S.C. 7421-38.

The Naval Petroleum and Oil Shale Reserves were established to provide sources of oil for New ships in the event of a crisis in which oil imports would be out off. Their usefulness depends on the Navy's shifty to produce significant quantities of oil on short notice and to proserve the oil in the ground until needed by restricting production to a minimum. Fladings/Conclusions: The Naval Petroleum Reserves canability for producing oil for emergency needs has not been fully developed. Without additional development which would take time and cost more than \$2 billion, the Reserves could supply only a very small portion of the oil that might be needed in an emergency. Excess production has been necessary at most of the Reserves to provent drainage of oil by adjacent commercial wells. The Oil Shale Reserves were totally undeveloped and their ability to supplement existing oil supplies significantly in the near future was thought questionable. Proposed legislation, calling for production from a Reserve to cover costs of terminating offshore oil leases in the Santa Barbara Channel, would reduce resources in a major oil deposit. Recommendations: The Secretary of the Nevy, with the approval of the President, should determine how much oil the Roserves should be able to produce and how soon it should be available for defense needs and then submit to Congress a plan for adequate development and conservation of the Reserves. Congress should: (1) evaluate requests that the Navy submits in response to GAO's recommendations; and (2) deliberate on proposed legislation affecting the Reserves. (Author/HTW)

Combillity of the Nevel Petroleum and Gil Shale Reserve to Most Entropy Old North May 30 1973 12 no Temperary before the Senate Committee on latenar and Inmiter A.S. fairs: by J. K. Fasick, Director, Logatics and Communications Div.

Countrolles Conserved: Department of the News. Congressional Relevance: Senate Committee on Interior and Insular A (7----

## Authority: 10 115 C 7421-38 R-66927 (1972)

Executive orders have exablished four naval netroleum reserves and three naval oil shale reserves to provide sources of oil for naval ships. Proven recoverable oil in the reserve is about 1.2 billion barrels, whereas all domestic reserves, including the Navy's and Alasica's total about 49,72 hillion harrels Without additional development, the payal reserves could contribute only a small amount of oil needed in an emergency. The reserves could not ourrently substitute for oil embargo or military needs in a national omergency, or even do so if fully developed by the mid-1980s. The Navy has had to produce oil in excess of what it considers the minimum necessary to maintain the readness of the reserves. Offset production is carried out at three of the reserves, with leasing and chainage problems to be resolved at the fourth Environmental, economic and technical factors constrain production of oil shale reserves. The New should determine how much oil the reserves should be able to produce, and how soon the oil should be available to meet national defense needs, and then submit to Congress a plan for the development and conservation of the reserves. (DIM)

Information on the Proceed Alasko Oil Fineline, B-174944. June 27, 1973. 24 no + annendices (2 pg.). Record to Sen. William Proximire: Ren. Les Auton, by Elmer B. Strate, Comptroller General

Organization Concerned: Alveska Procline Service Co., Department of the Interior: Office of Emergency Preparedness, Federal Power Commission.

Congressional Relavance: Sen William Proximire, Rev Les Aspin Various sources contributed information on the proposed Alaska eiteline, but the information has not been verified Fundwaz/Cavclustons: The delivered prices of 26 0-26.9 degree API sweet crude oil as of November 15, 1972 in New York, Chicago, and Los Angeles were \$3.99. \$3.79, and \$3.20 per harrel, respectively. For medium sulphur crude oil, they were \$2 805 and \$3.12 per berrel in New York and Los Angeles, respectively. Percentages of crude oil from foreign and domestic sources used by New York, Change, and Los Angeles refineries, respectively, were: 22.0% domestic at \$0.60 per barrel transportation rost (to) and 78.0% foreign at \$0.23 to \$1.09 per barrel se. 91 5% domestic at \$0 125 to \$0.24 per barrel to and 8.5% foreign at \$0.46 per barrel to for Canadian oil (other prices not available); and 77.0% domestic at 50.10 to 50.60 per harrel to and 23.0% foreign at \$0.44 to \$1.07 per barrel to. The projected average cost per barrel for Persian Gulf oil delivered to Los Angeles after conversion to 26.0 degree grade was \$2.12. The ospital gost for a reinjection plant would be \$175 million with an operating cost of about \$6 million a year Production at the Cook Inlet/South Alaska oil fields will be 100,000 barrels per day in 1980 and 50,000 per day in 1985. (Author/OM)

Problems Count by Coal Ministr Near Federal Reservoir Projects). B-177092. Occober 2, 1973. 48 pp. + 2 appendices (5 pp.) Report to Ren. Henry S Rouss, Chairman, House Committee on Government Operations: Conservation, Energy and Natural Resources Subcommittee; by Elmer B. Staats, Comperoller General. Organization Concerned: Department of the Army; Department of

the Army: Cores of Engineers. Congressional Relayance: House Committee on Government Operattony Conservation, Recrey and Natural Resources Subcommittee Authority: Federal Water Pollution Control Act Amendments of 1972 (\$6 Stat. \$16). Refuse Act of 1899 (33 11 S.C. 407).

Right extensive coal mining operations impinge on the drainage basics of constain projects in Kentucky and West Virginia. Fig. shage/Canclusions: Both the reservoirs' purposes and their environments were adversely affected by the coal mining operations. Major problems seen were: sedimentation buildup, water quality deterioration from acid mine dramage, and eathetic and environmental degra dation. At one protect, Fishtran, Kentucky, extensive mining had nessted its primary purpose-flood control-and cast doubts on its planned benefits. The types of estate deeds used to subordinate minerals directly affected the extent to which mining can be regulated on Corps of Rosineers owned land. The concratiform extate deed used at Fishtran did not adequately protect the environment. Pendme legislation would control surface mining or surface disturbance from deep mining. Recommendature: The Corns should: revise its regulations for the types of estate deeds to be used to subordinate mineral rights and for factors to be considered when minerals are developed: monitor miners' compliance with restrictions; correct the problem of mining being conducted without Corps approval at Fishtrap, and protect Pishtrap from further deterioration of its drainage basin (DJM)

# Problems Cound by Coal Mining Near Federal Reservoir Projects.

October 25, 1973. 6 pp Temperary before the House Committee on Government Operations: Conservation, Energy and Natural Resources Subcommittee: by Henry Exchwege, Director, Resources and Economic Development

Organization Concerned: Department of the Army, Corps of English peers: Bureau of Reclamatio Congressional Relevance: Heure Committee on Government Oper-

ations Conservation, Energy and Natural Resources Subcommittee Authority: Refuse Act of 1899

Extensive coal mining within drainage basins of water resource projects can adversely affect the projects' purposes and their environments. The master problems noted at eacht projects in the Army Corns of Engineers' (Corns) Ohio River Division were: sediment in streams and other hadies of water: deterioration of water quality by said mine drawage, and the degradation of the projects' esthetic aspects and their environments. At one project excessive sediment has hindered the observive of flood control as a result of the Cores' method of acquiring land and subordinating mineral rights which did not adequately protect the project from the adverse effects of mineral develonment. The Corps' ability to regulate mining on lands not acquired for project purposes but within the drainage basins was hampered by deficiencies in relevant legislation and Federal-State coordination. The Corps should-revise sts regulations to give adequate guidance in subordinating mineral rights; establish a system for monitoring comphance: take action against mining operations being conducted with. out the Corns' approval; and promptly develop and implement a plan to correct the sediment problem at the aforementioned project. The Congress should consider legislation protecting the Pederal investment in reservoir projects, particularly regarding the effects of does mining. (OM)

Progress and Problems in Developing Nuclear and Other Experimental Techniques for Recovering Natural Gas in the Rocky Mountain Area. B-164105. April 2, 1974. 80 pp. + 2 appendices (3 pp.). Resort to the Congress; by Elmer B. Staats, Comptroller General.

Organization Concernade Federal Power Commission; Atomic Energy Commission; Department of the Interior. Congressional Rahavances Congress.

Authority: Atomic Energy Act of 1954 (P.L. 83-703: 42 U.S.C. 2051).

The amount of natural gas available and expected to be available is not sufficient to meet current and anticipated demands within the United States through 1990. Large amounts of gas are located in low-permeability or tight geological formations in the Rocky Moun-

tain area in three basins: Orean River Basin, Wyoming: Picesnoe Basin, Colorado; and Uinta Basin, Utah. Findings/Conclusions: This gas in not considered part of the U.S. reserves because it cannot be recovered economically with conventional techniques. Either guclear stimulation or massive hydraulic fracturing could be used to recover this eas. Both processes are currently under investigation. A third method currently under study is chemical explosive fracturing. Nuclear stimulation field experiments indicate that, in similar geological formations, several times more gas can be recovered over a well's life using nuclear stimulation than can be recovered using conventional techniques. Experiments using the massive hydraulic fracturing technique have not been conducted in the Rocky Mountain formations, and Pederal and industry officials are not sure whether this technique can be applied there successfully. Field experiments with chemical explosive fracturing have not been successfol. Before nuclear atimulation could be used for commercial development of natural gas. Congress would have to enact legislation to allow the Atomic Energy Commission to provide nuclear detonstion services to private firms. (SC)

# Receipt and Coardination of Natural Gas Reserve Data, B-178912. April 30, 1974, 17 pp. + appendices (46 pp.).

Report to Rep. Henry B. Gonzalez: by Elmor B. Staats, Cometroller General.

Organization Concerned: Securities and Exchange Commission; Federal Power Commission; Coastal States Gas Producing Co. Congressionel Relayances Res. Henry B. Gonzalez. Authority: Natural Gas Act (15 U.S.C. 717g (b)), Securities Act of 1933 (15 U.S.C. 77a). Securities and Exchange Act of 1934 (15

U.S.C. 78a) A review of gas reserve data handled by the Securities and Exchange Commission (SBC) and the Federal Power Commission (FPC) was directed towards determining what information the agencles receive, whether gas supplies are verified by PPC when ass sales are approved, and whether efforts of agencies are coordinated. Find-Ings/Conclusions: Information on gas reserves is required by SEC with registration statements and by FPC in accordance with its information gathering powers. The FPC's Bureau of Natural Gas is responsible for determining the occuracy of gas reserve estimates presented for certification of interstate cas sales. No estimate was made by the PPC staff of the proportion of approved sales reviewed. but it was believed to be a majority. Coordination between SEC and PPC with respect to gas reserve data was very limited. Most interagenor requests involved transmittal of prospectuses by SBC to FPC for review. When discrepancies that could not be resolved were revealed, they were merely brought to the attention of SEC. One such case involved differing estimates of gas reserves claimed by South Texas Natural Gas Gathering Company, an affiliate of Coastal States Gas Producing Company. Recommendations: To assist PPC in review of prospectuses, the Chairman of SEC should direct that FPC be provided with supplementary gas reserve data pertaining to interstate operations. The Chalemen of FPC and SEC should jointly

evaluate results achieved from this practice to determine if it should Statistical Data on Printleum and Petroleum Products. B-178205. May 24, 1974, 2 on. + appendices (38 on.). Report to Rep. Lester L. Walff; by Robert F. Keller, Acting Comptroller General.

Organization Concerned: Department of the Interior; Department of Commerce; United States Tariff Commission. Congrassionel Ralevences Rep. Laster L. Wolff. In response to a request for information on petroleum products.

Import and expert data, production and demand data, and reserve and stock data on petroleum and petroleum products were reviewed. The following information was complied: (I) schedules of domestic production, demestic demand, imports and exports for crude petroleum, selected petroleum products, natural gas, and natural gas bloods (1969-1973): (2) domestic productive capacity of crude potroleum, natural gas, and natural gas liquids compared to actual production attained on March 31, 1973; (3) operable refinery capacity and crude petroleum processed by month in 1972 and 1973: (4) estimate of domestic grade oil resources as of December 31, 1972; (5) and of year primary stocks of selected petroleum products and natural was liquids products (1969-1973); (6) Department of Commerce regulations for exports of petroleum and its products; and (7) schedules of production and exports of selected petrochemicals, plattic resins, and plastic materials by month in 1972 and 1973. (Author/QM)

Federal Coal Research-Status and Problems to Be Resolved. RED-75-322: B-182859. February 18, 1975. 82 ps. + appendix (1 pp.). Report to the Congress; by Elmer B. Stasts, Comptroller General Organization Concerned: Energy Research and Development Administration

Congressional Relavance: Congress. Authority: Energy Reorganization Act of 1974 (42 U.S.C. 5801)

The potential for increased development and use of U.S. cost resources in meeting increased energy demands is great. Findings/-Conclusions: In order for coal to play an important role in meeting future U.S. energy needs, 1) research must demonstrate the commercist fessibility of converting cost to other sources of energy; 2) the coal industry must be willing to finance and be capable of supplying increasing quantities of coat and 3) environmental problems associeted with coal supply and use must be resolved rationally. Recommendations: The Administrator of the Energy Research and Development Administration (ERDA), is cooperation with the Department of the Interior, the Federal Energy Administration, and other spencies involved in cost research, should determine whether formal procedures for exchanging research and development information can be developed. Because of potential problem areas which inhibit the transition from the research plasse to the commercial production phase for various coal conversion processes and problems presently inhibiting the increase in the U.S. coal supply, particularly the need for improved mining technology, the Administrator of ERDA should give these problems early consideration in the plannine for feature coal research and developing efforts. (SC)

#### Financing Infrastructure in Energy Development Areas of the Western States. August 22, 1975. 13 pp. Sowek before Seminar on Financina Infrastructure in Exercy Deve-Icomesc Aseas of the Western States, Sorwhird, UT; by J. Dexter

Authority: Federal Coal Lowling Amendments Act of 1975; S. 391. The Outer Continental Shelf Lands Massoment Act of 1975; S. 521 (94th Cong.). The Coastal Zone Management Act Amendments of 1975; S. 586 (94th Cong.). Mineral Lessing Act of 1920. Coastal Zone Management Act of 1972, H.R. 7680.

Peach, Deputy Director, Energy and Minerals Div

Assuring adequate visibility at the national level to the problems attendant to Rocky Mountain energy resource development is a kny to the political, administrative, and economic feasibility of significant Federal involvement in solution of the problems. The Pederal Goverament must understand that State and local interests desire early, substantive, and real involvement in both the planning and decisionmaking processes of energy resource development. The very specific problem of obtaining adequate funding to offset frost-end impacts of development at the local level is a matter of concern. The correct lealslative picture indicates that the Federal Government very likely will assist State and local governments in planning for the impacts of energy resource development. The ways to offset the impacts of such development are much less clear except for a possible increase in the share of muraues produced from Federal leaves distributed to states under the Mineral Lessing Act of 1920. Even the fate of that legislation may be suspect, since the Office of Management and

be continued or eliminated. (HTW)

caused by increased fuel costs. The industries plan to pass on these increases to the consumer whonever possible. Ohio, New Jersey, and North Carolina are States that will be seriously affected by curtailments. North Carolina is the most critical area; the number of industries without an alternative fuel capability is relatively high. The Federal Energy Administration, in charge of allocating fuels other than natural gas and electricity, projects adequate supplies of fuel oil nationwide but the availability of propane is uncertain. FPC natural gas reports do not show the economic impact of the curtailments on the areas involved. It appears that FPC requirements data may be overstated and since natural gas curtailments generally are computed as requirements less delivenes, the reported ourtailment quantities could also be overstated. (Author/OM)

Budget has traditionally taken atmng positions arbitrarily earmorking revenues and could recommend a veto. A hetter percess for involving State and local government and private interests in energy resource development planning and decisionmaking would: commit the Federal Government to a specific timetable regarding development of energy resources in an area; provide for State and local involvement at key points in the planning and decisionmaking processes; and provide explicit mechanisms for arriving at mutually extracable and timely resolution of the concerns of all parties involved. (Author/QM).

The Economic and Environmental Impact of Natural Gas Curtailments during the Winter of 1975-76. RED-76-39; B-181503. October 31, 1975, 43 pp. + appendix (3 pp.)

Report to Rep. Jack Brooks, Chairman, House Committee on Goverrement Operations; by Elmer B. Staats, Comptroller General Organization Concerned: Federal Power Commission: Federal Energy Administration.

Congressional Relayance: House Committee on Government Operations. Authority: F.P.C. Order 467-A. F.P.C. Order 467-B. F.P.C. Order

Because of shortages of natural gas, the Federal Power Commistion is projecting major curtailments by interstate pipeline companies during the 1975-76 winter season. The total amount to be curtailed for the period April 1975 through March 1976 is expected to be about 45% more than the amount curtailed during the same months in 1974-1975. The States expected to be the most severely affected by this winter's gas shortages are Oliso, Pennsylvania, New York, New Jersey, Maryland, Virginio, North Carolina, and South Carolina. Findings/Conclusions: These eight States receive about 68% of their total interstate supply from four interstate pipelines that were projecting major curtailment increases in 1975-1976 over amounts curtailed in previous years. These States have many industrialized areas which consume large amounts of zas and which employ a large nercentage of the States' antal labor force. Localized areas are expected to be severely impacted economically by the projected curtailments, particularly in those areas with industries that are dependent on passous fuels for processing or as feedstock. Alternative fuels can cost three to four times more than natural sad Although GAO did not identify any broad areas of projected unemployement or widespread shutdowns of industrial operations due to the curtailments, unseasonably cold weather early in the winter and-/or a shortage of alternative fuels could result in these conditions. (Author/SC)

### The Francoile and Environmental Impact of Natural Gas Curtalburgs

Ouring the Winter of 1975-76. PSAD-76-51; B-178205. November 11, 1975, 9 pp Technory before the House Committee on Interstate and Foreign Commerce: Energy and Power Subcommittee, by Heary Eschwege, Director, Resources and Economic Development Div.

Organization Concerned: Federal Energy Administration; Federal Power Commission Congressionel Relayones: House Committee on Interstate and Foreign Commerce: Energy and Power Subcommittee

The Federal Power Commission (FPC) projected a total natural gas curtailment of 3.2 trillion cubic feet for the period April 1975 through March 1976, representing, for the winter heating season, a 0.3 trillion cubic feet increase in curtailments over the 1974-75 season. Apart from localized usemployment, assuming normal weather conditions and the availability of alternative fuels, without which the impact would be more severe, the most important impact of the gas curtailments will be in terms of higher industry operating costs

Trans-Alaska Oil Pipeline-Progress of Construction through November 1975. RED-76-69; B-180224. February 17, 1976. 45 pp. + appendices (7 pp.)

Report to the Congress; by Elmer B. Stants, Comptroller General. Organization Concerned: Department of the Interior, Alveska Pipe line Service Co Congressional Relevants: Congress

Authority: Trans-Alaska Pipeline Authorization Act of 1973 (P.L. 93-153). Defense Production Act

The Alyeska Pipeline Co. completed construction of the Alaska oil pipeline in the fall of 1976, but the oil is not planned to be transported until July 1, 1977, because pump stations and the terminal are not expected to be completed before that date. Findings/-Conclusions: The planned papeline system is to have a capability to transport 600,000 barrels of oil a day by July 1, 1977, and 1.2 million barrels a day by November 1977. A decision had not been made by Nevember 1975 with regard to increasing the capacity in excess of 1.2 million barrels a day. The quality assurance program for pipeline construction did not function properly during the early part of the 1975 construction season because Alyesks had not given its quality control organization authority to halt construction which did not conform to environmental or technical regulations. Federal and State mosstors had to carry out the quality control functions by requiring correction of some work. Construction of the pipeline will affect the Alaskan landscape permanently. It will cross 801 miles of previously undeveloped land. The effectiveness of the technical requirements of the pipeline system will not be known until the system becomes operational Some environmental damage has already resulted from the jack of crosion control, construction related oilspills, and failure to meet sewage treatment standards at construction camps. (Author/QM)

Status and Obstacles to Commercialization of Coal Lisurfaction and Gonfession, RED-76-81: B-151071, May 5, 1976, 38 pp. + appendices (26 pp ). Report to Sen. Jennings Randolph, Chairman, Senate Committee on Public Works: by Elmer B. Staats. Comptroller General.

Organization Concerned: Energy Research and Development Administration Congressional Relevance: Senate Committee on Public Works.

Authority: Natural Gas Act of 1938 (15 U.S.C. 717). Synthetic Liquid Fuels Act of 1944 (30 U.S.C. 321).

The Energy Research and Development Administration (ERDA) is funding development work on a number of new or second-generation Bourfaction and gasification processes. BRDA expects these processes, when developed successfully, would reduce the east of synthetic oil and gas by 15% or more. Pludings/Conclusions: ERDA spent about \$205 million in fiscal year 1975 on this development work and is authorized to spend about \$250 million in fiscal year 1976 and the 3-month transitional quarter, ERDA's efforts on coal liquefaction and gasification have not yet progressed to the point where a plant has been built that can process more than 100 tors of coal a day. Once a successful demonstration-scale operation is achieved, ERDA expects little technical risk in scaling up to commercial size it appears highly unlikely, though, that any commercialaixed coal liquefaction plant will be operating in the United States by 1985. A principal obstacle has been the availability of less expensive satural oil and gas. In the gasification area, at least 16 projects have been announced, but only three have progressed to the point of applying for the required Federal Power Commission approval Boosomic constraints to building such commercial plants include: large capital requirements, the ability to obtain private sector financing; east escalation; and competition from other feel sources. Even the ERDA revised gasification estimate of 250,000 to 500,000 barrels of oil a day by 1985 could be difficult to achieve. Recommendations: Regulatory changes or Federal subsidies might be needed in addition to loan gearantees for initial high British thermal unit coal assification projects. Environmental uncertainties and the necessity for large amounts of water to process the coal need to receive further study. (Author/QM)

#### Plans for Construction of a Magnetohydrodynomics Trit Facility in Mostrono. EMD-76-8; B-178205. September 1, 1976. 1 pp. + appardices (11 pp.). Report to Reo. Marilyo Llovd: by Robert F. Keller, Acting Comp-

Organization Concerned: Energy Research and Development Administration.

Congressional Relevance: Rep. Marilyn Lloyd Authority: Department of the interior and Related Agencies Appropriation. Act of 1975 (Pt. 1984), 48 Stat. 2033, Special Energy Research and Development Appropriation Act of 1975 (Pt. 193-122). 88 Sat. 276, S. Renty, 93-1065. S. Renty, 93-903. H. Rept., 93-123.

For a number of years the Federal Government, anticipating an increased use of coal, has been funding programs to make coal a eleaner source of energy. It has expanded its efforts to include technotagies designed to convert cost energy to electricity more efficiently than conventional powerplants do. In this way, the same amount of electricity could be generated using less of the colluting fuel. An electrical penerator operating on the principle of magnetchydrodynamies (MHD) is one such technology. The goal of the Energy Research and Development Administration's (ERDA) MHD program is to design, construct, and operate a combined MHD and steam commercial demonstration plant by 1989. Findings/Conclasions: Analysis of matters concerning the construction and operation of the MHD test facility in Montana discloses that the Congress did intend for BRDA to build two such facilities there, the component development and integration facility and later the engineering test facility. Because of this congressional mandate, no analysis was made to determine whether it would be more advantageous to build either of these facilities in another State. (Author/OM)

### 087

troller General.

H Rept. 94-696.

The Legality of the Reported Use by the Europy Research and Development Administration of Ceresia Fould Europy Founds. B-178005.08. Speptender 7, 1976. 9 pp.
Letter to Rep. Ken Hechler, Chairmen, House Committee on Science and Technology: Europy Research, Development and Demonstration (Possil Postly Subcommittee; by Robert F. Keller, Achine Comerciale General.

Organization Concerned: Energy Research and Development Administration.

Immunation Relevance: House Committee on Science and Technology: Beergy Research, Development and Demonstration (Fossil Psels) Subcommittee.

Authority: (P.L. 94-187; 89 Stat. 1063). Energy Reorganization Act of 1974 (P.L. 94-188; 88 Stat. 1233; 42 U.S.C. 3801 et seq.). Federal Normulate: Bereitz Research and Development Act of 1974 (P.L. 94-188).

93-577; 88 Stat. 1878; 42 U.S.C. 5901 of 1993.). 89 Stat. 1073. H.R. 12113 (94th Cong.). H. Rept. 94-294. Energy Digest SEPTEMBER 1977

#### 06\$

(Contracting Out Besic Planning and Management Program Functions). EMD-76-11; B-186105. September 21, 1976. 2 pp. + enclosures (13 pp.).

Report to Rep. Ken Hochler, Chaisman, House Committee on Science and Technology: Borrgy Research, Development and Demonstrated (Pauli Fuels) Subcommittee, Rep. William S. Mooshead, Chairman, House Committee on Government Operations: Construiton, Energy and Nasaral Resources Subcommittee; by Bi-mer B Sants, Comprehend Committee on Control of Committee on Control of Committee on Co

Organization Concerned: Energy Research and Development Administration, TRW, Inc.

Congrasioned Bulwares: Heur Committee on Science and Technology, Beergy Research, Development and Demonstration (Flowill Fuzil) Subcommittee; Heur Committee on Government Operations: Conservation, Energy and Natural Resources Subcommittee. Authority: Energy Reorganization Act of 1974 (FL. 93-483).

The Energy Research and Development Administration's (ERDA's) Fossil Energy Organization awarded a contract for various energy-related planning and analysis services to TRW, Inc. Findings/Conclusions: The effect of an agency contracting out basic functions for planning and management of its programs is to dilute the agency's ability to retain essential control over the conduct of its programs and to assure the Congress that its programs are being carried out in an efficient and economical manner. The heavy workload and the time pressures involved in putting together a national energy research and development plan may have justified the need for the services TRW, Inc., provided, Nevertheless, ERDA needs to reduce its dependence on management and technical support contracts. Fossil Energy Organization officials are reducing dependence by increasing their staffing. Recommendations: The Administrator of ERDA should: establish within the Possil Energy Organization a system for screening information sent to support service contractors to prevent possible conflicts of interest; show as a line item in Possil Regrey's hadget to the Congress the funds needed for support service contracts to keep the Congress better informed; and require that all forum service contracts contain a provision requiring the inclusion of a conflict-of-interest clause in all subcontracts and provisions restricting contractors' autolying consulting services on other contractors' competitive and noncompetitive proposals for rendering services in various areas where a conflict could arise. (Author/OM)

# 000

Review of FPC and FEA Actions in Assessing the Impact of Natural Gast Curtailments during the Winter of 1976-77. BMD-77-12; B-180228. January 13, 1977. Released April 15, 1977. 12 pp. Letter to Rep. John D. Dingell, Chierman, House Committee on

Interstate and Foreign Commerce: Energy and Power Subcommittor; by Elmor B. Staats, Comptroller General.

Organization Cencernish Pederal Power Commission: Federal En-

ergy Administration.

Congressional Rajavence: House Committee on Interstate and Foreign Commerce: Energy and Power Subcommittee.

GAO was asked to examine whether there would be shortages of natural gas in the winter of 1976-77 and the need for gas curtail-

ments, their effects, and what could be done to reduce their impact. Radings/Checkadows At the Federal Nove Commission (PPC) and the Federal Rengy Administration (PPC) and the Federal Rengy Administration (PPC) was received to the control of the Commission of the

with gas opedine computation on gas curtailment Issues would be enbanced if FEA staff personal vould graticipate. Recrimendades sizes: The charmen of the two agencies should issue a joint memoral sizes: The charmen of the two agencies should issue a joint memoral state dislenses to their expressive tasks, particialerly in femulating continguous plans among from shortages, and cooperate in data rolle-totion and dissemination. Their personnel should have unrestructed secrets to this data. FEA should participate in FPC herrings on gase curtailment. URL

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Issues Needing Attention in Developing the Strategic Petroleum Reserve. EMD-77-20; B-178205. February 16, 1977 19 pp. + 2 appendices

Report to the Congress; by Elmer B Starts, Compitedler General.

Organization Concarnad: Federal Energy Administration, Department of the Interior, Department of State; Department of Defense,
Department of the Navy.

Congrassional Ralayanea: House Committee on Interstate and Foreign Commerce; Senate Committee on Intersor and Insular Affairs Congress.

Authority: Energy Policy and Conservation Act (P.L. 94-163)

The engagest of the Strutonic Petroleum Reserve is to resolute pentention against future oil embarages by creation of a reserve could to approximately SIO burrels of courte oil. As part of the reserve, an Early Storage Reserve is to be established to contain at least 150 million barrels by December 1978. The proposed reserve will contain only crude oil which will be stored underground in salt dome caverns or in mines, primerily along the Gulf Coast, Issues which require further analysis by Congress relate to three questions (1) Is there a need for the type of Strategy Petroleum Reserve? (7) How should the strategic Petroleum Reserve he filled? and (3) How should the Strategie Petroleum Reserve be Enanced? Fundangs/Cauclamane GAO continues to support the concept of a system of national emersevery energy reserves. It helieves, however, that the use of industry crude oil and product stocks may be an alternative to the creation of a Strategic Petroleum Reserve. The Federal Energy Administration plans to purchase oil for the reserve at near the national average composite price. As long as proce controls remain on domestic oil. royalty oil could be required to fill the reserve, resulting in significant dollar savings with little or no adverse financial impact on small refiners. (RRS)

#### 199

[Procurement of Foreign and Domestic Petrolium by Department of Definer]. PSAD-76-51; B-178205. Documber 29, 1977 18 pp. + enclosure (2 pp.). Report to Sen. William Proximite, Chairman, Jose Economic Com-

mittee: Priorities and Economy in Government Subcommittee, by Elmer B Statts, Comperciler General.

Organization Concerned: Department of Defense

Organization Concerned: Department of Defense
Congressional Raisvance: Jose Economic Committee: Priorities
and Economy in Government Subcommittee.

and Economy in Government Subcommistee.

Authority: Truth-in-Negotiations Act of 1962 (P.L. 87-653). Defense Production Act of 1950 Emergency Petroleum Allocation Act.

B-168450 (1974).

Although the Defense Field Supply Center has mote a gamine field to procuse periodism for the Desention of Ordinose (2001), when he provided assurances that prices gaid for perceivens were fair and reasonable. Finding Containions Configurate were devoted or contained to the contained of the Contained Configuration of the Contained Contained Contained Contained Contained Contained to device the Contained Contained Contained Contained Contained to Contained Contained Contained Contained Contained Contained 1973, the Contained Contained Contained Contained Contained Contained The Contained Contained Contained Contained Contained Contained Adjustment Contained Contained Contained Contained Contained Contained Adjustment Contained Adjustment Contained titlos à lacking. Aroumentatione Where companies ser exemption from furnathing cout dats on the besis of substantial sales of the object. He despitable, the Secretary of Defense should debain encopyl dats to estable that par less are beand on proces paid by comparable excitomers on should be extracted by the comparable of the continuence of should be extracted before conducting contract suggestioners. Dot should be extracted before conducting contract suggestioners. Dot should also exprise the fastishility of basing excitation payment on charges in price index designed to measure movement in protoloum contract particular supplications. Dot suggestion of the contract payment of the payment of the contract payment of the contract payment of the contract payment of the payment of the payment of the payment of the

#### HOW DO FINANCIAL INCENTIVES, TAX POLICIES, AND REGULATORY POLICIES AFFECT ENERGY SUPPLY ACTIONS?

#### 092

Opportunities for Improvements in Reclaiming Strip-Mined Lands under Coal Purchase Contracts. B-114350. August 9, 1972 33 pp. + 4Dpindiess (10 pp.) Report to Rep. Ken Hechfer; by Elmer B. Staats, Comptroller Gen-

Organization Contarned: Tennessee Valley Authority.

About 1560 the Tenossee Valley Authority (TVA) begins to denourage adoption of strip-muni plaisables in the States from which is buys coal. Because not all of these had adopted strip-mening environmental protection legislation by 1955, TVA decided to include reclimation requirements in its strip-mund-onal purchase contacts. These conjuments provided that the constracts buy all tour materials, keep the demange free of spoil and control water mostly approach to the confidence of the control water mostly and the strip of the control water mostly and the strip of the control water and the control water and the control water to the control water and the control water to the control w

surposed seases, and compace the request reclimation works which a beautiful and the desiry of all collect speed under the contexts, and the selection of the context and the selection of the context that as yet off as carbon versions and are a significant supervision in PVA1 appoints to the reclimation of single sense in East NTA appoints to the reclimation of single sense in East NTA appoints to the reclimation of single sense in East NTA appoints to the reclimation of single sense in East NTA appoints and the reclimation of the single sense in East NTA appoints and the reclimation of the single sense in the single se

recamium requirements. 174 on an invest socious processives for conducting and reporting on impetitors of retinantion activities. On conducting and reporting on impetitors of retinantion activities for concess and acobity before including an arcs in an approved inling plan; establish guidelines on enforcement actions for perspective reclamations, and establish procedures for use in performing and recording on imprections (OM).

#### 093 Administration of Regulations for Surface Exploration, Mining, and

Perferenciation of Public and Indian Coel Lands: B-148623 August (), 1972. 31 pp. + appendix (5 pp.).

Riport to Rep. Henry S. Reuss, Chairman, House Committee on Government Operations: Conservation, Energy and Natural Residences Subsemmittee; Re. Guy Vandor Jast, Ranking Minority Conservation, Energy and Natural Residences Subsemmittee; Re. Guy Vandor Jast, Ranking Minority

Member: by Elmer B. Stasts, Comproller General.

Organization of General.

Organization Generals Bureau of Indian Affairs, Bureau of Land
Management; Department of the Interior, Geological Survey,
Congressionel Relevance: Heuro Committee on Government Operations: Constrainties, Benergy and Natural Recourses Subcommittee,

on The Committee of Committee on Committee on Constrainties, Genergy and Natural Recourses Subcommittee,

on Committee of Committee on C

Rep. Guy Vander Jagt.
Authority: Minteral Lands Act of 1920, as amméded (P.L. 86-705; 10
U.S.C. (81). Minteral Lands Act for Acquired Lands (P.L. 80-382;
30 U.S.C. 351). National Barviorennessia Policy Act of 1949;
91-190, 83 Stat. 852). 52 Stat. 347, 35 Stat. 781, 43 C.F.R. 23, 25
C.F.R. 177.

The Department of the Interior's regulations concerning surface exploration, mining, and reclamation of public lands and Indian lands do not provide specific technical requirements for such activities. Such requirements are based on examinations of the effects that the proposed mining operations will have upon the environment and are included as spross stipulations in permits or leases granted by the Department to the mining operators During the period January 18, 1969 to November 1, 1971, the Department issued 258 permits and 38 lesses for coal exploration and mining on public and Indian lands. The Bureau of Land Management (BLM) had 529 normit and 115 lease applications pending at November 1, 1971, the Bureau of Indian Affairs (BIA) had none Findings/Conclusions: For the 65 permits and lesses reviewed (53 for BLM and 12 for BIA), it was found that: the required technical examinations had not been conducted for 35 of the permits and lesses; some permittees were operating without approved exploration plans and some plans had been approved without technical examinations, some compliance and performance bonds covering the requirements, including reclamation, of leases or permits had not been obtained from the operators; and some of the reports required to be submitted by the operators to the Department at various stages of the operations on such matters as grading and backfilling, planting, and abandoning operations had not been submitted. Documentation of the results of technical examinations, onsite visits, and other activities required by the regulations was not always prepared BLM's procedures for the preparation of environmental impact statements do not outline the criteria to determine when and under what circumstances statements should be prepared. BIA has not developed any procedures for the preparation of such statements. Recommendations: The Secretary of the Interior should clarify the requirements of the Department's regulations by providing guidance as to: the timing and scope of technical examinations and the submission and approval of exploration and mining plans; the required amount of performance bonds, the need for adequate documentation of the results of the activities conducted under the regulations; and the need for documented periodic reviews of the administration of the regulations. The Secretary should approve the adequacy of the fee associated with processing an application for a coal permit or lease; require BLM to revise its procedures for the preparation of environmental impact statements to comply with the guidelines of the Council on Environmental Quality, and require BIA to adopt such procedures. (Author/QM)

# 094

Procedures for Evaluating ReviewalNewer of Petroleum Pipeline Rates Need Improving. B-153389. September 20, 1972. 16 pp. + appendices (4 pp.) Report to the Congress; by Robert F. Keller, Acting Comptroller

General.

Organization Concernade Department of Defense; Department of the Air Force; Interatate Commerce Commission.

Congressional Reliveness: Congress
Authority: Truth in Negotistics Act of 1962. Interpate Commerce

Act.

The Department of Defense (DOD) spends an estimated 17 million annually transporting periodem their by pipelines within the considerated Illusied States. A major period on this cust as anotherine considerated illusied States. A major period on this cust is anotherine to the contract of the contr

for the same service. As a result of GAO's review, DOD negotiated retroactive rate reduction and obtained refunds from the carriers. Recommendations: DOD should negotiate rates for new pipeline service and review the reasonableness of prepart means by requiring carriers to limit quotations for pipeline service to that parties of the pipeline used in common carriage; accept rates no higher than those charged commercial customers; negotiate sensests contracts for the extra services no resulted acceptance to the military and if the central contracts.

refuse to negotiste separate contracts, solicit the assistance of the interstate Commerce Commission in establishing reasonable rotes.

#### 095

[Department of the Interface Views of Communic on Administration of Regulations for Surface Explorations, Minkey, and Recharaction of Public and Indian Coat Laund; 18-14823 January 31, 1973. T pp. Report 10 Rep Henry S. Reuss, Charman, House Committee on Government Operations: Conservation, Energy and Natural Resources Subsensation of Communication of Communica

Organization Consumed Department of the Interior; Bureau of Land Minnagement, Council on Environmental Quality; Bureau of Indian Affans; Geological Survey. Congressioned Relevance: House Committee on Government Department Conservation, Engrey and National Researchers Subsectionalities.

ations Conservation, Energy and Natural Resources Sub-committee.

Authority: Mineral Leasing Act (30 U.S.C. 181). National Environmental Policy Act 25 C.F.R. 177. 43 C.F.R. 23.5(a), 43 C.F.R. 23.7,

23.E. Bureau of Land Management Manual, § 3509

The Department of the Interior believes that: (f) the Bureau of Land Management's (BLM's) procedures for preparing environmental impact statements were developed through formal and informal consultation with the Council on Environmental Quality (CEO) and fully comply with CEO guidelines: (2) GAO's report on the administration of regulations for surface exploration, mining, and reclamstion of public and Indian coal lands by the Department was not in all cases factual and accurate; and (3) reclamation regulations were fully implemented, and further clarification of BLM's regulations or the manual instructions and other implementing guidelines of the Geological Survey is unnecessary. Findings/Constantone BLM's procedures do not provide adequate criteria to determine when and under what elecurationes BLM should prepare individual environmental impact statements. After BLM has issued a statement on its cool-lessing program, criteria will be necessary to identify those netions which qualify as exceptions to the program and which justify individual statements. Department officials do not have the evidence to back up their claim that 10 leases and permits, rather than the 23 cited by GAO, did not have technical examinations before issuance, extension, or adjustment. Recommendations: Further clarification and guidance regarding the Department of the Interse's reclamation regulations is needed, particularly concerning circumstances in which site examinations are not required, (OM)

#### 076

Revenues and Costs Allocated to Power Operations at Multiple-Purpose Project in the Southwestern Federal Power System. B-125031. February 20, 1973. 36 pp. 4 appendices (12 pp.). Report to Rep. Carl Albert, House of Renoracitatives Speaker of the

House; by Elmer B. Staats, Comptroller General.

Organization Concurred: Department of the Army, Department of the Interior; Smithvestom Power Administration; Department of the Army; Corps of Engineers; Foders! Power Commission.

Congressional Relayance: House of Representatives: Speaker of the House Rep Carl Albert:
Authority: Florid Control Act of 1944 (16 U.S.C. 8258). S. Rept.
1764 (Rath Corp.) S. 3338 (Rath Corp.) H.P. 2788 (Rath Corp.)

Authority: Flood Control Act of 1944 (16 U.S.C. 825s). S. Rept. 1764 (84th Cong.). S. 3238 (84th Cong.). H.R. 278E (84th Cong.) B-163798 (1970).
The Speaker of the House was concerned over recent rate in-

the speaker of the relief will concerned over feeder the aswest and the people's of costs and other they assessed against the power of the contract of the cost of the cost of the cost of power of the cost of the cost of the cost of the cost of the power operation of these projects. Findings/Conclusion Review and the thin the cost of the cost of the cost of the cost of the deprecision express, totaked show \$275 million, resulting is a deprecision express, totaked show \$275 million, freezing the other of the cost of the cost of the cost of the cost of the projects in operation at Jones 20, 1970, testing \$407,\$404,\$5.8790, persists and the cost of of total joint-use project expenses allocated to power has tended to decrease for projects constructed in recent years, the total joint-use costs allocated to power have increased. (Author/QM)

Proposed Renations to the Criteric and Contracts for Uranium Enrichment Services. B-159687. March 15, 1973. 30 pp. + 3 appendices (13 pp.)

(13 pp.). Report to Rep. Melvin Price, Chaltman, Joint Committee on Atomic Energy; by Elmer B. Stasts. Comptreller General.

Organization Concerned: Atomic Energy Commission.
Congressional Raidwannean Join Committee on Atomic Energy
Authority: Atomic Energy Act of 1954, as armosded (42 U.S.C.
2011). Private Ownership of Special Nuclear Materials Act (P L
85-489).

The Atomic Energy Commission (AEC) has preposed revisions to the Uranium Enrichment Services Criteria. These revisions would change the terms and conditions under which AEC parrently offers to provide enrichment services by requiring its customers to assume a greater share of the financial risks in supplying such services. The proposed changes would provide AEC with the flexibility to initiate operating practices which should be helpful in accomplishing ARC's objectives. Fladings/Conclusions: There are no legal objections to the proposed criteria changes and the corresponding changes AEC is contemplating in its contractual relationship with its customers AEC's objectives in changing the criteria seem reasonable because of the uncertainties as to the level of future customer demand for enrichment services and the substantial community necessary to recwide additional enrichment capability. Because of the possibility that AEC may reach as enrichment capability limit by the end of calendar year 1974, the Joint Committee on Atomic Energy may wish to consider requiring that AEC report on its total outstanding commitments, estimated additional commitments, and maximum enrichment capability more frequently than the present annual report period. The Committee may also with to require AEC to include information on industry's advangement toward assuming reconnichility for providing any additional enrichment capability needed beyond AEC's capability in its report. The Committee may wish to discuss with AEC its contingency plans as to what it would do if industry can not assume responsibility for new enrichment capability by the end of 1974 (SC)

How the Fideral Government Farticipates on Activities Affecting the Energy Resources of the United Stotes. 9-178205. April 6, 1973–34 59. 4-4 appendices (8 pp.). Report to the Congress, by Elmer B. Stratis, Comptroller General

Opportueites Concerned: Atomic Energy Commission; National Solitace Foundation; Bureau of Miner; Department of the Interior, Ocological Survey; Bureau of Reclamation; Rural Electrification Administration; Federal Power Commission; Tennessee Valley Authority; Eavitemental Properties Agency; Department of the Army; Corps of Engineers; Department of the Army; Corps of Engineers; Department of the Comparation Radivaronts: Organisation Radivaronts: Organisation

Authority: Geothermal Steam Act of 1970 (P.L. 91-581). Federal Coel Mine Health and Safety Act of 1969 (30 U.S.C. 901). Water Quality Improvement Act of 1970 (P.L. 91-224).

Writtably all energy demands in the United State are presently audited by the principle years guaranteed in the training as, ceal, water, and market energy—end by electrosity, which is considered to be a scoolarly from of sealing because it is produced though conveniend of a princip yourse. Advanced course goodcreen, solid bads, and described the sealing and collection of the state of the princip of and the sealing and the sealing and collection of the sealing of the Political efforts in the energy field has envired over the years without the health of a form disastical energy polity with other contradiated disastics or coordination. Efforts aftering thesi years 1972 and 1973 pertisation of the produced of the produced of the produced of the produced produced the produced of the produced piller, treates that development of polarizably new energy sources, determination from a solute way to proceed gains effect on confirmation of the solution of the confirmation of the confirmation of the serge, production and said of destribing, and rappetion of temperature production and said of destribing, and rappetion of temperature of the confirmation of the c

(Repowers Requirements of the Pederal Investment in the Tennessee Valley Authority's Electric Power System]. B-114850. April 27, 1973. 6 pp. Report to Rep Joe L. Evins, Chairman, House Committee on Appro-

printions Public Works Subcommittee; by Elmer B States, Comptroller General.

Organization Concerned: Tennessee Villey Authority.

Compressional Relevance: Houre Committee on Appropriations:

Public Works Subcommittee. Authority: Tennessee Valley Authority Act, § 15d (P.L. 86-137; 16 U.S.C. 12A). S. Rept. 86-470

The legal requirements for rensyment of the Federal appropriation investment in the Transsee Velley Authority (TVA) and the return on that investment treat a large part of the investment as if it were equity capital. Although TVA is required to repay \$1 billion of the appropriation investment, it is not required to repay about \$201 million of the investment which was outstanding at June 30, 1960. or any of the apprenriation investment made after that date. Findiner/Conclusions: If the appropriation investment cutstanding at June 30, 1973, were considered as equity capital, the \$20 million annual repayment of the appropriation investment presently required would be available instead to reduce the amount of bonds TVA would otherwise issue to finance its nower program. This procedure would result in net savings in interest costs because funds which TVA would use to recey the appropriation investment with an estimated interest rate of 5.75% would be used, instead, to reduce the amount of bonds which TVA would otherwise issue at an estimated interest rate of 7.5%. The resulting savings in interest costs would be available to reduce or postpone power rate increases. From fiscal year 1974 through fiscal year 2014, the use of the alternative renavment sorthed could result in TVA power customers realizing savings totaling about \$287 million (Author/OM)

100 Improved Impection and Regulation Could Reduce the Passibility of Olispills on the Outer Continental Shelf. B-146333. June 29, 1973. 36

pp. + appendices (S pp.).

Report to Rep. Henry S. Reuss, Chairman, House Committee on Government Operations. Conservation, Energy and Natural Resources Subcommittee; by Elimer B. States, Comptroller General.

Openization Concerned Department of the Interior; Geological Survey; Cossis Glund; Environmental Protection Aproxy. Congrassioned Balavaness: House Committee on Government Opentions: Conservation, Benrya and Natural Resources Subcommite Authority: Federal Water Pollution Control Act (33 U.S.C. 161), Outer Continental Shoff Lands Act (43 U.S. C. 1323), 30 C.F.R. 250.

The Department of the Interior is authorized to lease lance and to regulate oil and gas operations on the Outer Continents Shelf (OCS) to conserve natural resources. The Geological Survey is responsible for importing and regulating oil and gas operations on OCS. Fleshings/Continuions: Form March 1971 through February 1972, spills totaling about 9,600 burrels were reported by offshore oil operations in the Gulf of Moxico ores, and there were more than 50 of the Continuing Continui

natural oil stors in the Pacific area. Geological Survey inspectors in the Gulf Coast ragion did not always follow prescribed regional enforcement actions, and written warmings in the Pacific region were sometimes ineffective in obtaining promot correction of deficient equipment. Except for producing wells, the Survey had not issued written policies on the frequency of inspections, especially for drilling of new wells, remedial work on producing wells, and abandonnext of nontroductive wells. The Survey did not inspect structures in the Gelf Coast tree or frequently as required by standards say but the region or by official Survey policy. The Survey had no formal inspector training program. Recommendations The Securities of the Interior should require the Geological Survey to emphasize the need for inspection personnel in the Gulf Coast region to apply prescribed enforcement actions for violations of OCS orders, recuaction the Pacific region's policy of not halting operations for violations of OCS orders; and establish a realistic policy on how frequently each type of OCS operation must be inspected.

#### 101

Authority: H. Rent. 89-1409

Proposed Power Role Interest of the Bureau of Reclassion's Control Vestige Proper, Lemany 22, 1974. 8 pp. - 4 stachments (5 pp. 7 Teimony before the House Committee on Government Operations: Conservation, Sonery and Natural Resources Subcommittee, by 31st as E. Birkle, Deputy Director, Resources and Economic Development Day

Organization Concerned: Bureau of Reclamation; Pocific Gas and Electric Co.; Federal Power Commission. Congrusional Ralawance: House Committee on Government Operations. Conservation. Supray and Natural Resources Subcommittee

Preparing rate and repayment studies for the Central Valley Project based on predicting changes in the operating methods that are subject to the outcome of future agreements between the Bureau of Reclamation and Partilio Gas and Electric is a questionable method. The no-deficit-year concept used in the rate and renovment study is not consistent with the criterion used by other Federal power manketing scences or with congressional statements as to the concerns which would be used in occurring a rate and renewment study. On the basis of the Bureau of Reclamation's study using updated bydrology data, the effective rate for both capacity and energy would be about 5.97 mills per kilowatt-hour instead of the proposed 6.15 mills per kilowatt-hour, an overall rate increase of about 46% compared with the proposed increase of 51.6%. Except for providing \$78.4 million for those stems referred to as deferred costs, nower rates should not be increased to provide a surplus. Replacement costs should be espitalized rather than expensed in the year in which they occur. (Author/OM)

### 102

Renew of Complaints Governing the Mondatory Petroleum Allocation Program and the Regulation of Petroleum Printing. B-178205. May 3, 1974. 6 pp. 1-6 appendixes (13 pp.). Report to Sen. Robert Dole; by Elmer B Staats, Compiteditor General.

Organization Concernad: Federal Energy Office. Congressional Relevance: Str. Robert Dole.

Authority: Economic Stabilization Act of 1970 (P.L. 91-379; 84 Stat. 799). Emergency Petroleum Allocation Act of 1973 (P.L. 93-159; 87 Stat. 627). Defense Production Act of 1950 (50 U.S.C. App. 2061). S. 3151 (93rd Cong.).

Several persons complained to Stantor Dobe regarding the profound milestallon porpara. Highing-Commission Meat of the complaints investigated were written within a month of the Again and the Federal periods and almostone program in Content 1973. Most of the personnel actions regardined in force at the time of the complaints have been revised and many changes have conserved in the reorgant's organization, stuffing, policies, and procedures. Data systems designed to provide the Federal Energy Office (FEQO)

with data on where and when different petroleum products are necessity are not protected are now personing our see respected to be operating an the near finitive. Under the present pregnin, availables supplies are affected to a minerity accordance with previous estimated by PEO. The late of antiherity specified time caused some problems for the Kareata City PEO. Repelled of time caused some problems for the Kareata City PEO. Repelled of time caused some problems for the Kareata City PEO. Repelled Offices in carrying out its responsibilities. The compilational softwiewed could not provide documentation to substantiate changes are recommended to the compilation of the com

#### . . .

[Legality of Printing Genillies Battoning Cospects by Federal Energy Administration]. B-178205(2). June 13, 1974. 3 pp. Letter to Rep. Harold V. Froethich; by Robert F. Keller, Deputy Commental General

Congressional Relavouse: Rev. Harold V. Prochlich.

Authority: Defense Production Act of 1950, as amended (50 U.S.C. App. 2071(b)). Supplemental Appropriations Act (of) 1974 (P.L. 93-245). Emergency Energy Act; S. 2589 (93rd Cong.).

[Legality of Administration Actions in Printing and Storing Gar Coapeas), B-178205(1) June 13, 1974, 3 pp

Letter to Rep. Paul Findley, by Robert F. Keller, Deputy Comptroller General

Congressional Relavance: Rep Paul Findley.

Authority: Supplemental Appropriations Act [of] 1974 (P.L. 93-245).

Information on Certain Oil and Gas Industry Oversight Responsibilities. B-146333 June 17, 1974. 10 pp. + appendices (2 pp.). Report to Rep. John E. Moss; by Elmer B. Stants, Comptroller Gen-

Organization Concerned: Department of the Interior; Bureau of Mines; Bureau of Land Management; Geological Survey. Congressional Relayments: Res. John E. Moss.

Avithority: Outer Continental Shelf Lands Act (P.L. 83-212; 43 U.S.C. 1332). Administrative Procedure Act (S U.S.C. 552), 30 C.F.R. 250.97

The Department of the Interior has data oversight responsibilities regarding the oil and gas industries involved in offshore drilling activities, release of offshore geologic and seismic data to the public, canned wells on Federal lands, and prior employment by the oil industry of certain Federal officials. Fludings/Conclusions: The Geological Survey (Survey) generally obtains its oil and gas reserve statistics from the Bureau of Mines (BOM) which obtains its information from the American Petroleum Institute and the American Gas Association. These organizations' statistics are used because they are prepared on a basis consistent with prior years and it would be a duplication of the industries' effort for the Department to also prepare statistics. BOM does not verify the organizations' statistics bossuse their policies prohibit verification. Written agreements between Survey and Bureau of Land Management (BLM) provide for exchange of the data accided by both agencies and the procedures to be followed in tract selection, presale evaluation of the tracts, and postsale evaluation of the bids received on the tracts. According to Survey, official public disclosure of offshore goological and geophysiest data is prohibited by law and by the terms of the contract for purchasing the data. Shut-in wells on Federal and Indian lands could supply about 12,000 berrels of all and 185,000,000 cubic feet of gas a day. Of 36 top-level Department employees reviewed, 15 had recorded previous oil and gas industry employment. (Author/QM)

Citation Sartiso 106

The Cost of Living Council's Actions to Assure That Cost Increases for Petroleum Products Were Made in Accordance with Petroleum Pricing Repulations 1, B-178205, June 24, 1974, 2 pp.

Report to Rep. William J. Randall, Chairman, House Committee on Government Operations: Commerce, Consumer and Monetary Affairs Subcommittee: by Phillip S. Hughes, Assistant Comptroller General.

Organization Concerned: Cost of Living Council; Federal Energy Office Congrassional Relayance: House Committee on Government Operations: Commerce, Consumer and Monetary Affairs Subcommittee.

Prior to December 26, 1973, the Cost of Living Cooseil (COLC) was responsible for administration of petroleum pricing regulations. Findings/Conclusions: COLC regulations did not require refiners to provide cost information justifying price increases; however, from October to December 1973, COLC sent out requests to refiners for just such information. A maximum of four people, who had other reasonabilities as well, verified the refiners' cost information. They did not develop an audit program for detailed verification of data. COLC did not issue any remedial orders to refiners or undertake any other enforcement action. Frequent changes to the regulations made enforcement action difficult. COLC's surveillance was not sufficient to insure that refiners were complying with regulatory pricing requirements (Author/OM)

[Recovery of Expenses from Cleanup and Investigation of Oil Stills]. B-146333. June 28, 1974, 12 pp. Letter to Rep. Henry S. Reuss, Chairman, House Committee on Government Operations. Conservation, Energy and Natural Resources Subcommittee; by Robert F. Keller, Deputy Comptroller General.

Congressional Relayances House Committee on Government Operations: Conservation, Energy and Natural Resources Subcommittee. Authority: Outer Continental Shelf Lands Act (43 U.S.C. 1332 et sen.). Federal Water Pollution Control Act, as amended (P.L. 92-500: 33 U.S.C. 1321 (Supp. II): 33 U.S.C. 1161).

# 108

Problems in the Federal Energy Office's Implementation of Emergency Petroleum Allocation Programs of Regional and State Levels. B-178205. July 23, 1974. 13 pp. + 3 appendices (3 pp.). Report to Sen. Abraham A. Ribicoff, Chairman; by Phillip S. Hughes, Assistant Comptroller General.

Organization Concerned: Federal Energy Administration Congrassland Relavance: Sesate Committee on Government Operations

Authority: Emergency Petroleum Allocation Act of 1973 (87 Stat. 627). Executive Order 2748.

Problems identified in the regional offices of the Federal Energy Administration (FEA) included: failure to promptly or correctly process applications for petroleum allocations; an ineffective management information system designed to keep track of allocation cases; and a limited enforcement and compliance effect which may have been misdirected. States appeared to be using the State set-saide for hardship allocations of fuel. Findings/Conclusions: Many priority users, such as agricultural producers, were found to be requesting and receiving State set-aside fuels, even though such priority users should have been receiving 100% of their current requirements from regular supplies. Delays in processing applications at FEA regional offices were one openent cause of priority users requesting hardship allocations. A lack of documentation concerning the factors considered in arriving at decisions on applications for allocations made it difficult to evaluate the propriety of decisions and may have contributed to inconsistent decisions at each region since no basis for developing precedents was available. A number of deviations from regulations were noted. There were inconsistencies in the manner in which the region entered information into the nationwide computerized case tracking and reporting system, and the system was not used to identify duplicate adjustments or to provide feedback to State energy offices on the status of requests for permanent adjustments made by applicants requesting hardship relief. (SC)

[Suppliers' Compliance with Allocation and Price Regulations]. July 30, 1974. 3 pp. + enclosure (2 pp.). Report to Hugh Saussy, Jr., Federal Energy Administration: Regic I Office, Boston, MA; by Joseph Eder, Regional Manager, Field Operations Div.: Regional Office (Boston)

Organization Concerned: Sun Oil Co.

Authority: 10 C.F.R., ch. U. Petroleum Allocation and Price Regulations, 6 211 102, Petroleum Allocation and Price Regulations, § 211.-

As part of a review of the Federal Energy Administration's (FEA) motor gasoline allocation program, an investigation was conducted to determine whether gas deliveries and adjustments by suppliers were in accord with the established Petroleum Allocation and Price Regulations Findings/Conclusions Three of the four major suppliers reviewed were generally complying with the regulations relating to both deliveries and adjustments Suncco, however, was delivering more assounce to stations than regulations permitted. A review of deliveries to 22 randomly solocted stations showed that 18 had received over one-half million gallons or more than one-third more than allowed during the period January through April 1974. Suppoo's deliveries were made at 1974 projected levels and not based on historical sales. Recommendations: PEA should periodically review suppliers' delivery records to assure that regulations are being followed. Delivery records for retail outlets which have not requested an adjustment should be periodically examined to assure that they are receiving the proper quantities of graciline. (DJM)

# [Alleged Waste of Money in Printing Costs on Gas Rationing Cospons].

B-178205. August 5, 1974 3 pp. Letter to Rep. Elizabeth Holtzman; by Robert F. Keller, Deputy Comptroller General. Organization Conterned: Bureau of Engraving and Printing; Federal

Energy Administration. Congressional Relevance: Rep Elizabeth Holtzman.

# 111

Heavoying the Operations of the Federal Energy Administration Region X Office), August 15, 1974, 3 pp. Report to Jack Robertson, Administrator, Federal Energy Administration: Region X Office, Scattle, WA; by Philip A. Bernstein, Manager, Field Operations D(v : Regional Office (Scattle).

The Federal Energy Administration (FEA) Region X Administor agreed to take certain actions to improve the operations of the FEA Region X Office. Fludings/Conclusions: Most fuel suppliers had not been forwarding allocation requests to FBA within 20 calendar days after receipt as required. In response to the problem, FEA will esonitor the time it takes for the allocation requests to be forwarded to the region by the suppliers and notify noncomplying companies of the required FEA time frame. There was little documentation in some of the case files to support FRA case determinations; case documentation procedures are being developed. The region had not been using its computer system for recording and retrieving information on allocation cases. The region is now redesigning the entire case tracking and control system around the comtrater so dualization between the two systems will be eliminated and will start using the computer system to summarize data on the disposition of cases. A request return rate of 18% to the States, indicating processing problems, was actually caused by misrouting of the requests. (Author/QM)

Donestic Crude Oil Pricing Policy and Related Production. B-178205. August 19, 1974. 2 pp. + appendis (17 pp.). Report to Rep. Donald M. Fraser; by Phillip S. Hughes, Assistant

Organization Concerned: Cost of Living Council; Federal Energy Administration

Congressional Relavances Rep. Donald M. France.

Comptroller General.

Currently, responsibility for the administration of petroleum pricing policy rests with Federal Energy Administration, Before the creation of FEA, the Federal Energy Office was responsible for these policies, this responsibility having been transferred from the Cost of Living Council on December 26, 1973. Findings/Conclusion: New oil production costs are not separately maintained by the major oil companies to they could not supply this information. Rapid changes in petroleum pricing policies have made it difficult to single out the offerts of the policies on oil production. There were no indications that oil companies were witholding production of oil. The December 1973 dollar increase in the price of old oil was not tied to increased costs of production and no detailed studies or analyses were made to justify the increase. Primary reasons for the increase were to reduce the gap between domestic and higher world oil prices and atimulate increased production through secondary and tertiary recovery methods. (Author/OM)

Need for Improving the Regulation of the Natural Gas Industry and Management of Internal Operations, B-180228, September 13, 1974. 63 pp. + 4 appendices (52 pp.). Report to Rep. John B. Moss; by Elmer B. Staats, Comptroller General

Organization Concerned: Federal Power Commission. Congressional Relavance: Rep. John E. Moss.

Authority: Pederal Water Power Act (16 U.S.C. 791), Public Utility Act of 1935 (16 U.S.C. 971). Natural Gas Act (15 U.S.C. 717). F.P.C. Order 402-402-A. F.P.C. Order 418. F.P.C. Order 431-431-A. F.P.C. Order 491, F.P.C. Opinion 699.

Extensions which the Pederal Power Commission (FPC) granted to producers making 60-day emergency gas sales were improper because they were not authorized by FPC regulations and because they were contrary to PPC's stated intention to limit anoducer emergency sales to a single 60-day period. Findings/Canclasians: Extensions granted by FPC during the Federal court's stay of the FPC's order implementing 180-day emergency sales negated the effect of the court stay and raised serious questions as to the propriety of the FPC's actions. Persone orders implementing amergency ass sales either were not enforced or required only submission of estimates on the volume and price of natural sas brought to the interstate market when the sale began, the PPC relied on incomplete and inaccurate data in its decisionmaking processes. Because the FPC failed to take final action on applications made under PPC's optional certificate procedure within 6 months, customers paid higher prices for natural gas than may be just and reasonable. Recommendations: The Chairman of the PPC should: improve monitoring of interstate gas sales by imposing reporting requirements on regulated entities, establishing an adequate data and recordkeeping system, and requiring timely and complete reporting of gas sales data; improve the processing of applications under the optional certificate procedure to insure that gas consumers are not charged rates which are higher than justified: and improve FPC's procedures to insure that upper level officials do not own financial securities which could result in a conflict of interest. (Author/SC)

[Need for the Federal Power Commission to Improve the Regulation of the Natural Gas Industry and Management of Its Internal Operations). September 25, 1974. 13 pp. Testissony before the House Committee on Interstate and Foreign

Commerce: Oversight and Investigations Subcommittee; by Victor L. Lowe, Director, General Government Div.

Organization Concamed: Federal Power Commission. Congressional Relevence: House Committee on Interstate and Poreign Commerce: Oversight and Investigations Subcomm Authority: Natural Oza Act. F.P.C. Order 402, 402A. F.P.C. Order

418. F.P.C. Order 491, 491A.

A study of the Pederal Power Commission (FPC) showed that the Commission needs to improve both its regulation of the natural gas industry and its management of internal operations. Findings/Conclusions: In 1970, PPC issued a number of emergency orders designed to deal with perceived ass shortages. Under some of these orders, independent natural gas producers were authorized to make emergency sales to interstate pipelines for 60 days without prior FPC epocoval. Extensions were later granted to producers making emersency sales under these orders, although such extensions were not anthorized by FPC regulations and ran counter to FPC's stated intertions and commitments. The question as to whether the FPC has the authority to waive these regulations imposed by the Natural Clas Act remains. There is a need for FPC to obtain more complete and accurate data on the volume and price of sas brought into the interstate market by its emergency sales programs. PPC's optional certificate procedures need to be improved to insure that sas customers are charged prices that are just and reasonable. There has been wideread noncompliance by PPC officials with the agency's standards of conduct regulations resulting from a breakdown in the reporting system intended to disclose financial holdings of officials that were actual or potential conflicts of interest. (SC)

Review of the Operations Division of the Federal Energy Administraslos]. October 24, 1974. 4 pp. + attachments (3 pp.) Report to Robert Mitchell, Regional Administrator, Federal Buergy Administration: Region 1 Office, Boaton, MA; by Joseph Eder, Manager, Field Operations Div.: Regional Office (Boston)

Organization Concerned: Environmental Protection Agency Authority: Mandatory Petroleum Allocation Regulations, § 211. 13(c).

The Operations Division of the Pederal Buergy Administration (FBA) consists of the Case Resolution Branch and the Energy Assistance Center. These sections process requests for additional petroleum products. Fladings/Conclusions: There was a 65% decline in the number of petroleum product request applications processed by the Case Resolution Branch after June 1974. Reasons olted by the Operations Division for the decline, such as the complexity of osses, are questionable. There was also a substantial decrease in applications reviewed by the Bnergy Assistance Centor staff while the staff itself increased in average size. The man-days expended at the Center are not reported by its Workly Regional Status Report; productivity ownnot be assessed. Even though \$5,000 in overtime was paid to the One Resolution staff in June, July, and August 1974, the case backlog increased and the weekly average cases closed did not increase. About one-third of the overtime was paid to the Chief of the Case Resolution Branch even though his daties do not involve directly resolving cases. Also, overtime was not being approved in advance according to policy. This same Chief received a raise in pay status to which he was not entitled and for a time worked on a detailed status with another agency that was not documented. Recommends alone: The level of manpower required by the Case Resolution Branch should be reevaluated in view of the reduced caseload. The Weekly Regional Status Report should be modified to show the output of " a Bnergy Assistance Center in relation to man-days expended. Also, management should be aware of the need and resson for paying overtime before the fact, and the failure to provide dorumentation for personnel actions indicates a need to improve FEA's administrative practices. (Author/OM)

# 114

[Federal Energy Administration's Actions on Allocation and Pricing of Fuel]. October 29, 1974. 2 pp. + enclosure (4 pp.) Report to William C. Arntz, Regional Administrator, Federal Energy Administration: Review IX Office. San Francisco, CA: by A. M.

Administration: Regional Manager, Field Operations Div.: Regional Office (San Francisco).

Organization Concernad: Consumer Oil Operations, Secramento, CA; B. S. Addisoo, Inc.; Fredericksen Tank Lines; Petroleum Tank

Two conspanies, E. S., Addison, is, and Commer Gill Operation (COO), any law religious the provision of the Plant Adsociation (COO), and the religious of the Plant Adsociation (COO), and the religious of the Plant Adsociation (Plant Adsociat

#### 117

[Cartaliment of Electric Power Service by the Tennessee Valley Authority]. B-114850. November 4, 1974 4 pp + encicoure (17 pp)
Resort to Sen. Bill Brock: by Eliner B. Staats. Comptroller General

Organization Concerned: Tennessee Valley Authority.
Congressional Relevances Ses. Bill Brock.
Authority: Federal Power Act, \$202(c) (16 U.S.C. 324z(c)). Federal
Coll Mine Health and Safety Act of 1969 (30 U.S.C. 801)

The Tennessee Valley Authority (TVA) has taken actions to obtain additional coal supplies and to conserve its easiling supplies TVA has estimated that, providing there is not a lengthy coal muter? TVA has obtained that, providing there should be alongly coal muter strike, it can get through the winter of 1974-1975 without a cubbact, in power server, if it obtains reasonable success from its request for most request for

consumers to voluntarily reduce their use of electricity by 20% Predings/Conclusions: Although coal production was up about 7% in the first half of 1974 compared with a similar period of the provious year, some of the incressed production appeared to be available at prices and with contract terms which TVA generally has been unwilling to socept. TVA adopted an approach of paying some of the higher prices, but not the highest prices, being requested for costs refusing to change at coal quality guarantee and mining reclamation requirements; and taking alternative actions designed to reduce its cost consumption. TVA has a task force working on a contingency plan which will be implemented if a mandatory outback in power is necessary. This contingency plan could include the elimination of all nonessential uses of electricity, certain mandatory reductions in use by all customers, and scheduled short-time interruptions of nower on a rotational basis. The chances of success for TVA's program to obtain a voluntary reduction in the use of electricity probably will be improved if State and local government leaders in the areas served by TVA support the program and set an example by implementing the program in all State and local government facilities. (SC)

#### 118 Problems in the Federal Energy Administration's Compliance and Enforcement Effort. B-178205. December 6, 1974. 15 pp. + 3 ap-

Enforcement Effort, B-178205, December 6, 1974. 15 pp. + 3 appendious (7 pp.). Report to Sen. Abraham A. Ribicoff, Chairman, Senate Committee on Government Operations; by Phillip S. Hughes, Assistant Comp-

Opportunition Conserved: Pederal Energy Administration; Internal

Organization Concerned: Federal Energy Administration; Internal Revenue Service. Congressional Relevance: Sexule Committee on Government Open-

ations. Authority: Federal Buergy Administration Act of 1974 (88 Stat. 96). Emergency Petroleum Allocation Act of 1973 (88 Stat. 627). 18 U.S.C. 1905.

The future of petroleum product price controls is uncertain. Various Executive Branch officials have commented on the need to relex such centrols. Ruisting legislative authority for netroleum product once controls is scheduled to expire on Pebruary 28, 1975, nithough bills are currently pending in the Congress to extend the authority through August 1975. Findings/Conclusions: There are significant problems in compliance with price controls among crude oil producers, refiners of petroleum products, wholesalers, and retailers. There was almost no direct audit of operations of crude oil producers Federal Energy Administration (FBA) audits at the retail level showed numerous violations and there was evidence of large violations at the wholesale level; audits of refiner operations were not completed; substantive issues relating to the adequacy of regulations remained unselved; and organizational disputes within FEA hindesert its refinery sudit work. FEA officials estimated that the magnitude of refineries' notential violations could be between \$1 and \$2 billion. FEA will have to strengthen its compliance and enforcement program at all levels if there is to be adequate assurance that firms are complying substantially with price regulations. Recommendstaxes: FEA should consider the following alternatives for improving the effectiveness of its audits: increase the size of assigned staffand/or use a "strike force" approach where a team of suditors would visit selected firms and review key facets of the operations. If FEA wished to maintain a continuous presence at each refinery operation, one auditor could be permanently assigned for the purpose of identifying problem areas which may necessitate more detailed attention by a "strike faces" REA should also controlline the control and direction of the auditors assigned to review refineries (Author/QM)

## The Federal Energy Administration's Compliance and Enforcement Activatives. December 11, 1574, 11 pp. Tastenary before the Senate Committee on Government Operations; by Phillip S. Hughes, Assistant Compitoller General.

Organization Concerned: Federal Energy Administration.
Congressional Rolevance: Senate Committee on Government Oper-

ations. Authority: Federal Energy Administration Act of 1974, § 12.

There are significant problems in the Pederal Energy Administration's (FEA's) compliance and enforcement program at all levels of notroleum industry operations. Review of the program should: there was almost no direct audit of crude oil producer operations; FEA concentrated its audits at the retail level and found numerous viole. tions, although there was evidence of large violations at the wholesale level where little audit effort was made audits of refinery operations were not completed; substantive issues relating to the adequater of regulations remained unresolved; and organizational disputes within FEA hindered audit work at refinery operations. PRA officials advised GAO that a revised staffing plan had been approved which would permit audits of crude oil producers to begin, increase the audit attention at the wholesale and refinery level and decrease the audit attention at the retail level. GAO's evaluation of FEA's compliance and enforcement program was impeded by FEA's reluctance to allow full access to such information as records relating to active compliance investigations or audits which had not been

completed. A framework to insure that such problems do not occur in the future has been proposed and it expected to be instituted. GAO concluded that if petroleum price control are to be constituted. BEA must attempthen its compliance and enforcement program at all levels if it is to have adequate assertance that firms are complying better and only the price of the proposed assertance that firms are complying them exists on the problems action with performance and the proposed assertance and the problems actions and the proposed assertance and the problems actions and the proposed assertance and the problems action and the proposed assertance and the problems are the proposed assertance and the proposed assertance are also as a proposed assertance and the proposed assertance are also as a proposed assertance and the proposed assertance are also as a proposed as a proposed assertance are also as a proposed as a pr

### [The Federal Energy Administration's Progress in Redirecting Its Compliance and Enforcement Program]. B-178205. March 31, 1975. 3 pp.

1973. 3 pp. Report to Sen. Abraham A. Ribicoff, Chairman, Senate Committee on Government Operations; by Phillip S. Hughes, Assistant Comptroller General

# Organization Concerned: Federal Energy Administration. Congressional Relevance: Sensiv Committee on Government Operations.

A 1974 report identified major problems in the Pederal Energy Administration's (FEA's) compliance and enforcement activities particularly a need for FEA to sudit producers of cruce oil and to improve audits at the refinery level. Findings/Conclusions: FEA's planned staffing allocation change for the compliance and enforcement program was 784 additional employees by December 31, 1974. The actual change was 746 additional employees by March 14, 1975. Completion of the planned staffing changes had been delayed, primarily because of problems in redeploying staff among PEA regions. As of March 21, 1975, 40 crude oil producer audits had been completed and 87 additional audits of a planned 197 audits were in process. FEA uncovered 27 possible violations. As a result, the producers made two voluntary rollbacks and signed nine consent agreemonts and PEA issued two Notices of Probable Violations and drafted 14 additional notices. The two voluntary rollbacks resulted in refunds of \$158,698, and the nine consent agreements resulted in refunds of \$634,903 and penalties of \$46,658. The majority of the violations andovered resulted from producers claiming more new and referred oil production than their wells actually produced. After FEA completes the feltial 197 andits, it plans to sudit the next 1,000 communies that show the largest percentage in new oil (Author/OM)

# 121

Problems of Independent Refiners and Gaseline Retailers. OSP-75-11; B-178205. April 4, 1975. 16 pp. Report to Son. Abraham A. Ribicoff, Chairman, Senate Committee

on Government Operations; by Phillip S. Hughes, Assistant Comptroller General.

# Organization Concerned: Federal Energy Administration. Congrussional Relevance: Single Committee on Government Operations.

ations.

Authority: Emergency Petroleum Allocation Act of 1973 (87 Stat. 627). Pederal Energy Administration Act of 1974 (15 U.S.C. 761).

A number of independent retail graciine operators have been forced to close. The Federal Energy Administration (FBA) has made efforts to protect independent refiners and retail gasoline dealers. Findings/Conclusions: Under FEA's revised crude oil allocation regulations, small refiners, on the average, operated above 1972 levels, but the four large independent refiners operated below 1972 levels. Under the "two tier" pricing system used for crude oil, small refiners and large independent refiners generally paid higher prices for crude oil than the major oil companies. This occurred because amail and independent refiners did not have access to that part of comestically produced crude oil under price controls. FEA recognized this problem and adopted new regulations aimed at equalizing cruce oil costs. At the retail level, FEA was not prompt in developing and reporting data on the market share of independents. The number of independent retail dealers appears to have decreased, although the proportion of refiner-owned-and-operated stations has increased. (Author/QM)

#### 1722 [The Administration of the Petroleum Set-Aside Program by State Energy Offices]. B-178205. May 8, 1975 8 pp.

Report to Frank Zarb, Administrator, Federal Energy Administration; by Monte E Canfleld, Jr., Director, Office of Special Programs.

Organization Concerned: Arkansan Office of Petroleum Allocatics; Pederal Bangy Administration; Florida: Office of Petroleum Allocatios; New Messics: Office of Fetroleum Allocation; New York: Office of Petroleum Allocation; Oldshomi: Office of Petroleum Allocation; Vignitic Office of Petroleum Allocation.

Authority: Emergeacy Petrolsum Allocation Act of 1973 (P.L. 93-159). Special Broayz Research and Development Appropriation Act of 1975 (P.L. 93-322). Pederal Energy Administration Act of 1974 (P.L. 93-325).

At the height of the Arab oil embargo, the State Offices of Potroleum Allocation elsved an important role in alleviating temporary shortages of petroleum products through allocations from the State set-asides to users who could not obtain fuel from their traditional suppliers and/or who had not been assigned new suppliers by the Federal Energy Administration (FEA). When the embarge ended and supplies of petroleum products became more plentiful the State set-asisies in Arkansas. Florida, New Mexico, New York, Oklahoma, and Virginia were no longer being used strictly for emergency and hardship cases. Findings/Conclusions: State set-aside fuel was allocated in many instances with no documentation or instancests documentation that a hardship or emergency requirement existed. Because individuals were allocated State set-aside faci without adequate justification that a hardship or emergency existed, these individuals may have exceeded the allocations to which they were entitled under the regulations. In this respect, some individuals may have avoided filing with FEA for an adjusted allocation by repeatedly applying for and receiving State set-aside allocations. FBA has had a hands-off approach concerning the set-saide program. The lax manner in which the State set-saide program apparently was administered may have stemmed from the increased supplies of petroleum products available compared with the supply situation when the allocation program was imposed. Recommendations: FEA should: recycluste its set-aside requistions to determine whether the ansaside program should be continued in its present form; and consider reducing the amount of fuel allocated to the program, restricting the program to those petroleum products for which hardship or emersency requirements exist, or storping the program until such time as a shortage may again develop. If the program is continued, PEA should: review pertinent legislation to determine whether PEA has the authority to administer, evaluate, or investigate the use of State set-saids fuel and change the regulations or seek changes in the law to obtain that authority; determine whether State offices have established and are following consistent and concise criteria for evaluating hardships and emergencies; and determine whether State offices are allocating set-aside fpols for ressons other than those of hardship and emergency and take appropriate action to correct any deficiencies in the grogram, (Author/QM)

# 128 [The Effects of Oil Price Increases on Social Business Contracts]. PSAD-75-72; B-178205. May 22, 1975. 3 pp. Report to Rep. Milto McCormick; by Elmer B. Stasta, Comptroller

Organization Contempd: Department of Defense; General Services Administration. Congressional Relevances Res. Mike McCormack.

Congressional Relevance: Rep. Milke McCorntack.

Authority: Defense Procurement Circular 120, OSA Procurement
Letter 105.

Oil price increases in fiscal years 1973 and 1974 may have had some effects on small beainess corteator made by the Department of Defraste. Findings/Decelarious: The inflation experienced during fiscal years 1973 and 1974 had an impact on profit, and the rate of inflation was affected by the increase in the price of oil and oil-related products. However, including oil-related forcease from other price

increases that contributed to the infletion rate was difficult to achieve, Costructors involved in six Department of Defense small business. firm fixed-orice contracts studied did not incur any economic setbacks due to oil trice increases because the unit erices for the contract stems increased as the once of fuel products increased There was no instance where these contractors were unable to erovide the services called for in the contracts because of the find product crices. From July to December 1974, there were 24 123 active fixed-price, small business defense contracts with a total dollar value of approximately \$1.8 billion. Of these contracts, 9.29% contained constmic once adjustment clauses. The total dollar value of these contracts was \$494 million, (OM)

[Funds Credited to the Account of the Virgin Islands for Refunds from Import License Fees]. OSP-75-14; B-183222. June 13, 1975. 3 pp. Report to Rep. Ron deLugo; by Phillip S. Hughes, Assistant Comptroller General.

Organization Concernad: Department of the Interior, Federal Energy Administration; Virgin Islanda

Congressional Relavance: Rep. Ron del.ugo. Authority: Presidential Proclamation 4227, Presidential Proclamation 3279. Presidential Proclamation 4210

Before May 1973, the amounts of crude oil and common products which could be imported into the United States were limited by a system of cuotas, and tariffs were assessed against each shinmost of such goods. Under Presidential Proclamation 4227, license fees collected on imports into the customs territory of the United States of crude oil and petroleum products manufactured in the Virgin Islands are to be held in a securate Denastment of the Treasary secount and then refunded to the Virgin Islands. The Department of Justice stated that the provision of Proclamation 4227 regarding refunds to the Virgon Islands in without legal foundation. A separate appropriation is required to pay the refunds, according to the Department of Justice. Legislation has been drafted returning that refunds be paid to the Virgon Islands. The Congress has not acted on the proposed legislation Findings/Conclusions: From May 1, 1973, through December 31, 1974, a tetal of \$2,945,569 was to be credited to the Virgin Islands account in the Treasury. The amount of refunds accrued in the account after December 1974 could not be determined because the Oil Imports Office had not set morized pertinent information. The Oil Imports Office could not recall being the source of the varying estimates of the amount credited to the Virgin Islands account. (Author/QM)

#### The Federal Entrey Administration's Compliance and Enforcement Processes, June 19, 1975, 12 po Testimony before the Senate Committee on the Judiciary: Administrative Practice and Procedure Subcommittee; by Phillip S. Hughes. Assistant Comptroller General

Organization Concerned: Federal Energy Administration Congressional Relevance: Sense Committee on the Judiciary: Administrative Practice and Procedure Subcommittee Authority: Federal Energy Administration: Act of 1974, § 12.

A prior review of Federal Energy Administration (FEA) compliance and enforcement efforts recommended initiation of a program of direct audits of crude oil producers and increasing emphasis on audits of major oil refineries. FEA has experienced delays in redirect ing efforts from the retail level to other areas because of the problems ic redeploying stall among regional offices and in recruiting additional technically qualified investigators for the more complex eroducer and refiner audies. As of June 13, 1975, investigations of 267 crude oil producers had been began. Basic regulatory questions will have to be resolved before the producer sudit program can be conducted in an efficient and effective manner. FEA currently has shown 162 auditors assigned to the sadits of refineries. As of May 30, 1975. FBA had made investigations of about 92,000 firms, both whelestle and retail, resulting in refunds to the public totaling \$87 million. The total amount amount of violations found under peopane wholesslet investigations may amount to about \$30 million. FEA's sudit of suppliers of fuel oil to utilities, Project Utility, has several implementation problems including inadequate criteria for selecting suppliers for sudit; substanist dolays in collisteral investigations; and several unresolved regulatory questions. There are also serious problems in the processing of Notices of Probable Violation and remedial orders-(OM)

[Federal Receipt Administration Efforts to Audit Fool Oil Smaller of Major Utility Companies (Project Utility)]. OSP-76-2; B-178205. July 15, 1975. 7 pp + enclosure (1 pp.). Report to Frank Zarb, Administrator, Federal Energy Administra-

tion; by Monte Canfield, Jr., Director, Energy and Minerals Div.

Authority: Emergency Petroleum Allocation Act of 1973 (87 Stat 627). Federal Energy Administration Act of 1974 (\$5 Stat. 96).

Project Utility was an effort by the Federal Energy Administration (FFA) to audit the fael oil supplies of major utility companies Findings/Conclusions: The effective manpower assigned to the acciect has been far less than the level reported to FEA headquarters Inconsistent auditing among FEA regions resulted in substantial audit offort so areas untikely to yield evidence of violations. Investigations were delayed because of complex supplier relationships, inadequate supplier records, and poor coordination among FEA remonal offices. Regulatory questions have impeded completion of a number of investigations. Since FEA has no authority over public utilities, there is no assurance that refunds made to them will be returned to consumers. Despite the considerable publicity given Prosect Utility, the amount of violations detected has not justified the emphase placed on the project Project Utility had hindered other compliance activities, such as the producer and refiner audits.

Recommendations: FEA should: phase out Project Utility as a specisl effort, but complete promising investigations and mitiate compliance actions within a specified time; return to balanced compliance operations covering producers, refiners, wholesslers, and retailers; use more consistent criteria to select suppliers and identify suspicious transactions in wholesale investigations, and set priorities in this area; use utilities and other major fuel users to identify suppliers for audit; and promptly inform field auditors of the brokers' proper status under FEA regulations. (Author/DJM)

[Requested Utility Rate Increase by the Potomoc Electric Power Compony]. LCD-76-303, B-178205. August 11, 1975. 3 pp. Report to Rep. John E. Moss; by Robert G. Rothwell (for Pred J. Shafer, Director, Logistics and Communications Div.

Organization Concerned: Department of the Treasury: General Services Administration: Potemac Bleetric Power Co. Congressional Relevance: Rep. John E. Moss,

Authority: Pederal Property and Administrative Services Act of 1949, se amended (40 U.S.C. 481; 40 U.S.C. 486), 41 C.F.R. 101-

The Department of the Tressury suggested that the General Services Administration (OSA) refrain from intervening in forthcoming utility rate cases involving price increases for the Potomac Electric Power Co. (PEPCO), because PEPCO urgantly needed the increases due to increased costs of fuel, construction, and financing. Find ings/Conclusions: The suggestion was fully within the authority of the Department of the Treasury and did not constitute interference with GSA's role in protecting the Government against higher utility rates. It is not possible to determine what the specific effect of GSA's terticipation in rate hearings will be. Other intervenors participating in the rate hearings may auconed in making an effective case against a proposed rate increase, even without GSA's intervention. GSA did participate in the PEPCO rate hearings before the Public Service Commission of the District of Columbia, and cross-examined

PEPCY) witnesses on testimony they filed with the Commission. (Author/QM)

[ Violation of Ceiling Prices in a Defense Fuel Supply Center Sale]. Angust 12, 1975, 3 pp.

Report to Gorman C Smith, Assistant Administrator for Regulators Programs, Federal Energy Administration; by Monte E Canfield Jr., Director, Office of Special Programs.

Organization Concerned: Department of Defense: Defense Fuel Supply Center, Alexandria, VA; Texaco. Inc. Authority: Defense Production Act of 1950, 38 F.R. 1052.

A possible violation of celling prices was found in a sale by Tesaco, Inc., under a fuel contract with the Defense Fuel Supply Center, Texaco, Inc., exercised a contract option by delivering 235. 137 barrels of Navy distillate fuel to Port Arthur, Texas, at the centract price of \$.37 per gallon. The fuel was for shipment by the Government to U.S. military installations overseas. According to the Pederal Energy Administration, this price was significantly higher then Texaco, Inc., could have charged for the fuel for use demestically at that time under guidelines of the Cost of Living Council. (Council) Findings/Conclusions: Although the fuel was purchased for use oversess, the shipment to Port Arthur was sobject to Council prior regulations. There was no indication that the price rollings were intended to be limited in application to the industry involved in the ruling, but rather the principles discussed in the rulings appear to have been intended to senly to say situation where products destined for consumption at a foreign location would not produce revenue from a foreign source. (Author/QM)

# 129

Analysis of the Energy, Economic, and Budgetary Impacts of H.R. 6860. OSP(OPA)-76-3. September 1975. 26 pp. + acpendix (6 pp.). Stoff study

Organization Concurred: Federal Energy Administration. Congressional Relevence: Senate Committee on Finance. Authority: H.R. 6860 (94th Cone.).

H.R. 6860 would impose quotes on imported potroleum products and take a number of actions designed to decrease domestic energy consemption. The bill would: (1) establish an import quota schedule, an import licensing system, and rates of duty on imported petroleum; (2) set automobile standards; (3) provide for tax incentives for energy-related improvements of buildings and for purchase of electric motor vehicles; (4) establish an energy conservation fund; and (5) provide for business conversion for greater energy paving. Findings/Conclusions: To provide a basis for analyzing impacts of the bill, the domestic demand and supply of crude oil was projected at carrent world prices, assuming no restrictions on imports. GAO concluded that reductions in oil imports mandated by the bill exceed all projections for all consumption that would result from the bill's conservation provisions. The system for sectioning oil import licenses, taken together with expected shortfalls in oil supply would tripper price increases of \$4 to \$6 a barrel for imported oil. Treasury receipts under the auction system were estimated to increase in the range of \$12 to \$18 billion each year through 1980. Increased prices of imported oil would trigger increases in the price of domestic uncontrolled oil and result in windfall profits for oil producers. Price increases would be inflationary and lead to increased unemployment. Only automobile efficiency standards and tax credit for insulation of residences were thought likely to achieve measurable reductions in energy consumption. (HTW)

Need for the Federal Power Commission to Evolvate the Effectiveness of the Natural Gas Cartailment Policy. RED-76-18; B-151503. September 19, 1975. 17 pp. + 2 appendices (20 pp.) Report to Rep. Pierre S. du Pont; by Elmer B. Stasts, Comptroller

Organization Concerned: Federal Power Commission. Congressional Relayance: Rep Pierre S. du Pont.

Authority: Federal Power Act (16 U.S.C. 792), Natural Gas Act (15 U.S.C. 717). Federal Energy Administration Act of 1974 (88 Stat. 96), F.P.C. Order 431.

The Federal Power Commission (FPC) lacks authority to obtain the secessary information to evaluate the effectiveness of its natural gas curtailment policy boostse its jurisdiction does not extend to intrastate pipeline and distributing companies. The Commission is attempting a coordinated offert with the Federal Energy Administration (FEA) to obtain the poeded information, but the effort has not been underway long enough to determine its value. Findings/Conclusions: To evaluate the effectiveness of its curtailment policy, the PPC needs information on the end use of gas supplies and on the economic impact of the shortages on the areas affected. Without such information, the FPC cannot determine whether pipeline companies are distributing available natural gas as specified in approved ourtailment plans or whether modifications are needed to achieve curtailment policy objectives. Recommendations: The FPC should report to the Congress on the results of the attempted coordinated effort with FEA. If the desired results are not obtained from this effort or if the Commission finds the mechanism too cumbersome, the Commission should seek legislative revisions to the Natural Gas Act to extend the Commission's authority to obtain information on natural gas sales by increatate pipeline and distributing companies, and on the end use of the gas by ultimate consumers who parchase the gas from interstate and intrastate pipeline and distributing companies.

Comments on Proposed Legislation to Charge Basis for Government Charge, for Uraniam Exrichment Services, RED-76-30: B-159687. September 22, 1975. 12 pp. Report to Sen. John O. Pastore, Chairman, Joint Committee on Atomic Energy: by Elmer B. Stasts, Comptroller General,

Organization Concerned: Energy Research and Development Administration.

Congressional Relevents: Josef Committee on Atomic Brengy Authority: Private Dwaership of Special Nuclear Materials Act of 1964 (P.L. 88-489). Atomic Energy Act, as amended (P.L. 91-560). DMB Circular A-94, Revised.

The Energy Research and Development Administration (ERDA) monosed legislation which would change the basis of the Government's charge for unanium enrichment services from the current cost receivery method. Findings/Conclusions: The proposed changes would allow the Government to obtain fair value for its enrichment services and would eliminate or reduce the difference between the Government's charge and that of potential private carichers. The secomptions made by ERDA in developing its processed prices are within a reasonable range: however, they are ludgmental and it is difficult to conclude that they are the most reasonable assumptions. If the proposed legislation were enacted, ERDA would initially implement the law by increasing its enrichment services charge to \$76 for each senerate work unit to include amounts representing costs which would normally be incurred and considered in a commercial firm's charge. Recommendation: The Joint Committee on Atomic Finerary should consider revising the proposed legislation to that any changes in the basic appearch used in seriving at the fair value charge for the Government's umnium enrichment services and any additions to this charge necessary for not discouraging the development of private supply sources would be included in the uranium enrichment criteria and should be submitted to the Joint Committee with them. (Author/SC)

Problems in Licensing Hydroelectric Projects. RED-76-13; B-115398. September 23, 1975. 20 pp. + 3 appendices (12 pp.). Report to the Congress: by Elmer B. Staats, Comptroller General.

## Organization Concern & Federal Power Commission Congressional Ralavo: :a: Congress

Authority: Federal Power Act of 1935 (16 U.S.C. 791 et seq.), Pederal Water Power Act of 1920.

Large delays exist in the licensing of hydroelectric projects by the Federal Power Commission. Findings/Canclusions: The backlog of applications has been growing steadily for years, and the number and slow rate they are acted upon are cause for concern. As of December 31, 1974, there were 502 backlog applications, which have been pending an average of 60 months. Most of the time needed to license a project is outside the control of the Federal Power Commission (FPC), but, to the extent practicable, delays should be eliminated because licensing projects offer considerable nublic benefits as uscreased electric power and recreational facilities. The Commission contributes to delay by extending reporting deadlines after giving anolicants 30 to 90 days to comply with requests for needed information. The FPC never prosecuted those who failed to provide needed information. The required process of obtaining comments from other Federal agencies is often lengthy and time consuming. Recommendations: The EPC should: establish followup procedures and standards ensuring that information needed to process applications is pursued aggressively; prosecute those delaying the licensing process; enter into interprency agreements to formalize the role of other Federal agencies in the licensing process; require applicants to pay reasonable annual charges for administering the licensing program, or retroactively charge for proviously constructed projects when applications are filed; systematically evaluate constructed projects to ensure that all projects under FPC jurisdiction are hornsed; not automatically extend reporting deadlines, and use its enforcement powers to meet its statutory responsibilities (Author/DJM)

# Federal Energy Administration's Efforts to Audit Devestic Crade Oil

Producers. OSP-76-4; B-178205. October 2, 1975 12 pp + enclo-Report to Sea Abraham A. Ribicoff, Chairman, Senate Committee on Government Operations; by Monte Canfield, Jr. (for Phillip S. Hughes, Assistant Comptroller General)

Organization Concernad: Federal Energy Administration Congressionel Relayance: Small Committee on Government Oper-

Authority: Emergency Petroleum Allocation Act of 1973 (87 Stat 627). Federal Energy Administration Act of 1974 (88 Stat 96)

The Pederal Energy Administration's (FEA's) audits of mdependent crude oil producers have disclosed substantial violations of crude oil pricing regulations; however, FEA has done limited sudit work at the major oil companies that produce the majority of the domestic crude oil and thus has been unable to determine their compliance with the regulations. Endury/Corclesions: As of Auaust 22, 1975. FEA sudits of independent producers' operations resulted in: consent agreements with 35 producers under which the producers agreed to refund a total of \$3.2 million to customers and to pay penalties of about \$115,000, notices of probable violation issued or being prepared for 52 other producers involving about \$11 million in potential violations, and investigations of 163 producers completed without any violation being detected. Since FEA regions did not follow a uniform policy for compromising civil penalties. producers that were determined to be in violation of price regulations were treated inequitably. Recommendations: FEA should: intensity the coverage afforded production operations of major oil companies: expedite efforts to identify and discominate to the regional offices the names of independent producers that are, according to reports submitted to FRA, most likely to be in violation of pricing regulations; and insure implementation of a uniform policy regarding penalties which should be sought and collected from producers that are determined to be in violation of FEA pricing regulations. (Author/QM)

Evaluation of the Administration's Proposal for Government Assistance to Private Uranium Eurichment Groups. RED-76-36; B-159687. October 31, 1975. 47 pp. + 3 appendices (17 pp.). Report to Sen. John O. Pastore, Chairman, Joint Committee on Atomic Energy; by Elmer R Stasss, Comptroller General.

Organization Concarned: Energy Research and Development Administration; Uranium Enrichment Associates

Congressional Ralayanca: Joint Committee on Atomic Energy-Authority: Nuclear Poel Assurance Act of 1975; S. 2035 (94th Cong.). Atomic Energy Act of 1954, as amended (P.L. 83-703). Private Ownership of Special Nuclear Materials Act of 1964, as amended (P.L. 88-439).

Legislation has been proposed to encourage "privatization" of the uranium entichment process. The legislation would: authorize the Energy Research and Development Administration (ERDA) to enter into cooperative arrangements with private firms: authorize ERDA to provide assistance and assurance under such arrangemeets limit the 11% Government's total potential liability to \$8 billion; authorize ERDA to start construction planning and design activities for expanding one of the Government's existing enrichment facilities as a contingency measure, and provide for congressignal review of the basis for the cooperative arrangements by the Joint Committee on Atomic Energy. Findings/Conclusions: The next increment of uranium exceptment capacity should be achieved by adding on to the existing Government gaseous diffusion plants because Uranium Enrichment Associates' proposal is not acceptable cheely because it shefts most of the construction and plant-proving risks to the Government: a decision is needed now, there is a greater nonenced for alsenage in the invate group's schedule for bringing additional capacity on-line; additions to existing plants can be done at an estimated construction cost of \$2.1 billion as compared to the estimated cost of the private group constructing a plant of \$2.7 billion, an add-on can be phased in increments thereby keeping additional gaseous diffusion capacity at the minimum consistent with the development of centrifuge technology, and maximizing flexibility to deal with problems of changing domands or poor projections, and management of the Government facilities could be accomplished more effectively by a corporation having a self-financing authority. Recommendations: The Joint Commuttee on Atomic Buergy

should consider authorizing ERDA to construct the next increment of the earlthment capacity using the proven enrichment process; establishing a Government corporation with self-financing authority to manage enrichment facilities; and developing legislation with provisions similar to those in the legislation authorizing BRDA to enter into cooperative agreements with private corrobers using advanced technologies. (Author/QM)

## 115 Implications of Deregulating the Price of Natural Gos. OSP-76-11;

B-181503 January 14, 1976 59 pp. + appendix (2 pp.). Report to Rep. Jack Brooks, Chairman, House Committee on Government Operations; by Elmer B. Stants Report on first part of study issued as GAO RED-76-39,

October 31, 1975. Congrassional Ralavonea: House Committee on Government Oper-

Deregulation of natural gas sold in interstate commerce is under

consideration as one way to reverse a national trend toward declining production of natural gas. Findings/Conclusions: Even with deresulation, natural gas production is likely to continue its decline. Higher prices would bring some additional supplies on natural gas over what would otherwise occur. However, supplies are constrained by factors in addition to price, such as the ability to discover new reserves at a sustained, high rate. These factors indicate that the United States will probably never again attain recent production levels. Deregulation, however, could slow the rate of decline. The

price of natural gas will continue to rise, either under regulation or dereculation. With deregulation, however, price rises would be more rapid, except in the unlikely event that regulated prices were deliberately raised to intrastate levels and held there. Therefore, while additional gas supplies are likely from higher deregulated prices, this advantage must be weathed against higher prices to consumers. Deregulation will increase costs to readential contomers rationwide by 40% in 1980 and 10% in 1985. Because natural eas is a cleanburning fuci, deregulation would seem to have an overall beneficial effect on the environment. On the whole, deregulation is not likely to have discormble efforts on the gross national product, but could have various regional and sectoral offects. (DJM)

The Intelligations of December on the Price of Natural Got Tennery 15 1976. 11 pg. Testimany before the House Committee on Internate and Foreign Commerce: Energy and Power Subcommittee; by Phillip S. Hughes, Assistant Comptroller General

Congrassional Relavance: House Committee on Interstate and Foreign Commerce: Energy and Power Subsemmittee

A study of the energy supply economic social and environmen. tal implications of deregulating the price of natural gas from 1975 to 1985 showed that, even with deregulation, natural gas supplies are likely to decline during this period. With continued low prices, natural ass supplies should decline about 20% by 1985. With deregulation, this decline would be slower, about 13% by 1985. However, in either case the United States is unlikely to ever again achieve the production levels of the recent past. The Nation's natural as bill will increase even with regulation. With deregulation the increase would be more rapid, but by 1985 the differences would be quite small. Continued regulation at low prices will put a disproportionate share. of the natural gas abortfall on the interstate market. Reaching a ducision regarding deregulation requires weighing a set of interrelated trade-offs, which should include: the additional semilies of gas likely to result from deregulation; the additional errors to consumers; the councilic and social posts of continuing a regulatory framework, including the fostering of separate interstate and intrastate markets; and alternatives such as regulation at higher prices and bringing intrastate supplies under Federal regulations. (SC)

# Amount of Natural Gaz that Could Be Released from Federal Price

Regulations upon Expiration of Contracts from 1975 through 1985. January 26, 1976, 6 pp. Testingny before the House Committee on Interstate and Poreign Commerce: Energy and Power Subcommittee: by Henry Richwese. Director, Resources and Economic Development Div.

Organization Concerned: Federal Power Commission. Congressional Relevance: House Committee on Interstate and Poreign Commerce: Energy and Power Subcommittee. Authority: 18 C.F.R. 154,93.

If the law were to remove the price regulation over natural gas, the volume of gas released from regulation upon the expiration of sales contracts between producers and interstate pipeline companies could amount to shout 29 trillion cubic feet (TCF) during the period 1975 through 1985, assuming that the production from existing wells continues at a constant rate. This estimate is based on contract data which received limited verification by the Federal Power Commission (PPC) and which was somewhat incomplete. Three methods were used to determine at what rate productivity from existing reservoirs will decline in order to develop estimates on the cumulative volume of gas that would be released from regulation; assuming the Davis Doeline Curve, the total volume released would be 9.1 TCP; assuming the National Availability Curve, the volume would be 12.7 TCF; and assuming the Total Energy Resources Analysis (TERA) Curve, the volume would be 7.7 TCF. The amount of gas currently under contract which would be deregulated could also be affected by indefinite pricing clauses in existing contracts which provide for future changes in the price of gas sold. Provisions of the deregulating statute and/or PPC retembling actions would affect the impact of these classes on the volume released from price controls. Many of these indefinite pricing clauses are impermissible under FPC regulations. GAO recommended that FPC should maintain current informotion on producers so that needed data are readily available for use in future Congressional and FPC decisionmaking. (SC)

## 158 [Gulf Oil Corporation's "Double Dipping" on Crude Oil Product Costs]. OSP-76-13: B-178205. February 9, 1976. 4 pp. Report to Reo Les Aspin; by Phillip S. Hughes, Assistant Comptroller General

Organization Concerned: Gulf Oil Corn., Pederal Parezy Administra

Congressional Raisvence: Rcp. Les Aspie. Authority: Emergency Petroleum Allocation Act of 1973 (87 Sus 627). Federal Energy Administration Act of 1974 (88 Stat. 96). Energy Policy and Conservation Act

The term "double die" means the recovery of certain increased product costs twice by the oil companies, as interpreted from Pederal Energy Administration (PRA) regulations. Findings/Canalysisses Gulf Oil Corporation overhanized \$119.7 million in increased crude all costs from February to September 1974. Most of these costs in question were not actually double dipped because they were not passed on to the consumer in increased prices, but were "banked" for a potential second recovery of increased consumer prices later. The regulations provided for a mandatory crude oil allocation program. which 13 refiners interpreted to permit double dispine in crude oil sales and in increased cost passthrough. These 13 refiners overbanked increased crude oil costs of \$309.1 million. When, in May 1974, the FEA revised its regulations, all except Gulf discontinued overbanking. After clarification, Gulf agreed with PEA to decrease its bank \$119.7 million. (DJM)

[Problems in Regulating Natural Gas Prices by the Federal Energy Administration]. OSP-76-15; B-179205. February 25, 1976. 9 pp. + aspendix (1 pp.). Report to Sen. Edward M. Kennedy, Chairman, Senate Committee on the Judiciary: Administrative Practice and Procedure Subcom-

mittee; by Phillip S. Hughes, Assistant Comptroller General. Congressional Relayones: Sensor Committee on the Judiciary: Ad-

ministrative Practice and Procedure Subcommittee. Authorities Emergency Retroloum Allocation Act of 1973 /P.I. 93-159). Pederal Energy Administration Act of 1974, \$ 5(b)(11) (P.L. 93-275 IO CHR 212

The major problems in developing, implementing, and enforcing the Pederal Baergy Administration's (FEA) regulation of the price of natural cas liquids (NGI) were examined. Eladinar/Constasions: Pederal laws direct the PEA to regulate the price of at least two NOLs, butane and propane. However, the legislation was not specific, and FBA price regulations were poecly suited for application to NGL plants, resulting in considerable industry confusion. PBA did not implement a meaningful compliance and enforcement program; however, many companies did not know that the price regulations pertained to them, in January 1975 the PEA implemented specific regulations for NOL plants and in August 1975 applied them retrospectively. Because of numerous requests for clerification. FEA proposed amendments to include provisions inadvertently omlitted and to adapt them more specifically to eas plant operations. PBA recently started some limited compliance audits of ass processors. FEA officials acknowledged that the solution of the pricing of NGL took anduly long. Several producers/refiners are currently challenging PEA's legislative authority in court. (Author/DJM)

Comments on the Administration's Property Conthatic Finals Commercials

Countroller General

Institut Processor B FD-76-52 R-178205 Musch 19 1976 19 cm 4 2 annendices (10 pp.). Resort to Ben Ken Herbler, Chairman House Committee on Science and Technology: Energy Research, Development and Demonstration (Fossil Fuels) Subcommittee; by Elmer B. Stanta,

Organization Concerned: Energy Research and Development Ad-Congressional Relevance: House Committee on Science and Technology: Energy Research, Development and Demonstration (Fossil Fuels) Subcommittee

Authority: Federal Nonnuclear Energy Research and Development Act (42 U.S.C. 5901). Energy Reorganization Act of 1974 (42 U.S.C. 5801). S. 2532 (94th Cong.). H.R. 3474 (94th Cong.).

Proposals providing for Federal assutance to aid industry in building a limited number of commercial-scale synthetic fuel plants. using technologies which have advanced to the point where largescale plants can be built to help demonstrate their economic and environmental viability, have been or are being considered by Conerror. Andher Conclusion: The Energy Research and Development Administration (ERDA) believes that the moles contribution from these plants will be the environmental and economic informs. tion that will be generated in locating and operating them. This information could gave the way for industry and governmental regulatory bodies' involvement in the commercialization of a large number of coal gasification and oil abale plants. In anticination of legislation authorizing this activity, ERDA plans to make various studies signed at: undertaking strategy and policy analyses necessary for program implementation; initiating long lead-time activities related to nongram implementation such as environmental impact statement finalization and program regulations; and informing the public, Congress, States, and other groups about the proposed program. Recommendations: Congress should consider awaiting the completion of these studies before considering legislation suthorizing a commercial demonstration program. Congress should consider specifically requiring ERDA to delineste and justify the scoot and magnitude of Federal assistance it feels will be needed to implement the property and to justify the type and number of plants needed to accomplish the program's objectives. (Author/SC)

Financing for Commercial-Stred Demonstrations of Energy Technoloplex April 1, 1976. 10 pp. Tenimony before the House Committee on Science and Technology:

by Phillip S. Hughes, Assistant Comptroller General. Organization Concernado Energy Research and Development Administration

Congressionel Ratevances House Committee on Science and Technolosy. Authority: Energy Policy and Conservation Act of 1975. H.R. 3474 (95th Cons.), H.R. 12112 (95th Cons.),

Legislation regarding financial support for synthetic fuels and other energy development should be coordinated in a comprehensive framework including all likely development costs and details. Such legislation authorizing financing by means other than the appropriation process should include provisions for annual review by the Congress coupled with such limitations and allowances for flexibility as deemed appropriate. Close scrutiny should be given to the number and size of nonsynchetic fuel commercial demonstration facilities proposed by the Energy Research and Development Administration (ERDA) and to any information obtained under this program before authorizing the planned research and development on synthetic fuel plants. The question of Government assistance for encouraging the commercialization of synthetic and nonsynthetic fuel technologies might be better resolved within the broader scope of the proposed Energy Independence Authority with finencial assistance authority covering all forms of energy supply, rather than a select few. Questions could be rasted regarding: the desirability of subsidizing high cost synthetic first output when the price of domestic oil is regulated at an average price; and the incremental versus average pricing of synthetics. (Anthor/OM)

Developing and Commercialising Russey Technology, April 13, 1976 c 16 nn 4 appendices (11 nn)

Testimery before the Senate Committee on Ranking, Housing and Urban Affeirs: by Monte Canfield, Ir. Director, Office of Special Programs

Congressional Relevance: Senze Committee on Banking, Housing and Urban Affairs Authority: Federal Rosrey Davelonment Impact Assistance Act of 1976: S. 3007 (94th Cong.): H.R. 11792 (94th Cong.), Energy Independence Authority Act of 1975; S. 2532 (94th Cong.); H.R. 10267 (94th Cong.), Personners Tax Reduction Act of 1975; H.R. 10105 (94th Cong.), S. 973 (94th Cong.), H.R. 8524 (94th Cong.).

Proposed legislation being considered by the Congress would provide various combinations of Federal financial support for develeging and commercializing energy technologies. There are three main types of legislative proposals to financially assist the development of new energy technologies: I)subsidies to States and local governments in regions which are largely rural and unindustriolized to help them plan for development and to provide the public facilities necessary as a result of the development; 2)incentives to build and operate new risky commercial or near-commercial facilities in the form of loss guarantees, interest subsidies and tax write-offs; and Neubaidies to the producers of synthetic fuels in the form of price supports or to users in the form of tax incentives or low interest loans. The Administration's most comprehensive energy development proposal would establish an Energy Independence Authority (EIA) and encourage the development and commercial operation of domestic energy sources. This bill (S. 2532) exhibits a clear preference for initiatives of the supply-increasing type and would hamper conservation efforts. GAO has conducted and is conducting studies on the mention of Pederal financial assistance for developing and commerelalizing energy technologies. (SC)

Federal Assistance to State and Local Governments in Developing and Administering Energy Programs]. OSP-76-20; B-178205. April 23, Report to Frank G. Zarb. Administrator, Federal Rosray Administration; by Monte Canfield, Jr., Director, Office of Special Programs.

Authority: Federal Energy Administration Act of 1974, Energy Policy and Conservation Act.

The Federal Energy Administration's (FEA) assistance to State and local governments in developing and administering energy programs was surveyed. Findings/Conclusions: Several weaknesses were found in program planning and direction which have inhibited FEA's ability to significantly affect State and local activities in dealing with energy problems. Little coordination and communication were found between FEA headquarters, FEA regional offices, and State energy offices on energy conservation, and ineffective use of manager was found in dealing with other significant energy problems and issues. Studies of the growing natural gas shortage, for instance, were independently made by all three entities, and often amounted to duplication of effort. The use of coal and alternate energy resources (solar, prothermal, solid waste) was given minimal attention. Recommendations: PRA should establish a plan setting forth PEA programs which should involve State and local governments, and the manner of their involvement with PBA headquarters and regional offices. The plan should provide for more effective communication and coordination between regional offices to insure a single purpose in carrying out such programs and the maximum flow of information along organizational elements. (DJM)

Integration of Financial Data in Fraheating Pederal Factor Programs April 28 1976 19 no

Specch before American Gas Association-Edison Electric Inst. Accounting Conference, Houston, TX: by Planer B. Streets, Compressible General

Oronnization Concerned: Cost Accounting Standards Board: Federal Energy Administration: Financial Accounting Standards Board: Securities and Exchange Commission. Authority: Energy Policy and Conservation Act: S. 2872 (94th

Cone.). Congress is interested in using accounting in corrying out na-

tional policies. The Cost Accounting Board seeks to achieve consistency in cost accounting under covered Government contracts. Disclosure Statements are used to provide for knowledge, in advance of contracting, of the cost accounting practices which the contractor will actually use. The Energy Policy and Convergation Act will establish a strategic petroleum reserve, set a ceiling price for domestic crude oil, and mandate auto efficiency standards. The act will increase the Federal Recrey Administration's (PRA's) responsibilities and give GAO new authorities including the right to impect the books and records of private persons and companies under certain conditions. GAO has about 90 energy attidies underway or planned. One study of natural gas deregulation concluded that, even with deregulation, natural gas production is likely to continue its decline, Without it, though, production would decline even more steeply. The economic tradeoffs involved in alternative courses of action must be earefully switched. The best long-term organizational approach to the solution of energy problems would be to establish a Department of Energy and Natural Resources. Baergy conservation should be given higher priority in national policy. (OM)

Comments on Selected Aspects of the Administration's Proposal for Government Amistance to Private Uranium Enrichment Gravas, RED-76-110; B-159687. May 10, 1976. 2 pp. + 3 appendices (33 pp.). Report to Rep. Melvin Price, Vice Chairman, Joint Committee on Atomic Energy: by Elmer B. Staats, Comptroller General.

Organization Concerned: Bacrey Research and Development Administration: Uranium Enrichment Associates Congrassionel Relevences John Committee on Atomic Energy

Authority: Nuclear Fuel Assurance Act of 1975; H.R. 8401 (94th Cong.); S. 2035 (94th Cong.). Atomic Energy Act of 1954, as amended (42 U.S.C. 2051(a)(4); 42 U.S.C. 2153(d)). Congressional Budget Act of 1974 (P.L. 93-344).

The Nuclear Fuel Assurance Act proposes Government assistance to private uranium enrichment arouns. Of specific concern is a proposal from Uranium Enrichment Associates to provide the next Increment of enrichment capacity. Findings/Conclusions: Management of the Government enrichment facilities could be accomplished more effectively by a corporation having a self-financing authority to borrow funds from the Treasury or the public. A self-financing proposal would from the corneration from the budgets ry requirement of seeking congressional approval of appropriations, thereby achieving a major goal sought by the present legislative proposal. The Joint Committee on Atomic Energy should approve legislation authorizing the Energy Research and Development Administration (BRDA) to construct the next increment of enrichment capacity using the proven enrichment process. ERDA should sack and encourage private industry to continue offerts in advanced technologies through explicit programs, Government assistance and assurances will be required. The Government should seek an equitable sharing of risk with the private enrichers. (Author/QM)

# Developing and Commercializing Engray Technology, May 24, 1976, 9

Testimony before the House Committee on Banking, Currency and Housing Rossomic Stabilization Subcommittees the House Committee on Interstate and Foreign Commerce: Energy and Power Subcommittee by Monte Confield, Ir. Director, Engrey and Minerals

Organization Concerned: Energy Research and Development Administration. Congressional Relayance: House Committee on Banking, Currency and Housing: Economic Stabilization Subcommittee: HouseCommittee on Interstate and Foreign Commerce: Energy and Power Sub-

committee. Authority: S. 2532 (94th Cone.), H.R. 12112 (94th Cone.).

There are three main types of legislative proposals to financially assist the development of new energy technologies: "Yront-end" assistance or subsidies to states and feest governments in regions which are largely rural and unindustrielized; incentives in the form of loan guarantees, interest subsidies and tay writeeffs for rejuctant private suestors, and subsidies to renducers in the form of tax incentives or low interest loans to enable higher cost technologies to compete in the marketplace. A bill is being considered which would establish an Basisy Independence Authority (RIA) to encourage energy days: forment and conservation. The proposed bill shows a preference for initiatives of the supply-incressing variety. It would sctually hamper conservation efforts because it would result primarily in the allocation, not the creation, of central. The bill is underlaid by some assumptions regarding national policy which are by no means settled, notably its predilection toward nuclear power generation. The Congress should consider awaiting further Energy Research and Development Administration (ERDA) studies before approving any legislation. Information which should be available from ERDA and GAO in the summer of 1976 should be helpful to the Congress as it proceeds toward final legislative action on bills dealing with the Pederal financial support for construction costs, price supports, and initial costs to State and local governments for energy programs. (Author/QM)

Actions Taken by the Federal Power Commission on Prior Recommendations Concerning Regulation of the Natural Gas Industry and Management of Internal Operations RED-76-108; B-190228, May 24, 1976. 13 pp. + appendices (4 pp.). Report to Rep. John E. Moss, Chairman, House Committee on Inter-

state and Foreign Commerce: Oversight and Investigations Subcommittee; by Elmer B. Stasta, Comptroller General. Organization Concerned: Pederal Power Commission.

Congressional Relevance: House Committee on Interstate and Foreign Commerce: Oversight and Investigations Subcommittee. Authority: Natural Gas Act. F.P.C. Order 402, F.P.C. Order 402-A. P.P.C. Order 491, P.P.C. Order 418, F.P.C. Order 455, P.P.C. Order 455-B. F.P.C. Opinion 699, F.P.C. Opinion 699-B. 18 C.F.R. 3.735. Executive Order 11222.

The Pederal Power Commission (PPC) has implemented most of OAO's prior recommendations concerning the natural gas industry. and the actions taken have sehanced FPC's ability to effectively regulate the natural gas industry Findings/Conelasions: FPC is having some difficulty, however, in obtaining volume and price data on emergency sales promptly because it lacks an adequate followurn system and because interstate pipeline companies are not required to file sales date within a specified period, PPC's system of following up on volume and price data not reported involves merely writing or phoning the companies at the discretion of the FPC staff member keeping the records. Usually 4 months places before my followen is made. Recommendations: For FPC to adoquately mordior the offentiveness of the 60-day emergency sales, the Chairman of FPC should establish a specific reporting time frame for interstate reguling cornpanies required to file volume and price data on 60-day emergency

sales: require that formal followers procedures be established to obtain 60-day emergency sales data when the data are not prometly reported, including specifics on when the pensity provisions of the Natural Gas Act should be invoked; and keep data about emergency sales that continue beyond 60 days separate from other emergency sales data (Author/OM)

Requests to Regulatory Apencies he Oil Companies for Deviations from Standard Procedured, OSP-76-25: B-156603, June 15, 1976, 7 no. + enclosure (2 pp).

Report to Rep. Oeorge Miller, House Committee on Interstate and Pareign Commerce; Rep. John E. Moss; by Phillip S. Hughes, Assistant Comptroller General Organization Concerned: Environmental Protection Agency; Fed-

eral Energy Administration; Pederal Maritime Commission; Pederal Power Commission; Federal Trade Commission; Department of the Interior; Interstate Commerce Commission; Department of Transportation; Securities and Exchange Commission Congressional Relavance: Rep. George Miller; Rep John E. Moss.

A number of deviations from standard operating procedures wer requested from Federal regulatory agencies from September 1973 through October 1975. Findings/Conclusions: The Environmental Protection Agency received requests from the Offshore Operators Committee, Shell, Sun Oil, Texago, Gulf Oil, and Atlantic Richfield for changes or relaxation of requirements related to discharges, effluents, or sulfur content, Federal Energy Administration information revenled 181 requests, none involving procedures which would distort financial reporting, of which 33 were granted and 2 partially granted. No requests were received by the Federal Maritime Commission Requests received by the Federal Power Commission related to extensions for filing forms and reconsideration of termination of procedures for emergency sale of natural gas. The Federal Trade Commission reported motions by companies to cussh orders for filing special reports. Department of the Interior received requests dealing with testing requirements of coupment The Interstate Commerce Commission reported 12 requests for deviations pertaining to onshore operations. Only the Coast Guard and Materials Transportation Eurese of the Department of Transportation recolved requests for modification. The Securities and Exchange Commission did not exempt oil companies from information disclasure requirements, except for five waivers which were considered reasonable. (HTW)

LEffects of a Change in Size Standard for Small Business Petroleum Refiners]. June 18, 1976. 3 pp. + enclusure (9 pp.) Recort to Rep. John E. Moss. Rep. John D. Dinzell: by Robert F. Keller, Acting Comptrolfer General,

Organization Contamade Small Business Administration; Defease Supply Agency: Geological Survey. Congressional Relevanta: Rep John E. Moss; Rep John D. Dingell Authority: 13 C.F.R ch. I, part 121.

The October 1975 change in the size standard for petroleum refiners, one of seven made in the last 3 years by the Small Business Administration (SBA), was made to allow small refiners to expand without losing benefits and to compensate for a decrease in the percentage of refiners considered "small". Eliphility for set-aside coetracts and SBA loans was increased to 50,000 burrels per day (BPD) grade oil capacity and 1,500 employees or less; for sales of royalty oil, it was increased to 45,000 BPD and the same number of employees. Findings/Conclusions: Based on examination of industry lists and contacts with Federal agencies, eight refiners were identified that may have become eligible for smell business benefits as a result of the change. The eligibility of three of these was being reviewed by SBA. According to an official of the U.S. Geological Survey, an increase in the number of oligible refiners will cause refiners eligible under the old standard to receive less revalty oil

reserved for sale to small refiners. Three agency officials who had earlier recommended a more limited increase now stated that the new standard was justified. An examination of the former Administrator's appointment book did not show that he was contacted by refiners directly affected by the change. (HTW)

Budgeting of Federal Financial Intentives for Energy Development. July 27, 1976, 3 pp. Testmony before the Senate Committee on Budget; by Phillip S.

Hughes, Assistant Comptroller General

Organization Contamed: Energy Research and Development Administration. Congressional Relevance: Senste Committee on Budge

Awtheelty: Nuclear Fuel Assurance Act, S. 2035 (94th Cong.). Synthetic Peels Demonstration Plants Bill: H.R. 12112 (94th Cong.) S. 2532 (94th Cong.).

Legislative proposals before Congress aimed at fostering the development of new energy supply technologies include S. 2532 to establish the Energy Independence Authority; S. 2035, the Nuclear Assurance Act: and H.R. 12112, to amend the Federal Non-Nuclear Energy Research and Development Act of 1974, \$2035 would authouse the Energy Research and Development Administration (ERDA) to enter into contracts with firms for building privatelyowned stanium entschment plants with total authority of \$8 billion. H.R. 12112 would authorize ERDA to provide private firms up to \$4 billion in support for synthetic fuel, renewable resources, and industrial conservation projects. GAO advocated full disclosure of the budget impact of Federal credit programs and expressed support for recommendations of the 1967 President's Commission on Budget Concepts which urged a unified budget. Off-budget programs have departed from this concept and would be substantially increased by ensciment of the financial incentives under consideration. The loan guarantee technique may not be the most effective way to achieve the objectives of the bills and the proposed losn guarantees should be carefully weighed against other options. (HTW)

An Evaluation of Proposed Federal Assistance for Financiae Commercustization of Emerging Energy Technologies. EMD-76-10; B-178205. August 24, 1976. 56 pp + appendices (9 pp.). Report to the Congress; by Elmer B. Staats, Comptroller General.

Organization Concarned: Energy Research and Development Administration; Federal Energy Administration. Congressional Relavance: Congress.

Authority: Energy Policy and Conservation Act (P.L. 94-163). Congressional Budget Act of 1974, tnles I-IX (P.L. 93-344). P.L. 94-385. S. 2532 (94th Cong.). H R 12112 (94th Cong.).

Proposed legislation before Congress would provide Federal assistance to encourage private use of a variety of energy technologies.

Findings/Conclusions: Three factors to be considered in the selection of technologies are: contributions to meeting the Nation's noergy needs, costs, and eventual selling price. In choosing financing mechanisms, factors to be considered are the technology's state of development, its economic feasibility, and groups whose actions would be influenced. Based on its analysis of energy options. GAO concluded that conservation should have top priority. Among techregionies to increase energy speely, hydrothermal energy, municipal waste combustion, solar hesting, and tertiary oil recovery were considered most cost effective and, thus, to be given prigrity. Synthetic fuel would not be competitive with foreign oil, and new technological advances may make early plants obsolete before they operate. Therefore, financial assistance for commercial development in this field was not favored. Recommendations: Congress should place principal on energy conservation, encourage solar heating, maintain oversight of tertiary oil recovery, and consider action to encourage considered waste combustion. It should also consider the advisability of legislasion authorizing Federal loan augmentees to builders of synthetic feel

Citotian Section 155

plants, and consider directing the Energy Research and Development Administration to continue research and development and to construct smiller plants which could supply necessary information. (HTW)

# An Evaluation of Proposed Federal Assistance for Financing Commer-

claffrentian of Energing Energy Technologies. August 30, 1976. Il pp. Testuniony before the House Committee on Interestate and Forcing Committees: Energy and Power Subcommittee; the House Committee on Science and Technology; by Phillip S, Hughes, Assistant Comptroller General.

Organization Concerned Energy Research and Development Administration

Congressional Ralavonce: House Committee on Interstate and Forough Commerce: Energy and Power Subcommittee, House Committee on Science and Technology.

Authority: Synthetic Firels Demonstration Plants Bill; H.R. 12112 (94th Cong.)

Several hills introduced in Congress would provide Pederal assistance to encourage private use of a variety of energy technologies. H.R. [2112 would provide Federal loan guarantees for commercialization of synthetic fuels. Factors to be considered in selection of energy technologies are: contributions to meeting the Nation's energy needs, costs, and selling price. The choice of financing mechanisms depends on the technology's state of development, its connectic fessibility, and groups whose actions would be influenced. Based on its analysis of energy options, OAO concluded that conservation should have too priority. Among technologies to increase energy supply, hydrothermal energy, municipal waste combustion, solar heating, and tertiary oil recovery were considered most cost offective. Large investments required to build synthetic fuel plants would direct Federal intentives primarily to large industries. GAO did not favor Government assistance for commercial development of synthetic fools, but felt that emphasis should be placed on research. development, and demonstration. Congress should continue to place priority on energy conservation, encourage solar heating, maintain oversight of tertiary oil recovery, and consider action to encourage municipal waste combustion. It should also consider the advisability of legislation authorizing Foderal loan guarantees to builders of synthetic fuel plants and consider directing the Energy Research and Development Administration to expand research, development, and small pleats, (HTW)

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Management Intercements Needed in the Federal Power Commission's Processing of Electric Rate-Interest Cases. EMD-76-9; B-180228. September 7, 1976. 22 pp. + 3 appendixs (7 pp.). Report to Rep. John J. Monkley; by Robert F. Keller, Acting Comptrollor General

Organization Concerned: Boston Edison Co.; Federal Fower Commission; Massachusetts: Dept. of Public Utilities.

Congressional Relevances Rep. John J. Moskiey. Authority: Rederal Power Act, as amended (16 U.S.C. 792-825r). P.P.C. Order 513, P.P.C. Order 157.

 on authority in such matters. The fixed-unterest rates on overcharges are no flat for either beyone or selfent because cases often lake years to proceed and interest states can fluctuate considerably during such a period. Present oldlys in processing electric-rate increase cases nor ambituable primarily to the handbility of the fluctuate of Provert to keep page with the between framehor of detection state states, in the final between the control of the

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## 154

Alternative Puels for Aviation (H.R. 12112). September 28, 1976. 11 Pratimony before the Senate Committee on Aeronautical and Space Sciences: Ad Hoc Aeronauce Technology and National Noeds Subcommittee; by Monte Casifield, 3r., Direction; Energy and Minteral

Organization Concerned: Energy Research and Development Administration.

Congrassional Relavance: Senur Committee on Acromatical and Space Sciences: Ad Hoc Acrospace Technology and National Needs Subcommittee. Authority: Synthetic Fuels Demonstration Plants Bill; H.R. 12112 (94th Cong.)

H.R. 12112 is primarily designed to promote the commercialization of synthetic gas; it also contains a provision for a small program to increase liquid fuels through oil shale plants. Factors to be considered in choosing energy technologies are: contributions to meeting the Nation's energy needs, costs, and selling prior. Based on its analysis of energy options, GAO concluded that conservation should have too priority. Among technologies to increase energy supply, hydrothermal energy, municipal waste combustion, solar heating, and tertiary oil recovery were considered more cost effective than avathetic fuels and thus to be given priority. Estimates of future needs for synthetic fuels very but BDRA estimated that the equivaient of 10 million barrels of oil from synthetic fuels will be needed in the year 2000. Synthetic feel production does not warrant Government financial support at this time, but Government research, development, and demonstration in this field should be continued Congress should continue to place priority on energy conservation. encourage solar heating, maintain oversight of tortiary oil recovery. and consider action to encourage municipal waste combustion. I should also consider the advisability of legislation authorizing Pederal less guarantees to builders of synthetic feel plants, and consider Instead directing the Energy Research and Development Administration to expand research, development, and small plants. (HTW)

# 15

Improvements Needed in the Federal Enhanced Oil and Gat Recovery Essenth, Development, and Devocatestion Program. BMD-77-3; B-178205. January 28, 1977. 26 pp. + appendicts (27 pp.). Report to the Congress, by Einer B. Statts, Comprobler General.

Organization Concerned: Energy Research and Development Administration; Pederal Beergy Administration.
Congressional Ralevanese: House Committee on Science and Technology; Sensite Committee on Interior and Insular Affairs; Congress.

Authority: Federal Nonnuclear Energy Research and Development Act of 1974 (P.1. 93-527)

Improvements are needed in the Federal enhanced oil and pasrecovery research, development, and demonstration reperam. Fladings/Conclusions: Advanced methods to recover currently nonrecoverable oil and gas could contribute to reducing United States dependence on imported energy resources. Commercialization of many of those techniques will require more technology development. Other obstacles, primarily economic, also stand in the way of commercialization. The Energy Research and Development Administration has a risk-sharing cooperative demonstration program to stimulate industry commercialization of advanced recovery technologies. However, the program has not been based on adequate planning and has been moving along at a slow pace. Although the agency is attempting to improve the program, it is unlikely to have a major effect on increasing domestic oil and gas supplies before the late 1980s or early 1990s. Recommendations: The Administrator of the Energy Research and Development Administration should give continued and increased emphasis to developing and putting into operation a management plan for enhanced pay recovery. The plan should focus on developing a halanced research program to include ishoratory research, demonstration tests, and the eathering of erological data on the types of deposits the agency plans to test. Admigistrator should also reassess annually the Federal role and level of effort in enhanced oil and gas recovery research and development in the light of increased oil and gas prices and industry's willingness to promote new technology, (Author/SC)

## HOW CAN THE EXECUTIVE BRANCH ORGANIZATION AND PROCESSES FOR DEALING WITH ENERGY PROBLEMS BE IMPROVEDS

California's Central Valux Project-Proposed Power Rate Increase. B-125042. November 19, 1973. 34 pp. + appendix (3 pp.). Report to Ren. Henry S. Reuss. Chairman. House Committee on Government Operations: Conservation, House Collisions of sources Subcommittee: by Elmer B. Stants. Comptroller General

Organization Concerned: Department of the Interior: Bureau of Reclamation. Congressingel Relevance: House Committee on Government Operations: Conservation, Energy and Natural Resources Subcommittee. Authority: H. Rent. 39-1409

The Department of the Interior proposed a substantial (51.6%) increase in the namer rate to be charged customers of the Bureau of Reclamation's Central Valley Project (CVP) in California, Project costs allocated to nower, and part of the costs allocated to irrigation. are required to be recovered in rates charged nower customers and to be repaid to the U.S. Treasury. To determine whether power rates are adequate to recover the Federal investment within the required repayment period, CVP periodically makes and publishes rate and repayment studies. Findings/Conclusions: The rate and repayment attadies upon which the proposal raise is based have inherent weaknesses which cause them to give speculative results. These weaknesses result from uncertainties from projecting revenues, costs, and changes in operating methods for extended periods. Several contentions made by the opponents of the proposed rate increase involved suggestions which would require agreement with a contractor, and GAO cannot predict what the terms of the agreement would be. Four of the contentions had merit: three involved separate rate and repayment study procedures which the Bureau of Reclamation could change unitaterally and one involved using updated hydrology studies. Two CVP procedures were not consistent with established critcris: planning to avoid a deficit in any year of the repayment period and planning for an operational surplus at the end of the repayment period. If these two procedures were to be changed, the power rate would have to be increased only 36%. The proposed rate probably could be further reduced if water availability data from undated

hydrology studies were used in the rate and repayment study for CVP. (Author/OM)

Energy Data Collection in the Federal Government January 17, 1974, 6 pp. Testamony before the House Committee on Small Business: Activi-

ties of Regulatory Agencies Subcommittee: by Phillip S. Hughes, Assistant Comptroller General.

Organization Concerned: Atomic Energy Commission; Bureau of Mines: Department of the Interior; Department of Commerce; Geological Survey, Federal Buergy Administration; Federal Power Com-Congressional Balancers - House Committee on Small Business Ac-

tivities of Resulatory Apencies Subcommutee Authority: Economic Stabilization Act of 1970, as amended. Emergency Petroleum Allocation Act of 1973. Defense Production Act of 1950. H.R. 11793 (94th Cong.). H.R. 11503 (94th Cong.). S. 2776 (94th Cone.), S. 2732 (94th Cone.).

There is substantial concern in and out of the Government about the data on which energy decisions are based and about the system under which such data are collected. Seventeen Federal agencies, comprising 48 bureaus, offices, divisions, and administrations which were collectors or users of energy data were identified and visited As of March 1973, 15 major Federal agencies were circulating 145 questionnaires and forms to private industries and States requesting energy-related data. There is an acute need for improvements in both organization and process to assure systematic collection and analysis of energy data. There is also a need for specific statutory authority for energy data collection and specific statutory support for syssematic data verification. Varification provisions in the legislation should provide for access to records and other documentation which gravate firms have in support of data reported to the Government. GAO should be given access to the same records and documentation to which any saency given responsibility for energy data collection is provided access (Author/OM)

A Bill to Establish a National Energy Information System. Pebruary 6. 1974. 16 pg Testimony before the Senate Committee on Interior and Insular Affairs; by Phillip S. Hughes, Assistant Comptroller General,

Organization Concerned: Atomic Energy Commission; Bureau of Mines: Department of the Interior: Department of Commerce: Greek logical Survey; Pederal Energy Administration; Federal Power Commission.

Congressional Relayance: Senate Committee on Interior and Invalor Affeles. Authority: Energy Policy Act of 1973, S. 2776 (94th Cong.), H.R. 11793 (94th Cong.), S. 2782 (94th Cong.), S. 2176 (94th Cong.).

Legislation is required to establish a comprehensive energy data system. Such regislation should: (1) require reporting of needed enerev-related information; (2) provide for certification of the accuracy of reported data and establish sanctions for nonreporting or incorrect reporting; (3) provide for access to records and other supporting documentation by those collecting data so that programs of data verification can be established; (4) provide for standardization of terms and definitions to Insure reporting on a consistent basis: (5) assure that needed data are available to Government agencies; (6) provide for prompt and complete public disclosure, limiting "confidential" data to the minimum; and (7) provide assurance of independent reviews of energy data collection by giving OAO access to all reported data and to the records and supporting documentation of those reporting data. The best long-term organizational approach to the solution of energy data problems is to establish a Department of Energy and Natural Resources which would have the score and stability to deal with complex and long-term issues. A single reference source or directory should be developed. A comprehensive

Citetion Saction 163

inventory of existing collection efforts, preiodically updated, should identify the data and its source, frequency, timeliness, and qualitatively describe its reliability. (Author/OM)

## 100

Actors Needed to Improve Federal Efforts in Collecting, Analysing, and Reporting Energy Date, B-178205. February 6, 1974. 35 pp. + 3 appendixes (10 pp)
Report to Sen Henry M. Jackson, Chairman, Senate Committee on Interne and Insular Affairs, by Phillip S. Huelner, Accident Commit-

Gegenizedien Concerned: Atomic Borray Commission; Department

of the Interior; Federal Energy Office; Federal Power Commission; Interstate Commerce Commission.

Congressional Relayance: Sessire Committee on Interior and Insular

Affairs. Authority: Energy Policy Act of 1973; S. 70 (93rd Cong.). S. 2776 (93rd Cong.). S. 2782 (93rd Cong.). S. 2176 (93rd Cong.). H.R. 11903 (93rd Cong.). H.R. 11903 (93rd Cong.).

Major improvements are essential in both the collection and the analysis of energy data. Findings/Canalysisses Many Federal agencass have been collecting a large volume of operay-related data which comprises a wide range of information which one he utilized to developing a comprehensive Federal energy information system. However, there are sups in the data being collected; time lags are not consistent with current national requirements; the data are unverifled for the most part, and the individual data collection efforts need to be coordinated and integrated into a comprehensive system. Data collection should be based on a careful review of the needs of data users, giving priority to the data needs of Government users responsible for energy-related policy decisions. General responsibility for developing the comprehensive system should be placed within the executive branch which has the opportunity to astablish a professignal, obsective oceanization to eather energy information. Personmendations Legislation required to establish a comprehensive energy data system should: require reporting of needed energyrelated information; provide for certification of the accuracy of reported data, provide for access to records; assure that the needed data are available to Government agencies; provide for promot and complete public disciosure; and provide assurance of independent reviews of the energy data collection. (SC)

# 160

[Proposed Energy Inventory Act of 1974]. B-178205. April 12, 1974. 2 pp.
Letter to Rep Harley O. Staggers, Chairman, House Committee on Intestate and Facrigin Commerce; by Robert F. Keller, Deputy Commercial C

Congressionel Relavance: House Committee on Interstate and Foreign Commerce.

Authority: Energy Inventory Act of 1974; H.R. 12534 (93rd Cong.).

# 61

Facific Northwest Hydro-Thermal Power Program—A Regional Approach to Meeting Electric Power Requirements: B-114558, June 5, 1974, 22 pp. + 4 approximates (16 pp.) Report to the Congress; by Robert F. Keller, Acting Comptroller Central,

Organization Concarnad: Bonneville Power Administration; Bureau of Reelsmation; Department of the Army: Corps of Engineers; Department of the Army; Department of the Interior.
Congressioned Relevence: Congress.

Authantity: Public Works Appropriation Act of 1970 (P.L. 91-144). Bonneville Project Act (16 U.S.C. \$32e). Government Corporation Control Act. P.L. 91-439. H.R. 14168 (93rd Cong.) S. 3362 (93rd Cong.). H. Rept 91-1219.

The Hydro-Thermal Power Program was developed in 1969 to most the arrowing electrical needs of the Pacific Northwest through the integration of regional nower resources. Findings/Conclusions: As a result of delays in providing generating capacity under phase I of the program nower shortages in increasing amounts have oncurred and are expected to continue to occur. The delays resulted from problems in obtaining funds for constructing the Federal hydrostectric protects to be provided under the program plan: planning. designing, and constructing both Pederal and non-Pederal Socilitiesobtaining public acceptance of a Federal hydroelectric project; and meeting State air politation control requirements for a thermal plant. Actions have been taken by both the Federal Government and the utilities to reduce the impact of the program delays. Additional Pederal funds totaling about \$2 billion will be required for other hydroelettric projects and transmission facilities in order to complete chase. I of the program Pacific Northwest utilities and the Bonneville Power Administration (BPA) have agreed upon a plan for implementing the program through 1986 BPA has developed a legislative proposal to authorize it to sell revenue bonds to the Secretary of the Treasury to finance its expenses. (OM)

# 162 Survey of Federal and Electric Utility Procurements of Power Equip-

General.

ment. Bi 174317. August 1, 1974. 23 pp. + appendices (11 pp.). Ropor to Sea. Lee Metcall, Chiliman, Senate Cemmittee on Gorerament Operations Reports, Accounting and Management Subcommittee; by Phillip S. Hughes, Asiatant Comproller General.

Organization Cancerned: Atomic Energy Commission; Beanerillo Power Administration, Federal Power Commission; Runa Electrification Administration; Tennesce Valley Administry. Congressional Relevance: Seaw-Commistee on Government Operations: Records, Accoracting and Management Subcommittee.

Making meaningful comparisons of power equipment prices is a complex task involving many technical matters and subjective decisions. Costs of somewhat comparable power equament sometimes varied greatly in Federal procurements, in electric utility procurements, and between Federal and electric utility procurements. Find-Ines/Canolations: Them was no nattern to indicate that electric utilities generally paid more or less than the Federal Government for comparable equipment. A number of problems preoluded determination of the reasonableness and comparability of prices paid by the Federal Government and the electric utilities for nuclear and normsclear cower equipment. These problems is volve the general lock of Foderal authority to examine suppliers' and manufacturers' records relating to such sales; the many complex and technical equipment specifications involved; the lack of enterla on how to measure in dollars certain necessary comomic considerations; and the fact that nuclear equipment is nurchased on a total system basis and posts are not available on an individual component basis. No determination concerning the consumbleness of equipment costs to the Redeval Government and the electric utilities can be made without extensive scores to the records of equament suppliers and manufacturors. Pew regulatory commissions have authority to review or audit records of equitment suppliers and manufacturers. Little attention is given to individual procurements of power equipment. Increasing foreign competition in procurements of power equipment and increasing standardization of equipment and plant siting and design hold promise for reducing costs. (OM)

## 163 [Access of the Federal Power Commission to Bareau of Reclamation Records to Instite Compliance with the Federal Power Act]. B-125042. August 22, 1976. 4 pp.

August 22, 1976. 4 pp.
Letter to Rep. Heary S. Resss, Chairman, House Committee on Government Operations: Conservation, Energy and Natural Resources Subcommittee; by Robert F. Keller, Acting Comptteller

Organization Concerned: Bureau of Reclamation; Federal Power Commission.

Commission.

Congressional Relevance: Heart Committee on Government Operations: Conservation, Energy and Natural Resources Subcommistee.

Authority: Federal Power Act; 3 103 (16 US C. 1823). 79 Cong.

[Staffing of Finland Energy Administration's Office of Communications and Public Affairs]. B-181254: Potensery 28, 1975. 3 pp. + 5 seppendices (14 pp.)

Report to Rep. Jehn B Moss; by Phillip S. Hughes, Assistant Compreliter General.

Organization Concurred: Federal Energy Administration. Congressional Relevance: Rep John E. Moss. Authority: 5 U.S.C. 3107.

A number of Federal Energy Administration (FEA) employees. including those temporarily detailed from other agencies, deal with public relations and information and the modia. Findings/Conclusient: The PEA's Office of Communications and Public Affairs is at only office for this task. It has a ceiling of 129 people, and as of Pebruary 1975 had 127 employees, including 12 peopermanent empley sex. The 65 employees of the Public Inquines and Correspondence Division respond to inquines from the Government and the miblic, and processed about 2,000 reseases a month as of January 1975, down from a mosthly high at 1974 of 8,500. These employees worked considerable overtime in Anni and May 1974, but much of the overtime is being phased out. As of February 1975, 2) employees were classified as Public Information Officers The Office averaged 130 employees and did a commendable job during the energy casis. handling thousands of Written and telephoned requests, and worked considerable overtime Purther study will involve the question of whether there is a violation of statutes which forbid the use of approprinted funds to pay such public relations employees. (DJM)

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Alternative Energy Proposals. March 10, 1975. 6 pp. Testivony before the House Committee on Intertate and Foreign Commerce: Energy and Power Subcommittee; by Phillip S. Hughes, Assistant Compredier General

Congressional Relevence: House Committee on Interstate and Foreign Commerce Energy and Power Subcommittee.

The General Accounting Office has developed a package of enorgy proposals which are mutually supportive and reasonably comprehensive. Items which would be worthwhile additions to any package of energy proposals include: legislation requiring that Pederal regulatory ageacies give energy conservation the highest possible priority is all regulatory action; modification of the oil price control program to create sufficient incentives for all oil that can be recovered economically through secondary and tertiary recovery: and a legislative mandate requiring that the Pederal Government set an energy conservation example for the Nation in all of its activities which involve the direct consumption of energy. The energy noncoral markage developed by GAO includes a number of energy conservation measures directed at the transportation sector; proeruns designed to improve energy encountryation in the residential. industrial, and commercial sectors of the economy; a program of oil import quotas: Pederal exploratory drilling on the frontier Outer Continental Shelf areas; truth in energy provisions designed to increase consumer awareness concerning energy efficiency; and the establishment of a Department of Energy and Natural Resources.

## 166

Alternative Energy Proposals Developed by the General Accounting Office in Reports to Congressional Inquiries: Proposals and Supporting Acalyses. March 17, 1975. 13 pp. +7 enclosures. Tentinoxy before the House Committee on Ways and Monney, by Blane B. Stants, Comptroller General.

Congressional Relayance: House Committee on Ways and Means-

The development of a number of alternative energy proposals for congressional consideration reflects the growing consensus that a disciplined and cohesive national energy policy is needed and that this policy will significantly change the patterns of energy supply and consumption prevalent in the 1960's and early 1970's. Findings/ Casclantone: A package of energy proposals developed by GAO included: 1)a number of energy conservation measures in the field of transportation; 2)a number of programs designed to improve energy conservation in the residential, industrial, and commercial sectors of the economy; 3)s program of import quotes designed to reduce the importation of oil; 4) a series of governmental activities designed to increase energy supplies and to provide reserves of petroloum to guard against future disruption of imports; and 5)the establishment of a Department of Energy and Natural Resources. Key differences among the various alternative energy proposals before Congress include the manner of implementing and the timing of any import reduction; the extent to which oil and natural gas pesces should be controlled; the amount and method of physing in any new retail tax on gasoline; and the desirability of voluntary as opposed to mandatory actions to improve the fuel efficiency of automobiles. (SC)

## 167 Information on Selected Assects of the Power Operations of Tennesses

168

Valley Authority. RED-75-368, B-114850. April 29, 1975. 10 pp. + appendix (45 pp.). Recort to Sen. Bill Brock; by Elmer B. Stasts, Comptroller General.

Organization Contamad: Temesics Valley Authority.

Authority Tennessee Valley Authority Act of 1933 (16 U.S.C. 831 et seq.). OMB Circular A-76.

The Tennessee Valley Authority (TVA) has several resource development programs, of which its power program is the largest, accounting for about 87% of TVA's total assets in 1974. Findings. Conclusions: With a few minor exceptions, the Authority's power rates are lower than the rates of its neighboring utilities and the average rate of utilities throughout the United States. TVA believes that it has achieved many of the advantages associated with peakload pricing. TVA plans to meet increased demand for electricity primarily with nuclear generated power. Seventeen nuclear units are planned for operation by 1984. The Authority owns six coal reserves which it estimates contain 382 million tens of recoverable coal. Ownership of these coal reserves contributes to lower proces for coal delivered to its steam plants. TVA negotiates with the Tennessee Valley Trades and Labor Council to establish the prevailing wage rate in the area for its trades and labor employees. The Authority constructs its power plants primarily with its own work force rather than by contract, and believes that this is a more economical and efficient meens of attaining its program objectives. The Authority has established 10 residential power resale rate levels, any one of which it may authorize for use by each of its 160 distributors in billing consumers. (SC)

Which Alternative for Energy Paticy? April 30, 1975. 12 pp.
Speech before National Economists Club, Washington, D.C.; by
Moate E. Canfleld, Jr., Director, Office of Special Programs.

Even with the implementation of strong energy conservation encaures and increased efforts to develop new domestic energy supplies, the United States could be forced to increase its reliance on oil

imports in the years ahead. Oil imports should be reduced from the level that they would have been if no notion were taken, first to achieve a 2 million barrel per day reduction in roughly 30 months. and from there, to further suports commensurate with our ability to conserve and increase domestic energy production. Comparative analysis is needed in the transportation sector because the claimed savings for various alternative energy proposals are being computed under different assumptions and using different data bases. It is estimated that implementation of GAO's package of energy proposals would result in a real Greek National Product of about \$322 billion in calendar year 1976 as compared to about \$802 billion if the Administration's proposals were adopted. Basic oconomic indicators would change little as a result of this implementation. Expenditures would not as a stimulus in the current communic situation and would diminish over time as the economy is likely to expand. Three alternative energy proposals not in GAO's proposals should be considered: statutory requirement that regulatory agencies give highest priority to energy enservation; modification of the oil price control program to create production incontives; and a legislative mandate that the Federal Government set an energy conservation example, (Author/QM)

Entroy the Franciscs and the Budget, May 16, 1975, 14 nn. Speech before Federal Government Accountants Association, Philadelphia Chapter, Eighteenth Annual Symposium; by Monte Canfield, Jr., Director, Office of Special Programs.

Even with the implementation of strong energy conservation measures and increased efforts to develop new domestic energy supplics, the United States could be forced to increase its reliance on oil imports in the years ahead. A reasonable goal for amport restrictions, taking into necoust increasing demand and decreasing demestic sunply, is the reduction of imports from the level that they otherwise would be if no action were taken on energy. Comparative analysis is needed in the transportation sector because the claimed services for the various alternative energy proposals are being computed under different assumptions and using different data bases. Basic economic indicators would change little as a result of the implementation of GAO's onergy program from what they would have been if no action were taken. Expenditures would act as a stimulus in the current economic situation and would diminish over time as the economy expands. The following proposals should be considered: a statutory requirement that Pederal regulatory agencies give energy conservation the latchest possible priority; modification of the oil price control program to prests sufficient incentives for producing all oil that can be recovered economically through secondary and tertiary recovery; and a legislative mendate requiring the Federal Government to set on energy conservation example. (Author/QM)

[Comments on the Everyy Information Act], B-178205.90. July 28, 1975. 6 no. + attachments (4 pp.). Letter to Rep. Harley O. Suggers, Chairman, House Committee on Interstate and Foreign Commerce; by Robert F. Keller, Deputy Comptroller General

Organization Concerned: Department of the Interior; Federal Enerry Administration: Federal Power Commission, Federal Trade Commission; Geological Survey. Congressional Relayance: House Committee on Interstate and Foreign Commerce. Authority: Energy Information Act; H.R. 2385 (94th Cong.). Pedoral Bnergy Administration Act of 1974 (P.L. 93-275; 15 U.S.C. 261), S. 70 (93rd Cong.), S. 2176 (93rd Cong.), S. 2776 (93rd Cong.).

Fnergy Digest SEPTEMBER 1977

171 America's Energy Futures. August 4, 1975. 17 pp. Speech before 1975 Engineering Foundation Conference. Honniker. New Hampshire, by Monte Cardield, Jr., Director, Office of Special Programs.

The Ford Foundation's Energy Policy Project, as part of a study of the ear between clomestic energy production and domestic energy consumption, developed three alternative energy futures through the year 2000 Historical Growth Technical Pia, and Zero Growth (ZEG) Policies which would be necessary to sustain high energy growth (the assustion under the Historical Growth scenario) are: governmental efforts to promote high densend; subsidizing the encrev industry to keep prices low; Federal resources available for widespread development; encouragement of rapid Gross National Product growth; capital available to finance new energy systems; and a major supply-oriented research and development program. The more flexible Technical Pixes might be applied to a few key areasspace heating; more ine of waste host from powerplants; improved note fuel economy; use of salar energy for space conditioning and water heating where communical; and incressed recycling of metals and energy intensive products and use of energy from municipal wastes. The Nation should consider moving toward ZEG because: Technical Fix only buys time; the expecity of the earth is finite. resources will be needed in the future; our societies will have serious problems in a resource-short world; and citizens may want a different

Reliable Contract Sales Data Needed for Projecting Amounts of Natural Gas That Could Be Deregulated. RED-76-11; B-178205. September 8. 1975. 19 pp. + 3 appendices (10 pp.). Report to Sen. Henry M. Jackson; Rep. John E. Moss; by Elmor B. Stants, Comptroller General.

kind of America (QM)

Organization Concerned: Federal Power Commission Authority: Natural Gas Act of 1938 (15 U.S.C. 717), P.P.C. v. Texaco. 377 U.S. 33 (1964). Phillips Petroleum Company v. Wisconsin (U.S., 1954). 18 C.F.R. 154.93.

Commuted volumes of eas that will be released from expiring contracts from 1975 to 1985, and which therefore will notentially be available at deregulated prices, range from about 29 trillion cubic feet (TCF) to 7.7 TCF, depending on assumptions concerning the rate of gas flow over the periods in which it is economically recoverable. Fludings/Conclusions: Many sales contracts between producers and interstate pipeline companies contain indefinite pricing clauses which may affect the amount of gas released from price controls if demonstration occurs. The reliability of the 1972 can contract sales data used to study the decembring effects was questionable because the Federal Power Commission (FPC) performed only limited verification to determine that the data were complete and accurate. Recommendations: The Chairman of the FPC should institute procedures aimed at keeping FPC apprised of the status of gas flowing under contracts subject to its jurisdiction. FPC should, to the extent possible, use data regularly supplied, such as gas rales volumes data, and data received nursuant to the August 1973 FPC order which required producers to provide sales date under their contracts with interstate pipelines and other contract data. If available data are inadequate. FPC should consider requesting the additional data needed to form a base which could then be periodically undated. FPC should lestitute procedures to independently verify, at lesse on a sample basis, that the data received are complete, accurate, and reliable. (Author/SC)

[Amendment of the Pederal Energy Administration Act of 1974 and the Extension of its Expiration Date]. B-181254. September 30, 1975. 2 172 Challen Section

Letter to James T. Lynn, Director, Office of Management and Budget, by Robert F Keller, Deputy Cornetroller General

Organization Concerned: Federal Energy Administration. Authority: Federal Energy Administration Act of 1974 (P.L. 93-275)

Southwestern Endered Dance Process w. Empirical Management and Dear gram Operations. RED-76-47; B-125032, January 2, 1976. 54 pp. 4 attachments (24 pp.). Report to the Congress, by Elmer B. Staats, Comptroller General

Organization Concerned: Federal Power Commission: Department of the Interior: Southeastern Power Administration: Department of the Army: Come of Engineers: Department of the Army: Army Audit Aprocy. Congressional Relevances Congress

Authority: Federal Power Act. 6 10(0 (16 U.S.C. 803(0), Acti-Deficigney Act (31 U.S.C. 665). Fland Control Act of 1964 (16 U.S.C.

The Southeastern Endoral Bower Broarum (SERR) had assets of about \$862 million at June 30, 1974, and power revenues of about 541 million for fiscal year 1974. Net power revenues have increased in recent years. Fladings/Conclusions: The following problems in operating projects may have an adverse effect on future financial results: important rehabilitation requirements; delays and cost increases in constructing projects; delays in determining and collecting headwater benefity delays in firming up our allocations of total project costs: adverse environmental effects: and havadous operating conditions. Before marketing arrangements can be completed for four new SFPP projects, several problems must be resolved. The Army Corns of Engineers (Corns) and the Southeastern Power Administration (SEPA) have taken actions to increase nower generation from existing projects. The Corps and the Federal Foursy Administration (FEA) have identified 14 hydroelectric projects which might be expanded or constructed. SEPA had renaid \$155 million of the estimated \$687 million Federal power investment through fiscal year 1974. The Corps Savannah District violated the Anti-Deficiency Act because it incurred obligations in expess of appropriation allotments. The Army Audit Agency has not made financial audits of the Corns accounting offices involved in SFPP since 1966. Recommendanow. The Department of the Interior should issue uniform methods and guidelines for occupring rate and repayment studies used for determining the revenue levels needed in formulating wholesale nower rates. The Army should report the violation of the Corps Savannah District and the actions taken to the President and the Congress. The Army Audit Agency should schedule periodic audits of the Corps accounting offices. (Author/OM)

Fature Energy Demand, February 17, 1976, 11 pp. Speeck before New York Society of Security Analysis: by Monte Canffeld, Jr., Director, Office of Special Programs.

Organization Concerned: Department of the Interior: Pederal Reeray Administration, Federal Power Commission, Authority: Energy Policy and Conservation Act.

The Energy Policy Project projected three alternate energy futures through the year 2000; Historical Growth; Technical Fix; and Zero Growth (ZEG). With the Historical Growth apppario, total energy consumption is assumed to grow at 3.4% per year. There would be very serious environmental and supply and capital problems with this approach. Under the Technical Fix scenario, total United States energy would grow at about 1.8% per year. There would be much more emphasis on more efficient use of energy. The ZEG scenario would involve only a few substantial changes in how we live. Total energy consumption would stabilize at about 1.3 times present consumption rates. There would also be more emphasis on mass transit; new communities having integrated utility systems; industrial parks; and encouragement of movement screates a service economy. The Nation should move toward Technical Fix or ZEG. Even with deregulation of the price of natural gas, natural gas production is likely to continue its decline. Description could, however, slow and possibly arrest the rate of decline. Without it, production would decline even more steenly. The Energy Policy and Conservation Act gives GAO new responsibility in the energy data verification area and the authority to inspect the books and records of energy companies (Author/OM)

The Energy Information Act, S. 1864. Murch 9, 1976. 13 pp. + 5 Testimony before the Senate Committee on Interior and Insular Affairs: by Phillip S. Hoghes, Assistant Comptroller General.

Organization Concerned: Atomic Engrey Commission: Department of Commerce: Densetment of the Interior: Energy Research and Development Administration: Federal Energy Administration: Federal Fower Commission: Federal Trade Commission: Nuclear Regulatory Commission: Office of Management and Budget. Congressionel Refevence: Seven Commuttee on Interior and Insular

Affinirs. Authority: Energy Information Act; S. 1864 (94th Cong.). Trans-Alsskan Pipeline Act, § 409 (P.L. 93-153), Federal Energy Administration Act of 1974 (P.L. 93-275). Energy Policy and Conservation Art (P.I. 94-163)

Eighteen energy-related hills have been exacted into law since 1974. In general, the legislation gave the Federal Energy Administration (FEA) stanificant data collection responsibilities and established it as a focal point for Federal energy data. The best long-term organizational approach to the solution of energy problems including energy data collection problems would be the establishment of a Department of Energy and Natural Resources. Alternatives for intproving data collection which should be considered are: building on the capability already existing in FEA by expanding that agency's energy data role and assuring the independence and objectivity of its data collection activities; or creating a separate agency for energy information either within the executive branch or in the form envi sioned by the Energy Information Act The new bill would transfer responsibility for energy forms clearance to the new agency. A better alternative to this would be to transfer all forms clearance responsibillity presently vested in GAO and the Office of Management and Budget with the added requirement that requests for energy data be consdinated through the Administration or PEA. Section 301 of the bill should be revised to require a one-time study by the Department of the Interior of energy resources on Pederal lands and annual splisting of information concurning recoverable reserves. (Authee/QM)

GAO's Energy Role, March 16, 1976, 15 no. Speech before Society of Petroleum Engineers of the American Insti

tute of Mining Engineers; by Monte Canfield, Jr., Director, Office of Special Programs. Organization Concerned: Federal Energy Administration; Depart-

ment of the Interior, Pederal Power Commission. Authority: Energy Policy and Conservation Act (P.L. 94-163), Federal Energy Administration Act, § 12 (15 U.S.C. 771).

Some of GAO's projects for identifying and investigating energy roblems include: (1) a review of the Pederal Russey Administra tion's (FEA's) efforts to decrease the use of oil and gas in powerplants and fuel burning installations; (2) a survey of Federal efforts to develop and introduce emerging alternative fuel sources with evephasis on alcohol fucls; (3) a review of the effectiveness of Federal voluntary energy conservation programs; (4) reviews of the Department of the Interior's Outer Continental Shelf lessing program; and (5) a review of Interior's cost lessing program, Deregulation of natural ass prices is not likely to have discernible consequences for the Nation's scooning. Come to constituted regulation would contain so increase bearants of pine case which the regulattory framework and because consumers who could be to legact buy ansatest jas would protein submitted their she to higher prices. Desegnturated in whoved as internative course of rection. The Bergy Policy retained in whoved as internative course of rection. The Bergy Policy and Conservation Are legac (AGO schotchilly) is inspect the books and records of privite persons and companies. As long as the Poderal (Commenced continues to control of and gas pices and the energy and the property of the property of the property of the art by the privile persons and companies.

178
Review of the 1974 Project Independence Evaluation System. OPA-7620; B-178205. April 21, 1976. 49 pp. + appendices (9 pp.).
Report to the Congress; by Elmer B. Stasts, Comptroller General.

Organization Concerned: Federal Energy Administration.

The 1974 Project Independence Evaluation System was a set of crelated models developed to represent the U.S. energy system. This major effort involved many Government employees and energy experts outside the Government under the overall direction of the Federal Energy Administration (FEA) Findings/Conclusions: The 1974 Project Independence Evaluation System was a valuable atternet to provide an integrated framework for evaluating energy policy, PEA developed an innovative framework for analyzing the complex and interdependent sectors of the U.S. energy system. Nevercholess, it recesives corrective action in order to approach its full usefulness and to assure that the results from subsequent versions will be reliable. Recommendations: FEA should add to its plan; an analvsis of problems resulting from the static nature of the system and the procedures which can be used to alleviate them; an analysis of the limitations in the environmental impact analysis and the procedues which can be applied to correct them; and a comprehensive, well-documented verification, validation, and sensitivity testing effort. In implementing the plan, priority should be given to the following areas: the methodological approach used to estimate energy surely, in particular crude oil and natural gas: the energy demand extination technique regarding calculating energy price elasticities: the representation of the relationship between the energy system and the coonomy; and a more thorough assessment of the economic, environmental, and international impacts of alternative U.S. energy policies, (Author/OM)

A Bill to Extend the Falerol Energy Administration Act of 1974. April 26, 1976. 18 pp. + stituchments (17 pp.). Teatmony before the Senate Committee on Government Operations; by Elmer B. Seatts, Compttoller General.

Organization Concerned: Foderal Energy Administration; Energy Rosenth and Development Administration; Foderal Fower Commistor; Benzy Resources Council. Congressional Relevances: Senter Committee on Government Opervision.

Authority: Pederal Energy Administration Act of 1974; S. 2872 (94th Cong.). Energy Policy and Conservation Act.

The best long-term caganizational approach to the solution of orange problems in so consultion. In Department of Emergy and Maneral George problems in some consultation of the Consultati

energy diss collection effects by FEA for the most part have been pilled on top of cide form as deflicts for improved econficiation have yet to show much secrets. A structury requirement should be line energy conservation except the secret process of the energy conservation except for the speciming year. FEA till needs to conservation area for the speciming year. FEA till needs to strengthen its compliance and enforcement pages. FEA till needs area into a secret process. FEA till needs are as a brightness of the speciming of the process to as a brightness of the speciming of the process to as well as State and local energy personal, (2010).

Review of the Information-Gethering Practices of the Federal Energy Administration. OSF-76-18; E-181254. May 11, 1976. 19 pp. + 3 appendices (9 pp.). Report to Frank G. Zarb, Administrator, Federal Energy Adminis-

tration; by Monte Canfield, Jr., Director, Office of Special Programs.

Authority: Trans-Alaska Authorization Act, § 409 (P.L. 93-153).

Recause of the large number of new information-suthering requirements generated since its establishment, the Federal Energy Administration (FFA) was selected as one of the initial accords to be studied in a long-term program for the evaluation of the management processes used in developing information-gathering requirements. Findings/Conclusions: FEA had not applied the degree of effort warranted in assessing the need and definition of data requirements. Many of FEA's collection efforts do not completely fulfill the stated need. FEA generally does not contact potential respondents during the early stages of the development cycle. Several requirements duplicate information collected by other organizations. In assessing burden, little attention is given to the impact of the proposal upon the perpondents. While FEA has pretested several requirements before submitting them to GAO for clearance and subsequent full-scale implementation, it has not adopted field testing on a fullscale basis. FBA does not perform any periodic assessments; however, three ad hee reviews have demonstrated the need for such an effort. There is an apparent lack of adequate authority in FEA's clearance review function. Recommendations: FEA should: more actively contact the various involved congressional organizations during the development process to insure development of requirements which will fulfill their needs; increase its efforts to contact other organizations and agencies during the development process; issue procedures requiring field testing of proposals when warranted; Institute a continuous program of evaluating the information-gathering process and data usage; review and revise the procedures and placement of the clearance organization; and take stops to insure that the regional offices obtain official approval before solleiting information from 10 or more parties. Action should be taken to change the following basic beliefs: the need for information overrides the burden of the respondents in providing that information; it is better to obtain information directly from respondents than use information from existing reports; and it takes too long for Pederal agencies to work and design information-gathering afforts of mutual interest. (Au-

181

[Faderal Energy Administration Personnel Turnover Rates]. OSP-76-23; E-178205. May 24, 1976. 1 pp. + 3 enclosures (3 pp.). Report to Son. Patrick J. Leahy; by Monte Canfleld, Jr., Director, Office of Special Programs.

Organization Concurred: Protecti Energy Administration. Congressional Relevance: San Patrick J. Louhy.

Personnic psyroll records for celevidar year 1975 were extrained and officials were interviewed at Federal Benegy Administration (PEA) Insequenters in Washington, D.C. Paedings/Conclusion: Personnel summer rates for celendar year 1973 at FBA headquarters and its 10 lengthous offices were 54,9% and 57,9%, respectively. The overall agency fumorer rate was 38,5%, All presonnel, including 145 consultants, superior, summer alless, and student sustainels, seminarity.

ing FEA employment during 1975 were counted as sensitations. (Author/OM)

Improvements Still Needed in Federal Energy Data Collection, Analysis, and Reporting. OSP-76-21; B-175205. June 15, 1976. 13 pp. + 5 attachments (32 pp.). Report to the Congress: by Elimer B. Staats, Comptroller General.

Organization Concerned: Federal Energy Administration: Federal Power Commission: Department of Commerce: Bureau of Minex Geological Survey: Department of the Interior: Atomic Energy Congressional Raisvones: Senate Committee on Interior and Insular

Affairs: Congress. Authority: Energy Information Act; S. 1864 (94th Cong.). Trans-Alaskan Pipeline Act (P.L. 93-153). Federal Energy Administration

Act of 1974 (P.L. 93-275). Energy Policy and Conservation Act (P.L. 94-163). Energy Supply and Environmental Coordination Art PT 93-319 13 U.S.C 9 31 U.S.C 425 44 U.S.C 3512

An earlier GAO report concluded that legislation would be required to establish a comprehensive energy data system and that development of that system should be placed where it would not be influenced by energy policy analysis and formulation Findings/ Conclusions: Many basic problems have not been resolved, yet the volume of energy and energy-related data has grown tremondously Except for certain congressionally mandated Federal Energy Administration efforts, Federal agencies generally continue to design information requests to fit their individual needs, and efforts for improved coordination have shown limited success. Recommendadays: The best long-term organizational approach to the solution of energy problems, including energy data collection problems, would he the establishment of a Department of Energy and Natural Resources. A separate bureau of energy data collection could be insulated within that department, perhaps by enacting explicit statutory provisions insured independence and objectively. In the interim, on organizational alternative which should be considered is to build on the cumbility already existing in the Federal Energy Administration by expanding that agency's energy data role and insuring the independence and objectivity of its data collection activities. The agency already has a legislative mandate to act as a focal point for energy data collection and, as such, would be a logical choice to assume greater control over Federal energy data activities Another alternative that deserves attention would be the establishment of a separate new spency for energy information, such as that envisioned in the Energy Information Act. (Author/QM)

# [Review of the Federal Energy Administration's Advisory Commuttees].

EMD-76-5; B-179205. August 2, 1976. 11 pp. Report to Frank G. Zarb, Administrator, Federal Energy Administration; by Monte Canfield, Jr., Director, Energy and Minerals Div

Authority: Pederal Energy Administration Act of 1974 (P.L. 93-275). Federal Advisory Commuttee Act of 1972 (P.L. 92-463). Esergy Policy and Conservation Act (P.L. 94-163).

Because many energy decisions of the Federal Energy Administration (FEA) affect customers, environmentalists, industry, State and local governments, and State regulatory utility commissions, it is essential that FEA receive and consider input from representatives of these groups before making energy palicy decisions. FEA receives this input through the establishment of advisory committees. As of February 1976, FEA had 14 advisory committees with a total of 374 members. Findings/Conclusions: Except for establishing final uniform guidelines, FEA advisory committees were functioning according to requirements. Some major energy issues within the committees' scope had not been discussed, PEA had not given adequate consideration to committee recommendations, and FEA had not informed the committees on action planned in response to recommendations. More than half of the committee members considered their committee to be uneffective or only marrinally effective. Unless a committee's authority is carefully defined by FEA, the members may not know whether they are responsible for making a recommondation, issuing a report, or merely providing inconclusive doliberation. Recommendations: FEA should: when appropriate, refer all important energy issues confronting the agency to the respective advisory committee before making an agency decision on the issue; clearly indicate to the respective advisory committee the stems or subissues of each issue for which FEA seeks advice and outline the type of committee action which would most assist FEA; on a timely basis, inform advisory committees of FEA actions planned in response to the committees' recommendations; and complete uniform guidelines and management controls for its advisory commit-

# 104

Status of the Grand Coulse-Raser Transmission Line Project. PSAD-76-167; B-114858. August 18, 1976. 16 pp. + appendices (4 pp.). Report to the Congress; by Elmer B Stasts, Comptroller General.

Organization Concerned: Department of the Interior: Bonotville

## Congressional Relayants: Congress.

The Grand Coulee-Rayer ejectrical transmission line was the first high-capacity 500-knowolt double-circuit line constructed by the Bonneville Power Administration. The project was undertaken to serve growing needs for power and assure reliable service in the Puget Sound area of the State of Washington Findings/Conclusizes: A \$48.6 million cost growth in the project was exceed primarily by changes in the scope of the work, escalation in the price of material, and increased construction contract costs. The most recent cost exempte excluded \$1.2 million for materials and equipment available from projects and \$11.7 million for related equipment provided by the Bureau of Reclamation. If the construction of other planned power generation facilities to the area is delayed or eliminated, additional capacity across the Cascade Mountains will be required sooner The cost to upgrade the capability of the Grand Coulee-Rayer line from 2,800 to 5,000 magawatts is estimated at \$14.8 million. After the Bonneville Power Administration had gedeagned portions of the towers, it was found that they had not been tested at the ultimate design load Recommendations: The Bonneville Power Administration's cost estimates provided to the Congress in the future should identify all related project costs. Future transmission tower test programs should provide for testing redesigned items to assure that the ultimate design load can be obtained. (Author/QM)

[The Federal Income Texts of Class A and B Electric Utilities]. EMD-76-7; B-180228 August 27, 1976. 3 pp. Report to Sun Lee Metcalf, Chairman, Susate Committee on Goverament Operations: Reports, Accounting and Management Subcommittee; by Robert F. Keller, Acting Comptroller General,

# Organization Concerned: Federal Power Commission: Internet Revenue Service.

Contrassional Relayance: Sessor Committee on Government Overations: Reports, Accounting and Management Subcommittee. Authority: S. 2213 (94th Cong.).

According to the Internal Revenue Service ([RS), electric utility companies are generally taxed like other corporations, and the various types of audit adjustments made to the income tax returns of utility companies may also be made to the income tax returns of other corporations. Findings/Conclusions: Of the 214 electric utility companies under Federal Power Commission (FPC) jurisdiction for which IRS provided income tax data, the tax liability or the amount of tax paid for 10 utility companies could not be determined because their income tax data were integrated with tax data of unregulated industries. The other 204 utility companies paid Federal income taxes of about \$792 million in 1972, \$798 million in 1973,

and \$578 million in 1974. In only about one-third of the individual cases do the figures reported to FPC and to IRS over the 3-year period come within 10% of each other. Some differences were caused by the differences in FPC and IRS reporting requirements. There may be significant differences in the tax data as supplied by FPC or IRS and the tax liability used to justify the rates consumers must pay. Fluctuations in the sales volumes and cost of service as well as various tax statutes cause the actual taxes and the tax liability used for race justification to vary (Author/QB)

servation Act of 1975.

The Changing Role of the General Accounting Office in Energy Information and Data Programs. September 8, 1976. 19 pp. Speech before Twelfth Annual Institute on Oil and Gas Accounting. Southwestern Legal Foundation, Dallas, TX; by Monte Canfield, Jr., Director, Energy and Minerals Div.

Organization Concerned: Federal Energy Administration: Energy Research and Development Administration; Federal Power Commission. Authority: Federal Energy Administration Act of 1974. Energy Conservation and Production Act of 1976. Energy Policy and Con-

GAO's first major study of energy data programs (April 1973) addressed the magnitude of the Federal energy data effort, identified and discussed several problem areas regarding the Pederal Government's capability for collecting and analyzing energy data, and discussed executive and legislative proposals to improve energy data collection and analysis. The best long-term organizational approach to the solution of energy problems, including energy data collection problems, would be the establishment of a Department of Energy and Natural Resources. The Encrey Conservation and Production Act places several specific requirements on GAO, including that GAO review and evaluate the effectiveness of energy conservation and renewable resource programs and provide an annual report to the Congress on Federal Energy Administration activities. The Energy Policy and Conservation Act authorized GAO to independently verify energy data and, to that end, inspect the books and records of private persons and companies under certain conditions. GAD has about 90 energy studies underway or planned. Of these, 27 were initiated as a result of congressional requests and the remainder were undertaken on GAD's own Initiative. (QM)

# 107

The Costal Zone Management Program: An Uncertain Fature. GGD-76-107; B-145099. December 10, 1976. 115 pp. Report to the Congress; by Elmer B. Staats, Comptroller General. Organization Concerned: Department of Commerce: National

Decanic and Atmospheric Administration. Congressional Relavance: House Committee on Merchant Marine and Pisheries: Sware Committee on Commerce: Senate Committee on Appropriations: State, Justice, Commerce, The Judiciary Subcommittee: Congress Authority: Coastal Zone Management Act of 1972, (P.L. 92-553).

An assessment was made of progress under the Coastal Zone Management Act of 1972 by the National Oceanic and Atmospheric Administration (NOAA) and the coastal states and territories. The Ace provides for incentives to States including grants administered by NOAA for the wise use of coastal resources. Findings/Concluslows: Although some progress has been made, many problems have developed in Implementation by the States and coordination with Federal agencies. There has been a lack of understanding of State problems, weaknesses in monitoring procedures, and conflicting policies between State and Federal agencies. Some problems in funding and implementation have resulted from lock of public support. Recommendations: States should be helped to develop authority and involve the public in program development. Poteral agencies should be kept informed at early stages. Information should be coordinated among the States and technical information assistance should be expended. (HTW)

Information-Gathering Activities of the Nuclear Regulatory Commississt. ACGRR-77-3; B-150225. December 28, 1976. 7 po. Report to Marcus A. Rowden, Chairman, Nuclear Regulatory Commission; by Phillip S. Hughes, Assistant Comptroller General.

The offectiveness of the Nuclear Regulatory Commission's (NRC) information-gathering program could be improved. Findings/Conclusious: The NRC has several procedures that contribute to effective information gathering, but the program operates informally and problems can occur in the absence of management controls. Recommendations: The NRC should: (1) establish a formal data collection program that designates duties and resconsibilities of the offices and baroaus involved in the acquisition process and incorporates the critical management controls; (2) place the information clearance function at an organizational level where it can make final. independent decisions, and (3) appoint information clearance representatives in the offices and bureaus which initiate requirements

Affaire

to act as liaison with the information clearesco officer. (DJM) Survey of Publications on Exploration, Development and Delivery of Alaskan Oil Market, EMD-77-11: B-174944, January 14, 1977, Released January 17, 1977. 40 pp.

Report to Sen. Henry M. Jackson, Chairman, Senate Committee on Interior and Insular Affairs: by Elmer B. Staats, Comptroller Gen-

Organization Concernad: Department of the Interior; Pederal Energy Administration: Alveska Pipeline Service Co.; Atlantic Richfield Co.: Standard Oil Co., Inc. Congressional Relevance: Sessie Committee on Interior and Insular

Authority Mineral Lessins Act of 1920 (P.L. 93-153), National Environmental Policy Act of 1969. Alaskan Vessel Traffic Regulation Act of 1977, Trans-Alaska Pipeline System Authorization Act

Information was esthered from more than 100 publications on the feasibility, advisability, and building and operation of the Trans-Alaska Pincline System. Findless/Concission: The existence of oil in Alaska has been known since shoot 1902. It is in a sandatone formation under heavy permatreat layer, near Prudhoe Bay and is the high-sulfur, heavy crude type, Leasing brass in 1969, after which the lossees divided the area in half. Batimated initial production will be 1,200,000 barrels a day by 1978 and development expenditures are estimated to be \$2,430 million by 1979. The need for the pipeline was first evaluated in 1963 and construction finally permitted in 1973. after proper legislation was ensested and conservation group injunctions ruled upon. The sipeline extends 801 miles from Prudhoe Bay to Valdez, across several mountain ranges and land of varying degrees of stability. The pipeline has safety valves to guard against oil leaks, and special construction techniques and materials were used because of the ground and termerature conditions. Continual monitoring of the pipeline will be maintained by a computer in Valdez and a microwave communications system. Completion is expected in 1977, at an estimated cost of \$7.7 billion. Three long range distribution systems are being considered and one short term system. (shipping through the Panama Canal). The long-range plans are trans-provincial, northern tier, and Schlo mid-continent. Foreign sales require Presidential and Congressional approval. There appears to be an adequate domestic tennage supply for marine transportation. The ICC has regulatory jurisdiction. (SS)

America's Factor Futures, January 19, 1977, 17 pp. Storé before Brookines Conference, Williamsburg, VA- by Monte Canfield, Jr., Director, energy and Minerals Division

Omanization Concurred: Ford Foundation

The basic energy choices available to the United States depend on energy conservation. Total U.S. energy consumption more than doubled between 1950 and 1973. The Energy Policy Project (BPP) has concluded that the central energy problem in the next 25 years will not be the lack of energy resources per se, but the large potential for rapid growth in energy consumption. People want a reliable supply of energy at the lowest total cost to society that is standardized regionally and economically and as safe and as free as possible from international problems. These desires can be achieved by the market or by government intervention. In several years there will be no new major source of energy, no major rebuilding, and no major new transportation systems. Three energy scenarios can be considered the Historical Growth someric by which total energy commention is someof to grow at 3.4% ner year and requiring technological and expenditure increases that may be impossible to achieve; the Technical Pix scenario by which U.S. energy consumption would increase 1 8% yearly; and Zero Growth by which consumption would stabilize at about 1.5 times present rates. Technical Fix provides both more time and more flexibility than Historical Growth and requires less capital. The U.S. should move toward Zero Growth, parallelling Technical Fix until the mid-1980's to allow for lead time problems. (OM)

National Energy Policy: An Agenda for Analysis. EMD-77-16; B-178205, January 27, 1977, 56 pp. Report to the Congress; by Elmer B. Staats, Comptroller General

Organization Concerned: Energy Research and Development Administration; Nuclear Regulatory Commission; Federal Power Commission; Federal Energy Administration, Department of the Interior Congressional Relevance: Congress. Authority: Federal Energy Administration Act. Energy Supply and

Environmental Coordination Act. Geothermal Energy Research. Development, and Demonstration Act. Solar Heating and Cooling Act. Solar Energy Research, Development, and Demonstration Act. Energy Reorganization Act. Nonnuclear Energy Research and Development Act of 1974.

An assessment of national energy problems dealt with the urproces for new policies to senid the heavy relinate on energy imports The critical issues identified were the need for energy conservation, problems of nuclear fission, future reliance on fossil fuels, especially coal, and possibilities of alternate sources. Questions were posed about the role of the Federal government in wise management of energy resources, including those on public lands. These assues were malizzed from the points of view of roat and current performance and plans for future emphasis. Findings/Conclusions: There is need for conservation during the next 10 years, consolidation of Federal agencies dealing with energy, and wise management of energy resources on public lands balanced by environmental considerations. Energy efforts will require coordination of all branches of the Goverament, industry, and citizens. (HTW)

# West to Strengther Congressional Control of Eagrey Construction

Projects Other Thun Nuclear. EMD-77-25; B-178726. February 25, 1977. Released March 10, 1977. 3 pp. + enclosures (21 pp.). Report to Sen. Henry M. Jackson, Chairman, Senate Committee on Energy and Natural Resources; Rep. Olin B. Teague, Chairman. House Committee on Science and Technology: by Robert F. Keller. Acting Comptroller General.

Ornestration Concerned, Engrey Research and Descionment Ad-

Congressional Relayance: House Committee on Science and Technology, Swate Committee on Energy and Natural Resources. Authority: Federal Nonnuclear Energy Research and Development Act of 1974 (P.L. 93-577).

The Energy Research and Development Administration's (ERDA) budgeting, accounting, and reporting procedures associated with construction-related activities for nonunclear energy research and development projects were reviewed. The purpose of the princy. was to determine the extent to which existing legislative reporting requirements provide Congressional committees with information necessary for effective control over the funding of such projects. Of particular interest was FRDA's compliance with the reporting and specific authorization requirements of the Pederal Nonnuclear Energy Research and Development Act of 1974. Findings/Conclusions: These recurrements are inadequate because they are vague and allow selective interpretation, thus limiting the ability of Congress to control nonrocletz energy projects. FRDA has not established any specific criteria for use in identifying the types of nonnuclear energy projects subject to the reporting or specific authorization requirements. The 1974 act is not clear about which type of projects must he reported or specifically authorized. Nowhere in the set are types of projects specifically defined Recommendations: ERDA should develop legislation which would clarify the act on the types of prosects requiring reports or specific authorizations. ERDA should develop and provide the authorization committees with its definitions of the various project phases together with an identification of the phase of each apparedest energy project meeting the minimum cost criteria for reports or specific authorization (RRS)

## 193

Energy Policy Decisionmaking, Organization, and National Exergy Goods, RMD-77-31: B-178205, March 24, 1977, 45 nn. Report to the Congress, by Elmer B. Staats, Comptroller General.

Ospanization Concerned: Foderal Energy Administration: Foderal Power Commission: Department of the Interior: Energy Research and Development Administration, Professional Audit Review Team. Congressioned Relevance: HowerCommittee on Government Operstions: Senate Committee on Governmental Affairs.

Authority: Omnibus Energy and Natural Resources Reorganization Act of 1977: S. 591 (95th Cong.). Department of Energy Organization Act; S. \$26 (95th Cong.) Federal Coal Lessing Amendments Act of 1975 (P.L. 94-377) Energy Policy and Conservation Act: S. 27 (94th Cong.): S. 2726 (94th Cong.)

Energy functions are divided among several agencies with respensibilities in the areas of energy conservation, development of nonrenewable energy resources, and onergy price regulation. Fled. ings/Conclusions: In each of these areas, there are needs for better coordination among sgencies and for a system of priorities, Energy conservation has not received adequate emphasis because of lack of public concern and insufficient incentives and funding. Programs for development of nonrenowable energy resources were lacking in production goals, estimates of future needs, and effective mechanisms for commercialization of technology. In reference to price regulation. it was felt that prices were too low to encourage energy conservation. and that regulation discouraged energy development. Reorganiestion of energy functions under a single Pederal agency as proposed by the Administration would improve the decisionmaking process.

Recommendations: Congress should enact legislation to establish a Department of Energy with responsibilities for setting goals for automobile fuel economy and energy production planning. The legislation should call for continuation of the Professional Audit Review Team, establish coordination with other agencies, and reaffirm GAO's monitoring role. Congress should also examine energy regulatory functions. (HTW)

# Eners v Resroanization Legislation. March 25, 1977. 18 pg. + oxolo-

Terrimony before the Senate Committee on Governmental Affairs: by Elmer B. Staats, Comptroller General.

Organization Concerned Foderal Energy Administration: Professional Audit Persient Team Congressional Relevence: Sexual Committee on Governmental Af-

Authority: Federal Cost Mine Health and Safety Act of 1969 (30) U.S.C. 801). S. 591 (95th Cong.), S. 826 (95th Cong.).

Of the various remedies that are available to close the gaps in the energy decisionmaking reverse the meanmended remedy is to oneate a Department of Energy and Natural Resources (DENR), The creation of a separate administration having statutory jurisdiction for energy data is advisable. Congress should utilize the Professional Audit Review Team (PART) in order to gather vital information on energy data. The proposed DENR should have the responsibility for automobile fuel consomy standards and energy conservation performance standards. An energy health and safety regulatory organization will be needed, which will be either completely independent of the DENR or, if included within the Department, will be carriedly insulated from its promotional activities. A placification of the administration's proposed treatment of the relationship between Fedstral land management policy and energy policy would be beloful. A

high-level council, headed by the Secretary of the DENR, should be formed to coordinate all Federal activities related to energy. The

# General Accounting Office should earefully monstor the activities of the DENR to provide Congress with information for assessing its WHAT ARE THE PROSPECTS FOR TRANSITION TO **ESSENTIALLY RENEWABLE ENERGY RESOURCES**

performance (LDM)

Management of the Atomic Energy Commission's Controlled Thermonaclear Research Program. B-159687. Documber 8, 1972. 43 pp. + 2 appendices (3 pp.). Report to Sen. John O. Pastore, Chairman, Joint Committee on Atomic Energy, by Elmer B. Staats, Comptroller General,

Organization Concerned: Atomic Energy Commission. Congressional Relavance: Jour Committee on Atomic Energy.

(GEOTHERMAL, SOLAR, FUSION)?

From fiscal year 1951 through 1972, the Atomic Rosery Commission (AEC) incurred costs of about \$449 million in the Controlled Thermonuclear Research (CTR) program. The program was conducted under research contracts at AEC-owned, contractor-occursed laboratories and at universities and other institutions. The overall objective of the generam is to develop a major source of energy from controlled thermonuclear fusion. Findings/Conclusions: AEC has established mechanisms to control and coordinate efforts of contractors responsible for conducting the program, including: reviews by the standing committee and ad hoc technical panels related to onening and planned program efforts; establishment of research priorities; and technical evaluations of research proposals submitted by universities and other institutions. Recommendations: In establishing research priorities, it would be useful if AEC would document and communicate to CTR laboratories and AEC field offices rules pertaining to CTR devices which require AEC's review and approval before fabrication. AEC should also require, as part of this rule, that any proposed device which is a revision or modification of a proviously disapproved device, regardless of the estimated cost of the revised device, be subject to AEC's review and approval before fabrication. (Author/QM)

I Comments on H.R. 11212, 93rd Congress, a Bill to Further Research. Development, and Commercial Demonstrations in Geothermal Energy B-178726, April 19, 1974, 3 pp.

Lower to Rep. Clin E. Tesque, Chairman, House Committee on Science and Technology: by Robert F. Keller, Deputy Comptroller Ganeral

Organization Concerned: National Science Foundation; National Appropriate and Space Administration Congressional Relevance: House Committee on Science and Technology

Authority: National Science Foundation Act of 1950, § 3-4 (42 U.S.C. 1862). National Acronauties and Space Act of 1958, 6 203 (42 U.S.C. 2473), H.R. 11212 (93rd Cong.),

Review of Sciented Federal and Private Solar Eagrey Activities. B-178726. June 18, 1974. 23 pp. + 9 appendices (16 pp.). Report to Rep. Mike McCormack, Chairman, House Committee on Science and Technology: Energy Research, Development and Demonstration Subcommittee by Phillip S. Hughes, Assistant

Ornanization Concerned: National Science Foundation Congressional Relayment House Committee on Science and Tachnoingy: Energy Research, Development and Demonstration Sub-

A review of solar energy activities focused on Federal funding. objectives of Federal activities, interagency coordination, private sector activities, and economic evaluations. Findings/Conclusions: Federal funding for solar energy research, development, and demonstration activities has incressed each year since 1970, with noise heating and cooling setting most of this august. The \$50 million 1975 splar energy budget included \$17 million for heating sed engling. The National Science Poundation was designated in 1973 as the prime agency in Federal someon of research on terrestrial analications of splar newer. The Foundation has contributed the various Federal activities through several means, including the formulation of a Foderal solar heating and cooling program and an Interagency Panel for Terrestrial Applications of Solar Energy. Considerable private sector interest exists, ranging from individuals who use solar systems in their homes to some 70 organizations working in the field. The future economic fessibility of solar heating and cooling is still problematical. Two key cost factors are the costs of conventional fuel and splar colloctors. (Author/DJM)

Have Solar Energy Was Treated in the AEC Chairman's Report. "The Nation's Energy Future". B-178205. October 18, 1974. 27 pp. + 4 appendices (8 pp.).

Report to Sen. James Abourezk; by Elmer B. Staats, Comptroller Organization Consumed: Atomic Energy Commission.

Congressional Relevance: Sen James Abourezk. Authority: Environmental Policy Act of 1969 (42 U.S.C. 4332).

in response to a Presidential request, the Atomic Energy Commission (AEC) reviewed Federal and private energy research and development. GAO reviewed the means for arriving at recommendstions on solar energy in the AEC report and the public availability of recommendations of the solar energy review panel. Findings/-Conclusions: The Energy Reorganization Unit (ERU), established by AEC, occidinated the following three efforts to develop the research and development program: (1) Cornell University brought together authorities from industry, the academic community, and Government to develop policy and study topics of importance to the program; (2) 16 panels of Federal officials assisted by private consultants reviewed proposals and developed a 5-year program at three alternative funding levels; and (3) the ABC Chairman appointed an over-

new rand of eight Covernment officials to not together the Comell effort and recommendations of the 16 panels and to recommend a 5-year, \$10 billion program. The overview panel made major reductions in funding levels recommended by the 16 review panels to develop the \$10 billion program, and reduced funding recommendstions of the solar energy review penel because of its audement that solar energy was basically long-term and that recommendations were not instified. The public result have had access to recommendations through environmental impact statements, the public document room, and the Technical Information Center, but this was not readily attainable at the earliest practicable time. (HTW)

Problems in Identifying, Developing, and Using Geothermal Resources. RED-75-330, B-178205 March 6, 1975, 59 pp. + 5 appendices (1)

Report to the Congress; by Elmer B. Staats, Comptroller General.

Organization Concerned: Atomic Entrey Commission: Bureau of Land Management: Energy Research and Development Administratice: National Accomputies and Space Administration: National Science Poundation: Geological Survey. Congressional Relayance: Congress.

Authority: Geothermal Energy Research, Development and Demonstration Act of 1974 (P.L. 93-410). Geothermal Steam Act of 1970 (30 U.S.C. 1001-25). Outer Continental Shelf Lands Act (43 U.S.C. 1331-1343). Colorado River Basin Project Act of 1968 (43 U.S.C. 1501), Energy Reorganization Act of 1974, P.L. 93-438, H. Rept. 93-1301 Reich v. Commusioner of Internal Revenue, 454 F. 2d 1157 (9th Cir. 1972).

Geothermal resources can be used to produce energy, fresh water, and minerals. The Pederal hudget for fiscal year 1975 represent about \$49 million for geothermal exploration, research, and developmont Findings/Constantes Estimates of electric nover that may be produced from geothermal resources in the United States by 1985 range from 4,000 to 132,000 megawatts. The geothermal leasing program has not proceeded as rapidly as anticipated due partly to the little-known characteristics of the resources and partly to the early state of the technology. The lack of information used in decimating lands as known prothermal resource areas is another problem in the leasing program. Designation of lands as goothermal resource areas is often not based on a seological survey. The minimum expenditures required of the lessee in the 10-year primary lesse term could be insufficient to cover the cost of drilling one exploratory well, and no minimum expenditures are required in the first five years of the lesse. The variety of laws dealing with ownership and central of minerals. gas, and water causes delays in lease assuance. Recommendations: The Secretary of the interior should improve the methods for design nating known goothermal resource area by obtaining autourface data when practicable or analyzms the geology of any area before a value is assigned and it is offered for lesse; increase the level of expenditures required of lessees during the primary 10-year lease term and provide more specific requirements as to the minimum developmental actions required during the initial five years of the lease; where ownership of gootherms) resources is in dispute, provide for issuing leases with the understanding that all reats, revulties, and homeses would be held in excrew, pending resolution of the title question; propose lexislation to classify goothermal resources in a special class: and propose legislation to clarify the Department's authority for offshore goothermal leasing (QM)

# Federal and State Solar Energy Research, Development, and Demonstra-

thon Activation. RED-75-376; B-178205. June 10, 1975. 2 pp. + appendix (26 pp.). Report to See. Hubert H. Humphrey, Chairman, Joint Economic Committee; by Elmer B. Staats, Comptroller General.

Organization Concerned: Energy Research and Development Administration; Department of Agricolture; National Aeronautics and Space Administration: National Science Poundation

Conversional Relavance: Jour Economic Committee Authority: Energy Reorganization Act of 1974 (P.L. 93-438). Solar Heating and Cooling Demonstration Act of 1974 (P.L. 93-409) Solar Energy Research, Development, and Demonstration Act of 1974 (P.L. 93-473), Federal Non-Nuclear Energy Research and Development Act of 1974 (P.L. 93-577).

Four agencies carry out most of the Pederal Government's solar energy research and development activities: Energy Research and Development Administration, National Science Foundation, Depertment of Agriculture, and National Aeronautics and Space Administration. Findings/Conclusions: Estimated Pederal funding for these apencies for fiscal years (FY) 1975 and 1976 for solar energy research and development was \$52.7 million and \$78.0 million, respecticely. As of April 30, 1975, about \$22.1 million of \$49.7 million. available had been spont or obligated on these activities and the remaining \$27.6 million was expected to be obligated by the end of the fiscal year. The major Federal funding emphasis was on solar beating and cooling technology. The executive branch had not issued suddings on the allocation of funds to avoid duplication; and there were no programs for evaluating or pertifying solar energy devices. although efforts in this direction were underway. In addition to Foderal Funding at least five States were funding solar energy projects. amounting to about \$200,000 for the period July 1, 1974, through April 8, 1975. (HTW)

Federal Hedroelectric Plants Can Increase Power Soles. CED-76-120; B-125042, July 8, 1976 24 pp. + appendices (11 pp.). Report to the Congress; by Elmer B Stants, Comptroller General.

Organization Concerned: Bonneville Power Administration; Bureau of Reclamation, Southwestern Power Administration: Department of the Interior Congressional Relevance: Congress

Hydroelectric power accounts for about 15% of the Nation's electric-generating capacity of which shout 40% is Governmentowned. Additional hydroelecture descendable consolty can be made available for sale by changing the methods the Department of the Interior nower-marketing agencies use in determining how much capacity can be sold and reassessing the amount of capacity which is held in reserve for contingencies. Findings/Conclusions: If the power-merketing agencies had plans for purchasing power from other systems during low-water years, the result could be 110 meso. watts of additional dependable peaking capacity in two of the Bureau of Reclamation regions. In addition to operating reserves, the Bureau of Reclamation requires that reserves be maintained for maintenance and customer load growth. Power-pooling agreements which state the reserve requirements for its members do not adequately recognize that hydroelectric systems do not break down as often as other forms of power generation. If reserves more realistically represented espected conditions, the Pederal reserves could be reduced. The additional capacity thus made available could be sold. Recommendefines: The Secretary of the Interior should have the Poderal power-marketing agencies (1) establish uniform auidelines for determining the Federal power system's generating capability under adverse conditions, recognizing the differences of the various Fosteral systems; (2) determine the feasibility of establishing dependable capacity based on purchases of power; (3) identify and obtain the modifications required to implement this method, including a provision for enough money to purchase the power needed in low-water years; and (4) sell any additional capacity as dependable based on the results of the above action. The Secretary of the Interior should also require the Bureau of Reclamation to redetermine the reserve requirements for each power system, considering the benefits derived from pooling arrangements and the climination of reserves based on load growth and maintenance; and the Pederal power-marketing agencies to negotiate for more equitable reserve requirements and to sell the capacity that may become available as a result of redetermining reserve requirements (Author/QM)

Charles Sadles 204

Consequeliles to Improve Planning for Solar Energy Research and Development J. EMD-77-8: B-178205. November 30, 1976. 9 nn. Report to Robert C. Scamens, Administrator, Energy Research and Development Administration, by Monte Canfield, Jr., Director, Enerey and Minerals Dry.

Congressional Relayance: House Committee on Science and Techpolices: Sente Committee on Interior and Insular Affairs Anthority: Energy Reorganization Act of 1974 (P.L. 93-438) Solar Hearing and Cooling Demonstration Act of 1974 (P.I. 93-409).

The Energy Research and Development Administration's (EPDA) solar research, development, and demonstration program was surveyed to assess the adequacy of the planning process established to meet program goals. Findings/Conclusions: ERDA research focuses on seven different solar technologies, for which a number of program plans have been established. However, ERDA's nearest plant indicate only a ten percent polar contribution to owner! energy needs by 2000 A.D. HRDA has not established a formal priority system for allocation to each technology or cost or performance objectives, without which program effectiveness and progress cannot be eya. ted. Recommendations: ERDA should establish a formal system for setting priorities to allocate limited resources among the different technologies; develop measurable cost and performance objectives, with a companion schedule research, development, and demonstration activities; and establish a system of decision points for evaluating the success of the program in meeting established costs and performance objectives. (DJM)

## 203

[Management and Funding Assects of Three Nannuclear Faces Research, Development, and Demonstration Subsragrams ]. EMD-77-24; B-186105, February 25, 1977, Released March 7, 1977, 3 cm. + ceelosure (22 nn.)

Report to Son, Prank Church, Chairman, Senato Committee on Esergy and Natural Resources: Rosrey Research and Development Subcommittee; by Robert F. Keller, Acting Comptroller General.

Organization Concerned: Energy Research and Development Ad-Congressional Ralayonea: Secret/Committee on Energy and Natural Resources: Energy Research and Development Subcommittee. Authority: Energy Reorganization Act of 1974 (P.L. 93-438).

Management and funding aspects of three nonneclear energy research, development, and demonstration subprograms under the Energy Research and Development Administration were examined. The three subprograms were: photovoltaic energy of the solar energy program; direct combustion of the cost program; and hydrothermal technology application of the geothermal energy development program. Findings/Conclusions: The extent to which research, develepment, and demonstration funds were used for management support services among the three subprograms varied. The amounts used for planning and managing were: \$1.8 million (5.3%) for soler photovoltaic energy: \$5.4 million (9%) for coal direct combustions and \$0.2 million (1.1%) for hydrothermal technology applications. The management support services included: planning subprogram activities, reviewing and evaluating research peoposals, and contract and edministrative support. Amounts of research, development, and demonstration funds used for planning and management services were not disclosed in the agency's budget justification documents or socounting records. Recommendations: ERDA should separately

identify in the budget and accounting records each subprogram's

research, development, and demonstration funds used for manage-

ment support services and make the amount of such funds visible in

the Agency's annual budget submission to the Congress. (RRS)

Passer Pactor Requirements Imposed by Federal Power-Marketing Assertice on their Customerel, Bill 14858, March 9, 1977, 9 no. Leave to Secretary, Department of the Interior by Monte Canfield. fr. Director, Engrey and Minerals Day

Omenization Concerned: Bonneville Power Administration: Bureau of Reclamation: Southwestern Power Administration.

Power Production at Federal Dans Could Be Increased to Madernir inc Turkines and Generalors, EMD-77-22: B-125042, March 16, 1977.-12 pp.

Report to Secretary, Department of the Interior; Secretary, Department of the Army: Chairman, Tempessee Valley Authority, by J. Dexter Peach (for Moste Cassield, Jr., Director, Energy and Minerale Dist

Centrassianal Relayonce: House Committee on Interior and Insular Affairs: Seaste Committee on Interior and Insular Affairs.

Painting Federal hydroelectric plants could increase power production by modernizing turbines to increase efficiencies and espacities and by modernizing generators to increase capacities. Findings/Conclusions: Increasing hydroelectric power production will increase the Nation's energy supply, displace consumption of nonrenewable fuels by fossil-fixel power plants, reduce pollution, incrosse Foderal revenues and displace or delay construction of altern nate power sources. Detailed analysis at each power plant is needed to determine what modernization improvements might be made and if they would be cost effective. At present, the agencies do not have a system to make sure that opportunities are identified and acted upon. Recommendations: The Secretaries of the Interior and the Army and the Chairman of the Board of the Tennessee Valley Authority should: identify opportunities to amprove hydropower peoduction through equipment modernization, implement those that are commonically justified, and consider making changes before the end of the equipment's useful life: include in the economic analysis the value of oil or coal consumption displaced and, either directly or indirectly, the value of maintenance costs reduced by installing new eculoment: include feasible turbine and generator modernization in their overall hydroelectric nower expansion plans; and develop avaterms to make sure that future technological improvements are roomnized and considered for implementation in existing systems. (Author/SC)

[The Federal Wind Energy Program]. EMD-77-33; B-178205. March 29, 1977, 6 np. Report to Robert W. Fri. Acting Administrator, Foorey Research and Development Administration; by Monte Canfield, Jr., Director, Energy and Minerals Div.

Organization Concerned: National Science Foundation: National Aeronautics and Space Administration; Department of Agriculture. Congressional Relevanta: House Committee on Science and Technology: Senate Committee on Energy and Natural Resources.

Under the direction of the Energy Research and Development Administration (ERDA), the National Aeronautics and Space Administration is responsible for developing, testing, and evaluating large wind energy systems, and the Department of Agriculture is responsible for identifying, developing, and testing applications in rural and remote areas. Of the funds specifically designated for small, medium, and large systems from July 1974 through September 1976, more than \$2% had been spent on large systems. ERDA's emphasis on these systems has been based on its belief that: well-defined commercial markets exist for large systems but not for small and medium-sized systems; large systems will provide cheaper power 206 CHaffor Sacklon

than the small and medium-sized; Federal assistance will be needed by industry to develop and commerciative large systems, but little Federal assistance will be needed to develop and commercialize amailer systems; areas needing improvement are well-defined for large systems, but not for the small and medium-sized; and a Federal program to develop amail and medium-sized systems would climinate private investment | Andiego/Conclusion: A GAO servey of the Wind Emergy Program showed that the decision to stress large systems was made without comparative analysis of small and medium-sized systems; and ERDA needs to systematically compare and evaluate the potential and advantages and disadvantages of wind energy systems of all sizes so that program content and priorities are proper and that resources are effectively allocated among the different sized wind energy systems and between the wind program and ERDA's other programs. Recommendations: ERDA should: direct the expeditious completion of market studies in sufficient depth to identify the commercial potential of small, medium, and large wind energy systems; using these market studies in conjunction with the ongoing and completed studies, make a comprehensive formal review of the formal potential and the advantages and disadvantages of wind energy systems of all sizes, and, if warranted, redirect resources within the Wind Energy Program and between the wind program and non-wind programs. Provided ERDA's comprehensive roview shows that small and/or medium-sized systems have the potential for rapid commercial expansion, it should move quickly to develop optimum designs, identify constraints and impediments to commercialization and take actions to overcome them, and, if necessary, develop plans to demonstrate these systems. (Author/QM)

# IS THE FEDERAL GOVERNMENT WISELY EXERCISING TRUSTEESHIP OVER ENERGY SOURCES ON FEDERAL LANDS?

207
[Provisions of Navajo and Hopi Cosi Leass]. B-177079. James 29, 1974. 8 pp. + 2 enclosures (2 pp.).
Recov: to Sen. Henry M. Jackson, Chairman Senate Committee on

Report to Son. Henry M. Incheson, Chairman, Senate Committee on Interior and Insular Affairs; by Elmer B. Stass, Comptroller General.

Congressional Relevance: Senan Committee on Interior and Involut

Affairs.

Authority: Mineral Lands Lessing Act (30 U.S.C. 181).

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# 208 Followup on Certain Matters Concerning the Impection and Regulation

of Outer Continental Shelf Oil Operations. B-145333. February 26, 1974. 12 pp. + 2 encloses (7 pp.).

Report to Rep. Henry S. Rena, Chairman, House Committee on Government Operations: Conservation, Energy and Natural Resurces Subcommittees by Eliter B. Sasta, Comprising Concerning Control of Control.

Osponization Consumad: Department of the Interior; Environmental Protection Agency; Geological Survey.

Cengrassionel Ralavoines: Heure Committee on Government Operations: Conservation, Briergy and Natural Resources Subcommittee. Authority: Outer Contineaus Shelf Lands Act, § 5. 30 C.P.R. 250.-43. Outer Contineaus Shelf Order No. 7. Outer Continental Shelf Order No. 11. Order No. 8. Quier Continental Shelf Order No. 11.

The Department of the Interior has implemented several suggestions regarding the inspection and regulation of oil drilling operations on the Outer Continents) Shelf (OCS). Geological Survey (Survey) Gulf Coast personnel have been reinstructed to apply the prescribed enforcement actions for all violations unless deviations have been authorized, instructions were given to survey western region personnel describing the conditions under which they should halt all or part of the operations on a platform. Findings/Conclusions: Survey estimates that by 1976 its Gulf Coast operations will have to be carried out from six district offices at a total operating cost of about \$4.6 million. Survey has declared its intention to clear up any confusion in OCS regulation provisions regarding olispill prevention. Survey has not informed the public of the issuance of notices of noncompliance, but such information is svallable on request. The suthority to fine lessees for willful violations of GCS regulations has been used only once. Survey is proposing a revision of GCS Order No. 8 sliminating confusing wording and requiring the operator to be ready for inspection at any time. Punitive shut-ins are not used as a means of enforcing OCS regulations and orders. During January 1968 and January 1969 nearly 8 billion and 4.5 billion cubic feet of gas, respectively, were flared from Federal OCS leases in the Gulf Coast Region. Survey intends to eliminate gas flaring where it will result in a greater loss of equivalent total energy than could be produced if gas flaring was allowed (QM)

## 209

[Agreement between the Scoresary of the Interior and Officials of the State of Unit Peristring to Oil Shale Losses], B-164613. March 27, 1974. 4 pp.

Letter to Rep. Charles A. Vanik; by Elmer B. Staats, Comptroller

Organization Concerned: Department of the Interior; Utsh. Congressional Reisvances Res. Charles A Vanik. Asthority: Taylor Grazing Act, § 7 (42 U.S.C. 3150). 43 U.S.C. 851-852, 30 U.S.C. 191. 42 Op. Attly Gen, 10.

[Oil and Gar Learing on Federal Lands]. B-178205. July 12, 1974. 5 pp. Reserv to Sen. William V. Roth; by Elmer B. Staats. Comptreller

General.

Organization Consumed: Department of the Interior.

Congressional Relevance: Sca. William V. Roth.

Astherity: Other Continental Shelf Lands Act (67 Stat. 463; 43

U.S.C. 1331). Mineral Lawis Lewing, Act (41. Sec. 437): 20 U.S.C. 1331). Moreal Lawis Lewing, Act (41. Sec. 437): 20 U.S.C. 1310. 43 C.P.R. 3100. 43 C.P.R. 31

issues within known geologic structures are similar, but those on exploratory lands are awarded to the first qualified didder for 10 years. Competitive and noncompetitive issues have substantially the same provisions for old and gas production, with requirements for sound engineering, timely drilling, extendable life of contract, preduction, setganding the proble interest and compensation for low, controlling and production of the problem of the protoning set of the problem of the problem of the protoning set of the problem of the protoning set of the protoring set of the protoning set of the protoni royalties, rent, and bonuses totaled \$4.1 billion. Lesses on Indian lands produced \$25 million. GAO is still reviewing the Interior Department's lessing program, particularly as regards production/non-

[Leasing of Minerals on Public Lands], B-164613, September 19, 1974, 4 pp Report to Ren. Charles A. Vanik: by Elmer B. Staats, Compareller General.

Organization Concerned: Department of the Interior. Congressional Relevance: Ros. Charles A. Vanile

Authority: Mineral Lands Leasing Act (30 U.S.C. 181): 43 C.F.R. 3100: 43 C.F.R. 3500. Outer Continental Shelf Lands Act (43 U.S.C. 1331): 43 C.F.R. 3300, 31 U.S.C. 483a, B-118678 (1970), OMB Circular A-25.

Mineral lessing laws and regulations do not contain specific provisions requiring prelease evaluation for mineral lesses on public lands offered for competitive bidding. However, Office of Management and Budget Circular No. A-25 directs Federal agencies to require such lessing at fair market value. Findings/Conclusions: Prelease evaluations are made where possible using discounted cash flow techniques for measuring profitability. GAO is still examining the Interior Department's use of this method. Noncompetitive migeral lesses and prospecting permits for oil and gas on public lands are issued for exploration and development onshore where deposits are not known to exist. Rents and royalties are the same as for competitive leases, which also call for bonus payments. Other onshore minerals as coal, phosphate, sodium, sulphur, and potash are similarly lessed and prospected. In February 1973, the Department suspended coal lesses until it had developed a comprehensive plan for coal resources. In the past, GAO has recommended that all leases be awarded competitively at fair-market value. (DJM)

# National Ocean Policy Study. September 28, 1974, 13 pp.

Testimony before the Senate Committee on Commerce: by Monte Canfield, Jr., Director, Office of Special Programs.

Organization Concerned: Ford Foundation. Congressicael Relevence: Senote Committee on Commerce

Authority: Coastal Zone Management Act of 1972, National Enviroomental Polloy Act of 1969.

Federal lessing of the California Outer Continental Shelf must be considered in the context of available energy options and environmental impact. Reports by GAO were cited dealing with oilspills and leasing programs. Options to OCS development, as outlined in the Ford Poundation's Energy Policy Project, were: (1) "zero energy growth" which would rely on strict conservation and decreased demand: and (2) the "technical fix" which emphasizes conservation by more efficient energy consumption. Difficulties in implementing these options were noted, but it was felt that there is a good potential for energy conservation. In relation to OCS development, the importance of obtaining accurate data for determining resource potential, environmental impact, and tract selection was emphasized. The need for analysis in these areas was urged, (HTW)

Leaves in Leaving the Atlantic Outer Continental Shelf L. Pobrunes 28. 1975, 10 nn Topimony before Massachusetts: Special Legislative Commission on Marine Boundaries and Resources; by Monte Canfield, Jr., Director,

Office of Special Programs. Prepared with the assistance of Herman Galvin, Assistant Director (Energy).

Organization Concerned: Department of the Interior.

## Authority Coastal Zone Management Act.

The mid-Atlantic Outer Continental Shelf (QCS) is scheduled to be offered for lease for oil and gas development. In testimony given in 1973 dealing with Federal energy resource development policy, it was stated that uncertainities involved in OCS lessing resulted from lack of adequate information and poor understanding of environmental, social, and economic impacts of development. It is important to consider State and local needs in policy planning; however present policy is not directed to these needs. GAO reports planned for release dealt with: Pederal goals to accelerate lessing of resources on the OCS and with improvements possible in determining where and at what dollar value to lease. Differing estimates of resources contribute to questions about the value of OCS development compared to alternative energy sources. Federal energy policy is still suffering from gaps in information and management, but some useful studies and actions have been taken. Studies cited concern: inspact on marine environment, effects of industrialization, effects on public policy, and methodology. (HTW)

Outlook for Federal Goals to Accelerate Leasing of Oil and Gas Reso on the Guter Continental Shelf, RED-75-343; B-118678, March 19, 1975. 32 pp. + 4 appendices (8 pp.). Report by Elimer B. Stasts, Comptroller General.

Organization Concerned: Pederal Energy Administration: Denartment of the luterior Authority: Outer Comments! Shalf Lands Act (43 U.S.C. 1332). Baccutive Order 11814

Pederal goals for lessing of oil and gas resources on the Outer Continental Shelf changed significantly in the period from 1971 to 1975. Findings/Conclusions: The lessing goal increased from 1 mil-Non acres in 1971 to 10 million acres in 1974-only 0.8 million acres less than the total acreage lessed in the 20-year period of the Poderal Shelf leasing program. The Department of the Interior established the accelerated leasing goal of 10 million acres without carefully analyzing and considering several factors and problems affecting the goal's soundness. Interior's decision to lease the 10 million acres was reached before the Project Independence study was initiated in March 1974. There is general agreement that existing and predicted shortages of materials, equipment, personnel, capital, and other related services will to some degree limit the ability of industry to expand exploration and development of the Shelf. Actions need to he taken in several broad policy areas in order to minimize constraints to production. Recommendations: The Secretary of the Interior should: clearly define Shelf lessing goals and specify how these goals will be met and how they relate to overall national energy goals and plans; and reconsider the accelerated Shelf leasing schedule in the light of Government and industry capabilities and possible afternatives to lessing in new Shelf areas as addressed in the Project Independence analysis and the President's subsequent national energy and economic proposals. (Author/SC)

## Development of the Outer Continental Shelf Fuell Fael Requires. April

9, 1975. 15 pp. + endlessere (2 pp.). Tentimony before the Senste Committee on Interior and Insular Affairs: the Senate Committee on Commerce: by Phillip S. Huzhes, Assistant Comptroller Opperal.

Congressional Relevance: Sengte Committee on Interior and Insular Affairs: Soute Committee on Commerce. Authority: Outer Continental Shell Lands Act Amendments of

1975; S. 426 (94th Cong.). Bnergy Supply Act of 1975; S. 521 (94th Cong.). Coastal Zone Bryleomental Act of 1975; S. 586 (94th Cong.). National Borray Production Board Act of 1975; S. 740 (94th Cong.), Outer Continental Shelf Lands Act of 1953.

Experience with the system now in use for leasing and developing Outer Continental Shelf (OCS) resources indicates a need for improving leasing and operating practices. A recent GAO report focused on the circumstances under which the Department of the Interior's accelerated "10 million acre" lessing goal was developed; this goal was hastily conceived without adequate data. Interior officials stated that they no longer have this goal, but no new goals were armounced. The process of tract selection for leasing potential oil and gas resouces also needs improvement. Two bills concerning development of OCS resources were endorsed in general but some specific provisions requiring action by the Comstroller General may need modification (HTW)

[Accelerated Outer Continental Shelf Development]. April 21, 1975.-12 pp. + enclosure (16 pp.) Tennerry before the House Committee on Appropriations: Interior

Subcommittee; by Monte Canfield, Jr., Director, Office of Special Organization Consumed: Department of the Interior.

Congressional Relevance: House Committee on Appropriations: Interlor Subcommittee Authority: Octor Continental Shelf Lands Act of 1953.

Reviews of Issues involved in Cotter Continental Shelf (CICS) development have concentrated on leasing goals and tract selection. A March 19, 1975 report to Congress focused on the circumstances under which the Department of Inserior's accelerated "10 million acre" leasure and was developed, its relationship to the Project Independence effort, and constraints expected to hinder the program The soal was hastily conceived without adequate data. After Denartment officials stated that they do longer have this goal but failed to appropried new goals, GAO recommended that lessing goals should be defined and related to overall national energy goals. In a review of the Federal Government's program for deciding where to lease potential oil and gas resources and at what dollar values, at was concluded that the Government is frequently committed to development before it has sufficient information to make intelligent choices Recommendations to the Secretary of the leterior called for an exploration program including selective test drilling prior to lessing: pacing lease offers to permit data analysis; periodic assessment of economic factors; and a test program for lessing entire geological structures instead of tracts. GAO also issued a report dealing with efforts to control oil strills and is planning additional work in the OCS arca (HTW)

Further Action Needed on Recommendations for Improving the Admin tration of Federal Coal-Learing Program. RED-75-346: B-169124. April 28, 1975. 17 pp. + 2 appondices (3 pp.). Report to Rep. John E. Moss, by Elmer B. Stasts, Comptroller Gen-

Organization Concerned: Department of the Interior. Congressional Raisvanca: Rep. John E. Moss.

Authority: National Environmental Policy Act (42 U.S.C. 4321) Mineral Leasing Act (30 U.S.C. 201(a)). 30 U.S.C. 207. S. 1040 (93rd Cong.);

In a 1972 report, three recommendations were made to the Secretary of the luterior relevant to coal leasing. Findings/Conclusions: In response to one recommendation, the Geological Survey issued guidelines for enforcing reclamation and environmental requiremeets, including a requirement for lessees to submit surface protection plans. Although 69 mines were subject to this guideline as of October 1974, only 43 surface protection plans had been submitted. Another recommendation called for discontinuing the practice of issuing leases for lands that permitted leasees to defer or suspend operations by payment of a royalty. Some action was taken on this recommendation, including issuance of a policy providing for mise development within 3 years on new leases, but the actions did not require coal production within a specified time. The third recommendation related to possible changes in legislation permitting more frequent adjustment of lesse terms. No legislation was enacted. Objections offered by the Bureau of Land Management did not seem to be documented. Recommendations: The Goological Survey should prepare and put into effect guidelines dealing with surface subsidence as soon as possible. The Secretary of the Interior should: (1) discontinue the practice of issuing coal leases that permit leases to defer or suspend operations unless justification is given; (2) seek a change in the law to allow for more frequent adjustment in lease terms; and (3) when a lesse comes due for renewal, require the Bureau to prometly renegotiate terms, delete provisions for suspending operations by paying a royalty, and include terms to provide for termination if timely development is not accomplished. (HTW)

Outer Continental Shelf Oil and Gas Development: Improvements New in Determining Where to Lease and at What Doller Value. RED-75-359; B-118678, June 30, 1975, 42 pp. + appendices (9 pp.). Resert to the Congress; by Elmer B. Stasts, Comptroller General-

Organization Concerned: Department of the Interior Congressional Relevance: Congress Authoritys Outer Continental Shelf Lands Act (43 U.S.C. 1332). S.

426 (94th Cong.). S. 521 (94th Cong.). H.R. 6218 (94th Cong.).

Development of oil and gas resources on the Outer Continental Shelf (OCS) is considered an important means of lessening U.S. dependence on foreign energy supplies. Legislation which provides for U.S. lurisdiction over OCS submerged lands authorizes the Department of the Interior to lease lands for such purposes as production of oil and gas and to regulate operations to prevent waste and conserve natural resources. Findings/Conclusions: Wesknesses have been found in Interior's system of selecting areas to lease. Problems identified an evaluation programs are: (1) they are hindered by inadequate data and analysis: (2) they do not reasonably insure a fair market return on lease offers; and (3) they are being isopard/god by an accelerated lessing pace. The Government's direction and finencing are essential to insure that exploratory activities are sufficiently broad to implement a systematic plan for resource appreliast A test program to evaluate, offer, and lease entire ecological structures will allow the merits of a structure lessing proposal to be analyzed and evaluated. Recommendations: The Department of the Interior should: (1) direct an exploration program for systematic appraisal of OCS resources; (2) issue permits for exploration by industry; (3) provide for dissemination of protechnical information to the Government and the public; (4) assess economic factors used in valuing resources; (5) page lease offers at a frequency which normits consideration of data, and (6) establish a test program for lessing entire geological structures instead of tracts. (Author/HTW)

# [Accelerated Outer Continental Shelf Development], July 11, 1975, 10

Testimony before the House Committee on Science and Technology: Energy Research, Development and Demonstration Subcommittee: by Monte Canfield, Jr., Director, Office of Special Programs.

Organization Concurred: Department of the Interior. Congressional Relavance: House Committee on Science and Toch-

nology: Energy Research, Development and Demonstration Subcommittee,

# Authority: Outer Continental Shelf Act of 1953.

GAO work on Outer Continental Shelf (OCS) development has stressed leasing goals and tract selection. A Merch 19, 1975 report to Congress focused on the circumstances under which the Department of Interior's accelerated "10 million acre" lessing goal was developed, its relationship to the Project Independence effort, and constraints expected to hinder the program. This goal was hastily conceived without adequate data. Although Department of Interior officials stated that they no longer have this goal, no new acrospr goals have been announced. Leasing goals should be defined and related to overall national energy goals. A review of the Pederal

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Government's program for deciding where to leave potential oil and gas resources and at what dollar values indicated that the Governmore is frequently committed to development before it has sufficient information to make intelligent choices. Programs are hindered by inadequate data, do not insure fair market value return and are segnardized by an accelerated maps. Recommendations include: exploration programs for resource appraisal by the Department and inclustry, provisions for supplying information to the Government and the public, periodic assessment of economic factors, reging leave offers to permit data analysis, and a test program for leasing entire Recological structures of tracts. (HTW)

## 220

Followay Ressew of the Natual Patrolium Reserves. LCD-75-321: B-66927. July 29, 1975. 2 pp. + appendices (27 pp.). Report to Rep. John E. Moss, by Elmer B. Strats, Comptroller Gen-

Organization Concerned: Department of the New Department of Defense; Department of the Navy Office of Naval Petroleum and Oil Shale Reserves. Congressional Relevance: Rev. John F. Moss.

Authority: Supplemental Appropriations Act of 1974 (P.L. 93-245) Energy Independence Act of 1975; S 594 (94th Cong.), H.R. 2650 (94th Cong.), Alaska Statebood, Act (P.L. #5-50g), S.I. Rev. 176 (93rd Cong.), H.J. Res. 47 (94th Cong.) S.J. Res. 13 (94th Cong.). H.R. 49 (94th Cong.). H.R. 5919 (94th Cong.). Public Land Order 1621. Executive Order 3797-A

The Navy's Office of Naval Petroleum and Oil Shale Roserves. (the Office) manages the Navy's petroleum reserves and for years has requested funds to further explore and develon them. For the most part, the requests have been denied and have not been submitted for appropriation consideration. Fludings/Conclusions in reviewing the Office's requests, the Navy and the Densetment of Defense (DOD) have assumed that funds approved for the reserves would be at the expense of other Navy activities. Reasons given for denying the requests were: the reserves were national resources and appreprintions for other New activities should not suffer; and there was no firm national policy on the reserves. A lack of funding has delayed development of the reserves and the canability of penduring large quantities of oil for an emergency. Funds for exploration and deveforment at Petroleum Reserve No. 1 in California and Reserve No. 4 in Alaska have recently been made available by the Congress. Proposals have been made to produce oil from the reserves to ingrease the amount of domestic oil available to meet current fuel meeds and reduce future reliance on foreign sources. A Federal Energy Administration report did suggest the alternative of production from the Navy's reserves. Leases continue in effect on Federal land around the reserves.

## 221 [Federal Coal-Leaving Program of the Department of the Interior].

RED-76-26A: B-148623, October 15, 1975, 1 no. + enclosure (9 pp.). Report to Rep. Henry S. Reuss: by Elimer B. Staats, Comptroller General.

Organization Concerned: Department of the Interior. Congressional Relavance: Rep. Hanry S Rossa

Authority: Freedom of Information Act (U.S.C. 552(b)). Clean Air Act, as amended (P.L. 91-604; 42 U.S.C. 1857). Mineral Lessing Act (30 USC 184)

The Federal coal leasing program is administered by the Department of the Interior. Questions have been raised about coal reserve estimates, coal production trends, production and reserve data on Federal lesses, and the monitoring of Federal lesses. Findings/Conclusions: GAO accepted the 1974 Bureau of Mines estimate that the domenstrated coal reserve was 434 billion tons. These 434 tons are not necessarily recoverable. They figure in the Interior Department's astimate of 3,244 billion tens, both identified and hypothetical, with recoverable coal ranging from 217 to 258 tons. Mining in western States is increasing for several reasons, including ease of mining and low sulphur content. As of December 31, 1974, 785,000 scree of Poderal land were leased containing about 16 billion tons of recoverable cost, and production has increased in recent years (20.63),000 tons in 1974). A table lists the 15 largest acrease holders of Federal coal leases. Federal law sets limits of 46,080 acres in coal lesses and prospecting permits to any one person or corporation in any one State at one time State officials of the Bureau of Land Management monitor acreage limitations on a quarterly basis from computer list-

The Geological Survey's Inadequate Action on Recommendations Comcerning Impection and Regulation of Owner Continental Shelf Oil Osciations 1, RED-76-49; B-146333, November 21, 1975, 2 no Reyor to Rep. William S. Moorhead, Chairman, House Committee on Government Operations, Conservation, Engrey and Natural Resources Subcommittee: by Robert F. Keller, Acting Comptroller General.

Organization Concerned: Geological Survey. Congressional Palacence: House Committee on Concernment Once-

ations: Conservation, Energy and Natural Resources Subcommittee. The Goological Survey has taken inadequate action on the followine recommendations: (1) that the Secretary of the Interior require the Geological Survey to issue instructions covering partial inspections of drilling operations and inspection of remedial and shandonment operations; and (2) that the Geological Survey he required to issue regulatory orders to control employ, workeyer and wireline operations, and certain concurrent operations from a single structure. Findings/Concludence The Geological Survey gives instructions to the technicians on a continuing basis during day-to-day inspections, and inspection schedules for those types of operations are established as needed within the corrations framework. Written guidelines would provide greater insurance that inspection activities were being administered and reported uniformly. The regulation changes would not be finalized and put into effect until early 1976. (Author/OM)

[Development of Federal Coal Resources], March 26, 1976, 13 pp. Tentimens before the House Committee on Interior and Insular Affeirs: Mines and Mining Subcommittee; by Phillip S. Hughes, Assistant Comptroller General

Organization Concerned: Department of the Interior Congressional Relevance: House Committee on Interior and Insular Affairs: Mines and Mining Subcommittee. Authority: Mineral Leasing Act of 1920.

A GAO study on Pederal cost lessing addressed questions of the need for new lessons and the ability of the Department of the Interior to administer a leasing program. The Department of the Interior decided to lift a moretorium on coal leasing without assessing the potential contribution of Federal lands toward meeting the national goal of doubling yearly coal production by 1985. Attempts should be made to: (1) better identify the amount of coal under lease and prospecting permit; and (2) relate the amount of Federal coal required to meet national goals to programs of renewed leasing. Lessees should furnish information related to holdings and production plans. Proxism administration of the Denartment's new leasing reocess has improved, but further improvements are necessary. Weaknesses were found in the coal resource mapping program, in drilling programs, and in the land management plansing system, Recommend were made to the Secretary of the Interior to correct these weaknesses. The Department proposed regulations designed to improve production on Federal leases, did not go far enquals. Action by Congress was suggested to allow for more frequent adjustment of lesse terms, and amendment of the Mineral Lessing Act of 1920 was proposed to provide for competitive award of leases and for issuance of nonexclusive prospecting permits, (HTW)

224 Chetion Section

## 22

Department of the Interior Study of Situs-In Oil and Gar Well Completions and Lacista-GAO Observations. RED-76-90; B-178205. March 30, 1976. 2 pp. + 2 appendiese (12 pp.). Report to Sen. Also. Chestion; Sen. Ernest F. Hollings; Sen. Wasten G. Magauston; Sen. Friste E. Most; Sen. Addis E. Stevenson; Sen.

John V. Tenney; by Elmer B. Staats, Comptroller General.

Organization Consumed: Department of the Interior; Geological Survey.

Congressional Releyance: Sen. Alan Cranston; Sen. Ernese P. Hollings; Sen. Warron G. Magnussot; Sen Frank E. Moss; Sen. Adlai E. Stevenson; Sen. John V. Tunney.

On January 22, 1975, the Secretary of the Interior instructed the Geological Survey to study Outer Continental Shell (OCS) shut-in well completions and leases in the Gulf of Mexico. The study focused on the following areas; shut-in oil and gas well completions; menproducing lesses with qualified producible wells: certain nonproducing lesses with ass reserves; and unexplored primary-term lesses (5 year) with no drilling operations for 2 consecutive years Findings/Conclusions: The summary of operators' sessons for shut-in completion indicated that 94 well completions were plugged or were availing plugging operations because they had produced oil or gas to their economic and/or physical limits. Most of the remaining 60 well completions were shut in pending completion of a pineline connection or were awaiting additional work to restore production. Study of 137 completions for recoverable reserves indicated: 34 completions with possible are reserved; 19 completions with possible oil reserves; and 84 completions with no reserves. Geological Survey Officials plan to Institute a reporting system in June 1976 to identify shot-in well completions on a quarterly basis. Study disclosed that I of 17 shot-in leases seviewed were producing, I was in the midst of an intensive development program, 2 were reliaquished, and 12 were allowed to retain their leases for longer periods. Geological Survey officials said they lack the staff to verify each set of justifications for suspension-of-production submitted by lessees. (Author/QM)

225
Indian Notaral Resources-Part II: Coal, Oli, and Gas-Better Monage ment Can Ingress Development and Increase locates and Exployment. RED-76-44; B-114858. March 31, 1976. 39 pp. + 1 appendix, C pp.).
Report to Son. Henry M. Jackson, Chairman, Senate Committee on

Interior and Insular Affairs, by Elmer B. Statts, Comptroller General.

Organization Concurred Bureau of Indian Affairs; Europe of Mines; Department of the Interior; Geological Survey.

Congressional Relevocana Sensire Committee on Interior and Insulae Affairs.

Affairs.
Authority: Indian Self-Determination and Education Assistance Act of 1975 (P.L. 50-638), Indian Reorganization Act of 1934 (ES U.S.C. 364, ES C.F.R. 171, 15 C.F.R.

172. 25 C.F.R. 177. 25 C.F.R. 183.45. Coal, oil, and gas are valuable resources that provide Indians with income and job opportunities which will increase as resources are further developed. Indian income from oil and gas in fiscal year 1974 amousted to about \$43.1 million, Indian income from other minecals, including a large amount from coal, amounted to about \$9.6 million during the same period. Findings/Conclusion: The Bureau of Indian Affairs (BIA) has placed limited emphasis on developing Indian coal, oil, and gas resources. For example: the amount of resources on most reservations is unknown; planning for minerals resource development has not been adequate; BIA does not have sufficient personnel with minerals expertise; and information on expersonce gained during minerals development has not been exchanged among BIA field offices, Indian employment in the mineral industry was substantially higher on those reservations that had extablished specific requirements for Indian preference in hiring and followup procedures. Thirteen of the 16 Indian coal leases reviewed

had fixed royalty rates and, therefore, the income per ton produced

did not rise during periods of rising coal prices. The Geological Survey has not adequately fulfilled its responsibilities for mineral resource development on Indian reservations. Recommendations The Secretary of the Interior should direct the Commissioner of BIA to: develop complete minerals inventories for all reservations; develop mineral management pleas taking into consideration the wishes of the Indian people; determine the mineral expertise staffing BIA needs and take steps to meet them; establish procedures to exchange and distribute between area and agency offices information relating to experience existed by the tribes in developing mineral resources; update and maintain BIA's operations manual; establish specific requirements in all Indian mineral leases for Indian preference in hiring; establish propodures to insure that such preference provisions are bring followed: establish a coal-lease royalty rate policy based on a percentage of the selling price of coal; determine whether the 2,560sore limitation and the criteria for exceeding it are valid; and insure that the Bureau's lease files are adequately documented. The Director of the Geological Survey should establish penalty fees and require reports from lessees. (Author/QM)

## 226

basis. (QM)

Rale of Federal Coal Resources in Meeting Energy Gools Neels to Be Determined and the Leasing Process Improved. RED-76-79; EN200-. April 1, 1976. 64 pp. + 4 appendices (5 pp.).

Repair to the Congress; by Elmer B. Stasts, Compitolist General.

Organization Concerned: Department of the Interior, Buress of Land Management: Geological Survey.

Congressionel Reluvence: Congress.

Authority: Mineral Lands Lessing Act (30 U.S.C. 181). Mineral Lessing Act for Acquired Lands (30 U.S.C. 351). Clean Air Act, as amesded (P.L. 91-604; 42 U.S.C. 1857). 30 U.S.C. 207. 30 C.F.R.

The Administration's goal is to double present national yearly coal production by 1985. Because of its large holdings of low-sulfur coal, the Federal Government is in a key position to shape future patterns of cost development. Most of the cost lands are administered by the Department of the Interior and may be lessed to mine coal. Under a new leasing process, the level of lease offerings would be determined by bidding results in competitive lesse sales. Lesse sales, of environmentally acceptable, would be offered as long as bids were sufficiently high. Findings/Conclusions: Reliance on the new lessing process places the Department of the Interior in the position of reacting rather than providing leadership needed to develop sound national energy strategy. Much remains to be done before the new leasing process can be applied effectively on a large scale. Weaknesses exist in the Department of the Interior's coal resource may ping program, in drilling programs to obtain data for mineral classification and environmental protection, and in the land management planning system. There is a lack of information to make resonsbly sound valuations of coal lands and leased coal. Coal-leasing regulation improvements are needed concerning production standards for leases; adjustment of lease terms; assignment of leases; and coal exploration. Improvements are also needed in the preparation for and the administration of a conl-leasing program. Recommends tions: The Congress should enact legislation that would: permit adjusting terms of future lesses more frequently than after a 20-year primary term; and smend the law to provide for the sward of leases only on a competitive basis and issuence of prospecting permits under which persons could explore for cost for commercial purposes but have no exclusive rights to leases. The Department of the Interior should: specify what demands will be placed on Federal coal resources in meeting production goals; establish a leasing schools to indicate the timing and magnitude of lease sales; develop a systernatic coal-drilling program to provide data for appreising coal resources and provide planned and coordinated drilling through federally financed activities; require existing and potential lessees to furnish information on reserve heldings, production plans, resease and justifications for nonproduction, and the need, if any, for additional Federal coal reserves; and award lesses only on a competitive

Citotion Saction

227 Monogramment of and Plant for the Naval Petroleum Peterses, I CD-76. 313: B-66927. May 14, 1976. 21 pp. + 5 appendices (33 pp.). Report to the Congress by Rimer B. Stants, Comptroller General

Organization Conterned: Department of the Navy Congressional Ralevance: Congress.

Authority: Naval Petroleum Reserves Production Art of 1976 (P.1. 94-256), Armed Services Procurement Act of 1947, 10 U.S.C. 641 H. Rept. 94-942.

By law the Newy has had custody of Rederel lands contribing large reserves of netroleum and thousands of zeros of eil shale. Findinst/Coardustour Under recent Insistation reasonability for coatedy and exploration of the largest reserve (No. 4, North Slope, Alaska) was shifted from the Navy to the Department of the Interior Reserves Nos. 1 and 3 (Elk Hills, California, and Teapot Dome, Wyoming) will be more fully developed at a cost of \$535 million reising production to over 400 000 harrels a day. No. 2 (Ruena Vista California) Reserve is almost depleted, and No. 4 and the oil shale reserves are undeveloped. At No. 3, the Navy recently started to systemically test oil wells and solve problems detected and has remested proposals for a new operator contract. In the past, Navy progurement for the reserves did not always accord with that used by the defense agencies or ensure that the Government's best interests were being served, because it did not always follow the relevant intent of the Armed Services Proguement Act applied to all euro chases of supplies and services, including contractors who operate the reserves. Recommendations: The Secretary of the Navy shouldestablish contracting procedures which conform to the policies and proceedings of the Procurement Regulations; review the morntly awarded contracts to operate reserves Nos. 1 and 4, and modify them if necessary to accord with procurement regulations; and comply with the newly established contracting procedures for the new operator contract at reserve No. 3, (DJM)

Comptroller General.

Department of the Interior's Procedures for Approxing Coal Mining Pless J. EMD-76-6; B-113678, July 20, 1976. 5 pp. Report to Rep. Patsy Mink, Chairman, House Committee on Interior and Insular Affairs: Mines and Mining Subcommittee; Sen. Lee Metcalf, Chairman, Senate Committee on Interior and Insular Affairs: Minerals, Materials and Fuels Subcommittee; by Elmer B. Staats,

Organization Concerned: Bureau of Land Management: Department of the Interior: Geological Survey. Congressional Relayance: House Committee on Interior and Insular Affairs: Mines and Mining Subcommittee: Seaste Committee on Interior and Insular Affairs: Minerals, Materials and Fuels Subcommit-

A review of the Department of the Interior's approval process for coal mining plans focused on six mining plans approved since Octo-ber 31, 1975. Phyllips/Conclusions, Lossoss must submit mining plans that detail reclamation and environmental protection measures before mining on public lands. Any major environmental impact must be treated in an environmental impact statement. The mining gian is submitted to the Area Mining Supervisor who makes a technical review. A Federal surface management agency (such as Forest Service or Bureau of Land Management) also reviews the plans. At the same time, a multidisciplinary, multiagency (Federal and State) environmental analysis is prepared to determine the need for an environmental impact statement. If approved, the plan goes through five offices/divisions and at each level stigulations can be added. After approval by Assistant Secretary, Energy and Minerals, it reverses its unward flow and returns through channels back to the Area Mining Supervisor who notifies the lesses of approval. In four cases, however, approval from the Assistant Secretary was communicated by phone, not by the process outlined, in order to lift legal injunctions by the courts on a timely basis. The approval letter contained a number of modifying stipplations dealing mainly with the method of operating and reglamation and compliance with various regulations and requirements. (DJM)

An Evaluation of the Federal Power Commission's Eulemaking on Ibilities' Construction Work in Property EMD-77-7: R-180723. December 2, 1976. Released January 17, 1977. 5 pp. + appendix (19 pm.). Resert to Ren. John E. Moss. Chairman, House Committee on Inter-

state and Poorign Commerce: Oversight and Investigations Subcommittee by Firmer B Staats Cornetroller General.

Organization Concerned: Federal Power Commission. Congressional Relevance: House Committee on Interstate and Poreign Commerce: Oversight and Investigations Subcommittee. GAO was asked to review a proposed Federal Power Commis-

sion role to allow natural eas and electric atility companies to include construction work in meagress in their bases for commuting rates Findings/Conclusions: The refernaking order does not appear to serve adequately the purposes the Commission originally envisioned.

The immediate financial impact appears to be misimal, and little change will result in the utilities' allowences for funds used during construction accounts. More importantly, the rulemaking sets a precedent for the Commission to depart from its historic "used and gseful" policy and provides an opening for utilities to submit future rate increase filings with cost of construction work in progress in the rate base. The greatest impact of the resembling will probably be to increase the administrative workload of the PPC staff, thus intensifying the regulatory lag problem. Reconvendences: The Chairman of the FPC should require a complete central file to be maintained for each rulemaking. (Author/DJM)

[Rational Exploration and Development of Outer Continents] Shelf Recover 1. March 7, 1977, 10 pp. + 2 enclosures (4 pp.). Testimery before the House Select Committee on Outer Continental Shelf; by Monte Canfield, Jr., Director, Energy and Minerals Div.

Organization Concessed: Detectment of the Interior. Congressionel Relavence: House Select Committee on Outer Contiprotel Shelf Authority: H.R. 1614, § 208 (95th Cong.).

Improved policies and procedures are needed for the rational exploration and development of the Outer Continental Shelf (OCS) resources. An assessment of the first frontier sale - OCS Sale 35 off the California coast - revealed that the Department of the Interior's tract selection and evaluation process was not reliable, and bidding was not senerally competitive. In addition, the prerelease tract evaluation used in making accept/reject decisions on industry bids were bosed on inndependent data. The Department's current revenue estimating process for OCS sales is based on inadequate information; it often includes overly optimistic estimates; and it relies on various errors to cancel each other out and vield a ressonable estimate. Under the present lessing system, the Federal Government is fremently committed to lesse before it has sufficient information to make intelligent choices. The Department of the Interior should: direct a geological exploration program which would provide for the systematic development and implementation of a plan for appraising OCS oil and sas resources, encourage private industry to conduct the drilling identified in the plan, and take necessary steps to encourage Industry to obtain further information after the tract selection process is completed, and offer for lease sale only those areas for which sufficient information has been collected and analyzed. (RRS)

Outer Continental Shelf Sale #35: Problems Selecting and Evaluating Land to Lease EMD-7719; B-118678. March 7, 1977. 45 pp. + appendices (22 pg.).

Report to the Congress; by Robert F. Keller, Acting Comptreller General.

Organization Centenned Department of the Interior, Office of Management and Budget.
Congressional Relevances: House Committee on Interior and Invites Affairs, Seasor Committee on Interior and Invites Affairs, Constituent Committee on Interior and Invites Affairs, Constituent Shaft Leads Act (43 U.S.C. 1331), S. (95th Cong.), H.R. 1641 (93) Cong.), S. 21 (94th Cong.).

A review of practices in lessing Outer Continental Shelf (OCS) lands for oil and gas development concentrated on tract selection and methods for estimating revenues. The Department of the Interior has leased a total of about 12.5 million acres in 21 years through competitive offerings, with resulting revenues to the Federal Government of nearly \$16 billion. Findings/Conclusions: After the oil embargo, accelerated lessing led to speculation and isopardized the Government's role in protecting the public interest. Por OCS Sale #35. tracts were selected for lessing without adequately assessing their resource potential. Prelease tract evaluations were made using inadequate data. Revenues to be received were overestimated because of leadequate information and overcotimistic estimates. Recommendations: The Secretary of the Interior should (1) direct a geological program to appraise OCS oil and gas resources; (2) encourage industry to share information on explorations with the Department; and (3) offer for lease only areas analyzed through sufficient information. Congress should act favorably on proposed legislation providing for a leasing program to meet national goals and assure receipt of fair market value for oil and gas. (HTW)

[Improved Policies and Procedures for the Exploration and Development of Outer Continuental Shelf Resources] Match 15, 1977. 10 pp. + 4 exclusives. Testimony before the Senite Committee on Energy and Natural Resources, by J. Deuter Peach, Deputy Director, Energy and Infrartia Div.

Congressional Relevance: Senate Committee on Energy and Natural Resources. A planned and systematic approach to the leasing of the nation's Outer Continental Shelf (OCS) resources as needed if hydrocarbon production in frontier areas is to be maximized in a manner consistent with environmental and other values. A GAO assessment of the first frontier sale (OCS Sale 35 off the Celifornia coast) has demonstrated that (1) the Decortment of Intenor's tract selection and evaluation process were not rehable, (2) the bidding generally was not competitive; and (3) the prefease tract evaluation used by the Department in making accept/reject decisions on industry bids were based on inadequate data. The need for sufficient data is epitical por only for selecting and valuing tracts to determine the fair market value for leased lands, but also for identifying where to lease so that domestic oil and can production can be increased in the near future. The Department should undertake a systematic explosition program to collect data on previously spexulated frontier areas. Such an exploration would also irrecove the Department's revenue-estimating process and provide the nation with a better knowledge of the total OCS resource potential. The Department should also encourage private industry to conduct the dalling and share the resulting information with the Department on a confidential basis. The Department should offer for losse sale only those areas for which it has sufficient information to identify the resources' location, estimated value, and accertail for development, (LDM)

### 223

56

Domestic Energy Resource and Reserve Estimates-User, Limitations, and Needed Date. EMD-77-6; B-178203. March 17, 1977. 35 pp. + 5 appendixes (21 pp.). Royer's to the Congress; by Robert F. Keller, Aceing Comptroller Geograf.

Organization Concerned: Department of the Interior, Energy Research and Development Administration; Federal Energy Administration. Congressionel Relavence: House Committee on Interstate and Foreign Commerce, Sensie Committee on Buergy and Natural Resources: Congress.

Ashbeity Bergy Polley and Conservation Act (2d U.S.C. 520). (Sup. VI) Bergy Conservation and Production Act (Ed. 4-35). (Sup. VI) Bergy Conservation and Production Act (Ed. 4-35). Mining and Minrath Polley Act of 1970 (30 U.S.C. 21a). Bergy Recognization Act of 1974 (4d U.S.C. 530) (Supp. VI). Feetral Bergy Administration Act of 1974. Bergy Supply and Environmental Coordination Act of 1974. Bergy Supply and Environrental Coordination Act of 1974. Peters Water Power Act Ani-Valve Conference on the Conference of the Confe

The unefulness of resource and reserve estimates of the Nation's primary energy fuels, including oil, gas, goal, and grantum, can be greatly improved. These estimates are prepared and reported on by Federal agencies. Findings/Conclusions: The estimates propared have been an attempt to measure the potential short- and long-term domestic supplies of these fuels. Review of the reported energy resource and reserve estimates demonstrates that there is a need for more data to assess resources and reserves and a need for more reliable resource and reserve estimates. In order to increase the ascfulness of reserve estimates for decisionmaking purposes, information is needed on the effects of cost-price relationships on energy source recoverability. Recommendations: The Secretary of the Interior should direct a geological exploration program which would provide for the development and implementation of a systematic plan for appraising Outer Continental Shelf oil and gas resources. The Bacrgy Research and Development Administration should expedite the work and report of its National Uranium Resource Evaluation Program. The Admonistrator of the Federal Energy Administration should obtain additional information concerning the effects of cost-price relationships on the recovery of energy resources, the quantities of recoverable cost reserves, and the ownership and central over energy resources (Author/SC)

# DO OUR DOMESTIC AND INTERNATIONAL ENERGY POLICIES ADEQUATELY REFLECT THE INTERNATIONAL AND DOMESTIC ENERGY SITUATIONS?

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A Sammary of European Piess on Dependency of the Free World on Middle East Oil. B-178334. August 29, 1973. 19 pp. Report to Rep, Lee H. Hamilton, Chairman, House Coasmittee on Internstitional Reliations: Burepe and the Middle Bast Subcommittee; by Elmer B. Stasts, Compiletier General.

Organization Concurred: North Atlantic Treaty Organization; Organization for Bencomic Cooperation and Development; Organization of Petrologue Experting Countries:
Congressional Raisyments: House Committee on International Relations: Borone and the Middle Exes Subcommittee.

House hearings concerning oil negotiations with governments of the Persian Gulf were planned for which European views on the following oll-related issues were sought: oil negotiations, issues, and the stability of supply; and the impact of Arab oil money on the international monetary scene. Findings/Conclusions: The energy crisis and increasing dependency on Middle East oil are real probless for both Europe and the United States, which connet be avoided or greatly alleviated before the early 1980's. Immediate action is necessary to prevent the energy crisis from extending beyond that, Burepeans have adjusted to their historic dependency but are becoming more concerned, particularly over U.S. policy on the Middle East and energy. Cooperation among major oil-consuming nations is highly desirable but difficult to schieve. Middle East oil riches are an important factor in world financial markets and played a large role in the recent massive selling of dollars. Protection of value, however, not maliciousness, motivated the movement of oil wealth into other currencies. Accumulated oil weelth and the excess liquidity of major

oil-producing countries must be considered in any new international financial arrangements. Both oil and oil-derived wealth are potential economic veapons of growing strength, although the actual or throutened use of such weapons has been limited to date (Author/GM).

# 235 Essays Related to Foreign Sources of Oil for the United States. B=179411 January 23, 1974 63 pp. + appendix (1 pp.). Report to the Congress, by Elmer B States, Comptroller General

Organization Concerned: Department of State, Organization for Economic Cooperation and Development; Organization of Petrodeum Exporting Countries. Congressional Relevences: Cooperas.

Issues relating to international petroleum supplies include: future availability of imports; surrements with oil-exporting and oil-consuming countries; outlets for monetary reserves of oil-exporting countries, and the role of the Department of State in negotiations between oil companies and producer countries. Analogs/Canclesions: U.S. national policy on energy must be coordinated with U.S. foreign policy. The Department of State has not participated in a substantive way in negotistions between oil companies and produc-Ing countries. The Department has traditionally tried to use its influence to promote an environment conducive to U.S private investment abroad, but at the same time avoided direct involvement with private industry. The Department tried unsuccessfully to conclude agreements with Western Hemisphere producing nations for a continuing oil supply, but did not attempt such agreements with Eastern Hemisphere countries. It is clear from the results of recent negotiations between oil companies and producing nations, coupled with U.S. policy towards largel, that the U.S. has been left with a less secure supply of oil than before. Recommendations: In view of the highly volatile situation in the Middle East at the time of the report, GAO deferred specific recommendations. (DJM)

# 226 [The Purchase of Short-Supply, Energy-Related Items through the Export-Import Book of the United States], 2-17E205. October 4, 1974. 2 pp. 4 conclosures (2 pp.). Record to San, Liuyd M. Bensen: by Elmer B. States. Comptroller

Organization Concernad: Export-Import Bank of the United States; Department of Commerce; National Advisory Council on International Monetary and Fanancial Policies; Pederal Energy Administra-

# tion. Congressional Relavance: Sen. Lloyd M. Buntson.

General.

Neither the Federal Energy Administration (FEA) nor the Deportroppet of Commerce has attempted to maintain a list of officially designated short-supply items used in domestic energy activities. Both agree that energy-related items currently recognized as being in short sunnly are tubular goods (well casing and tubing, drill tipe, and line pipe) and drilling rigs. Findings/Conclusions: The Export-Import Bank of the United States (Eximbank), from June 10 to July 31, 1974, approved one transaction involving the expect of such short-supply items. The approval committed Eximbank to make a 7% loan of \$31,043,000 to help finance \$68,984,000 in exports to Algeria, consisting of 20 drilling rigs and 91 trucks. Before Eximbank approves an application for financing energy-related expects, it submits the proposed transaction to FBA and the National Advisory Council on International Monetary and Pinancial Policies (Council) for their review, FEA submits its recommendation to the Council, which then decides by a majority vote of its members whether the transaction should be approved. Eximbank is not required to abide by the Council's decision. Eximbank only contacts other spencies through the Council, On June 31, 1974, Eximbank was considering 38 transactions involving potential exports of the short-supply items.

Subsequent to June 10, 1974, Eximbank had not made any commitments to finance energy-related equipment determined to be in short speely by FEA or the Council (Author/OM)

## Economic Implications of Current World Oil Prices, 53 pp. Staff study March 1975

Organization Concerned: Organization of Petroleum Exporting

The four-fold increase in oil prices set by the Organization of Petroloum Exporting Countries (OPEC) is exusing an unprecedented disequilibrium in international psyments and corresponding transfer of wealth. Fladings/Conclusions: Major OPEC countries are unable to spend their accumulated financial reserves, which could reach \$650 billion by 1980 (World Bank figure). Possible outlets for oil revenues include: internal reconomic development: imports of goods and services, including military equipment and training; assistance to developing countries; and investments in other countries and private and international institutions. Foreign investment in industrialized countries has the greatest potential for using surplus oil revenues. The United States is attempting to reduce dependence on imported oil and is seeking to increase expects to OPEC countries. Consumer conservation may have some effect on our dependency on OPEC. The United States may involve itself more heavily in the international oil market. The future level of oil prices is uncertain; high oil prices may not be maintained indefinitely. Lower world prices would case the balance-of-payments financing problems for oil importers. (DJM)

# 228 Miscation of Ussaium Eurichtstein Services to Fast Feerings and Damenic Nuclear Restors. ID-75-45; B-181963. March 4, 1975. Released May 21, 1976. 19 pp. + 5 appendices (8 pp.). Report to Rep. Thomas E. Moegan, Chairman, House Committee on

Informational Relations; by Elmer B. Steats, Comptroller General.

Organization Concerned: Energy Research and Development Administration: Desartment of State.

ministration; Department of Solic.

Congressional Relavantas House Committee on International Rela-

tions.

Authority: Atomic Energy Act of 1954 (42 U.S.C. 2011).

Recent Presidential commitments caused the Atomic Energy Commission (AEC) to sign provisional contracts to provide urgalum perichment services to fuel nuclear reactors in Egypt, Israel, and Iran. At the same time, the AEC was helding domestic respects for such services in abeyance. Findings/Conclusions: The demand for enrichment services at June 30, 1974, for executed and pending contracts was greater than available especity. As a result, all such long-term contracts were suspended except those with Egypt, Israel. and Iron. This deviated from the historical policy of access on a chronological basis for all buyers, and contracts with a number of foreign countries were abridged. Conditional contracts were offered to 45 foreign countries, depending on approval by the AEC for recycling platenium produced as a reactor byproduct as fuel. Foreign policy will be adversely affected if the United States does not execute these conditional contracts. The new AEC policy to terminate further long-term Government contracts together with the private sector's lack of a firm commitment to build has introduced uncertainty as to future U.S. supply and may have encouraged the emergence of foreign supply sources. Consequently, the United States may lead significant balance-of-revments benefits from these sales, as well as the leverage that a dominant supplier has in international relations concerning nuclear policies and neargoliferation of weapons. (DJM)

242

U.S. Financial Assistance in the Development of Foreign Nuclear Energy Properties. ID-75-63; B-181963. May 23, 1975. 5 pp. + 7 appendices (23 pp.).

Apport to Rep. Thomas E. Morgan, Chairman, House Committee on International Scintions; by Elmer B. Statts, Comptroller General.

Organization Concerned: Atomic Energy Commission, Agency for International Development; Export-Import Bank of the United States; International Atomic Energy Agency.

Conversional Enlawance: Hours Committee on International Rela-

tions.
Authority: Assente Energy Act of 1954 (42 U.S.C. 2011). Foreign
Assistance Act of 1974 (P.L. 93-559). H. Res. 1189 (93rd Cong.). H.
Res. 1219 (93rd Cong.).

The United States may assist foreign countries in the development and utilization of stomic energy for peaceful purposes. Findings/Conclusions: Agreements for the peacoful application of stonic energy are in effect with 29 foreign ocuntries, the International Atomic Energy Agency, and the European Atomic Energy Community (EURATOM). Since the beginning of the international program, the United States has exported billions of dollars worth of nuclear-related goods and services. As of June 1974, the annual export value of quotesr plants and related equipment was about \$1 billion. A number of floancial arrangements under various programs of several Government saencies have been used for U.S. nuclear exports. At present no single Government agency maintains financial information on an individual agreement basis for all nucleur exports, nor is information on private financial participation readily available within the Government. However, a complistion on U.S. financial assistance is provided on an individual agency basis. International lending institutions have not been significantly involved in financing nuclear projects. U.S. Government financial assistance to foreign countries or international organizations has primarily involved the Atoms for Peace program, the Agency for International Development, the Atomic Energy Commission, The Export-Import Bank, the Internsticual Atomic Energy Agency, and the Arms Control and Disarmament Agency, (DJM)

240 .
Role of the International Atomic Energy Agency in Safeguarding Nuclear Material. TD-75-65; B-181963. July 3, 1978. 34 pp. + 5 appendices (10 pp.).
Roper to Rep. Thomas B. Morgan, Chairman, House Committee on

International Relations; by Elmer B. Statts, Compireller General.

Oepositerion Concerned: Horry Research and Development Administration; Department of State; International Atomic Energy Agency.

Congressionel Relavance: Hears Committee on International Relations.

Authority: Atomic Energy Act of 1954 (42 U.S.C. 2011). Atomic Energy Act of 1946.

The International Atomic Energy Agency (IAEA), an autonomous Agency under the seals of the United Nations, administers an international nuclear safeguards program designed to detect diversion of nuclear materials for nuspeaceful purposes. Findings/Concluston: Membership in the IAEA does not obligate any of the 106 member countries to accept safeguards on its nuclear facilities. The Agency's safeguards system consists of material accountability, onsite inspections, and surveillance and containment devices such as casteres and seals. The principle is that the detection capability would deter a would-be diverter. However, the scope and applicability of inspections are limited because the safaguards are designed to detect diversions on a national level only, do not include physical protection, and do not provide for detecting clandestine facilities or retrieving diverted material. Problems in administering and implomenting the safeguards system relate to: adequacy of countries' socountability records, need for better detection devices, equitable distribution of costs among members, and political problems and differing agreements with members. The real effectiveness of Agency

safeguards is not known. Effective safeguards depend largely on international goodwill. The question of whether U.S. interests are best served through bilateral or Agency safeguards is difficult to answer. (DIM)

241

Natural Gas Shariage: The Role of Imported Liquified Natural Gas.
10-76-14: B-178205. October 17: 1975. 35 ps. + 3 appendices (10.

(D-76-14; B-178205. October 17, 1975. 35 pp. + 3 appendices (10 pp.).

Record to the Congress: by Bimer B. Steats, Comptroller General.

Organization Concerned: Department of the Interior; Federal Baergy Administration; Federal Power Commission. Congressional Relevence: Congress.

Authority: Natural Gas Act of 1938, as amended (15 U.S.C. 717-717w). Pederal Energy Administration Act of 1974 (P.L. 93-275). Energy Reorganization Act of 1974 (P.L. 93-438).

Worldwide natural ass reserves are wontiful, but ILS, reserves have been declining since 1967 because new discoveries have not kent rece with domestic production. Gas shortupes have necessitated curtailment of deliveries and conservation efforts, and the shortage is expected to increase. Fladings/Conclusions: Refore alternative sources of energy can be developed, economic and environmental problems must be overnome. Increasing all imports raises political economic, and national security questions. Deregulation of natural ass prices will have an uncertain effect on domestic gas production. Consumers' conservation measures have reduced overall gas use by about 5% but conservation alone cannot eliminate the shortfall. Probions associated with importing liquefied natural gas are: (1) its shortterm contribution to domestic supply will be minimal: (2) a capital investment of about \$11 billion may be required to construct the necessary tankers and receiving terminals: (3) the same risks on sociated with large oil imports exist; and (4) the cost of imports would add about \$4 billion annually to U.S. balance-of-nayments outflow. (HTW)

Role of the International Assente Energy Agency in Safeguarding Nuclear Material]. Immuny 30, 1976. 16 pp. Tenimany before the Seante Committee on Government Operations; by J. K. Pasick. Director, International Div.

Organization Concerned: International Atomic Energy Agency.
Congenssional Relevances: Strant Committee on Government Operations.

The growth of nuclear power has focused attention on the notential diversion of nuclear material from peaceful activities to development of explosive devices. The United States initially established bilateral safeguards to prevent such diversion, but, since the inception of the International Atomic Energy Agency, has almost complotely phased out its bilateral program in favor of international references. Membership in the Agency does not obligate a country to socept safeguards, and there are limitations in scope and applicability of inspections. Safeguards are designed only to detect diversions on the national level with the assumption that terrorist groups will be dealt with by member nations. Safeguards do not include physical protection for transport of nuclear waste. The Agency does not have authority to seek out underlared facilities or retrieve materials. Congressional committees and executive branch officials should consider: the need for expanding Agency responsibilities in physical protection of nuclear material; the technical and political limitations in applying Agency safeguards; the lack of strong penolties for diversion of nuclear material; and the desirability of proposing that the Agency publish an annual report related to amounts of nuclear materials subject to safeguards and unaccounted for during inspections. (HTW)

# 242

U.S. International Nuclear Safeguards Rights: Are They Being Effectively Exercised? (Unclassified Direct), ID-76-21 February 9, 1976.

Released May 3, 1977. Record to the House Committee on International Relations: by Elmer B. Staats, Comptroller General.

Organization Concerned: Energy Research and Development Ad-

ministration; European Atomic Energy Community; International Atomic Energy Agency Congressional Relevance: House Committee on International Rela-

Agreements with foreign nations in which the United States supnlies muclear materials and facilities generally provide the United States with rights to make sure that these exports are not diverted for unsutherized purposes, Findings/Conclusions The United States has been relying mainly on international safeguards applied by the European Atomic Energy Community (EURATOM) and the International Atomic Energy Agency. The United States has not taken adequate steps to insure effective implementation of these safeguards, and sufficient information was not supplied by the international organizations to determine effectiveness. EURATOM and the Agency have negotiated but not yet implemented an agreement providing for future Agency verification of EURATOM safeguards.

Issues relating to the reinstatement and continuation of U.S. safeguards rights were in need of clarification. These rights were considcred important as a fallback in case the Agency safeguard system collanges. Recommendations: Consideration should be given to: (1) developing methods for assuring the effectiveness of international safoguards; and (2) providing Congress with an analysis of bases for reinstating U.S. sufequards rights and clarifying possible confusion on extension of these rights. Representatives from the U.S. Intelligence community might consider providing a briefing on effectiveness of international versus U.S. bilateral safeguards. (HTW)

[The Exportation of Coal]. B-178205; OSP-76-17. April 14, 1976. 7 Report to Frank G. Zarb. Administrator, Federal Energy Adminis-

tration: by Monte Canfield, Jr., Director, Energy and Minerals Div. Organization Concerned: Bureau of Mines: Geological Surve Authority: Federal Energy Administration Act of 1974 (P.L. 93-

275), Trade Act of 1974 (P.L. 93-618). Coal is by far the United States' most abundant energy resource, and it is expected to play an important role in the Nation's future energy picture. If past ocal export trends continue, the availability of coal for future domestic use could be limited. Findings/Concissione. Most of the metallurgical coal exports are a type identified as low volatile bituminous cost, which, according to some users, is in critical supply. Users who depend upon this type of coal in their storimaking process feel that there should be a more detailed monitoring system than is currently being maintained by the Government. Department of Commerce officials, however, feel that there is insuffinient instification to obtain data beyond the present system. At the present time, Federal Energy Administration (FEA) data on coal exports are limited to that being compiled by the Department of Commerce. As a result, neither of the agencies can determine how much low volatile bituminous coal is being experted. Recommendaflows: FEA should collect and maintain detailed information on transections involving coal exports. A sufficient sample of the transactions can be acquired by requesting the information from the 14 exporters who comprise 85% of the coal export market. This information should at least show exports by the three categories of volatility to identify whether controls must be implemented.

Con the U.S. Resoler Reactor Development Property Re Accelerated In-Using Furnish Technology? RED-76-93; B-164105. May 6, 1976. 47 on. + 8 attendions (95 pp.).

Report to Sen Hubert H Humphrey, Chairman, Joint Economic Committee: by Elmer B. Staats, Comptroller General.

Organization Concerned: Energy Research and Development Administration: Nuclear Regulatory Commission.

Congressional Relevance: Joint Bornomic Committee. Authority: Freedom of Information Act (5 U.S.C. 552).

Development of the liquid metal fast breeder reactor has been ven high priority by the United States, Britain, France, the Federal Republic of Germany, the Soviet Union, and Japan. Because of lack of energy resources, most countries are operating on tighter time frames than the United States. Findings/Conclusions: The approach of the Energy Research and Development Administration (ERDA) contrasts with that of other countries in emphasizing develearnest of competitive industry and developing a technological base before building plants. The United States could profit from exchange agreements by obtaining increased data and information from other programs and sweiding duplication. Factors impeding technology exchange include: foreign reluctance to furnish data of possible commercial value; foreign views that U.S. information will not be commercially valuable; concerns about the Freedom of Information Act; and possible U.S. problems related to belance of prymonts, dependence on foreign energy sources, and licenting. Although some information has been exchanged, this will become increasingly difficult as programs approach commercial status. It is unrealistic to expect that the U.S. program could be greatly accolorated or that large amounts of money would be saved through exchanges. However, efforts in certain areas offering the most potential should be continued. Recommondations: ERDA should seek legislation exempting data acquired through international technology agreements from disolosure acovisions of the Preedom of Information Act. (HTW)

International Cooperation in Energy Research and Development. July 2, 1976. 13 pp. Testsmony before the House Committee on Science and Technology:

Energy Research, Development and Demonstration Subcommittee; by Phillip S. Hughes, Assistant Comptroller General. Ornantsetten Concerned: Energy Research and Development Ad-

ministration; Nuclear Regulatory Commission Consessional Relevence: House Committee on Science and Technology: Esergy Research, Development and Demonstration Sub-

Authority: Proedom of Information Act.

GAO work in international energy cooperation has dealt with sale of U.S. ususium enrichment services to foreign countries and the exchange of technology on breoder reactor development. In a report on uranium enrichment sales, concerns were expressed about the declining role of the United States in this area. A report on breeder reactors addressed the question of whether U.S. development could he seccierated by using forcien technology. The United States has had agreements to exchange technology and ean benefit by obtaining increased data and information from other programs and avoiding duelication. Pactors impeding technology exchange include: foreign reluctance to furnish data of possible commercial value; concerns about the Freedom of Information Act: tighter time frames imposed in foreign programs; potential licensing problems; language difficulties: lack of travel funds: and national pride and security. Exphange will become more difficult as programs approach commercial status. and it is unrealistic to expect that the U.S. program could be greatly accelerated or large amounts of money could be saved through exchanges. However, efforts in areas offering the most potential should be continued (HTW)

Assessment of United States and International Contacts over the Peaceful They of Alucieus Engers 17-76,60: B.181963. Sentember 14, 1976. 85 cm + armendices (56 nm)

Report to the Congress; by Elmer B Staats, Comptroller General.

Organization Concerned: Arms Control and Disarmament Agency: Esergy Research and Development Administration: Nuclear Regulatory Commission: International Atomic Energy Agency: European Atomic Energy Community. Congressional Relavence: Congress.

Authority: Energy Regressization Act of 1974 (P.L. 93-438). Atomic Energy Act. Export Administration Act of 1969, Executive Order 11902

The development of nuclear technology in foreign countries is of concern because of the notential for nuclear weapons proliferation and dangers of their and sabotage. Findings/Conclusions: United States and international controls over peacetime uses of nuclear enerry were found to be inadequate in many respects. In spite of U.S. offorts to seek improvements in international safeguards and physical security of nuclear materials, weaknesses exist in the effectiveness of international organizations in implementing safeguards. Some countries have not estified the Treaty on the Non-Proliferation of Nuclear Westons. Nuclear suppliers' efforts to achieve common export policles do not require Congressional ratification, international safeguards are designed only to detect diversions of nuclear material on a national level, and it is possible for a country to circumvent safeguards without sufficient information concerning their effectiveness. Action available to the international Atomic Energy Agency is limited if a country were to divert nuclear material from peaceful purposes. The United States is not reserving its rights as a fallback to international safeguards The " C peaceful nuclear export liceus-

ing and regulatory control program is fragmented among agencies. Recommendations: The Energy Research and Development Administration, with the Department of State, should provide Congress with an assessment of circumstances in which I S seferords could be reinstated. Congress should (1) make future U.S. nuclear eocogeration contingent upon adherence to the Non-Problemation Treaty or agreement to international safeguards with certain exceptions: (2) insist on congressional review of hinding arrangements; (3) reserve U.S. safeguard rights; and (4) clarify intent concerning decisionmaking where disagreements with the Nuclear Regulatory Commission

occur. (HTW)

U.S. Nuclear Nan-Proliferation Policic A Comparison of GAO and Executive Branch Positions, 1D-77-7, January 6, 1977, 2 nn. in en. closure (9 pp.). Report to the Senate Committee on Government Operations, the Senate Committee on Poreign Relations; the House Committee on

International Relations: Joint Committee on Atomic Energy: by Organization Concarnad: Department of State, Nuclear Regulatory Commission; Energy Research and Development Administration; Densitment of Commerce.

Elmer B Streets Comptroller General

Congressional Relavance: House Committee on International Relations; Senare Committee on Foreign Relations, Senare Committee on Government Operations, John Committee on Atomic Roomy

A comparison was made of an Administration policy statement on nuclear proliferation with a GAO Report "Assessment of U.S. and International Controls over the Penceful Uses of Nuclear Energy," ID-76-60. There was general agreement on the need for more effective controls to curb nuclear weapons proliferation, but the exocutive branch response did not indicate plans for action on specific GAO recommendations. Recommendations in the GAO report were designed to strengthen U.S. agreements for cooperation, apprade nuclear safeguards, control exports, and guide future U.S. atrategy. Findings/Conclusions: Although the Administration statement took a positive approach by directing negotiations that would bring

existing agreements into conformity with international and new U.S. criteria, the statement was not specific enough. The Administration supported recommendations for morading safeguards, but disserced with the need for some of the procedures for inspection evaluation and monitoring. The Administration agreed with the need for export controls, but legislation to this effect was not enacted. Recommendarious: Agreements for nuclear cooperation should stress adherages to the Non-Proliferation Treaty and solutission to full fuel cycle sufermeds IIS nuclear export policy should be more clearly defined (HTW)

# Appendix 1

# Federal Program Evaluations on Energy

Citations in this appendix are extracted from Federal Program Evaluations; a Directory for the Congress. (1976 Congressional Sourcebook Series) PAD-77-5, 1976.

Conservation Director Tank Force Report on the Onthore Laure Management Program Study for the U.S. Geological Survey. A. D. Acuff, and others, May 1975, 120 pp. + appendices.

Authority: Mining Law of 1872 (30 U.S.C. 22). Mineral Leasing Act of 1920, as amended (P.L. 86-705; 30 U.S.C. 181), Mineral Lessing Act for Acquired Lands (P L. 80-382; 30 U.S.C. 351). Date Rosa Reference: F-00712-008

This task force report on the 'Onthore Lasse Management Program Study' recommends that 66 of the 79 National Aeronauties and Space Administration recommendations be fully adopted. II be adopted with some change, and that only two recommendations not be adopted. Areas covered include obsectives, policies, and procedures; organizations, personnel, and funding; management information systems, plans, controls, and communications: training: inspection, enforcement, and supervision; regulations: operating orders and technical standards: legislation and lease terms: fair market value; safety; environmental analyses and statements; external relationships; and additional task force recommendations. Task force recommendations are related to division resource evaluation activities and a study of division organization.

Oushore Lease Management Program Study for the U.S. Geological

National Aeronauties and Space Administration. December 20, 1974 91 pp + appendices. Authority: Mining Law of 1872 (30 U.S.C. 22). Mineral Lessing Act of 1920, as amended (P.L. 86-705; 30 U.S.C. 181), Mineral Lessing

Act for Acquired Lands (P.L. 80-382; 30 U.S.C. 351). Date Base Reference: E-03712-007 A study of the Onshore Lesse Management Program indicates a

need for improvement in several key areas: policies, procedures, and technical standards; organization and staffing; plans and controls: management information systems; internal communication; personnel; inspection; enforcement; supervision of operators; legislation and regulations; fair market value; safety and other areas, including the use of helicopters, computer terminals, the assurance of ethical conduct, contracting for work, relations with other organizations, relationship with the Outer Continental Shelf (OCS) program, and burden of proof.

Reports of the Review Commisses on Safety of Guter Continental Shelf Petroleum Operations to the United States Geological Survey] George F. Mechlin, and others. Washington: Marine Ecsed, National Academy of Engineering, 1974-1975.

Authority: Outer Continental Shelf Lands Act (P.L. 83-212; 43 Date Born Reference: E-00712-001, E-00712-002, E-00712-003

Three reports, each containing recommendations, were prepared on different aspects of the Roview Committee's work. The first report (Jan. 1974, 7 pp.) summarizes committee activities, which focused on five areas: a technical review of selected draft standards and specifications, the application of system analysis techniques to offshore oil and gas operations; the U.S. Geological Survey (USGS) Safety Alert Notices System; extension of the Survey's OCS (Outer Continents) Shelf) Order No 8 to include Caisson-type structures; and a prelimnary lock at the conduct and planning for environmental baselines. The second report (June 1974, 20 pp.) focuses on three issues: policy and program planning by the USGS for the assurance of safety and collistica control in OCS petroleum operations; implementation actions and priority assignments by the USOS on the basis of safety study recommendations; and application of system analysis techniques to offichore oil and ass operations. The third report (Mar. 1975, 12 eq.) concerns three topics: standards development for OCS

Reports of the Work Group on OCS Safety and Pollutism Control. W. A. Radlinski, and others, May 1973, 33 pp. + appendix, Supplements issued in 1974.

operations: inspection strategies for use in the OCS: and methods for

determining the condition of existing pipelines.

Authority: Outer Continental Shelf Lands Act (P.L. 83-212; 43 HSC 1332).

Dato Sosa Rafarencia: E-00712-004, E-00712-005, E-00712-006 This report provides the results of the U. S. Geological Survey

(USGS) Work Group review of the findings of three studies on improving safety and pollution control in the management of Outer Continental Shelf (OCS) oil and sas operations. Each section conteins the related recommendations from the three study reports, same remarks, the Work Group's recommendations and the implementation action required. Supplement number 1 (May 1974, 17 pp.) is a response to recommendations of the report "Energy Under the Oceans," a technological assessment of Outer Continental Shelf (OCS) oil and ass operations. This propri contains 39 recommendations. All of the recommendations, except those over which the U. S. Geological Survey has no control, are discussed in the supplement. The second supplement (November 1974, 12 co.) is a remense to the pertinent recommendations of the moort, "OCS Oil and Gas-An Environmental Assessment," April 1974, which is the cosult of a study of the environmental impact of oil and gas production on the Atlantic Outer Continental Shelf and the Gulf of Alaska.

Review of Royalty Accounting System for Onshore Oll and Gas Leases. June 9, 1975. 106 pp. + appendix.

Authority: Mining Law of 1872 (30 U.S.C. 22). Mineral Lessing Act of 1920, as amended (P.L. 86-705; 30 U.S.C. 181). Mineral Lessing Aut for Acquired Lands (P.L. 20-382: 30 U.S.C. 351). Doto Basa Reference: B-00712-013

This report summarizes the deficiencies in the Geological Survey

Conservation Division Royalty Accounting System (RAS) for onabore dil and gas, and makes related recommendations. The principal reasons for the contational and procedural problems is a chronic understaffing problem: a staff increase of 37 positions is recommended. The following additional recommendations are made: (1) requirement of an established reporting sackage from each lesses. including essential sale and production data, submission of nurchaser's report, and use of Federal lease identification numbers: (2) conversion of companies having the capability and volume to mannetic tape; (3) establishment of standard resultance advice: (4) various improvement to provide meaningful accounting records and statements of account, (5) establishment of standard procedures for error correction and commuter input, including recognition of persistcet errors by companies; (6) establishment of procedures for monltorses and collection of delinquent payments, and meaningful sonalties: (7) initiation of a policy of immediate response to late renorts, and establishment of significant pensities, (8) emphasizing an armsel nost-sudit review of accounts, (9) application of all royalty payments directly to lease accounts; (1ff) provision of stoff canability and expertise, expecially a single production valuation team; and (11) various improvements dealing with operating inefficiencies in area accounting offices.

### 234 Royalty Accounting System Study of Solid Mineral Learning Activities. August 11, 1975. 24 pp. + appendix

Authority: Mining Law of 1872 (30 U.S.C. 22). Mineral Leasing Act of 1920, as smended (P.L. 86-705, 30 U.S.C. 181). Mineral Leasing Act for Acquired Lands (P.L. 80-382; 30 U.S.C. 351). Data Bass Reference. Explorts. Add.

This report summarizes the deficiencies in the Geological Survey Conservation Division reveity accounts system for solid mineral leasing activities, and provides recommendations for their improvement Except for certain weaknesses in internal control, the system is procedurally adequate to account for and collect royalties on leasable solid minerals from Federal lands. The basic system for internal central over the accounting and collection functions is madequate to assure that all royalty payments are properly collected, deposited and recorded in the lease accounting records. Since one nerson in each office is solely responsible for this accounting, no system of checks and balances exists. It is recommended that collection, accounting, and billing of royalty receipts be separated in the offices. Division officers are not maximizing the use of the independent financial audit, a formalized package of anda report requirements should be established. Officials are not requiring all leasees to adhere to the royalty reporting and payment provisions of their lesses; struct enforcement should be maintained to avoid unnecessary interest expense. Revenue from the majority of Indian solid mineral leases has not been placed under any formalized system of accounting control. These leases should be pisced under the control of the royalty accounting system.

# Appendix 2

# Requirements for Recurring Reports to the Congress on Energy

Citations in this appendix are extracted from Requirements for Recurring Reports to the Congress: a Directory issued by the Comptroller General for the period through June 30, 1976. (1977 Congressional Sourcebook Series) PAD-77-61, 1977.

## DEPARTMENT OF COMMERCE

The Economic Impact of Energy Actions; Semiannual Report (Joint Report with Department of Labor and Federal Energy Administration)

Frequency/Due Date: Semiannually / Unspecified. Agency Contact: Bureau of Domestic Commerce. (202) 377-4273. Congressional Recipient: House Committee on Interior and Insular Affairs; House Committee on Science and Technology; Senate Com-

mittee on Energy and Natural Resources: Joint Committee on Atomic Energy; John Economic Committee. Authority: Foderal Energy Administration Act of 1974 (P.L. 93-275, \$ 18(d); 88 Stat. 111; 15 U.S.C. 777).

Data Basa Reference: R-00300-014 The report provides information on the impact of the energy shortage and actions taken by the Federal Energy Administration regarding conslowment and the economy. The report contains recommendations on whether additional Federal programs for employment and economic assistence should be put into effect to minimize the impact of the energy shortage and any action thus taken. The report examines the evolution of the energy shortage and the economic effects of the mandatory petroleum allocation and price regulations, and develope a conceptual framework that will govern future reports.

Report to the Contress on Coastal Zone Management

Frequency/Due Date: Annually / November 1. Agency Contact: National Oceanic and Atmospheric Administration. (202) 634-4257. Congressional Recipient: House Committee on Merchant Marine

and Fisheries: Sengte Committee on Commerce, Science and Tran-Authority: Coastal Zone Management Act of 1972 (P.L. 92-583, 6 313(a); 86 Stat. 1288; 16 U.S.C. 1426(a)).

Data Base Reference: R-00306-002 This report contains a summary of activities of the Office of Constal Zone Management during the preceding fiscal year, detailing program developments and implementation.

# DEPARTMENT OF THE ARMY

Solid Waste Management, Collection, Disposal, Resource Recovery, Recycling Program, DD-I&L(A)1436. Fraquency/Due Date: Annually / Unspecified.

Agency Contact: Corps of Engineers, (202) 693-6458. Congrassional Raciplent: House Committee on Armed Services; Senate Committee on Armed Services.

Authority: (P.L. 93-552; 88 Stat. 1759). Data Base Reference: R-00403-025

This report describes environments) improvement and energy conservation projects (involving recycling of materials) active at military camps, posts, and bases. The cost of these projects is limited to \$50,000/installation/year. (MN)

## DEPARTMENT OF THE NAVY

Quarterly Report of Production from the Hatal Petroleum and Oil Shale Reserves.

Frequency/Due Date: Quarterly / 30 days after end of quarter. Agency Contact: Naval Petroleum and Orl Shale Reserves. (202) 602-0600 Congressional Recipiants House Committee on Armed Services;

Seegre Committee on Armed Services Authority: (P.1. 87-796, § 1(10); 76 Stat. 906; 10 U.S.C. 7434). Date Base Reference: R-00404-008

This report lists the quantity of oil, gas, gasoline, and other associated hydrocarbons, produced from Naval Petroleum and Oil Shale Reserves, Gross production is listed for California, including leased lands: Wwoming: Alaska: and Colorado.

All Purchases and Condemnation Proceedings Regarding the Naval Petroleum and Oil Shoic Reserves Frequency/Due Date: Annually / Unspressed.

Agency Contacts Naval Petroloum and Oil Shale Reserves. (202) 692-0600 Congressional Sectolents House Committee on Armed Services: House Committee on Interior and Insular Affairs: Smale Committee

on Armed Services; Smote Committee on Baergy and Natural Re-Authority: (P.L. 54-1028: 70A Stat. 458: 10 U.S.C. 7425(b)). Date Rese Reference: R-00404-017

This report provides data related to private leads on purchase and condemnation actions taken the provious year by the Secretary of the Navy. Rationale for purchases and/or condemnation is the conservation of naval petroleum and oil shale reserves. (MN)

# Recycling of Mannais DDI&L(A)1436. Smear Committee on Armed Services

Frequency/Dua Date: Annualty / Unspecified. Agency Contact: Office of the Chief of Naval Operations. (202) 697-3689. Congressional Recipient: House Committee on Armed Services;

Authority: (P.L. 93-552; 88 Stat. 1759). Doto Bosa Reference: R-00404-022 This report describes environmental improvement and energy conservation projects (involving recycling of materials) active at

military eamps, posts, and bases. The cost of these projects is limited to \$50,000/ installation/year. (MN)

# Protection of Gil Reserves: Contracts for Conternation.

Frequency/Due Dote: Annually / Unspecified. Agency Contact: Naval Petroloum and Oll Shale Reserves. (202) 692-0500. Contrassional Recipiants House Committee on Armed Services;

House Committee on Interior and Insular Affairs; Senate Committee on Armed Services; Smare Committee on Energy and Natural Re-Authority: (P.L. 87-796; 76 Stat. 905; 10 U.S.C. 7424(b)).

Date Base References R-00404-023

This report describes the Navy's efforts to conserve and persect navel potrolourn and oil shale reserves by contracting with the appropriste persons to conserve the resources and to compensate them for estimated drainage in lieu of drilling and operating wells or by acquiring the reoperty to exchange for stated reimbursements, (MN)

## 262

Annual Report to Congress on Naval Petroleum and Od Shele Reserves. Proquency/Dua Date: Annually / 1st day of fiscal year Agency Contact: Naval Petroleum and Oil Shale Reserves. (202)

692-0600. Congressional Recipient: House Committee on Armed Services; House Committee on Interior and Insular Affairs; Senate Committee on Armed Services; Senose Committee on Energy and Natural Re-

Authority: Naval Petroleum Reserves Production Act of 1976 (P.L. 94-258- 90 Stat. 311: 10 115 C. 7431(0)(ci)

Data Base Reference: P.00404-024 This report concerns naval petroleum and oil shale reserves. Is describes the status of exploration and development, production and proceeds from same, transportation facilities involved in projects related to the reserves, and a summary of future plans (MN)

## DEPARTMENT OF HOUSING AND UPRAN DEVELOPMENT

# 262

Report on Salar Energy Demonstration

Frequency/Due Date: As required / Upon occurrence of event Agency Contacts Bureau of Policy Development and Research. (202) 755-5544. Congressional Recipient: House Committee on Banking, Firance

and Urban Affairs; Senate Committee on Banking, Housing and Ur-Authority: Housing and Community Development Act of 1974

(P.L. 93-313, § 814; 88 Stat. 738; 12 U.S.C. 1701z-5(cm Data Base Reference: R-00600-009 This report is to summarize solar energy demonstrations carried out under the authority of Section 506 of Title V of the Housing and

Urbee Development Act of 1970. It should also include information on the economic and technical feasibility of the project.

[Special Report on Solar Heating and Cooling Demonstration Programs]. Frequency/Due Date: Annually / Unapposited. Agency Contact: Bureau of Policy Development and Research (202) 755-6442

Congressional Recipient House Committee on Banking, Finance and Urban Affairs; Senate Committee on Banking, Housing and Urban Affairs Authority: Solar Heating and Cooling Demonstration Act of 1974 (P.L. 93-409. § 12; 28 Stat. 1076; 42 U.S.C. 5510(d)).

Data Base Reference: R-00600-010 This special report is to summarize all of the current and projected setivaties of the various Federal agencies involved in implementing the Solar Heating and Cooling Demonstration Act of 1974. It is to present a comprehensive, overall view of the programs. The information contained in this report is duplicated in the Energy

# Research and Development Annual Report. DEPARTMENT OF THE INTERIOR

Employee Disciouses under the Energy Policy and Conservation Acc.

Frances/Don Date: Annually / June 1

Agency Contact: Office of Audit and Investigation, (202) 34 1-5"4" Concressional Recipients Congress: House Committee on Intra and Josefer Affairs: Senate Committee on Bangry and Natural F.

Authority: Encrey Policy and Conservation Act (P.L. 94-15-15) Stat. 962: 42 U.S.C. 6392(b)(2))

Date Bern Reference: R-00700-026 Certain employees of the Federal Energy Administration and of the Department of the Interior are required to file reports (1)

ing any "known financial interest" in some aspect of the coal, risk a wgas, or petroleum products business. This report deals with a ... disclosures and the actions taken, if any, in regard to the satuat . . .

Commedity Base Summones and Mineral February MINACAVIAL Franciscov/Dua Data: Anomalia: / Democified Agency Contact: Bureau of Mines. (202) 634-1263

Congressional Recipient: Congress: House Committee on Appr. printions; House Committee on Interior and Insular Affairs, H. a. of Committee on Ways and Means; Senate Committee on Appropria tions; Senate Committee on Energy and Natural Resources, Son, Committee on Finance; John Committee on Defense Prod. : Authority: Voluntary

Data Bass Reference: R-00711-001

This report contains data sheets that provide information on the domestic mineral industry structure, Government programs, tariffs and salient statistics for individual minerals, metals, and fuel: A'sincluded is information of domestic production and use, sup- it sources, depletion allowances, events, trends, and issues, world planproduction and capacity; and world resources

Mining and Moneyals Policy, MIN-C-33. Frequency/Dus Date: Assually / Linsperified

Agency Contest: Bureau of Mines. (202) 634-8697. Congressional Recipionis Congress; House Committee on Internal

and Insular Affairs; Senste Committee on Energy and Natural Resources; Joint Committee on Defense Production Authority: Mining and Minerals Policy Act of 1970 (P. L. 91-631, 84 Stat. 1876: 30 U.S.C. 21e)

Date Bese Reference: R-00711-003

This report offers a brief overview of energy and minerals supplies, along with recommendations for action. The United States ennually requires over two billion tons each of nonfuel mineral materials and fuel minerals. Pactors influencing our energy, metals. and nonmetablic minerals are discussed, and include international aspects, national minerals inventory, mineral resources and reserves. environmental considerations, marine mining, health and safety transportation infrastructure, research and development, and others Trends and events are discussed for energy fuels, major nonferrous and forrous metals, fertilizer materials, and nonmetalife construction materials. The following recommendations are suggested for amplementation by various Pederal agencies through reacheduling lose segont work to reprogram funds: 1) continued scalysis of selected minerals to assess items of concern and impacts of potential shortages. 2) determination of alternate objectives for excess defense msterials, 3) continued improvement of data and analysis programs. 4) clarification of troublesome points in mining health and safety legislation and encouragement of production in archuous mining conditions, 5) removal of legislative and administrative distortions and encouragement of use of recycled materials, and 6) encouragement of private research and development.

Report to the Congress on Motters Continued in the Helium Art

MIN-C-37.

Frequency/Due Date: Annually / Unspecified. Agency Contact: Bureau of Mines. (202) 634-4734.

Congrassional Recipient: House Committee on Interior and Insular Affairs; Sesow Committee on Energy and Natural Resources. Authority: Hellum Act (P.L. 86-777; 74 Stat. 923; 50 U.S.C. 167n). Data Bass References R-00711-006

This report contains information on the current status of the Government's helium program, including financial, statistical and enerating information. Specifically, the report reguldes information on helium conservation, production, and distribution; engineering studies and special projects; litigation; and helium program expenditures, income, and financial condition, us well as various statistical tables

# Refunds on Outer Continental Shell Leaves GRO.C.29

Frequency/Due Date: As required / Upon occurrence of event, Agency Contact: Geological Survey. (703) \$60-7511. Congressional Recipient: House Committee on Interior and Insular Affairs; Sevele Committee on Energy and Natural Resources. Authority: Outer Continental Shelf Lands Act of 1953 (P.L. 83-212; 67 Stat. 469: 43 U.S.C. 1339(b)).

Data Base Reference: R-00712-002 The purpose of this report is to identify the recipients and the amount of refunds or credits proposed to be made to lessees for overpayments under the Outer Continental Shelf Lands Act and to provide a summary of facts loading to the determination for the refunds or credits.

Exploration of National Petroleum Reserve in Alaska. GEO-C-118. Frequency/Dus Date: As required / Upon occurrence of event. Amency Contects Environmental Conservation, (703) 860-7491. Congressional Recipients House Committee on Interior and Insular Affairs; Senate Committee on Energy and Natural Resources Authority: Naval Petroleum Reserves Production Act of 1976 (P.I. 94-258; 90 Stat. 305; 42 U.S.C. 6504(d)(2)). Data Bace Reference: R-00712-003

This report describes any new plans or substantial amendments to onzoing plans for the exploration of national notroleum reserves in Alaska. It also includes an evaluation of anticipated effects of such plans or amendments. (MN)

Progress of and Future Plans for Exploration of Matismal Petroleum Reserve in Alaska, GED-C-119. Frequency/Das Dafe: Annually / October 1. Agency Contact: Environmental Conservation, (703) 860-7491.

Congressional Recipient: House Committee on Interior and Insular Affairs; Senate Committee on Energy and Natural Resources Authoritys Naval Petrologis Reserves Production Act of 1976 (P.L. 94-258; 90 Stat. 305; 42 U.S.C. 6504(d)(3)). Data Basa References R-00712-004

This report describes the progress of and future plans for the exploration of national petroleum reserves in Alasko. It details such things as number of exploratory wells drilled and significant findings of petroloum resources. (MN)

[Compensators Rosalts Agreements]. BLM-C-3100-1. Frequency/Due Date: Anaually / Beginning of congressional ses-

alon. Agency Contact: Bureau of Land Management. (202) 343-7753. Congressional Recipient: House Committee on Interior and Insular Affairs; Senate Committee on Energy and Natural Resources.

Authority: Mineral Lessing Act Revision of 1960 (P.L. 86-705; 74 Stat. 783; 30 U.S.C. 226(g))

Data Sase Reference: R-00714-003 This report centains information on compensation agreements

entered into by the United States whenever lands owned by the United States are being drained of oil or gas by wells drilled on adjacent lands.

# Grants of Rights-of-Way for Pipelines through Federal Lands. BLM-C-

Frequency/Due Date: Annually / January. Agency Contact: Division of Lands and Realty. (202) 343-8738.

Congressional Recipioni: House Committee on Interior and Insuler Affeirs; Senate Committee on Energy and Natural Resources Authority: Trans-Alaska Pipeline Authorization Act (P.L. 93-153: 87 Stat. 583; 30 U.S.C. 185(w)(2)). Data Base References R-00714-007

This report is notification of a request for a right-of-way through Federal lands for a pipeline 24 Inches or more in dismeter. It includes details recending terms and conditions of the granting of the right-ofway, (MN)

[Contolidated Financial Statement of the Federal Columbia River Power System 1. RPA-C-64. Frequency/Due Date: Annually / Unspecified.

Agenty Contact: Bonneyille Power Administration, (503) 234-3361. Congressional Recipients: House Committee on Interior and Inspire

Affairs: House Committee on Public Works and Transportation; Senore Committee on Energy and Natural Resources; Smale Committee on Environment and Public Works. Authority: Federal Columbia River Power System (P.L. 59-448; 50

Stat. 200; 16 U.S.C. 8350. Date Base Reference: R-00718-001 This report presents a consolidated financial statement on a pay-

out basis for the Federal Columbia River Power System, It demonstrates the adequacy of wholesale power rates by forecasting revenues, expenses, interest, and amortization for the next 75 years. Other factors considered are purchase and exchange power, investment placed in service, unsmortized investment, allowable unamortized investment, irrigation assistance, and cumulative applies

# Annual Report on the Columbia River Power System, BFA-C-64A. Frequency/Due Date: Annually / Unspecified.

Agency Contact: Bonneville Power Administration, (503) 234-3361. Congressional Recipients House Committee on Interior and Insular

Affairs: House Committee on Public Works and Transportation: Secate Committee on Energy and Natural Resources: Senate Committee on Environment and Public Works. Authority: Voluntary.

Date Boss Reference: R-00718-002

This report provides information on legislation affecting the Bonneville Power Administration, so well as information on rate increases, system control, the Hydro-Thermal Power Program, other hydro projects, the transmission system, research and development, and operations. In addition, the report provides information on sabotage attempts and successes, energy conservation, environmental suits filed, power sales, statistics on opstomer growth, finances, and revenues and expenses, as well as statements of finances and expenses, assets and liabilities, and changes in financial position.

## DEPARTMENT OF HISTICS

Review of Voluntary Agreement and Plan of Action To Implement the International Energy Program

Frequency/Due Date: Semiannually / March 21; September 21. Agency Contact: Antitrust Division. (202) 739-4173. Congressional Recipions: House Committee on International Rela-

tions; House Committee on the Judiciary; Souce Committee on Foreign Relations; Senare Committee on the Judiciary Authority: Energy Policy and Conservation Act (P.L. 94-163; 89 Stat. 871; 42 U.S.C. 6201). Data Sase Reference: R-00801-006

This report previews actions of private industrial groups in complying with voluntary agreements made related to the conservation of energy. The agreements are intended to amplement an international energy program. The report includes information regarding the voluntary agreements as well as the groups' plans for action, (MN)

## DEPARTMENT OF TRANSPORTATION

Annual Report of the Secretary of Transportation on the Administration of the Natural Gas Proeling Safety Act of 1968.

Frequency/Due Date: Appually / March 17. Agency Contacts Office of the Socretary, (202) 426-0135. Congressional Recipionis House Committee on Appropriations, House Committee on Government Operations: House Committee on Interstate and Poreign Commerce: Senate Committee on Approprinticos: Sevate Committee on Commerce, Science and Transports-

Authority: Natural Gas Pipeline Selety Act of 1968 (P.L. 90-481, 6 14; 82 Stat. 728; 49 U.S.C. 1683).

Data Bose References R-01100-007 This report summarizes the administration of the Natural Gas Pipeline Safety Act of 1968 and covers the Department of Transportation's related activities. The Act is administered by the Office of Pipeline Safety. Amendments to the Federal pipeline safety standards provide greater flexibility in qualifying pipe for use and facilitate the transport of pipe by rail, clarify the definition of a gas service line, and continue oderization of gas in certain transmission lines. Inconsed State participation in safety magnets was executeded through administration of grants-in-old funds and increased training activity. Compliance activities were accelerated to assure that all operators subject to the Act meet safety standards and reporting requirements. Research and study projects provided valuable technioal information for Government agencies, the regulated industry, and the public. Pipeline safety information was disceminated through a monthly Advisory Bulletin and copies of all amendments, crearentstions of pipeline safety programs, and various information publica-

# Review of Average Fuel Economy Standards under Tide V of Mone Vehicle Information and Cost Smirgs Act.

Prepancy/Due Data: Annually / January 15 Agency Contacts National Highway Traffic Safety Administration. (202) 426-0846

Congressional Recipient: House Committee on Interstate and For-eign Commerce; Smale Committee on Commerce, Science and Transportation. Authority: Energy Policy and Conservation Act (P.L. 94-163; 89 Stat. 902: 15 U.S.C. 2002(a)(2)).

Dota Sasa Rafarenca: R-01107-006 Congress has established a scale (by year) of average fuel

economy required for passenger automebiles manufactured after model year 1977. This report reviews the requirements of the scale. esses manufacturers' ability to meet the standards for model year 1985, and contains recommendations for improving the furl economy program, (MN)

Resource Recovery and Source Reduction, RINE700.021A Frequency/Dua Date: Annually / Unspecified. Agency Contact Office of Solid Waste Management Pro-

ENVIRONMENTAL PROTECTION AGENCY

grams. (204) 254-7840. Congressional Recipient: House Committee on Interior and Insular Affairs: Sessie Committee on Environment and Public Works.

Authority: Resource Recovery Act of 1970 (P.L. 91-512, § 104(a); #4 Stat. 1229: 42 U.S.C. 3253(a)). Data Base Reference: R-02304-003 This report noments a review of the Agency's investigations of the

utilization of material, energy, and products recovered from solid waste and the reduction in the generation of waste through a reduction in material or product consumption. Also included are discussions about conservation of energy and material resources, septection of the quality of the physical environment, and economic effects. Chapters deal with projected trends in resource utilization, environmental pollution and solid waste generation that give impetus to consideration of resource recovery and source reduction measuses; effects of existing Federal policies; markets for materials and energy recovered from post-consumer residential and commercial waste; product controls such as bans, standards, charges and deposits, diproted at regulating the design or consumption of products; and studies of several special wastest automobile, pecksging, beverage containers, and rubber tires.

## EXPORT-IMPORT BANK OF THE UNITED STATES

[Submissions of U.S.S.R. Energy-Related Transactions for Congressional Review]. Fraquancy/Due Dote: As required / Upon occurrence of event

Aganey Contacts Export-Import Bank. (202) 382-8400. Congressional Resigiants House Committee on Banking, Finance and Urban Affairs: Senate Committee on Banking, Hossing and Ur-

ban Affairs. Authority: Export-Import Bank Amendments of 1974 (P.L. 93-646. § 5; 88 Stat. 2335; 12 U.S.C. 635(b)(3)). Deta Base Palaranca: R-02500-002

The Board of Directors of Eximbank may not finally approve any lean or financial gustantee or combination which equals or exceeds \$25,000,000 for the export of goods or services involving research. exploration, or production of fossil fuel energy resources in the Union of Soviet Socialist Republics without submitting a detailed report to Congress describing and explaining the transaction. The report shall contain I) a brief description of the purposes of the transaction. the identity of the party or parties requesting the loan or guarantee, the nature of the goods or services to be expected, and their intended use, and 2) a full explanation of the reasons for Bank financing of the transaction, amount of the loss to be provided by the Bank, approximate rate and repayment terms, and approximate amount of the gransetee.

## FEDERAL ENERGY ADMINISTRATION

# Monthly Energy Resirus

Frequency/Due Date: Monthly / Unspecified. Assety Centech Office of Policy and Analysis. (202) 254-8705.

#### Congressional Raciniant: Congress Authority: Voluntury

Date Base Reference: P-02000-000 This report contains current time-series data and eraphical disntave of production and consumption of major sources of energy in the United States Data are included on crude oil, natural gas, refined petroleum products, cost, fuel oil, assoline, heating oil, and electracity

#### 282

Federal Energy Guidelines, Weekly Sapplement. Frequency/Dup Date: Weekly / Unspecified. Agency Contact: Office of Policy and Analysis (202) 254-3564.

Congressional Regiolant: Congress Authority: Voluntary.

Poto Base Reference: R-02900-003 This report provides reliable, un-to-date information on the Fed-

eral Energy Administration's (PBA) energy policy and regulatory programs. It contains Fedoral energy laws, executive orders. FEA organizational outlines, regulations, rulings, forms, FEA advisory committees, exceptions, exemptions and appeals, and court decisions affecting the FEA pengrama

Energy Information Reported to Congress as Required by Public Law Frequency/Due Date: Quarterly / Unspecified.

Agency Contact: Office of Policy and Analysis (202) 254-8705. Congressional Recipient: Congress. Authority: Energy Supply and Environmental Coordination Act of 1974 (P.L. 93-319, § 11; 88 Stat. 262; 15 U.S.C. 796(a)).

Data Base Reference: R-02900-004 This report contains summanies and statistical information on energy resource development of cost, natural gas, cruds oil, and refined netroleum products. A section dealing with the development and operation of modear energy and nucleur power plants is also included

Petroleum Market Shares: A Resort on Retail Gasoline. Frequency/Due Date: Monthly / Unspecified.

Agency Contact: Office of Policy and Analysis, (202) 254-7351. Congressional Recipient: House Committee on Interstate and Foreign Commerce: Smale Committee on Energy and Natural Re-Authority: Emergency Petroleum Allocation Act of 1973 (P.L. 93-

159, 5 4: 87 Stat. 631: 15 U.S.C. 753). Date Base Reference: R-02900-005

Based on a continuing national sample survey of gasoline service stations conducted by the Pederal Energy Administration, this repost contains information on the assregate market shares of motor gaseling retailers. The following statistical tables are contained in the report- market shares of motor gasoline retailers; gallonage sales by marketer type; number of service stations and average sales by marketer type: and relative standard errors of gallonage sales estimates by percent.

## Menchly Petroleum Statistics Report

Fraquency/Due Date: Monthly / Unspecified. Aganey Contact: Office of Policy and Analysis, (202) 254-7903. Congressional Recipients Congress. Authority: Voluntary.

Data Sase Reference: R-02930-006

This report centains data on production, import and stocks of orude oil, motor gaseline, jet fucis, and distillate and residual fuel oil. It also provides regional breakdowns of data on refinery operations and graphs of data on petroleum imports, crude runs-to-stills, heating oll stocks, motor gasoline stocks, refinery acquisition costs of crude oil, well-head prices of gasoline, home heating oil, and residual fuel. The Federal Except Administration: Occupely Report on Princia Greenowner and Radger

Fraquency/Due Date: Quarterly / Unspecified Agency Contact: Office of Private Grievanous and Redress. (202)

Congressional Registers: Congress. Authority: Federal Energy Administration Act of 1974 (P.L. 93-

275, 5 21(c), 88 Stat. 113; 15 U.S.C. 781). Date Bose Reference: R-02900-008 This report describes the nature and number of petitions for griev-

annes and redross filed with the Federal Energy Administration (FRA) by those adversely affected by morey abortages or FEA requlations. Summaries of decisions are listed alphabetically by company in the armendix. Dismirard copes are also listed in the annendix. grouped according to reason for dismusal. Decision summaries for single and consolidated decisions are included in the appendix.

Financial Disclosures by Familianes Performing Functions under Energy Police and Conservation Act

Frequency/Due Date: Annually / June 1. Agency Contact: Office of General Counsel. (202) 961-8001. Congressional Recipient: Congress: House Committee on Interstate

and Foreign Commerce: Senate Committee on Engray and Natural Resources Authority: Energy Policy and Conservation Act (P.L. 94-163; 89 Stat. 961; 42 U.S.C. 6392).

Data Sasa Reference: R-02900-009

This report surveys financial disclosure of employees performing duties under the Energy Pelicy and Conservation Act. Possible conflicts of interest reported by employees in the Federal Energy Administration or the Department of the Interior are reviewed, and enforcement actions are noted. Disclosure provisions apply to employees enanged in Federal energy activities who are in the business of exploring, developing, producing, religing, transporting, or distributing cost, natural gas, or petroleum products or who have interests in property from which coal, natural eas, or crude oil is commercially produced. (PR)

Action Proposed Concerning Conflict of Interest. Fraguency/Dua Dots: As required / Upon occurrence of event.

Ameney Contact: Office of General Counsel. (202) 960-8001. Congrassional Recipients House Committee on Interstate and Forsign Commerce: Senate Committee on Energy and Natural Re-

Authority: Federal Energy Administration Act of 1974 (P.L. 93-275(4)(I)(1)(A); 76 Stat. 1124; 15 U.S.C. 763(I)(1)(A)). Data Sase Reference: R-02900-010

This report describes procedures for invoking exemptions from conflict of interest provisions for employees of the Federal Energy Administration. A report which includes a detailed statement of the subject matter involved in the conflict; the nature of the employee's financial interest; or the name and statement of financial interest of each nerson who will come within such exemption must be submitted te Congress 10 days prior to each exemption. (PR)

Strotegic Petroleum Reserve Plan Frequency/Our Date: Annually / Unspecified.

Agency Contact: Strategic Petroleum Reserve. (202) 634-5540. Congressional Recipient: Congress: House Committee on Interior and Insular Affairs: Senate Committee on Regrey and Natural Re-

Authority: Energy Policy and Conservation Act (P.L. 94-163; 89 Stat. 889: 42 U.S.C. 6245). Data Base Reference: R-02901-001

This report describes the intens of the Stringer Petrolium Reserve and summarise the extinuis takes to develop and melement the Strategic Petroloum Reserve Tita and the Early Scozage Reserve Fun. Included at an analysis of the impact and effectiveness of syciatations, on the vulnerability of the United States to interruptions in the supplies of perceivant predictions, a summary of existing programs with respect to performance of the Early Storage Reserve to the State of the Early Storage Reserve towns for purplemental logations. (PSP) This most recommendations for purplemental logations. (PSP)

# 290 Federal Energy Administration Annual Report to the President and

Frequency/Due Date: Annually / Unspecified Agency Contest: Office of Management (202) 961-8536.

Congression of Resistent: Congress
Authority: Federal Energy Administration Act of 1974 (P.L. 93-

275, 6 15(c); #8 Stat 96: 15 U.S.C. 274). Deta Base Reference: R-02902-001 This report desembes and analyzes the activities of the Federal Energy Administration (FEA). Chapter 1 comprises a review and analysis of the major activities in regulatory programs controlling pricing and allocation of crude oil, residual fuel oil, and refined petroleum products The goals of these programs are those of the Emergency Petroleum Allocation Act of 1973. The hardships of these activities are to be shared as equitably as possible by the people of the United States. Three major regulatory programs are discusted in detail: Price Regulations, the Oil Import Program, and Petroleum Allocation Regulations Chapter 2 seports briefly on energy supply key projections for the midterm and longterm for the major types of fuel. Chapter 3 contains a summary listing of all recipiests of funds between November I, 1973 and May 13, 1975. Cooperative agreements, interagency agreements, non-profit organizations, and profit organizations are covered for FEA-DOI awards, FEA pre-PRB review, and FEA post-PRB review Chapter 4 compenses a summary listing of information-gathering activities within PEA conducted un-

# def Section 13 of the FEA Act. 291 Exemption of [a Refined Femilian Product] from the Mandauers

Particians Allocation and Price Regulaters.
Fraquency/Due Bales As required: Upon occurrence of event.
Agency Confect Regulatory Program. (202) 254-7200.
Congressional Recipionis Hours of Representatives. Speaker of the

House: House Committee on Internsite and Foreign Committee; Sensee, President of the Sensee; Sensee Committee on Energy and Natural Resources

Authority: Emergency Petroleum Allocation Act of 1973 (P.L. 94-

Avmorry: Emergency Petroleum Allocation Act of 1973 (P.L. 94-163) 89 Stat. 951; 15 U.S.C. 760s(d)(2)). Data Bate Reference: R-01903-001

This report somematizes the findings which are accessary to suptor complian of a relined percolaim product from mandatory patroleum allocation and pier regulations. Proceedings for presenting oral and written arguments for exemption are outland, and immations or Presidential resentances to regulation are noted, (PR)

#### 292

Energy Conservation: Federal Energy Management Program. FBA-283-R-D. Frequency/Dus Dole: Questicity / Unspecified.

Agency Confect: Office of Conservation and Environment. (202) 961-7934.

Congressional Recipient: Congress.
Authority: Presidential Directive.
Poto Base Reference: R-02504-001

This report auromatics the achievements of the Federal Borgy Management Program. Detailed information showing performance of the individual participating deportments and agencies, and the amount and types of energy used and saved are contained in the accompanying tables and figure.

## 792 Federal Evergy Management Program Annual Report,

Frequency/Due Date: Annually / Unspecified.

Agency Contest Office of Energy Conservation and Environment. (202) 961-7934.

ment. (202) 961-1939.
Congressional Raciplenit Congress; House Committee on Government Operations; Sessate Committee on Governmental Affairs.
Authority: Pederal Energy Administration Act of 1974 (P.L. 93-278. 8 is 38 Sm.) 109-15 il.S.C. 7246.

275, § 15, 88 Sont. 109; 13 U.S.C. 774(e).
Date Stop Reference: R-02904-002
This report summarizes the activities and accomplishments of the Federal Energy Management Program. It shows the actual reduction of energy use by the larguage Federal accodes, relative to an establishment.

#### 294 Progress of Energy Conservation Program for Consumer Products Other

Thus Automobiles
Frequency/Duo Dote: Annually / December 22.
Agonty Contest: Assistant Administrator for Conservation and En-

vironment. (202) 961-7068.
Congress: House Committee on Interior and Insular Affides; Source Committee on Energy and Natural Restricts.

Authority: Energy Policy and Conservation Act (P.L. 94-163; \$9 Sitt. 912; 42 U.S.C. 6308). Doto Sous Reference: R-02904-003 This report deals with offorts to odecate consumers with respect

to cutracy costs and conservation. Educational efforts are directed to the significancy of estimated annual operating costs, the advantages of comparative shooping; and other matters which the Poderal Enargy Administrator determines may incourage the conservation of energy in the use of consumer products. Steps to objects consumers may include publications, audiovisual presentations, demonstrations, and sometimes of mational and ergional conferences. (PR)

#### 295 Operation of State Energy Conternation Plans

lished goal.

Fraquency/Due Dotte: Annually / December 22.

Agency Contect: Office of Conservation and Environment. (202)

961-8370.

Some recommendation of the second of the second

Resources.

Authority: Energy Policy and Conservation Act (P.L. 94-0163; 59
Stat. 935; 42 U.S.C 6325).

Data Base Reference: R-02504-004
This report reviews energy conservation goals for each State for

The contraction of the contraction goals are seen a une our 1900 as well as interim goals. Goals coesial of the assistment requires in the consumption of energy during any year as a result of a State energy conservation pain, information is presented on the operation of the energy conservation path energy conservation and the contraction and th

# Industrial Energy Efficuncy Program.

Prequescy/Dus Dotes Antiusly / Unspecified.

Agency Content Office of Energy Conservation and Bavironment. (201) 254-5782.

Congressional Raciplesh: Moure Committee on Interior and Insular

Affairs, House Committee on Science and Technology, Sonate Committee on Commerce, the control of Transportation, Sonate Committee on Commerce, the control of Transportation, Sonate Committee on Beergy and Nature Recourses.

Ashebarty, Breezy Policy and Constarration Act (F.L. 94-163; 85 Stat. 937, 42 U.S.C. 6349).

Parts Sear Reference: R-02906-0008

This report summanives progress toward meeting industrial engray efficiency improvement targets set by the Rederal Regrey Administration and reviews progress in meeting such targets since the muhileation of the previous report. The basic information for this report was submitted by industrial representatives. (PR)

#### EEDED AT DOWER COMMISSION

Effect and Operation of Interestate Compacts Relative to Natural Gos Fraguancy/Dun Date: As required / Upon occurrence of event Agency Contact: Bureau of Natural Gas (202) 275-4477 Congrassional Radiolant: Congress: Hove Computer on Interior

and Insular Affairs, Smare Committee on Energy and Natural Re-Authoritis: Natural Gas Act (P.L. 25,688: 52 Stat. 822: 15 115 C. 217(6))

Date Basa Reference: R-03301-001 This report summarizes data relative to compacts between two or more States affecting the conservation, production, transportation. or distribution of natural ray. The offect and operation of such comnects are reported, and recommendations are made for further losis. lation which appears necessary to promote the purposes of interstate comments (PR)

## Reports of Costs of Certain Structures on Nongovernment Waters. Frequency/Due Date: As required / Upon occurrence of event. Agency Costoct: Buresu of Power (202) 275-4863,

Congressional Recipient: Congress: House Committee on Interior and Insular Affairs: Sware Committee on Energy and Natural Re-Authority: Federal Water Power Act (P.L. 66-280: 41 Stat. 1070: 16 U.S.C. 805)

Date Sera Rafarance: R-03302-002 This report encompasses recommendations relating to Federal participation in construction of locks or other navigation structures in confunction with hydroclectric power projects on nongovernment waters. Cost estimates are included. (PR)

#### ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION

ERDA Report of Review of Design, Construction, and Planning of Platonium Processing Facilities, FCM-1 Frequency/Due Deter Quarterly / Unspecified.

Agency Contact: Division of Facilities and Construction Management. (301) 353-4700. Congrassional Radiolant: Jour Committee on Atomic Poersy.

Authority: H. Rent. 92-1066; S. Rent. 92-802. Date Born Rafarance: R-06000-001

The review covers status of construction, procurement, and the project estimate as well as a full update on design of all safety features for the facility. Detailed design of the process areas, including results of information requived from vendors of critical equipment, indicates that all originally designed and planned safety equipment features will be accommodated in the facility within the current estimate.

## Report on the Status of Major Construction Projects Experiencing

Stanifloant Variances. Fraquency/Dua Deta: Semianneally / Unwocsified. Agancy Contact: Division of Facilities and Construction ManageCongressional Raciplant: John Committee on Atomic Energy. Authority: Requested by the General Accounting Office. Date Boss Reference: R-06000-002

The report provides information on nuclear materials, weapons, reacter research and development, general energy development, some nuclear systems, physical reasurch, and biomedical and armironmental research. Included are the project budget number: title: dollar amounts, including original data sheet, latest Congress advised, and current; completion status of design and construction; and original and current estimated completion date of construction

Report on Fost Flux Test Reville, RRD-1 Frequency/Dua Date: Quarterly / Unspecified.

Agency Contact: Fast Flux Test Pacifity Project Office. (509) 942-5481 Congressional Recipient: House Committee on Ammonriations: Senate Committee on Appropriations: Joint Committee on Atomic Re-

Authority: Recursted by the Public Works Subsemmittee of the Senate Annopriations Committee Dota Basa Reference: R-06000-010

This report summarizes the status, progress, expenditums, and other major developments of the Fast Flux Test Facility.

Activities of Solar Energy Coordination and Management Project. SE-1. Francasey/Dua Dote: Annually / Unasscrified Agency Cornect: Assistant Administrator for Planning, Analysis. and Evaluation. (202) 376-4337.

Congressional Raciolant: House Committee on Interior and Insular Affairs; Sweete Committee on Energy and Natural Resources; Joint Committee on Atomic Francey. Authority: Solar Energy Research, Development, and Demonstra-

tion Act of 1974 (P.L. 93-473; \$8 Stat. 1437; 42 U.S.C. 5562). Date Boss Raferance: R-06000-019 This report summarizes international connecative succements for research and information dissemination relating to solar energy re-

sources and technologies during the year. Projected activities and funding requirements for the ensuing 5 years are presented, and appropriate legislative and reorganizational actions are recommended (PP)

Proceed Distribution of Special Nuclear Materials, A1A-2. Francishey/Dua Data: As required / Upon occurrence of event Ansacy Cortacts Office for International Affairs, (202) 376-4410. Congressional Recipioni: Acts/ Committee on Atomic Energy. Authority: Atomic Energy Act of 1954, as amended (P.L. 93-377; 84 Stot. 473; 42 U.S.C. 2074(a)(b)). Date Base Reference: R-06000-020

This report stimulates the procedures to be followed before proposed international distribution of special nuclear materials can he implemented. Such materials are to be used for medical thereny or other peaceful nurnoses. Limitations are specified in terms of amounts of materials to be experted, dollar value of materials, and time periods in which they may be distributed. A method is craffined for the submission of proposed export agreements to the Congress. and the mode of required congressional action is detailed. (PR)

Proposed Agreements for Cooperation with Other Nations on Atomic Energy, AIA-1 Frequency/Due Date: As required / Upon occurrence of event. Approxy Contests International Affairs, (202) 376-4410. Congressional Raciplant: Joint Committee on Atomic Ene Authority: Atomic Energy Act of 1954, as amended (P.L. 93-485;

88 Stat. 1460: 42 U.S.C. 2153d).

ment. (301) 353-4700.

#### Data Base Reference: R-06000-021

This report dotalls procedures for presenting proposed international cooperative agreements regarding nuclear reactors to Congress and outlines deadines for Congressional recommendations and approval of such processis. (PR)

#### ---

National Flan for Energy Research, Development and Demonstration Flanning and Analysis APAE-1. Frequency/Duo Dotas Annually / When President submits budget.

Pregreecy/Disc Botes Annually / When President submits bodge.

Agency Centects Assistant Administrator for Planning, Research
and Evaluation. (202) 376-4337.

Congressional Recipients House Committee on Interior and Insales

Congressional Recipient: House Committee on Interior and Insuler Affairs, Senare Committee on Energy and Natural Resources. Authoritys Federal Nonnuclear Energy Research and Development Act of 1974 (P.L. 93-577; 48 Stat. 1894; 42 U.S.C. 5914(a)).

Due hos Astenues. R-0000-2001.
This report details services a comprehensive plan for motive and nonmoless and sometimes are suppressed, development, and demonstration and sea for monoficions and excellence in the given. Services in the plant. Services are suppressed to the plant of the plan

#### 306

Activities of the Geothermal Coordination and Management Project, GTI-1.

GE-1.
Fraquency/Due Dote: Annually / Unspecified.
Agenty Centeet: Division of Geothermal Energy. (2023)76-4897.

Compressional Recipient: Histas Committee on Interior and Insular Affairs; Sense Committee on Beauty and Neistral Resources. Astherity Cochemical Energy Research, Development, and Demonstration Act of 1974 (P.L. 93-410; 38 Stat. 1088; 30 U.S.C. 1162(a)).

# Date Sees Reference: R-06007-001 This report summarizes softwittes of the national geothermal en-

orgy research, development, and demonstration programs and evaluates the program's progress. Estimates and projects are presented in an attempt to assess the catent to which the objectives of the authorizing legislation will have been met by June 10, 1930. (PR)

#### 507

Activities of Rich Geathermal Demonstration Project CB-2.
Pasquency/Dea Date: An expired of Upon occurrence of event.
Agency Centres Division of Geothermal Brorgy, (200) 376-4903.
Compressional Resilient flows Committee on Interior and Insular Affairs, Sense Committee on Energy and National Resources.
Authority's Geothermal Brorgy Research, Development, and Demonstration Act of 1974 (P.L. 92-416), 88 Stat. 1085; 30 U.S.C.
1167-010.

Data Sase Reference: R-06007-002

This report embodies a final review of the activities of each project undertaken as a part of the national geothermal energy research, development, and decroscation programs. Other legislative and administrative actions which should be undertaken to further the goals of this moreone are recommended. (PR)

# 308

National Program for Solar Heating and Cooling, SE-2.

Frequency/Due Date: Amerally / Unspecified.

Agency Contact: Division of Solar Energy. (202) 376-6435.

Congravational Recipient: House Committee on Interior and Insular Affairs, Steam Committee on Benray and Natural Resources. Authority: Solar Heeting and Cooling Demonstration Act of 1974 (P.1. 93-405: 18 Stat. 1076: 42 U.S.C. 5510(d)).

Oako Base Reference: R-06007-003

This report describes rotineal and dissemination services for information practing to soils relating and cooling. Such information structs have been provided for Pederal, State, and local government organizations; universities, colleges, and other nonprofit organizations; and, in appropriate cases, for private individuals. (PR)

#### \*\*\*

Financial Report on the Geothermal Resources Development Fund.

OE-3.

Fraquency/Dun Date: Annually / Unspecified.

Agency Centect: Division of Geochermal Benzgy, (2003) 376-4899.

Congressional Recipiest: House Committee on Enterior and Institute Affairs, Sensir Committee on Enterior and Institute Affairs, Sensir Committee on Energy and Natural Resources.

Authority: Geochermal Energy, Research, Development, and Democratization Act of 1974 (P.L. 93-410; 88 Stat. 1088; 30 U.S.C. 134467).

Doto Bosa Rafaranca: R-06007-004

This financial report documents operations of a fund established to carry out the loan guaranty and interest sasistance program established in conjunction with the geothermal resources and research program. (PR)

#### ...

Report on ERDA's Nonnuclear Activities. OPA-2.

Frequency/Dun Defas Annually / Unspecified.

Agancy Contect Office of Public Affairs. (301) 353-4551.
Congrassional Recipient. Adult Committee on Atomic Energy.
Authority: Federal Nonnuclear Energy Research and Development

Act of 1974 (P.L. 93-577, § 15(a); 88 Stat. 1878; 42 U.S.C. 5901). Doto Bosa References R-06013-001

This report contains a description of a comprehensive plan for sucteer and nonnuclear energy research, development, and demonstration, as directed by the Energy Reorganization Act of 1974. The Act is designed to achieve solutions to immediate and short-term (to the early 1980's), middle-term (the early 1980's to 2000), and longterm (beyond 2000) energy-supply system and associated environmental problems. The nonnuclear report shall include information on anticinated research, development, and application objectives to be schleved by the proposed program; the economic, environmental, and societal significance of the proposed program; the total estimated cost of individual program items; the estimated relative financial contributions of the Pederal government and non-Pederal participants in the research and development program; the relationship of the proposed program to any Federal national energy or fuel policies; and the relationship of any short-term undertakings and expenditures to long-range goals.

#### 311 Don't C

Famil Energy Program Report. AFE-1.
Franciscov/Dua Date: Annually / Unspecified.

Agency Contact: Office of Public Affairs. (202) 376-4064.
Congressional Resignant House Committee on Science and Technology; Sonate Committee on Energy and Natural Resources.
Authority Voluntary.

Para Basa Rafaranca: R-05013-003

This report summarizes efforts of the agency and industry to develop and demonstrate technology for synthetic feels from coal. Improved recovery methods applicable to petrolerum, natural gan, and oil shale are discussed. (PR)

#### 312

Report on Acoust and Program Index of the Europe Research and Development Administration: Status of Contraction Projects and Other

Dave OC-9 Frequency/Due Date: Semismutally / Unspecified.

Anney Costnet: Office of the Controller (301) 353-5325 Conservational Parintent: Inter Committee on Atomic Energy

Authority: Remosted by the Joint Committee on Atomic Forces Data Rose Reference: R-06015-001

The index provides information on the status of active authorized construction projects, and includes data on solar, senthermal, and advanced energy systems development, including physical researchnuclear energy development, including fission power reactor develcoment, naval reactor development, space nuclear materials avaterms, and nuclear materials: national security, including weapons laser fusion, and nuclear materials accurity; environmental and safety research, including biomedical and environmental research and waste management; program support, including program direction; construction planning and design, general plant projects; and reactor safety research.

Report by the U.S. Exercy Research and Development Administration: Status of Construction Projects and Other Date. OC-10.

Frequency/Dua Date: Annually / Unspecified. Agancy Contact: Office of the Controller, (301) 353-5325.

Congressional Registers: Joint Committee on Atomic Energy Authority: Requested by the Joint Committee on Atomic Energy. Data Base Reference: R-06015-002

The report provides information on the status of active authorized construction projects, including solar, acothermal, and advanced energy systems development, nuclear energy development. national security, environmental and safety research, program support, construction planning and design, general plant projects, and reporter safety research, active authorized projects on which revised cost estimates have exceeded the authorized limitations after the project has been started; authorized projects that have been comploted: projects not started but for which funds have been authorized sithough not yet available; analysis of unexpended balances; and a comparison of Atomic Energy Commission (AEC) division requests for construction projects with estimates submitted to the Office of Management and Budget and the submission to Congress. In addition, the report provides information on the President's fiscal year budget estimates for those amounts allocated for the AEC's operating expenses and capital equipment not related to construction.

# Report on Reprogramming Action for the Nuclear Materials Program.

Frequency/Due Date: As required / Unspecified. Agency Contact: Office of the Controller. (301) 353-5325.

Congressional Resigions: Joint Committee on Atomic Energy. Authority: Reputated by the Joint Committee on Atomic Regrey. Data Base Reference: R-06015-005 This memorandum provides information on a proposed repro-

gramming action that will provide an additional \$15.5 million in fiscal year 1975 operating funds for increases in costs of electrical power for the suseous diffusion plants or easesde power. The inoreased cost of cascade power has resulted principally from higher than enticipated coal costs for the electric power suppliers-Tennessee Valley Authority, Electric Energy Inc., and Ohio Valley Bitctric Corn subjets in turn are passed on to their customers. The report states what the issue is, the background, the alternative, and a recommendation. In addition, it includes copies of letters to the chairman of the Joint Committee on Atomic Energy which provide statistical data related to costs.

Proposed Establishment of Joint Federal-Industry Nonsyclear Corpora-NY OC-11.

Frequency/Due Date: As required / Upon occurrence of event. Agancy Contacts Office of Controller (301) 353-5325. Congressional Recipient: House Committee on Science and Tech-

nology. Single Committee on Energy and Natural Resources. Authority: Federal Nonnuclear Energy Research and Development Act of 1974 (P.L. 93-577; 88 Stat. 7883; 42 U.S.C. 5906(b)(7)(A)). Data Base Reference: R-05015-010

This report acts forth procedures for the establishment of joint Pederal-industry corporations of nonnaclear energy research and development. Specific legislation must be enacted by Conservabefore such cornerations can be established. Guidelines are outlined for competitive systems of price sumparts proposed for congressional authorization of such corporations, and procedures are specified for the award of planning grants and the construction of commercial

## NUCLEAR REGULATORY COMMISSION

demonstration (scilities (PP)

Summary of Abnormal Occurrences Reported to the Nuclear Resulatory Commission

Frequency/Due Date: Quarterly / Unspecified. Agency Contact: Nuclear Regulatory Commission. (301) 492-7735. Congressional Recipient: Joint Committee on Atomic Poerry

Authority: Energy Reorganization Act of 1974 (P.L. 93-438, § 208; 38 Stat. 1248: 42 U.S.C. 5848) Data Basa Raference: R-06200-002

This report lists abnormal occurrences at or associated with earl facility which is licensed or otherwise requisted pursuent to the Atomic Poercy Act of 1954 as amended or pursuant to the Poercy Recreanization Act of 1974. An abnormal occurrence is defined as an unacheduled incident or event which the Commission determines is significant from the standpoint of public health or safety. The report contains information on 1) the date and place of each occurrence; 2) the nature and probable consequence of each occurrence; I) the cause or causes of each occurrence; and 4) any action taken to prevent reoccurrence.

# Budget History Tables.

Frequency/Due Date: Annually / Unspecified. Ausney Contact: Nuclear Regulatory Commission. (301) 492-7988.

Congressional Recipients John Committee on Atomic Energy. Authority: Requested by the Joint Committee on Atomic Energy. Data Base Reference: R-06200-010

This report is to provide current authorization and appropriation background information on the Asomic Energy Commission (AEC) for use in connection with the fiscal year authorization bill. The Pall

Planning Projections containing the unclassified 5-year budget prolections for ARC programs and their subparts about also be included. In addition, fact shorts should be provided on the nucless materials security program, the controlled thermonuclear research and laser fusion program, the laser isotopes appareties program, the liquid metal fast breeder reactor project, the waste management and transportation program and various construction projects

Report to the President by the Nuclear Regulatory Commission. Frequency/Due Date: Annually / Unanedified. Aganes Contact: Nuclear Regulatory Commission. (S01) 492-7283.

Congressional Recipients House Committee on Government Operations; Smale Committee on Governmental Affairs; John Committee on Atomic Bnorgy. Authority: Energy Reorganization Act of 1974 (P.L. 93-438, § 307(e); 88 Stat. 1251; 42 U.S.C. 5877(e)).

**Energy Digest SEPTEMBER 1977** 

## Data Basa Reference: R-06200-013

This report summerican the activities of its Nuclear Regulatory Commission. It is subticed as statement of horourage and language poils, priorities, and plant as they rotter to the benefits, costs, and a summer of the state of

### Appendix 3

### Federal Information Sources and Systems on Energy

Citations in this appendix are extracted from Federal Information Sources and Systems; a Directory issued by the Comptroller General for the period through June 30, 1976. {1977 Congressional Sourcebook Series} PAD-77-11, 1977. (in press).

#### DEPARTMENT OF THE INTERIOR

#### 319

National Natural Resources Library and Information Systems (HNRLIS).

OMB Funding Title/Code: Departmental Operations / 14-0108-0-1-306.

Congrassional Ralavances: House Committee on Agriculture, House Committee on Appropriations: Instance Subcommittee, House Committee on Interior and Insular Afflias, Sonte Committee on Agriculture, Nutrition, and Porestry; Sonter Committee on Approportations intorior Subcommittee. Sonte Committee on Ap-

and Natural Resources.

#### Subject Terms: Information Centers: Libraries: Natural Resources.

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Agancy Contoch: Office of Library and Information Services; 19th and C Streets NW, Ruom 1152, Washington, DC 20240; (202) 343-5521.

#### 220

## Federal Helium Program.

OMB Funding Tala/Coda: Helium Fund / 14-4053-0-3-306.
Congressional Relavance: House Committee on Interior and Insular
Affairs; Senate Committee on Energy and Natural Resources.

Dato Base Reference: S-00711-003

#### Subject Termu Hellum.

Pursase: The Federal helium program is designed to provide for the ourrent and foresociable future requirements for helium for essential Government sotivities. The program involves the production. conservation, sale, and distribution of helium and includes the following functions: 1) Acquisition, construction, operation, and masagement of helium plants, gas fields, helium storage fields, pipelines, and fleets of hellum tank cars and semitrailers: 2) the search for new sources of helium-bearing natural gas and negotiation of contracts for supplies of helium-bearing gas; 3) establishment of helium reserves: and 4) experimentation and research to discover helium supplies and to improve methods of helium production, purification, transportation, liquefaction, storage, and utilization. Aquat: Information is anthered through internal operations and contracts with other Federal agencies, private beliam producers, distributors and users, well drilling companies, and natural gas producers and distributors by means of statistical surveys, personal contact, and liberature searches. Content: Information covering all aspects of helium production. unts, distribution, conversations, sun, faiture dermath, and reservative conflicted and interest through version interests and external reproperture, papers, not publications. These reports are generally touted on an annual beams, lowered, none on the limited interestinating depending and another through the contraction of the contrac

Agancy Centect: Division of Holium; Columbia Plaza, 5th Floor, 2401 E St. NW. Washington, DC: (202) 634-4734.

#### 321

Affinis

#### Missen! Land Assessment.

OME Funding Tible\*Code: Mines and Minerals / 14-0959-0-1-300; Commidiated Working Fund / 14-3905-0-4-306. Commidiated Working Fund / 14-3905-0-4-306. Comparational Relavances: Hower Committee on Appropriations: Institute Subcommittee; Hower Committee on Education and Lukor; House Committee on Institute and Insular Affairs; South Committee on Appropriations: Institute of Insular Affairs; South Committee on Energy and Natural Response; South Committee on Governments.

Date Base Reference: S-007[1-001

Subject Tenne: Firels: Land Use: Minerals. Parpose: Mineral assessments are made with both regional and mmodity emphasis to identify the sources and availability of mincrait and fucis. These serve as input for those decisionmakers given the responsibility for land use planning and decisions, particularly those involving public lands. They also assist public and private groups in resolving onvironmental and engineering problems associated with maintaining adocuate mineral supplies. Justic These assessments are developed through courthouse mining claim starches, public and company record studies, and field work. The bulk of the activities are conducted through four field offices. Contest Under the Wilderness Act of 1964 and the Eastern Wilderness Act of 1974, and in conjunction with the Goological Survey, mineral assessments of national forest areas are conducted. These provide an evaluation of an area's mineral reserves and paramerainal resources Similar studies are made of wild and scenic rivers and Indian lands Information is gathered for minerally related environmental impact statements which are reviewed on a formal and informal basis: rive basin studies that evaluate mineral resource development, related water requirements, and water poliution problems; and dam and respress sites to assess the impact of proposed construction on mineral resources. Owner: Project files are the major output. Doctments are published occasionally. Assilability: The information is publicly available

Agancy Centoct: Office of the Associate Director; 2401 E St. NW, Room 1038, Washington, DC 20241; (202) 634-1330.

#### 322

# Minerals Information System (MINFO). OMB Funding THe/Cody: Mines and Minerals / 14-0959-0-1-300:

Consolidated Working Fund/14-3909-0-4-306; Contributed Funds; 14-8287-0-7-306. Congressionel Relavenes: Hour Committee on Appropriations: Interior Subcommittee; Houre Committee on Education and Labor; House Committee on Interior and Insular Allaire, Sensio Committee on Appropriations: Interior Subcommittee; Sonse Committee on Entrary and Natural Resources; Sonse Committee on Governmental

#### Date Base Reference: S-60711-035

## Subject Terms: International Trade, Minerals

Perpose The system develops and disseminates a occardinated hady of basic mannels information, both domestic and foreign couering coverages of 100 commodules for Government and industry policy, planning, and decisionmaking. Input: The information is collected by convessing \$0,000 mineral establishments by means of more than 600 stansified surgest and by nestreel contacts on a weekly, monthly, quarterly, semannual, or sensual basis. In addition, foreign date are obtained from various publications, foreign service dispenches, other Government agencies, and mineral attaches at forcito costs. Control: Technical and economic information covering all aspects of reserves, production, processing, consumption, and international trade is collected. This information is unsigned to deteretime what the current and future mineral-related problems and onparticulties are and to identify the underlying factors. In addition, the effects that legislation and policy decisions have on the supely/demond relationship of minerals as well as their impact on the environment, economy, and public well-being are assessed. MINFO is enhanced by two automated subsystems: Firely Applicability System (FAS) and the Minerals Assilability System (MAS). State linison officers are channels of information for both the Perferal and State interests. They are input sources for MINEO. They also are sources of the system's output at the State levels. Output: The Russon of Mines develops and disseminates in a variety of forms many remorts and studies. The following is a list of principal, periodic publications: Mineral Industry Surveys (weekly, monthly, quarterly, and annually): Minerals and Materials in monthly surveyl: Mineral Trade Notes (monthly): International Cost Trade (monthly): Commodity Deta Summeries (nequality): Status of the Maneral Industries (enemally); Minerals in the U.S. Economy (unrually); Mineral Trends and Personals (annually): Minerals Yearback, three volumes (annually): and Mineral Parts and Problems (every five years). Availability: The publications are exhibits available.

Agency Centeck Office of the Associate Director; 2401 E St. NW, Room 1038, Washington, DC 20241; (202) 634-1330.

#### aza Maina Ressorti

OMB finding Title/Code: Mines and Minerals / 14-0959-0-1-300; Costolidated Working Fund/14-3909-0-4-306; Contributed Funds/ 14-3287-0-7-306; Miscellancous Appropriations / 14-9911-0-1-

Coagnasianul Rainvoness Heure Committee on Agrouptiations Interior Silocentmitee; How Committee on Education and Labor, House Committee on Interior and Insider Affinin; Steade Committee on On Agroppications: Interior and Insider Affinin; Steade Committee on Agroppications: Interior Subcontrollete; Steade Committee on Energy and Natural Resources; Steade Committee on Governmental Affairs.

#### Date Base Reference: S-00711-006

Subject Tower Energy, Parks, Minerals; Mining Research; Power Resources; Research.

Nersex: The mining reserved program of the Busses of Mines is a fixed as producing technologies that will help near the Nation's increasing mineral and energy demands at the lowest possible social and controlle costs. The major thrust of the mining ensearch sechnology program falls within three best engages neem. Mining leithers and Saftry Reserved, Advanced Mining Technology Reserved and Reserved Mining Technology Reserved and Reserved Mining Technology Reserved American Conference of the Property Controlled Conference of American Mining Conference on the Property Controlled Conference of American Mining Conference on the Conference on the

simultaneously developing new systems that are safer and more produalise and compatible with an aesthetic environment. Justit The research program is conducted out of five research centers located in Curbondale, IL: Denver, CO: Minneapolis, MN: Pittsburgh, PA: Spokane, WA: and an environmental field office at Wilker-Barre, PA Contest: The contest of the Mining Research information varics depending upon the nature of the research activity. Some research data reflects broad and significant projects or programs of scientific inquiry. Other information presents Bureau research which describes the principal features and results of individual experiments (single or multiple), minor research presents, or a significant coordinated phase of a major project or program. These data also may include a summany of several projects or activities in a given subject area, results of laboratory analyses of an unusual nature, and comparative and nonmuting testing. Still other data power summaries of scientific and technical meetings, bibliographics, and descriptions of new mining processes. Gutage The Ruceau of Mines reports the findings of its seveneth and investigations in its own series of publications and also so articles that annear in scientific, technical, and trade icornals; in proceedings of conventions and seminars; in reference books; and in other non-Bureau exhibitations. Mining publications are Bulletins Technical Progress Reports, Report of Investigation, Open File Renorts, Information Circulars, and Patents. These data are penerally connerted and released to the public after a specific study or research project has been completed. Availability: Promay robling. tions are roblinly symiable.

Agancy Content: Mining; 2401 E St. NW, Washington, DC 20241; (202) 634-1210.

#### 324

Besonth Information Management System (RIMS).

OMB Feeding Tills Code: Misces and Miscessi / 14-0959-0-1-300;
Consolidated Working Fasel/1-43900-0-4-306; Contributed Funds/
14-327-0-7-306; Miscellaneous Appropriations / 14-9911-0-1-306.

Congressionel Railvennes: Heure Committee on Appropriations: Interior Subcommittee; Houre Committee on Education and Laboura-House Committee on Interior and Insular Affairs; Senar Committee on Appropriations Interior Subcommittee; Senar Committee on Energy and Natural Resources; Senar Committee on Governmental Affairs.

# Date Sase Reference: S-00711-001

Subject Terms: Management Information Systems; Musing Research, Planring; Research.

Purpose: This is a communicated data storage and retrieval system which supports the planning and management of mining research of the Bureau of Mines. It accumulates, organizes, and summarizes date on the substance, schedule, status, and cost of all projects, from proposal so project completion, in the research program conducted by the Office of the Assistant Director-Mining, Bureau of Mines. Input: The data contained in this system are derived from program memorands and contract award notices within the Bureau of Mices Content: The system consists of a series of reports which are updated monthly or more frequently by special request. The data in these reports cornist of the following: project identification numbers, prolect titles, contractor name and address, program area, research area, research center involved, contract modifications, project award date, expected completion date, dollar expenditures, project monitors, and congressional districts. Output: RIMS serves Eureau of Mines management by generating standard and special reports at scheduled intervals or upon ad hoo request. For the rontine dissemination of general contract status summeries, standard reports are reproduced and distributed at monthly intervals. Special reports may be reproduced or may be queried from the data base, depending upon the size of the request and time frame involved. Availability: RIMS output. is for internal use only.

Agasey Contact: Mining; 2401 E St. NW, Washington, DC 20241; (202) 634-1230

National Water Data Exchange (NAWDEX).

OMB Funding Title/Code: Surveys, Investigations, and Research / 14-0204-0-1-206.

Congrassional Relavance: House Committee on Appropriations: Interior Subcommittee; House Committee on Interior and Insular Affairs: Senate Committee on Appropriations: Interior Subcommittee: Smare Committee on Energy and Natural Resources.

#### Data Base Reference: S-00712-002

#### Subject Terms: Hydrology; Location, Water

Purpose: NAWDEX provides nationwide assistance to users of water data in the identification, location, and acquisition of needed data, information is provided on water data available from Federal. State povernmental, local governmental, and private organizations. NAWDEX is intended to benefit all users of water data including Federal, State, and local governmental organizations; private organizations and individuals: universities; and water, environmental, and energy resource planners, managers, and scientists. Insur: NAW-DEX gathers information on water data available from surface and groundwater sites. This information is currently supplied by 19 Federal organizations and 300 non-Federal organizations active in water data collection activities. Contributing non-Federal organizations include State governmental organizations, local governmental organizations, river basin commissions, interstate commissions, irrigation districts, universities, public utilities, and private organizations. Consent: NAWDEX data systems include a Water Data Sources Directory which contains information on organizations that collect water data, the types of data collected, geographic areas in which data are collected, and locations within each organization from which water data may be acquired. A nationwide Muster Water Data Index is also maintained which identifies situs for which water data are collected. the collecting organization, the geographic location of the site, the type of site, the types of data collected, the periods of records for which date are available, major water data parameters being mosspred and their frequency of measurement, and the media in which each type of data are available. Each water data site is geographically identified by latitude, longitude, State code, county code, congressional district, and hydrologic unit or basin code. These data systems are updated on an annual basis and contain information on the availability of streamflow, river stages, peak and low flow values, reservoir or lake volumes, geologic identifiers, groundwater levels, groundwater discharges, well depths, and water quality data of surface and groundwaters including physical, biological, sediment, and chemical characteristics. Quant NAWDEX data systems have both remote batch and interactive ad hoo query capability. Printed reports and tables of information on data availability are produced. Numeric summaries of categories of data available may also be produced. A printed directory of sources of water data is published periodically for public dissemination. Ad hoc reports are produced upon request. Availability: The output is publicly available.

Agency Contact: National Water Data Exchange; 421 National Center, Reston, VA 22092; (703) 860-6031.

Land and Mineral Conservation Information System. OM8 Funding Title/Coda: Surveys, Investigations, and Research / 14-0804-0-1-306

Congrassional Ralevanea: House Committee on Appropriations: Interior Subcommittee: House Committee on Interior and Insular Affairs: Senate Committee on Appropriations: Interior Subcommittee: Senste Committee on Beergy and Natural Resources.

#### Data Base Reference: S-00712-005

Subject Terres: Land: Mineralesical Research: Minerale: Natural Resources Conservation: Research.

Purpose: The system provides a methodology for collecting, analyzing, and disseminating information relative to the effective development of land and mineral resources within the jurisdiction of the Federal Government. Aspat: Information is gathered by scientific observation of physical characteristics of potential minerals areas to establish the statistical probability of economically feasible occurrences and subsequent compliance with regulations and legislation relating to the orderly extractions in a manner most favorable to the public interest. Content: The information system includes the Federal jurisdiction of land and mineral development. Subsystems include energy producing minerals, non-energy producing minerals. and water storage potential for energy producing purposes. Certain portions of information established under legislative directive are retained permanently, while other catagories gathered for verious purposes are retained for periods relative to the utility and continued accuracy of information. Data are maintained current according to need. Output: The major output types are evaluative-selective onetime, hardcopy, inventory-nemperiodic, circulars or billetins; supervisory-monthly, hardcopy; and financial-annual, hardcopy, Availability: The reports are for internal use only.

Agency Contact: Conservation Division; 12201 Sunrise Valley Dr., Reston, VA 22092; (703) 860-7524.

Geologic Surveys, Investigations, and Research Program. OMB Funding Title/Code: Surveys, Investigations, and Research / 14-0804-0-1-306 Congressional Ralayaneau House Committee on Appropriations: In-

terior Subcommittee; House Committee on Interior and Insular Affairs: Sevate Committee on Appropriations: Interior Subcommittee; Sevent Committee on Energy and Natural Resources.

## Data Base Reference: 5-00712-010

Subject Terms: Gralogy; Geophysical Research, Land Use: Mineral Rescurrey Research.

Person: The national program of geologic research and investiions provides teologic, geochemical, and geochysical information for other Government agencies and for the general tublic on land resources, on mineral and energy resources, and on geologic hazards of the Nation and its territories. The relationship of geologic research and investigations to human welfare is particularly significant. Examples are the ecologic hazards such as earthougkes, volcano eruptions. and landslides in urban and suburban areas; the development and use of energy resources, including oil and gas, coal, uranium, and genthermal waters, on the environment of the earth's surface; and the depletion of known mineral reserves and their corresponding impacts on the national and world economies. Assur: Geologic research and investigations entail a systematic study, macoing, and analysis of the geology of the United States and the submerged edges of the contineat. Knowledge is obtained about the distribution, structure, and potential usefulness of the rocks on and beneath the surface of the earth. Geochysical sechniques measure the variations in the earth's gravity, magnetic field, and electrical sensitivity to belo trace ecologic features beneath the surface. Geochemical studies include determining the distribution of elements in the earth's mantle and crust: determining the processes that form one bodies determining isotopes and their application to establishing the age of rocks; and analyzing rocks, minerals, and ores. Contest: The national program produces peologic, geophysical, and peochemical maps and analyses that show the distribution, age, composition, structure, and physical properties of rocks and minerals at and beneath the earth's surface; new or improved methods, sechniques, and instruments for mineral or energy exploration on land and on the submerged continental margins; and, with the bein of other State and Pederal agencies, leformation on the chemistry and physics of the earth, moon, planets, and the peologic processes by Which they were formed and are continually being modified. Output: The major output types are professional papers, bulletins, circulars, geologic quadrangle maps, Journal of Research, open-file reports, misoellaneous investigation maps, administrative reports, miscellaneous field studies maps, geophysical investigations maps, earthquake information bulletin, grological survey annual research, geological survey annual director's report, National Technical Information Service reports, and general interest pamphlets. Antilebility: The professional papers, bulletins, circulars, and general interest pamphlets are obtainable by mail from Branch of Distribution, U.S. Geological Survey, 1200 South Each St. Arlington, VA 22202. The Journal of Research and the Earthquake information Bulletin can be obtained from GPO. For mans of areas east of the Massissippi River, including Minnesota, Puerto Rico, and the Virgin Islands, address mail orders to Branch of Distribution. U.S. Geological Survey, 1200 South Eads St., Arlington, VA 22202. For maps of areas west of the Mississipes River, including Alaska, Hawasi, Louisiana, Guam, and American Samos, address mail orders tor Branch of Distribution, U.S. Goological Survey, Box 25286, Fedcref Center, Denver, CO 80225 Residents of Alaska may order Alaska mans from: Distribution Section, U.S. Gaglogical Survey, 310 First Ave , Pairbanks, AK 99701.

Agency Centect: Geologic Division; 911 National Center, Revion, VA 22092; (703) 869-6531.

# 228 Evergy Resource Data Speares. OMB Funding Tills/Code: Surveys, Investigations, and Research /

14-0804-0-1-305 Congrussional Relevance: House Committee on Appropriations: Interior Subcommittee; House Committee on Interior and Insular Affairs; Sower Committee on Appropriations: Interior Subcommittee; South Cognitify and Natural Rebusers.

Data Base Reference: 5-00712-012

\$40 jest Termst Coal; Energy, Fosis, Geothermal Energy, Persoleum; Power Retources; Research; Thorism; Uranium.

Purpose: The system includes and does the following: 1) NCRDS answers questions about the distribution and quality of equi resources in the United States: 2) PDS provides production and reservoir data to conduct resource estimates of remaining petroleum: 3) WHCS allows detailed studies to be conducted in seglogically discrees movinors: 4) GEOTHERM is used to study the cyclic behavior of geothermal "pools" which is reflected in the engineering characteristics: 5) srankum-thorium is used to construct occurrence models for this type of oce; and 6) oil shale data are used to assess the three-dimensignal distribution of the resource. Insut: NCRDS receives data from published documents for file 1, and from goologic manning and field work for file 2. PDS gets data from State O and G regulatory somoles, AAPC, USBM, State application surveys, and local genicescal societies, WHCS data are provided by Petroleum Information Corporation, GEOTHERM data are compiled from published scorces and from geothermal working groups around the world. Uranium-thorium data were collected in the 1950's, and supplemental data are provided by ERDA. Oil shale data are derived from existing drill cores which have been archived. Content: NCRDS is developing one file for easi sonney and chemical analysis records. cinssified by rank, depth, thickness, and location (to county level), and a second file for detailed one occurrences by quadrangle PDS contains data on location, production, reservoir parameters, and fluid analyses for oil and gas nocks. WHCS is an oil and gas well history file purchased from and maintained by Petroleum Information Corporation (Denver), GEOTHERM contains records of the location. exploration, development, evaluation, and engineering data of geothermal resources. The stanium-therium file contains ore and metal production data (proprietary), location, ownership, and gross accious information. The oil shale file is composed of records derived from 300 drill cores containing data on location, lithelegy, and Fisher assays. Quesut: The major output types are NCRDS. tennage of coal and analysis of coal resource summary reports for specified area. Contour maps, cross-sections, and resource (bed) maps; PDS-ail and gas pool distribution maps and detail pool reports or summary, regional reports. WHCS-contour maps and detailed well reports: GEOTHERM-conurrence maps and detailed engineering reports; uranium-thorium-contour maps and generalized reports; and oil Shale-delli core profile and Fisher anny reports by depit, cellelikliy. All fions reg generally available to the public, INCROS and GEOTHERM are resiliable through USGS, Reston, V.A. PDS and WHCS are smalled through the University of Okthonos; tranme-thorism and oil plane date files are available intrough USGS, Denvey, C.O. NCROS, GEOTHERM, U-th, and oil sakes are all treaseach files in early developmental stages and only selected potions may be available.

Agency Centest: Geologic Division; 911 National Center, Reston, VA 22092; (703) 860-6531

#### 229 Coal Lease Data System

OMR Funding Tills/Code: Management of Lands and Resources / 14-1109-0-1-302. Communication Relevance: House Committee on Arriculture

House Committee on Appropriations: Interior Subcommittee, House Committee on Interior and Insular Affairs, Senset Committee on Agricultum, Nutration, and Pecestry; Senset Committee on Appropriations: Interior Subcommittee; Senset Committee on Energy and Natural Resources.

Date See Reference: S-00714-006

Subject Ferma: Coal Losson, Lesson: Natural Resources.

Purpuse: The only supers of this system developed to date is the capability to makenus a data file for coal leases. The system support, billing and compliance efforts: Injust Injust comes from field office file as lensing course. Consent Information relates to the geography, some ownership, expense productivity, terms and eligibilities, and important dates of the lease. This data file will be form the base from which a new, broader system will be developed chains: No recovers one meanment.

Agency Contect: Chief; Division of Mineral Resources; 18th and C Streets NW, Washington, DC 20240; (202) 343-2718.

#### 330 Oil Shale/Bentonite Title Clearance.

OMS Funding Title/Code: Management of Lands and Resources / 14-1109-0-1-302.

Commissional Relayance: House Committee on Agriculture:

Conguestional Ralawanca Houre Committee on Agriculture: Houre Committee on Appropriations: Interior Subcommittee: Houre Committee on Interior and Intuite Allairs, Senare Committee on Agriculture, Nutrition, and Froestry, Susair Committee on Appropriations: Interior Subcommittee; Sessee Committee on Energy and Natural Resources.

Date Base Reference: S-00714-007

Subject Terms: Claims; Mosonala, Natural Resources; Oal Shales; Shale Oils

Purpose: The system protifies limited support to a case flow membrinding system by studied grouper of each support on this laboration, and preveding support of either supported and excellent laboration, and preveding support of clinic supports and excellent laboration promptile interesting support laboration (2014), and excellent laboration and

Agency Contests Chief; Division of Mineral Resources; 18th and C Streets NW, Washington, DC 20240; (202) 343-2715.

221

Outer Continental Shelf Post-Sale Seriem. QMB Funding Title/Code: Management of Lands and Resources /

14-1109-0-1-302

Congrassional Relayance House Committee on Agricultures House Committee on Appropriations: Interior Subcommittee House Committee on Interior and Insular Affairs; Senere Committee on Agriculture, Nutrition, and Forestry; Sensor Committee on Appropriations: Interior Subcommittee; Seware Committee on Energy and Natural Resources.

Data Base Reference: S-00714-010

Subject Terms: Continental Shelves: Land Transfers: Lance

Purpose: The system processes information related to the sale of Outer Continental Shelf tracts. The input data are edited, and the total exposed bid amounts are audited. Input: Lease-sale data are input by the Outer Continental Shelf offices as sales occur. Content: The system covers all Outer Continental Shelf sales as they occur in various prographical areas. Output: Seven major reports are generated. Availability: Reports may be available, but confidential data

Agancy Centerly Chief: Division of Mineral Resources: 18th and C Streets NW, Washington, DC 20240; (202) 343-2721.

332

will be deleted

Land Base System. OMB Funding Title/Code: Management of Lands and Resources /

14-1109-0-1-302 Congressional Relevance: House Committee on Agriculture; House Committee on Appropriations: Interior Subcommittee; House Committee on Interior and Insular Affairs: Sengte Committee on Agriculture, Nutrition, and Forestry; Senste Committee on Approprietions: Interior Subcommittee: Senate Committee on Encrey

Date Sero Reference: S.00714-011

and Natural Resources. Subject Terres: Oil Shales.

Purpose: The system is limited to those lands involved in the oil shale or bentonite programs. As such it may be considered a support system or subsystem of the Oil Shale/Bentonite Title Clearance System. Input: The system contains basic geographic, planning, and administrative data. Input is from Bureau field offices in the affected sections of Colorado, Wyoming, and Utah. Consus: Data for the areas involved contain Master Title Plat, supplemental, and use lot information to support several lands records applications tasks, such as cadastral survey and public inquiry-responses utilization management. Gutout: Four basic land base reports are output. Arellability. Within the corrent Land Rase System, these reports are available in those states (RLM State Offices) coded into the data base.

Agency Contacts Chief: Division of Mineral Resources: 18th and C Streets NW, Washington, DC 20240; (202) 343-2721.

Leave Management System.

OMB Funding Titla/Code: Management of Lands and Resources / 14-1109-0-1-302 Congressional Raisvance: House Committee on Agriculture; House Committee on Appropriations: Interior Subcommittee;

House Committee on Interior and Insular Affairs; Sewase Committee on Agriculture, Nutrition, and Porestry; Sense Committee on Approprintions: leterior Subcommittee; Senare Committee on Energy and Natural Resources.

Data Base Reference: 5-00714-013

Subject Terrory Million: Constituents Contracto Lenges.

Energy Digest SEPTEMBER 1977

Purpose: This system supports billing and compliance checking procedures for all leanes. Input: Lease transactions, geographic date, and billing date are input from Bureau office files. Content: All leases in effect are included. Outsut: Thirty-two reports are produced, senerally concerned with transactions, geographic data, and administrative information. Availability: The reports are available upon request.

Agency Contact: Chief: Division of Mineral Resources: 18th and C. Streets NW, Washington, DC 20240, (202) 343-2721.

Library of Executed Floring Press Contracts.

OMB Funding Titls/Code: Operation and Maintenance / 14-5064-

0-2-301 Congressional Relayance: House Committee on Appropriations: Public Works Subcommittee; House Committee on Interior and Insular Affairs: Senate Committee on Appropriations: Public Works Subcommittee; Seven Committee on Energy and Natural Re-

Data Base Reference: S (0716-001

Subject Terror: Contractors; Contracts; Electric Power Generation; Libraries; Powerstance Public Utilizina.

Purpose: Under recismation law, the Secretary of the Interior is authorized to market power generated at various reclamation projects and at certain powerplants constructed by the Corps of Engineers. To recomplish this, the Bureau of Recismation has entered into electric service contracts with preference customers and private utilities. In addition, transmission and interconnection contracts are required to transmit federally generated power from the powerplants to distribution points. This library serves us a centralized collection of these contracts for the use of Bureau management and other interested parties in contract administration. Input: These service contracts are negotiated between the Federal Government and private utilities or preference customers which include municipalities. rural electric cooperatives, State agencies, Federal agencies, Indian tribes, public utility districts, and irrigation districts. Content: This library provides a contralized collection in Washington, DC for execoted electric service contracts, inserconnection and transmission service contracts, and other related contracts. General terms of electric service contracts include quantity of power sold (contract rate of delivery); delivery conditions, including points of delivery, delivery voltage, and points of measurement; and a rate achodule. General terms of interconnection and transmission contracts include amounts of power to be transmitted and to whom, points of interconnection, and a rate achodule. Octoor: No additional outrest is generated. Availability: The output is publicly available.

ney Contact: Division of Power: 18th and C Streets NW. Room 7612. Washington, DC 20240: (202) 343-5337.

Plant Operation and Paper Scheduling.

OM8 Funding Title/Code: Bonneville Power Administration Pand / 14-4045-0-3-301. Congressional Relavance: House Committee on Appropriations:

Public Works Subcommittee: House Committee on Interior and Insular Affairs; Senate Committee on Appropriations: Public Works Subcommittee: Senate Committee on Engray and Natural Re-ADIOTOSS.

Date Sava Reference: S.00718-004

Subject Terms: Electric Power Generation; Hydroelectric Fower; Powerplants.

Purpose: The primary objective of the plant scheduling process is to propare generating schedules at reservoirs directly contributing to the Pederal generation requirement to meet BPA loads and obligations to interconnect utilities while utilizing available resources in the most efficient manner possible. Anna: Input is predominantly internal real-time data from RODS system (Real-time Operations, Dispetch, and Scheduling) and natural flow forecasts. Content: This is a model of the BPA hydrogenerating system with select non-Pederal unstream regulating reservoirs. The program regulates the system à vdraulicaily and electrically, on or off control, to satisfy a given load condition. The resulting schedules are used both as a base for realtime control of the generating system through automatic load frequency control techniques and generation disputching and to provide data on probable operations. The scheduled generation is projected up to five weeks into the future in 1-hour increments for the first 48 hours, then 8-hour increments for the rest of the first 2-week period. The last three weeks of the scheduling period consist of a 1-week average period. This provides a link between the immediate operation and the analysis of seasonal loads and resources. Outsite The major output is a daily hardcopy report. There is CRT query capability. Availability: BPA customers and many other interested parties are provided with an indication of the probable Pederal system operation through this report.

Agazey Contect: 18th and C Streets NW, Room 5600, Washington, DC 20240; (202) 343-6955.

Power Flow Processes

OM8 Funding This/Code: Bonneville Power Administration Fund / 14-4045-0-3-301.
Congressional Relevance: House Committee on Appropriations:

Public Works Subcommittee; House Committee on Interior and Insular Affairs; Senser Committee on Appropriations: Public Works Subcommittee; Senser Committee on Energy and Natural Re-

Date Base Reference: 8-00718-005

Subject Tenens Effectsic Power, Hydrocleotric Power; Pewerplasts; Public Utilizans.

Purpose: This program solves the AC power flow problem for systerns of up to 2,000 busses. The program is BPA's basic system plasning tool. In addition, this program supports power system operation, especially the planning of scheduled outages. Aspar: Input for power flow studies comes from within BPA, the Corps of Engineers, Buresu of Reclamation, utilities in the Northwest Power Pool, BPA industrial customers, and the Western Systems Coordinating Council. Content: System source data include load forecasts, substation characteristics, power system configuration data, line characteristics, and generation data. Power system planning is based upon an annual evels, and the data are updated annually. Owner: The major output types are computer listings with electrical parameters, hardcoov oneline diagrams, graphic terminal one-line diagrams, and microfiche listings with electrical parameters. Base case data and some output are saved on magnetic disk and magnetic tape, and the power flow program is used several times each day. Availability: Output is generally for internal use. Some output is absend with Northwest utilities and some with members of the Western Systems Coordinating Council. There is no personal informatico in the output.

Agency Control: 18th and C Streets NW, Room 5600, Washington, DC 20240; (202) 343-6955.

337

Real-Time Operations, Dispatch and Scheduling (RODS).

OM8 Funding Title/Codes: Respectific Power Administration Pund /

14-405-G-3-301.

Congusational Roboveness: House Committee on Apprepriations:
Public Works Subcommittee, House Committee on Interior and Insular Affairs; Senant Committee on Apprepriations: Public Works
Subcommittee; Senast Committee on Apprepriations: Public Works
Subcommittee; Senast Committee on Briergy and Natural Resucrees.

Data Base Reference: 5-00718-005

Subject Terms: Electric Power Generation, Hydroelectric Power; Powertients: Public Unitries.

Purpose: The RODS system is a complex of digital computers providing the basic support for power scheduling and dispatch for generation and transmission. Initial functional applications were Automatic Generation Control which matches generation to internal lose and to hourly schedules with external utilities while preserving frequency at 60 Hz: Scheduling and Percenting, a substantial set of operation functions for hourly coordination of hydro resources and loads including power interchange and intertie schedules, streamflow schedules, system load forecast, hydroelectric generation schedules, and monitoring; and Data Acquisition and Display programs, a set of functions linking all other program groups to the hardware data acquisition systems. Asput: Data acquisition programs service hardware such as kWh, hydromet, powerhouse, teletype, load frequency control, SCADA, etc. Display programs provide link through the console hardware for all user input requests and output to CRT displays, console annunciators, and hardcopy devices. Consent: Block transfers of system data move over kilobit channel from SCADA to refresh data files used by RODS applications programs and to undate RODS display formats every 10 seconds. RODS subsystems at the Dittmer Control Contec are used to controline control of main grid substations. The center controls major generation at hydroelogtric projects of the Federal Columbia River Power System. Gutage Output is available through CRT displays, microwave, console annunciators, and hardcopy devices. Availability: Output is generally for internal use. Some output is shared with Northwest and Southwest utilities.

Agancy Contool: 18th and C Streets NW, Room 5600, Washington, DC 20240; (202) 343-6955.

38

Supervisory Council and Date Acquisition System (SCADA).

OM6 Funding Title/Code: Beancy-ille Power Administration Fund /

Congressionel Relavonce: House Committee on Appropriations: Public Works Subcommutee; House Committee on Interior and insular Affairs, Sowice Committee on Appropriations: Public Works Subcommittee; Savase Committee on Beergy and Natoral Re-

Data Base Reference: S-50718-056

Subject Terms: Ejectric Power Generation; Hydroelectric Power; Powerplans; Substitute Control.

Paymer SCADA provides direct support to dispatch and operation of the transmission system and includes remote control of substations. Control of a large number of substations is centralized through the master station. Japan: A high volume of data is collected from each remote substation including power circuit breaker position (open or closed), buss or transmission line voltage, transmission line or transformer MW and MVAR readings, transformer tap changer positions, transformer bank or reactor temperature readings. station slarms, and hot line indicators (energized or not). Contest: Master station hardware with remote units is located in Washington. Oregon, Ideho, and Montana. The primary and secondary systems provide a volume of data and control through a 2.5 second update cycle from all remotes. Output: SCADA computers drive annunciator lights on the dynamic group display boards of transmission grids. Illuminated lights indicate the field breakers and but line ludicators or switches that are open in the networks. In addition, output is made to consoles, microwave, and RODS. Data are associated with daily operation of the system. Asalishility: Output is generally for internal use. Some output will be shared with the Northwest utilities.

Agancy Contacts 18th and C Streets NW, Room 5600, Washington, DC 20240; (202) 343-6955.

#### 310

Planning and Billing System.

OMB Funding Table/Coda General Investigations / 14-1501-0-1-301; Operation and Maintenance / 14-1500-0-1-301. Congressional Relevances - House Committee on Appropriations Public Works Subcommittee; House Committee on Interior and Interior

tion; Senote Committee on Appropriations: Public Works Subcommittor; Senote Committee on Energy and Natural Resources; Senate Committee on Environment and Public Works.

Data Base Reference: S-00719-001

Subject Terms: Electric Power, Energy Planning; Hydroelectric Power, Powerplants.

Purpose: The Alaska Power Administration (APA) has assignments in planning for the development and use of Alaska's water. nower, and related resources, and in nower systems and nower manket studies. APA operates maintains, and markets the power from Federal hydroelectric projects and represents the Secretary of Interior in Alesko on nower matters. Januar The data are internal APA power projects provide project sales and revenues for power sold to local stillities. Contest: Projects provide monthly reports of electrical energy sold to nermit power billings to outtomers. Energy reports submitted by the projects are used in the preparation of sanual reports to the Federal Power Commission. General investigations studies are conducted to determine the most economical and appropriate means of development and utilization of water, nower, and related resources, and to represent the Secretary of the Interior in Alaska on power matters. Output: The major output types are power reports of energy produced, feasibility reports on proposed power projects, and special study reports on water resources. Reports are manually prepared. Assistability: The reports are publicly available. Primarily the data are used for internal purposes.

Agency Contoch Alaska Power Administration; P. O. Box 50, Juneau, AK 99002; (907) 586-7405.

#### ENVIRONMENTAL PROTECTION AGENCY

#### 340

Technical Assistance Data System (TADS), 10075.

OMB Funding Title/Code: Abatement and Control / 68-0108-0-1-

304.

Congressional Relevence: Hosse Committee on Appropriations:
HUD Independent Agencies Subcommittee; Heure Committee on
Interestate and Foreign Commerce; House Committee on Public
Works and Transportation; Sense Committee on Appropriations
HUD-Independent Agencies Subcommittee; Sense Committee on
Commerce, Science, and Transportation; Sense Committee on

vironment and Public Works.

Data Sass Reference: S-02300-017

Subject Termes Hazardoun Substances; Oli Spills; Pollution Control; Water

Purpose: TADS in to reduce the effects of oil and hazardous materials spills by resolving scribles scores to information on material disasterates are providing scribles scores to information or material disasterates are providing scribles scores to information or on the control of the control by the control of the contr

such solutions. To excrece unformation from the filts, the sace projection is search in our five and read read read and an arrow a solution in the arrow production in a green, flows, and smalls like rotter eggs can be likesified by assemble from the solution in the ceven of poll reveals, the two bier syntax is available to include the solution in the ceven of poll reveals, the two biers years in available AARC these boars. A system may be accused, it can of consequent, within one to three boars share the occurrence of a spill. Output There are no recurring reports produced by that systems. The data base is qurried in coder to respond to a speakil or contragency need for information. The Sociationary construction and Created have been different to the Sociationary contents and Created have been described.

Agency Contests Office of Water Program Operations; 401 M St. SW, Washington, DC 20460; (202) 245-3045.

#### 341

Energy Data System (EDS), 10257, OMB Funding Title/Code: Abstement and Control / 68-0108-0-1-

Congrussional Raisvences: House Committee on Appropriations. HUD Independent Agencies Subcommittee; House Committee on Interestes and Fereign Commerce; Susare Committee on Appropriations: HUD-Independent Aceacies Subcommittee: Sassie Commi-

tee on Environment and Public Works. Date Sess Reference: S-02300-022

in the file are publicly available.

Subject Tenne Air Polizzon; Emissions; Energy, Environment; Fazi Constraption; Polizzon Connol.

Purpose: EDS provides management with a flexible energy-environmental data base for evaluating problems associated with stationary source feel usage, feel quality, compliance with emission regulations, and related effects on air quality. The Office of Air Quality Planning and Standards uses the prepared reports for evalnating proposed compliance strategies or changes in emission regulations. Jugar. The EDS contains data collected primarily by other Redered agencies and other distaions within EPA. The Federal Power Commission provides Form 67 and 423 data; the Monitoring and Date Analysis Division surrelies air quality monitoring data from the SAROAD system and emissions data from the NEDS system. Data concerning emission resulations and source compliance schedules are supplied primarily by EPA's Division of Stationary Source Enforcement and the Office of Air Quality Planning and Standards. In addition, industrial organizations, such as the Edison Electric Institute, contribute supplementary information occasionally. Content: The system integrates all energy-related data presently in EPA's data banks (e.g., SIPS, NEDS, SAROAD, FPC-67, CDS) into one data file for quick-response, interactive access by EPA's Strategies and Air Standards Division. Output: Requested reports contain a wide range of energy information and gover such specific areas as fuel vac summaries by geographical region and by fuel-consuming categories. emission and equipment installed at large fuel-burning sources, regulations applicable to large fuel-burning sources, compliance schedules and status, modeling results for large powerplants, and sir quality data in the vicinity of large powerplants. Availability: Data ere publicly available.

Agancy Contact: Office of Air Quality Planning and Standards; Research Triangle Park, NC 27711; (919) 629-5201.

342

Spill Presention Control and Countermeasure System (SPCCS), 16032.

OMB Funding Title/Code: Abatement and Control / 68-0108-0-1-

304. Congressionel Relevances House Committee on Appropriations: HUD Independent Agencies Subcommittees; Heure Committee on Internation and Foreign Commerce; Switter Committee on Appropriations: HUD-Independent Agencies Subcommittee; Sweet Committees HUD-Independent Agencies Subcommittee; Sweet Committees Williams (1998).

tee on Commerce, Science, and Transportation

#### Date Boss Reference: S.02300:024

Subject Teams: Accident Provention, Hazardous Substances, Oil Spills, Oil Storges: Poliution Control: Water Pollution Control

Purpose: SPCCS is a tracking and reporting system used to monitor and report on compliance deadlines and actions to be taken for the prevention of spills from facilities storing oil and hazardous materials. Personnel from the Oil and Special Materials Control Division (OSMCD) and technical specialists in the regional offices use data in the automated file to initiate spill prevention plan reviews, compliance inspections, and penalty assessments. The system is also used by the Coast Guard to obtain information on oil spills which have been reported to EPA but which fall under the purview of the Cosst Guard for penalty assessment. Input: The data base is bring created from the input data being encoded by regions from information about oil storage facilities, spill reports, and enforcement renorts. Content: Nontransportation related facilities storing oil are required by law and Federal regulations to perpare still prevention control and countermeasure plans and to report oil spills to EPA or the Coast Guard. EPA has been empowered to amend facility SPCCS plans which are not successful at preventing spills, perform compliance inspections, request information pertinent to still control, and rule on extensions of plan preparation and implementation deadlines. Approximately 5,000 oil storage facility records are expected to enter the system sunually by way of reporting a spill or requesting a plan to be prepared. When it first enters the system, each facility generates an individual record. Each facility record will have 91 data elements of information. An estimated 24,000 update transactions a year will be required. Examples of the specific types of technical information coded into the file are: type, amount, cause and data of the smill, the body of water where the smill occurred, type of violation, and type of spill removal method used. Outsut: The specific types of reports which are prepared monthly from the data base are: description of spills which initiate the SPCCS Plan review and amendment process; list of facilities whose SPCCS Plan Reviews are pending; the status by region and facility of amendments in progress; a list of violations by facility and type of violation; a list of facilities required to respond to a Section 308 letter and who have not complied by the due date; and ad hac reports listing by region the number of extensions granted, inspections performed, spills orcurring, the causes of spills, the sources of spills, and spill descriptions. Availability: Data are publicly available.

Agency Contacts Office of Water Program Operations, 401 M St. SW. Washington, OC 20460; (202) 245-3045.

#### FEDERAL ENERGY ADMINISTRATION

Federal Energy Conservation Performance System, 6069. OMB Funding Titla/Code: Salaries and Expenses / 92-1500-0-1-305. Congressional Ralayonce: House Committee on Appropriations: Interior Subcommittee; House Committee on Government Operations; House Committee on Interstate and Poreum Commerce; Sessete Committee on Appropriations: Interior Subcommittee; Sexate Committee on Commerce, Science, and Transportation; Senate Committee on Energy and Natural Resources; Smare Committee on

### Governmental Affairs. Dote Bose Reference: S-02500-004

Subject Terms: Energy Consumption; Executive Agencies.

Purpose: This system is intended to collect information on the performance by the Federal Government in achieving improved energy officiency in its own facilities and operations. The authority for the collection of data is the Presidential Order of June 29, 1973. Input: Input is provided by 27 of the more energy consuming Federal agencies, such as the Department of Defence, Postal Service, GSA, and the Department of Transportation. Cantest: The content is energy consumption by type of fuel by Federal agency. The percent change is compared to the previous year's consumption. Information is collected quarterly on a national basis. Output: Annual reports provide information on energy usage by various fuel types by Federal approxy. Availability: Output is publicly available in the Federal Eneray Management Program's publication "Energy Conservation."

Agency Contact: National Energy Information Center; 1200 Pennsylvania Avc. NW, Room 1411, Washington, DC 20461; (202) 566-9025

## Project Conserve 6141.

OMS Funding Title/Code: Salaries and Expenses / 92-1500-0-1-305 Congrassional Relavance: House Committee on Appropriations: Interior Subcommittee: House Committee on Government Operations: House Committee on Interstate and Foreign Commerce: Sengle Committee on Appropriations: Interior Subcommittee: Sesste Committee on Commerce, Science, and Transportation: Sevote Committee on Energy and Natural Resources: Senate Committee on Governmental Affaire

## Date Base Reference: S-62500-005

Subject Terms: Community Participation; Energy Conservation; Housing Characteristics: Invaletion, Retrofiting.

Paragree: The purpose is to enable homogewords to furnish cartain characteristics of their dwellings and in return morely advice on what types and quantities of involution materials to add and an estimate of yearly energy savings. Input: Information is collected voluntarily from homeowners who wish to participate. FEA has conducted a program for Massachusetts and New Mexico, receiving voluntary responses from approximately 142,000 and 26,000 homeowners, respectively. FEA is now offering the computer programs and documentation to States interested in running their own programs. Content: The system content contains housing unit characteristics such as square footage, number of windows, number of doors, age of dwelling, and existing insulation characteristics. Owner Output is printouts to homeowners suggesting types and amounts of insulation materials needed and potential energy savings to be realized. Availability: Individual homeowner information is subject to the Privacy Act. A report covering the results of a pilot survey relating to Project Construe was published in October 1974.

Agency Contect: National Burrgy Information Center; 1200 Pennsylvanie Ave. NW, Room 1411, Washington, DC 20461; (202) 566-9325.

Ausomobile Classification Data Base, 6290.

OMB Funding Title/Code: Salaries and Expenses / 92-1500-0-1-305. Congressional Relayance: House Committee on Appropriations: Interior Subcommittee; House Committee on Oovernment Operations; House Committee on Interstate and Foreign Commerce; Sensor Committee on Appropriations Interior Schoommittee Senote Committee on Commerce, Science, and Transportation; Senate Committee on Energy and Natural Resources: Serger Committee on Governmental Affairs,

#### Date Sese Reference: S-(2900-005

Subject Terres: Automobiles, Classification Systems; Energy Conservation; Fael Conservation Gasoline.

Purpose: The system is to enable FEA to assist EPA to group sutos with similar characteristics (e.g., all autos weighing 2,500 pounds or more, or all autos over 16 feet long). Within each group, autos are to be ranked according to their fuel economy. Input The input is the manufacturer's automobile specifications. Content Specifications are weight, wheelbase, price, exterior size, passeeger space, and cargo volume. Output: Automobiles with like characteristics will be grouped to various estegories and will be ranked within each according to fuel economy. Availability: Output of this system

is exhibite available in the 1977 Gas Mileage Guide published mintly by the Bavironmental Protection Agency and the Federal Energy Administration.

Agancy Contact: National Energy Information Center; 1200 Pennsylvania Ave. NW, Room 1411, Washington, DC 20461; (202)

# 566-9025.

Electric Rate Demonstration Data System. 6318. OMB Funding Titla/Code: Salaries and Expenses / 92-1500-0-1-305.

Congressional Relayance: House Committee on Appropriations: Interior Subcommittee; House Committee on Government Operations: House Committee on Interstate and Porcign Commerces Senate Committee on Appropriations: Interior Subcommittee; Senare Committee on Commerce, Science, and Transportation; Sengte Committee on Hnergy and Natural Resources; Senate Committee on Governmental Affairs.

#### Date Sess Reference: 3-02500-007

Subject Terms: Electric Utilities; Blootric Utility Rates; Energy Consumption. Regrey Priors: Priors: Utilities.

Purpose: The system is for learning more about the effect that rate changes and load management techniques may have on electric utilities, utility customers, and onergy strategies. This will assist State regulatory Institutions in their decisions regarding electric utility rates. Input is based on data collected under cooperative approach with State and local government agencies. Content: The information in the file includes current energy usage data, stored data for related sources, and selected data for statistical analysis and modeling. Output: Reports will show how demand for electrical eneray is affected by price. Availability: Once the system becomes opcrational, publicly releasable information will be available through FEA's National Bacray Information Center.

Agency Contact: National Energy Information Conter: 1200 Pennsylvania Ave. NW, Room 1411, Washington, DC 20461; (202) 566-9025

Middle Distillate Price Manitoring System. 6006/6104. OMB Funding Title/Code: Salaries and Expenses / 92-1500-0-1-305. Congressional Relevance: House Committee on Appropriations: Interior Subsommittee: House Committee on Government Operations: House Committee on Interstate and Porcian Commerce: Senste Committee on Appropriations: Interior Subcommittee: Smore Committee on Commerce, Science, and Transportation; Senser Committee on Energy and Natural Resources: Senste Committee on

#### Governmental Affairs. Date Sone Reference: S-02500-008

Subject Terres: Energy Prices; Fucis; Hesting Oil; No. 2 Heating Oil; Price Regulation: Prices.

Purpose: On July 1, 1976, Middle Distillates (No. 2 hosting oil and No. 2 diesel fuel) were exempted from mandatory petroleum price and allocation regulations. The Middle Distillate Price Monitoring System was developed to track price trends of middle distillates at the refinery, retail, and wholesale levels. Monitoring of these price trends is necessary to assure that no abnormal price increases occur and to ensure adequate supplies to marketers during the transition period following decentrol. The system compares actual reported prices to national and regional index representative price ievels, which PEA believes would have provailed had middle distlilates remained under price controls. Input: The data are derived from monthly reports submitted by a scientifically selected sample of firms which sell No. 2 heating oil. From September 1976 through March 1977 the system is applied on a weekly basis with critical data obtained by telephone from the respondent companies. Content: The system congists of onles volume, percentage sales, average selling prior, and seventory data. Sciemissions are made monthly and are broken down by type of customer and by State. Residential sales and volume data are collected weekly from September through March. Output: Major reports are produced on a monthly/weekly basis and consist primarily of sales volume data and weighted average selling prices of No. 2 heating oil on a regional and national basis. Analishliity: Publicly releasable information is available through FEA's National Energy Information Center.

Agency Contest: National Energy Information Center; 1200 Pennsylvania Ave. NW, Room 1411, Washington, DC 20461; (202) 566-9021

Refinery Care Fourthrough, 6008/6105. OMB Fending Title/Code: Salaries and Expenses / 92-1500-0-1-305 Congressional Relevance: House Committee on Appropriations, Interior Subcommittee; Hour Committee on Government Operations: House Committee on Interstate and Foreign Commercer Sensor Committee on Appropriations: Interior Subcommittee: Senate Committee on Commerce Science and Transportation: Source Committee on Energy and Natural Resources; Senate Committee on Governmental Affairs

#### Date Rase Reference: 3-02900-009

Subject Torres: Energy Prices; Fuels; Gasoline; Heating Oil, Jet Puel; No. 2 Heating Oll; Petroleum; Price Regulation; Prices, Procure, Refineries

Purpose: The system serves as the means by which refiners subject to the FEA Petroleum Pricing Regulations compute and adjust May 15, 1973, selling prices for covered products (No. 2 oils, jet fire), gasoline, and propone). This allows FEA to monitor certain price movements within the industry. Input: The information is from refiners and natural gas processing plants. Coursel: The content inclodes the costs and quantities of imported and domestic crude netrolcum and the products luted above. Data are collected monthly on a national basis. Outset: Hardcony summaries of cost elements for various govered products are produced monthly. Applicability Publicly releasable information is available through FEA's National Russey Information Center.

Agency Contest: National Energy Information Center; 1200 Pennsylvania Ave. NW. Room 1411, Washington, DC 20461; (202) 566-9025.

OMB Funding Title/Code: Salaries and Expenses / 92-1500-0-1-305. Congressional Relevance: House Committee on Appropriations: Igterior Subcommittee: House Committee on Government Operations: House Committee on Interstate and Foreign Commerce: Sense Committee on Appropriations: Interior Subcommittee: Smow Committee on Commerce, Science, and Transportation; Senate Committee on Energy and Natural Resources: Senste Committee on Governmental Affairs.

#### Data Base Reference: S-02500-010

Propone/Busone Allocation System, 6025.

Subject Taxonia Statemer Puelly Inventories: Natural Glass Oil: Preparts: Re-

Purpose: The restern was developed to enable the FEA to monitoe existing and projected inventories of propane, butane, and other related forth produced from natural ass liquids. The primary reasons for this monitoring effort are to ensure the proper allocation of these fisels based on past usage and to identify the location and amousts of these ficels as possible substitutes for natural was should natural sesbe curtailed. Input: The information is supplied by producers, suppliers, certain wholesale numbases resellers, and operators of storage facilities for the covered products. Contest: Actual and projected volumes and sources of supply, supply obligation, and ownership of stored products are reported monthly on a national basis. Output Production and inventory level reports are produced monthly.

Annicability: Publicly releasable information is available through

FEA's National Energy Information Center.

Agency Cantorn National Energy Information Center, 1200 Pennsylvania Ave NW, Room 1411, Washington, DC 20461; (202) 566-9025.

Crede Oil Buy/Sell Program. 6031.

OMB Funding Title/Code: Salaries and Expenses / 92-1500-0-1-305.

Companisation Raisvanen Houre Committee on Appropriational Interior Subcommittee; Houre Committee on Covernment Operalions; House Committee on Intereste and Periogia Commores; Sense Committee on Appropriations: Interior Subcommittee; Sener Committee on Commerce, School, Committee of Subcommittee on Energy and Natural Resources; Sense Committee on Committee on Energy and Natural Resources; Sense Committee on

#### Date Base Reference: S 02900-011

Subject Terms: Crude Oil, Petroleum; Refineries; Resource Allocation.

Purpose This is system to shocate crude oil to sense that small callendage offers from see able to prefame inflicted crude oil to operate at excessorited by feedbly reciberate interfect excessor to the information of the control of the second which other todates are cruded to buy. Paper AULES, refused report to this system of the control of the cont

Agency Centors: National Energy Information Center; 1200 Pennsylvania Ave. NW, Room [41], Washington, DC 20461; (202) 566-9025.

#### 351

# Transfer Pricing System. 6047. OMB Funding Title/Code: Salaries and Expenses / 92-1500-0-1-305.

Cangas sisual Relavance: House Committee on Appropriations; Interior Subcommittee; Hause Committee on Government Operations; House Committee on Interests end Fercigo Committee; Seater Committee on Appropriations: Interior Subcommittee; Susace Committee on Energy and Netural Resource; Sevate Committee on Energy and Netural Resource; Sevate Committee on

## Data Base Reference: S-02900-012

## Soluject Terres: Crude Oil Imperis; Imports; Petroleum, Prices

Parsons: The objective of the Program is to monitor and regulate the prices at which oil companies transfer equity crude oil from their foreign to domestic affiliates. Such regulation is needed because of the cost passthrough provisions of the Emergency Petroleum Allocation Act of 1973. The FEA attempts to control these transfer prices by comparing them with prices from transactions involving the same or similar crude types that were conducted on an arm's-longth basis. When a company's transfer prices for a given crude exceed the arm's-length standard established by the FRA, a disallowence of cost is proposed. Input: The data are derived from reports submitted monthly by each refiner which imports \$00,000 barrels of crude oil during the month and/or each refiner which imports crude oil from an affiliated entity during the month. Content: The system consists of information concerning imported erade petroleum obtained by purchase and through exchanges, cost data for imported equity and buy-back oil, crude petroleum sales and purchases, fereign crude trading activity by country of origin, and crude characteristics date. Gunar: Output reports are generated monthly in hardcopy. Reports provide data on the high, low, and average transaction prices. Companies whose transaction prices exceed the computed average transaction price are subject to the issuance of a notice of distillowance, Ausiliability: Publicly releasable information is available through PEA's National Energy Information Contex.

Agency Contech National Energy Information Center; 1200 Pennsylvania Ave. NW, Room 1411, Washington, DC 20461; (202) 566-5075

#### 352

#### Crude Oil Entitlements (Equalization), 6072,

OMB Fuelding This/Code. Statents and Expenses (19):1500-0-1,105. Comprassional Relavoraces: Plass Committee on Appropriations linterior Subcommittee: Howe Committee on Government Operations; Howe Committee on Internate and Foreign Commerce, Smark Committee on Appropriations Interior Subcommittee on ac Committee on Commerce, Solven, and Transpareation; Smark Committee on Energy and Natural Resources; Sensire Committee on Governmental Alloys.

#### Date Sons Reference: S-02500-014

Subject Terror Crude Oil; Energy Prices; Inventories, Petroleum, Prices; Refineries: Resource Allocation.

Purpose: The system is to collect and process data on crude oil purchases which will be utilized to establish the monthly entitlements buy/sell position of each domestic refiner. This system supports the crude oil allocation program for the purpose of ensuring the maintenance of competitive domestic marketplace for all refiners regardless of size. Input: External input is provided by refiners of domestic and imported crude oil (140) and importers of residual oil (53). The forms are filed monthly by the fifth day of the second month following the month of operation. The reporting requirement is mandatory. Content: The system provides a listing of current volumes and weighted average costs of various categories of domestic and imported crude oil which is booked into refinery inventory by each domestic refiner for processing. Other data elements are adjustments to estimated volumes for crude oil from prior months: total crude runs to stills: required sale/surchase of entitlements; biss and exception relief, where applicable; and domestic crude oil supply ratio. Output: The principal output is historical cost comparison report, a calculations report, a Federal Register report, and a processing agreement crosscheck. These are issued monthly and are hardcopy. Availability: Individual company reports contain proprietary information and are not publicly available. Monthly entitlement notices, with values and huy/sell requirements, are published in Federal Energy Onidelines and in the Federal Register.

Agency Contects National Energy Information Center; 1200 Pennsylvania Ave. NW, Room 1411, Washington, DC 20461; (202) 566-9025.

#### 53

# Mandatory Of Imprort Propert (MOID), 6127(53)3. OMB Funding Hitt, Code: Shatter and Expense (F.2-1500-0-1-30). Congranisonal Relevances: House Committee on Appropriations February Subsemilative, House Committee on Government Opensions: House Committee, House Committee on Government Opensions: House Committee on Internate and Foreign Commisses, Standon Committee on Appropriations: Interfor Subsemmittee, Standon Exercise Standon Enterfor Subsemittiee, Standon Committee on Committee

Governmental Affairs.

#### Subject Terms: Imports: Petrology Imports: Resource Allocation.

Purpose: The system is an accounts receivable system. It stores, retrieves, and processes data on imported petroleum and petroleum products for the purpose of administering the Mandatory Oil Import Allocation and Licensing Program in accordance with Presidential Proclamation 3379. Apast: The data are obtained from other Gov-

ernment agencies and firms, including parent, subsidiary, or affiliated firms, which have incurred feet for the importation of coude oil. unfinished cits, and finished netroleum products during a nerticular menth. Content: The MOIP system contains data taken from allocations licenses consumption entry forms refund documents and remittance advices. These documents reflect the transactions of anproximately 700 companies which import petrologic and petrologic products. The consumption entry forms are received daily from the Customs Offices in each district. They provide data on the number of barrols, type of product, duties paid, and licensers) to be charged for each importation. Outsut: Outsut is produced as required and includes: Fees incurred, transaction lists, importer transaction lists. importer master list, current heads list, impacter allocation summary allocation remost current Records issued current Remove listed check navments accepted, new bonds/rider, unaccompanied payments, additions to license table, authorized refunds to be issued. shipment discrepancy, potential refund qualification, overdue accounts, closed licenses, shimments in excess of license amount, shinments made against expered licenses, crude and unfinished oil imports, finished and other petroleum, and residual fuel. Availabilits: Publicly releasable information is available through FRA's National Rosety Information Center

Agancy Contact: National Energy Information Center: 1200 Pennsylvania Ave. NW. Room 1411. Washington. DC 20461: (202) 566-9025.

#### FEA OII Impact System 6253.

OMR Funding Title/Code: Salaries and Expenses / 92-1500-0-1-305 Congrattional Ralayanca: House Committee on Appropriations: Interior Subcommittee: House Committee on Government Operations: House Committee on Interstate and Foreign Commerce: Smale Committee on Appropriations: Interior Subcommittee: Smate Committee on Commerce, Science, and Transportation; Senate Committee on Regrey and Natural Resources: Sensor Committee'on Governmental Affairs.

#### Date Bose Reference: S-00960-017

### Subject Terms: Crude Oil Imports; Imports; Oil; Potroleum Imports.

Purpose: The system provides the recent by which firms report data on the importation of crude oil, unfinished oils, and finished netroleum products into the United States and Puerto Rico, as well as shipments of residual feel oil into the East Coast Refining District pursuant to Public Laws 93-275 and 93-159, as amended, and Presidontial Proclamation 3279. Input: Information is filed on a monthly basis by approximately 700 firms which import crude petroleum and specified petroleum products. Content: The system is undated on a monthly basis and contains information by respondent company relative to port of entry, country of origin, quantity of imports, imnort Biomes numbers, and product imported. Quisst: Reports are produced monthly. In addition, plans call for the availability of data for on-line queries. Availability: Publicly releasable information is available through FEA's National Energy Information Center.

Agamey Contoct: National Energy Information Center; 1200 Pennsylvania Ave. NW, Room 1411, Washington, DC 20461; (202) 566-9025.

#### Crude Oil First Purchaser, 6272.

OMB Funding Title/Code: Salaries and Expenses / 92-1500-0-1-305. Congressional Relayonse: House Committee on Appropriations: Interior Subcommittee: House Committee on Government Operations: House Committee on Interstate and Foreign Commerce: Smote Committee on Appropriations: Interior Subcommittee: Senare Committee on Commerce, Science, and Transportation; Senate Committee on Energy and Natural Resources; Senste Committee on Governmental Affaira.

Date Bern Belmann, S.03905-019

Subject Terms Crede Oil: Demostic Crede Oil: Recess Prices: Petroleum Prince Price Regulation.

Purpose: This system, which was involvemented by authority of the Energy Policy and Conservation Act of 1975, calculates the composits monthly price of domestic crude oil based upon its first exchange for value. This composite price is compared with maximum prices nermitted to determine whether additional regulatory actions are warranted. Assat: Reports are from any firms that obtain ownership of domestic crode oil though numbers or other exchange. Contest-Geographic coverage includes the 50 States and Parrto Rico. Data are reported monthly. Three bundred firms provide data showing the volume and book value of course oil much seed by type (upper tier lower tier, stripper), by location (State), and by individual producer/ operators. Output: The principal reports are: Domestic Crude Oil Volume and Price Analysis Summary: Domestic Crude Oil Volume and Price Analysis-Company Summary; and subsidiary reports, including Perchasers/Sellers Report and Volume/Costs Variance Excention Report. These are recoluted monthly and are hardcom-Appliability: Price and volumetric reports are for limited official use. Individual company reports contain proprietary information and are not publicly available. Summary data are available monthly in the Monthly Recry Review

Agency Contact: National Energy Information Center; 1200 Pennsylvania Ave., NW, Room 1411, Washington, DC 20461; (202) 566,9025

Major Fuel Burning Installations (MFBI), 6217. OMB Funding Title/Code: Salaries and Expenses / 92-1500-0-1-305.

Congrassional Relevance: House Committee on Appropriations: Interior Subcommittee: House Committee on Government Operations: House Committee on Interstate and Poreign Commerce: Sessiv Committee on Appropriations: Interior Subcommittee: Senste Committee on Commerce, Science, and Transportation: Senate Committee on Energy and Natural Resources: Senate Committee on Governmental Affairs.

#### Data Base Zeference: S-02900-019

Subject Terms: Cost; Energy Consumption; Energy Policy; Poels; Major Pael Surring Installations; Natural One; Oil.

Purpose: This system collected information from major fuel bursing installations (excluding utility companies) for the ultimate purpose of decreasing the use of scarce oil and natural gas as fuels and increasing the use of abundantly available coal supplies. FEA analyzed this information and identified firms which could be considered candidates to be issued a Federal order requiring that coal be used to fire the combustor. The analysis was made on the basis of such things as coal availability, environmental considerations, and the financial shillty of the firm to absorb costs isvolved in converting the combustor for coal use. Insut: Reports were completed by all major fuel burning installation (excluding utility companies) which had combustoes with a designed firing rate of at least 100 million RTII/hr. Content Information was collected on a one-sime basis. and includes fuel use data, combustor characteristics, and air quality data. Output: Listings of summary characteristics of individual combustors are produced. Availability: Publicity releasable information is available through FEA's National Energy Information Center.

Agency Centect National Bacryy Information Center; 1200 Pennsylvania Ave. NW. Room 1411, Washington, DC 20461; (202) 556-9025

## 257

Natural Gas Curtailments 6219

OMR Funding Title / Code: Salzrics and Rungsses / 92-1500-0-1-305 Congrassional Ralayanea: House Committee on Appropriations: Interior Soboommittee; House Committee on Government Operations; Howse Committee on Interstate and Foreign Commerco, Senate Committee on Appropriations: Interior Subcommittee: Senole Committee on Commerce, Science, and Transportation; Senser Committee on Energy and Natural Resources: Sexuty Committee on Governmental Affairs

#### Date Rese Reference: S-02900-020

Subject Terms: Energy Policy, Energy Shortages; Fiels; Natural Gas

Payeer: The system was developed and implemented to collect data pertaining to natural gas shortages and to assess the resulting impact on alternate energy sources. Jegut: The data contained in the file for this system are derived from submission of reports from intrastate distributors of natural gas to end-use customers (this syssem is operated iginity with FPC and includes data collected by PPC for interstace distribution of natural gas). Twelve-month historical data are gathered each summer along with a 12-month projection. Projected data are updated on a sample basis during the winter heating season. Content: All reporting firms fumish basic delivery data for end-use customers by month for the past and projected heating years. Data pertaining to large end-use customers include individual accounts of deliveries, curtailments, and alternate fuel usage for the 2-wear period. Each large customer is identified as to State and county in which deliveries are received, category of curtomer, type of service, SIC code, and FPC priority. Gutput: Output is produced semiannually and includes State Aggregated Delivery and Curtailment Data; Demand on Alternate Feel By Type, Supply, and Demand Alternatives; and Degree Day Data. Augilability: Results of the Gas Curtailments Survey are tabulated in the publication Projected Natural Gas Curasiments and Potential Needs for Additional Altereste Fuels, which is publicly available through NTIS.

Agency Contact: National Entray Information Center: 1200 Pennsylvania Ave. NW. Room 1411. Washington, DC 20461: (202) 166-9015

Major Fuel Byrning Installation-Early Planning Process Identification OM8 Funding Title/Code: Salaries and Bunerses / 92-1508-0-1-305. Congressionel Ralevenes: House Committee on Appendiations: Interror Subcommittee: House Committee on Government Operations: House Committee on Interstate and Poreign Commerces Senste Committee on Agreequiations: Interior Subcommittee: Sen are Committee on Commerce, Science, and Transportation: Senate Committee on Energy and Natural Resources: Smale Committee on Governmental Affairs

#### Data Base Reference: S-02900-021

Sobject Terenz Cool; Energy Consumption; Energy Policy; Fuels; Major Poel Burning Instablishops.

Parpase: This system will collect information from major fuel burning installations (excluding utility companies) for the ultimate purpose of discouraging the use of scarce oil and natural gas supplies and encouraging the use of abundantly available coal supplies. Pions that are planning to construct combustors having a firing rate of 100 million BTU/he, or greater will report to PEA as to whether or not the combustors will be constructed with the capacity to burn coal as their primary energy source. If a firm respeeds "no," FEA will oppsider issuing an order that would require such a capacity. PEA will base a final decision on this matter on such factors as the synilability of coal supplies, environmental considerations, and financial ability of the firm to absorb the additional costs involved in constructing the combusing for c \* e No.2 \*\* 5 \*\* 2.2 \*\* . \*\* . from all major . \* 1 11/4 /5 11 THE Content: The sy - 1

tion and individual combustor characteristics. This study is planted to be conducted on a one-time bases. Companies will submit undator as necessary. Output: The output is the expected operational data for combustors and the expected candidates to be issued construction orders. Availability: Publicity releasable information is available through FEA's National Energy Information Center.

Agency Contoch National Energy Information Center; 1200 Pennsylvania Ave. NW, Room 1411, Washington, DC 20461; (202) 566-9025.

Drilling Equipment Production Survey, ERD-01, OMB Funding Title/Code: Salarios and Expenses / 92-1500-0-1-305. Congressional Relayance: House Committee on Appropriations: Interior Subcommittee: House Committee on Government Operations: House Committee on Interstate and Poreign Commerces Sonnie Committee on Appropriations: Interior Subcommittee: Senofe Committee on Commerce, Science, and Transpectation: Senote Committee on Energy and Natural Resources: Senore Committee on Governmental Affairs.

#### Date Sace Reference: S-02900-022

Subject Yourn: Drilling Equipment, Equipment; Porecesting; Inventories; Oil Well Drilling.

Purpose The purpose is to determine drilling equipment availabillsy in certain years in order to forecast requirements in preparing National Energy Outlook (NEO) and other future drilling forecasts. Input: The survey consists of collecting data through secondary sources in order to perform an analysis of the manufacturing companies that are supplying the principal elements of oil field drilling ecisioment. Content: The drilling equipment involved is rotary drilling rigs; oil country subular goods, including drill pipe, mobile and fixed drilling platforms; and surface equipment, such as, pumping units, sucker rods, electric motors, and steel tanks. The survey anslyzes actual or indicated manufacturing constraints. It also analyzes proposals recommending possible solutions. Output: The survey results will be prepared in a loose-leaf type report. This will be one report only, followed in two years with a comparable survey. Analle-Mility: Reports are for internal use only. Publicly releasable informstion is available through FEA's National Energy Information Conter.

Agency Contact: National Energy Information Center; 1200 Pennsylvania Ave. NW, Room 1411, Washington, DC 20461; (202) 566-9025.

Trends in Refinery Capacity and Utilization of Petroleum Refineries In the United States and Parelen Refinery Exporting Centers, ERD-02. OMB Funding Title/Code: Salaries and Bapenses / 92-1500-0-1-305 Congressional Ralayance: House Committee on Appropriations: Interior Subcommittee; House Committee on Ocvernment Operations; House Committee on Interstate and Poreign Commerce; Sensie Committee on Appropriations: Interior Subcommittee; Senate Committee on Commerce, Science, and Transportation: Sesole Committee on Energy and Natural Resources; Senate Committee on Oovernmental Affairs

#### Data Base Beforense S.62500.023

Subject Turnis Foreign Countries; Imports; Petroleum Imports; Petroleum Refiseries: Refiseries.

Purpose: This system monitors the growth of U.S. petroleum refining capacity and that of certain world refining exporting centers together with a 5-year forecast of such growth. It halps determine whether adequate domestic refining is being attained or if foreign refining capacity is being constructed to export products to the United States. Input: System input is from trade journals, newspapers, and miscellaneous literature sources, Bureau of Mines historical data, Office of Regulatory Programs records, CIA reports, and pertotal contact with companies pilaming new capacity. Contact The errest covered are the United States, Carbines Jishamas, Middle Best, Esserie Casada, Italy, Silespoor, Netherlands, as well as othera. The system is pulsed animally with crops on influency capacity consumption for fortigin experieng centers, espects to the United States and fortigin corrects, only assays in Grouds in the United States and fortigin corrects. Objects As named board report is produced. Assistability Objects as publicly switzles in the publicators. Trooth in Knizory Capacity and Uniteración. Venezione Referencies Devolución. Assistability objects and the Carbinette States (Trooth in Knizory Capacity and Uniteración, Francisco Ministration, Carter.

Aganty Center: National Energy Information Center; 1200 Pennsylvanis Ave. NW, Room 1411, Washington, DC 20461, (202) 566-9025.

#### Protect Operations System (POS), ERD-03.

ONB Nording Tito/Code. Statistics and Expenses (92-1800-6-180). Coagusational Belowence. Hour Committee on Agrogational Endowment. Hour Committee on Agrogational Endowment. Hour Committee on Committee on Committee on Committee on Committee on Committee on Agrogational Information Committee on Agrogational Information States Committee on Agrogational Information States Committee on Committee, Solore, and Transportation, States Committee on Energy and Natural Resources; Sensor Committee on Energy and Sensor Sensor Sensor Committee on Energy and Sensor Se

#### Data Base Reference: S-02100-024

Subject Teres: Demonstration Projects; Energy Research, Research and Development.

Arguer The system is no mobile to be implementation states of the PEA strategy means development prosper and square the PEA strategy means development prosper and square the PEA strategy means development proposed organization offsite the critical eletterates for the peace of t

Agancy Contoct: National Energy Information Center; 1200 Pennsylvania Ave. NW, Room 1411, Washington, DC 20461; (202) 566-9025.

#### 362 Plume Model, 6276

OMB Funding Tible/Codes: Substitute and Extenses / 92-1500-0-1-305. Compactalend Edwardense: Hauser Committee on Appropriationae finterior Subcommittee; Hauser Committee on Governments Opertione, Houser Committee on Internation and Foreign Commence; Seasor Committee on Appropriations Interior Subcommittee, Seasor Committee on Commerce, Science, and Transportations, Seasor Committee on Storagy and Natural Resources; Seasor Committee on Governmental Affects.

#### Data Base Beference: S-02900-025

Subject Terres: Forecasting; Industrial Waster; Mathematical Models; Saline Water; Simulation; Water Pollution.

Purpose: The Pjume Model is a three-dimensional model predicting the dispersion of effluent into large bodies of water. It is used to predict how fast the effluent discharged will decline to the normal salt concentration in these bodies of water. Input: The information concress smooth, bodies of water and smooths site locations and the nature of the site officence. Input is from the National Coranggraphic and Atmospheric Administration and other generally published sources, e.g., university studies. Content: The data include a basic data dock concerning a body of water. Included is information such as the concentration of salt, the water temperature, the currents, the bottom contours, and the geographic boundaries. Data are also input concerning the specific site to be considered. This includes the type of structure involved, the angle and velocity of offluence, and the temperature of the effluence. Output: Computer printests of the numerical results of the model on various site configurations are conduced on an ax requested basis. Contours (graphic representations of the effluent movement) can be drawn from these data. Availability. The numerical output is for internal use by FEA analysts. The contours are published in the Sentegic Petroleum Sites Environmental Impact Statements. Those data are not proprietary

Agency Contect: National Energy Information Center; 1200 Pennsylvania Ave. NW, Room 1411, Washington, DC 20461; (202) 566-9025.

#### Strategic Petroleum Reserves Program-Wide System (SPR). 6291.

OMB Funding This/Code: Statefor and Experience /9.1 1900-C-1-303. Congrussional Bullworner. Hoss Committee on Appropriations Intenior Subcommittee; Hosse Committee on Generational Option Formations, Howar Committee on Committee on Committee on Sense Committee on Appropriations Instein Subcommittee, Sense Committee on Empropriations Instein Subcommittee, One Committee on Emergy and Natural Resources, Sense Committee on Governmental, August 2018.

## Date Bost Reference: S-02900-026

Subject Terrair Energy Supplies, Manpower Utilization, Petroleum Reserves

Purpose: This PERT system was created to enable Strategic Potroleum Reserve Office (SPRO) management to monitor progress toward the achievement of program goals as delineated in the SPRO operating plan and to facilitate the effective coordination of projects that involve more than one Associate Assistant Administrator office. Input: Each Associate Assistant Administrator for Strategic Pr troleum Reserve Office enters the proposed activities and sche for his office and any updates to previous schedules on internaentry forms which are then keyed into the system. Content system meniters major activities, such as construction, fill statu: oil sequipition, for the entire Strategic Petroleum Reserve Pro-The system is updated as needed. Output: The major reports a PERT-type reports on hardcony computer printouts which are duced as needed. The major reports are activity reports abowing a activity and its early and late sport dates, early and late finish da slack, duration and description; and Milestone Event Reports exdensing all the activities to major milestone events to give a bett overall view of the project. Availability: These reports are intendefor internal use only. They are designed to sid SPRO in the management of all phases of the Strategic Reserve Program.

Agency Corboth National Energy Information Center; 1200 Pennsylvania Ave. NW, Room 1411, Washington, DC 20461; (202) 566-9025.

# Site Distribution Model, 6293. OMB Funding Title/Code: Salaries and Expenses / 92-1500-0-1-305.

Comparealment Raisvannes. House Committee on Appropriations: Interior Subcommittee; House Committee on Government Operations; House Committee on Inferestate and Poreign Commerces; Senset Committee on Appropriations: Interior Subcommittee; Senset Committee on Commerce, School, and Transportation; Senset Committee on Emergy and Natural Resources; Senset Committee on

#### Data Base Reference: 5-62900-027

Subject Terms: Energy Storage, Mathematical Models; Petroleum Distribution, Petroleum Storage; Sandanon.

Purpuse: This model is designed to provide least cost solvines among alternative providents moting anis and distributions systems. Ampair: Discrete performance parameters neer provided by analysis. Castern: The performance parameter include costs, apactive, caster, geographic Necesion of potential tiles, miles of pipeline, and rates, geographic Necesion of potential tiles, miles of pipeline, and hashedopy comparer printings of model findings to be used by the snalysis. Austitability: The output from this model is designed for invernal PEA as by cognitarin snalysis.

Agency Center: National Energy Information Center; 1200 Pennsylvania Ave. NW, Room 1411, Wastington, DC 20461; (202) 566-9025.

#### 365

Companionale Hauste Research Data Spaces (CHRSD, 6212.

OMF Funding Thirt Choose Statines and Exposers 19:2190-0-1-195.

Congruestlessed Balavance: Haust Committee on Appropriations: Hore Committee on Ownerment: Operations; House Committee on Esternate and Foreign Commence; Observed Committee on Appropriations; House Committee on Letterate and Foreign Commence; Sorter Committee on Committee on Letterate Subcommittees on Appropriation; John Committee on Com

#### Data Base Reference: 5-02500-028

Subject Terms: Economic Impact, Energy Contemption, Energy Policy, Papatation Statistics

Purpose: The system is to provide a flexible tool for the evaluation and analysis of the potential contemps and social impact of proposed energy-related regulations, policies, and practices on low and middle income families, special impact groups such as the elderly, the handicapped, and the poor, as well as on the general population at the State level. Input: The Phase I CHRD System is being designed as a file of microdate containing records on individual households and component persons. The primary data source for this purpose is the 1970 Public Use Sample (PUS) from the decennial census. The vorsion of the PUS chosen for Phase I implementation is the State Public Assistance Cost Estimator (SPACE) file. This file is a State stratified subsample containing approximately 150,000 households drawn from the full State PUS. Content: The analytical framework used for Phase I development is an adaptation of HEW's microsimulation Transfer Income Model. The Phase I system is expected to be on-line in March 1977 and will provide extinates of household energy consumption and expenditures for selected years 1974-1985 at the State level. Also, the system will serve as a key mechanism for the acticipation of consumer reaction to proposed energy programs and policies. Owner. The major reports will be essentially descriptive and will be produced as needed. Descriptive uses would include the preparation of table of income distribution, nationally, regionally, and for States. It would also include tabulations of energy consumption crosstabulated with the desired combination of accoraphic, demographic, and socioeconomic characteristics. Comparisons of such tabulations for projected periods with similar tehulations for a recent base period would show how energy programs, in conjunction with other economic and demographic factors, will operate to change such distributions. These reports will be produced in machine-rendable and hardcopy form. Availability: Publicly releasable information is available through FRA's National Energy Information Center.

Agency Contact: National Energy Information Center; 1200 Pennsylvania Ave. Room 1411, Wattington, DC 20461; (202) 566-9025.

# 366 Federal Energy Information Locator System (FEILS), 6003.

OMB Fueller Tille/Code: States and Express (92.1500-0-1-)05. Compassional Statyware. How Committee on Appropriations Interior Stocommittee, Hosse Committee on Government Operations; Hows Committee on Interests and Foreign Commence; Sease Committee on Appropriations (Interior Subcommuttee, Sease Committee on Appropriations (Interior Subcommuttee, Sease Committee on Appropriations; Interior Subcommuttee, Sease Committee on Energy sed Material Resources; Sonate Committee on Commence, Science, and Transportation; Sonate

#### Date Bess Reference: S-02900-029

Subject Terms: Data Bases, France: Information Services

Person: In December 1973, the Federal Energy Office (FEO) was created by Executive Order, and on January 23, 1974, the President directed that the Office be the focal point for energy information in the Pederal Government. In response to the Executive Order, the Administrator of PEO created the Interesency Task Porce on Energy Information to survey energy data in the Federal Government. FEILS represents the first step undertaken toward that goal, The FEILS data base was assembled and verified between Pebruary 1974 and July 1975 and undated in 1976. This directory is a comprehergive inventory of energy information available from 44 separate Federal agencies, bureaus, and administrations conducting 279 different programs relating to energy data. Insur: FEILS was developed from a series of questionnaires completed by Pederal agencies during 1974 and 1975. The 1976 undate consisted of a review of the initial data submitted by each agency, and new or change data added to the FEILS 1976 data base. Each agency provided energy program data for 12 energy categories-coal, electricity, energy-related, secthermal, natural gas, nuclear, oil shale, organic waste petroleum, petroloum products, solar, and tar sands. Data may be retrieved from the data base by reference to these energy source estegories or to any of the 90 functions related to them, e.g., exploration, extraction, processing. Content: The system is an automated facility that maintains information about the location of energy-related data within the Poderal Government. The data base comprises 44 agency program descriptions, 279 program summaries, and \$8 related file/data descriptions. Each agency description identifies major energy-related programs that provide or use energy data, the energy source codes that are covered by the programs, types of supporting data that are available, the date that the description was last undated, and the agency contact office and the telephone number. Each program description identifies the program name and number, energy sources and functions covered by the program, description of the program and its uses and objectives, status as to a data source or data requirement, survey form used, date of last update, and office contact and telephone number. Files identify file name, energy sources covered description of data content, number of records if known, size of record if known, date of description last update, and agency contact office and telephone number. Outsut: The FBHS directory is printed annually and an on-line base query capability is available through Data Base Management System (ADABAS). Availability. The directory is available to Government personnel via FEA's National Energy Information Center, On-line ocery is available to authorized users via NRIC terminals

Agreey Contest: National Energy Information Center; 1200 Prensylvania Ave. NW, Room 1411, Washington, DC 20461; (202) 566-9025.

#### 167

National Every Information Center (HEIC). 6062.

OMS Funding Title/Codg: Salaries and Expenses / 92-1500-0-1-305.

Congrassional Relevence: House Committee on Appropriations: Interior Subcommittee; House Committee on Government Operations; House Committee on Interests and Porting Commerce, Source Committee on Appropriations: Interests and Porting Commerce; Source Committee on Commerce, Science, and Transportation; Sense Committee on Commerce, Science, and Transportation; Sense Committee on Energy and Natural Resources; Sense Committee on Governmental, Affairs

#### Data Base Reference: S-02900-030

#### Subject Terms: Energy, Information Centers.

Administrator to provide for a central clearinghouse for Federal agencies and State governments seeking energy information and assistance from the Federal Government. Other corollary functions are to develop special programs for the coordination of energy information activities and the exchange of energy information with other Pederal agencies, States, counties, and cities; provide staff assistance to the Federal Inter-Agency Council on Energy Information; identify and estates existing energy data sources, reporting systems, and data; develop and promulgate standards in energy terminology; provide assistance to the States in their data collection activities; manage the FEA forms clearance process; retain, store, and catalog all FEA staff and contractor technical publications and reports; provide technicel support services for the preparation and publication of newsletters, reports, and special studies; provide for the dissemination of energy information by such means as bibliographies, directories, and development and utilization of pertinent automated data bases; and respond to both written and verbal inquiries. In the exercise of these functions, the NEIC provides a complete spectrum of capabilities in technical services, research services, and system services, and maintains a staff office for intergovernmental coordination. Input: NEIC is concerned with all levels of energy information resources in Goverament, industry, and the academic and professional world. It taps more than 100 data banks outside of FEA such as International Statistics (statistical), the Engineering Index (sechnical), the Congressional Information Service Index (congressional), and the Information Bank of the New York Times (general). Data reported by energy-related companies and corporations are maintained in more then 50 data bases by FBA in support of its analytical and regulators functions. The NBIC maintains a collection of monographs, reports, and periodicals in print, microform, and automated media, and, as a national clearinghouse, accesses many additional energy information sources and facilities. NEIC also establishes and oversoes regional energy information services centers. Context: The National Energy Information Center is a comprehensive source of energy data and information. There are no geographical limitations. Update cycles vary from dally to annually or one-time, depending upon the particufar area of the total energy information field being considered. Our awa: Three hundred forty-two technical reports are summarized in a December 1975 bibliography and its November 1976 update, Most of these reports are available through NTIS. The bibliography, Technical Reports of the Federal Energy Administration, is NYIS number PB 248 915 and costs \$5. Some of the reports, such as the Project Independence reports, are available through GPO. Some of the monthly reports, such as the Monthly Energy Review and the Monthly Petroleum Product Price Report are among the best known and most used reports. These reports are updated each year with an annual National Energy Outlook, NEIC also publishes its own Network Services Bulletin. Many special reports and tabulations are produced on request. Hardcopy printouts of most of the content of automated data files can be produced. Appliability: Most NEIC renorts are available to the public through NTIS or GPO. Much additional unpublished information and data are available to the public. If the data are proprietary, they may sametimes be releasable in an aggregated form.

Parasse: Section 20.(4) of Public Law 23-275 requires the FEA

Agenty Contact: National Buergy Information Center; 1200 Pennsylvania Ava. NW, Room 1411, Washington, DC 20461; (202) 566-9025.

#### 368 FEA Data Dictionary, 6075.

OMB Funding THe/Code: Saltries and Express / 92-1500-0-1-05. Congestated Bathwases Hose Committee on Appropriations in-terior Subcounsition: Howe Committee on Operation Committee in House Committee on Operation Committee interior Subcounsition: House Committee on Exercise Committee on Subcounsition Committee in Committee Committee Committee on Part of Committee Committee on Committee on Committee Committee on Committee o

#### Data Base Reference: S-02900-601

#### Subject Terms: Dictionaries, Energy, Glossaries

Purpose: The dictionary was established in 1975 to provide PEA program offices with information about the data being collected and processed in FEA. It contains processing and modeling systems descriptions, input energy forms descriptions, output reports descriptions, files or data base descriptions, and data element descriptions for the Passay Data Porms. There are two additional sections covering the Federal Energy Information Locator System (PEILS) and selected energy forms from other agencies used in the FEA Forms Clearance functions. Input: The systems, models, files, reports, and forms descriptions were derived from PEA program offices. The FEILS data were collected from each Federal agency having energyrelated programs. Content: The dictionary is arranged in several sections, each with an index corresponding to the various items being presented. The interrelationship between the systems, the input forms that provide data, and the data elements being collected establishes a hierarchial arrangement of the data that allows a user to trace the linkages to all parts of a system (on-line). Each record includes the item name, synonymous name, a description of the item and its purpose, source of the description. Office of Primary Interest, PEA project number, security classification of the data, and other related data. PRUS records are similar to the above. but they also include agency program numbers, agency contact office and telephone numbers, and the energy functions related to the energy sources reported. Outsw: The Data Dictionary is printed anqually and has on-line data base query capability through Data Base Management System (ADABAS). Anallability: The Data Dictionary is printed for internal PEA distribution. The on-line system is available to FEA users via NEIC terminals.

Agency Contests National Energy information Contest; 1200 Pennsylvania Ave. NW, Room 1411, Washington, DC 20461; (202) 566-9025.

# Sulpart L. 6032. OMB Funding Titls/Code: Salaries and Expenses / 92-1500-0-1-305.

Congrastional Relevences: House Committee on Appropriational Incenter Subcommittoe, House Committee on Government Operations, House Committee on Internstea and Poretige Commerces, Seesaw Committee on Appropriational Insector Subcommittee, Seesee Committee on Energy and Natural Resources; Seesaw Committee on Committee on Energy and Natural Resources; Seesaw Committee on Invernmental Affairs.

#### Date Base Reference: S-02900-037

Subject Terms: Disilistor; Energy Supplier; Gasoline; lot Putt; Korcomo; Petroleum Products; Proyane; Residual Fael Oli; Resource Allocation

Purpose: This system is to ensure the distribution of available products on an equitable basis during a shortage situation to all users of allocated products based on 1972 purchaser/supplier relationships and volumes sold. This system is in support of Subpart L of 10 CFR 211,222. Awar: The system collects information from every prime supplier of any product subject to State-set-aside. A prime supplier is the supplier (or producer in the case of propune) which makes the first cale of an allocated product subject to State-set-solds in the State distribution system for consumption within the State. Content: The contest is the total amount of delivered neaducts not State during the preceding month and anticipated supply for individual States for the following month. Products include propane, gasoline, kerosene, distillates, let fuel, and residual fuel oils. Outsut: Summaries of supplies of various petroleum products are available on a State-by-State basis. These listings are produced monthly. Availability: Publicly releasehis information is available through FEA's National Engray Information Center.

Agency Contock National Energy Information Center; 1200 Pennsylvania Ave. NW, Room 1411, Washington, DC 20461; (202) 566,0025

#### 370 Market Shares System 6038.

OMB Fooding His/Gods Shrinis and Expenses (93:1500-61-303). Congrational Balancests: Hour Committee on Appropriations Interior Subcommittees: House Committee on Government Optimisms, House Committee on Government Optimisms, House Committee on Appropriations Interior Subcommittee, Propositional Committee on Appropriations Interior Subcommittee, Sware Committee on Committee, Seitnes, east Committee on Commi

#### Date Base Reference: S-02503-038

Swiger Fermer Datillates, Energy, Marketing, Peneleum Products, Preparse; Residual Fuel Od
Perpasse: The purpose is to report any changes after calendar year

1972 in the aggregate share of nonbranded independent marketers. the aggregate share of branded independent marketers, and the aggregate share of other persons engaged in the marketing or distribution of refined petroleum products of the national market or the regional market in any refined petroleum groduct. Japan: Input includes data on sales of refined netroleum products by refiners and data on distillate, residual fuel oil, and procure sales to ultimate consumers by branded and unbranded independent marketers. Content: Information regarding sales volumes of various products is collected monthly from a sample of firms in each of the categories mentioned above. Outset: The principal monthly reports are Report on Sales of Refined Petroleum Products and Report on Gasoline Service Station Market Shares. Availabilitie Output reports are published monthly and formally distributed to the Speaker of the House. the President of the Senate, and majority and minority chairmen of principal Senate and House subcommittees. The reports are subsequently released in hardcopy form for distribution to the general public through the National Energy Information Center and NTIS.

Agancy Contoch National Energy Information Center, 1200 Pennsylvania Ave NW, Room 1411, Washington, DC 20461; (202) 566-9035.

### Underground Gas Storage System, 6054.

OMB Freding Title Codes Schizies and Expesses / 92-1500-01-305.

Congressional Railworness Roses Committee on Appropriations: Interfer Subsecurities, Places Committee on Spercament Operations: Interfer Subsecurities, Places Committee on Subsecurities, Places Committee on International Enterfer Subsecurities, Season Committee on Appropriational Enterfer Subsecurities, Season Committee on Commi

#### Data Base Reference: 3-02500-039

# Sobject Terme: Energy Supplies; Natural Can Sterage; Storage

Purpose. This system is to collect information economic process; exceptly, recope in the judicious, and wideless, and except except in the process in the process of the process of the protomation of the process of the process of the process of the protomation of the process of the process of the process of the protomation of the process of the process of the process of the proposed of the process of the process of the process of the proposed of the process of the process of the process of the protomation of the process of the process of the process of the protomation of the process of the process of the process of the provious of gas toronty of the process of the process of the provious of gas toronty of the process of the process of the provious of gas toronty of the process of the process of the provious of gas toronty of the process of the process of the protomation of the process of the process of the process of the protomation of the process of the process of the process of the protomation of the process of the process of the process of the protomation of the process of the process of the process of the protomation of the process of the process of the process of the protomation of the process of the process of the process of the protomation of the process of the process of the process of the protomation of the process of the process of the process of the protomation of the process of the process of the process of the protomation of the process of the process of the process of the protomation of the process of the process of the process of the protomation of the process of the process of the process of the protomation of the process of the process of the process of the process of the protomation of the process of the proce opment stage. Ostput: Output includes listings by company of volumetric impections, par near-viii withdrawsh, and balances. Ansilvability, Information collected for this survey as the basis of the publication Underground Storage of Netward Cas in the United States publicly available through FBA's National Energy Information Contract.

Aganty Control: National Energy Information Center; 1200 Pennsylvania Ave NW, Room 1411, Washington, DC 20461; (202) 565-5025.

#### 372

OMB Fueling Title/Codes Scherce and Expenses (79:1500-0-1-02) Compassional Subseases. Home Committee on Appropriations in terior Subseases theore Committee on Government Optimization Monte Committee on International Personal Committee on International Personal Committee on Appropriations: Interior Subsease Committee on Appropriations: Interior Subsease Committee on Commentees, Senses, and Committee on Expenses of Comm

## Data Sasa Reference: S-01900-040

Oll and Gar Personer Sustain 6055

Subject Tenne: Energy Supplier; Gas Preductier; Gas Reserves, Gas Reserves, Petroleum Production; Petroleum Preducts, Petroleum Reserves; Petroleum Reserves;

Purpose: The system was to propere a complete and independent analysis of actual oil and ass reserves and resources in the United States and its outer continental shelf. Also surveyed was the existing productive canacity and the extent to which such canacity could be increased for crude oil and each major petroleum product each year for the next 10 years through full utilization of available technology and canacity. Asset This system collected information as of December 1974 from approximately 12,000 operators of oil and sas wells. Contract The content includes data on the production of oil and gas for 1970-74, estimated production for 1975, and estimated reserves. Output: The control includes an initial report on Oil and Gas Resources, Reserves, and Productive Capacities, June 30, 1975. and a final report on Oil and Gas Resources, Reserves, and Productive Capacities (Vols. I-II), October 31, 1975. Availability: Publicity releasable information is available through PEA's National Energy Information Center.

Agenty Contects National Energy Information Center; 1200 Pennsylvania Ave. NW, Room 1411, Washington, DC 20461; (202) 566-9025.

#### Coal Date Base, 6057.

OMB Tunding Titls/Codes Salaries and Bapeness (\$92,1500-0-1,100.

Compassional Balanesses (Manc Committee on Appropriations Linetice Subcommittee (Hour Committee on Appropriations Linetice Subcommittee of Interestate and Porsign Commencer Operations (Hour Committee on Enterestate and Porsign Commencer Senses Committee on Appropriations Interior Subcommittee) and Committee on Enterestate and Porsign Commencer Committee on Enterestate on Commerce, Science, and Transportation; Senses Committee on Energy and Natural Resources; Sensis Committee on Energy and Sensis Sensis Committee on Energy and Sensis Sensis Sensis Sensis Committee on Energy and Sensis Sensis

#### Date Bose Reference: S-02900-041

Subject Terms: Arthracite; Biterninens; Coal Pricos; Coal Production; Coal Reserves; Energy Pricos; Stongy Supplier, Lignite; Subbinardicoss

Purpuse: The system provides untensated data base information ceiting to ceal teservas, production, prieces, and other Psylacial and concomic data. Data are organized by geographic location and by mergy market function. Jupuse Estemal data come from the Bursau of Mines, Demonstrated Coal Reserve Data Base of the Uslato Stans, and the Potental Fource Commission. Contract Continousal Stans, and the Potental Fource Commission. Contract Continousal sulfir contrast, location, type (authoristic, bituminious, subdituminous, slightly), consumption; costiat, and inventories. Onlyue Data

371

will be provided upon request. Availability: Publicly releasable information is available through FEA's National Energy Information Center.

Agancy Contact: National Energy Information Center, 1200 Pennsylvania Avo. NW, Room 1411, Washington, DC 20461; (202) 566, 9775

#### 374 Care and Private System 6233

OMB Funding Title/Code: Splarnes and Expenses / 92-1500-0-1-305.

Congressional Relevences House Committee on Appropristions: Interior Subcommittee; House Committee on Covernment Operations; House Committee on Interestate and Facing Committees; Sensate Committee on Appropriatoons Interior Subcommittee; Senera Committee on Commerce, Science, and Transportation; Sensate Committee on Europey and Natural Resources; Sensate Committee on Oovernmental Affairs.

## Data Base Reference: S-02900-042

Subject Terms: Datillates, Energy Prices; Gesellar; Jot Fuel; Keresene; Liquefied Petroleum Ges; Petroleum Products: Prices: Residual Fuel Od.

Parasse: The system is to monitor netrology product prices and to facilitate the timely analysis of price and volume of sales date at the refined product level. FEA uses the data collected for this system to assess conformity with established notroleum policies. James: The source of information currently is the Petroleum Industry Morebly Report for Product Prices. The report is submitted by all refiners and gas plant operators. Also included are resollers and retailers who derive \$50 million or more annually from the said of covered notroleum products. Content: The system currently tabulates selling price and sales volume data for each respondent firm for each covared petroleum product it sells. Covered products include assoling. distillate, residual fuel oil, aviation facis, kerosone, and liquid petroleum gas. Information is collected monthly on a national basis. Output: The output is various reports representing monthly price and current product prices. Availability: A tabulated summary is publicly available in the Monthly Petroloum Product Price Report through FBA's National Energy Information Center.

Agency Contact: National Energy Information Center; 1200 Pennsylvania Ave. NW, Room 1411, Washington, DC 20461; (202) 566-9025.

#### 375

John FEA/BOM Patroleum Reporting System, 6230/6301, OMB Funding Title/Code: Salaries and Expenses / 92-1500-0-1-305.

Compressional References: House Committee on Appropriations Inserior Subcommittee; House Committee on Government Operations; House Committee on Interestate and Foreign Commerces; Senset Committee on Appropriations; Interior Subcommittee; Senset Committee on Empressions; Interior Subcommittee; Senset Committee on Commerce, Solence, and Transportation; Senset Committee on Benery and Natural Resources; Sensie Committee on Governmental Affairs.

#### Data Base Reference: S-02500-043

Subject Teress: Crude Oli Imports; Petroleum Products; Petroleum Refinedes; Pipelines, Refineries.

Purpose: The system considered the petroleum reporting requirements of the Bersers of Moles (BOM), posttoment of the Instruction of Moles (BOM), posttoment of the Instruction of In

unes are stated for reflactors, bulk centricals, treds, and product population. In soldion, for reflactors, the recopility, next, and they predicted in soldion, for reflactors, the reception, ports, and thip-ments or losses are specified by conder and product. Obspare Monthly hashowing present yet the Protection Administration for Destreet Production of Perticulum Products, Patrumy Section & Crusted Orline and Perticulum Products, Patrumy Section & Crusted Conde and Tetrape to part by Reflexion, Availability: These sizes are used as to take the form to the Mental's Destruct Section are used to a to least for reproduct in the Mental's Destruct Section are used as to least for reproduct in the Mental's Destruct Section are used as to least for reproduct in the Mental's Destruct Section and Section Section and Section Section and Section Section

Agency Cented: National Energy Information Center; 1200 Permayivania Ave. NW, Room 1411, Washington, DC 20461, (202) 565-9025.

#### 376

Short Term Coal Densard Forecasting Model, 6118.2.

OMB Funding Title/Codes, Salaries and Expenses / 92-1500-0-1-305

Compassional Relawance: House Committee on Appropriations: Interior Subcommittee, House Committee on Government Operations; House Committee on Interesting and Foreign Commerces, Source Committee on Appropriations: Interior Subcommittee; Sunate Committee on Appropriations: Interior Subcommittee; Suntate Committee on Commerce, Schöne, and Transpioration, Source Committee on Energy and Natural Resources; Senate Committee on Governmental Affine.

#### Data Base Reference: S-02500-044

Subject Terror Cost; Econometric Models, Electric Utilities, Porceasting; Models.

Purson: The system forerests the demand for coal by querter. State, and by end-using sector of the oconomy. This model explies to electric utilizies, industrial and metallurgical users, and expertees Input: This is a componentic model that uses historical data on coal demand and economic activity, including the generation of electricity to estimate forecasting equations. Forecasts are based on forecosts of the appropriate exogenous variables. Content: Subsystems include retail, industrial demand for one; once producers demand for coal, electric utility demand for coal, export demand for coal, and Strike Evaluation Model. The Strike Evaluation Model will be used for special studies evaluating the potential impact of a coal strike; the test will forecast quarterly for two years, as quality for five years. Each of these subsystems will be State specific. All but the Strike Evaluation Model will be re-estimated at least senually. Outrot: Annual reports and quarterly input into other reports, including FEA Quarterly Report to Congress and the Monthly Energy Review, are the outrut. Audiobility Publicly releasable information is available through PEA's National Energy Information Center.

Agency Contects National Energy Information Center; 1200 Pennsylvania Ave NW, Room 1411, Washington, DC 20461; (202) 565-9025.

## Electrical Firmsolal Forecasting Model (BSB Model, EUFTNANCE).

6118.5.

OMB Funding Title/Code: Salarias and Expenses / 92-1500-0-1-305.

Compassional Ralavanaes. House Carmillton on Appropriations Interior Subcommittoe; House Committee on Government Operations; House Carmillates on Internation and Foreign Commerce; Seaste Committee on Appropriations: Interior Subcommittee; Sonace Committee on Commerce, Science, and Transportation; Sweets Committee on Energy and Natural Rosoncess; Seaste Committee on Governmental Affair.

#### Date Boss Reference: S.02900-045

Subject Terms: Ejectric Utilities; Pinansial Monitoring; Mathematical Models; Propertiests: Public Utilities: Straffation. Purpose. The system forecasts the finisecul condition of induring sheet subsequents. Inger the most leiches extening sidely plant characterization, system found characterization, power generation requirements, and explain class. Content: The EUDrageneration casassion patients for electrical today systems with a various casassion, patients for electrical today systems within various casassion, patients for electrical today systems within various casassion, patients for electrical today systems within various characteristic management of the content of the content patients with supersystems of the content of the casassion schedules with supersystems of the content of the casassion schedules with supersystems of the content of the casassion schedules with supersystems of the content of the supersystems of the content of the casassion of the casassion of the supersystems of the casassion of the casassion of the casassion of the supersystems of the casassion of the casassion of the casassion of the supersystems of the casassion of the casassion of the casassion of the supersystems of the casassion of the casassion of the casassion of the supersystems of the casassion of the casassion of the casassion of the supersystems of the casassion of the casassion of the casassion of the supersystems of the casassion of the casassion of the casassion of the supersystems of the casassion of the casassion of the casassion of the supersystems of the casassion of the casassion of the casassion of the supersystems of the casassion of the casassion of the casassion of the supersystems of the casassion of the casassion of the casassion of the supersystems of the casassion of the casassion of the casassion of the supersystems of the casassion of the casassion of the casassion of the supersystems of the casassion of the casassion of the casassion of the supersystems of the casassion of the casassion of the casassion of the supersystems of the casassion of the casassion of the casassion of the supersystems of the casassion of the

Agency Contact: National Energy Information Center, 1200 Pennylvanis Ave NW, Room 1411, Washington, DC 20461; (202) 566-9025

#### 378 Oil and Gas Swaate Model, 6138

OMB Fuelley Bills Code: Salrens and Expensey 92-1500-0-1-103.

Congrussive Melvered: Blow Chemistre on Appropriations Interior Subcompileor. It Blow Chemistre on Appropriations Interior Subcompileor. In the Salrens of Salrens on Appropriations InSalrens Committee on Appropriations Interior Subcommittee; Salrens Committee on Appropriations Interior Subcommittee on Interior Salrens Committee on Interior Salrens on Appropriations Interior Subcommittee on Interior Salrens on Inte

#### Date Gase Reference: S-02900-046

Subject Terren: Crude Od Production, Crude Od Reserves, Energy Supplies; Forecasting, Mathematical Modelly, Natural Gas Production, Natural Gas Reserves, Patrolium, Sarrafation

Purpose: The model is designed to produce independent estimates of future crude oil and natural ass production for use in energy policy formulation and plumning. This model is derived from the National Petrology Council Oil and Gas Model. Issue: The data are from the Bureau of Mines. American Petroleum Institute oil reserve estimates. American Gas Association drilling costs and statistics, resource estimates from the Geological Survey, and Lewin enhanced recovery data. Content: It forecasts the col and gas production by region for 1980, 1985, 1990, and later. The model is revised annually on a scheduled basis, but modifications and updates to the data base are being implemented on a continuing basis. Puture production possibilities are established as functions of anticipated profitability compared to alternative investment opportunities, the amount of exploratory drilling undertaken and its success, and the extent of constraining policies that limit profitability or the availabilaty of land favorable for exploration and production. Runs may be made under two basic sets of assumptions: 1) The Reference Case, asseming a continuation of policies in effect prior to 1977, except price controls; and 2) Accelerated Development, assuming changes to encourage domestic exploration and production. Quesur Oceans includes oil and gas production and reserves by region by year as machine-readable files and hardcopy and a comprehensive annual study supporting the National Energy Outlook and as issues develon. Annichility: Publicly releasable information is available through FEA's National Energy Information Center.

Agancy Contect: National Energy Information Center; 1200 Perasylvania Avc. NW, Room 1411, Washington, DC 20461; (202) 566-9025.

### National Coal Model (RMAC), 6143.1.

OMF Furding Hish/Codes Salarios and Expenses / 92-1508-0-1-105.
Congrassional Relevences. Heure Committee on Appropriations intentor Subcommittee. Heure Committee on Concernance Operations. House Committee on Intentiate and Poreign Commerces; Sessire Committee on Appropriations intentor Subcommittee; Sesate Committee on Commerce, Science, and Transportation; SantaCommittee on Energy and Natural Resources; Sense Committee on

#### Data Base Reference: S-02900-047

Subject Terrer: Coal, Energy Policy; Energy Supplies; Percoasting; Math-

entitied Models; Simulation Purson: The purpose is to forcest the long term sumply of cost by region and cost type. Input: The input is from Federal Power Commission electric utility canadaty data, sales by region data, and cost delivery data, Bureau of Mines coal reserve data; utility coal demand and distribution officienties; nonunlity coal demend, and and transportation demand. Country: The model is designed to forecast coal production, consumption, and prices and to analyze coalrelated public policy issues. It generates equilibrium solutions through a linear program formulation which balances the supply and demand for one at minimum cost. The model has 30 supply regions, 35 demand regions, up to 40 possible coal types, and 6 consuming sectors. The model is careble of making both short term and lone term annual projections under a variety of policy accounties. Users have the espability of changing such factors as region specifications. assumed inflation rates, or assumed growth rates in electricity sales through modifications in the data base. These factors are not a part of the model's structure. The model can also perform sonsitive analuses in order to cours uncertainty surrounding a forecast which it produced. Owbut: No regular reports are produced. The system is used as an analytical system to address policy issues as they occur. Availability: Publicly releasable information is available through EP A's National Energy Information Center.

Agency Contock National Energy Information Center; 1200 Pennsylvana Ave. NW, Room 1411, Washington, DC 20461; (202) 166-9025.

# 380 Reserves Albertion and Mine Cost Model (RAMC) 6143.2.

OMB Funding Title/Code: Salaries and Expenses / 92-1500-0-1-305.
Congrussions Relevance: House Committee on Approprisions: Interes's Subcommittees, House Committee on Operamines on Government Operations; House Committee on Interestate and Foreign Commorce; Sessive Committee on Appropriations: Interior Subcommittee, Servas Committee on Commerce, Science, and Transportation; Seussic Committee on Committee o

Governmental Affairs.

Date Sace Reference: S-02900-048

Subject Terms: Coal Reserver; Energy Supplies; Mathematical Module; Signulation

Purpose: The model is designed to allocate coal reserves by BTU and sulfur content to 40 coal type categories. The categories are then suggregated to create regional piles of each coal type. Supply curves are created for each region by mine size and coal type. These are input to the National Coal Model and the Project Independence Evaluation System (PIES). Input: Input is reserves data from the Bureau of Mines and the Federal Power Commission Coal Survey. Content: The program allocates coal reserves into 40 coal types. There are 30 coal producing regions to which these reserves ore allocated and then aggregated by coal type. These piles are then allocated to different mine types based on global, regional, and soul type specific parameters. Mines will be operational if coal is available to be mined and can be sold at a minimal acceptable selling price determined by the program. Output Consists of regional coal supply files and printed reports, including coal reserve base allocation, coal type and mine size allocation, and coal aupoly functions. Availability: Publicly releasable information is available. through FEA's National Energy Information Center.

Agency Contact: National Energy Information Center; 1200 Pennsylvania Ave. NW, Room 1411, Washington, DC 20461; (202) 566-9025.

#### 381

Project Independence Evaluation System (PIES), 6223

OME Funding Title/Code: Sciences and Expenses / 92-1500-0-1-305

Conversional Relayance: House Committee on Americanianse In-

Cangussisses seawanes: Hater Committee on Appropriations: Interior Subcommittee; Howe Committee on Government Opprations; Howe Committee on Interestate and Portiga Commetee, Scare Committee on Appropriations: Interior Subcommittee; Seiaw Committee on Energy and Natural Resources; Senaw Committee on Committee on Beargy and Natural Resources; Senaw Committee on Governmental Affairs.

#### Data Base Reference: S-02500-049

Subject Terms: Coal Production; Crude Oil Production, Econometric Middle, Economic Impact; Energy Policy, Ecorgy Prices, Energy Supplier, Fornossing; Gas Production; Standards.

Parasse: The system is to evaluate various energy policy alterna-

tives by predicting their impact on the energy sector over the past 5-15 years. Insur. The input includes the Regional Econometric Demand Model (R D4), supply function for each first carmeity limits for production of each fuel, transportation network by mode, commodity, price controls, world energy prices, and mecroeconomic forecast. The system requires extensive data input and approximately 10 000 lines of computer code. Castero The model consists of sunply modules for various sectors of the energy industry; cost production, oil production, gas production, refineries, utilities, energy production via emerging technologies, transportation, and importing The level of aggregation for each supply module is determined by division, specific to each supply module, of the United States into regions. The modules contain cost and capacity information for each region; for each of the years 1980, 1985, and 1990; and for each of several scenarios which reflect various policy alternatives. The model is updated annually for each new edition of the National Baccay Outlook. The model assumes a competitive accommic structure with upward sloping supply curves and downward sloping demand curves. Within this framework, the model is made to endozenously forecast the trajectories by which this equilibrium is achieved; and the data are generated assuming a smooth transition to the end state. A fundamental concept underlying the model is that prices will clear the market in all regions; that is, for the equilibrium set of prices, profitmaximizing producers, converters, and transporters will be willing to swordy precisely the set of quantities demanded by cost-conscious consumers. The forecasts that the model generates are functions of numerous assumptions about the energy system, many of which can be varied to estimate the impact of policy initiatives or alternative world petroleum prices or to account for supply or demand uncortainties. Many of these policy options or uncertainties have been structured into scenarios, and the results of these scenarios underlie the discussion presented within the body of the sunual National Bacray Outlook, Additional scenarios can be and are generated contimeously to explore policy options and uncertainties. All prices and quantities of energy goods produced, consumed, or converted are estimated on a regional basis. For each sector, a set of regional definitions is established to ease data collection and modeling. The supply side of the PIES equilibrating mechanism includes a set of activities that represents the flow of materials (crude oils, natural ass, electricity, cosis, and refined petroleum products) from their source to a final destination. While there are many different materials which flow in the system, there are only eight final products consumed in demand regions-gasoline, distillate, residual, other petroleum, natural gas, steam cost, metallurgical cost, and electricity. The three categories of supply activities are production, energy conversion, and transportation. Each activity is described by possible combinations of output, input, and cost. Cost functions for existing activities include not only variable costs (such as operating and maintenance costs), but new activities also, including amortized capital costs, Capital costs associated with existing activities are viewed as sunk costs and do not influence the allocation solution although they are insteaded in the average cost pricing mechanism when appropriate. The demand side uses a constant elasticity approximation to the demand mode described in summary of Regional Econometric Demand Model (RD4). The PIES Integrating Model operates as follows: A linear program which represents an interim approximation

of the energy system is solved. The linear program includes represent tations of demand functions, supply functions, transportation activities, and energy convertion activities. The interior market clearing prices estimated by the lunear program are used to refine the demand function approximation in order to re-solve the linear program. The process is repeated until the solution converges, determining an equilibrium of supply and demand quantities and proces. Quant. Two resorts are evaluable as computer reinsours. 1) PIES Model Report (WONDERBREAD)-updated annually. There is one for each year (108) 1085 and 1080 and each reason in it includes reasons description, ray materials acquisition report, material balance reports. summaries of conversion activities and yields, demand area requirements record, production final demand report, utility feasil fuel consumption report, table of primary products through system, resource requirements report and executive data summaries. 2) WONDER. COOKIE-contains more aggregated and discated information than WONDERBREAD and is much briefer. Availability: Publicly releasable information is available through FBA's National Barray Information Center.

Agancy Centects National Energy Information Center; 1200 Pennsylvania Avc. NW, Room 1411, Washington, DC 20461; (202) 566-9025.

# Natural Gas Shortage Model, 6238. OMB Funding Title / Code: Soleties and Expresses / 92-1500-0-1-305

Congressional Raisvesses. House Committee on Appropriations: Interior Subcommittee; House Committee on Government Operations; House Committee on Interstate and Poreign Committee. Seaste Committee on Appropriations: Interior Subcommittee, Senan Committee on Commerce, Science, and Transportation; Source Committee on Beergy and Natural Resources; Senate Committee on Committee on Housey and Natural Resources; Senate Committee on Power-meetable, Affeir

#### Date Base Reference: 5-02900-050

Subject Turns: Energy Shortages; Popozasing; Mathematical Medela; Natural Gas Shortages; Signalation.

Purpose: The avariety is to forecost natural are shortages; by State.

by quantur. Apput. The layer is econometric estimates of State demands from Birears of Mines data and concentrate estimates of standards production by Nedoral Power Commission region from American Personnel Institute/American data Association data American Personnel Institute/American data Association data Powerstas are quarterly, for eight quarters into the future for each State. Output: No regular repress are produced. The system is used as an analytical system to address policy issues as they occur. Analytical Network England Commission of the Commission of the Commission of Power and Michael State (Industrial Commission Commission).

Agancy Contect: National Energy Information Center; 1200 Pennsylvania Avc. NW, Room 1411, Washington, DC 20461; (202) 566-9025.

# Short Term Petroleum Demond Forecasting Model. 6239. OMB Funding Title/Code: Sulsries and Expenses / 92-1500-0-1-305.

Congressitant Raisvennes. House Committee on Appropriations Interior Subcommittee, House Committee on Government Operations; House Committee on Interestee and Peoelga Commerce, Sewer Committee on Appropriations Interior Subcommittee; Surare Committee on Commerce, Science, and Teaseportation; Swates Committee on Energy and Natural Resources; Sensire Committee on Governmental Affairs.

#### Dato Base Reference: S-02500-051

Subject Teams Energy Demand; Percenting: Mathematical Models, Petroleum Demand Patroleum Products Demand; Simulation.

Pursone: The system is to forecast the domand over the next three years for primary petroleum products. Japan The input is price assumption per fact type, GNP estimates, Federal Reserve Board production indices: and supply estimates. Gauteut: The content includes the demand by monthly, quarterly, and yearly time period for the price and the demand for fuel type. Forecasts of the Short Term Petroloum Demand Engagestine Model are used extensively in comparison with natural transfer to give constitution recomments of notential problems such as a possible shortage of easoline or some other primary petroleum product. Porecasts are used by FEA as a basis for analysis of major decisions on energy policy such as decontrol of residual fuel oil, distillates, and other products. Another important use of the forecasting methodology is to study past trends in netroform consumption to ascertain which factors accounted for the recent decline in petroloum demand relative to pre-embargo trends. Output: Exercises of natendrum product domand by type by year troproduced. Anallability: Publicly releasable information is available. through FEA's National Bacrey Information Center.

Agency Contects National Basegy Information Center, 1200 Pennsylvania Ave. NW, Room 1411, Washington, DC 20461; (202) 566-9025

International Energy Enshation System (IEEE).

OME Finding Tills (Lodes: Salaries and Expenses / \$2,1500-0-1-305.
Compassional Ralewanes: House Committee on Appropriations: Enter's Subcommittee, House Committee on Government Operations; House Committee on Government Operations; House Committee on Interestate and Foreign Commence; Searce Committee on Appropriations; Barrier Subcommittee; Street Committee on Commerce, Searce, and Transportation; Street or Committee on Co

# Governmental Affairs. Date Sons Reference: S-02900-052

Subject Termer Coal; Crude Off; Economicisic Models; Energy Detected; Enorgy Supplier; Percenting; Gos; Geothermal Beergy; Nuclear Energy; Simulation.

Payrous: The model is to enable market clearing analysis of alternative energy sources on a world level, to evaluate overall OPEC demand, and to determine the availability and price of fature U.S. energy imports. Insut: Input consists of econometric demand forecasts from the IEES domand models, energy supply forecasts from the IEES supply models, and energy process data on world refineries, utilities, and transportation resources. Content IEES is a world model of all energy resources (e.g., oil, cost, gas, nuclear) which defines energy demands by final product (e.g., gasoline, distillate, jet feel) by sector of the economy (e.g., commercial, residential, industriel) for each major country of the world. The model specifies supplies of each source of energy in terms of crude oil (by type), gas, coal (by type), nuclear, geothermal, and synthetics (by type). The time frome modeled is from the present to 1990 with primary emphasis given to the years 1980, 1985, and 1990. Explicit simulations of electrical utilities, refineries, and the international tanker fleets are included in the integrating model Itself. Simulations of the primary supply processes for oil, eas, and coal are included in the IBES supply stodels, and the results of these simulations are input to the IEES integrating model. The integrating model than seeks the supply/demend equilibroum for the world based upon energy prices and the supply constraints specified in the model. Output: Output includes regional/country level energy balances: energy supplies/demands/ prices: electricity enneration: refinery operations: world trade in oil. gss, and cost; and tanker/bulk carrier fleet utilization. Availability: The output is for internal use only while still under development.

Agency Contests National Energy Information Center; 1200 Pennsylvania Avo. NW, Room 1411, Washington, DC 20461; (202) 566,0025 385
Reviousi Françouetre: Domand Model and Auto Sanulation Model

regionary accounting management of the property of the company of

# Governmental Affairs.

Subject Terms: Distillator, Econometric Models, Energy Demand; Forcessiles: Gardine. Jet Pack Residual Fort Off Simulation.

Purson: The model (RTM) is an interface to the PIES system. RD4 provides a demand surface to the Project Independence Evaluation System (PIES) equilibrating framework. In the integration, demand and surroly are equilibrated, and fuel forecasts are produced for the years 1980, 1985, and 1990. The Auto Simulation Model is a submodel to the Regional Econometric Departed Model which force casts a demand point for gasoline consumption. Justic The model provides 1975-90 demand surfaces (demand point prices quantities and elasticities) based upon input forecasts of population, per capita disposable income, natural gas hookups, value added in manufacturing, and exogenous price paths derived from previous PIES equilibria for natural gas, electricity, distillate, residual fuel, liquid gases, gasoline, jet fuel, and coal by economic sector. Content: The model is a regional model, disaggregated to the level of the FEA Region to provide demand estimates for energy consumption over the period 1975-90. An Auto Simulation Model exists as a submodel to the Regional Econometric Demand Model which provides a national demand estimate for gasoline consumption (shared out to FEA regions) and transportation usages of distillate, residual fuel, and jet foel (all shared out to FEA regions). RD4 is an econometric model based upon 1960-75 idistoriosi data in the State/Federal Consumption and Proce Data Base. The level of regional disaggregation is to the FRA Region. Recommetrically derived coefficients are filed into the Regional Recommetric Demand Model forecasting code, and domand auritors are regionally derived from lanut of expensors variables (normistion, per capita disposable income, etc.). Gutaut-Output includes reports of prices and quantities for feels modeled from 1975-90 and electicities (available for 1980, 1985, 1990). Reports are in hardcopy form. There is one report available for each of the PIES demand scenaries. Availability: Publicly releasable information is available through FEA's National Energy Information

Agency Contoct: National Energy Information Center; 1200 Pennsylvania Ave. NW, Room 1411, Washington, DC 20461; (202) 546-0015

#### 386 OECD Energy Demand Model, 6273.

OMB Inciding Title\*Code: Salarina and Expenses / 92-1500-01-205. Congestation Relevances Hause Committee on Appropriations: Instein Subcommittee, House Committee on Government. Operations; House Committee on Insteinate and Profession Committee on Subcommittee; Subcommittee on Appropriations: Interior Subcommittee; Sunart Committee on Appropriations: Interior Subcommittee; Sunrat Committee on Compactor, Science, and Transportation; Senate Committee on Committee on House of Subcommittee on Committee on

#### Date Base Reference: S-02900-054

Subject Teems: Crul; Crude Oil; Econometric Models; Energy Demand; Forecasting; Ossoline; Jet Puel; Natural Oss; Residual Fuel Oil; Simulation.

Purpose: The Organization for Economic Cooperation and Development Energy Demand Model forecasts correy drawns by sector and sector product for 19 OECD countries. Input Macro variables include gross domestic product, see

traion foreasts. Other issue a energy prior forecasts by scote and historical energy consumption data. Combin: The new doctorminate the price assumptions and gross domestic product growth assumptions products covered unlends crucke of, instarting all rights, motor passiline, avoitation feed, resulted field oil, and cost. Output: The coarse price and growth rates, pre-casted price and growth rates, and simulated elasticity matrices. Availabilities: The recent say for inferred see of the control and control

Agency Contest: National Energy Information Center, 1200 Pennsylvania Ave. NW, Room 1411, Washington, DC 20461; (202) 566-9025.

#### International Coal Supply Model RIA.1.

OMB Funding This/Caule: Salaries and Expenses [92:1500-0-1305. Compassional Environment Management (Salaries) and Compassional Environment (Salaries) and Committee on Appropriations Interior Subcommittee; House Committee on Government Optimities, House Committee on Appropriations Interior Subcommittee; Salaries Committee on Appropriations Interior Subcommittee; Salaries Committee on Appropriations Interior Subcommittee; Salaries Committee on Engineering Committee on Energy and Natural Resources; Senate Committee on Energy and Natural Resou

Date Base Reference: S-02500-055

Subject Torons: Cost; Cost Mining; Energy Supplies; Forecasting; Mathematical Madels: Simulation

Paymer. The model case it into regularmining approach to feel and production of visions and type styr spins in a distantine discuss impleasing the control of the paymer than the control of the paymer than the control of the control of the paymer than the control of the contro

Agancy Contach National Energy Information Center; 1200 Pennsylvania Ava. NW, Room 1411, Washington, DC 10461; (202) 566-9025.

#### 183

International Oil Supply Model. BIA-2.

OMB Funding Title/Coder: Salaries and Expenses / 92-1500-0-1-305.

Congrasional Relevance: House Committee on Appropriations Interior Subcommittee, House Committee on Government Operations; House Committee on Internate and Perigip Committee, Seasire Committee on Appropriations: Interior Subcommistee; Seaer Committee on Demortee; Scionce, and Transportation; Seasor Committee on Brazzy and Natural Resources; Seasor Committee on Governmental Affairs.

#### Deta Rosa Reference: S-02900-056

Subject Terms: Drilling: Energy Supplier; Forecasting, Mathematical Models; Oil Production: Petroleum: Simulation.

Purpue: The model uses a linear programming formulation to forestst and ingreducing region's delifting and producing regions as such that discounted revenue is maximized. The formulation is solvent or region's technical and financial contraints. Puper The data requirements are producitive especitly information for primary, secondary, and, testifyer recovery methods; teneves information for coniting reserves and undiscovered (Yound via exploration definition) privately and the programming of the primary security of the serverse; cool information for exploration; reserve development, produrture segenty development, and production; and toolholal and commonic contential information. Cleaves the model allows the uses to defermine the dis-producing sections on at the time horizon to be diversal. Object the coupter includes of tables, meloding recovers, adolescent to receiver, production, and selfidiam to productive acceptance of the coupter of the coupter of the coupter of the commonic objects of the coupter of the coupter of the coupter of producing the coupter of the coupter of the coupter of the producing the coupter of the coupter of the coupter of the producing the coupter of the coupter of the coupter of the producing the coupter of the coupter of the coupter of the produced for each of the producing region under condicteration and for each time prefer of in the forecast horizon. Supports are hardcopy computed pressure are seen that the coupter of the coupter of the producing the coupter of the producing of the coupter of the co

Agency Costoct: National Energy Information Center; 1200 Pennsylvania Ave. NW, Room 1411, Washington, DC 20461, (202) 566,0025

## 389 Nearlowinel Revisual Greech and Energy Price Made: 6144.7

OMB reading That Code: Salares and Expenses (92:1500-0-1105). Compassions Historicon: Historicanities on Appropriations Intoire Subcommittee, Huser Committee on Appropriations Intoire Subcommittee on Intestita and Foreign Commence, Sourie Committee on Appropriations: Interior Subscenarities; Soer Committee on Commence, Science, and Transportation, Sewir Committee on Energy and Natural Resources; Source Committee on Operamental Affair.

#### Data Bara Balansura: \$-01000.015

Subject Terror: Economic Development, Economic Impact; Energy Policy, Energy Prices, Percessing, Mathematical Models, Prices; Simulation.

Purpose: The system is to determine the intract of State energy prices on State economic growth. Japan 'The ignut is apposal growth in unit expital and labor costs, by State and assural costs of energy and nonenergy manufacturing input, by State. Continue: The arowth of manufacturing output in each State is determined by the growth of capital equipment, labor, energy input, and other material input. The growth rates of camtal and labor deneed on the profit rate and the water rate, which in turn are affected by regional energy prices The model has been tested on data for the States for the 1963-72 period. Using parameters hased on these tests, energy policies which change State energy prices can be studied using this model. A hypothetical energy scenario (of eliminating State energy price differentials) has been simulated on the model. This simulation shows that energy prices are importantly related to regional growth. Output No regular remorts are produced. The system is used as an analytical system to address policy issues as they occur. Availabilitie: Publicly releasable information is available through FEA's National Baergy Information Center

Agency Contact National Energy Information Contact; 1203 Pennsylvania Ave. NW, Room 1411, Washington, DC 20461; (202) 566-9025.

# Income Distribution Impact Model. 6144.3. OMB Funding Title/Code: Salaries and Expenses / 92-1500-0-1-305.

Congratisant Ralevanca: House Committee on Appropriations Interior Subcommittee: House Committee on Government Operations; House Committee on Intensitate and Foreign Commerces, Susare Committee on Appropriations interior Subcommittee; Sundare Committee on Commerces, Science, and Temporetation; Sensit Committee on Energy and Natural Resources; Savarie Committee on Overzamental Affairs.

#### Deta Rase Reference: 5-02500-059

Subject Termin Economic Impact; Energy Policy; Personating; Income Distribution: Mathematical Models, Signification.

Parpose. The model is to provide estimates of the effects of enorgy policies on the size distribution of income for the United States. Input. The input is forecasts for functional distribution or components of personal moome (external) and a 1962 Survey of Financial Characteristics of Consumers (internal). Content: The model provides a sational estimate of the size distribution of income for the United States. The time period and specific energy policy examined are determined by availability of macroeconomic forecasts of imtacts. The model is a constant shares distribution impact model. Each element of the size distribution is allocated constant share of the functional distribution over time. The model computes size distributions for a variety of energy policy forecasts supplied as input to the model. Effects are calculated by comparing forecasts for an enorgy scenario with an appropriate reference scenario. Output: No regular reports are produced. The system is used as an analysical system to address policy asses as they occur. Anniability: Publiche releasable information is available through FEA's National Energy Information Center

Agency Centech National Energy Information Center; 1200 Pennsylvenia Ave. NW, Room 1411, Washington, DC 20461; (202)

#### 391

Danma: Injus-Ouyan Lueur Programming Model for Regissal Energy Impact Analysis (1901.P) 614.4. Bapact Analysis (1901.P) 614.4. OMB Funding Titls/Code: Salasies and Expenses / 92.1505.0-1.305. Congrussionel Relevencia: House Committee on Appropriations: Intention Salecomphittee, House Committee on Government Opera-

terice Subcommittee; Heury Committee on Government Operations, House Committee on Interstate and Foreign Commerce; Stease Committee on Appropriations: Internet Subcommittee; Sense committee on Commerce, Science, and Transportation, Sense Committee on Emergy and Natural Resources; Sonote Committee on Governmental Affairs.

#### Data Sace Reference: 5-02900-061

Subject Terres: Economictus Models, Sconomic Impact, Energy Policy, Percentury, Sensitation

Parpose: Public Law 93-275, section 18, requires that the Admulstrator develop analyses of the economic impact of various energy policies on the economic vitality of regional, Stree, and local areas. The project attempts to accomplish this purpose with the sid of an economic programming model Inswi: Direct input coefficients, sectoral output, Government expenditures, unemployment labor forces, and population data can be internally developed. Regrenal data on exports, imports, investment, external finances, and labor supply by shills will be collected by external agencies on a contractual basis. Contract: The model is basically a constrained multisectoral optimization model. The model is capable of identifying quantitatively optimal adjustments of the regional economy to changes in energy policies under a given set of resource constraints including energy. Furthermore, the parametric program feature of the model makes it possible to obtain different time profiles of ontimum adjustment processes corresponding to alternative energy policy scenarios. Such efficient adjustments to alternative energy policies will be measured in terms of changes in region-industry specific output, income, value added, employment, consumption, saving, and capital accumulation. The model will be developed for each of the nane cemus regions of the United States. The model will be first empirically implemented and tested for the New England region. Output: A working paper and development of an in-house computer capability to monitor regional impacts of energy policies on a continual basis are the output. Availability Publicly releasable information is available through PEA's National Energy Information

Apancy Conton National Energy Information Center; 1200 Pennsylvania Ave. NW, Room 1411, Washington, DC 20461; (202) 566-9025. 992
Resintal Industrial Multiplier System (RIMS), 6144.5.

OMS Funding This/Code. Salance and Exposure 172-1500-0-1-305.
Coagnasisheri Relevence. Mose Control Report Population Information Proceedings of the Proceedings of Committee on Information of Committee on Information Proceedings on Information Proceedings on Appropriations Information Subsection Committee on Appropriations Information Subsection Season Committee on Appropriations Information Subsection Season Committee on Commerce, Science, and Transportation, Sensire Committee on Energy and Natural Resources; Sonate Committee on Sensire Committee on Committee Committee on Committee Committee Committee on Committee Committee on Committee Committee on Committee Committ

Date Save Reference: 5,02500-052

Subject Terms: Econometric Models, Bosnomic Impact, Bosngy Policy; Porecaring; Struitston

Purpose: Public Law 93-275, section 18(a), requires the Administrator to evaluate impacts of actions on critical industrial acctors of the economy; employment on a national, regional, State, and local basis; and the economic vitality of regional, State, and local areas, Requirements for regional economic impact analysis are also implied in sections 5 and 15 of Public Law 93,275 and in Public Law 94,163. Title V, Part C-State Energy Conservation Programs. The Regional Industrial Multiplier System (RIMS) was developed to help meet these requirements and will provide one means for identifying the regional dimensions of proposed national policy. In addition to serving as a basic modeling structure for regional impact analysis, the data base will serve as input into other modeling systems being developed within FEA. Japan RIMS was initially developed for FEA by the Regional Economic Analysis Division, Bureau of Econome Analysis, Department of Commerce and consists of regionand industry-specific final demand multipliers and ratios for transforming gross output impacts into impacts on earnings and employment. The RIMS allows the analyst to consider the multiplier effects of one or more industries impacting on the economy. Required input is the initial changes in final demand (changes in output) by industry of interest. These changes must be estimated or obtained from business or other Government agencies. Cautent: RIMS can be used to derive input-output type direct and indirect production, carnings. and employment multipliers for every State and for the nine census regions. The State model disaggregates multiplier effects into 103 industrial estegories. The census region model considers the 103 industries as well as 16 aggregated industries. The primary use of RIMS will be in analyzing site-specific impacts resulting from onergy-related activities. It is best suited as a tool for quick-response analysis, providing timely estimates of the economic effects of energy policies on particular regions and critical industries within the regions, Solutions represent a static equilibrium for a given point in time. Model parameters can be updated as new information or new assumptions are made available. Output: The output consists of changes in gross output due to changes in final demand (total multipliers); changes in output by industry (direct effects and indirectinduced effects); changes in earnings (income from production) by industry; and changes in employment by industry. Output generation is not yet automated. Reports are provided on request. Availability: Publicly releasable information is available through PEA's National Energy Information Center.

Agancy Centern National Energy Information Center; 1200 Perssylvania Ave. NW, Room 1411, Washington, DC 20461; (202) 566-9025.

FEA Household Energy Expenditure Model (HEEM), 6242.

OMB Funding Title/Code: Splartes and Expenses / 92-1500-0-1-305.

Compessionel Relawantes House Committee on Appropriations: Interior Subcommittee; House Committee on Government Operations; House Committee on Interesting and Peorigin Commerces, Sense Committee on Appropriations: Interior Subcommittee; Sense Committee on Commerce, Solience, and Transportation; Suntacommittee on Benergy and Natural Resources; Sense Committee on Committee on Benergy and Natural Resources; Sense Committee on

#### Data Base Reference: Scripton.ce.

Subject Terms: Consumers; Econometric Models, Economic Impact; Energy Prices; Porcention: Monetholds Income Description Process Sensibilities

Purpose: The HEBM model is a computerized data file containing 1973 energy information on approximately 50,000 U.S. households. The data file can be extrapolated into the future to forecast average household energy expenditures. The HEEM model helps in the evaluation of the unpacts of energy events on the household sector of the U.S. economy and forecasts the impacts of higher energy prices on consumers and on the distribution of income. Aurus: In addition to the basic data file, the HEEM model contains software programs to screen the data file to give output for various subgroups of households, input to invoke the data file and the screening programs can be made with either batch or interactive access to the computer system. Input for extrapolation of the data file includes demand elasticities and prices for coal, fuel oil, natural gas, bottled gas, electricity, and exacting. Content: The data file was developed from the Public Use Sample of the 1970 Census and from the 1969 National Personal Transportation Survey. The data file was statistically aged to 1973 and can be extrapolated to future years. The HBEM model contains data on housing, housing characteristics, geographic locations, income levels, demographic characteristics. and energy expenditures. Output: Optput is available on computer printouts on an as needed basis, Average Annual Household Energy Expanditures are tabulated by income and by geographic region for the year of interest. Screens can be made to yield tabulations for various subgroups of the households. Total energy expenditures can be tabulated, or the tabulations can be senerated by fuel. Estimates are made to indicate the total number of U.S. households for each cell of the tables. Availability: The output is for internal FEA use only.

Agency Contact: National Energy Information Center; 1200 Pennsylvania Ave. NW, Room 1411, Washington, DC 20461; (202) 566-9025.

# 394 FEA Household Energy Survey, 6248.

OMB Funding This/Code. Statistics and Expenses (39:1500-0-1305. Comparational Raiworner. House Committee on Appropriations Interfer Substantialities, House Committee on Gerenment Operations House Committee on Gerenment Operations, House Committee on Fertiles and Fertiles, Committee Committee on Appropriations Interfer Substantialities, Sensit Committee on Benery and Committee on Committee, South Committee on Benery and Natural Resources, South Committee on Benery and Natura

Data Bosa Reference: S-02900-064

Subject Terms: Consumers; Energy Consumption; Households; Insulation,

Purpose: The survey provides information used in the analysis of horseholds' consumption of energy by income groups are race, sexand other socioeconomic and demographic characteristics. Input This data source is the product of two nationwide surveys taken in 1973 and 1975. The 1973 survey's sample size is approximately 1,500 households. The same 1,500 households plus 1,500 new households comprise the 1975 sample. Context: Included is detailed information on households' ownership of appliances, use of insulation, transportation patterns, and energy consumption. The file also contains data on the demographic and socioeconomic characteristics of the household including employment status, are, race, and sex-These date can be used to analyze the impact of energy policies including increased energy prices and the restructuring of electricity and natural gas rates, on the residential sector and its various componenta. Outsur. Cuput is available on computer printouts. Analyses can be accomplished by linking this data file to statistical packages such as the Biomedical Statistical Package or the Statistical Package for the Social Sciences. Availability: Output is generally available for internal are only.

Agancy Contact: National Energy Information Center; 1200 Pennsylvania Ave NW, Room 1411, Washington, DC 20461; (202) 566-9625.

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395
Piscal Impact of Energy Price Changes on State and Local Government
Parchases of Goods and Sermon 6335.

O MB Fueding Title/Code States and Exposus 92.1500-0.1305. Comparational Relevance Most Committee on Appropriations Title Tools and States and

Data Base Reference: S-02900-055

Subdest Torres: Economic Impact, Energy Proces; Forecasting, Mathematical

Models, Procurement; Simulation, States Purpose: The system is to estimate the dollar impact on State and local government outlays for purchases of goods and services when energy prices change. This model is being developed as a result of Public Law 93-275, section 18, 15 11 S.C. 727, which requires that the Federal Feerey Administration take occurred of the fiscal impact of proposed Foderni energy nobey changes on State and local sources. ments. Javan limit into the model is data from reports prepared for the Federal Energy Administration and from other public information, e.g., Survey of Current Business; Commendium of Public Pinances; Governmental Finances; FEA Working Paper 76-WPA-12; and Research Triangle Institute reports to PEA in Pobruary and May 1976. Contest: Impact estimates are made for individual States. These estimates result from one or more forts which have undergone a price change. Base year for data is 1967, and undates can be made as new data become available. Forecasts of impacts can be made for future years with various assumed energy price changes. The model makes use of energy use per dollar of purchases multipliers based on the 1967 U.S. input-output table. Output: No regular reports are provided. The system is used as an analytical system to address policy issues as they occur. Availability: The output is for internal use only.

Agency Contects National Energy Information Center; 1200 Pennsylvania Ave. NW, Room 1411, Washington, DC 20461; (202) 566-9025.

#### 996

Severance Tax Model E1A-3.

OMB Funding Title/Code: Salution and Expenses 192:1500-0:-103. Comparational Relavences: House Committee on Appropriations: Interior Subcommittee; House Committee on Convenement Operations; House Committee on Interior Subcommittee; Senses Committee on Appropriations: Interior Subcommittee; Senses Committee on Appropriations: Interior Subcommittee; Senses Committee, Solvence, and Transportation; Senses Committee on Expenses of Committee on Committee, Solvence and Transportation; Senses Committee on Brazing and Technologies.

#### Data Bere Reference: S-02900-056

Subject Terms: Economic Impact, Percenting; Mathematical Models; Minerals; Soverace Taxes, Strebutes.

Purpose: The system is to allicone severance taxes by State and type of production and to maintain in sujedne diffe of severance tax rate changes in order to project revenues and budgings impacts for the control of t

reports are produced. The system is used as an analytical system to address policy issues as they occur. Againfuller: Output is intended primarily for internal use only. Publicly releasable information will be published in the National Energy Outlook

Agency Contact: National Energy Information Center; 1200 Pennsylvania Ave. NW. Room 1411, Washington, DC 20461; (202)

Crude Oil Pricing Model (DCROPS), 6272 L. OME Funding Title/Code: Salaries and Expenses / 92-1500-0-1-305.

Congruentenet Relevance: House Committee on Appropriations: Intenor Subcommittee; House Committee on Government Operations: House Committee on Interstate and Feerign Commerce: Source Committee on Appropriations: Interior Subcommittee: Senore Committee on Commerce, Science, and Transportation; Senste Committee on Energy and Natural Resources; Sensor Committee on Governmental Affairs

Date Base Reference: S.02900.067

Subject Terms: Crude Oil Production: Energy Prices, Energy Supplies, Portcasting, Mathematical Models, Penoleum; Simulation

Paypose. The model is to provide short term monthly forecasts (a 40-month period beginning February 1976) of prices of domestic crude, given certain assumptions about crude production. These forecasts are provided in response to the need for information in the formulation of regulatory policy at FEA. The Energy Policy and Conservation Act of 1975 (Public Laws 93-275 and 93-159) is the authority for controls on the proces of certain domestic crude oils. Asset: The input is crude oil production points for February 1976, 1977, 1978, 1979, and May 1979; decline rate of lower tier oil parameters, lower/upper tier shift in production parameters; freeze parameters (month start and stop, prices to start and stop), and monthly volume and cost of first purchases of demestic crude oil by oil category. Context: The model provides forecasts of upper, lower, and stripper well production by month, given assumptions about upper/ lower allocation for each forecast period as well as other input parameters listed above. It also forecasts composite crude price by month, computes required ceiling adjustments necessary for aggregate compliance, and computes excess or deficiency in producer receipts. Outsut: Principal reports are output on a monthly basis and contain price, output, and aggregate producer receipts data. Availabiling These are for internal use only.

Agency Contect: National Energy Information Center: 1200 Pennsylvania Ave. NW, Room 1411, Washington, DC 20461; (202) 566-9025.

Oude Oil and Natural Gas Production Model: 6272.2 OMB Funding This/Code: Salaries and Expenses / 92-1500-0-1-305. Congressional Relevance: House Committee on Appropriations: Interior Subcommittee; House Committee on Government Operations; House Committee on Interstate and Poreign Commerce; Severy Committee on Appropriations: Interior Subcommittee; Sevare Committee on Commerce, Science, and Transportation; Senate Committee on Energy and Natural Resources; Second Committee on Governmental Affairs

Dete Base Reference: 5:02500-068

Subject Terres: Coude Oil Production; Beergy Prices; Beergy Supplier; Pron-Century, Mathematical Models; Natural Gas Production; Potroleum; Siryela-

Purpose: The model provides projections of prices and production for these facts over a abort to intermediate time period. It provides input to the Federal Energy Administration petroleum products forecasting system and to other systems requiring crude input forecasts. Production forecasts can be made under a variety of price ceiling strategies, reserve base estimates, and demand and sup-

ply clasticities. The solution method is an optimal control algorithm applied in an resource-exhaustion framework. The applicable muplementation authority is the Energy Policy and Conservation Act of 1975, Title IV, Section 401. Japan: The input is oil and gas reserves estimates from the Geological Survey, American Potroleum lestabete and the American Gas Association; recovery cost functions from the National Petroleum Council, MIT Energy Laboratory, and Lewin and Associates; resource demand from PEA Regional Econometric Demand Model (RD4); regional and national demestic output growth rates; price celling regulations and decontrol schedules from FEA and Federal Power Commission; and canital productivity forecasts. Contine This model produces forecasts of domestic crude oil and natural eas production and prices on a monthly, quarterly, and annual basis, it has been designed to operate in an analytic environment in which criting levels have been imposed on wellhead prices of these resources at the national level. The model, when provided a national and regional set of demand curves for the resource and associated shortron extraction cost functions and estimated rates of capital productivity growth, generates optimal resource extraction price and quantity vectors. The model solves iteratively for these optimal paths from the present through the point at which further resource recovery would not be prefitable. The solution thus found is such that the present discounted value of marginal productivity of capital employed in resource recovery is constant over the life of resource deposits. Control variables at the discretion of the user are demand clasticity, initial resource supply. and growth rate of the economy. The model computes and reports optimal resource prices at each time period until exhaustion of economically recoverable resources; optimal resource production levels at each time period until exhaustion of economically recoversble resources; remaining proved and discoverable resource stocks; and cost conditions at each period as a function of resource stocks, production levels, time, and growth rate of technology. Output: Computer-generated reports are summary price and production forecasts, detailed quarterly forecasts for the United States and for FEA regions, monthly crude oil phased decentrol analyses, and detailed amousl and quarterly forecasts for major oil and gas fields. Availabilthe Publicly releasable information is available through PEA's National Energy Information Center.

Agency Contacts National Energy Information Center; 1200 Pennsylvania Ave. NW, Room 1411, Washington, DC 20461; (202) 566-9025.

FEA Crude/Transportation Model, 6121. OMB Funding Title/Coda: Salaries and Expenses / 92-1500-0-1-205.

Congrassional Ralavanca: House Committee on Appropriations: Interior Subcommettoe; House Committee on Government Operations; House Committee on Interstate and Foreign Commerce; Sense Committee on Appropriations: Interior Subcommittee; Senate Committee on Commerce, Science, and Transportation; Senate Committee on Energy and Natural Researces; Steam Committee on Governmental Affairs

#### Date Sese Reference: S-02900-059

Subject Terms: Crude Oil; Energy Policy; Energy Supplies, Fool Allocations Mathematical Medels; Petroleum; Pipelines; Simulators

Purpose: The system is to determine optional location and capacity of storage sites, drawdown strategies, and allocation of reserves for Strategic Petroleum Reserves and to evaluate alternative crude oil pipeline systems. The requirement is from the Energy Policy and Conservation Act of 1975. Input: The input is Project Independence Evaluation System (PIES) demand data; crude oil supply curves; pipeline network definitions (routes and capacities); and Strategic Petroleum Reserve site locations and capacities. Covseet The content is the simulation of flow of crude oil between points in the strategic reserve network of refineries, bulk storage terminals, and crude oil pipelines. Simulation is on a national basis. Output The output is a computer printout showing flows between all locations. Availability: Publicly releasable information is available through FEA's National Bacrgy Information Center.

Agency Contact: National Energy Information Conter. 1200 Pennsylvania Ave. NW. Room 1411, Washington, DC 20461 (202) 5 66 000E

#### FEDERAL POWER COMMISSION

## FPC Budget Files

OMS Funding Title/Code: Salaries and Expenses / 26-0100-1-0-305 Congressional Relayance: House Committee on Appropriations: Public Works Subcommittee: House Committee on Interior and Insular Affairs: House Committee on Interstate and Foreign Commorro: Senote Committee on Appropriations: Public Works Subcommittee: Sensy Committee on Commerce, Science, and Transportation: Swate Committee on Energy and Natural Resources.

## Date Sesa Reference S-03300-001

Subject Terrory Studget Information Systems, Resource Allocation.

Payesse: The purpose is to collect and maintain quantitative and narrative information necessary to develop and justify annual budget estimates to the Office of Management and Budget and the Congress. and to monitor Agency budget execution. Input: The data are internal input from the various bureous and offices of the Commission. Content: The system contains annual bureau and office statements of current and projected positions, workload, space, equipment, travel, personnel compensation; personnel benefits travel; rents, communications and utilities; printing and reproduction; supplies and materials; equipment; outlays; total obligations and inventory of ADP systems: and budget programs, as follows: water resources analysis: hydroelectric project licensing; electric utility regulation; gas certificate regulation; gas rate regulation; industry systems analvsis: regulatory compliance; administration; and distribution. In addition, a narrative justification is submitted along with senual statements of Commission collections and payments. Outsut: Annuni budget estimates to the Office of Management and Budget and the Congress (manual, hardcopy) are the principal reports. Anathr-Miller Congressional budget estimates are available publicly following submission of the President's bodget to the Congress. Supporting data are for internal use only.

Agancy Contact: Office of the Comptroller; \$25 North Capitol St., Washington, DC 20426; (202) 275-4789.

#### Official FPC Files and Records

OMB Funding Title/Code: Salaries and Expenses / 26-0100-0-1-305. Congressional Relayance House Committee on Appropriations: Public Works Subcommittee; House Committee on Interior and Insular Affairs; House Committee on Interstate and Foreign Commerce; Senate Committee on Appropriations: Public Works Subcommittee; Susse Committee on Commerce, Science, and Transportation; Sensre Committee on Energy and Natural Resources.

# Date Base Reference: S-03300-002

Subject Terms: Electric Utilities: Energy: Management Information Systems; Natural Gas.

Purpose: The persons is to centrally control and maintain the officlal regulatory files and records of the Pederal Power Commission. Insue External source input includes required reports and regulatory applications and filings submitted by electric utilities and natural gas companies. Internal input includes staff analyses, legal papers, and other data submitted by the Commission, FPC staff and other Pederal sources, i.e., Department of the Interior, Environmental Protection Agency, U.S. Army Corps of Engineers, and the Pedersi courts. Content: The information consists of reports and other information concerning electric utilities and natural gas companies subject to the Commission's jurisdiction, including annual reports. natural res producer, ray piculing and electric rate schedules and tariffs and volumes of Commission natures orders, and princers. Also estimated are docket sherts on all cases filed, the official service lists of the Commission, and service registers listing those upon whom notices, orders, decisions, or coinions were served. Owand: No specific output is produced. Thus is primarily a reference source. Appliability Heless postricted by statute. Title 18 of the Code of Byleral Regulations or court poters, the information is publicly systiable by request to the EPC Office of Public Information.

Agency Contact: Office of Regulatory Support Services: #25 North Cannol St. Weshington, DC 20426: (202) 275-4970.

#### Corporate, Pinancial, and Economic Information File (RISCEID)

OMS Funding Titla/Code: Splaries and Expenses / 26-0100-0-1-305. Congressional Relayonce: House Committee on Appropriations. Public Works Subcommittee: House Committee on Interior and Insalar Affairs: House Committee on Interstate and Pornige Commemer Sway Committee on Appropriations Public Works Subcommittee: Smote Committee on Commerce, Science, and Teans. portation: Sense Committee on Energy and Natural Resources.

#### Date Sere Salessess 5.03100.003

Subject Terres Class A Riccing Utilities, Electric Utilities, Electry, Passecul Monitoring: Natural Gas Patelines: Prelines. Privately-Owned Utilities: Pubhe Hilbins

Payasse: The purpose is to provide monthly and annual financial data on the electric industry and natural gas pipeling industry used by FPC, State Regulatory Commissions, Congress, other Federal agencies the ceneral nubble, and others. Jesus: Sources for the data are the electric utilities and natural gas pipeline companies as stated below filing annual reports, FPC Form 1, 1-M, and/or FPC Form 2 as prescribed under the requirements of the Federal Power Act and Natural Gas Act. Monthly reports, FPC Form 5, are filed by all gloctric utilities having \$2.5 million or more in electric operating revenues, and FPC Form II. filed by the major interstate natural see pipeline companies whose combined sales for resole and ass transparted (interstate) or stored for a fee exceeded 50 billion cubic feet during the preceding celender year. Content: Financial data are submitted monthly and annually on public use forms from privatelyoward electric utilities; publicly-award electric utilities; natural sas reneline companies: Class A clootric utilities: and major intensists natural gas pipeline companies. Output: Hardoopy press releases cover data on Class A and B newately-owned electric utilities and major interstate natural gas pipeline companies. Several annual statistical publications are generated in printout form. All output is accessible by terminals. Availability: The output is publicly availahie from the FPC Office of Public Information.

Agency Contact: Office of Accounting and Finance: 825 North Capitol St., Washington, DC 20426; (202) 275-4037.

#### 403 Gas Sweets Indicators

OMB Funding Title/Code: Salaries and Expenses / 26-0100-0-1-305. Congressionel Relevance: House Committee on Appropriations: Public Works Subcommittee; House Committee on Interior and Insular Affairs: House Committee on Interstate and Foreign Commerce; Sexate Committee on Appropriations: Public Works Subcommittee: Senste Committee on Commerce, Science, and Transnortation: Senate Committee on Energy and Natural Resources.

#### Date Sess Reference: 5/03300,004

Subject Tenna: Driffing: Energy Supplies; Natural Oat Pipelines, Natural Oat Reserves, Pipelises.

Propose: Clas Supply Indicators data are computed to records quarterly analyses of industry trends affecting ass supply. The criterion of the statutical series is their value as leading indicators of the industry response to changing economic conditions and regulatory nolones Issue: Data sources for the report are: 1) Mincral Industry Surveys, U.S. Department of the Interior, Bureau of Mines, Marketed Broduction, Imports and Europets of Natural Case 2) Sederal Power Commission, Sales by Producers of Natural Gas to Interstate Procline Companies - EUC Forms 2 2 & 1) Eadered Bouwer Compulesion, Form 11 - Natural Gos Pipeline Purchases from Producer and Sales to Ultimate and Retail Customers: 4) Hughes Tool Company weekly reports to the Drilling Contractor: 5) Hughes Tool Company Active Rotary Rig data reported weekly to the Oil and Gas Journals 6) American Petroleum Institute, Ougsterly Review of Drilling Statistics for the United States: 7) World Oil: 8) Bulletin of American Association of Petroleum Geologists: and 9) Contract data reported to the FPC. Bureau of Natural Gas. Content: "Gas Supply Indicators" includes annual and quarterly national data on marketed production, producer sales to interstate pinelines, number of active drilling rigs, exploratory and development drilling, and new contract sales by producers to interstate pipelines. Breakdowns of national series are made for offshore and FPC noce areas. It includes a series of initial rates paid by interstate eineline companies for natural east under new long term and short term (emergency) contracts. The series covers the period 1970 to date and is undated counterly. Outsuc. A quarterly report with text, tables, and charts is produced. Anailability: It is publicly available from FPC. Office of Public Infor-

Agency Centests Office of Economics, \$25 North Capitol St., Washington, DC 20426; (202) 275-4170.

#### 104

Bulk Electric Power System Religibility.

OMB Fueding Title Fodes Statistics and Expenses / 26-0100-0-1-305. Congressional Relevances House Committee on Appropriational Public Works Subcommittee; Base Committee on Interior and Interior and Interior and Interior statistics of Committee on Interestic and Foreign Commences, Sense Committee on Interestic and Foreign Commences, Sense Committee on Appropriations: Public Works Subcommittee; Senser Committee on Commence, Science, and Transportations: Senser Committee on Commence, Science, and Transportations: Senser Committee on Energy and Natural Resemmes.

#### Data Base Reference: S-03200-005

Subject Terror Electric Power, Electric Powerplants; Energy; Power Load Forceasing; Provides Owned Uffices, Public Uffices, Relightity.

Purpose: The purpose is to evaluate matters concerning power interruptions, load reductions, and bulk power supply hazards; to determine suitable religibility criteria and standards of operation and planning: to study the effects of transmission line interconnections on the religibility and economy of power supply including the maintenance of extensive and up-to-date transmission line maps; to determine the causes of generating plant unreliability and methods of improvement; to study the means of providing adequate generating canacity at lowest cost; and to study the methods of load forcesse. ing. Justic Public use forms (FPC Forms 12, 12A, 12D, 12E-2, 12F) are filed periodically by electric utilities (privately owned, publiclyowned, and ocoperatively-owned). Reports are filed under Order 331-1 as the need arises due to service internations. Amoust reports are compiled and filed in response to FPC Order 383-3 on a voluntary basis by the nine Regional Electric Reliability Councils. Reports sec filed under Order 445 when utilities modify their continuency procedures. Minutes of the meeting of technical and administrative committees of the Reliability Councils and attendance by Bureso of Power staff engineers at such meetings are included. Attendance and perticipation in conferences and meetings of the national engineering societies and similar organizations are included, as well as information received from Government agencies and other sources. Form 12E-2 has 5 schedules; one is filed monthly, the other four semiannually. There are 269 respondents; some are individual utilities, some are pools responding as a single entity on behalf of their members, and some are holding companies responding as a single entity on

behalf of their subsidiaries. Form 12F is filed annually by some 550 utilities owning or planning transmission facilities at 69 ky or greater voltage. Content: FPC Forms 12 and 12A are annual reports filed by electric utilities, giving information concerning energy production, transfers of energy and canacity, loads, senerating units, and planted caracity. FPC Form 12D is similar to Form 12 but much abbreviated and is filed at Sovear intervals by very small utilities Reports are filed under Order 131-1 by utilities suffering an interrustion to service, as the occasion arises: these reports describe the particulars of the equipment failure or other circumstances that caused an unformers interruption of service to customers. Panerse are filed under Order 445 when a utility changes its procedures for dealing with sinustions in which load exceeds (or threatens to exceed) capacity. The information reported describes the procedures to be instituted by the utility in the event of an emergency. The reports filed by the Reliability Councils under Order 383-3 summaring on an integrated regional basis the 20 year projected planning of the utilitită în each Council anus. For the first decade information is siven in significant detail. For the second decade the information is more general. Through attendance at and participation in meetings of the various engineering societies, information is obtained concerning technological studies and advances in the area of engineering such as materials components devices methamatical methods of system analysis, reliability studies, and economics of engineering. Data received from Government agencies consist of historical statistics and projections. The information is supplied by Federal and State agencies for the most part, some of it annually, some biennially, and some as the occasion arises. Form 12B-2 provides information on construction plans and changes in generating capacity and transmission lines, and load forecasts semiannually. It provides actual load and categity data monthly. Form 12P provides information on transmission planning at voltages of 69 ky or higher. Output: The principal reports are a series of special studies on: 1) "Interstate Status" of electric systems; 2) the market for power from Federal and licensed hydroelectric projects; 3) the electric power aspects of environmental statements of nuclear and fossil fueled powerplants: 4) annual reports summarizing and discussing the load and carecity projections of the Reliability Councils for the following ten-year period and for the succeeding ten-year period; 5) semiannual reports summarizing load and capacity estimates for the forthcoming winter and summer peak load periods: 6) semiannual reports summarizing the status of planaed sentrator construction, completion of units, and courses of delays in completion: To reports on special topics related to bulk electric power supply-Powerplant Availability, System Controls and Communications, Reserve Practices, and other torics: \$\ operation reports summarizing data concerning systems outages affecting supply to customers and an annual report summarizing data concerning transmission lines; 9) maps of the U.S. transmission system, undated periodically; 10) special reports such as National Power Survey, and Bulk Power Supply analyses in response to congressional queries: and | | | ) worbs| reports in response to requests for information from NRC, FEA, ERDA, GAO, OMB, State agencies, and members of the public. Availability: All studies are available on request.

Agency Contoct: Division of Power Supply and Reliability; \$25 North Capitol St., Washington, DC 20426; (202) 275-4718.

#### 405 Electric Power Fuel and Enteronmental Analyses.

OMB Funding Title/ Code: Salaries and Expenses / 26-0100-0-1-205. Congressional Relations on Appropriations: Public Works Subcommittee, House Committee on Interior and Ensiles Affairs; House Committee on Interiors and Foreign Commerce; Search Committee on Appropriations: Public Works Subcommittee, Swater Committee on Appropriations: Public Works Subcommittee, Swater Committee on Energy and Natural Resources.

#### Date Bese Referency S-03300-005

Subject Tennic Air Polistics Control; Electric Power; Energy Prices; Environmental Assessment; Porceasting; Signatules; Thorses! Powerplants; Water Polistics Control.

Purpose: The purpose is to analyze and evaluate information on electric powerplant fuel supplies, transport, stockpiles, quality, and costs: to determine the environmental effects of steam-electric noweroisnts and associated faculaties upon air and water quality and the authetic effects of transmission line installations; and to determine the offect of finel and environmental control costs on the cost of electricity to consumers. Input: Input includes public use forms (FPC Forms #67 and #423); data from other Government seencies (Department of the Interior, Environmental Protection Agency, Eneray Research and Development Administration, Federal Energy Administration); data from industry associations (National Coal Association. Edison Electric Institute. Electric Power Research Institute); and private communications with electric power industry representatives. Content: PPC Form #67, titled "Steam-Electric Plant Air and Quality Control Data" is filed annually by some 850 steam-electric plants from all parts of the United States, having a canacity of 25 megawatts or greater. The data include the following information: 1) Air Quality Control Data-fuel types, cusnitities, and quality; boiler designs, flue gas cleaning equipment, amounts of pollutants discharged to the atmosphere, disposal of ask and sulfur waste products, cost of air pollution control: 2) Water Quality Control Data-cooling water provisions, types of cooling systems, thermal and chemical discharges; 3) Future Air and Water Quality Dataprojected plant expansions; quantity, quality, and source of future fuel requirements; projected plant water use; and 4) Plans and Costs for Meeting Air Pollution Standards-applicable air pollution control regulations, proposed method(s) for achieving compliance, pollution centrol costs associated with achieving compliance. FPC Form #423. "Monthly Report of Cost and Quality of Puels for Electric Plant," is filed monthly by some 850 plants from all parts of the United States burning fossil facts and having a total combined (steam-electric combustion, turbine, and internal combustion) generating capacity of 25 mesawatts or greater. The form includes information on the type, quantity, quality, and price of fossil fucls delivered to electric powerplants; source of the fuel; and type of rurchase. Outsur: Steam-Electric Plant Air and Water Quality Control Data is published annually. The Monthly Report on Fuel Cost. Quality is published monthly. The Annual Summary of Cost and Quality of Electric Plant Fuels, with special supplements on the origin of coal delivered to electric utilities and a comparison of the sulfur content of goal with applicable sulfur regulations is published annually. These are all hardcopy. Applicability: All reports are publicly available.

Agency Contest: Division of Power Surveys and Analyses; 825 North Capitol St., Washington, DC 20426; (202) 275-4677.

Hjohn and Electric Recurring Data Reports.

OMAF Funding Histor General and Reports (26-0100-01-1005.

Congusational Relevances House Committee on Appropriators:

Public Works Subcommittee, House Committee on Internsiate and Forciga Committee on Internsiate and Forciga Committee on Internsiate and Forciga Committee Committee on Internsiate and Forciga Committee on Internsiate and Forciga Committee on Reportations: Public Works Subcommittee, Swatz Committee on Committee on Food Subcommittee, Swatz Committee on Report and Natural Resources.

Data Base References S-03300-037

Subject Terms: Electric Power Generation; Electric Utility Roses; Energy Consumption, Pinancial Statements; Hydroelectric Power; Privately-Owned Utilities; Public Utilities.

Purpose: The purpose is to provide for a series of authorisetion proceedings Price Justicians and attainties relative to the general proceedings of the purpose in the proceedings of electric interrupt of electric interrupt of electric interrupt of the transport of electric interrupt of the transport of electric interrupt of the transport of electric interrupt of the electric interrupt of elect

March 11, 2) Annual Rennet, Municipal Electric Utilizies, Somilar information from municipal electric utilities with annual revenues of \$250,000 or more. Due March 31: 3) Typical Net Monthly Bills for Residential Service. Filed annually by selected power suppliers in each State for specified communities, typical net monthly bills for nower at rotal for residential service for communities of 2.500 or more notalation and commercial and industrial service for communities of 50,000 or more, or if there are no cities that size, the three largest. Due shout February 15-4) All, Electric Homes Data Sheet Filed annually by power suppliers in all cities busine populations of 50.000 or more or supplying the three largest cities, not annual retail bills for all-electric homes computed under rates applicable January I. Also istess information on number of all-electric customers and average electric consumption, Due April 15; 5) Monthly Powerplant Report. Filed by all electric utilities with generating opposity, monthly information on generation of electricity and consumption and stocks of fuel (Form 4-white). And from a selected sample of industrial establishments, generally with installed generating capacity of 5,000 kilowatts or more (Form 4-pink). Due 10 days after month reported; 6) Monthly Statement of Electric Operating Revenue and Income. Monthly information on operating revenues and income, filed by all privately owned electric ptilities with ennual electric operating revolucs \$2.5 million and over, and certain publicly owned utilities. Due about 40 days after end of month: 7) Industrial Biectric Generating Caracity, From all industrial establishments which oward or operated generating capacity, other then motor generators, at any time during the year and did not report monthly on Porm 12-E2. Due May 1: 1) Summary for National Flortric Rate Book, Selected retail rate schedules of electric utilities. both public and private, for Inclusion in the FPC National Electric Rate Book, Filed periodically as requested by PPC; and 9) Retail Rate Level Change, All changes in retail rates, filed within 60 days of date of change, from all electric utilities serving at least one community of 2,500 or more population. Quant: The principal hardconv reports produced are: 1) Electric Power Statistics and advanced news release - hardcopy, monthly; 2) Typical Electric Bills - hardconv. annual: 3) All-Electric Homes - handconv. annual: 4) Statistics of Privately Owned Electric Utilities - hardcopy, annual; 5) Statistics of Publicly Owned Electric Utilities - hardcopy, annual; 6) National Electric Power Generation and Energy Use Trends - hardcopy, quarterly. 8) Summary of Canacity, Production and Fuel Consumption hardcopy, annual: 9) Retail Rate Increases - hardcopy, quarterly: 10) Supplement to Yearly Typical Electrical Bill Report (500 kwh) hardcopy, quarterly; 11) Power Production Generating Capacity Data for 1970 to 1975 - hardcopy, annual; and 12) Monthly Comparisons of Peak Demends and Energy for Load by Power Supply Areas - hardcook, annual Availability: All publications are publicly available from the FPC; publications 1 through 5 are also available from the GPO.

Agancy Contoot: Division of Power Surveys and Analyses; 825 North Capitol St. Washington, DC 20426; (202) 275-4731.

Hydrochock Rown Resource of the United States (HPR).

OMB Funding Hittle-Gode Schinists and Expanses 12-60-100-01-3-05.

Compassioned Subversion Houre Committee on Large Large Large Large Large Committee on Large Larg

Data Base Reference: S-03300-003

Subject Terres: Electric Power Generation; Hydroclectric Powerplants, Powerplants

Paryone The purpose is to keep current an inventory of all existing hydreelectric plants in the United States and of potential undeveloped hydroelectric power sikes, and to provide summaries by various ortegeries, hittorical data, and forestess for future development of hydroelectric power. Apart: Data on existing bydroelectric power.

powernisets are obtained from reports received by the Commission from both privately- and publicly-owned electric utilities and from reports on industrial generating plants. Data on the undeveloped hydro rower resources are obtained from vanous sources which include reports and studies by Foderal, regional, State and local attencies, studies by private interests and applicants for licenses or permits from the Commission, or from any other available source Acts of Congress such as the Weld and Scenic Rivers Act provide input that identifies exclusions and notential exclusions from the data file. Consent: Each moned in the data file on magnetic tape has 999 characters which eroyide for 160 items of descriptive information on each hydroclectric plant or site. These items include names of plants. sites, and reservoirs; locations by streams, major drainages, States and regions, by coordinates, elevation, river miles and relative sequence on over reaches: drainage areas and average inflows: dam and reservoir descriptions: project purposes; type of project: license project numbers and action dates, plant data sems, sacluding generator ratines, number of units, states, average annual generation, head capability, hydraulic capacity, types of turbine and power conduit cost data, numerous processing codes and other items of information: and perusons remarks. Output: The principal reports are "Hydroelectric Power Resources of the United States. Developed and Undeveloped," every four years; an annual list of Federal hydroelectric tilants in operation, under construction, and authorized: listings of 40 items from each record of the data file and four cross undexes in computer output formats; and certain summeries and tabellations of this data appearing in the annual report of the Federal Power Commission. Appliatifies "Hydroelectric Power Resources of the United States" is available from the Superintendent of Documents, U.S. Government Princing Office. Computer Introduction of selected plant and site data are generally for internal use, but are available on special request. A computer printout of each entire tape record is available on FPC Form 557.

Agency Contact: Division of Rover Benins; 825 North Capitol St., Washington, DC 20426; (202) 275-4684.

# 408 Electric Regulatory Astronous

OMB Fuelding Tille/Code: Salarius and Exposess / 26-0100-0-1-305. Compessional Relevance: House Committee on Appropriate Public World Sulcommitter, House Committee on Internate and Fueling Comsulter Affairs; House Committee on Internate and Fuelings Comsurers; Seaster Committee on Appropriations: Public Works Subcommittee, Seaster Committee on Commerce, Science, and Transportation; Science Committee on Energy and Natural Recoursers.

Date Base Reference: S-03300-029

Subject Teams: Electric Utility Ruses, Proc Regulation, Public Utilities, Public Utility Rases; Utilities.

Purpose: The purpose is to provide information concerning the electric utility regulatory workload of the Commission, electric rate schedules on file with the Commission, and the status of formal electric rate cases pending before the Commission Input: All information is derived from internal sources. Cassent: The subsystems and their contents are: 1) Quarterly summary of electric regulatory activities - provides workload data on electric rate fillings and cases for current and provious quarters, summary of rate cases pending at end of quarter, and number of cases and dollar value of corrorate transactions pending for corrent and previous quarters; 2) index of electric rate schedules - lists all electric rate schedules filed with the Commission, including names of selling companies and other parties and types of electric service provided. Index is updated and reissued quarterly; and 3) slohanumeric Index by Company Name and Docket Number - lists alphabetically by electric utility (and by docket number where more than one case is pending) the docket number, status, assignment and internal activity for all formal electric rate cases. Covers all cases since 1974. Output: Summaries of electric regulatory activities are issued quarterly as Commission news releases. The index of electric rate achedules is a quarteely computer printout, reproducible in hardcopy, of approximately 350

pages, highersuments order, and tabular. The index by company names and decket name in a hardessy company remotes, issued monthly in columnar formest and alphanuments order. Availability: Summaries of electric regulatory activities and the index of electric regulatory activities and the index of electric modes of the endex of electric and decket outside in the property of the end of electric modes of electric and decket company name and decket company in the end of electric modes are resulted to the end of electric modes of electric modes.

Agency Centert: Division of Rates and Corporate Regulation; 825 North Capitol St., Washington, DC 20426; (202) 275-5667.

## 409 Proor Surveys and Systems Evaluation.

OMB Funding Title/Gode: Salarses and Expenses / 26-0100-0-1-305.
Congrassland Railvoorses: House Committee on Appropriations:
Public Works Subcommittee, House Committee on Interior and Insalar Allies, House Committee on Interiors and Insalar Allies, House Committee on Internate and Foreign Commerce, Sweate Committee on Appropriations: Public Works
Subcommittee, Sweate Committee on Committee on Transportation; Sanet Committee on Energy and Natural Resources.

Date Base Reference: S-03300-010

Subject Terms: Electric Power Generaton, Electric Powerplants; Energy Policy; Financial Statements, Privately-Owned Utilities; Public Utilities; Utilites

Purpose: The purpose is to investigate the electric power industry, including its characteristics, demands and supplies, structure, markets, and value of power, and to project future development patterns of the industry, the costs of electric power, and the impact of public policies on the industry. Input: Information is derived from electric power industry reports submitted to the Commission, including certain FPC public-use forms (FPC Forms 1, 12, 12E), staff analyses and reports, and reports of government-industry advisory Committees. Consect: Industry reports are submitted to the Commission monthly, somennustly, and annually, and cover all aspects of electric power generation for every geographic region of the Nation. Advisory Committee reports are submitted as requested and proconcerned with specific topics, such as power supply, fuels, finances, conservation, research and development, power supply adequacy, and environmental issues. The Committees are established to consider a particular issue, and their reports and recommendations are used as source material in the development of Commission policies. Public use form data include the following: 1) Porm 1 detailed financial and operating information filed annually (March 31) by all privately-owned electric utilities with annual electric operating revenues of \$1 million or more; 2) Form 12-annual power system statement (due May I) filed by all systems which generate at least part of their own power and whose not energy generation exceeds 20 million kilowett hours per year, and 3) Form 12E-o monthly supplement to Form 12 listing the near-term summer or winter load supply situations of the responding utilities and related transmission and generating facility delays. Output: Advisory Committee and Commission reports covering various electric power industry issues and problems are published as noccusary. Periodic hardeopy reports of seasonal load-supply situations (national and regional) are published. Annual hardcopy reports are published listing plant costs, operating and fuel expenses, and related data for steam-electric, hydroelectric and gas turbine powerplants. Availability: All reports are available to the public through FPC or the Government Printing Office.

Agency Contoct: Division of Power Surveys and Analyses; 825 North Capitol St., Washington, DC 20426; (202) 275-4766.

# Status of Pending Hydroelectric Applications OMB Funding Title/Code: Salaries and Expenses / 26-0100-0-1-305

Comprissionel Relevence: House Committee on Appropriations: Public Works Subcommittee, House Committee on Interior and Insular Affairs; House Committee on Interior and Insular Affairs; House Committee on Interiora and Peteign Commerce; Sensar Committee on Appropriations: Public Works
Subcommittee; Sensar Committee on Commerce, Science, and Transportaining, Sensar Committee on Energy and Natural Resources.

#### Date Bose Reference: S-02100-011

#### Subject Terms: Hydrociectne Powerplants, Licenses, Powerplants.

Purpose: The marpose is to provide information concerning the status of hydroelectric project applications pending for preliminary permits, licenses, license amendments, transfers, or surrenders, and other matters related to the Commission's hydroelectric licensus. program under Part I of the Federal Power Act. Input: Information is denved from applications submitted to the Commission and from input at various stages of application processing. Content: The system provides the applicant name. EPC project number assumed, date application was filed, processing status of the application, installed generating canacity of the project, the engineer assigned, and a brief description of the type of application. A separate subsystem also provides a brief payretive history of applications involving new hydroelectric generating capacity. Output: The overall system provides an automated, hardcony status report of all pending applications. It is published quarterly but can be updated more frequently. The system can be queried by applicant, status category. type of application, and project number. The quarterly new capacity report is manually produced. Assilability: The reports are for internal use only.

Agency Contact: Division of Licensed Projects; 825 North Capitol St., Washington, DC 20426; (202) 275-4861.

#### 411 Special Reports Issued by the FPC and Federal Power Commission

OMB Founding Title/Codus Salarites and Expenses / 26-010:00-1-305.
Congruentineet Relavances House Committee on Appropriations:
Philis Works Subcommittee; House Committee on Interiorie and Insular Affairs; House Committee on Internates and Percigin Commerce; Sauric Committee on Appropriations: Public Works
Subcommittee; Panele Committee on Commerce, Science, and Transparticles: Growner Committee on Exergy and Natural Resources.

#### Data Sase Reference: S-03300-012

Publishment.

## Subject Terms: Electric Power; Information Services; Maps; Natural Gas.

Paymer: The purpose is to provide to the press, the Congress, other Covernment apencies, the regulated industries, and the general public with information on availability of publications and reports leaned by the FFC. Insut: Information is submitted by internal sources, including all organizational units within the FPC. Content: Them publications list special reports and publications issued by the Federal Power Commission. Reports are grouped under general, electric power, natural gas, special report, and map categories. The list of special reports covers reports available free of charge from the Office of Public Information. Title, date of issue, and nows release (NP) number (where applicable) are provided. Publications contained in the publications list are available from the Superintendent of Documents, U.S. Government Printing Office. Title, date of publication, price, and description of contents are provided for each. These are undated as necessary. Outsut: The output consists of statistical reports, rules and regulations, decisions and opinions, operating data, special gas and power studies, maps, cost and rate information, power and gas savings, gas cartailment reports, electric load sunnly projections, and other matters, revised periodically. These are monthly, quarterly, annually, or as necessary. Alt are hardoopy publications. Availability: Reports are publicly available. from GPO NTIS, and PPC. Availability varies from report to report.

Agency Contact: Office of Public Information; 825 North Capitol St., Washington, DC 20426; (202) 275-4006.

## 412

Natural Gas Industry Evaluation Systems.

OMB Funding Title/Code: Salaries and Expenses / 26-0100-0-1-105.

Congressional Relavorace Hour Committee on Appropriations:

Public Works Subsystems Hours Committee in Interface and In-

seiar Affairs; House Commissee on Interstate and Poreign Commerce; Seaste Commissee on Interstate and Poreign Commerce; Seaste Commissee on Interstate and Poreign Comsubscenarities; Seaste Commissee on Commerce, Science, and Transpertation; Seaste Commissite on Energy and Natural Resources.

#### Date Rese Reference: S-03300-013

# Subject Terms: Energy Industries; Forecasting; Gas; Natural Gas, Synthetic Park. Purpose: The National Gas Survey was established by a series of

Commission orders, in accordance with the requirements of the Federal Advisory Committee Act, to provide the Commission, the public, and the industry with information designed to provide a clearer micture of the respect and future course of the natural gas industry than could be obtained from the mass of unevaluated statistics and information currently available. This information is required for offective regulation of this industry. Agent: The data in this system are the end product of a combined effort, directed by the Commission in which Perfered and State spencies, industry representatives, and members from academic institutions and technical societies all participate, utilizing all industry knowledge, data, and information currestly available. Control The information in the system includes analyses of natural gas resources, natural gas industry technology, industry erouth trends, and the anticipated interaction of probable future market forces, assuming various public policy and private industry decisions. The impact of feature technological changes is carefully considered. The program goal is a periodically updated, commendentive analysis of the future energy situation, and an overview of the natural gas industry and its probable future course. The National Gas Survey is nationwide and worldwide in scope. Output: The principal output of the server will be hardcopy reports on the following achiect areas: nonconventional natural gas resources, synthesized gaveous hydrocarbon fuels, regulatory aspects of substitute ras, rate design, impact of the eas shortage on consumers, officiency in the use of gas, finance, and curtailment strategies. Availability: The system's output in the form of task force reports, preliminary summaries (chapters), and final, Commission approved reports (volumes) is available to the public. The source of published volumes is the U.S. Government Printing Office, All other documents are available through the Commission's Office of Public Information and/or from National Gas Survey files.

#### Agency Centoct: Bareau of Natural Gas; 825 North Capitol St., Washington, DC 20426; (202) 275-4516.

# 413 Natural Gos Campany Operating Information File

OMB Facility Tills/Codes Salaries and Exposes 126-01000-1-303. Companishmed Exhormest Hause Committee on Ageopratisions: Public Works Sub-committee; Heiser Committee on Interior and Insider Affairs; Bauer Committee on Interior and Interior and Interior and Interior Salaries Committee; Salaries Committee on Appropriations: Public Works Sub-committee; Salaries Committee on Ommittee; Salaries, and Transpartation; Source Committee on Energy and Natural Resources.

#### Subject Terms: Energy Industries; Exports; Imperix; Nazzeti Gas; Natural Ges Fluelines: Fluelines.

Paymer: The Natural Gas Company Operating Information file provides the Commission and the public with detailed data and information and was a second of the public with detailed data and information and the public of the publi

films fees made by these companies. This file is maintained under the agneral requirements of section 14(a) of the Natural Gas Act. Invat: The data in this file are derived from official FPC data collection forms, various compliance filmes, and other reports required to be filed by natural eas pircline and producing companies under the Commission's jurisdiction. Consent: The natural sas company operating information file contains the following information: Dedicated year-end reserves and annual interstate production by company, by State and FPC production area, updated annually; producer expenditures, exploration and development activity, reserve additions and revenues by company updated annually; jurisdictional producer intra and interstate production and reserves by company, undated annually: underground storage volumes by company, by geographic reany, undered monthly (semimonthly November through March): underground storage volumes, caracity, deliverability and gost by company, by ecographic region, by field, undeted annually; imports and export volumes and monthly prices by company, by FPC docket, by location, undated annually: actual and estimated nineline requirements and curtailments by company and region, annual and winter basis, undated seminaurally; actual monthly curtaliments by company, by State, updated quarterly; pipeline construction costs by mile by nine size by function by commony by EPC docket by geographic region, updated annually; monthly intrestate contract prices by company, by PPC production area, by State, undated oursterly. listing of regulated piteline communies by type and size by service area, undated semiannually: average wholesale and reizes for 14 large metropolitan areas, undated annually: reserve dedications by company, by FPC production area, by purchaser, undated monthly: field code listing by county and State name and code, hours seller and small producer ends listings with name changes and date of change, active or inactive status; and jurisdictional contract and rate surmanies by company undated continuously. Output: The system output is keved in most instances to the frequency of reporting vis official EPC data collection forms, filings, and remote. These include pipeline reserves and production - annual; underground storage semimonthly, monthly/sanual; imports and exports annual; pipeline curtailments - quarterly, semisanual; construction costs - annual; pipeline listing - annual; wholesale gas prices - annual; interstate gas prices - quarterly; reserve dedications monthly; field, buyer, seller and small producer listings - annual. The code listings and reserve dedication reports are issued as ADP printouts; all other reports are issued as news releases and/or formal reports. Availability: With the exception of the internal monthly and semimontialy underground storage reports and two internal annual reports on pipeline construction costs, output is available to the public through the Commission's Office of Public Information. Information pertaining to producer reserves and cost data is considered confidential pending Commistien and/or court action

Agency Contect: Bureau of Natural Gas; 825 North Capitol St., Washington, DC 20426 (202) 275-4419.

414
Notural Gas Regulations System (Producer Rate).

OMB I-welling Title Codes Salaries and Represent 726-0100-1-305. Comparational Relevance House Committee on Appropriations Public Works Subcommittee, House Committee on Interior and Insular Affairs; House Committee on Internate and Porcing Commerce; Strate Committee on Internate and Porcing Commerce; Strate Committee on Appropriations; Public Works Subcommittees, Series Committee on Committee on Committee on Terraportation; Store Committee on Energy and Natural Resources.

Date Sase Reference: S-03100-015

Subject Terms: Energy Prices; Government Regulation; Internate Correperce; Natural Gas Prices.

Purpose: Producer rate regulation is required by the Natural Gas. Act to assure that material gas is noted in interestate commerce as rates which are just and reasonable. The major functions of this system are to review exploration, developmental, and production costs associated with the production and sale of natural gas, recommend rates required to explore for such develop the natural gas received.

essential to the needs of the country, and review all producer rate filings made with the Commission. This system is maintained to provide the Commission and its stoff with the information processary to determine just and reasonable rates for the sale of natural easform: The data are derived primarily from producer rate change filings, rate schedules, industry questionnaires, Commission orders and opinions, and data available from the Natural Gas Operating Information File. Content: This file contains records of rates applied for by producers for interstate gas sales to pinelines, a comy of each contract under which producer sales are made also correspondence and other related producer information. These rate fillings are made runtuent to Commission opinions establishing astionwide rates or as a certile of contractual requirements or State actions affection rates being charged. Output: Opinions which establish just and ressonsble rates are preduced approximately every two years. Hardcopy is available. Producer rate change filings are reported on summary reports on a continuous basis. Hardcony reports only are available. Availability: National Rate Opinions are available to public in hardnony form. Producer rate changes are reported on continuous reports for internal distribution only.

Agency Contacts Bureau of Natural Gas; 825 North Capitol St., Washington, DC 20420; (202) 275-4579.

415 Natural Gas Resulation System (Producer Certificate).

OMS Funding Titles/Code: States and Expenses / 26-0100-01-305.
Canguestened Relevances: House Committee on Appropriations:
Public Works Stocomatites; House Committee on Interior and Insular Affairs; House Committee on Interiors and Foreign Commerce; Smale Committee on Interstate and Foreign Commerce; Smale Committee on Appropriations: Public Works
Subcommittee; Seaste Committee on Commerce, Sealence, and Transcontrollers Smale Committee on Energy and Natural Resources.

Data Dasa Reference: S-03300-016

Subject Terms: Government Regulation; Interstate Commerce, Licenses; Natural Gas Pipelines; Natural Gas Sales; Pipelines.

Parson: Under the Natural Gas Act, producers are required to obtain certificate authorization to sell gas in interstate commerce and to obtain abandonment authorization for the cossation of any sale of eas in interstate commerce. Certificate applications and abandonmost applications are filed by producers pursuant to the Commissign's Rules and Regulations as set forth in the Code of Federal Regulations, Title 18, Chapter I. The purpose of the file is to provide the Commission staff with adequate information concerning the amount of gas available, terms and conditions of gas sales, and location of any dedicated to the interstate pipeline system. Input. The data necessary to support this system include applications for certificates of public convenience and necessity and eas contracts filed by producers. Commission orders and opinions, and data available from the Natural Gas Operating Information File. Context: The files contain a record of all producer certificate applications and contracts which govern the terms and conditions of the sales. Each certificate provides the applicant's name; description of facilities; pipeline locations, length, dismeter, daily capacity; any compressor, eas-on-line, dehydration or purification plant; storage facilities; sas supply; and gas contract. Each gas contract contains the name of the purchaser, point of delivery, contract volume, price at time of filing, date and term of contract, and special conditions. Outsut: A semisneus summary of producer certificate fillings of various types is prepared by the Bareau of Natural Gas for the Commission's information in hardcopy form with no computer capability. This summary identifies large producer certificate applications, small producer contracts filed by pipelines, applications for limited term certificates and for entional certificates and notifications of 60-day emergency sales by docket number or file number, seller, buyer, field, county, State, price, term, and volume. Availability: The summary of producer certificate filings is publicly available upon request, but it is primarily an internal report prepared for the information of the Commission.

Agency Contect: Bureau of Natural Gas, 825 North Capitol St., Washington, DC 20426; (202) 275-4524.

#### 416

Natural Gas Regulation System (Pipeline Rote).

OMB Funding Title/Code: Salaries and Expenses / 26-0100-0-1-305.

Ceagnatelend Ralavance House Committee on Appropriations. Public Works Subcommittee, House Committee on Interior and Insular Affairs, House Committee on Interistate and Foreign Commercey. Seems Committee on Appropriations: Public Works Subcommittee; Source Committee on Commerce, Science, and Transportation, Seems Committee on Commerce, Science, and Transportation, Seems Committee on Energy and Natural Resource.

### Date Base Reference: S-03300-017

Subject Terms: Energy Prices; Government Regulation; Natural Gas Pipelines; Natural Gas Prices; Pipeline Relet: Pipelines.

Purpose: Pipeline rate regulation is required by the Natural Gas Act to assure that nineline rates are just and responsible. As part of its burden of proof in support of a proposed rate increase, a pipeline company is required to submit cost and financial data including an overall cost of service which is the starting point in determining just and reasonable rates. It represents the revenue requirements that will enable a company to recover its cost and operate profitably in order to attract capital for sustained service to its customers. Formal hearings are usually held on these rate increase proposals. Rulemaking proceedings are also instituted to set standards and new policies and to provide necessary information for effective regulating actions. Jeput: The data necessary to support this system are derived primarily from pipeline rate change filings, rate schedules, tariffs, reports and investigations instituted as a result of rate change filings, and Commassion orders and opinions. Data from the Natural Gas Operating Information File are also used. Context: The information File contains a historical record of each individual regulated pipeline's just and reasonable rates, cost of service, plant in service, depreciation rate, gas purchase cost and volume sold, volume of gas sold and rate price, balance sheet data, income statements, transmission line data, gas storage data, a finance payment data, expital structures, and allowed rate of return. Outsur Opinions which establish just and reasonable rates are issued after the Commission has decided individual pipeline formai rate cases. Hardcopy is available. Available. try: Pipeline rate opinions are available to the public.

Agency Contact: Bureau of Natural Gas; 825 North Capitol St. Washington, DC 20426; (202) 275-4371.

## 417 Natural Gas Revalution Systems (Plueline Certificate).

OMB runding Title/Code: Salaries and Expenses / 26-0100-01-305. Congressland Ralavencar House Committee on Appropriations: Public Works Subcommittee: House Committee on Interier and insuiter Affaire; House Committee on Interstate and Foreign Commerce; Senses Committee on Appropriations: Public Works Subcommittee; Senses Consulties on Commerce, Solonce, and Transportations: Senses Consulties on Econy and Natural Resources.

## Data Base Referense: S-03350-018

Subject Termus Government Regulation; Licoures; Natural Gas Pipelines; Pipelines.

Purpuse Under accional 3 and 6 of the National On Act, over 120 purificational natural age shipeline companies must thorin septitational natural age shipeline companies must thorin septitational natural age of the shipeline of

certificate application filed by the pipeline company, from Commissign orders and colmions, and from data available from the Natural Gas Operating Information Pile. Supplemental data are frequently requested by staff from the applicant as required. Consent: This file consists of all certificate applications applied for by Natural Gas Companies. Each application for a certificate by a jurisdictional papeline company is accompanied by specific data on the project as to the financing, engineering, economics, gas supply, market, State and local authorization, location of facilities, flow diagrams, environmental impact, cost of facilities, construction, massicnance and operation schedules, the impact the projects will have on the entire system's operation, gas volumes to be transported, anticipated startup dates, and other relevant company data. Data on natural gas curtailment plans are also a nart of this information source. Output: The ultimate output is the Certificate of Public Convenience and Necessity issued by the Commission. Reports at the staff level include internal memos recommending action, exhibits, testimony, and environmental impact statements. Availability: The Certificate of Public Convenience and Necessity, Exhibits, Testimony, Environmental Impact Statements, and correspondence to and from the applicant are all available to the public through the FPC, Office of Public Information. Staff memos recommending action are restricted to internal use.

Agancy Contact: Bureau of Natural Gas, 825 North Capitol St., Washington, DC 20426; (202) 275-4496.

#### 418 FPC Library

OMB Funding Title / Coém. Salaries and Expenses / 26-0100-0-1-305. Congrussional Euleviences: House Committee on Appropriations: Public Works Subcommittee, House Committee on Interior and Insular Affairs; House Committee on Interestee and Footign Commerces; Seouse Committee on Appropriations: Public Works Subcommittees; Seouse Committee on Commerces, Science, and Transportations; Seouse Committee on Energy and Natural Resources

Data Sass Reference: S-02300-019

Subject Terms Energy; Information Services, Laborers, Public Utilities

Perpete The Federal Power Commission Library maintains materials which relate to pertain phases of FPC fiscal and budgetary programs; current and retrospective files misting to congressional reports, hearings, and public laws for the regulatory arencies, as well as soveral executive departments such as Agriculture, Interior, and Energy Research and Development Administration. Juput: Materials are derived from integral and external sources. Content: The content includes an extensive collection of publications and materials related to general management and accounting functions; the United States budget dating back to 1921; statistics of electric and gas, public utilities, including finance and management; Moody's Public Utilities and Moody's Industrials back to 1913; Standard and Poor's services on companies, stocks and bends; Ebasco's analyses of public utility financing; Commerce Clearing House services on Federal and State taxation; publications containing data on finance and banking which influence the national economy and hence the use of electric power and natural gas; Federal Fower Commission electric rates arranged by State, dating from 1939; and American Gas Association rate service. The remaining bulk of the collection deals with the legal and technical materials directly involved in public utility regulation. including publications on energy, asvironment, finds, aconomics, secounting, and law. Quesal: Normal library products are produced. Availability: The library is available for FPC staff use only.

Agency Content Office of Administrative Operations; 825 North Capitol St., Washington, DC 20426; (202) 275-4303.

#### 419 Notaral Gos Distribution Model.

OMB Funding Title/Code: Salaries and Exposess / 26-0100-0-1-305.

Congressional Relavoree: House Committee on: Appropriations: Public Works Subcommittee; House Committee on Interestate and Feetigs Commerce; Sever Committee on Appropriations: Public

Works Subsommittee; Sesse Committee on Commerce, Science, and Transcortation.

Data Base Reference: 5-03100-020

Subject Terms: Forecasting, Mathematical Models, Natural Gis Demand; Natural Gas Distribution, Natural Gas Papelines: Pinclines, Similation

Purpose: The model is a mathematical program which determines the optimum distribution of natural gas from producing areas to markets through the natural gas pipeline network. Bigut: Input data requirements for the model are the demand for natural gas by State, scotor (residential, commercial, industrial, electric utility), and year, and natural gas production (both interstate and intrastate) by FPC producing area. Demand data, by sector, are provided by the Foderal Energy Administration, Production data are derived from data prepared by the Future Requirements Committee and published in Future Gas Consumerion of the United States. Volume 6. December 1975. Content: The model computes the optimum allocation of natural gas to sectors within each State, using goal-oriented techsigues of mathematical programming. Optimum allocations are computed in accord with user supplied factors indicating the relative importance of satisfying demand in each of the four sectors in the States. The model determines an optional allocation from a set of potential solutions which are constrained by such factors as pipeline especity, gas production, and maximum allowable deviation from historical patterns of gas distribution. Output: Major hardcopy reports consist of predicted flow of gas from supply areas to market areas on a pipeline-by-pipeline basis and predicted allocations of natural gas to residential, commercial, industrial, and electric utility sectors on a State-by-State basis. As the need for analysis of natural gas distribution arises, the model is run and reports are produced. Availability: Sample output from past analyses is available from the Agency contact.

Agency Contest: Pipeline Certificate and Curtairment Division; 825 North Capitol St., Washington, DC 20426; (202) 275-4515.

#### TENNESSEE VALLEY AUTHORITY

420

Bookkeeping System.

OMB Funding Titls/Cods: Tonnessee Valley Authority Fund / 64-4110-0-3-301.

Congrussional Raisvoness House Committee on Appropriations:

Public Works Subcommittee; House Committee on Public Works and Transportation; Senare Committee on Appropriations. Public Works Subcommittee; Senare Committee on Environment and Public Works.

Data Mass Reference: S-05700-001

Subject Terms: Accounting: Budget Information Systems; Management Information. Systems; Resource Allocation.

Purpose: The system occumulates accounting data and preparasiltural report for accounting and for management to plan, monitor, and countrie dependent on plan, monitor, and countrie dependent on plan, monitor, and countrie dependent operations provide purposes. Celliser to the system provides information that is necessary to prepare nod support halances sheets and lusione sestemates for proprietative strong sensitions—fined yet produced to fusion sestemates for proprietative strong sensition—fined yet produced pulsacions are not existent only one-special solucions, and exist stituents of operation and form due support separation plants of the sensition of the sensits of the sensition of the sensition of the sensition of the sens

Agency Contact: Division of Finance; Tennessee Valley Authority, Knexville, TN; (615) 632-3291.

### ENERGY RESEARCH AND DEVELOPMENT

ADMINISTRATION

Francial Information System, 383; 384; 385.

OMB Funding Title/Code: Operating Expenses / 89-0100-0-1-053;

Operating Expenses / 89-0100-0-1-251; Operating Expenses / 89-

olio-0-1-305.

Canguastienol Raisveness: Houre Committee on Agicultore, Rosse Committee on Appropriations: Interior Schemmittee Mose Committee on Appropriations: Interior Schemmittee Mose Committee on Armed Services: House Committee on Science and Technology; Souste Committee on Agriculture, Netrition, and Percentify, Souste Committee on Agriculture, Netrition, and Technology; Souste Committee on Appropriations: Existing Subscrimittee, Source Committee on Appropriations: Policia Works Submittee Subscrimittee, Source Committee on Com

Date Base Reference: S-06000-001

Committee on Energy and Natural Resources.

Sobject Terms Accounting Budget Information Systems; Francial Management.

Parpose: The system is the primary financial information collection and dissemination mechanism for the Agency. Input: The input includes congressional actions, OMB budget decisions, field financial reports, field and headquarters financial plans, program financial status information, and manpower management reports (contractor). Content: The financial management system is composed of two primary modules-the accounting module and the budgeting module. The accounting and budgeting modules are interfaced to provide comparisons of actual costs with financial plan estimates. This provides a tool for measuring performance by month. The interface enables much of the past year actual data to be recast into the new budget structure by machine. Data in these modules are organized in a programmatic rather than object class or special analysis structure. The accounting module is designed to collect and disseminate cost and obligation data at varying levels by budget and reporting classification, reporting organization, contractor, and location. The budgeting module is essentially made up of two major submodulesbudget formulation and budget execution. Budget execution is built around the Pinancial Plan, a document which provides guidance and cellings on costs and obligations at various reporting levels. Each office or organization which receives an alletment also receives a financial plan to provide guidance in expending the allotment. Since ERDA receives two appropriations (one for operating expenses and one for plant and capital equipment), each program is actually controlled by two financial plans. Both financial plans are computergenerated and contain only current year data. The financial plan is organized by office, organization, and program. The operating expenses financial plan is maintained on a cost and obligations basis, while the plant and capital equipment financial plan is on an obligational basis. Budget formulation is primarily a manual system. Budget schedules show a 3-year spread (past year actuals, current year estimates, and budget year estimates) for comparison purposes. Since the budget structure changes somewhat from year to year, past year actuals and the current year estimates are recest into the new hudget year structure for comparability. Special analyses of the budget data are also prepared as are certain crossouts which emphasize computers, isboratories, and personnel. Output: The principal output conslate of Rudget Status Tables. Pinencial Plans (Cost and Obligation) Mannower Reports (Contractor), Obligation and Cost Accounting Reports (Actual Vs. Planned), and Tressury Schedules and Reports. Assistability: Output is generally for Internal use only.

Agancy Contoct: Office of the Controller; 20 Massachusetts Ave. NW, Room C-207, Washington, DC 20545; (202) 353-5002.

### 422

National Solar Heating and Cooling Information Center Rusers

OMB Funding Title/Code: Operating Expenses / 89-0100-0-1-305. Congressional Relevance: House Committee on Appropriations, Interior Subcommittee: House Committee on Ameroprostrops: Public Works Subcommittee. House Committee on Science and Techpology: Seaste Committee on Appropriations: Interior Subsommittee: Seaste Committee on Amenoriations Public Works Subcommittee: Senate Committee on Energy and Natural Re-

#### Date Sere Reference: S-05000-002

Subject Terror Cooling Systems, Heating Systems; Information Centers Solar Cooling Salar Heating Purpose: The National Solar Heating and Cooling Information

Center was established by the Department of Housing and Urban Development in cooperation with the Energy Research and Develcoment Administration, under provisions of Public Law 93,409, to belts make everyone aware of the practical fessibility of solar energy and to encourage the public and industry to consider solar energy systems for houses and commercial buildings. Junet: Information and data (e.g., reports, studies, proposals, grants) from HUD and ERDA Inhoratories and contractors unwersities consultants and other contractors from both the public and private sector are sources of innet. Contest: Information is, or will be, available on such sublogts as thermal energy for buildings, flat plate solar collectors, thermal storage systems, solar water heating, building heating systems. combined heating/cooling systems, collectors and component materials, focusing collectors, economic analysis of solar systems. and photovoltaic power separation. Other topical areas are electric power generation, methano production, agricultural applications, thermal radiation properties, and solar system models. The Conter one provide locations of solar homes and offices for inspection names of architects who specialize in solar design, builders with solar experience soler equipment manufacturers detailed extentific or technical findings, and comprehensive listings of books and periodicals on apecific subjects. Output: Based on existing and new information from the ERDA Oak Ridge Technical Information Center. the NSH and CIC maintains or is developing a voluminous listing of state-of-the-art reports, periodicals, books, buvers' suides, and a directory of solar energy uses and mers. Literature searches will be performed on request. The Center provides exhibits and the names of organizations that will furnish topical speakers, information on grant applications (e.g., eligibility and timing for application submission) is available. The Center is establishing a centralized data bank of information. Availability: All data that are provided directly by the Center are unclassified, popularietary, and available to Government agencies, business and industry, and the general public without cost. Information provided by other sources available to the Center may have to be purchased.

Assency Contact: Division of Solar Energy: 20 Massachusetta Ave. NW. Washington, DC 20545; (202) 376-9482.

ERDA Headquarters Technical Library. OMB Funding Titla/Code: Operating Expenses / 89-0100-0-1-053;

Operating Expenses / 89-0100-0-1-251; Operating Expenses / 89-0100-0-1-305 Congressional Relevance: House Committee on Agricultures

House Committee on Appropriations: Interior Subcommittees House Committee on Appropriations: Public Works Subcommittees House Committee on Armed Services; House Committee on Science and Technology; Sense Committee on Agriculture and Forestry; Senate Committee on Appropriations: Interior Subcommittee: Senate Committee on Appropriations: Public Works Subcommittee: Senste Committee on Armed Services: Senste Committee on Commerce, Science, and Transportation; Senate Committee on Energy and Natural Resources.

#### Date Sess Reference: 5:06000:003

Subject Terror Energy Information Services, Libraries

Purpose: The ERDA Technical Library serves ERDA Headquarters personnel by providing the scientific and technical literature needed to support ERDA's mission. The library maintains an extensive collection of books, reports, public documents, and serials covering all energy-related areas. The library is coen to the public, but materials must be used in the library or borrowed through entablished Interlibrary Loan procedures. Input The input includes MARC (Morbine, Readable Catalogies Applications Backage): Hodgestiffed Reports Listing program, Headquarters Report Index -2444; KWIC-KWOC (Key Word In Context . Key Word Ont of Context): and Serial Information Control System (SICS). Contest: The computerined system contains all books cataloand by the BRDA Library since. mid-1974, and includes selected subject areas of L.C. MARC tapes. which are undated monthly. The number of all full rine necleasified reports held by ERDA Library are reported and updated every six works. The titles and number of ERDA Headquarters canocty are updated monthly (Word Processing) The KWOC Index of the titles of ERDA Headquarters reports is undated monthly. All subscriptions handled by the ERDA Library are updated monthly. Output The output consists of: 1) Author-Title Book Catalog, Subject Book Catalog, KWIC Index to Book Catalog, Shelf List to Book Catalog Selected Dissemination of Information output from MARC tapes 2) Unclassified Reports List; 3) ERDA 76-41; 4) ERDA Headquarters Reports: and 5) Accessions and Holdings List, KWIC Index, Routing slips, Serial Expiration Report, Routing List by Journal, Publisher List. Routing List arranged by recipient, X Cards, Cisim. Letters, and Serial Espiration Letter. All output is hardcopy. Availability: Reports are available through NTIS. Other output is for internal use.

Annacy Contacts Division of Administrative Services: Massachusetts Ave. NW., Washington, DC 20545; (202) 376-9015.

Energy Films Distribution, 75. OMB Funding Title/Code: Operating Expenses / 89-0100-0-1-053: Operating Expenses / 59-0100-0-1-251: Operating Expenses / 59-

Congressional Relevance: House Committee on Agriculture: House Committee on Appropriations: Interior Subcommittee House Committee on Appropriations: Public Works Subcommittee: House Committee on Armed Services: House Committee on Science and Technology; Sense Committee on Agriculture, Nutrition, and Forestry; Senate Committee on Appropriations: Interior Subcommittee: Senate Committee on Arations: Public Works Subcommittee: Senate Committee on Armed Services: Senate Committee on Commerce, Science, and Transportation: Serare Committee on Energy and Natural Resources.

#### Date Sone Reference: S-05000-004

Subject Terres: Audiovisual Aids: Engray: Piless.

Persons: The purpose of the Energy Film Distribution System (EFD) is to provide teachers, broadcasters and program chairmen of schools, television stations, civic clubs, government and industrial organizations with a means to obtain educational and informational films as well as technical and professional films on energy and energy-related subjects. The EFD is an on-line film booking system which books written or oral requests for motion picture films up to a year in advance and penerates appropriate forms and correspondence to confirm booking, daily listings of films to be mailed, mailing labels, a record of the return of films, and subsequent availability for dispatch, and statistics. Information recorded includes that identified on the enclosed form T1-234. Insut: The Input is schools. TV stations, civic clubs. Government, and industrial organizations. Content: This is an on-line film booking system which records the availability of educational films on energy and energy-related subisots. The system generates forms to confirm bookings, labels, a record of the return of films, and a daily listing of films to be malled.

Owless: The system generates hardcopy correspondence forms to communicate with film requestors. It also produces status reports on the circulation of films. The frequency is daily. Availability: The films and related system products are available to the public.

Agency Contact: Technical Information Center, Oak Ridge, TN 37830; (615) 483-8611.

## Liquid Mosel Fatt Breeder Rescior Plant Personatur Informatique

Sucrem 40 OMB Funding Title/Cods: Operating Expenses / 89-0100-0-1-305.

Congressional Relavance: House Committee on Appropriations: interior Subcommittee; House Committee on Appropriations: Public Works Subcommutee; House Committee on Science and Technology; Sasser Committee on Appropriations: Interior Subcommettee; Senow Committee on Appropriations: Public Works Subcommittee; Senate Committee on Rivergy and Natural Re-

### Date Seco Reference: S-06000-005

Subject Termic Roader Reactors; Liquid Metal Paul Breeder Reactors, Reac-

Parasse: The system provides compilation of LMFBR reactor systems characteristics for use in making management decisions. Data input and retrieval are via an on-line computer system (System 2000) Justic The input is from the Division of Reactor Development and Demonstration, contractors, international agencies, and the Assistant Administrator for International Affairs. Content: This system is part of the overall LMFBR program of developing a broad technological and engineering base for the LMFBR with extensive utility and industrial involvement so that upon this base a carecity can be enablished for a competitive commercial breeder industry as a means for meeting national energy needs in the 1990's and beyond. One of the program's overall objectives is to achieve public acceptance of the LMFBR Power Generation System by demonstrating its inherent strategy, oconomic benefit, and environmental acceptabiliity. Gugue: Output from the system is generally in hardcopy form via System 2000. The frequency of output is on an as-required basis. Availability: Output is generally restricted to internal use.

Agancy Contact: Division of Reactor Development and Demonstration; 9700 S. Case Ave., Argonne, IL 60439; (312) 739-7711.

#### Nuclear Maserial Management Plan. 41 OM8 Funding Titls/Cods: Operating Expenses / 89-0100-0-1-305

Congrassionel Rajavanea: House Committee on Appropriations: Interior Subcommittee; House Committee on Appropriations: Public Works Subcommittee; House Committee on Science and Technology; Sessee Committee on Appropriations: Interior Subcommittee; Senate Committee on Appropriations: Public Works Subcommittee; Sessie Committee on Energy and Natural Re-

### Data Susa Reference: 5-06000-006

Subject Terms: [tryensories: Noclear Materials.

Purpose: The system's purpose is the inventory and resource management of nuclear materials. Input: The input is from operation offices via contractors. Content: The major input document to the system (Form AEC 408) is concerned with the Quarterly Forecasts of Nuclear Material Requirements, Some of the information required on the input document is: Project Number, Project Title, and Material Type. This information is submitted to the system on on sucual basis. Output: Output is generated annually and represents a summary of the input. Availabilitie Output is generally restricted to internal use

Agancy Contact: Waste, Production and Reprocessing: 20 Massachusetts Avc. NW, Washington, DC 20545; (301) 353-4128.

## Reactor Information File, 289,

OMS Funding Titla/Code: Operating Expenses / 89-0100-0-1-305. Congressional Relevance: Henry Committee on Appropriations: Interior Subcommittee: Hause Committee on Appropriations: Public Works Subcommittee: House Committee on Science and Technology; Smote Committee on Appropriations: Interior Subcommittes: Senste Committee on Appropriations: Public Works Subcommittee: Sense Committee on Energy and Natural Renomnoes

### Date Rese Belonance: 5-05000-003

Subject Terms: Electric Utilities; Nuclear Powerplants; Nuclear Reactors Powertilarity: Reactors

Purpose: The Reactor Information File offits and processes parametric, cost, and achedular data received from electric utilities and other sources on civilian nuclear powerplant units. Computer printouts from RIF are used for preparation of ERDA publications ER-DA-125, ERDA-30 and TID-8200, as well as reports, analyses, and information responses to other ERDA components, Congress, other agencies, industry, and the public. Input: The input comes from electric utilities having nuclear plants ordered or under construction and the Nuclear Regulatory Commission Offices of Public Affairs and Industry Relations. Content: The system interfaces with other systems which maintain information (including statistics) in the following areas with respect to central station nuclear powerplants Number of plants announced, on order, under construction, operable, or terminated; schedules; capacity rating; costs; and operational history. Outsut: The output frequency is monthly, quarterly, or as required. Products of the system are sent to ERDA organizations. other azencies, industry and the public via Publications ERDA 125 and 30; and the Congress (Joint Committee on Atomic Rocrey and other energy-related committees) receives "update" which is a roport on success power. Assilebility: These are publicly available through ERDA distribution.

Agancy Contact: Nuclear Energy Assessments: 20 Massachusetts Ave. NW, Washington, DC 20545; (301) 353-3748.

#### National Plan for Entry: Research, Development, and Demonstration: Creeting Energy Choses for the Future, 123.

OMB Funding Titls/Code: Operating Expenses / 89-0100-0-1-305. Congrassional Relavance: House Committee on Appropriations: Interior Subcommittee; House Committee on Appropriations: Public Works Subcommittee; House Committee on Science and Techsology; Sensor Committee on Appropriations: Interior Subcommit-Sensor Committee on Appropriations: Public Works Subcommittee: Senate Committee on Interior and Insular Affairs.

#### Oato Bose Reference: 5-05000-003

Subject Terms: Budget Information Systems; Boorgy Planning; Energy Policy; Energy Programs, Research and Development Purpose The National Plan is published yearly in two volumes.

Volume I presents the energy technology goals, Research, Development, and Demonstration (RD and D) priorities, implementation policies and required resources for the normative and strategic elements of ERDA's plan. Volume 2 details energy R and D sotivities which are supported in whole or in part by the Federal Government, It highlights specific program goals, objectives, strategies, schedules. problems, and expected results. The plan's primary purpose is to be used as a background for budget preparations and hearings. Input-The primary input to the plan comes from the BRDA Program Administrators and ERDA labs and research centers. Programs from other Federal agencies are also presented in Volume 2. Content: The documents are updated each year and present the national energy policin, plans and programs for the Federic Government. Volume 1, dischars the sension energy profess, presents in case of all solvcides has detailed an extra extra

Agancy Contocts Planning, Analysis, and Evaluation; 20 Massachusetts Ave. NW, Washington, DC 20545; (202) 376-4354.

Coupled Energy System - Bosnomic Models, 465.

OME Funding Time/Codes Operating Bayestons / 88-0100-01-136. Congestioned Relavosces House Committees on Appropriations: Interfer Subsemministee: House Committee on Appropriations: Public Works July Committee on Subsemble on Public Works July Committee on Subsemble on Public Works Subsemministee: House Committee on Subsemble Subsemministees on Appropriations: Public Works Subsemministee; July Committee on Basery and National Residence on Appropriations: Public Works Subsemministee; July Committee on Basery and National Residence on Appropriations and National Residence on Residence on Appropriations and National Residence on Appropriations and

Date Sera Reference: 5-00010-000

Subject Terms: Econometric Models, Economic Impact; Energy Policy; Bacegy Supplier; Environmental Assessment; Percentage Sun Valen

Purson: The interrated energy system-economic models are used to evaluate the long run oconomic, energy, and environmental effects of various combinations of Government energy policies. These include policies relating to research, development, and demonstration of new entray supply, conversion, and end-use conservation technologies both in current and future time agricult. Assur. The integrated-uses economic portions of the system rely on largely historical data to project accommic levels and inter-industry activity through the year 2000. Rosery and technological parameters arise from exogenous forecasts of individual technologies and resources. Data Resources, Inc., Cambridge, MA, shares provision of economic data with the Brookhaven National Laboratory National Center for the Analysis of Energy Systems. The latter provides energy and technology data. Content: The integrated system consists of four models. The Data Resources Incorrected (DRI) Macraronsomic Growth Model is used to specify the annual values for the Gross National Product (GNP) and its component parts as well as relative prices and shares for capital and labor. The growth model is used to estimate the nominal and real values of consumption, investment, government spending, and not experts over time through the year 2000, given exogenously specified population and productivity estimates, and aggregate production and utility functions. The secand model is the Hudson-Jorgenson nine-sector econometric model of interindustry transactions. This model is based on a system of accounts for the private domestic sector of the U.S. economy, including final demand, primary input, and inter-industry transactions in current and constant prices. The U.S. economy is divided into nine industry groups, including five groups within the energy sector - coal mining, crude petroleum and natural gas, petroleum refining, electric utilities, and ass utilities. The model also includes three estegories of primary input - capital services, labor services, and imports - and four categories of final demand - consumption, investment, government purchases, and exports. Through this model, the process of production for energy and nanenergy products can be traced from the purchase of primary input through all stages of intermediate processing to deliveries to final demand. Owtest: Model output. hardcopy, is seed as input to larger analyses such as the annual authoral glast for energy research, development, and demonstration, topnet reports, and special analysis for BRDA units. The model output is rearly the final product is no analysis, "exhibiting variable for Analyzed model output is publishy available through the Office of the Antienta Administrate, Planning, Analysis, and Revolution, BRDA or the Center for the Analysis of Snorgy Systems, Brookhaven Netional Laboratory.

Agency Contact: Planning, Analysis, and Evaluation; 20 Missachusetts Avc. NW, Washington, DC 20545; (202) 376-4364.

430

Contracts Information System (CIS), 93.

OMB Funding Title/Codes Operating Expenses / 85-0100-0-1-053;
Operating Expenses / 89-0100-0-1-251; Operating Expenses / 89-0100-0-1-1000-1-1000-1-100-0-1-1000-1-100-0-1-100-0-1-10

Congratulated Ralvenness Mouse Committee on Appropriations: Interior Subcommittee, Heave Committee on Appropriations: Works Subcommittee, Heave Committee on Armed Services; House Committee on Schoene and Technology; Somes Committee on Appropriations: Interior Subcommittee; Senate Committee on Appropations: Public Works Subcommittee; Senate Committee on Appropriations: Public Works Subcommittee; Senate Committee on Armed Services; Senate Committee on Commettee, Seitence, and Transportation, Susant Committee on Ecommetee, Seitence, and

Data Base Referenser S-06000-010

Subject Terms; Contract Missagement; Contractors; Contracts; Government Propuments; Procurement.

Person: 9. CIS is a centralized data base which collects and processes conti -t and procurement data. Asset The input is derived from a recounters divisions administering contracts and/or interagency agreements, all field offices and energy research conters, and ERDA cost-type prime contractors when total procurement actions under the contract are estimated at \$250,000 or more. Consone Information is used for management purposes, for informational reports, and for furnishing progurement information required by congressional committees, the Omeral Accounting Office, General Services Administration, Small Business Administration, Renegotistion Board, Office of Federal Contract Compliance, Denarroment of Labor, and the personnel Government-wide Pederal Procurement Data System (FPDS). Output: Output relates to contracts and contractors and is generated in response to queries by the Comgress, private industry, and other Government agencies. Nine reports pertaining to procurement are updated monthly. A vendor file is also contained in the system. Assilobility Output is generally available to the public through seency distribution.

Agency Contact: Division of Procurement; 20 Massachunetts Ave. NW, Washington, DC 20545; (201) 353-3316.

A Computer Code for Conceptual Cast Estimates of Steam Electric Power

Plents (Cancett), 468.

OMB Founding Hid-Codes Operating, Bayennes / 89-0100-0-1-305.

Camparational Ralevances: Masse Committee on Appropriations. Teneral Subscommittee, House Committee on Appropriations: Public Works Subcommittee, Masse Committee on Appropriations: Interface Subcommittee, Subcommittee, Subcommittee, Subcommittee, Subcommittee, Subcommittee, Subcommittee, Subcommittee, Subact Committee on Appropriations: Public Works Subcommittee, Subact Committee on Barragy and Natural Re-

Sources.

Date Same Reference: 5-09000-012

Subject Terms: Construction Cons; Nuclear Fewerplants; Powerplants; Thermal Powerplants.

Paramer The CONCEPT computer package was developed to provide conceptual capital cost estimates for nuclear and fossilfueled cowernlants. Cost estimates can be made as a function of plant type, sun, location, and date of operation. The getnet includes a detailed breakdown of the escinate into direct and indirect cost surrouting to the surrounting system described in the cost model. Cost models haved on 1973 technology are currently provided in CON-CEPT IV for first and second unit PWRS, BWRS, HTGRs, and cost, oil, and en-fired plants. PWR, BWR, and coal cost models are currently being undated. Inset: The most is derived from Union Carbide General Offices - Oak Ridge, IAEA, external stellines, and miscellanous sources. Contest: The system collects seminmusidate on construction labor and material costs relating to powerplanes. Some of the meterrals factored in are concrete ply-form, three types of structural steel, reinforcing steel, lumber, and land. One of the major system files contains date on cost models representing 48 different types of plants. Garpur. The system generates daily output in two major areas. One area represents the development and testing of various methods and models; the other one is associated with providing special assistance for construction estimates. Amilability: Details on the system (including the computer programs) are available to the public through the Argonne National Code Center A reference manual (ERDA-108) is also available through NTIS.

Amony Contests Office of Norlean Energy Assessments, 20 Massarkusetts Ave. NW. Washington, DC 20565; (301) 353-3748.

U.S. Umassan Resources and Sugate

OME Fueding Title/Code: Operating Expenses / 89-0100-0-1-305. Congressional Relevance: House Committee on Appropriations: Interior Subcommittee: House Committee on Appropriations. Public Works Subcommittee: House Committee on Science and Technology, Sessie Committee on Appropriations: Interior Subcommit-Senate Committee on Appropriations. Public Works Subcommittee: Sensie Committee on Energy and Natural Ro-

Data Rose Reference: S.06000.013

Syblect Terms: Nuclear Energy: Power Resources, Ursesum

Purpose: The purpose of this data acquisition system is to eather information on domestic stanium are reserves and resources, economics, and production capability as a basis for Agency and industry planning for nuclear energy and alternative system development. Data are gathered and published in a wide ranging variety of utanium raw materials related subjects, including efforts of Government and Government contractors and the private sector Input: Information is developed by gathering the results of industry activities in organium exploration and mining. The basic data are used to prepare estimates of U.S. transum reserves and resources. Analysis of the data by ERDA personnel results in projections of uranium supply. Staristics on exploration and mining activity and future plans are also provided by industry. ERDA is generating additional information under a National Uranium Resource Evaluation program which is a systematic reconnaissance survey using various methods to identify areas favorable for the occurrence of uranium leading to preparation of national uranium resource appraisal. Context: Information covers all aspects of agentum raw materials area for the United States. including Alaska. Data are released routinely through press releases and papers and annually through publication of "Statistical Data of the Uranism Industry" and a Uranism Industry Seminar held in Grand Junction, CO. Similar data are gathered and reported regarding foreign uranium resources and production capability. Output: The principal output is the report GJO-100, "Statistical Data of the Uranium Industry," published annually, Reports on appelific areas and topics are published as work is completed. Assistability: The data and reports are available to the public from ERDA.

Agency Contact: Division of Unanium Resources and Enrichments 20 Massachusetts Ave. NW, Washington, DC 20545; (301) 153-4303

Information Center for Exercy Safety (ICES). OMB Funding Title/Code: Operating Expenses / 89-0100-0-1-305.

Consequences Palayeres: House Committee on Appropriations: Inserior Subcommittee, Howse Committee on Appropriations: Public Works Subcommittee: House Committee on Science and Technalogy. Swate Committee on Appropriations: Interior Subcommittee; Sesate Committee on Appropriations: Public Works Sobcommittee: Senate Committee on Roprey and Natural Resmiler's

Data Base Baterance: S-05000-014

Subject Terms: Energy; Information Services; Occupational Health and Safety, Power Resources: Safety,

Purpose: The Information Center for Energy Safety (ICES) was established at Oak Ridge National Laboratory by the Energy Research and Development Administration as a national center for collecting, storing, evaluating, and disseminating safety information essential to the development and use of several possuclear forms of oversy. Insut: Energy safety information is collected by information specialists who scan all available sources-literature, meetings, personal contacts among experts in the field, screen out those of pertinence, separate the sources into [CES's subject areas, and abstreet and enter into the ICBS storage and retrieval system. Content Energy safety is related to the following energy technologies: solarthe energy as derived directly from the sun's radiance: coal-the energy obtained directly from the burning of coal; coal conversion and utilization-the energy and source chemicals obtained by converuon of coal, oil, pay and shale technology-the energy obtained by conversion of these fuels; magnetohydrodynamics (MHD)-the eneray obtained by direct conversion of fuel to electricity; thermonuclear-the engineering, metalluration, and physical science requirements associated with plasma containment; acothermal-the energy obtained from geothermal sources; wind-the charge obtained from wind sources: electrical energy systems-the storage, transmission, and use of electrical energy: transportation and storage-containment, storage, and transfer of energy other than electricity; and advanced systems-the energy obtained from advanced sources. Ourour. The output consists of answers to technical inquires, state-ofart reviews, periodic dissemination of information, monthly material in National Safety Council R and D Newsletter, bibliographies and abstracts, and consultation with staff members. Availability Since ICES is currently under development, agrees to the information is limited to Federal agencies, their contractors, and selected industrial concerns.

Aponcy Contact: Environment and Safety: 20 Massachusetts Ave. NW, Washington, DC 20545; (201) 353-3562.

Socia-Economic Rusingamental Demographic Information System (SEE, DIST OMS Funding Title/Code: Operating Expenses / 89-0100-0-1-305. Congressional Relevance: House Committee on Appropriations: In-

terior Subcommistor; House Commistor on Appropriations: Public Works Subcommittee: House Committee on Science and Technology; Sessie Committee on Appropriations: Interfor Subcommittce; Sexus Committee on Appropriations: Public Works Subcommittee: Sensie Committee on Energy and Natural Resources.

Data Base Reference: S-04000-015

Subject Terms: Demography; Energy Policy; Environmental Assessment; Porecasting: Population Statistics: Socioeconomic Inducators.

Purpose: The purpose of the system is threefold, disitiving consustract maps, creating a geographic data base, and mapping this inforession. Energy, production decision-makers and planners are sunplied with the capability to manipulate, analyze, display, and map a broad range of socioeconomic, environmental, and demographic data Jupur: The input is derived from Bureau of Census population and housing data, Bureau of Labor data, San Francisco Bay area data on industrial water use in California, and business, transportation, agriculture, health, environmental, and natural resources data. Congent: SEEDIS has the following capabilities. It produces high-quality, low-cost maps for graphical display of statistical data by geographical and political area and provides an error free geographical data base for spatial analysis applications. The SIRAP project within SEEDIS provides a central repository for regional and national data bases used by the Army Corps of Engineers in cost-benefit analyses and socio-economic-environmental impact planning for their civil works construction projects. A series of 12 basic domographic profiles containing information weful to planners and researchers in human resources programs was compiled from the 1970 census data and is used for projecting manpower profiles. A specialized data base limited to data items pertaining to the San Francisco Bay metropetitan area is being developed for use by the Association of Bay Area Governments. In collaboration with the Lawrence Berkeley Laboratory Energy and Environment Division, a multireeional input-output model is being developed which utilizes linear programming techniques to analyze U.S. production, employment, and energy use. A project to edit, sort, interpolate, and display the California water use by industries is being completed. The Employment Projections Project has employed the Bureau of Labor Statistics and State employment security agencies to project employment by occupation and industry to 1980 for States and metropolitan areas with populations of 250,000 and over. The Regional Management Information System and the Computerized Charting for Employment Benchmark Adjustments projects involve data from several Department of Labor automated reporting systems, such as the Empleyment Security Automated Reporting System (ESARS) and the Employment Security-202 (unemployment insurance ) reporting aystem. Gursuc: The output includes maps, bar charts, pie charts, analyses, population studies, mannower studies, input-output studies, California and Bay Area studies, and employment studies. Availabiltte: These are available to Federal agencies and their contractors and State and local government agencies.

Agency Contacts Environment and Safety; 20 Massachusetts Avo. NW, Washington, DC 20545; (301) 353-3562.

### 435

Stripensure and Lard Radinuctive Information Systems
OMF Furning The Code Operating Segerment J 88-900-01-305.
Congressioned Raisvennes: Haway Committee on Appropriations: Interior Subcommittee; Howay Committee on Sporine and Technical Stripensure; Howay Committee on Sporine and Technical Stripensure Information Committee on Sporine and Technology, General Committee on Appropriations: Barties Obstitute Technology, General Committee on Appropriations: Public Works Johnston, Committee on Appropriations: Public Works Johnston, Committee On Appropriations: Public Works Johnston, Committee On Appropriations: Public Works

Appropriation of Committee On Appropriations

Appropriation of Committee On Appro

#### Date Rose Reference: S-06000-016

Subject Terms: Coal Mining: Environmental Assessment; Land Recisionistics, Strip Mining.

Purpose: The system's purpose is to assist the solution of the problems of land reclamations not incommangements by the comparisation of a data base and implementation of the continuous impact of an and reclamation purmits of coal inclining States and publications are prorting arealed or R and D. Canteers: The contents included any other provides area of the content included and the content in problems in contents included and the content in problems in each matter shading the content in problems in each content in problem

region; man repogrately, hydrology, and overhandes characteristics, and permit cois differences studies of alternative reclamation techsiques, polynets, and programs. The natual complains is on Illinois, Indiana, Olino, and Kentucky. Output: Quentis are answered, and analyses and studies are propured. Austholibility This information is available to Pederal appecies and their contractors and State and local secretics.

Agancy Control: Environment and Safety; 20 Massachusetts Ave NW Washington, DC 20145 (201) 153-3562.

### Formi Energy Update

OMB Fueding This/Code: Operating Expense / 89-0100-01-103. Comparated Relavores: Hans Committee on Appropriations: Interior Subcommittee; Hours Committee on Appropriations: Politics World Subcommittee, Hours Committee on Appropriations: Politics World Subcommittee, Hours Committee on Selection and Technology; Seast Committee on Appropriations: Politic Worlds Technology; Seast Committee on Appropriations: Politic Worlds Subcommittee; Seast Committee on Energy and Natural Reresects.

Date Base Reference: 5-06000-017

Subject Terms Energy: Forsi Fuchs, information Services, Research and Development.

Purpose: Fossil Energy Update is a comprehensive current awareness announcement of publications covering fossil energy research, development, and domonstration issued by ERDA and its contractors. Appair Fossil Energy Update also contains references to reports, icumal articles, conference proceedings, patents, and monographs issued by other U.S. Government agencies, research and industrial institutions, and by foreign countries. Content: The subject scope of Possil Energy Update includes coal and coal produots, petroleum, natural gas, oil shales and tar sands, electric power engineering, environmental aspects, power transmission and distribution, and MHD Generators. Owner An abstract journal is published monthly in hardcopy form. Each issue of Possil Energy Update centains the subject, personal author, corporate source, and report number indexes. Availability: Fossil Energy Update is available to the public on a subscription basis from the National Tochnical Information Service, 5285 Port Royal Road, Springfield, VA 22161. The annual subscription cost is \$27.50. The price covers 12 monthly issues and an anougl cumulative index.

Agency Centert: Office of Technical Information; 20 Massachusetts Ave. NW, Washington, DC 20545; (202) 353-4035.

# 437 Soler Energy Update OMB Funding Titls/Code: Operating Expenses / 39-0100-0-1-305.

Congrustional Relavances House Committee on Appropriations: Interior Subcommittee; House Committee on Appropriations: Interior Subcommittee; House Committee on Appropriations Public Works Subcommittee; House Committee on Enterior Sub-committee; Sease Committee on Appropriations: Interior Sub-committee; Sease Committee on Appropriations: Public Works Sub-committee; Stease Committee on Energy and Natural Re-

Data Base Reference: S-06000-018

Subject Terms: Abstracts; Bibliographies; Energy Research; Photovolisio Conversion; Power Researces, Research and Development; Solar Energy; Titlel Power, Wied Borrgy.

Purpose Solar Energy Update is a comprehensive current awareness amonucement of publications covering a size energy research, development, and demonstration issued by RRDA and its contration. Japan Solar Energy Update is so contains references to reports, icomal articles, conference proceedings, patents, and monographs issued by other U.S. Government agrocks, research and isolateful anatomous, and by foreign countries. Content. The striplest topog of Seaf-Bergy Uglisses soldies and every convention, showershife conversion, photocopialistic conversions, sold internity provipation, for the province of the seaf-Bergy Content of the

Agency Centert: Office of Technical Information; 20 Massachusetta Ave. NW, Washington, DC 20545; (301) 353-4035.

#### 438

ERDA Energy Research Abstracts (ERA).

OMB Feeding This/Codes Operating Expenses / 89-0100-0-1-305.
Congravational Estimation (Sour Committee on Appropriations Letters Subcommittee, House Committee on Appropriations: Public Works Subcommittee, House Committee on Appropriations: Public Works Subcommittee, Appear Committee on Appropriations. Interfer Subcommittee, Sour Committee on Appropriations. Public Works Subcommittee, Sourier Committee on Appropriations.

Date Base Reference: S-06000-019

Subject Teams: Abutraces, Energy Rescurch, Information Services, Nuclear Energy: Research and Development

Purpose: ERDA Energy Research Abstracts (ERA) provides abstracting and indexing coverage of nonnucleur and nuclear energy scientific reports, patents, journal articles, conference papers, theses, and monographs originated by ERDA and its laboratories, onergy centers, and contractors. Aspat: ERA is the prime vehicle for timely announcement, in comprehensive and organized fashion, of the availability of sublications reporting the results of ERDA's research. development, and demonstration programs. Dissemination of this information is necessary for the fulfillment of ERDA's mission and is authorized by law (Public Law 93-438, sec. 107e). Content: ERA also covers certain other technical information on nuclear fuel cycle technology, foreign reactor and fusion technology, as well as documents received from foreign governments with which ERDA has agreements for technical cooperation. Output: An abstract journal is published semimonthly in hardcopy form. Each issue of ERA contains subject, personal author, corporate author, and report number indexes. The latter indicate the availability of each report. Semeanual and annual indexes are provided. Amilability: ERA is available to the public on a subscription basis from the Superiorandent of Decuments, U.S. Government Printing Office, Washington, DC 20402. ERA is available on an exchange basis to universities, research instrictions, industrial firms, and publishers of scientific information. Federal, State, and municipal agencies concerned with energy development, conservation, and usage may obtain ERA free of charge.

Agency Centers Office of Technical Information; 20 Massachusetts Ave. NW, Washington, DC 20545; (201) 353-4035.

### 39

Technical Information Center (TIC).

OMB Funding Titla/Code: Operating Repenses / E9-0100-0-1-305.
Congressional Relevance. House Commissee on Appropriations: Intention Subcommissee. House Commissee on Aggregated on: Public
Works Subcommistee. House Commissee on Science and Technology, Sonsee Commissee on Appropriations: Instruct Subcommistee; Sonsee Commissee on Appropriations: Instruct Subcommistee; Sonsee Commissee on Appropriations.

Subcommittee; Sexute Committee on Energy and Natural Resources

Data Base Reference: S-06000-020

Subject Termus Energy Research; Information Centers; Information Buchange; Information Services; Technology Transfer

Purpose: The Center (TIC) in Oak Ridge, TN, is the collection, processing, and distribution point for scientific and technical information generated by the ERDA programs. One of the primary objectives of TiC is to insure that ERDA-sponsored research is reported promptly and that reports are distributed within ERDA and to its contractors. When suitable, reports are also made available to the general public. Scientists, linguists, editors, craftsmon, educators, writers, engineers, librarians, computer specialists, and information specialists maintain TIC's strong contralised technical information activity Insuc Authority for public availability of ERDA's research and development is derived from the Energy Reorganization Act of 1974. In pursoing its mandate, TIC locates and acquires energy-related scientific and technical information nationally and internationally through bilatoral agreements with foreign countries. special exchange programs, and organization-to-organization agreements. Content: Selected information items attained through the above means become part of ERDA's science information archives and data base and are retrievable on both a current and retrospective basis. The TIC bases are divided according to broad subject disciplines and are available for use in several ways-batch nearthing (RB-SPONSA); on-line interactive searching (RECON); as separate tapes available to others for local application; as tapes representing the U.S. input to the International Nuclear Information System of the IAEA; and for bibliography preparation. Nearly \$50,000 citations are subject indexed and machine-searchable, corresponding to ERDA's programmatic interests. Output: The TIC publishes the ERDA Energy Research Abstracts, Energy Abstracts for Policy Analysis, Solar Energy Update, Fossil Update, and various bibliographies. TIC also develops and maintains the ERDA data bases, the RESPONSA batch search system, and the RECON on-line search system. TIC maintains a unique publishing capability for preparing, printing, and announcing ERDA prestige publications and any publication of special interest to the ERDA program. The Center provides technical reference services and document and film requests services and carries out an educational services program devoted to aiding students and teachers in their studies of energy. Availability: Plims and educational materials are available from the ERDA Technical Information Center, P. O. Box 62, Oak Ridge, TN 37830, Other publications are for sale through the U.S. Government Printing Office, Washington, DC 20402, or the National Technical Information Service, Springfield, VA 22161.

Agency Contoch: Office of Technical Information; 20 Massachusetts Ave. NW, Washington, DC 20545; (301) 353-4035.

### RECON (R.Emote CONtole).

OMB Funding Tiths/Cade: Operating Expense/ 18-0100-0-1-305. Congessional Edwards: House Committee on Appropriations: Public Works Streemshore, House Committee on Appropriations: Public Works Streemshore, House Committee on Appropriations: Institute Ondoors: Operations on Appropriations: Public Works Streemshore, Streemshore, Operations: Operations: Public Works Streemshore, Sward Committee on Appropriations: Public Works Streemshore, Sward Committee on Appropriations: Public Works Streemshore, Sward Committee on Except on Matural Resources.

Data Base Reference: S-06000-021

Subject Teams: Energy, Information Storage and Retrieval; Power Resources; Research and Development.

Purpose: RECON is the ERDA computerized on-line, interactive storage and retrieval system. It is designed to permit solenties, librarians, and information specialists tocated at various sites across the country direct and fast soccess to bibliographic records stored in large files which cover a broad range of energy-related topics. Input: The data bases available on RECON include those made available through proprieted agreement with other Endered agencies and companies and the ERDA Energy Data Base (EDB), with TIC providing the total input and evaluation. Content: The subject scope of the nearly \$50,000 citations includes nuclear science, power reactor ficonsing and regulation, energy policy, coal technology, solar energy, genthermal energy, oil shale, magnetohyrodynamics, conservation, alectric power engineering, direct energy conversion, thermonuclear power, environment and safety, and basic research and development. The indexes available for on-line searching are author, corporate author, country of publication, journal code, patent country, subject categories, and controlled subject descriptors RESPONSA, a variation of the RECON system, allows searching in the batch mode. Output: The principal output of RECON is the capability for computer terminal searching. The output of the ERDA Energy Data Base includes ERDA Energy Rosearch Abstracts, Energy Abstracts for Policy Analysis, Solar Energy Update, Fossil Update, and various bibliographies. Availability: RECON is available to ERDA, ERDA contractors, and other Government secucies with which ERDA has agreements.

Agency Contact: Office of Technical Information; 20 Massachusetts Avc. NW, Washington, DC 20545; (301) 353-4035.

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Energy Abstracts for Policy Analysis (EAPA).

OMB Funding Title/Code: Operating Expenses / 89-0100-0-1-305.

Congrassional Ralavances: House Committee on Appropriations: Interior Subcommittee; House Committee on Appropriations: Public Worlds Subcommittee; House Committee on Selection and Techmology; Secure Committee on Appropriations: Interior Subcommittee; Sensive Committee on Appropriations: Interior Subcommitee; Sensive Committee on Appropriations: Public Weeks Subcommittee; Sensive Committee on Energy and Natural Rerespects.

#### Data Base Reference: S-06000-022

Subject Terres: Abstracts, Economics: Energy, Energy Policy; Energy Research; Forecasting; Information Services; Power Resources.

Purpose: EAPA is a bibliographic data base sponsored by the Eneray Research and Development Administration, EAPA provides abatracting and indexing coverage of selected publicly evailable nontechnical literature contributing to energy-related analysis and evaluation. The thrust is toward policy issues, economics, supply and demand, and forceasting of major and potential energy sources. The audience includes scientists, policymakers, planners, and economists. Input: BAPA covers pertinent material from congressional committee prints: ERDA and other Federal agency and department reports: news reports: regional and State government documents: books: and conference proceedings and papers. In general, only documents considered to have significant reference value and rublished within the past two years are included. Content: Subject areas covered by EAPA are policy; conservation; research and development studies; economies; supply and demand; forecasting; systems studies; and environmental effects. Specific fields of energy sources, including fossil foels, applear fuel, hydrogen and synthetic foels, and hydroelectric power: unconventional energy sources, including solar, wind, geothermal, tidal, and waste products; energy conversion and storage: and energy consumption, including residential, commercial, Industrial, agricultural, and transportation sectors, and intersectional studies; and efficient energy utilization in these sectors. Output BAPA is produced monthly in hardcopy form. It is machine-readable on RECON as a subset of ERDA Energy Data Base. Availability EAPA is available to the public on a subscription basis from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. The annual subscription rate is \$20 for domestic subscribers. An annual subscription includes 12 issues plus an annual Index.

Agency Centest: Office of Technical Information; 20 Massachusetts Avc. NW, Washington, DC 20545; (301) 353-4035.

#### 442

sources.

Technical Books and Monographs

OMB Funding Hillar/Ostal Operating Exposuse / 89-0103-0-1-305.

Compassional Railwassen Mosse Committee on Appropriations: Interfor Sistensmisser. House Committee on Appropriations: Proceedings of the Committee on Appropriations: Publications in Committee on Appropriations in Committee on Appropria

### Data Base Reference: S-96000-023

Subject Terms: Bibliographics; Catalogs; Epergy; Information Services.

Purpose: This catalog is a bibliography of books and monographs sponsored by the Energy Research and Development Administration. Input The books and monographs are grouped under 13 subsect categories. Information for each book, published or in press, includes title: outher and author affiliation; publisher and publication date: a physical description of the book consisting of page and illustration count: Library of Congress eard number: International Standard Book Number; a brief descriptive statement concerning the book; and a list or a description of the centents for more recent books. Recent symposia published as ERDA project reports appear in a special section at the end of each subject category. Additional ERDA cublications are described at the end of the cutalog. Commit: The content is a bibliographic listing of books and monographs published by ERDA. Outsur. The outsut is an annual hardcony of ERDAanonsored books and monographs. Appliability: It is free on request to ERDA Technical Information Center, P. O. Box 62, Oak Ridge,

Agency Contects Office of Technical Information; 20 Massachusetts Ave. NW, Washington, DC 20545; (301) 353-4035.

#### 443 Center for Everey Studies (CES).

CAMPA FUNDATION THREE PROPERTY AND A CONTROL OF THE PROPERTY O

#### Data Base Reference: S-06000-028

Subject Terms: Energy Research; Information Services; Power Resources.

Propose: The Center for Energy Studies (CES) was established to

growide s central laison for energy research and obstantional strivicians of a provide a fermion focular point for the collisions and distonanation of energy information. Denset: The Cutzer was given a bread massatte to indistin, institute and a provide lates for existingnation of the collisions of the collisions of the collisions of the satisped in the following resear Corbiterral, energy conservation, control and lightin, then the owing power, qualette, or copy conservation, continued around regard profile synthetic profiles allowed in continued around regard profile synthetic profiles a State, and London formation of the collisions of the collisions of the collisions of the formation of the collisions of the collisions of the collisions of the formation of the collisions of the collisions of the collisions of the formation of the collisions of the collisions of the collisions of the formation of the collisions of the collisions of the collisions of the formation of the collisions of the collisions of the collisions of the formation of the collisions of the collisions of the collisions of the formation of the collisions of the collisions

Agency Contests Center for Energy Studies; The University of Texas at Austin, Austin, TX 78712; (512) 471-3434.

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Controlled Furion Atomic Data Center.

OMB Funding TilliveGold Openting Expenses J 88-01(0-0-1-30s, Congrussional Relevances House Countrilates on Appropriational Parties Colombia Subcommittee, House Committee on Appropriational Public Works Subcommittee; House Committee on Appropriational Public Works Subcommittee; House Committee on Appropriational Interest Subcommittee; Sensire Committee on Appropriational Public Works Subcommittee; Sensire Committee on Energy and Natural Re-

#### Data Boso Reference: 5,00003,025

Subject Yerms Energy, Nuclear Energy, Nuclear Passon, Particles; Theoremsenters Energy

Purpose The Controlled Pasion Diats Center was enhabled in 1958 and its postored by the Estergy Esterns and Development Administration, Devision of Sutpacio Pasion Derey, Papier Puproduces that on endisons involving Lengths and extently particle with gastern and surfaces which not develop related to controlled thatmonoculeur research. Oughas The Center published and compliation of the Center of the Center of the Center of the Center coefficient processes. Arabilitity: Government appreciat and these coefficient produced by the Center. Data compilations are other publications of the Center of the Center of the Center of the Center of Covernment Policies (Office, and Covernment Policies).

Agamey Contects Controlled Fusion Data Center; Oak Ridge National Laboratory; P.O. Box X, Oak Ridge, TN 37830; (615)

#### 445 Crušcolite Data Center

ONR Funding Hills/Ends: Operating Expenses I \$9-0100-01-305
Congressional Releveness House Committee on Appropriations: Teneror Selectomistice, House Committee on Appropriations: Public Works Subcentmistee, House Committee on Appropriations: Public Works Subcentmistee, House Committee on Science and Technology, Sonue Committee on Appropriations. Interior Subcommistee; Seate Committee on Appropriations: Public Works Subcommistee, Seate Committee on Appropriations.

#### Bata Base Reference: S-05000-030

Subject Terres: Cateality: Fassonable Materials, Information Conten, Nacies: Barryy, Nuclea: Meterals, Safety: Transportetion of Hatacides Substances

Purses: The Criticality Data Center is supersored by the Hinter

Research and Development Administration, Division of Millium, Application, The Control was enablished in 18th Control residence of Applications, The Control was enablished in 18th Control Research, and the Control Research and enablished and enablished processing of fault materials. Administration of enabling processing of fault materials, and enablished and enablished and enablished and provided and prov

Agency Contest: Criticality Data Center; Oak Ridge National Laboratory, P. O. Box X, Oak Ridge, TN 37830; (615) 483-5611. 446
Ecological Sciences Information Center (ESIC).

OMB Funding Title/Code: Operating Expenses / 89-0100-0-1-305; Operating Expenses / 89-0100-0-1-251.

Congressionel Relevence: House Committee on Appropriations: Interior Subscammittee; House Committee on Appropriations: Public Works Subscammatee, House Committee on Science and Technology; Sanax Committee on Appropriations: Public Works tee; Sanak Committee on Appropriations: Public Works Subscammittee; Sanaya Committee on Commerce, Science, and Transportations; Assay Committee on Ecomportee, Science, and Transportation; Assay Committee on Ecomportee, Science, and Trans-

#### Dard base Keierenter 5-00000-0

Subject Terms Reology, Electric Powerplants; Estrainment, Erroresmental Assessment, Possi Fuels, Nuclear Energy; Thermal Polisicon; Transcentes.

Purpose: Established in 1968, ESIC provides information support related to the assessment of the environmental impact of both ouclear and fossil energy. The sources and interactions of radionuclides in the environment, pathways to man, and effects in man and experimental animals are of concern information support is provided to the National Uranium Resource Evaluation Project with a computerscarchable file of annotated references to the geochemistry and prophysics of uranium. Input: The geology of selected areas within the United States is used in commeter manging procedures. The Nevada Applied Ecology Information Center compiles the data base on the Saylronmental Aspects of the Transpranies and provides information to the Nevada Applied Ecology Group. References and abstracts originally assembled on the basis for a comprehensive review of radionuclides in soil and uptake by plants are computer-searchable Transport of uranum and therium in the environment as related to the thonum fuel cycle, are the subjects of a data base, annotated hibliography and critical raying. Courses Computerlyed Information files are compiled on the environmental impact of cooling electric generating stations. Subjects related to cooling include effects of temperature, chiprine, and other chemicals, impingement, and entrainment. A predictive fish population model on the effects of power station operations is supported by a data base on the life history. hiplory, parelation dynamics, and tropic interactions of strings base. Other data hases are built by the Center for the ORNL Brairmmontal Sciences Division. The journal "Ecology" was searched from 1956 through 1976 for articles pertaining to ecosystem analysis. either subtrocesses or total systems, and an annotated and indexed data base is being compiled. Information support is provided to the assessment of cycling of carbon in the biosphere with an extensively indexed and annotated data base. Output: Reviews and/or bibliographies on thermal effects of squatic systems, effects of entrainment, and environmental aspects of the transurances are published on a regular basis. A number of specialized bibliographies and literature overviews are also published. In-depth literature searches using compaterized data bases and extensive library facilities are provided. Assilebility: Bibliographics are available from NTIS. Resources and services in the Center are available to all individuals.

Agancy Contest: Ecological Sciences Information Center; Information Center Complex/Information Division, Oak Ridge National Laboratory, P. O. Box X, Oak Ridge, TN 37830; (615) 451-4611.

## 647 Energy Research, Development, and Demonstration Inventory

OMB Funding Title/Code: Operating Expenses / 89-010-0-1-305. Congressional Reisvesses. House Committee on Appropriations: Instead of Subcommittee, House Committee on Appropriations: Public Subcommittee; House Committee on Science and Technology; Senser Committee on Appropriations: Insteries Subcommittee; Senser Committee on Appropriations: Public Works Subcommittee; Suste Committee on Energy and Neural Re-

#### Data Sasa Referenza: 3-05000-012

Subject Terms: Energy Research; Information Services, Inventorios, Research

Purpose: The Energy Research, Development, and Demonstration Inventory was established in 1971 and is spensored by the Energy Research and Development Administration The Inventory is a commutenced file containing descriptions of current engrapcolated research done or sponsored in the Ligited States. The econoof interest includes all energy sources, fissil fisely musicar, and upconventional: electric power generation, transmission, distribution, and storner energy uses and conservation-beating and cooling lighting, accidences, industrial processes, transportation, agriculture: nconomic and least senects; and environmental and health officers. In relation to these subjects, information on exploration, mining, procpasing, reaccurres and reserve studies, and busic or applied essential and engineering development is of interest. Input: The input is from books, monographs, reports, yournals, and data in the subsect area. Content: The descriptions of energy research projects are arranged by subject categories and consist of (when available) title, research institution and city, sponsor, principal investigator(s), project duration, funding level, description of research, number of technical personnel assigned to the protect, type of research (basic, applied, and/or developmental), and publications. Keywords and secondary auticat categories, when needed, are also added to the project deserintions. Various statistical summery tables on funding arc included in the published version of the Inventory. Statistical studies of the measurement of soverage and the representativeness of the Inventory projects are conducted and summarized in the published Inventory. Output: The system prepares inventories of descriptions of energy-related research and development progress. The third and latest issue (in five volumes), dated January 1976, is entitled Inventory of Baergy Research and Development: 1973-1975, and is available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Applicabilities The system answers inquiries concerning information in this computer information base. Limited computer searches are performed as time allows.

Agency Contact: Information Center Complex/Information Division; Oak Ridge National Laboratory, Bidg. 3603, P. O. Box X, Oak Ridge, TN 37830: (615) 483-8611.

### 448

Environmental Information Analysis Center (EIAC).

OMB Funding Title/Codes Operating Expenses / 89-0100-0-1-305;
Operating Expenses / 89-0100-0-1-251.

Congeniational Relavances: House Committee on Appropriations: In-

terior Subconnittee; House Committee on Appropriations Public Works Subcommittee; House Committee on Science and Pelenology; Senaré Committee on Appropriations: Interior Subcommitee; Senaré Committee on Appropriations: Interior Subcommitee; Senaré Committee on Appropriations: Public Works Subcommittee; Senaré Committee on Commerce, Science, and Transportation: Senare Committee on Commerce, Science, and Trans-

#### Dato Base Reference: S-06000-033

Subject Youns: Environmental Health; Information Centers; Information Services; Nuclear Powerplants; Phitonium; Powerplant Siting, Radiation Safety; Tritum.

Purpuse Sponsored by the BRDA Division of Biomedial and Governmental Research, the Battled Continuous Labouaction Bioletineance and Research, the Battled Continuous Labouaction Bioletineance and the Battled Continuous Continuo tents has received major emphasis, with specul consideration players to triming placetions, and multisep georgetical major. The operational scope has continued to expand in support of the EROA program for the development of a sow, more compelicative theatern of terms required to desirably the break environmental and technological for the control of the control of

Agancy Contect: Environmental Information Analysis Center; Battello-Columbus Laboratories; Columbus, OH 43201; (614)

#### 440

Eurironmontal Resource Center (ERC)

OMB Funding Title/Code: Operating Exponses / 89-0100-0-1-251.
Congressional Raisvocces: House Committee on Appropriations: Institled Subcommittee, House Committee on Appropriations: Public Works Subcommittee, April Committee on Subcommittee, House Committee on Subcommittee, Subcommittee, Subcommittee, Subcommittee, Subcommittee, Subsub Committee on Appropriations: Institute Public Works Subcommittee, Sussub Committee on Openopriations: Institute Openopriations Institute (Subcommittee, Sussub Committee Commerce, Science, and Trans-

#### Data Base Reference: S-05000-035

Subject Terms Energy Research, Environmental Assessment; Environmental Health: Hazardeen Substances: Information Content: Information Services.

Purpose: Spensored by the Energy Research and Development Administration and the National Science Foundation, Research Applied to National Needs, the Center was established in 1975. The Environmental Resource Center (ERC), Boological and Boylronmental Sciences Section of the Information Center Complex. Oak Ridge National Laboratory, extends the expertise and facilities of the section to diverse user groups on both long-range projects and abort term or specialized study contracts. Jeaut: By adopting a matrix management system based on information system functions and subject specialization. RRC has assembled as its major resource a professional staff of scientists with practical operating experience in monograph preparation, abstracting, tabular data extraction, and computerized information extrieval and manipulation. The ability to Quickly mobilize an environmental task force grared to specific tasks is accompanied by strong environmental data bases and extensive information collections ranging from commercially available largescale disciplinary collections such as Biological Abstracts to in-house collections on environmental health and control data of emerging energy technologies. Contest: Capabilities range broadly across the environmental damage and control spectrum from energy technologies to hazardeus substances. Outset: Many renducts and services are available through ERC. These include information overview monographs, abstract journals, nowsletters, topical reviews, annotated hibliographies management information systems tabular data extraction, data base creation, directory and distribution services, and maintenance of environmental data resource file in hardcopy, microfiche, and magnetic type form. The ERC also provides response and referral services including in-death literature services. using computerized data bases and extensive library facilities: answoring of specific environmental questions posed by the scientific community, Government agencies, industry, and others; the publication of bibliographies as natural byproducts of the response service; and technical survey activities. Amilability: Some services are available to everyone; other are available only to funding agencies.

Agency Contects Environmental Resource Center; Information Center Complex/Information Division, Oak Ridge National Laboratory, P. O. Bex X, Oak Ridge, TN 37830; (615) 483-8611. 450
Liquid Metal Fati Breeder Reactor Fuel-Cladifing Information Center
(T. MESD.)

(LM/SR).

OMB Funding Thia/Code: Operating Expenses / 89-0100-0-1-305, Plans and Capital Equipment / 89-0103-0-1-305

Congressional Relevenses House Committee on Appropriations In-

terisy Subcommittee, House Committee on Appropriations Public
Works Subcommittee, Masse Committee on Science and Technology, Seast Committee on Appropriations: Interior Subcommitee, Seaste Committee on Appropriations: Public Works Subcommittee, Seaste Committee on Energy and Natural Resources.

#### Data Bese Reference: S-06000 638

Subject Terms: Cladding Engineering, First Flax Test Facilities, Fucia, Information Services, Loand Metal First Breefer Research, Nuclear Fields

Payson: The LMFRR Fuel-Cladding Information Center provides nuclear engineers and scientists with a broad base of engineering data on LMFRR nuclear firels and cledding materials. It manusins a central data source of materials performance from inradiation tests on experimental mixed-oxide firel elements and FFTF (Fast Plux Test Facility) driver feel elements. Input: In-house experimentation and data collected from matride sources comprise puttem input. Content The system includes feels and cladding materials data from LMFBR mixed-oxide fuel element development programs. Data for all experimental mixed-oxide fuel elements inradiated in the EBR-II (Experimental Breeder Reactor) are maintained on magnetic tape and accrofilm files. These files are cludding fabrication, cladding properties, irradiation history, postirradiation examination results, and breached cladding files. The Center has data on the manufacturing of draver fuel elements for the FFTF, the fabrication of experimental mixed-outde fuel elements, and postirradiation examination of materials. Quasar The system provides traceability to original raw materials with data for each master fabrication step, asswers inquiries, and provides data comeillations. Data are available directly from the computer in the form of tables, plotted curves, and simple statistical analysis. Summaries are prepared for experimental feel elements irradiated in the EBR-II. The files onetain data only for U.S. technology. Analiability: Persons so designated by the ERDA Division of Reactor Development and Demonstration have access to the Center

Agency Contest: LMFBR Fuel-Oloiding Information Center, Westinghouse Hanford Company; Hanford Engineering Development Laboratory, P.O. Box 1970, Richland, WA 99352; (509) 943-3384.

451
National Geothermal Information Resource (GRID):

Aminosi Unaharmal Information Resource (GRID).

OM8 Funding Title/Codes Operating Expenses / 39-0108-0-1-305,
Operating Expenses / 89-0100-0-1-251.

Congressional Rebreace: House Committee on Appropriations Interiors Subcommittee, House Committee on Appropriations: Public Works Subcommittee; House Committee on Science and Technology, Senate Committee on Appropriations: Interior Subcommitery: Source Committee on Appropriations: Public Works Subcommittees, Successional Public Works Subcommittees, Successional Committee on Commerce, Science, and Transportation; Swane Committee on Energy and Nutral Resequence.

#### Data Base Reference: S-06000-039

Subject Teens: Environmental Americani, Geothermal Energy, Information Services; Libraries.

Parpere Essablished in 1974, the Center provides information as five major categories of predement spinon and technology - physical chemistry, exploration, stillartion, environmental, and institutional considerations. Jupac The imput is books, and institutional considerations. Jupac The imput is books, reports, and data in the subject area. Constere The Center provides information on physical densitys, exploration, undireation, convironmental effects, and institutional considerations. Output

tion, data and bibliographic searches to meet the needs of geothermal scientists and engineers, and preparation of special reviews. Attellisible: Services are available to ERDA and its contractors. There is a nominal charge to other users.

Agency Contect: National Goothermal Information Resource; Lawrence Berkeley Laboratory, University of California, Berkeley, CA 94720; (415) 843-2740.

Nesada Applied Ecology Information Center.

OMB Funding His/Codes Optiming Exposes (189-0100-01-198). Congrassional Balanesse Hears Committee on Appropriations Instein Subcommittee, Hears Committee on Appropriations Public Works Subcommittee, Hears Committee on Series and Technology; Smare Committee on Appropriations; Interior Subcommittee on Appropriations; Interior Subcommittee on Appropriations; Interior Subcommittee on Appropriations; Public Works Subcommittee, Smart Committee on Appropriations; Public Works Subcommittee, Smart Committee on Energy and Natural Resistence.

#### Dots Bose Reference: S-06000-041

Subject Terms: Environmental Protection, Hazardom Substances; Nuclear Testing, Plotonium; Radiation Safety, Radioactiva Contamination; Radioactive Waste Disposal; Transprinter, Unanium.

Purpose: The Center is appeasance by the National Applied Boology Group, U.S. ERDA, Novada Operations Office. The Center was established in 1971 and concerned itself with the biornvironmental data for the nuclear testing site, primarily, plutonium, wranism, and other transuranies, and special emphasis on distribute tion and movement. Input: Data are collected from organizations and publications throughout the world Content: Studies of animals. plants, soil, resuspension, man, exposure, logal and political aspects including regulations and standards for environmental levels, safety, shipping and storage waste disperal, analysis of plutonum and other environmental materials, movement, and the fate of radioquelides in the environment "with emphasis on availability to man" are included. Governmental data on radiation dose, environmental conditions of chemical isotope, organisms used in research, route of intake, rocangon distribution, particle size, and effects are commissi. Other transuranies in the environment due to nuclear testing serve as interface in the scientific and industrial community for the collected compilation and analysis of data relevant to the scope of the Center. The Center provides information on topics within its scope. Owgast: Upon request, Center personnel consult with members of the public industry, and the scientific community. Assilability: Specialized bibliographic services, including verified abstract, reprint copies, and data, are available free to ERDA, its contractors, and to others with a professional interest on a cost recovery of information exchange basis. Documents relating to platenium and other transumnics and their ecological and radiobiological stanificance are available.

Agency Contects Director; Nevada Applied Ecology Information Center; Nevada Operations Office, P. O. Box 14100, Las Vegas, NV 89114; (702) 734-3194.

### Appendix 4

### Major Energy Legislation

To facilitate reference from the index entries, the laws listed in this appendix have been assigned consecutive accession numbers

## \*\*\*

Endered Witte Domon Act (D.L. 65, 200, 11 See, 1062)

This act established the Federal Power Commission (FPC), The printed commissioners were from the Execution Branch and had regulatory authority over certain water power projects. In 1930, FPC horame an independent regulatory agency

Natural Clas Act (P.1. 75,688, 52 Sco. 921) This art save the Endorst Bower Communica (SEC) invaduation

over companies which transported and sold natural and in interstate commerce. Before 1954, FPC construed the Natural Gus Act as authorizing only the regulation of interstate and sales by pureling COMPANIES In 1954, the Supreme Court, in Phillips Petroleum Co. v. Wisconsin, held that FPC must also regulate prices charged by pas producers to interstate medime companies. FPC is responsible for assuring that the nation has an adequate supply of natural gas and electric cower at reasonable rates. FPC's regulatory authority is limited to the wholesale segment rates and services for resale.

## 450

Trans-Alaska Pipeline Authorization Act (P.L. 93-153, 87 Stat

This sol directed the Secretary of Interior to issue the necessary authorizations for construction of the trans-Alaska pipeline to carry crude oil from Prudhoe Bay to Valdez. This pipeline when completed (sometime in 1977) will have an ultimate design capacity of 2 million barrels of crude cel per day

Emergency Petroleum Allocation Act of 1973 (P.L. 93-159; 87 Stat 627; 15 U.S.C. 751 et veu. (Supp. 101).

This act directed the President to temporarily impose a mandatory allocation programs for oil and oil products so that shortness resulting from the Arab oil boycott would be shared by users. The logislation permitted retailers to pass on to their customers increases in the wholesale price of oil and oil products, and provided for proportional reductions of supplies to each user if the total supply of oil was less than that for a corresponding period of 1977. The mandetory allocation provisions were terminated in 1976, but the pricing allocations are still in effect

Emergency Highway Energy Conservation Act (P.L. 93-239, 87) Stat 1046: 23 U.S.C. 121 (Steen, 1V)).

This legislation provided that the Secretary of Transportation

should not approve any interstate or defense highway proper within a state which has a maximum speed limit on any of its public highserve to occur of \$5 miles per lawy. The statute stated that is codes to conserve fuel, decrease traffic congestion during rush hours, immove air quality, and enhance the use of existing highways and parking facilities, the Secretary should approve projects designed to encourage the use of carpools in urban areas throughout the country while not adversally affecting has and other mass transportation rid-

Foleral Energy Administration Act of 1974 (P.L. 93-275; 88 Stat. 94, 15 U.S.C. 761 et seu (Sunn 1V))

This legislation created the Federal Energy Administration (FEA) as a temporary agency whose primary responsibility was to manage short-term fuel shortages using allocation and price cuerted. authorities. This net transferred to PEA several energy responsibilities previously existing in the Department of the Interior and the Cost of Living Council. FEA's authority was to expire on June 30. 1975, but was extended by the Energy Conservation and Production Act through December 1977, PEA is responsible for work in such areas as energy conservation, petroleum altocation and prieing resuintions, strategic petroleum reserves, demestic energy resource deveignment, and energy data and analysis.

#### 462

Energy Supply and Environmental Coordination Act (P.L. 93-319). 88 Stat 246, 15 U.S.C. 791 (Supp. 1V1).

This act's main thrust was to temporarily delay certain clean air standards established under the 1970 Clean Air Act. However, it also had several major energy provisions. FEA was directed to prohibit electric utilities from burning oil or natural gas if their facilities were capable of burning coal. FEA was also given broader power to gather and publish information needed to make energy policy decisions.

The Solar Heating and Cooling Demonstration Act of 1974 (P.L. 93-409; 88 Stat. 1069; 42 U S C. 5517 (Supp. IV)).

The solar heating sot authorized the appropriation of \$60 million over a 5-year period to develop solar heating and acoling systems for holidines.

Geothermal Energy Research, Development, and Demonstration Act of 1974 (P.L., 93-410; 88 Stat. 1079, 30 U.S.C., 1162 (Sunn IVn.

The geotherms act authorized \$50 million to guarantee losis for the acquisition and development of geothermal resources.

#### 465

Energy Reorganization Act of 1974 (P. L. 93-438, 88 Stat. 1233, 42 U.S.C. 5081 (Supp. 1V))

This issuine decilited the Annie Eteragy Commissions (AEC) and transferred in Internises to two raw specime-the Energy Research and Development, Administration (ERCA), and the Newholsensech Commission (ERCA) and England (ERCA) and E

#### 466

Solar Energy Research Development and Demonstration Act of 1974 (P L. 93-473, 88 Stat. 1431; 42 U.S.C. 5551 et seq. (Supp.

The solar energy bill authorized \$75 million for solar energy research.

#### 447

Federal Non-Nucleur Energy Research and Development Act of 1974 (P.L. 93-577; 88 Stat. 1878; 42 U.S.C., 5901 et seq. (Supp.

This act established a 10-year \$20 billion program of research and development (R and D) in nonmodear energy sources. It established broad pelicy goldelines for carrying cut nonnotations: R and D to go along with the neclear energy Policy established by the Atomic Energy Act of 1954. Most energy R and D programs were assigned to the Escay Research and Development Administration (RRDA).

#### 468 Eaergy Policy and Conservation Act (P. L., 94-163; 89 Stat. 871; 42

This act established a number of new energy programs, mainly in the conservation area. Among the more significant provisions of the act are the following: (1) establishment of a strategic petroleum reserve, (2) establishment of mandatory automobile efficiency standards, (3) continuation of crude oil price controls through May 1979. and (4) establishment of a \$750 million loan guarantee program to develop new underground coal mines. In addition, title V of the act suthorized GAO to independently verify energy data, and stated that GAO may use its authority to inspect the books and records of private persons and companies under the following conditions: (1) if s company is legally required to submit energy information to the Federal Energy Administration and the Federal Power Commission, or the Department of the interior; (2) if a company is organed in the energy business, other than at the retail level, and (a) furnishes energy information directly or indirectly to any Federal agency, excluding the Internal Revenue Service, and (b) GAO determines that the Federal agency uses this information in carrying out its official functions and 50 fibre energy information as well familiar discretional pertunding to a vertically integrated potroleum company in carrying out our repronechilities under toll 6 of the Act, the Computer of the Comput

#### 469

Constal Zone Management Act Amendments of 1976 (P. L. 94-370, 90 Stat. 1013).

This set provided coastal states with funds to cope with the ombore impact of fishers et land gas exploration and produce netivities. It created a 10-year \$1.2 billion coastal energy impact program, dispersing Jones and long guarantees to States and locations to bild additional public facilities needed because of the impact of officiors of wedvectures.

### 470

Federal Coal Leasing Amendments Act of 1975 (P.L. 94-377; 90 Stat. 1083).

The sex cushished new policies for leaving cost on Poderal Banks in required the Department of the Instruction of solvelap compenhentative. It required the Department of the Instruction of the State of the State of the Instruction of In

#### 471

Energy Conservation and Production Act (P.L. 94-385, 90 Stal. 1125; 42 U.S.C. 6801).

This are was originally introduced to extend the life of FEA peach in June 20, 1976 explained date. The sky a presend, on only profit FEA's extinction through 1977, but she combines a number of constru-FEA's extinction through 1977, but she combines a number of construction of the construction of the construction of the construction of the boundar of low-income persons, and improve electric utility rate persons and the construction of the form write using territary productions techniques. The net size exists and the construction of the c

### 472

Emergency Natural Gas Act of 1977 (P.L. 95-2; 91 Stat. 5; 15 U.S.C. 717 (a)(w)).

This set permitted the Petaldent to dealers a natural gas entergency when he form data intaining as required to a conductor of the residential, small commercial, and certain other users. During under an emergency, the Petaldent sawy copients (1) any internate pipeline or local distribution company to deliber to any other internate pipeine or local distribution company and (2) the construction and operation by any pipeline of any facilities necessary to effect such Acril 30, 1977 and delivery or transportation may continue after Acril 30, 1977 on the delivery or transportation may continue after

## SUBJECT INDEX

Includes entries under both Descriptors (representing subject matter) and Identifiers (representing proper names) dealt with in the document, in one alphabetic sequence.

names) dealt with in the docur	nent, ii	n one alphabetic sequence.	,,,,,	and to our man to pro-	
Descriptor		Sample entry:		Identifier	
Electric Power Curtailmen  Curtailment of Electri by the Tennessoe V (Report)  Type of Publication	c Powe alley A	er Service Breeder Authority Liquid	Reac Met gam-	al Fast Breeder Reactor — Past, Present, and Future	Title 046 ei
Abstracts Energy Abstracts for Pubcy Analysis (RAPA) EROA Energy Research Abstraces (ERA) Solir Energy Update	441 432 437	Department of the Intence's Proce- dates for Approving Coal Mining Flore (Report) Department of the Intence's Views of Correction on Administration of Registrous for Surface September, Mining, and Reciseouses of Fulface and Inchine Coal Lards (Report)	228	Requests to Regulatory Agraman by Ori Companies for Devastrous from Standard Procedures (Report) Review of the Federal Except Adminis- tration's Administry Committees (Ne- port) Review of the Operations Division of the Pederal Energy Administration	145
Accident Provention Spili Percention Costrol and Costeer- measure System (SPCCS)	342	Development of interagency Releases ships in the Regulation of Nucleo- Materials and Fectities (Report) Entry Construings at Government Field Institutions Progress and Problems (Report)	055 028	(Repail) Renorw of the 1974 Project Independ- ence Evaluation System (Repair)  Administrative Remedias	11.5
Accounting Bookkeeping System The Yerkent Energy Administration's Compliance and Enforcement Pro-	420	The Pederal Baergy Administration's Compliance and Enforcement Activi- ties (Testaway)  Pederal Energy Administration's El- forts to Audit Dominio Crede Oil Produces (Report)	119	A Bill to Exceed the Federal Energy Administration Act of 1974 (Tos- alwary) Department of the Sasonor Study of Short-In Oil and Gas Well Comple-	179
cases (Tentinony) Passocial Information System Importance of Passocial Data in Eva- tuation Federal Energy Programs (Speed)	125 421 144	Polisive on Certain Minters Concern- ing the Imperiors and Regulation of Outer Cortinental Shoff Oil Open- tions (Report) Improving the Operations of the Ped-	208	tions and Lenze-OAO Observations (Report)  Energy Recognition Legislation (Turnstay)  Following on Centals Missings Concents-	224 194
Requests to Regulatory Agencies by Od Companies for Davistoria from Standard Procedures (Report) Review of Royally Accounting System for Ombore Oil and Gas Leases	148	eral Baergy Advancestration Region X Office (Report) Information-Guthering Activities of the Nuclear Regulatory Commission (Re- gort)	111	ing the Inspection and Regulation of Outer Continental Shaft Oil Opera- tions (Report) Importance of Financial Data in Eva- lating Folical Burgs Programs	116
Royalty Accounting System Study of Solid Mineral Lensing According	254	The Legality of the Reported Use by the Energy Research and Development Administration of Certain Found En- orgy Pands (Letter)	087	(Speech) Improving the Operations of the Federal Energy Administration Region X Office (Report) Indian Natural Resources-Part III	164
Administrative Procedures Actions Taken by the Federal Power Commission on Price Recommenda- tions Concerning Regulation of the Natural Gas Industry and Manage-		Need for Improving the Regulation of the Natural Cale Industry and Men- agement of Internal Operations (Re- port) Problems in the Patient Recept Ad- micintuation's Compliance and En-	110	Cost, Oil, and Gua-Better Manage- ment Can Improve Development and Increase Income and Employment (Report)  Management Improvements Needed in	225
ment of Internal Operations (Report) Administration of Regulations for Sur- free Engineering, Mirring, and Recta- mation of Public and Indian Cost Londs (Report)	147	foncement Effect (Supers) Problems in the Pederal Energy Office's Implementation of Energency Pe- troleum Allemation Programs at Re- gonal and State Levels (Report)	118	the Federal Power Communion's Processing of Electric-Rate-Increesse Class (Report) Roview of the Federal Barryy Adminis-	153
A Bill to Establish a National Energy Information System (Testamony) Contracting Out Basic Planning and	158	Problems of Independent Refiners and Gesoline Resallers (Report) Refereng Nuclear Powerplant Load-	121	tration's Advisory Contrittees (Re- port)  Role of Federal Cool Resources in Meeting Energy Goals Needs to be	183
Managoment Program Functions (Re- port)	035	times. Many Obstacles Roman (Re- part)	049	Determined and the Leaung Process Improved (Esport)	226

Affirmative Action Subject Index

Affirmative Action Provinces of Nevajo and Hops Cost Leaves (Report)	207	The Liquid Metal Fast Breeder Resents Programs—Past, Prescot, and Passer (Report)	045	GAO's Energy Role (Speech) Improvements Needed in Controls and Accounting for Ground Vehicle Pe-	127
		Repsyment Requirements of the Fed- oral Investment in the Tennance Val-		troleum (Report) Problems in the Federal Energy Ad-	018
Air Conditioning Energy Conservation in Federal Office Buildings in California (Repair)	002	ley Authority's Electric Power System (Report) Status and Obstacles to Commercial at-	099	ministracion's Compliance and En- forcement Effort (Report)	118
Energy Efficiency Ratios of Window Air-Conditioners (Report)	ons	tron of Coal Liquelection and Gas/fi- cation (Report)	085	Southeastern Federal Power Program- -Paracelel Menagement and Program Operations (Report)	174
Air Poliution		This Country's More Expensive Light Wore: Reactor Safety Test Facility (Reacts)	010		
Dust Fuel Program (Report)	001	, and a second		Automobile Industry	
Energy Data System (EDS)	241			Federal Efforts to Improve the Feel Economy of New Automobies (Re-	
		Arizone Federal and State Solar Energy Re-		porti	630
Air Poliution Control		starch, Development, and Demon-			
Dual Pari Program (Report)	001	stration Advistors (Report)	200	Automobiles	
Electric Power Firel and Environmental				Alternative Entray Processis (Tes-	
Analyses	405	Arms Control Agreements		Sincey)	165
Petertul for Using Electric Vehicles on	022	U.S. Nuclear New-Proinferance Policy		Alternative Energy Proposits Deve-	
Federal Installations (Report)	022	(Report)	240	leged by the General Accounting Of- fice in Response to Congressional	
Alaska		Atlantic Richfield		Inquiries: Proposals and Supporting Applicate (Testmons)	166
Exploration of National Petrolgem Re-		Attentic Richfield Represa to Regulatery Agencies by Oil		Automobile Classification Date Base	100
stive at Alaska	270	Companies for Dorishous from		711011111111111111111111111111111111111	345
Followup Review of the Naval Pe- ticlesia Reserves (Report)	110	Steedard Procedures (Report)	145	Redoral Efforts to Conserve Energy	
Planning and Billing System	329			(Report)	ano
Progress of and Feron Plans for Eu-	440	Atemic Fnergy Countission		Federal Efforts to Conserve Fael in the Movement of Men and Materials (Re-	
ploratum of National Petroloum Re-		Budget History Tables	317	Movement of Mon and Materials (Re-	004
serve is Alisika	271			Federal Efforts to Improve the Fuel	
Servey of Publications on Exploration, Development and Delayery of Alas-		Atomic Wegoons		Economy of New Automobiles (Re-	
Lan O4 Murket (Report)	127	An Unclassified Digest of a Classified		port)	030
		Report Enoised "Safety and Trans-		Petential for Using Electric Vehicles on Federal Installations (Resort)	022
Alasko Pipeline		portation Safeguanie at Rocky Plats Nuclear Wespers Plant" (Report)	067	Review of Average Fool Economy	022
Information on the Proposed Alman Orf		House worden take (adjoin)	-	Standards under Title V of Motor	
Papeline (Report)	074			Vehicle Information and Cost Sovings	
Trass Alexas Od Pipeline-Progress of		Audiovisual Aids Energy Plans Distribution	-01	Act	278
Construction through November 1975 (Report)	084	Davids Lines presidente			
LY73 (Arguio	044			Automobile Standards	
		Auditing		Analysis of the Beergy, Economic, and	
Alcohol Fuels	1277	Contracts on H.R. 11212, 93ed Con- gross, a Bill to Further Research, De-		Budgetary Impacts of 11.R. 6860 (Staff metal	129
GAD's Friengs Role (Speech)	L//	velopment, and Commercial		Energy Conservation (Testimany)	605
		Demonstrations in Goothermal En- ergy (Leiter)	104	Editity Conservation (1989)	013
Ugerio		The Cost of Linking Council's Assions to	100		
The Purclase of Short-Supply, Energy- Related lices shrough the Expert-		Assure That Cost Increases for Pe-		Auto Simulation Model	
largest Bank of the United States		trolous: Products Were Made in Ac-		Regional Sconometric Domend Medal and Auto Simulation Model (RD4)	
(Report)	236	cordence with Petroleum Pricing Regulations (Report)	106	and Actor angulation model (ACM)	385
		Federal Energy Administration Effects	100		
inthracto		to Audit Fati Oil Supplies of Major			
Coal Data Base	273	Dobty Companies (Project Delity)	126	Awards Department of Commerce's "SavEn-	
		(Report) The Fodoral Energy Administration's	129	erer Citations" (Aeport)	024
Portments		Compliance and Enforcement Activi-			
Ways in Which Department of Housing		tios (Testimorys)	119		
and Urben Development Can Pro-		The Federal Energy Administration's Carnellance and Enforcement Pro-		Belance of Payments Allocation of Uranium Ennoyment Sec-	
mote Energy Conservation (Report)	003	Compliance and Enforcement Pro- cesses (Textinore)	125	vices to Puel Foreign and Domestus	
		Pederal Regrey Administration's Ef-		Nuclear Resciers (Report)	228
ppropriations		forts to Audit Domestic Crude Oil		Economic Implications of Current	
Budget History Tables	317	Producers (Report)	133	World Dil Priors (Staff study)	237
The Legality of the Reported Use by the Energy Research and Development		The Federal Energy Administration's Progress in Redescring Its Compli-			
Energy Research and Development Administration of Certain Fossit En-		groe and Enforcement Pregram (Ar-		Bellefonte Nuclear Plant	
ergy Punch (Lener)	087	part)	120	Bellefonte Nuclear Plant (Sigf study)	054
				Energy Digest SEPTEMBER	

Subject Index Closiding

Bentonite		Problem Areas which Could Affect the		Euergy Conservation in Federal Office	
Land Base System	332	Development Schedule for the Clasch Rever Breeder Reactor (Staff study)	040	Buildings in California (Report)	002
Od Shile/Bestouse Title Clescope	330	Proposed Changes to the Atomic En-	040		
		ergy Commission's Amongoment for		Buses	
Bibliogrophiss		Carrying Out the Lupard Metal Fast Breeder Reactor Demonstration Pro-		Energy Conservation Financing (Tes-	027
Solar Energy Update	437	pet (Report)	932	almonyi	02/
Technical Beoks and Monographs	442	The Preposed Custreet for the Clinch			
		Revor Breeder Roucter Fregect (Ter-	056	Business Ethics	
Blds		timony)	058	Pederal Energy Administration's Ac- tions on Allocation and Pracing of	
Agrosment between the Secretory of the letterer and Officials of the State				Fool (Report)	116
of Utoh Pertamma to Orl Shele Lensen		Budget Information Systems			
(Letter)	209	Bookkeeping System	420	Batone	
Improved Policies and Percolange for the Expression and Directoring of Outer		Penescul Information System	421	Propens/Butters Allocation System	349
Continental Shell Resources (Jestimony)	232	FPC Budget Files National Plus for Energy Research,	400		
Billion		Creating Energy Cholous for the Fu-		Celifornia Followup Romen of the Naval Pe-	
Leane Management System	222	ente	429	troloum Reserves (Aspert)	220
				Natureal Coops Policy Study (Tis-	
		Budgets		Amorpi	212
Coal Date Fore	272	How Solar Energy Was Treated in the			
		AEC Chairman's Report, "The Na-		Connecto	
Sends		tion's Energy Future" (Report)	198	Issues Related to Poreign Sources of Oil	
Repayment Requirements of the Fed-		The Logolity of the Reported Use by the Energy Research, and Development		for the United States (Report)	235
erol Investment in the Tennessee Vol-		Administration of Certain Fossil En-			
ley Authority's Electric Power System (Report)	099	trgy Funds (Letter) The Liquid Metal Fast Breeder Reactor	687	Copital Investments	
ayacii (aqaa)	v	Program-Past, Present, and Police		Natural Gas Shortsare: The Role of Ins-	
		(Report)	0.65	ported Liquelled Natural Gas (Report)	
Breeder Rooctor		Ways to Strengthen Congressional Con- trol of Energy Construction Projects			241
Can the U.S. Breeder Reactor Develop- ment Program to Accelerated by Us-		Other Than Nuclear (Report)	172		
ing Foreign Technology? (Report)	245			Cotologs	
Comments on Energy Research and				Technical Books and Menographs	442
Development Admirostration's Proposed Arrangement for the Clinch		Burener Visite (CA) Management of and Place for the Navai			
River Breeder Reactor Demonstra-		Potroloum Reserves (Report)	227		
tion Plant Project (Report)	044			Cantrol Vollay Project (CA) California's Control Volley Project-	
Cost and Schodule Estimates for the Nation's Pirst Liquid Metal Past		Building Codes		-Proposed Power Rate Increme (Re-	
Breeder Reactor Demonstration Pow-		National Standards Needed for Resi-		peni)	155
erplant (Report)	0.07	dential Energy Conservation (Report)	010	Proposed Power Rate Increase of the	
The Energy Research and Develop- ment Administration's Proposed			0.19	Bareau of Reclamation's Central Val- loy Project (Tennage)	101
Contract with Project Management				soy Project (Laurenty)	101
Corperation, Commenwealth Educat, and the Tennesson Valley Authority		Building Construction National Standards Needed for Rosi-			
(Resert)	056	dental Energy Conservation (Report)		Citizen Porticipation	
Past Flux Test Pacificy Program (Staff		Progress and Poshious of the Green-	019	Efforts to Encourage Conservation on the Prevate Sector (Report)	009
amaly)	041	ment's Utility Conservation Program		Beview of the Federal Energy Adminis-	0.0
Further Comments on Atomic Beergy Commission's Proposed Arrenge-		(Report)	021	tration's Advisory Committees (Re-	
ment for the Liquid Metal Fast				porti	183
Breeder Reacter Demonstration Pre- lect (Report)	G33	Building Design			
Liquid Metal Past Brooder Resour	033	Herr Federal Agencies Can Conserve		Civil Military Relations	
Plant Parameter Information Sys-		Utilities and Reduce their Cost (Re- port)	907	All Perchases and Condennation Pro-	
tom The Liquid Metal Fast Breeder Resotor	425	parte		coodings Regarding the Nevel Pe-	
Program-Past, Present, and Peters				trologie and Oci Shale Reserves	259
(Report)	045	Buildings Alternative Energy Proposals (Tex-		Protection of Oil Reserves	261
Liquid Metal Fast Breeder Resetor Program-Past, Present, and Patters		through	165		
(Tentwoop)	046	Alternative Energy Proposals Deve-		Cledding	
The Liquid Metal Fast Breeder Reactor		leped by the General Accounting Of- fice in Response to Congressment		Liquid Metal Past Breader Resolve	
Procuses and Uncertamities (Sing)	Des.	Ingeing: Proposels and Supporting		Fuel-Cludding Information Center (LMPBR)	410
emily)	349	Analyses (Testlewey)	166	(sanFBR)	400
<b>Energy Digest SEPTEMBER 1977</b>					119

Cleins Oil Shak/Benout per Tiple Classage	330	National Coal Model (RMAC) National Energy Policy An Agenda for	379	non of Coel Laperfection and Gaudi- cation (Report)	
		Amilysis (Report)	191		
Classification Systems Automobile Classification Data Base	145	OECD Energy Demand Model Opportunities for Improvements in Re- claiming Step-Mayed Lands under	386	Cool Mines Administration of Regulations for Sur- face Exploration, Mineral, and Recla-	
	343	Cost Purchase Contracts (Report) Plans for Construction of a Magnetichy-	092	mation of Public and Indian Coal Lunds (Repart)	
Clerch River Broader Reacter Can the U.S. Breeder Reacter Develop- ment Program Br. Accelerated by Up-		drodynamics Ton Faculty in Mon- tane (Report)  Short Term Coal Deniard Forecasting	086	Department of the Incorne's Views of Commons on Administrations of Regulations for Serface Exploration, Mining, and Reclamation of Public	
Ing Fortign Technology* (Report)	245	Model	376	and Indian Coal Lands (Report)  Development of Federal Coal Re-	
Research and Development (Ten-	246	Cool Exports		Paderal Cosl Research-Status and	
Liquid Metal Fast Streeter Reactor Program-Pass, Present, and Fature (Temporary)	044	The Esponson of Cost (Report)	244	Problems to Be Resulved (Report)  Further Action Needed on Recommen- dations for Improving the Admiss-	
Problem Areas which Could Affect the Development Schedule for the Clarch		Coal Gasification		tration of Federal Coal-Leasing Program (Report)	
Barer Broeder Researce (Staff andg)	049	Comments on the Administration's Proposed Synthesic Fuels Commer- cuelination Program (Report)	140	Opportunities for Improvemous as Re- claiming Strap-Mined Lands under Coal Purchase Contracts (Repair)	
Clinch River Breader Reactor Demonstration Plant		implecations of Deregalizing the Price of Natural Gus (Report)	125		
Comments on Energy Research and Development Administration's Proposed Arrangement for the Clerch River Breeder Reason: Description		States and Obstacles to Commercializa- tion of Coal Laquefaction and Gamil- cation (Report)	oss	Coal Mining Department of the Interior's Proce- dures for Approving Coal Mining Plans (Report)	
The Estern Research and Develop-	844	Coel ledustry		Federal Coal-Leaning Program of the Department of the laterior (Report)	
ment Administrator's Proposed Contract with Project Management Corporation, Commonwealth Educes, and the Tentratore Valley Authorny		Role of Federal Coal Resources in Morang Energy Goals Needs to be Determined and the League Property		Indian Natural Resources-Pers II- Cost, Orl, and Gas-Sector Menage- stent Cost Improve Development and Increase Income and Employment	
(Report)	056	improved (Report)	226		:
The Proposed Contract for the Chuch Biser Steeder Reactor Project (Tas- ancey)	058	Cool Leases		International Coal Supply Model Problems Caused by Coal Musing Near Federal Reservoir Properts (Report)	
		Coal Leane Data System Department of the Intentor's Proce-	329	Problems Carned by Conf Mining Near Pederal Reservoir Projects (Tec- tations)	
Containers of Electric Power Service by the Tennesse Valley Authority		dures for Approving Coal Minus Plans (Report)	228	Role of Federal Cool Resources in	0
Explorer Destinants make the No.	117	Development of Federal Coel Re- sources (Teathrony)	223	Determined and the Leasing Process Improved (Report) Striptuning and Land Reclassion, la-	2
Engry Rifferent of Market and Co.	265	Federal Coal-Lensing Program of the Department of the Intense (Report)	221	formation System	40
Electricity (Report)	006	Further Assists Needed on Recommen- detons for Improving the Adverse-		Coal Prices	
Energy Resource Data Systems Francial Disclosures by Employees	328	propose of Protectal Cont-Landing Program (Report)	217	Coal Data Base	37
Performing Functions under Energy Policy and Conservation Act	287	GAO's Energy Role (Speech) Indian Natural Resources—Part II:	177	Coal Production	
Possil Energy Program Report International Coal Supply Model	311	Cost, Oil, and Gan-Better Manage- ment Can Improve Development and		Coal Data Base Project Independence Evaluation Sec-	37
intertoriosal Energy Evaluation Sys- ters (IEES)	384	(Report)	215	tem (PIES)	36
Major Fael Surreng Installation-Early Planting Process Mentification (EPPE)		Provisions of Navajo and Hops Coal Leates (Repart)	207	Coal Reserves	
Major Ford Burning Installations (MFBD)	358	Rale of Pederal Coal Resources on Meeting Energy Goals Needs to be		Coal Data State Pedoral Coal-Leasing Program of the	37
Management and Freedom Access of	356	Determined and the Leasing Process Improved (Report)	226	Department of the interior (Report) Pederal Cost Research-Status and Problems to Be Reselved (Report)	22
Three Normacless Energy Research, Development, and Demonstration Subprograms (Report)	202			Information on Selected Aspects of the Power Operations of Transpare Vol.	(10)
Monthly Energy Review	200	Coni Liquefaction Status and Chatacles to Commercializa-		Reserves Allocation and Man Com-	16
				Model (RAMC)	

Contract Administration Subject Index Employee Disclosures under the Enerry Policy and Conservation Act The Energy Research and Develop-ment Advantation's Proposed Contract with Propos Management

Cornection Commenced & Educa

and the Tennessee Valley Authority

Promoted Disclosures by Brapleyees Performing Functions under Energy Policy and Contervation Act

(Begon)

946

287

Communic on Energy Research and Development Administration's Proposed Amangement for the Clinch

River Breeder Reactor Demonstra-

A Consuster Code for Consentual Cost

Cost and Schedule Estimates for the Nature's First Lageld Metal Past Breeder Reactor Demonstration For-

Estimates of Steam Bestric Power

401

tion Plant Project (Report)

Piercs (Concept)

Coastel Zone Management
The Coastel Zone Management Program An Uncertain Poure (Resert)

Management

Celorada

Report to the Congress on Coastal Zone

Progress and Problems in Developing Nuclear and Other Experimental

Techniques for Recovering Natural		Need for the Federal Power Commis-		erplant (Report)	047
Gas us the Rocky Mountain Area (Re- port)	077	sion to Improve the Regulation of the Natural Gas Industry and Manage- ment of its Internal Operations (Te- strong)	114	Energy Research and Development Administration's Confingency Plan for More Enrichment Capacity at Portumenth, OH (Report)	052
Celumbia Rivar Power System Anneal Report on the Columbia River Power System Consolidated Financial Statement of	275	Congressional Owersight Ways to Strengthen Congressional Con- trol of Energy Construction Projects		Evaluation of the Administrators's Proposal for Government Assistance to Private United Enrichment Groups (Report)	134
the Pederal Columbia Ravar Pewer System	274	Other Tean Nuclear (Repert)	192	An Evaluation of the Federal Power Commission's Rutersaking on Unli- tues' Construction Work in Program (Report)	229
Common Corriers Freedures for Evaluating Reasonable-		Conservation America's Energy Putases (Speech) Conservation Division Task Porce Re-	190	Fast Plax Test Pacifity Progress (Staff study)	041
ness of Petroleum Pipeline Rates Need improving (Report) Protecting Special Nuclear Material in	094	port on the Onshore Lesse Minage- ment Program Study for the U.S. Geological Survey	249	Lugard Metal Fast Breeder Reactor Program-Past, Present, and Puture (Tentropy)	044
Transat Improvements Made and Ex- uting Problems (Report)	035	Curtailment of Electric Power Service by the Texnessee Valley Authority (Report)	117	National Standards Needed for Resi- dental Energy Conservation (Report)	
Communist Countries		The Department of Defense's Conser- vation of Petroleum (Report)	012	Pacific Northwest Hydro-Thormal Power Program-A Responsi Ac-	019
Submussion of U.S.S.R. Energy-Related Transactions for Congressional Re- tion	200	Efforts to Encourage Contervation is the Private Sector (Report) Energy Conservation at Government	009	possis to Meeting Electric Power Re- quirements (Report)	161
		Field Installations Progress and Problems (Report) Spergy Conservation Pederal Energy	028	Poor Management of a Nuclear Light Water Reactor Safety Project (Report)	063
Community Porticipation		Management Program	292	Sequepub Nuclear Plant (Staff study)	043
Project Conserve	344	Rearry Conservation Femoreing (Ten- trearry)	027	Status of the Grand Couloo-Rawer Transcrination Line Project (Report)	104
Competition Procurement of Foreign and Domestic		Energy Conservation Practices Es- ecuraged by States (Report) Energy Conservation Program at Pre-	006	This Country's Most Expensive Light Water Resolver Safety Test Facility (Report)	059
Petroleum by Department of Defense (Report)	091	Government Contractors (Report)  Energy Policy Decisionmaking, Organ-	006	(Adjust)	
Survey of Poderal and Electric Utility Procurements of Power Equipment (Report)	142	ization, and National Energy Goals (Report)	193	Consultants Contractive Out Basic Planning and	
Indeed		lasses Needing Attention in Develop- ing the Strategic Petroleum Reserve (Report)	090	Managament Program Panctions (Re- port)	088
Compliance Lease Management System	253	National Energy Policy: An Agenda for Analysis (Report) Policies and Programs Being Developed	191	Consumer Education	
Compast		To Expend Procurement of Products Containing Recycled Materials (Re-	923	Progress of Energy Conservation Pro- gram for Consumer Products Other This Assertables	294
Opportunities for Moco Effective Use of Anicosi Manura (Report)	626	port)	w	THE ADDITIONS	-,-
		Construction Beliefence Nuclear Plant (Staff analy)	054	Consumers PEA Household Energy Expenditure	
Computers Progress and Problems of the Government's Utility Conservation Progress (Report)	021	Report by the U.S. Energy Research and Development Administration. Status of Construction Projects and Other Data	313	Model (HHEM) PBA Household Energy Survey	393
Conflicts of Interest Action Proceed Concerning Conflict		Report on Activity and Program Index of the Energy Research and Develop- ment Administration: States of Con- struction Projects and other Data	312	Comments on Energy Research and Development Administration's	
of Interest	288			Proposed Arrangement for the Clinch River Breeder Resour Demonstra-	
Contracting Out Basic Planning and Management Program Purceions (Re- pont)	048	Construction Costs Beliefente Neclear Plant. (Staff swdy)	054	tica Piant Project (Report) Contracts Information System (CIS)	430
Energy Digest SEPTEMBER 197	7				121

Contract Administration					
The Energy Instantion and Development of Control of Con	056	Contracting On Boar Plasting and American Program Processing Officers of Page 1970 (Contrast Information Systems Contrast Information Systems Contrast Information Systems (Contrast George Contrast George Contrast Contrasting Contrasti	056 056 053	Cost Analysis. The Cost of Lorentz Service Ser	106 101 696 184 162
(creany)	058	Energy Research and Development Administration of Certain Fossil En- ergy Funds (Letter) Library of Escavied Illectric Power	567	crity Contribution's Arrangement for Carrying Out the Liquid Motal Fast Broader Reactor Demonstration Pro-	
Contract Modifications The Bacapy Research and Development Admissionment's Proposed Contract with Project Management Coopmount, Construenceals Edons, and the Tennessee Valley Asthority (Keyen) The Proposed Common for the Clinch	056	Contracts Management of the Ascelle Brangy Conceilsman's Controlled Thermonu- cione Research Program (Report) Procurement of Portiges and Domentic Principles by Department of Defense (Report)	334 195 691	jos (Reper)  Cost Effectivaness Operating Cost and Environmental Redisland Mositoring at the Step- pinggors Atomic Pawer Steelon (Re-	032
Raver Brooder Reaster Project (Ten- ferancy)	058	Proposed Changes to the Atomic En- ergy Commission's Armingement for Carrying Out the Lapid Metal Fast Breeder Reneter Degenstration Pro- lets (Report)	002	Cost Estimates	042
Contractor Responsibilities Borgy Conservation (Festivary) Bergy Conservation Program at Piro Government Contractors (Report) Improvements Needed in the Program for the Posteretion of Special Nuclear	015 008	The Proposed Contract for the Clinch River Breeder Reason Project (Teo- mony) Refunds on Outer Continents! Shelf Leases	05E 269	Past Plax Test Facility Program (Skiff analy)  Cost Overruns	641
Masorial (Repert)	934	Reliable Commet Sales Data Needed for Fregoting Amounts of Natural Gas That Could Be Dereguinted (Re- gort)	172	Proposed Changes to the Atonic En- ergy Commission's Arrangement for Carrying Out the Liquid Metal Past Speeder Reactor Danagementalist Pro-	
Convacts Information System (CIS) The Effects of Oil Prior Increases on Small Regulets Contracts (Report)	470 122	Cooling Systems		pet (Repert) This Country's Most Expensive Light Water Reactor Safety Test Pacifity	032
Energy Conservance Program at Pave Government Contractors (Report)	008	National Solar Heating and Cooking In- formation Conter Review of Scienced Pederal and Private	422	(Report)	0.59
Library of Baccuted Electric Power Committs Miniagoness of and Plans for the Naval	334	Solar Energy Activities (Report)	197	Coats Commonts on Energy Research and	
Petroleur, Reserves (Report) Misongement of the Atomic Energy Communicati Controlled Thempost- ciour Research Program (Rayert) Procurement of Postign and Deseato Petroleurs by Objections of Deseato Petroleurs by Objections of Deseato	195	Corporate Planning Proposed Bushininees of Joint Feder- si-Tedescry Neonecter Corpora- tion	315	Development Administration's Peoposed Arrangement for the Clinch River Breader Reagtor Domenstra- tion Plant Project (Report) Cost and Schodule Bistinates for the Nation's Flore Llouid Metal Past	044
(Report)  Conference Allocation of Utanaum Barichmon; Ser-	091	Corporations Proposed Establishment of Joint Peder- al-Industry Neuroscier Corpora-		Breeder Reactor Demonstration For- orplant (Report)  Further Comments on Atmose Beergy Commission's Proposed Arrange-	647
vices to Paul Foreign and Domestic Nuclear Reacters (Report) Amount of Natural Cas that Could Be Released from Federal Price Regula-	238	tion  Cost Accounting	315	ment for the Liquid Metal Plast Breeder Renotor Demonstration Pro- ject (Report) Legality of Administration Actions in Printing and Storing One Compose	603
tions upon Expiration of Contracts from 1975 through 1985 (Tanteaux) Comments on Berryy Research and Development Administration's	157	Importance of Financial Data in Eva- liating Pederal Energy Programs (Speech)  Operating Cost and Environmental	144	(Letter) The Liquid Metal Fast Breeder Reactor Program-Past, Prosent, and Putter (React)	104
Proposed Arrangement for the Clinch River Breeder Reactor Demonstra- tion Plant Project (Report)	044	Rediction Monitoring at the Ship- plesport Atomic Power Station (Re- port)	042	Poor Management of a Nuclear Light Water Reactor Safety Project (Report)	065
122				Energy Digest SEPTEMBER	1977

Subject Index Defense Controcts

Trensfer Pricing System	251	Development (Testimony)	219	Small Basiness Contracts (Report)	
Joint FEA/SOM Petroleum Reporting System	375	Data Collection Accelerated Outer Continental Shelf		Defense Contracts The Effects of Oil Price Increases on	
rude Oil Imports FEA Oil Import System	354	Pederal Rougy Information Locator System (PEILS)	366	testion's Advisory Committees (Re- port)	
Problems of Independent Refiners and Clesolane Resallers (Report)	121	Data Bases		(Report)  Review of the Foderal Energy Adminis-	
Problems in the Federal Energy Ad- ministration's Compliance and En- forcement Effort (Report)	118	for Projecting Amounts of Natural Clas That Could So Deregulated (Re- port)	172	Energy Data Collection in the Federal Government ( <i>Testineny</i> ) Energy Policy Decisionsniking, Organ- Instano, and National Energy Gods	
DRCD Energy Demand Model	285 366	in Determining Where to Lease and at What Dollar Value (Report) Rehable Contract Sales Data Needed	218	Decisionmoking Energy Data Collection in the Fodoral	
tem (IEES) Monthly Energy Review Meathly Petroleum Statistics Report	281	Outer Continental Shelf Oil and Gos Development Improvements Needed		Practices of the Federal Energy Ad- ministration (Report)	
(Report) International Energy Evaluation Sys-	138	gram for Evaluating Environmental Impacts of Construction and Opera- tion of Nuclear Powerplants (Report)	051	Om That Could Be Deregulated (Re- port)  Review of the Information-Gathenna	
port License Poor (Report)  Guif Od Corporation's "Double Dip- ping" on Crude Oil Predict Costs	124	Energy Data Collection, Analysis, and Reporting (Report) Nuclear Regulatory Communicatis Pro-	182	1974 (Letter)  Reliable Contract Sales Data Needed for Proporties Amounts of Neonal	
port)  Punda Credited to the Account of the  Virgin Islands for Refunds from Im-	120	and S Electric Utilities (Report) Improvements Still Needed in Federal	185	troleum Allocation Programs at Re- gressi and State Levels (Report) Proposed Energy Inventory Act of	
The Federal Energy Administration's Progress in Redirecting Its Compli- ance and Enforcement Program (Re-		The Energy Information Act, S 1864 (Tentrocoup) The Pederal Income Taxes of Class A	174	(Report)  Problems in the Pederal Energy Office's Implementation of Emergency Pe-	
forts to Audit Demestic Crude Gii Producers (Report)	133	Energy Data Collection in the Pederal Government (Textimony)	157	Need for the Federal Power Commu- sion to Evaluate the Effectiveness of the Natural Cas Curtailment Policy	
Compliance and Enforcement Pro- cesses (Tenning)  Federal Energy Administration's Ef-	125	tion and Data Programs (Speech)  Comments on the Energy Information Act (Letter)	184	the Natural Gas Industry and Man- agement of laternal Decrators (Re- port)	
Compliance and Enforcement Activi- ties (Testinosy) The Pederal Energy Administration's	119	port) The Changing Role of the General Ac- counting Office in Energy Informa-	156	Nuclear Regulatory Commission (Re- port)  Need for Improving the Regulation of	
Report to the President and Con- gress The Pederal Energy Administration's	290	Information System (Tiestenous)  Californa's Central Valley Project  Proposed Power Rate Increase (Re-		and Reporting (Report) Information-Gathering Activities of the	
FEA Crude/Transportation Model Federal Energy Admiristration Annual	399	Reporting Energy Data (Report)  A Bill to Establish a National Energy Information System (Testamona)	159	Connectal Stell Revouces (Featwares) Improvements Still Needed in Pederal Energy Data Collection, Analysis.	
Energy Information Reported to Con- gress as Required by Public Law 93- 319	183	Data Analysis Actions Needed to Improve Federal Ef- forts in Collecting, Analysing, and		port) Improved Policies and Procedures for the Exploration and Development of Chair	
Crede Oil First Purchaser Domestic Crude Oil Prining Policy and Related Production (Report)	355 112	Turbines and Generators (Report)	205	The Exportation of Cost (Report)  Federal Effects to Conserve Fact in the  Movement of Men and Materials (Re-	
Crede Oil Entitlements (Equaliza- tion)	362	Power Production at Federal Dams Could Be Increased by Modernezing		The Energy Information Act, S. 1864 (Tealmony)	
rude Oli Crade Oli Buy/Sell Program	350	die East Oil (Report)	234	Act (Lette) Energy Data Collection in the Pederal Government (Tentmony)	
Criticality Data Center	445	Currencies A Summary of European Views on De- pendency of the Proc World on Mid-		The Changing Role of the General Ac- counting Office in Energy Informa- tion and Data Programs (Speeck) Comments on the Houry Information	
Financial Report on the Geothermal Resources Development Fund	309	Crude Oil Reserves Oil and One Supply Model	378	niment) Certain Actions That Can Be Taken to Help Improve This Nation's Urenzan Proture (Report)	
edit .		Oil and Gas Supply Medei Project Independence Evaluation Sys- tem (PIRS)	378	A Sail to Extend the Pederal Energy Administration Act of 1974 (Tea-	
Ways in Which Department of Housing and Urban Development Can Pro- mote Energy Conservation (Esport)	003	Model Crude Oil Pricing Model (DCROPS)	396 397 378	ment of Internal Operations (Report)  A Bill to Establish a National Energy Information System (Zualmen)	
Rosser of Sciented Federal and Private Solar Briergy Activities (Report) Sequoyah Nuclear Plant (Stoff maly)	197	Crude Oil Production Crude Oil and Natural Gas Production		Actions Taken by the Federal Power Commission on Price Recommenda- tions Concerning Regulation of the Natural das Industry and Menage-	
Development Schedule for the Clinch River Breeder Reactor (Staff study)	040	Information on the Proposed Alaska Oil Pineline (Report)	074	forts in Collecting, Analyzing, and Reporting Energy Data (Report)	

Defense Controcts Subject Index

Energy Conservation Program at Pive Government Contractors (Report) Procedures for Evaluating Resociable- ness of Petroleum Papeline Rases Need Improving (Report)	008	Problem Areas which Could Affect the Development Schedule for the Chaols Short Boodes Reactor (Stoff midg) Propost Operations System (POS) Proposed Changes to the Anesis Br-	040 361	Outer Continental Shelf Oil Opera- tions (Report) Gas Supply Indicators The Geological Survey's Inadequase Action on Recommendations Con-	258 403
Dafance Instellations The Storry Impact of Moving Department of Defeate Amortes Store the		engy Commission's Arrangement for Carrying Out the Liquid Metal Plant Breeder Reactor Demonstration Pro- ject (Raport) Report on Solar Energy Demonstra-	032	orming Impection and Regulation of Outer Continental Shelf Oil Opera- tions (Report) International Oil Supply Model Role of Faderal Coal Resources in	222 338
Minny Ocean Terminal, Brocklyn, New York, to Bayenso, New Jersey (Report)	011	Special Report on Solar Heating and Cooling Demonstration Program Status and Obstacles to Connercializa-	263 264	Meeting Energy Goals Needs to be Determined and the Leasing Process Improved (Report)	224
Defanse Procurament The Effects of Oil Price Increases on Small Business Committee (Report) Policies and Programs Bring Developed	123	tion of Coal Legarization and Gesifi- cation (Report)	065	Orilling Equipment Onling Equipment Production Survey The Perchase of Short-Supply, Henry	359
To Expend Procurement of Products Containing Recycled Materials (Re- port) Procedures for Evaluating Research ness of Petioleum Parking Rases	023	Deregulation Amount of Natural Gas that Could Be Released from Federal Price Regula- tions upon Expiration of Contracts	197	Related Items through the Experi- Import Bank of the United States (Report)	235
Need Improving (Report)	094	from 1975 through 1985 (Tentenony) Puture Energy Comand (Queck)	175		
Procurement of Foreign and Oceanor		OAO's Energy Role (Speech)	177	East West Trade	
Potroleum by Department of Defonse (Report)	091	Imphestions of Geregalising the Price of Natural Gas (Report)	135	Submission of U.S.S.R. Energy-Related Transactions for Congressional Re- view	280
Demography		The Implications of Derogulating the Proce of Natural Gas (Testinosy)	136		
Scene-Economic Environmental Demo- graphic Information System (SEE- DIS)	424	Importance of Financial Date in Eva- lasting Pederal Energy Programs (Speech) Rehable Contract Sales Data Needed	144	Ecology Ecological Sciences Information Conter (ISSIC)	444
Demonstration Projects Activates of Each Groothermal Demon-	207	Ser Proposing Amounts of Natural Gas That Could Be Deregulated (Ne- port)	172	Economotric Models	
Comments on Energy Research and Geoelopteen: Administration's Proposed Autanomous for the Clinich		Developmental Costs States and Obstacles to Commercializa-		Coupled Energy System - Brossenia Medels Dynamic Input-Output Linear Pro- gamenting Medel for Regional En-	429
Rever Broader Reactor Demonstra- tion Plant Project (Aspan) Commons on H.R. 11212, 93rd Con- gress, a SHI to Further Resourch, De-	044	non of Coal Laquefaction and Gasti- cation (Report)	085	orgy Impact Analysis (DIOLP) FEA Household Energy Expenditure Model (HEEM)	391 393
velopesen, and Commercial Oceanizations in Geothermal En- ergy (Lener)	175	Dictionaries PEA Data Decimary	248	International Energy Evaluation Sys- tem (IEBS)  ORCD Energy Damand Model	384
Comments on the Administration's Proposed Synthetic Facia Comme- cutions program (Report)	140	,		Project Independence Evaluation Sys- tem (PIES)  Regional Econometric Demand Model	361
Cost and Schedule Estimates for the Names's First Liquid Metal Fast Breeder Reactor Demonstration Pow-		Distillates Cost and Pricing System Market Shares System	374 370	and Auto Simulation Model (RD4)  Regional Industrial Multiplier System	385
erplant (Report) Federal and State Solar Energy Re-	047	Registed Econometric Destand Model and Auto Situalation Model (RD4)	585	(RIMS)	392
search, Development, and Demon- stration Assesses (Report)	200	Subpart L	349	Short Term Coal Demand Forecasting Medel	374
Parameng for Commercial-need Demonstration of Energy Technolo- ges (Televatry)  Porther Comments on Atomic Energy Commission's Preposed Assung- ment for the Loyald Metal Place	140	Domastic Crude Oli Crade Oli Fuss Parchaser	355	Economic Analysis Review of Selected Federal and Private Solar Energy Activities (Report)	197
Breder Reactor Demonstration Pro- ject (Report)  The Liquid Metal Past Breeder Reactor Program-Past, Present, and Fatare (React)	033	Droinoge Problems Cassed by Coal Missing Near Pederal Reservoir Projects (Ten- shoop)	076	Economic Assistance U.S. Pinascial Assistance in the Development of Pecelgn Nuclear Energy	
Liquid Metal Past Breeder Reactor Program-Past, Present, and Patere (Tennescop)	045	Drilling		Programs (Report)	239
Plans for Construction of a Magnetohy- drodynamics Test Facility in Mon- tans (Report)	086	Alternative Energy Proposals (Ten- tmosp)  Pollowup on Certain Matters Concern-	165	Economic Development Puture Energy Demand (Speech) Necolassical Regional Orowth and En-	175
104	ues	ing the Inspection and Regulation of		ergy Prize Model	389

124

Subject Index Flectric Milities

Economic Impact Comprehensive Human Resources Data System (CHRDS)	165	The Energy Impact of Moving Depart- ment of Defense Activities from the Military Ocean Terminal, Breoklyn,		Hydro and Electric Recurring Data Re- ports  Hydroelectric Power Resources of the	495
Coupled Energy System - Economic Models	429	New York, to Saycone, New Jensey (Report)	011	United States (HPR) Library of Esecuted Electric Power	407
Dynamic Input-Output Linear Pro- gramming Model for Regional En- ergy Impact Analysis (DIOLP)	391	leformston on Selected Aspects of the Power Operations of Tennessec Val- ley Audionsy (Report)	167	Contracts Operating Cost and Environmental Radiation Monitoring at the Shin-	334
The Bonomer and Environmental Im- pact of Natural Cas Cartasiments dur- ing the Winter of 1975-76 (Report)	082	The Liquid Metal Past Breeder Reactor Promises and Uncertainties (Singl' studie)	Date	progress Alongs Power States (Re- pert)  Place Operation and Power Schedul-	042
PEA Household Energy Expenditure Model (HEEM)	393	Monthly Energy Review	261	ing Power Surveys and Systems Evalua-	335
Fitted Impact of Energy Price Changes on State and Local Overmont Per- chases of Goods and Services	295	Pacific Northwest Hydro-Thermal Power Program—A Regional Ap- greach to Meeting Electric Power Re-		tion Problems in Identifying, Developing, and Using Continernal Resources	409
Income Distribution Impact Model	390	quemous (Report) Planning and Billing System	161	(Report)	199
Neoclassical Regional Growth and En- ergy Price Model	389	Power Pactor Requirements Imposed by Poderal Power-Marketing Agen-		Real-Time Operations, Dispatch and Scheduling (RODS) Revenues and Costs Allocated to Prower	337
Onter Continental Shelf Oil and One Development. Improvements Needed in Determining Where to Lease and at		one on their Customers (Lear) Power Flow Program	304 336	Operations at Multiple-Purpose Pro- josts in the Southwestern Federal	
What Dollar Valve (Report) Project Independence Evaluation Sys- tom (PIES)	215	Power Production at Pederal Dams Could Be Increased by Medernizing Turbases and Generators (Report)	205	Power System (Report)  States of Federal and Private Research and Development Efforts to Conserve	098
Regional Industrial Multiplier System (RIMS)	392	Problems in Identifying, Developing, and Using Geothermal Resources		Energy by Reducing Electric Power Transmission Losses (Sinff study)	025
Ropert on ERDA's Normadeur Activi- des	310	(Report) Proposed Power Rate Increase of the	199	Supervisory Occasel and Data Acquesi- tion System (SCADA)	228
Severance Tax Model	396	Buress of Replementon's Central Vol- ley Project (Tentenny) Represent Requirements of the Fed-	101	Electric Powerplants	
Sconomic Policy The Economic Impact of Energy Ac-		oral Investment in the Tennesson Val- ley Authority's Electric Power System (Ameri)	100	Bulk Electric Power System Relabel- ity  Foological Sciences Information Centor	404
trons Economic Implications of Current	255	Requested Utility Rato increase by the	w	(ESIC)	445
World Oil Prices (Staff study)  Issues Related to Pereign Seneces of Oil	237	Potentia Biretini Power Company (Report)	127	Power Surveys and Systems Evalua- tion	409
for the United States (Report)	235	Selected Aspects of Nuclear Power- plant Reliability and Economics (Re- port)	050	Report on Regrogramming Action for the Nuclear Materials Program Reports of Costs of Certain Structures	314
Boonseles Energy Abstracts for Policy Analysis		Seatherstern Poderal Power Program- Prostocial Management and Program		on Nengovernment Waters	298
(BAPA)	441	Operations (Report)  Special Reports Issued by the FPC and Perland Power Commission Publica-	174	Electric Power Production Power Professor et Federal Dama	
lgypt Allocation of Uranium Enrodument Scr-		tions Status of Pederal and Private Research	411	Could Be Increased by Moderniting Turbunes and Generators (Report)	205
vices to Fuel Foreign and Domestio Nuclear Reactors (Report)	218	and Development Efforts to Conserve Energy by Reducing Electric Power	005	Electric Power Reserves	
		Transcription Losses (Stoff study) Status of the Grand Coules-Rayer	023	Federal Hydroelectric Plants Can In-	
Sectric Power Annual Report on the Columbia River		Transmission Line Propert (Report) Ways in Which Department of Housing	184	crease Power Sales (Report)	201
Power System Beliefonto Nuclear Plant (Skaff study)	275 054	and Urban Development Can Pro- mote Energy Conservation (Report)	003	Einstric Power Tronsmission States of Federal and Provint Research	
Bulk Electric Power System Reliabil- try	404	Electric Power Custoliment		and Development Efforts to Conserve Barrey by Reducing Electric Power	
California's Central Valley Propost- -Proposed Power Rate Increase (Re- gord)	156	Curtalitisest of Electric Power Service by the Terrosses Valley Authority	117	Transmission Losses (Naj/ andy)	025
Comparison of Beergy Use in Pive Fed- eral Office Buildings (Report)	017	(Report)	10	Electric Utilities Access of the Federal Power Commis-	
	274	Electric Powered Vehicles Potential for Using Electric Vehicles on Pederal Installations (Report)	022	aion to Busens of Recitmetton Re- cords to Insure Compliance with the Pederal Power Act (Letter)	165
Consolidated Pinancial Statement of the Pederal Columbia River Power				Culifornia's Central Valley Project-	
the Pederal Columbia River Power System Custaliment of Electric Power Service by the Tennesse Valley Authority		Ejectric Power Generation		Proposed Power Rose Increase (Re-	
the Pederal Columbia River Power System Cortalisment of Blactric Power Stryles	117	Ejectric Power Generation Beergy Efficiency of Nosites and Con- ventional Paris Used to Produce Blooming (Report)	006		156

**Energy Digest SEPTEMBER 1977** 

125

Electric Utilities Subject Index

Sectric Rate Demonstration Data Sys-				Borrgy Abstracts for Poboy Analysis	
Heating Rate Damostration Date 595-	346	Emergencies  Need for Improving the Regulation of		(EAPA)	441
Energy Conservation Proctors En-		the Natural Oas Industry and Mos-		Baergy Data System (EDS)	341
ecuraged by States (Report)	006	agement of Internal Operations (Re-		Beergy Pilms Distribution	424
An Evolution of the Federal Power		part	113	Beergy Policy Decisionreaking, Organ-	
Commission's Rulesaking on Unli- ties' Construction Work in Progress		Problems in the Federal Energy Office's Intelementation of Emergency Pe-		insteen, and National Brergy Goals	
(Report)	229	troleum Allocution Programs at Re-		(Report)	193
The Federal Income Taxes of Class A		noral and State Levels (Report)	108	Harryy Resource Data Systems	328
and B Electric Utilities (Neport)	185			EROA Headquarters Technical Li- brary	423
Information on Selected Aspects of the		Emergency Gas Sales		PEA Data Distingery	360
Fower Operations of Teniossee Vul- ley Authority (Report)	147	Actors Taken by the Poderal Power		Pederal Energy Information Locator	
Management Interovenents Needed in	107	Commission on Prior Recommenda-		System (PEILS)	366
the Federal Power Commission's		tions Concerning Regulation of the Natural Gas Industry and Manager-		Paul Energy Update	406
Processing of Electro-Rate-Increase		ment of Internal Operations (Report)	147	FPC Library	418
Cases (Report)	153	Need for the Federal Power Commis-		Improved Policies and Procedures for the	
Official PPC Price and Recerbs	401	sion to Improve the Repulation of the		Exploration and Development of Outer	
Operating Cost and Environmental Reductor Monatoring at the Shap-		Natural Gas Industry and Manage-		Comments Shelf Resources (Featmany) Improvements Needed in Controls and	232
pingport Atomic Power Station (Re-		ment of its Internal Operations (Ta-	114	Accounting for Ground Vehicle Pe-	
part)	042	amany	114	troleum (Report)	018
Perific Northwest Hydre-Thermal				Improvements Needed in the Federal	
Power Program-A Regional Ap- proach to Meeting Slocuse Power Re-		Emergency Oil Supply The Administration of the Petroleum		Enhanced Oil and Gas Rosovery Re-	
quirerrents (Report)	161	Sex-Aside Program by State Energy		search, Development, and Demon- stration Program (Record)	155
Proposed Power Rate Increase of the		Offices (Report)	122	Information Conter for Energy Safety	120
Barenu of Recismation's Central Val-		Capability of the Naval Petroleum and		nces)	433
toy Project (Testimony)	101	Oli Shale Resovus to Most Emer-		Issues Needing Attention in Develop-	
Resister Information File	427	gracy Oil Needs (Report)	672	ing the Strategic Petroleum Reserve	
Sequoyeh Nuclear Plant (Stoff study)	943	Capabiasy of the Naval Potoleum and Cal Style Reserva to Meet Bestr-		(Report)	090
Short Term Cost Damed Percenting Model	376	greey Oil Needs (Teptimoral	073	Market Sheres System	370
Southeastern Fodoral Power Program-				Mining Research	323
-Financial Management and Program				National Energy Information Conter (NEIC)	267
Operations (Report)	174	Eminent Demain All Parthers and Condemnation Pro-		Official PPC Piles and Records	401
Status of the Grand Coolee-Raver	154	ceedings Regarding the Naval Pe-		On Cornervation and Innovation	401
Transmission Line Preject (Report) Survey of Foderal and Electric Utility	184	treleum and Oil Shale Reserves	259	(Special	009
Procurements of Power Equipment				Opportunities to Improve Planning for	
(Report)	142	Emissions		Solar Energy Research and Develop-	
		Doal Fuel Program (Supers)	001	mest (Report)	202
Electric Utility Rates		Energy Data System (EDS)	341	RECON (Ribsete CONsole)	440
California's Control Valley Project-				Technical Books and Monegraphs	442
-Proposed Favor Rate Incresse (Re-		Employees			
perti	156	Steffing of Fodoral Energy Adminutes-		Energy Conservation	
Electric Rate Demonstration Data Sys- tem	246	tion's Office of Communications and		Alternative Energy Proposals (Ter-	
	406	Public Affairs (Report)	164	steroepi)	165
Electric Regulatory Activities Hydro and Electric Recurring Cara Re-	406			Alternative Energy Proposals Dove-	
nyth and greens returning that he	406	Employee Terminations		loped by the Osneral Accounting Of- fice in Response to Congressional	
Requested Utility Rate Increase by the		Federal Energy Administration Person-		Inquiries: Proposals and Supporting	
Potomac Electric Power Company		nel Tumever Rates (Report)	181	Analysis (Testimony)	166
(Report)	127			Alternative Fuels for Aviation (H.R.	
Revenues and Costs Allocated to Power Operations as Multiple-Purpose Pro-		Employment Practices		12112) (Teshmony)	154
jects in the Southwestern Federal		Pedani Zueray Administration Ferson-		America's Energy Pattres (Speech)  America's Energy Pattres (Speech)	190
Power System (Report)	096	zel Ternover Rates (Report)	131	America's Energy Polices (Appeal)  Analysis of the Energy, Economic, and	NO
				Budgetary Impacts of H.R. 6860	
Factofication		Eeergy		(Stoff study)	129
Power Productice at Pedenti Dama		Bulk Electric Power System Reliabil-		Automobile Classification Data Base	345
Could Be Incressed by Medernizing		St.	404	A Bill to Extend the Pederal Energy	
Terbines and Generators (Report)	205	Comments on H R 11217, 93rd Con-		Administration Act of 1974 (Ter-	179
		gress, a 268 to Further Research, De-		stavey) Desertment of Commerce's "SavEn-	1/9
Elk Hills (CA)		relogment, and Commercial Demonstrations in Goothermal Ex-		ergy Citations" (Report)	024
Management of and Plans for the Naval		ergy (Letter)	796	The Department of Defense's Consur-	
Petroleum Reserves (Report)	227	Comperison of Boergy Use in Pine Ped-		vacion of Potroliven (Report)	012
		eral Office Buildings (Report)	017	Economic Implications of Current	
Embargo		Controlled Platete Attento Data Con-		World Oil Prices (Sigff study)	227
The Administraces of the Petroleum		ter	444	Efforts to Ilnousrage Conservation is	009
Sec-Ande Program by State Energy		Corporate, Pinencial, and Recognic In-		the Private Sector (Report)	915
Offices (Report)	122	fermeden File (RISCBID)	402	Energy Conservation (Tentestry)	413

**Energy Digest SEPTEMBER 1977** 

Subject Index Energy Demand

Energy Conservation at Government Field Installations: Progress and Problems (Report)	025	Power Paceer Requirements Imposed by Federal Power-Marketing Agen-		pates in Activities Affecting the En- ergy Resources of the United States	
Energy Conservation Financing (Tes- almosts)	027	sies on their Cestomers (Letter) Progress and Problems of the Govern- ment's Utility Conservation Program	204	(Report) Hydro and Electric Recurring Data Re- ports	40
Energy Conservation in Federal Office Buildings in California (Report)	002	(Report) Progress of Energy Conservation Pro- gress for Consumer Products Difter	021	Implications of Desegulating the Price of Natural Gas (Report)	13
Energy Conservation Practices En- couraged by States (Report)	006	Than Automobiles	294	Major Fael Zuming Insultation-Barty Planning Process Identification	
Breegy Conservation Program at "two Government Contractors (Report)	008	Project Conserve Recycling of Materials	260	(EPPE) Major Puel Ferning Installations	35
Stergy Efficiency Ratios of Window		Review of the Progress and Problems of Resource Recovery Since the Passage		(MPEI)	35
Air-Conditioners (Report) The Boorgy Impact of Moving Depart-	ccs	of the Resource Recovery Act of 1970 (Testimons)	016	Mosthly Energy Review National Ocean Policy Study (Tes-	25
ment of Defense Activities from the Military Ocean Terminal, Brooklyn.		Review of Voluntary Agreement and	910	Amony)  Potential for Using Electric Vehicles on	21:
New York, to Enyonee, New Jersey (Report)	011	Plan of Action To Implement the In- ternational Energy Program	276	Pederal Installations (Asport)	023
Energy Policy Decision making, Organ-		Solid Waste Menagement, Collection, Disposal, Resource Recovery, Resy-		Power Pacter Requirement, Imposed by Pederal Power-Marketong Agen-	
ization, and National Energy Goals (Report)	193	cling Program States of Federal and Private Research	257	cues on their Customers (Letter)  Revorw of FPC and FEA Actions In As-	20.
Energy Reorganization Legalation (Tentimony)	194	and Development Efforts to Conserve Energy by Reducing Electric Power		sessing the Impact of Natural Clas Curtaliments during the Winter of	
Energy, the Recencery and the Endget (Speech)	169	Transmission Lesses (Stoff study) Strategie Petroleum Reserve Plan	025 289	1976-77 (Letter) Statustical Data on Petrologen and Pe-	ose
An Evaluation of Proposed Pederal As- sistance for Financing Commerciali-		Using Solid Wate to Conserve Re- sources and to Create Energy (Aspert)		troloum Products (Repart) Using Solid Waste to Conserve Re-	071
zation of Emerging Energy Technologies (Report)	151	Ways in Which Department of Housing	013	sources and to Create Energy (Report)	013
An Evaluation of Proposed Federal As- sistance for Financing Commerciali-		and Urban Development Can Pro- mote Energy Conservation (Report)	003	Which Alternative for Energy Policy?	166
ration of Emerging Energy Technologies (Testimony)	152	Which Alternative for Energy Policy? (Speech)	168		
Pederal lifforts to Conserve Energy (Report)	010	14		Energy Conversion Energy Efficiency of Nuclear and Con-	
Pederal Efforts to Conserve Pael in the Movement of Men and Materials (Re-		Energy Consumption America's Energy Passres (Spendy)	171	ventional Facis Used to Produce Electricity (Report)	co
part)	004	America's Energy Putters (Speech)	190	Evaluation of the Administration's Proposal for Government Assistance	
'ederal Efforts to Improve the Pael Sconomy of New Automobiles (Re- part)	600	Ecliefonte Nucleur Planz (Stoff muly) Companion of Energy Use in Five Fed- eral Office Buildings (Report)	054	to Private Uranium Serichment Orouga (Report)	13-
Pederal Energy Management Program	292	Comprehensive Human Resources		Pederal Coal Research-Status and Problems to Be Reached (Report)	on
Annual Report Puture Energy Dessand (Speeck)	175	Data System (CHRDS) The Sconcesic and Environmental Im-	365	Opportunities for More Effective Use of Animal Massare (Report)	621
OAO's Energy Role (Speech)	177	pact of Netural Gas Certailments During the Winter of 1975-76 (Ter-		Plans for Construction of a Magnetehy-	431
How Pederal Agencies Can Conserve Utilities and Reduce their Cost (Re-		(imony) Electric Rate Demonstration Data Sys-	083	deadymentics Test Facility in Mon- tana (Report)	564
part) Sow the Pederal Government Partici-	007	sem	345	Status and Chatacles to Commercialitya- tion of Coal Leguefaction and Gastifi-	
pates in Activities Affecting the Iln- ergy Resources of the United States		Energy Conservation (Tentenny) Energy Conservation in Pederal Office	015	cotion (Pryori)	665
(Report)	095	Buildings in California (Report)  The Energy Impact of Moving Depart-	002	Energy Demond	
Improvements Needed in Controls and Accounting for Ground Vehicle Pe-		ment of Defense Activities from the Military Ocean Terminal, Breeklyn,		Asseries's Energy Futures (Speech)	17
troleum (Report) Industrial Hoergy Efficiency Program	018	New York, to Stayonae, New Jersey	011	America's Energy Pattern (Speech)  Bellefonte Nuclear Plant (Staff analy)	19
	276	(Report) FEA Household Egergy Survey	394	Certain Actions That Can Ee Taken to	~
National Energy Policy: An Agenda for Analysis (Report)	191	Federal Efforts to Conserve Fael in the Movement of Men and Materials (Re-		Help Improve This Nation's Unanium Picture (Report)	06
National Ocean Policy Study (Tes- thnony)	212	port) Pederal Effects to Improve the Poel	004	Energy, the Economy and the Budges (Speech)	16
National Standards Needed for Resi- dential Starray Conservation (Report)		Eccesary of New Automobiles (Re-	000	Puture Energy Demand (Speech) International Energy Evaluation Sys-	17.
Names I Gas Shortage: The Role of Im-	019	Pederal Regry Conservation Perfor-		tecn (IEEES)	38
Natural Gas Shortage: The Role of Im- ported Liquefied Natural Gas (Report)		mence System Financing Infragracture in Energy	343	OBCD Beergy Demand Model Regional Econometric Demand Model	38
On Conservation and Innovation	241	Development Areas of the Western States (Speeck)	081	and Auto Simulation Model (RD4)	38
(Speech) Operation of State Energy Conserva-	029	Patrice Reargy Domand (Speech) How Pederal Agencies Can Conserve	175	Review of PPC and PBA Actions in As- sensing the Impact of Natural Gas	
tion Plans Potential for Using Electric Vehicles on	295	Utilities and Reduce their Cost (Re- port)	007	Curtailments during the Winster of 1976-77 (Letter)	00

127

Energy Digest SEPTEMBER 1977

Energy Demand Subject Indian

Manung Energy Goals Needs to be Determined and the Leasing Process		motion Pile Natural Gas Industry Evaluation Sys-	413	A Still to Extend the Poticral Energy Administration Act of 1974 (Pa-	
Improved (Report)	226	6ccps	412	timony)	179
Short Term Petroleum Damand Pose- centing Model	383	Review of Voluntary Agreement and Flan of Action To Implement the In-		Budget History Tables Budgeting of Federal Financial Incom-	317
Which Alternative for Energy Policy?		ternstonal Energy Program	276	tives for Energy Development (Tie-	
(Speech)	168			tenony) The Changing Role of the General Ap-	150
Energy Efficiency		Energy Legislation Amendment of the Federal Society Ad-		counting Office in Entray Informa-	
Alternature Energy Proposals (Tes-	165	minutration Act of 1974 and the Ex-		tion and Data Programs (Speech) Comments on Selected Aspects of the	186
Arrangi Alternative Energy Proposals Deve-	160	teasion of its Expiration Date (Letter) Analysis of the Energy, Economic, and	173	Administration's Proposal for Gov-	
loand by the General Accounting Of-		Budgetary Impacts of HR 6860		Greenent Assistance to Private Unantum Exceptionent Grocos (Report)	
fice in Response to Congressional Inquines Proposals and Supporting		(Sing) study)  A Bill to Extend the Federal Energy	129	Continue Extractional Orders (August)	145
Analyses (Tennesny)	155	Administration Act of 1974 (Tai-		Comments on the Energy Information Act (Lene)	
Analysis of the Energy, Economic, and Budgetary Impacts of HR 6860		Amony)	179	Comprehensive Human Resources	170
(Stoff study)	129	Energy Conservation at Government Field Installations: Progress and		Data System (CHR QS)	355
Occurrence of Commerce's "SavEn-	024	Problems (Aspers)	028	Conservation Division Task Force Re- port on the Oashore Lesse Manage-	
orgy Castions" (Report)  Energy Conservation at Government	024	Energy Conservation Financing (Ten-	027	ment Program Study for the U.S.	
Field Installations Progress and		Basegy Policy Decreeownsking, Organ-	02/	Geological Survey	249
Froblems (Report)  Energy Efficiency of Nuclear and Con-	028	ization, and National Energy Goals		Coupled Energy System - Economic Models	407
versional Fuels Used to Produce		(Report) Energy Reorganization Lagislation	193	The Department of Defense's Conser-	
Electricity (Report) Energy Efficiency Ratios of Window	606	(Tenneny)	194	vation of Petroloum (Report)  Department of the Interior's Visus of	012
Arr-Conditioners (Report)	005	GAO's Energy Role (Speech)	177	Commerts on Administration of	
National Standards Needed for Resi-		Emproved Policies and Procedures for the Exploration and Development of Queer		Regulations for Surface Exploration, Mining, and Reclamation of Public	
dential Energy Conscrusion (Report)	099	Consecutational Resources (Pennson)	232	and Indian Coal Lands (Report)	095
Inergy Facilities		Proposed Energy Inventory Act of 1974 (Lever)	140	Development of the Outer Continuatal Shelf Penal Fuel Resources (Ter-	
Report on Reprogramming Action for the Nuclear Materials Program	314	Ways to Strengthen Congressional Con-	160	Amont Point Poil Residences (72)	215
the reaction and the Program	314	tral of Energy Construction Projects		Oynemic Input-Output Linear Pro-	
Energy Florace		Other Than Nuclear (Report)	192	gramming Model for Regional En- ergy Impact Analysis (O)OLP)	221
Oricloping and Commerculating En- rigy Technology (Termony)	149	Energy Management		The Bosonic Impact of Energy Ac-	
Energy Conservation Financing (Ter-		Department of Commerce's "Saviča- ergy Chatacon" (Report)	024	tions Effect and Operation of Interstate Com-	255
Anonyi	027	entry Cissosia - (Kepero	024	paote Relating to Natural Gus	297
An Evaluation of Proposed Pederal As- sustance for Prosneing Commercials		Energy Planning		Effects to Encourage Conservation in the Private Sector (Report)	
ustson of Emerging Beergy Technologies (Separt)	151	National Plan for Basegy Research, Development, and Demossuation:		Employee Disclosures under the Ex-	009
An Evaluation of Proposed Federal As-	131	Creating Energy Choices for the Pu-		ergy Policy and Conservation Act	265
sistance for Frenzesta Commerciali-		tere	428	Energy Abstracts for Policy Analysis (EAPA)	441
zation of Emerging Energy Technologies (Technologies	152	Plearing and Silling System	339	Energy Conservation (Temporal)	015
Pederal Coal Research-Status and		Energy Policy		Snergy Conservation: Federal Beergy	
Problems to Be Resolved (Report)  Financing for Commercial-sized	090	Accelerated Outer Continental Shelf	216	Management Program  Enterty Conservation Financing (Tita-	292
Opmoratusions of Energy Technolo-		Development (Termony)  Accelerated Outer Continental Shelf	216	(insty)	027
gita (Testimony) Financing Infrastructure in Beergy	141	Development (Testimony)	219	Energy Conservation Practices En- couraged by States (Report)	006
Ocyclopment Areas of the Western		Action Proposed Concerning Conflict of Interest	288	Energy Data Collection in the Federal	-
States (Speech)  Paties Structure of the Uranium En-	681	Administration of Regulations for Sur-	200	Government (Tanifmony)	157
richment Industry (Teamper)	037	face Exploration, Mining, and Reciz-		Energy Policy Decisionmsking, Organ- ization, and National Energy Goals	
The Logality of the Reported Use by the		motion of Public and Indian Coal Lands (Report)	093	(Report)	193
Energy Research and Development Administration of Certain Foult En-		Alternative Bacrgy Proposals /Tes-		Energy Reorganization Legislation (Testimony)	194
ergy Funds (Letter)	087	almony) Alternative Energy Proposals Deve-	165	An Brahmtico of Proposed Pederal As-	
Liquid Metal Fast Breeder Reactor Program-Past, Present, and Future		loped by the General Accounting Of-		sistance for Financing Commercial- action of Emerging Energy	
(Testimony)	0.45	fice in Response to Congressional Inquirees Proposels and Supporting		Technologies (Report)	151
Proposed Revisions to the Criteris and Contracts for Unsalam Bariolament		Analyses (Testimony)	166	An Evaluation of Proposed Federal As- sistance for Praspoint Commercial-	
Services (Report)	097	America's Energy Potents (Speech)	171	pation of Reserving Pressy	
U.S. Paranceal Assistance in the Deve- lopment of Porcian Nuclear Energy		America's Beargy Patients (Speech)  Analysis of the Briongy, Economic, and	190	Technologies (Tentmony)	152
Programs (Report)	232	Sudgetery Impacts of H.R. 6860		The Exportation of Coal (Report) FEA Crate/Transportation Model	399
		(Stoff study)	129	Pederal Efforts to Improve the Poel	
Energy Industries Natural Gas Company Operating Infor-			129		000

**Energy Digest SEPTEMBER 1977** 

128

Subject Index Breegy Research

Pederal Energy Administration Annual Report to the President and Con-		Ozahoro Leate Monagement Program Study for the U.S. Geological Survey	250	An Evaluation of the Federal Power Commission's Rulemaking on Utili-	
gress Perioral Energy Guidelmes Weekly Supplement	290	Opportunities for Improvements in Re- claiming Strip-Mined Lands under Coal Punchase Contracts (Report)	099	ties' Construction Work in Progress (Aspert) Exercision of a Refined Petroleum Pro-	229
The Pederal Wind Brongy Program (Re- port)	236	Outlook for Federal Goals to Accelerate Lessing of Oil and Gas Resources	071	duct from the Mandatory Petroleum Allocation and Price Regulations	191
Financial Disclosures by Employees Performing Functions under Entrgy		on the Outer Continental Shelf (Re- port)	214	PEA Household Energy Expenditure Model (HEEM)	393
Policy and Conservation Act Prosecing for Conserval-sized	287	Power Surveys and Systems Brains- tion	409	Friend Impact of Energy Price Changes on State and Local Government Per-	595
Denoustrations of Energy Technolo- ges (Testivopsy)	141	Project ledependence Evaluation Sys- tem (PIES)	381	chases of Goods and Services Heddle Distillate Price Menteolog Sys- tem	342
Financing Infrastructure in Energy Development Areas of the Western States (Speech)	081	Proposed Establishment of Jumi Feder- al-Industry Nonenclear Corpora- tion	335	Natural Gua Regulazioni System (Pre- decor Rise)	414
Possi Energy Program Report	211	The Purchase of Short-Sepply, Energy-		Natural Gas Regulation System (Prpe-	
Peture Energy Demand (Speech) How the Federal Government Parties	175	Related Items through the Espert- Import Bank of the United States (Report)	226	ince Rose) Necelassical Regional Growth and En-	416
patcs in Activities Affecting the En- ergy Resources of the United States (Report)	ces	(Rigional Industrial Multiplier System (RIMS)	392	ergy Price Model Project Independence Evaluation Sys- tem (PIES)	381
Implications of Decembering the Price		Report on ERDA's Nonnuclear Actass-		Refinery Cost Passibrough	348
of Natural Gas (Report)	125	ties	310	Survey of Publications on Exploration,	
Improved Periods and Procedures tot the Exploration and Development of Outer Commental Shell Resources (Journal)	232	Report to the President by the Nuclear Regulatory Communities	318	Development and Delivery of Alas- kan Oil Market (Report)	169
Improving the Operations of the Fed-		Ramps of Average Puel Sconotty Standards under Title V of Motor			
eral Energy Administration Region X Office (Report)	111	Vehicle Information and Cost Savings Act	278	Energy Programs Paderal Assistance to State and Local	
Income Distribution Impact Mcdel	390	Review of the Pederal Energy Adminis- tration's Advisory Committees (Re-		Governments in Developing and Ad- ministering Energy Programs (Report)	
Issues at Leasing the Atlantic Outer Continental Shelf (Testmone)	212	port)	183		143
Inyues Related to Foreign Sources of Oil for the United States (Report)	235	Review of the 1974 Project Independ- ence Evaluation System (Report)	178	National Plan for Energy Research, Development, and Demonstration Creating Energy Chosens for the Fu-	
The Lupud Motel Fast Breeder Resotur Program-Past, Present, and Future		Some-Bossems Environmental Demo- graphic Information System (SEE- DES)	434	ture	428
(Report) Moior Puel Burning Installation-Early	045	Status and Obstacles to Commercializa-	434	Except Recovery from Wasta	
Planning Process Identification (EPPE)	356	tion of Coal Liquetorson and Gasti- cation (Report)	085	Recycling of Materials Solid Waste Management, Collection,	240
Major Fact Burning Installations (MFBI)	354	Submission of U.S.S.R. Energy-Related Transpetiers for Congressional Re-	290	Disposal, Resource Recovery, Recy- class Program	257
Mining and Minerals Policy	267	view A Summary of European Views on Do-	200		
National Coal Model (RMAC) National Energy Policy: An Agenda for Analysis (Report)	191	pendency of the Pree World on Mid- die Bast On (Report)	234	Energy Research Activities of Each Geothernsal Demon-	
National Ocean Policy Study (Ter-	212	Survey of Poblications on Exploration, Development and Delivery of Ales-		straden Propert Activities of Spiar Energy Coordination	207
Nanonal Plan for Energy Research, Development and Demonstration		kan Dil Market (Report) U.S. Financial Assistance in the Deve-	169	and Management Project Applyties of the Goothermal Corrdina-	302
Planning and Analysis	305	lopenent of Pureign Nuclous Energy Programs (Report)	239	tise and Management Project	506
National Plan for Energy Research, Development, and Demonstration Creating Energy Choices for the Pu-		Energy Policy Project		Budgeong of Federal Pinesolal Incon- dres for Energy Development (Ter- mont)	150
ture	428	America's Energy Potates (Speech)	171	Ceaser for Energy Studies (CBS)	443
National Program for Solar Heating and Cooling National Standards Nooded for Res-	300	National Ocean Policy Study (Ter- neces)	212	Consenses on N.R. 11212, 93od Con- gress, a Bill to Purther Research, De- velopment. and Commercial	
dentiel Energy Contervation (Report)	019 357	Energy Prices	272	Demonstrations to Goothermal En- ergy (Letter)	196
Natural Gas Curtallments Need for Improving the Regulation of	357	Cost Date Base Cost and Prining System	372	Development of Intersectory Relation-	
the Natural Gas Industry and Man- agement of Internal Operations (Re-		Crude Oil and Natural Gas Production Model	396	ships in the Regulation of Nucleus Materials and Pacificies (Report)	055
port) Need for the Federal Power Controls	112	Crude Oil Fariticments (Equaliza-	262	Beergy Abstracts for Policy Asslysis (EAPA)	441
sion to Evaluate the Effectiveness of		tion) Crude Oil Pirst Purolaser	355	Beergy Information Reported to Con- gress as Required by Public Law 93-	
the Natural Gas Curtailment Policy (Report)	130	Crude Oil Pricing Model (DCROPS)	397	319	283
Necclassical Regional Crowth and En- ergy Price Model	389	Electric Power Facil and Edvironmental Analyses	405	Energy Research, Development, and Demonstration Inventory	40
On Conservation and Innovation (Speech)	029	Blactric Rute Dessentration Data Sys- tees	345	Environmental Resource Center (ERC)	449

129

Energy Digest SEPTEMBER 1977

Energy Research Subject Index The Federal Beergy Administration Quarterly Report on Private Oriev-teres and Referen

Natural One Containments

Natural Gas Shortese Model

284

357

392

Outsilment of Floorie Power Service

Developing and Commercializing En-ergy Technology (Technolog)

**Energy Digest SEPTEMBER 1977** 

by the Tennessee Valley Authority

117

149

ERDA Energy Research Abstracts

An Braitation of Proposed Pederal As-ristance for Pleaseing Commercial-zation of Emerging Recogn

438

(ERA)

130

131			The Economic and Environmental Im-	
				642
	Energy Storaga			142
152	Site Distribution Medel	264	pact of Natural Gas Curtaliments	
000				082
	f f			003
206			cepts That Could Greatly Improve	
	12112) (Tentropey)	154		049
309		373		049
	Coupled Energy System - Beenomie		(Speech)	169
681		427	The Espartation of Coal (Report)	244
	Model	398	Pederal Coal Research-Status and	
125	Crede Oil Pricing Model (DCROPS)			000
		397		
	Desirate Energy Resource and Re-		Utility Companies (Project Utility)	
	sed Needed Outs. (Report)	233	(Report)	126
	PEA Crude/Transportation Model	399	Pollowup Roview of the Nevel Pe-	220
				175
246				
			AEC Chairman's Report, "The Na-	
		367		795
203	ten (IEBS)	384	Implications of Doregulating the Price	125
	International Oli Supply Model	388		133
	Issues Nooding Attention in Develop-		Price of Natural Gas (Tentencey)	135
201		000	Issues Related to Foreign Sources of Oil	
				235
315	National Coal Model (RMAC)	379		
	Oil and Gas Reserves System	372	(Letter)	104
	Oil and Gas Supply Model	378	Legality of Printing Gasoline Rationing	
313	Project Independence Evaluation Sys-		Coupons by Federal Baergy Adminis-	103
		381		100
	Model (RAMC)	360	Three Nemauclear Energy Research,	
312	Review of PPC and FEA Actions in As-		Development, and Demonstration	202
301				Mu
	1976-77 (Letter)	080	Commission's Controlled Thermosu-	
300	Strategic Petroleum Reserves Program-			195
			Natural Gas Sheetage: The Role of Im-	
		369	partos Especies Hanara Con (Anjeri)	241
	Servey of Publications on Exploration,		Outer Continental Shelf Dil and Gas	
499	kun Oli Market (Report)	189		
	Underground Gas Storage System	371	What Dollar Value (Report)	218
192			Problems in the Federal Energy Office's	
	Enargy Supply			
	Alternative Energy Proposals Dave-		signal and State I made (Percent)	108
	loped by the General Accounting Of-		Progress and Problems in Developing	
681	Inquiries: Proposals and Supporting		Nuclear and Other Experimental	
		166		
			port)	077
***		190	Receipt and Coordination of Natural	
***				370
360	gency Od Needs (Report)	072	Mendatory Potroleum Allocation	
	Capability of the Naval Petroleum and		Program and the Regulation of Pe-	
	Otl Shale Reserves to Meet Erner-		troleum Priolog (Report)	102
			Role of Federal Coal Resources in	
	Help Improve This Nation's Ursaicon		Determined and the Leaving Process	
0.93	Plobars (Report)	061	Improved (Report)	226
	152 080 206 309 681 135 246 209 241 315 313 313 312 407 407 407 407 407 407 407 407 407 407	Energy Storage  120 Bill Politholius Model  120 Bill Politholius Model  120 Cappell Bill Politholius Collina C	Energy Starege  120 Bin Developmen, Model  120 Company Starege  121 Developmen (Company Starege)  121 Developmen (Company Starege)  122 Developmen (Company Starege)  123 Developmen (Company Starege)  123 Developmen (Company Starege)  124 Developmen (Company Starege)  125 Developmen (Company Starege)  126 Developmen (Company Starege)  126 Developmen (Company Starege)  127 Developmen (Company Starege)  128 Developmen (Company Starege)  129 Developmen (Company Starege)  120 Developmen (Company Starege)  120 Developmen (Company Starege)  120 Developmen (Company Starege)  121 Developmen (Company Starege)  122 Developmen (Company Starege)  123 Developmen (Company Starege)  124 Developmen (Company Starege)  125 Developmen (Company Starege)  126 Developmen (Company Starege)  126 Developmen (Company Starege)  127 Developmen (Company Starege)  128 Developmen (Company Starege)  129 Developmen (Company Starege)  120 Developmen (Company Starege)  120 Developmen (Company Starege)  120 Developmen (Company Starege)  121 Developmen (Company Starege)  122 Developmen (Company Starege)  123 Developmen (Company Starege)  124 Developmen (Company Starege)  125 Developmen (Company Starege)  126 Developmen (Company Starege)  127 Developmen (Company Starege)  128 Developmen (Company Starege)  129 Developmen (Company Starege)  120 Develo	Biotry Dorrey  Biotry Dorrey  Biotry  Biotry

The state of the s				European Atomic Energy Com	menty
Statistical Data on Petroloum and Pe-					
trefeson Products (Report)  A Summary of European Views on De-	(Lab	Report on TRDA's Noncodear Activities Report on the Status of Marin Con-	310	Improved Impedion and Regulation Could Reduce the Possibility of Oil- spills on the Outer Continental Shelf	
pandency of the Prec World on Mid- dle East Oil (Report)	234	struction Projects Experiencing Sig- nificant Variances	300	(Raport) National Energy Polacy: An Agenda for	100
Trans-Alaska Oil Pipeline-Progress of Construction through Nevember		Socio-Economic Revatoramental Demo- graphic Information System (SEE-		Analysis (Report) Natural Gas Shortage: The Role of Ico-	191
1975 (Report) Which Alternative for Energy Pointy?	084	DIS) Supposing and Land Reducation in-	404	ported Lequelled Natural Gas (Report)	241
(Speech)	168	Sormation System	435	Nevada Applied Ecology Information Corner	452
Energy Utilization Energy Conservation at Government Field Installations Progress and Problems (Report)	033	Environmental Criteria Department of the Interior's Proce- deres for Approving Coal Mining Flats (Rosert)	228	Nuclear Regulatory Commission's Pro- grees for Evaluating Environmental Impacts of Construction and Opera- tion of Nuclear Powerplants (Report)	051
Fufnssament		Nacker Regulatory Commission's Pro- gram for Evaluating Environmental	226	Opportunities for tempowerness in Re- staining Strip-Minord Lands under Coal Psychate Contracts (Report)	092
The Federal Energy Administration's Compliance and Enforcement Pro- cesses (Testenory)	125	impatts of Construction and Opera- tion of Nuclear Powerplants (Report)	es <sub>1</sub>	Problems Caused by Cost Massing Near Federal Reservoy: Projects (Report) Problems Caused by Cost Missing Near	075
		Environmental Health		Pederal Reservoer Projects (Tes- trecons)	076
Engineering		Zavicontestal Information Analysis		Recycling of Materials	260
Liquid Metal Fast Breader Resotor Fuel-Cladding Information Center (LMFRR)	450	Center (EIAC) Environmental Resource Center (ERC)	44	Resource Recovery and Source Reduc- tion	279
Maspower Needs of the Nations Power Industry (Report)	430	(ERC)	449	Role of the International Atomic En- ergy Agency in Safeguarding Nuclear Material (Report)	240
Roport by the U.S. Energy Research and Development Administrators: Status of Construction Property and		Environmental Impact Department of the Interior's Proce-		Solid Wisto Management, Collection, Disposal, Resource Recovery, Recy-	257
Other Data Report on Activity and Program Indea	313	dures for Approving Coal Mixing Plans (Report) The Economic and Environmental Im-	223	ching Program Trings-Alaska Dit Pipelane-Progress of Construction through Nevernbus	
of the Energy Research and Develop- ment Administration Status of Con- struction Property and Other Data	312	pact of Natural Gas Curts/ments dur- ing the Winter of 1975-76 (Report)	ce <sub>2</sub>	1975 (Report)	684
Engines		The Liquid Moral Fast Broader Reactor Proceioes and Universalistics (Stoff analys)	049	Equipment Drilling Equipment Production Sur-	259
Dual Peel Program (Report)	001	National Count Policy Study (Te- sinony) Notice Regulatory Communication Pro-	212	Teergy Research and Development Administration's Contingency Plan	224
Entrollement Ecological Sciences Information Center (ESIC)	445	gram for Evaluating Environmental Impacts of Construction and Opera- tion of Nuclear Powerplants (Report)	661	for More Enrichment Capacity at Postentials, OH (Report) Power Production at Pedecel Dams	Cd2
	440	Reports of the Work Group on OCS Safety and Polistics Control	252	Could Be Interested by Modernizing Turbines and Generators (Report) Survey of Federal and Electric Unity	205
Environment Energy Data System (EDS)	341			Procurements of Power Equipment (Report)	145
Trans-Alaska Oil Papelino-Progress of Construction through Nevember 1975 (Report)	004	Environmental Policy The Court Zoor Management Pro- gram: An Uncertain Pages (Roses)	187	U.S. Finnecial Assistance in the Devel- operant of Forcign Neclear Energy Programs (Report)	237
1973 (Algori)	004	gran: An Unitedita Palase (Kiper)	187	Programa (Mepert)	237
Environmental Assessment Administration of Regulations for Sur- face Exploration, Mining, and Recis- mation of Public and Indian Cost		Environmental Protection Administration of Regulations for Sur- Suc Exploration, Moving, and Roda- castion of Public and Indian Coll		Erosion Problems Cassed by Cosl Mining Near Pedensi Reservoor Projects (Tec- tionsy)	076
Loads (Report)  Coupled Energy System - Esonomic  Models	429	Lands (Report)  Department of the Interior's Views of	093		
Department of the laterior's Views of Comments on Administration of	429	Comments on Administration of Regulations for Surface Exploration, Mining, and Perforances of Public		Europe Allocation of Usanium Europement Services to Fuel Porough and Domestic	
Regulations for Serfiver Exploration, Mining, and Reclamation of Public and Jackson Coal Lands (Report)	095	and Indian Cost Lands (Report) Federal Cost Resourch-States and	065	Nuclear Reactors (Report)  A Summery of European Views on De- sendency of the Piece World on Mid-	238
Ecological Sciences Information Center (ESIC)	446	Problems to Be Resolved (Report) Further Action Needed on Recommen- dations for Improving the Admiss-	060	de last Oil (Report)	224
Risotrie Power Paul and Environmental Analyses	405	tration of Federal Coal-Leasing Program (Report)	217	European Atemic Energy	
Environmental Resource Custer (ERC) National Geothermal Information Re-	447	How the Pederal Government Partici- pates in Activities Affecting the En-		Community U.S. Plannoisi Assistance in the Deve- lepment of Poreign Nuclear Energy	
National Geothermal Information Re- aturno (GRID)	45]	crgy Resources of the United States (Report)	000	Programs (Report)	239
Energy Digost SEPTEMBER 1977	,				131

Energy Digest SEPTEMBER 1977

U.S. International Nuclear Safeguards Bights Are They Being Effectively Exercised* (Unclastafed Digne) (Re- cort)	24	Outlook for Federal Goals to Accelerate Leaving of Oil and Gas Resources on the Outer Continental Shell (Re- port)	214	New York, to Bayonne, New Jersey (Report)	91
Evaluation Energy Conservation Practices En-		Progress and Problem to Developing Nuclear and Other Experimental Techniques for Recovering Nassell Oas at the Rooky Megazain Arm (Re-		Fost Flux Test Facility Fast Flux Test Facility Program (Stuff atody)	04
couraged by States (Report) Need for the Pederal Power Commo-	300	port) Progress of and Future Plans for Ex-	607	Liquid Metal Fast Breeder Reactor Fuel-Cladding Information Center (LMFBR)	45
non to Evaluate the Effectiveness of the Natural Gas Cuttailment Folicy (Report)	120	pformen of National Petroleum Re- serve in Afrika	271	Report on Past Flax Test Positity	30
Procedures for Evaluating Residuable-					
ness of Petroleum Pipeline Rotes Need Improving (Report)	094	Experts Allocation of Unaviore Enrichment Ser-		Fast Reactors (Nuclear) Can the U.S. Breeder Reactor Develop-	
The Reactor Inspection Program of the Atomic Energy Commission (Report)		vices to Forl Foreign and Domessie Naclear Resolves (Report)	238	ment Program Be Accelerated by Us- ing Peculga Technology? (Report)	24
Review of the 1974 Present Independ-	631	Certain Actors That Can Re Taken to Help Improve This Names's Unanium		Cost and Schodule Estimates for the Nation's First Liquid Metal Past	
ence Resistance System (Report)	178	Peture (Report) Development of Interagency Relation-	061	Breeder Reactor Demonstration Pow- erplant (Report)	04
Executive Agencies		ships in the Regulation of Nuclear Massinals and Facilities (Report)	Q55	Further Comments on Atomic Energy Commission's Proposed Arrange-	
Energy Conservation Federal Energy Management Program	292	Economic Implements of Current World Oil Prices (Staff multi)	227	ment for the Liquid Metal Fast	
Energy Policy Decisions along, Organ-	272	Natural Gas Company Operating Infer-		Breeder Respier Demonstration Pro- ject (Report)	CX.
(Zerion, and National Energy Coals (Report)	193	marine Print The Purchase of Short-Supply, Europy-	413	The Liquid Metal First Broader Reacter Program-Past, Present, and Future	
Federal Energy Conservance Perfor- mance System	342	Related Jorns through the Export- Import Bank of the United States		(Report) Liquid Metal Fast Broader Resource	045
Pederal Energy Management Program Annual Report	202	(Report) Submissions of U.S.S.R. Epsego-Related	236	Program-Past, Prosent, and Puttive	
U.S Neelear Neer-Problemana Pointy		Transactions for Congressional Re-		(Tastimony) The Liquid Motel Fast Breeder Reactor:	046
(Report)	248	U.S. Françai Assistance in the Deve-	280	Promises and Uncertainbies (Staff study)	Det
Exacutiva Reorgenization		Inputest of Foreign Nuclear Energy Programs (Report)	239	Proposed Changes to the Atomic Es- ergy Commission's Arrangement for	
Actions Needed to Improve Federal Ef- fects in Collecting, Analysing, and Reporting Energy Data (Report) A full to Exceed the Federal Energy	159	U.S. International Nuclear Safeguards Righter Are They Boing Effectively Enternoof (Unclassifed Digms) (Re-		Carrying Out the Liquid Metal Part Breeder Resource Demonstration Pre- ject (Report)	00:
Administration Act of 1974 (Ta-	179	pert) Which Alternative for Energy Policy?	243		
Energy Conservation Financing (Tax-	027	(Spench)	168	Fedarol Advisory Bodias Review of the Federal Energy Adminis-	
The Energy Information Act, S 1864 (Technologi	170	Feelillies Management		tration's Advisory Committees (Re-	183
Energy Policy Decisionersking, Organ- ization, and Nanoral Energy Gusia	178	Commests on Selected Aspects of the Administration's Process for Gov-			
(Asport) Entrgy Reorganization Legislation	193	commons: Assustance to Powers Unnotion Europhysecut Groups (Report)		Federal Agencies Amendment of the Pederal Energy Ad-	
(Tarproop)	194		145	migistration Act of 1974 and the Ex- tension of its Expension Date (Letter)	172
Exploration		Fecility Construction		A Bill to Establish a National Energy	
Accelerated Curry Commercial Shelf Development (Testimory)	216	Comments on the Administration's Proposed Synthetic Fuels Commer-		Information System (Testimony)  A Bill to Extend the Pederal Energy	151
Accelerated Outer Continental Shelf Development (Textinents)	219	culcusion Fragram (Report) Tracegy Research and Development	140	Administration Act of 1974 (Tes- through	179
Alternative Energy Proposals (Tor-	145	Administration's Contagency Han for More Enrichment Conscier at		The Changing Role of the General Ac- counting Office in Energy Informa-	
Exploration of National Petroleum Re- serve in Alexa	270	Protomouth, OH (Report) Straigation of the Administration's	052	tion and Data Programs (Speech) Efforts to Encourage Conservation in	186
Pollowup Review of the Naval Po- trolowo Reserves (Report)	222	Proposal for Government Assistance to Private United Emphysia		the Private Sector (Report) Energy Data Collection in the Pederal	009
Improved Policies and Procedures for the Exploration and Development of Option		Groups (Report)  Plans for Countraction of a Magnetoby-	134	Government (Testimony) Pederal lifforts to Conserve Berrgy	157
Compount Shelf Resources (Terposons)	232	Grodynomics Test Facility in Mea- 1909 (Report)	086	(Report) Pederal Bourgy Administration Person-	030
Leasing of Minerals on Public Leads (Report)	211	man lendered.	146	nel Turnover Races (Repent)	181
Management of and Plans for the Naval Petroleum Reserves (Report)	207	Facility Transfer		Importance of Pinancial Data in Byal- uating Pederal Energy Programs (Speech)	
Duter Continental Shelf Sale #35. Problems Selecting and Evaluating	-	The Energy Impact of Moving Depart- ment of Defense Activises from the		Improvements Still Needed in Pederal	144
Land to Lease (Report)	251	Military Ocean Terminal, Brooklyn,		Snergy Data Collection, Analysis, and Resorting (Resort)	189

Subject Index Financial Assistance

Power Fatter Requirements Imposed by Foderal Fover-Marketting Aga- cos on the Cuttomers (Learner) Requested Unitry Rate Increase by the Patomose Electuar Fourte Company (Report) The Company of the Information-Cathering Patenties of the Potenties of the Patenties International Company (Learner) Received the Optention Division of	204 127 180	Pedaral Roungy Administration Person- nel Tamber Rose (Report) Financial Decisions by Engloyee Performing Function under Energy Policy and Consensation Act The Proposed Comment for the Clinish Bover Receder Resister Project (Fe- sions) Staffing of Foderal Energy Administra- tion's Office of Commencement and	161 287 058	Proximal Discissors by Employees Performing Passissers under Energy Poley and Conservation Act In- discontinue on Carison DI and Ges In- dustry Compatibilities (Re- port)  Federal Records Management Ways on Strengthen Congenerated Con-	187
the Pederal Energy Administration (Report)	11.5	Public Affairs (Report)	154	troi of Energy Construction Projects Other Than Nucleus (Report)	192
Import.		Federal Expenditures			
Federal Ald Progrems Comments on H R 11212, 93rd Congress, a Bill to Farther Research, Development, and Commercial Demonstrations in Geothermal En-	104	How the Federal Government Partner- pains in Activities Affecting the En- ergy Renewces of the United States (Report)	ces	Federal Regulation Federal Hydrodoctric Plants Can In- crosse Power Sales (Report)	201
ergy (Letter) Commercia on the Administration's	195	Federal Installations		Federal Republic of Germany Can the U.S. Breader Resette Develop-	
Proposed Synthetic Fuels Commer- cializanos Program (Report) Develoning and Commecoalizing En-	140	The Energy Impact of Moving Depart- ment of Defense Activates from the Milenery Ocean Terminal, Brooklyn.		ment Progress Be Accelerated by Us- ing Possign Technology? (Aspect) International Cooperation in Energy	245
ergy Technology (Testimony)  Developing and Commercializing En-	142	New York, to Bayonne, New Jersey (Report)	011	Research and Development (Tes-	246
orgy Technology (Testimony) Energy Conservation Planning (Tes-	146	Potential for Using Electric Vehicles on Federal Installations (Report)	022		
Amongi	097			Federal State Relations Agreement between the Secretary of	
Financing for Commercial-stood Demonstrations of Energy Technolo- gies (Technologies (Technologies (Technologies))	141	Federal Lands Royalty Accounting System Study of Solid Muscril Lessing Accounts	254	the laterier and Officials of the Stone of Utah Porturing to Oil Shale Leanes (Leane)	109
Reports of Costs of Costsin Structures on Nongovernment Waters	198	State Statem County Province		California's Central Valley Project-	207
Research of the Progress and Problems of Resource Recovery Since the Passage of the Resource Recovery Art of 1970		Federal Local Relations Paderal Assessance to State and Local Georgianasis in Developing and Ad-		-Proposed Power Rate Increase (Re- port) The Constal Zone Management Pro- seem An Uncertain Plante (Report)	156
(Tentinony)  Using Solid Waste to Conserve Re- sources and to Conste Energy (Report)	015	ennistering Energy Programs (Report)	143	Effect and Operation of Impression Com- pacts Relating to Natural Gas	297
Faderal Assistance		Reducing Nector Pewerplant Load- times: Many Obstacles Remoin (Re- acrt)	COF	Federal Assessance to State and Local Governments in Developing and Ad-	
Comments on the Administration's Proposed Synthetic Forth Commer-				synistering Energy Programs (Report)	143
entrantee Program (Report)  Evaluation of the Administration's  Proposal for Covernment Administration	140	Federally Guerenteed Leons Alternative Pecis for Aviation (H.R. 12112) (Testinony)	154	Pleasuring Infrastructure in Energy Development Areas of the Western States (Speech)	091
to Private Unanium Earlchment Groups (Supert)	134	Budgeting of Federal Pinancial Incon- tives for Energy Development (Ter-		Issues in Leaning the Atlantic Outer Continental Shelf (Tecanical)	213
Pederal Assistance to State and Local Governments in Developing and Ad- ministering Energy Programs (Report)	142	theory) Developing and Commercializing In- oras Technology (Technolog)	150	Management Improvements Needed in the Federal Power Commission's Processing of Electric-Rate-Increase	
Peture Structure of the Unicion En- richment Industry (Textman)	027	Developing and Commercializing En- ergy Technology (Teamony)	146	Cases (Report) Problems Casted by Cool Missing New	153
Pacific Northwest Hydro-Thermal Power Program-A Regional Ap-		An Evoluation of Proposed Poderal As- aistance for Pintesting Commercial- ration of Emerging Energy		Federal Reservoir Projects (Ten- creenge) Reducing Nuclear Powerplant Lead-	676
proach to Meating Electric Power Re- quirements (Repart)	161	Technologue (Report)  An Evaluation of Proposed Federal Assistance for Proposed Communities	151	tienes: Many Chatecies Remain. (Re- part)	069
Federal Budgets Budgeting of Pederal Financial Incon- tives for Energy Development (Ter-	150	zation of Emerging Starrgy Technologies (Textworp)	152	Fertilizers Opportunities for More Effective Use of	
(imany)	150	Federal Office Bolidings		Animal Manure (Report)	026
Federal Employees Employee Disclosures under the En- ergy Policy and Conservation Act	265	Companion of Energy Use in Prot Fed- eral Office Buildings (Report)	017	Films Energy Pilms Distribution	424
The Energy Research and Dovelop- ment Administration's Proposed Contract with Project Management Corporation, Commonwealth Edison,		Federal Officials Action Proposed Concerning Conflict of Interest	288	Finencial Assistance Playacins for Commercial-sized	
and the Tennessee Velley Authority (Report)	056	Employee Disclosures under the Be- ergy Policy and Conservation Act	265	Demonstrations of Energy Technolo- gies (Technoly)	141

133<sup>1</sup>

Energy Digest SEPTEMBER 1977

Flagacial Disclosure Subject index

Pinencial Duclosure		Crede Oa and Natural Gas Fredection	106	Foreign Energy Programs	
Action Proposed Concerning Conflict of Interest	255	Crede Oil Prome Model (DCROPS)	390	Can the U.S. Breeder Reactor Develop- ment Program Be Appelerated by Us-	
Employee Dischneres under the En-			397	ing Foreign Technology? (Report)	245
trigy Policy and Conservation Act Pittincial Disclosures by Employees	265	Dolling Equipment Production Sur-	259	International Cooperation in Energy Research and Development (Ter-	
Performing Punctions under Energy		Dynamic Input-Output Luner Pro-		Denough	246
Policy and Conservation Act Need for Improving the Regulation of	387	gramming Model for Registed En- ergy Impact Analysis (DIOLP)	301	U.S. Financial Assistance in the Deve- logment of Foreign Nuclear Energy	
the Natural Gas Industry and Man-		Bloctric Power Firel and Environmental		Programs (Report)	239
agreement of Internal Operations (Re-	1112	Analysis Energy Abstracts for Policy Analysis	405		
Need for the Pederal Power Commu-		(EAPA)	441	Foreign Governments	
son to Improve the Regulation of the Natural Gas Industry and Manage-		FEA Hossehold Energy Expenditure Model (HEEM)	193	Economic Implications of Current	
ment of its lateral Operations (Ter-	114	Price) Impact of Energy Price Changes		World Oil Prices (Sigf study)	237
iniany)	114	on State and Local Government Pur- chases of Goods and Services	105	Foreign Policy	
Financial Management		Income Databution Impact Model	390	Altocation of Uranuum Enrichment Ser-	
Pinancial Information System	421	International Coal Supply Model	387	vices to Fuel Foreign and Domestic	
Scritthaustern Federal Power Program- Pitton call Management and Program		Interestingent Energy Evaluation Sys- tem (EES)	384	Nusicar Reactors (Report)  Economic Implications of Current	238
Operatues (Repri)	174	International Oil Supply Model	388	World Oil Prices (Stoff steely)	237
		National Coal Model (RMAC)	379	Issues Related to Foreign Sources of Oil for the United States (Report)	235
Financial Monitoring		Natural Gas Distribution Model Natural Gas Industry Evaluation Sys-	419	U.S. Financial Assistance in the Deve-	233
Corporate, Fusancial, and Economic In- formation File (RISCEID)	400	tens	412	lopment of Porcegn Nuclear Energy	
Blestneal Financial Forcessing Model		Natural Gas Shorsage Model Neoclassical Regional Growth and En-	352	Programs (Report)	239
(BSB Model EUFINANCE)	377	ergy Proce Model	389		
		ORCD Beergy Domand Model	386 378	Fossil Fuels Contracting Out Basic Planning and	
Financial Statements Convoluted Process Statement of		Dil and Gos Supply Model Plante Model	362	Management Program Functions (Re-	
the Federal Columbia River Power		Project Independence Evaluation Sys-		port) Development of the Outer Continuent)	ces
System Financial Resort on the Geothermal	274	ton (PIES) Regional Economics Demand Model	381	Shelf Forsit Pagl Resources (Tex-	
Resources Development Fund	309	and Auto Simulation Model (RD4)		percent Beergy Resource and Re-	215
Hydro and Electric Recurring Data Re- purps	404	Regional Industrial Multiplier System	385	serve Estimates-Uses, Limitations,	
Power Surveys and Systems Evalue-	-	(RIMS)	392	and Needed Data (Report)	233
Refunds on Outer Continental Shelf	409	Severance Tax Model Short Term Cool Designal Forcessing	396	Ecological Sciences Information Center (ESIC)	445
Leaves of Oney Commission Spar	269	Model	376	The Economic and Environmental In-	
		Short Term Petroleum Dennad Fore- costing Model	383	pact of Natural Gas Curtailments dur- ing the Winter of 1975-76 (Report)	082
Fines (Penalties)		Secio-Economic Environmental Demo-	363	Pederal Conl Research-Somus and	
Recovery of Expenses from Cleanup and Investigation of Oil Spills (Letter)		graphic Information System (SEE- DIS)	434	Problems to Be Resolved (Report)	060
	107	Diay	***	Fossil Energy Program Report Fossi Energy Update	211
		Foreign Countries		Improvements Needed in the Federal	400
Fissianable Materials		Assessment of Unned States and Inter-		Enhanced Oil and Gas Recovery Re- search, Development, and Demon-	
Craticality Data Contin	445	national Controls over the Pencelal Uses of Nacione Energy (Report)	247	stession Program (Report)	155
Figad Centrel		Issues Retword to Porolan Searces of Oal	215	The Legality of the Reported Use by the Energy Research and Development	
Problems Canvel by Coal Means Near		for the United States (Report) A Summary of European Views on De-	235	Administration of Certain Possil En-	
Federal Reservoir Projects (Report)	075	pendency of the Free World on Mid-	234	ergy Funds (Letter)	087
		elle East Oil (Report) Trends in Refinery Capacity and Utili-	234	National Energy Policy: An Agenda for Analysis (Reserv)	791
Florida Federal and State Salar Engray Re-		zation of Petroletan Refineries in the United States and Pereign Refinery		Outlook for Federal Goals to Acceler-	
search, Development, and Domon-		Expending Centers	360	ate Leasing of Oil and Gas Resources on the Outer Continental Shelf (Re-	
stration Activities (Report)	200	U.S. Pinancial Assistance in the Devo- lopment of Foreign Nuclear Energy		part	214
		Programs (Report)	232	Progress and Problems in Developing Nuclear and Other Experimental	
Fard Foundation Agreence's Energy Futures (Speech)	171			Techniques for Recovering Natural	
		Foreign Economic Assistance		Gas in the Rocky Mountain Area (Re-	027
Forecasting		The Purchase of Short-Supply, Energy- Related Items through the Export-		Submission of U.S.S.R. Energy-Related	,,,,
Coupled Energy System - Bosnessic		Irrport Bank of the United States	024	Transactions for Congressional Re-	

Energy Digest SEPTEMBER 1977

134

Subject mean					uas
france		The Department of Defense's Conser-		Energy Resource Data Systems	328
Can the U.S. Breeder Reacter Develop- ment Program Be Ascelerated by Us- ing Forcign Technology? (Report)	245	varion of Potosleum (Report)  Hiffect and Operation of Intentate Com- pacts Relating to Natural Gas	012	Peninceg for Commercial-mand Demonstrations of Energy Yechnolo- ges (Telegons)	141
International Cooperation in Recogn Research and Development (Ten- thysta)	246	Pedemi Efforts to Conserve Pool in the Movement of Men and Materials (Re-	m,	Improved Policies and Procedures for the Englanators and Development of Outer	
amany	240	peri) Improvements Needed in Controls and Accessating for Georged Vehicle Pe-		Contigorial Shell Resonance (Testerony) Improvements Needed in Controls and Accounting for Ground Vehicle Pe-	232
Freud Federal Energy Administration's Ac-		The Navy's Practice of Discharging	010	troleum (Report) Immovements Needed in the Federal	018
tions on Allocation and Printing of Faci (Report)	116	Fuel at Ses (Report)  Review of Average Fuel Economy  Standards under Title V of Meter  Vehicle Information and Cost Savings	020	Enhanced Oil and Ons Recovery Re- search, Development, and Demon- stration Program (Report)	155
Fraudom of Information A Bill to Establish a National Energy		Act	278	Liquid Metal Fast Boreder Reactor Fuel-Cladding Information Contec (LMPSR)	450
Information System (Testreory)	158	Fuel Consumption Energy Data System (EDS)	241	Major Ford Burning Installation-Early Planning Process Identification (EPPE)	358
Fuel Allocation Actions Taken by the Federal Power		Pederal Efforts to Conserve Energy (Report)	010	Major Fuel Barring Installations (MFBI)	356
Commission on Prior Recommenda-				Middle Distillate Price Messtering Sys-	347
tions Concerning Regulation of the		Fuel Coats The Economic and Santragements Int-		Mineral Land Assessment	321
Natural Gas Industry and Manage- ment of Internal Operations (Report)	147	pact of Natural Gas Contailments		Museg and Muserals Policy	267
The Administration of the Petrolours		Ducing the Wister of 1975-76 (Ten-	060	Menng Research	323
Set-Aside Program by State Energy Offices (Report)	129	Information on the Proposed Alaska Oil		Meethly Petroleure Statistics Report	285
The Economic and Environmental Im- pact of Natural Gas Curtailments dur-		Pipeline (Keport)	074	National Energy Policy: An Agenda for Analysis (Report)	191
ing the Winter of 1975-76 (Report) The Economic and Environmental Im-	082	Fuel Dumping		National Plus for Energy Research, Development and Demonstration	
pact of Natural Gas Curtellinents During the Winter of 1975-76 (Ter-		The Navy's Practice of Discharging Facil at Sea (Report)	000	Placeset Gas Cartelments	103 357
alousey) Excesption of a Refined Petroleum Pro-	083	Fuel OII		The Navy's Practice of Discharging Fuel at Sea (Report)	020
duct from the Mandatory Petroleum Allocation and Price Regulations	291	Poderal Energy Administration Efforts to Audit Paul Cil Supplies of Major		Proceedings of Foreign and Domestic Petroleum by Department of Defense	
FBA Crade/Transportation Model	399	Utility Companies (Project Utility)	126	(Report)	091
Pederal Energy Administration's Ac- tions on Allocation and Pricing of Puci (Recent)	116	(Report)		Propose/Basson Allocation System Refreely Cost Passilancegh	348
Galf Oli Corporation's "Double Dip- ping" on Crude Oil Product Costs		Fuel Research Fast Flax Test Facility Program (Staff)			
(Repart)	128	study! Fond Energy Program Report	0.r1 211	Fuel Storoge	
Improving the Operations of the Fed- eral Energy Administration Region X Diffice (Report) Legality of Administration Actions in	111	Improvements Needed in the Federal Enhanced On and Gas Recovery Re- search, Development, and Demon-	311	Both Pue's Need To the Botter Managed (Report)	014
Printing and Storing Gas Coopens	104	stration Program (Report) Report on SRDA's Nonneclear Activi-	155	Fund Allocation	
Legality of Printing Gussline Rationing Company by Pederal Energy Adminis- tration (Lenn)	100	tics	310	Followup Review of the Navai Pe- troleum Reserves (Report)	220
Problems in the Pederal Energy Office's	103	Fuel Reserves			
Implementation of Emergency Pe- truleum Allocation Programs at Re- gional and State Levels (Report)	108	Bulk Pasis Need To Be Better Managed (Report)	014	Fusion Methods  Efforts to Develop Two Nuclear Con- cepts That Could Greatly Improve	
Review of Complaints Concerning the Mundatory Petroleum Allocation Program and the Regulation of Pe-		Fuels Bulk Fuels Need To Be Better Managed		This Country's Fature Energy Stan- tion (Report)	0.48
trojeum Priring (Report) Supptiers' Compliance with Alleration	102	(Asperi) Commodity Data Summaries and Man-	014		
and Price Regulations (Report)	109	cral Estimates  Decreatic Energy Resource and Re-	266	Gas Comparison of Energy Use in Five Fed-	
		serve Estimates-Uses, Limitations, and Needed Data (Report)	233	eral Office Buildings (Report) Deal Paul Program (Report)	017
Fuel Conservation		Duel Feel Program (Report)	001	Effect and Operation of latestate Com-	
Alleged Wasta of Money in Printing Costs on Gas Rationing Coupons (Latter)	110	Energy Conservation (Testimony)  Energy Efficiency of Nuclear and Con-	015	pacts Relating to Natural Gas Energy Efficiency of Naclear and Con-	297
Automobile Classification Data Pase	245	ventional Freis Used to Produce Electricity (Resort)	036	ventional Pacis Used to Produce Electricity (Report)	035

135

Interested Policies and Procedures for the Exploration and Development of Outer		Pederal Efforts to Improve the Foll Economy of New Automobiles (Re-		Geology Geologie Serveys, Investigations, and	
Continental Shell Resources (Testimonn)	232	port	030	Research Program:	227
Interpetational Beergy Evaluation Sys- tem (IEES)  Nitural Gas Industry Evaluation Sys-	384	Federal Energy Administration's Ac- tions on Allocation and Pricing of Fuel (Report)	116	Geophysical Research	
Volumbi Oux Industry Evaluation Sys- terns	412	Monthly Energy Review	281	Geologic Surveys, Investigations, and	
Ways in Which Department of Housing and Urban Development Can Pro-		Monthly Petroleum Statistics Report	285	Research Program	327
mote Energy Conservation (Report)	003	2000 F D AV 14	356		
		OECD Energy Domand Model Petroleum Market Shares	284	Geothermol Energy	
		Quesarty Report of Production from	201	Communes on H R. 11212, 93rd Con-	
Gos Compenies Rescript and Coordination of Natural	020	the Neval Petroleum and Oil Shale Reserves	258	gress, a field to Further Research, De- velopment, and Commercial Demonstrations in Geothernial Eq-	
Gas Reserve Data (Report)	678	Religery Cost Passthrough	346	ersy (Letter)	196
Review of FPC and PEA Actions in Av- sessing the Impact of Natural Gas		Regional Econometric Demand Model		Energy Resource Data Systems	328
Curuniments during the Winser of 1976-77 (Letter)	089	and Auto Simulation Model (RD4)	315	international Energy Evaluation Sys- tem (IEES)	364
Goseous Diffusion Plants		Review of Average Puel Economy Standards under Tolle V of Meter Vehicle Information and Cox Savega		Management and Funding Aspents of Three Nontraclest Energy Research, Development, and Demonstration	
Evaluation of the Administration's		Art	278	Subprograms (Report)	203
Proposal for Government Assistance		Renew of Complaints Concerning the		Nauonal Geothermal Information Re- source (GRID)	453
to Private Uranium Englishment Groups (Report)	194	Mandatory Petrologie Allocation		Problems in Montifyone Developing.	401
Groups (#1969)	134	Program and the Regulation of Pe- troleum Pricing (Report)	102	and Using Goothermal Resources (Report)	199
Goseous Diffusion Process		Subpart L	369		
Efforts to Develop Two Nuclear Con- copts That Could Greatly Improve This Country's Puture Energy Short-		Suppliers' Compliance with Allocation and Price Regulations (Report)	109	Geothermol Resources Activities of Exch Goothermal Demos- scration Project	207
tion (Report)	048	Goseline Rotienina		Acovidies of the Geethermal Coordisa-	
Energy Research and Development Administration's Contragency Plan for More Enrichment Capacity at		The Administration of the Petroleum Set-Aside Progress by State Energy	122	tion and Management Project	306
Portamosth, DH (Report)	052	Offices (Aspert) Alloged Waste of Money in Printing	122	Geothermal Resources Development	
		Costs on Gas Rationing Coupons		Fund	
Geses		(Letter)	110	Progratial Report on the Geothermal Resources Development Fund	339
Report to the Congress on Matters Con- tained in the Holsen Act	268	Legskty of Administration Actions in Printing and Storing Gas Coupons (Letter)	104	REPORTED DEVELOPMENT PURE	337
		Legality of Printing Guioline Rationing		Geothermy	
Gas Exploration		Cospora by Federal Energy Adminis-		Prosperial Report on the Geothermal	
Outer Continental Shelf Oil and Gas Dovelopment Improvements Needed		tration (Linuxy)	103	Resources Development Pund	329
in Determining Where to Lease and or What Bollar Value (Report)	218	Gaseline Taxes		Government and Business	
	210	Hongy Conservation (Testimany)	015	Comments on Selected Aspects of the Administration's Proposal for Gov- erament Assistance to Private	
One Industry An Evaluation of the Federal Power		Gos Production		Unanum Ennehment Groups (Report)	145
Cornerismon's Rulemaking on Utrili-		Oil and Gas Reserves System	372	Comments on the Administration's	143
ties' Construction Work in Progress (Report)	229	Project Independence Evaluation Sys- ters (PIES)	381	Proposed Systhetic Fuels Commer- cualitation Program (Report)	140
Receipt and Coordination of Natural Das Reserve Dats (Report)	60%			Developing and Commercializing Ru- ergy Technology (Tentinosp)	145
		Gos Reserves Department of the Isserior Study of		Demostic Crude Oil Pricing Policy and Related Production (Report)	112
Gozaline		Shas-lis Did and Gas Well Comple- tions and LeanesQAO Discryations		The Energy Research and Davelop-	
Automobile Classification Data Base	245	(Report)	224	ment Administration's Proposed Contract with Project Management	
Cost and Pricing System	374	Enformation on Certain Dil and Gas le- dustry Oversight Responsibilities (Re-		Corporation, Commonwealth Edison, and the Tennessee Velley Authority	
Energy Conservation (Testimony)	015	bout committee production but	105	(Report)	054
The Energy Impact of Moving Depart- ment of Delease Activities from the Military Ocean Terminal, Brooklyn,		Oil and Gas Reserves System Receipt and Coordination of Natural	372	The Evaluation of the Administration's Proposal for Government Assistance	
Military Ocean Terminal, Brooklyn, New York, to Bayoung New Jersey (Report)	611	Gir Reserve Data (Report)	078	to Private Uranium Enrichment Groups (Testenosy)	053
Padaral Efforts to Conserve Putl in the				Evaluation of the Administration's Proposal for Opvernment Assistance	
Movement of Men and Materials (Re- port)	004	Gos Resources Oil and Dan Reserves System	172	to Private Uranium Barichment Groups (Report)	134
136		1		Energy Digest SEPTEMBER	1977
				.,	

 $v_{i_{k_{1},i_{1}}}$ 

Subject Index Grand Coules

Perancing for Commercial-steed Demonstrations of Energy Technolo-		Energy Efficiency Return of Window Air-Conditioners (Report)	005	forts to Audit Domestic Crude Oil Preducers (Report)	123
ties (Tenimons)	141	Energy Research and Development	003	Purifier Action Needed on Recognition-	193
Possil Barray Program Report	311	Administration's Continuous Plan		dations for Improving the Adminis-	
Further Communis on Atomic Energy		for More Enrichment Capacity at		tration of Federal Coal-Lenning	
Contributes's Proposed Arrange-		Portsmouth, OH (Report)	652	Program (Report)	217
ment for the Legald Metal Past Breeder Resonar Demonstration Pro-		Policies and Programs String Developed To Expand Propagation of Products		Learning of Minerals on Public Lands	
jost (Report)	653	Containing Resysted Materials (Re-		(Report)	211
National Plan for Energy Research,		part)	023	Management Improvements Needed in the Federal Power Commission's	
Development and Demonstration	205	Survey of Federal and Electric Utibity		Processing of Electric-Rate-Increase	
Planning and Analysis Problems of Independent Rollings and	2005	Procurements of Power Equipment (Report)	162	Cases (Report)	153
Ossaine Retwirt (Report)	121	Violation of Coultry Proces in a Defense	10.2	Power Factor Requirements Impaced	
The Proposed Contract for the Clinch		Fuel Supply Center Sale (Report)	128	by Pederal Power-Marketing Agen-	
River Brooder Reactor Project (Ter-				cies on their Customers (Letter)	204
Amougi)	058			Problems Caused by Coal Mining Near	
Proposed Establishment of Joint Foder- al-Industry Nonnocieus Corpora-		Government Property		Federal Reservoir Projetts (Report)	075
hon	315	Role of Pederal Coal Resources in Morting Energy Goals Needs to be		Problems Caused by Coal Mixing Near Federal Reservoir Process (Ter-	
Proposed Revisions to the Crateria and		Determined and the Leaving Process		Owens)	976
Contracts for Uranum Enrichment		Irrproved (Report)	225	Problems in Regulating Natural Gas	
Services (Repart)	097			Prices by the Federal Energy Ad-	
Which Alternative for Energy Policy? (Speech)	140			munistration (Report)	139
sayerray	100	Government Publications Environment Publications and Day		Problems in the Federal Energy Ad-	
		tribution of "Shedding Light on Freta		ministration's Compliance and Et- forcement Effort (Report)	118
Government Assistance The Evaluation of the Administration's		shout Nuclear Energy" (Repart)	064	Requests to Regulatory Agencies by Oil	110
Proposal for Government Assistance				Companies for Dovations from	
to Private Uranum Ennchment				Standard Protodures (Report)	145
Groups (Tesaway)	053	Government Regulation		Suppliers' Compliance with Allocation	
		Beliefente Nuclear Plant (Sinff study)	054	and Price Regulations (Report)	109
Government Contracts		Comments on Selected Aspects of the Administration's Proposal for Gov-			
Compensatory Royalty Agreements	272	erament Assistance to Private			
Energy Conservation Program at Pivo Government Contractors (Report)	008	Uranium Entichtrant Groups (Report)		Government Rels	
Protection of Oil Reserves	261		145	How the Federal Government Partici- pates in Activities Affecting the En-	
THEREIN IS ON NORTH	201	Development of Interagency Relation- ships in the Regulation of Nacion		ergy Resources of the United States	
		Metennis and Facinies (Report)	055	(Report)	098
Government Corporations  Evaluation of the Administration's		Energy Conservation Procuses En-			
Proposal for Gavernment Assistance		couraged by States (Report)	906		
to Private Uranium Enrichment		Figureing Infrastructure in Energy Development Areas of the Western		Government Service Contracts	
Groups (Report)  Fisture Structure of the Uranium Re-	124	States (Speech)	081	Contracting Out Basic Planning and Management Program Punctions (Re-	
richment Industry (Testimony)	037	Natural Can Regulations System (Pro-		port)	088
		ducer Rate)	414		
Government Installations		Natural Our Regulation System (Pipe-	416		
Briefly Conservation at Government		line Rase) Natural Gas Regulation System (Pro-	410	Government Services	
Field Installations: Progress and		ducer Certificate)	415	Allocation of Uranum Enrichment Ser-	
Problems (Asport)	028	Natural Gas Regulation Systems (Pipe-		vices to Fuel Foreign and Domestic	
		line Certifleate)	417	Nuclear Reactors (Report)	228
Governmental investigations					
Recovery of Expenses from Cleanup and Investigation of Oil Spills (Letter)		Government Regulations			
and investigation of Citi Spitis (22007)	107	Administration of Regulations for Sur-		Government Spending	
		face Exploration, Minute, and Recis-		Budget History Tables	317
Government Litigotion		mation of Public and Indian Coal	093	Developing and Commercializing En- ergy Technology (Technology)	146
The Pederal Rosegy Administrations		Lands (Report)  Description of the Interior's Views of	093	Pederal and State Solar Energy Re-	140
Quarterly Report on Private Orien- ences and Redress	294	Comments on Administration of		search, Dovelopment, and Domon-	
ances and scoress	150	Regulations for Surface Exploration,		stration Activities (Report)	200
		Mining, and Reclemation of Public and Indian Cost Lands (Record)	095	Report on Reprogramming Action for	
Government Poperwork		Beergy Conservation (Tustmany)	915	the Nuclear Materials Program	314
Problems in Lineasing Hydroslectric Presents (Report)	122	Energy Reorganization Legislation	013	Review of Solected Federal and Private	197
Ways to Strengthen Congressional Con-		(Testimony)	194	Solar Energy Activities (Report)	197
trol of Escray Construction Projects		Federal Coal-Lessing Pregram of the			
Other Than Nuclear (Report)	192	Department of the Interior (Report)	221		
		The Poderal Heergy Administration's		Grand Coulae-Rover Transmission	
Government Procurement		Compliance and Enforcement Activi- ties (Testinoss)	119	Line Project Status of the Grand Coulee-Rayer	
Contracts Information System (CIS)	430	Pederal Energy Administration's Es-		Transmission Line Project (Report)	184
Energy Digest SEPTEMBER 1977					137

Green River Basin (WY) Progress and Problems in Developing		Households FEA Household Energy Expenditure		Status of the Grant Coulee-Raver Transmission Line Project (Report)	124
Nuclear and Other Experimental Techniques for Recovering Natural Gas in the Rocky Montain Area (Re-		Model (HEEM) FEA Househeld Energy Sarvey	393 394	Supervisory Control and Data Arquisi- tion System (SCADA)	336
(April)	027				
,				Hydroalectric Powerplants	
Gulf of Alaska		Housing Report on Solar Energy Demonstra-		Hydroelectric Power Resources of the United States (HPR)	407
Reports of the Wark Group on OCS Sefecy and Pollston Control	252	tion Ways in Which Department of Hosting	263	Status of Pending Hydrociectes Ap- phraticus	410
		and Urban Development Can Pro- mote Energy Conservation (Report)	903		
Guif of Maxico		most strategy Constitution (August)	peu		
Department of the listener Study of				Hydrelogy National Water Data Exchange (NAW-	
Shut-In Oil and Clas Well Comple-				DEX)	325
tions and Leases-GAO Observanous		Housing Cherectaristics		22119	
(Report)	224	Project Conserve	344		
				Hydrotharmol Energy	
				Alternative Feels for Avistion (H.R.	
Guif Oll Co.		Housing Improvement		12112) (Testimony)	154
Requests to Regulatory Agents as by Dall Companies for Deviations from		Nauscraf Standards Norded for Res-		An Evaluation of Proposed Federal As-	
Standard Procedures (Resert)	148	destrol Energy Conservation (Report)		sessence for Financing Commerciali- zation of Emerging Energy	
distant Flocesiles (Alpany			039	Technologies (Report)	151
				An Evaluation of Proposed Federal As-	
Hezerdous Substances				sinance for Financing Commerciali-	
Environmental Resource Creser		Housing Standards		extron of Emerging Rongy	
(ERC)	449	National Standards Needed for Resi-		Technologies (Testrephy)	152
Nevada Applied Ecology Information		destini Knergy Conservation (Report)	039		
Center	452	Ways in Which Department of Homing	Uly	Hydrothermol Power	
Spill Prevention Control and Counter-		and Urben Development Can Pro-		Management and Funding Aspects of	
measure System (SPCCS)	342	mote Energy Conservation (Report)	009	Three Nonsuctear Energy Research,	
Technical Assistance Data System				Development, and Demonstration	
(TADS)	240			Subprograms (Report)	203
				Pacific Northwest Hydro-Thernal Power Program:-A Respont Ap-	
		Hydroalattric Pionts		proach to Meeting Electric Power Re-	
Heating Energy Conservation in Federal Office		Annual Report on the Columbia River Power System	275	geretical (Resort)	161
Riversh Contensation in Lonesar Office	002	Consolidated Financial Scanetizat of	275		
Buildings of Cablornia (Report)	002				
Buildings in Colifornia (Roport)	002	the Pederal Columbia River Power	274	Hydrothermal Powar Program	
-		the Pederal Columbia River Power System	274	Annual Report on the Columbia River	
Heating Oil		the Federal Culturbus River Power System Power Production at Federal Daess Could Be Increased by Modernizang			275
-	347	the Potenti Calumbia River Power System Power Production at Federal Duess Could be Increased by Moderniang Turbuses and Generators (Report)	274	Annual Report on the Columbia River	275
Heating Oil Model's Distillate Price Meastoring Sys-	347	the Federal Colombia River Power System.  Federal Production at Federal Duess Could be Increased by Moderniang Turbests and Generaless (Bayori).  Reserve of Courts of Cornus Structures	205	Annual Report on the Columbia River	275
Heating GII Middle Dittillace Price Meastering System Moethly Petroleum Statistics Report	347	the Potenti Calumbia River Power System Power Production at Federal Duess Could be Increased by Moderniang Turbuses and Generators (Report)		Annual Report on the Columbia River Power System	275
Heating Oil Middle Dittillace Price Meastoring System	347	the Federal Colombia River Power System.  Federal Production at Federal Duess Could be Increased by Moderniang Turbests and Generaless (Bayori).  Reserve of Courts of Cornus Structures	205	Annual Report on the Columbia River Fower System  Import Quotos	
Heating GII Middle Dittillace Price Meastering System Moethly Petroleum Statistics Report	347	the Federal Colombia River Power System.  Federal Production at Federal Duess Could be Increased by Moderniang Turbests and Generaless (Bayori).  Reserve of Courts of Cornus Structures	205	Astrail Report on the Colombia River Power System  Import Quotes Energy Conservation (Testocomy)	
Heeting Oil Moda's Dutilibre Price Meastforing System Meetily Petroloaus Statentus Report Reflecty Cost Passiknough	347	the Potental Calumbus River Power System. Power Production as Foderal Daess Coals for Increased by Moderniang Turbates and Generator (Report) Reports of Conta of Certum Structures on Norganicament Winters  Hydrawitethic Power	205	Animal Report on the Columbia River Power System  Import Quotes Energy Conservation (Testoscop)	
Heating QII Middle Dittilline Price Meastering System Metally Petrology Statistics Report Reflecty Cost Passishough Haoting Systems	347	the Pederal Colombia River Power Sprices.  Provide Production as Federal Diems. Codis Se Incernated by Medical Guide Se Incernated Symposis.  Riperios of Cost of Cortum Structures on Nongovernous Waters.  Hydrowlectic Power Colombia's Central Valley Prosec- ciolatura's Central Valley Prosec-	205	Annual Report on the Columbia River Fower System  Import Quotos Energy Conservation (Fastonery)  Imports Attornion of Unasion, Earlichment Ser- Attornion of Unasion, Earlichment Ser-	
Heating OII Model Dutillac Price Measureing System Models Petrology Statistics Report Models Petrology Statistics Report Reflecty Coal Passionegal Heating Systems Nigford Systems	347 285 348	the Potenti Caltenbu River Power System.  Power Production as Foderal Dues Coals de Increased by Moderniang Turbotes and Generates (Report) Regions of Costs Structures on Neugoverances Waters Wijdenskietic Power Childrens's Cental Valley Propect- Proposed Power East Increase (No- Proposed Power East Increase (No-	205 296	Animal Report on the Columbia River Power System  Import Quotes Energy Conservation (Testoscop)	
Heating QII Middle Dittilline Price Meastering System Metally Petrology Statistics Report Reflecty Cost Passishough Haoting Systems	347	the Potent Culturius River Rover System.  Power Production at Focient Duess Code & Betterand by Modernian Torthous and Gussanian (Bipper)  System of Carlo Allerian Structures on Vougoventness Waters  Hydenskentic Forum:  Colonian Scored Valley Pagase— Deligonal Power Rate Increase (Su- pord)	205	Annual Report on the Columbia Rever Fower System  Import Quelos Energy Conservation (Fatancosy)  Imports Allocation of Ursailum Eurichment Services to Fuel Foreign and Dozestie Nuclear Beacters (Report)	015
Heating OII Model Dutillac Price Measureing System Models Petrology Statistics Report Models Petrology Statistics Report Reflecty Coal Passionegal Heating Systems Nigford Systems	347 285 348	the Potent Culturine River Power System. Power Production of Federal Dieses. Power Production of Federal Dieses. Twithers and Generaless (Report) Report of Cents of Centum Structures on Companymentation of Centum Structures.  Hydro Machine Power Faste Internet Collections' Centum Villey Proposed Power Faste Internet Collections' Power Faste National Collection of Centum Villey Profested Reproductive Power State Dieses Collections of Centum Villey Profested Reproductive Paris State Dieses Centum Villey Profested Reproductive Paris State Paris Centum Villey Profested Reproductive Paris State Paris Centum Villey Paris Centum Villey Profested Reproductive Paris State Paris Centum Villey P	205 298 156	Annual Report on the Calumbia Rever Power Spring.  Impart Quales Energy Conservation (Fannecopy)  Imparts Allowation of Unraines Bartelenest Servation field Foreign and Donnecies Nuclear Research (Report) Alternative Energy Proposals (Tre- tenergy)	015
Heating Oil Medic Dutilbac Price Measurems Sys- Medic Dutilbac Price Measurems Sys- Medically Petrologic Statement Separt Reference Coast Pathologic Heating Systems National Solar Heating and Creating In- formations Coast	347 285 348	the Potent Catanton Ricer Power Systems are Federal Own- Power, the Catanton of Potent Own- Fred States of the States of the Catanton Capacity Faster of Catanton Capacity Response of Catanton Capacity Reprint Catanton Catanton Catanton Management of Catanton Catanton Catanton Catanton Catanton Catanton Catanton Catanton Catanton Cata	205 296	Annual Report on the Columbia Rever Power Spring.  Import Quales Energy Conservation (Tentocopy) Imports Allocation of Unsalvay Eurichment Services to Peel Foreign and Doroselo Nucleor Relactor (Report) Alternative Energy Proposals (Tentocopy) Alternative Energy Proposals Deve	015
Heating GII Metale Distillate Price Meastroning System Metally Petrology Stanton Report Reflecty Cast Passishough Heating Systems National Solid Heating and Cooling Information Court Hallom	347 285 348	the Potent Culturine River Power System. Power Production of Federal Dieses. Power Production of Federal Dieses. Twithers and Generaless (Report) Report of Cents of Centum Structures on Companymentation of Centum Structures.  Hydro Machine Power Faste Internet Collections' Centum Villey Proposed Power Faste Internet Collections' Power Faste National Collection of Centum Villey Profested Reproductive Power State Dieses Collections of Centum Villey Profested Reproductive Paris State Dieses Centum Villey Profested Reproductive Paris State Paris Centum Villey Profested Reproductive Paris State Paris Centum Villey Paris Centum Villey Profested Reproductive Paris State Paris Centum Villey P	205 298 156	Annual Report on the Calumbia River Power System.  Import Quotes Energy Conservation (Tennocopy)  Import Alteration of Unsulung Enrichment Services Nucleor Resisters (Report)  Alternative Energy Proposals (Tennocopy)	015
Heating Oil Medic Dutilbac Price Measurems Sys- Medic Dutilbac Price Measurems Sys- Medically Petrologic Statement Separt Reference Coast Pathologic Heating Systems National Solar Heating and Creating In- formations Coast	347 285 348 422	the Potenth Calentine Ricer Power Sprint.  Potenth Calentine are Federal Desire Potential Calentine and Potential Francisco and Potential Federal Calentine (Deport Regions of Cents at Comen Structures on Nonposentine Wissen Nyforsidentic Fower Collemnia Cercial Visity Proport- drygion of Potential Potential Potential Power East Power State (Deport Federal Power State (Deport Fede	205 298 136 201	Annual Report on the Columbia Rever Power Spring.  Import Quales Energy Conservation (Tentocopy) Imports Allocation of Unsalvay Eurichment Services to Peel Foreign and Doroselo Nucleor Relactor (Report) Alternative Energy Proposals (Tentocopy) Alternative Energy Proposals Deve	015
Heating GII Motele Dutiline Price Measurong Syn- Mosthly Petrolone Statutes Report Reflerey Cost Pastichough Heating Systems Nuclear Softer Henory and Cooling In- formation Center Healine Posters Helium Program	347 255 346	the Potenth Calentine River Power System. The Potenth Calentine River Power System From Potenth River Power Potential Potential River Power Calentine River Indiana Calentine River Indiana Calentine River Power Calentine Court of Camera River Power Calentine Calentin	205 298 136 201	Annual Report on the Columbia Retr Flower System.  Impact Coates Energy Casservation (Tentenony)  Impact Associated Transium Enrichment Re- Valentian of Tenting and Denesie. Nuclear Research Report Alternative Energy Proposals Oftenening Alternative Energy Proposals Deve- land of the Central Activating Off	015
Heating CII Meter Chailine Price Meastromy Systems Mensily Province Stammer Report Reflery Cox Parathough Heating System Notional Solar Recong and Cooling Information Color Reflery Recong and Cooling Information Color Reflery Recong and Cooling Information Color Report to the Corpers	347 285 348 422	the Potenth Gateston Ricer Power Species of The Control of The Con	205 298 136 201 406	Annul Report on the Columbia Beet Provest System .  Impart Queles .  Impart Queles .  Impart Queles .  Allocation of Unavious Bariefoness 5 are de- Allocation of Unavious Bariefoness 5 are de- Allocation of Unavious Bariefoness 5 are de- terming to the Columbia State of Columbia State of the State of State of State of Columbia State	015 238 145
Heating CII Meter Chailine Price Meastromy Systems Mensily Province Stammer Report Reflery Cox Parathough Heating System Notional Solar Recong and Cooling Information Color Reflery Recong and Cooling Information Color Reflery Recong and Cooling Information Color Report to the Corpers	347 285 348 422	the Potenth Catenties Ricer Power System. See Federal Power System on Federal Power Power See Federal Power Control of Power Control of Common Report Notice and Common Research Notice and Power Conference Power Read Report Power Power Power Power Report Power Power Power Report Power Power Power Report Power Power Power Report Power Power Power Power Report Power Power Power Report Power Report Power Power Report Power Power Report Power Report Power Power Report Power Report Power Power Report Pow	205 298 136 201 406	Annul Report on the Columbia Bretz Provent System Provent System Provent System Contention (Trainmong) Emperical Contention of Trainmong) Emports Allmonin of Trainmong Empirical States (Sept. 1997) Allmonton (Empire) Proposito Provention Province Proposito Province Proposition Province Proposition Province Proposition Province Proposition Province Proposition Province Proposition Proposition Province Proposition Province Proposition Province Proposition Province Proposition	015 238 165
Hearing CH  Mode Chailine Price Measurons Sys- tems  Messaly Petroleum Stansons Report  Refluery Chair Passinous Stanson  Messaly Petroleum Stanson  Messale State Henong and Coulong Sys-  Hearing System  Notices State Henong and Coulong Sys-  Internation County  Healine  Profession State State  For Companies Matters Con-  tated in the History Act  History Processes  History Processes	347 285 348 422	the Peters Catesia Siter Peter Spring Sites of Peters Sites	205 298 136 201 406	Annual Report on the Columbia Beet Proved System Proved System Proved System States of Columbia Bandal Sandal Bandal Ban	015 238 145
Hearing DB Mode Dullier Price Measuring Systems Provides Summed Systems Report Referrer Case Provides Summed Systems Report Referrer Case Provides Summed Systems Notices Soft Message and Challong Information Control Systems Software Control in the West Congress in Marine Control in Marine Control in the West Congress in Marine Control in the West Congress in Marine Control in the Marine Control in	347 285 348 422	on Peters Catenia Sice Poet from Sice Poet Poet Poet Poet Poet Poet Poet Poe	205 298 156 201 406	Annul Report on the Columbia Bretz Proven System .  Impart Quelea .  Impart .  Allossons of Unesions Enrichment Services to Very Enrich and Development .  Allossons of Unesions Enrichment Services to Very Enrichment .  Annual .  Annua	015 238 165
Heading GB Males Price Measuring Sprease Price Manufacture States Report Receiver Cent Paralleling States Report Receiver Cent Paralleling States Report Receiver Cent Paralleling States Received States Received States Acc	347 285 348 422	on Petert Coinnis liver Poet Profitting to Felect Domi Coal & Remard by Moderline Coal & Remard by Moderline Repair of Coal & Coal Remard Repair of Coal & Coal Remard Repair of Coal & Coal Remard Repair of Coal & Coal & Remard Repair of Remard	205 298 136 201 406 161 239	Annul Report on the Columbia Bretz Proven System.  Impart Guette Energy Conservation (Transcopy) Energy Conservation (Transcopy) Energy Conservation (English Energy English Development of Development of Development of Development of English Engli	015 238 165
Needing GB Made Outlike Price Measuring Spiral Made Outlike Price Measuring Spiral Medical Price Measuring Spiral Medical Price Measuring Price Measuring Price Measuring Spiral	347 285 348 422	on Peters Calonius Sizer Poets Peter Toulisms on Peters Distance Cast de Ensement Syndrodius Regions of Clean Carone Sizer Regions of Clean Carone Sizer Sizer Sizer Regions of Clean Carone Sizer Sizer Regions of Clean Carone Regions Sizer Regions of Clean Carone Regions Sizer Regions of Clean Carone Regions Sizer Regions S	205 298 156 201 406	Annual Expert on the Calinshia Rever Prove System  Indigent Calabra  Ready Calabra  Allowing The Calabra  And	015 238 165 166
Heading GB Males Price Measuring Sprease Price Manufacture States Report Receiver Cent Paralleling States Report Receiver Cent Paralleling States Report Receiver Cent Paralleling States Received States Received States Acc	347 285 348 422	on Petert Coinnis liver Poet Profitting to Felect Domi Coal & Remard by Moderline Coal & Remard by Moderline Repair of Coal & Coal Remard Repair of Coal & Coal Remard Repair of Coal & Coal Remard Repair of Coal & Coal & Remard Repair of Remard	205 298 136 201 406 161 239	Annul Report on the Columbia Bretz Proven System.  Impart Guette Energy Conservation (Transcopy) Energy Conservation (Transcopy) Energy Conservation (English Energy English Development of Development of Development of Development of English Engli	015 238 165 166
Heating OB  Made Dutilise Print Meanming Spe- Made Dutilise Print Meanming Spe- Made Provinces Extension Report Reflerey Cost Passionage  Heating Systems Norder Med Heating and Chilling In- mental Cost of Mean Special Printers  Printers Mean Special Printers  Printers Medical Printers  And Special Printers  A	347 283 348 422 200 268	on Peters Calvine Ster Peer Peer Peer Steril	205 298 136 201 406 161 339 333 336	Annual Expert on the Calimbias Ever Prove System  Impact Qualett  Energy Conservation (Transacy)  Impact  Impa	238 165 166 129 035 237
Heating OB  Made Dutilise Print Meanming Spe- Made Dutilise Print Meanming Spe- Made Provinces Extension Report Reflerey Cost Passionage  Heating Systems Norder Med Heating and Chilling In- mental Cost of Mean Special Printers  Printers Mean Special Printers  Printers Medical Printers  And Special Printers  A	347 283 348 422 222 223 248	on Peters Calonia liber Poet Poeter Salamin on Peters Desire Coul for Executed by Modelmin Coul for Executed by Modelmin Report Octor of Course Eventure in Vogermanne Waste Performance Course Viging Propo- report Octor Viging Propo- report Octor Viging Propo- report Octor Viging Propo- Proport Poet File Proport Proport Poet Viging Proport Octor Viging Proport Octor Proport Proport Proport Octor Proport	205 298 136 201 406 161 339 333 336	Annual Spares as the Calendas Bore poor Spaine Imper Calendar (Termeny) Barger Camerovian (Termeny) Barger Camerovian (Termeny) Administration of Designation Spainess (Termeny) March Marcher (Spring) March March (Spring) March March (Spring) March March (Spring) March (Termeny) Administration of March (Spring) March (Termeny) Administration of March (Spring) March (Termeny) March (Termeny) Marc	015 238 165 166 129 055 237 169
Heating OI Males Print Meanturing Speak Marke Drailles Print Meanturing Speak Markely Provinces Statement Report Referrer Carl Practicogals Printed Speak Markely Speak Ma	347 283 348 422 222 223 248	on Peters Calonian State Poets Poets Touchains on Peters Designed Poets Touchains on Peters Designed Technic and Catanian (Special Record Clinic Clini	205 298 156 201 406 161 239 233 336 132	Annual Report on the Calinable Retrieved Spinson beinger Gasterweiter (Tenneug) langer Gasterweiter (Tenneug) langer Gasterweiter (Tenneug) langer Gasterweiter (Tenneug) langer (Tenneug)	238 165 166 129 035 237
Heating GB Unities Price Measuring Systems (March College Price Measuring Systems (March Perice Measuring Measuring Measuring Measuring Measuring Measuring Perice)  Heating Territors	347 283 348 422 222 223 248	on Peters Calonian Since Poses for Poster Scholman Felder Disman- Casis for Entersand by Modernian Felder Disman- Casis for Entersand by Modernian Felder Disman- Since State of Carlon Structures in Nongeneration Worts  Physical Casis for Wide Proposition  Free State Of Poster State  Free State Of Poster  Fr	205 298 156 201 406 161 239 233 336 132	Annual Enger et des Glandes Borr Petro Spaine Benger Gattereiten (Transengi) Enger Gattereiten (Transengi) Enger Gattereiten (Transengi) Happen Albertein Glandes (Transengi) Happen Albertein Enger (Transen ) Albertein Enger (Transen ) Andrew (T	015 238 165 166 129 055 237 169
Heating OI Males Print Meanturing Speak Marke Drailles Print Meanturing Speak Markely Provinces Statement Report Referrer Carl Practicogals Printed Speak Markely Speak Ma	347 283 348 422 222 223 248	on Peters Calonian State Poets Poets Touchains on Peters Designed Poets Touchains on Peters Designed Technic and Catanian (Special Record Clinic Clini	205 298 156 201 406 161 239 233 336 132	Annual Report on the Calinable Retrieved Spinson beinger Gasterweiter (Tenneug) langer Gasterweiter (Tenneug) langer Gasterweiter (Tenneug) langer Gasterweiter (Tenneug) langer (Tenneug)	015 238 165 166 129 055 237 169

Energy Digest SEPTEMBER 1977

Subject Index Industry

Issues Related to Portugo Sources of Oil for the United States (Espan) Mandatory Oil Imperts Project (MOIF) Nesocrel Bergy Policy: An Agenda for Analysis (Espan)	235 353 191	Indian Lenda Administration of Regulations for Sur- fee Esploration, Musing, and Recta- nation of Public and Indian Coal Lands (Report) Department of the Interior's Views of	093	Badgeting of Federal Financial Incen- tress for Energy Davologeneth (Pa- tance).  Comments on Proposed Legalston to Change Bails for Government Charge for Unissum Escalances Services	150
Natural Gas Company Operating Infor- mation File  Natural Gas Shoringe The Role of Im- ported Licarded Natural Gas (Report)	413	Commants on Administration of Regulations for Sufface Exploration, Mining, and Reclamation of Public and Indian Coal Lauds (Report)	095	(Report) Communis on the Administration's Proposed Synthetic Facts Commun- culiantee Program (Report)	140
A Summary of European Views on De-	241	Indian Natural Resources-Part II Coal, Od, and Gus-Better Manage-		Department of Commerce's "SavEn- ergy Citations" (Report)	024
pandoncy of the Pose World on Mid- die East Oil (Report)	224	nen Can Improve Development and Increase Income and Employment (Report)	125	Domestic Crude Oil Pricing Policy and Rejated Production (Report)	112
Transfer Pricing System Trends in Refinery Capacity and Utilization of Petroleum Refinedes in the United States and Percupa Refinery	351	Royalty Accounting System Study of Solid Mineral Lessing Activities	254	The Economic and Environmental Im- pact of Natural Gos Custalments dur- ing the Waster of 1975-76 (Report) The Economic and Environmental Im-	062
Exporting Centers Which Alternative for Energy Policy? (Speech)	360	Indian Reservotions . Dit and Gaz Leaving on Federal Leads (Report)	210	pact of Natural Gas Curtellmonts During the Winter of 1975-76 (Ten- tionage) Effects of a Change in Size Standard for	063
Incentives		Provisions of Navejo and Hopi Coal Losses (Report)	207	Smell Business Petroleum Refiners (Report)	149
Budgeting of Federal Francish Incon- tives for Beergy Development (Tec- mony)  Developing and Commercializing En-	150	Indian Rights Indian Natural Resources-Pert II: Coat, Ori, and Gas-Sector Manage-		An Evaluation of Proposed Federal As- sitiones for Financing Commercial- zation of firregain Energy Technologies (Report) An Evaluation of Proposed Federal As-	151
orgy Technology (Technology)  Doweloging and Commercializing En- orgy Technology (Technology)  Energy, the Economy and the Sudget	145	ment Cas Improve Development and forcesso Income and Employment (Report)	225	sutance for Financing Commercial- zation of Emerging Rorrgy Technologies (Technology Fodged Coal Rosraech-Status and	152
(Speech) Using Solid Waste to Conserve Re-	169	Indians (American)		Problems to Be Resolved (Report) Follond Energy Administration Efforts	080
sources and to Crosse Energy (Report)	013	Provisions of Navayo and Hopi Cost Losses (Report)	207	to Audii Parl Oil Supplies of Major Unlity Companies (Project Utility) (Report)	126
facome Sedion Natural Resources-Part 11.		Industrial Energy Conservation Program		The Federal Income Taxes of Class A and B Electric Utilities (Report)	185
Cost, Os, and Gas-Bener Managa- ment Cos limprove Development and Increase Income and Employment		Industrial Energy Efficiency Program	296	Gelf Oil Corporation's "Double Dip- ping" on Crade Oil Product Costs (Report)	138
(Report)	125	Industrial Multipliers Regional Industrial Multiplier System		Implications of Deregulating the Price of Natural Gas (Report) The Implications of Deregulating the	125
income Distribution FEA Household Energy Expenditure		(RIMS)	392	Price of Natural Gas (Teatimery) Industrial Energy Efficiency Program	134
Model (HEEM) Income Distribution Impact Model	393 390	Industrial Procurement		Information on Certain Oil and Gas In-	296
		Management of and Plans for the Naval Potentieum Reserves (Report)	227	dustry Oversight Responsibilities (Re- part)	105
Income Yex The Federal Income Taxes of Class A		Industrial Wastes		Issues Related to Foreign Sources of Oli for the United States (Report)	235
and B Electric Utilities (Report)	185	Plane Model Problems Caused by Coal Missing Noor	362	Manpower Needs of the Nuclear Power Industry (Report)  Need for Improving the Regulation of	658
Indemnity Agreement between the Secretary of the Interior and Officials of the State		Pederal Reservair Projects (Report)	075	the Natural Gas Industry and Man- agement of Internal Operations (Re- port)	113
of Utah Perisining to Osl Shale Lesses (Letter)	209	Industry Actors Taken by the Federal Power Construction on Prior Resemmenda- tors Conserring Regulation of the Natural Gas Industry and Manage-		Need for the Pedenti Power Comms- tion to Evaluate the Effectiveness of the Natural Gas Curtillment Policy (Report) Ontlook for Federal Goals to Acceler-	120
Further Comments on Atomic Horryy Commission's Proposed Arrange- ment for the United Monel Past		ment of Internal Operations (Report) Alternative Energy Proposits (Tes- tionom)	147	sie Lessing of Oil and Gas Resources on the Dater Conference Shelf (Re- port)	214
Brooker Reacter Demonstration Pro- ject (Report)  Proposed Changes to the Atomic En- erty Commission's Armagement for	<b>C33</b>	Alternative Energy Proposals Deve- loped by the General Accounting Of- fice in Response to Congressional Inquiries Proposals and Supporting		Problems in Regulating Natural Das Prices by the Federal Energy Ad- missatistics (Report) Problems in the Federal Energy Office's	139
Carrying Out the Liquid Metal Past Breeder Resctor Demosstration Pro- ject (Report)	032	Analyses (Testimony)  Abstractive Pacts for Aviation (H.R. 12112) (Testimony)	166	Implementation of Emergency Pe- troleum Alloration Programs at Re- gional and State Levels (Report)	106
Energy Digest SEPTEMBER 1977					139

Industry Subject Index

Progress and Problems in Geneloping		The Changing Role of the General Ac-		A Bill to Establish a National Energy Information System (Testamony)	158
Nuclear and Other Experimental Techniques for Recovering Natural		counting Office in Energy Informa- tion and Data Programs (Speech)	186	Comments on the Energy Information	
Gas it the Rocky Mountain Area (Re-	627	Energy Data Collection in the Federal Government (Testwood)	197	Act (Letter)	170
port) Price oved Reviseons to the Crosms and	Q//	Insequements Still Needed in Peteral	137	The Energy Information Act, S. 1864 (Testimony)	176
Councis for Uranum Emphretal Services (Report)	097	Energy Data Collection, Analysis, and Reporting (Report)	152	Improvements Still Needed in Federal Energy Cats Collection, Analysis,	169
Recorpt and Coordination of Natural Gue Record Data (Report)	678	Issues in Leasing the Atlantic Owner Connected Shelf (Testings)	213	and Reporting (Report)  Review of the Information-Gathering	182
Rosable Casseaux Sales Date Needed to: Property Assesses of Natural		Namoual Ocean Policy Study (Tel-	212	Practices of the Federal Reergy Ad- ministration (Report)	180
Cr. That Could Be Deregulated /Re-		Review of the Information-Gathering			
port/ Resum of Complaints Cascotting the	172	Practices of the Federal Energy Ad- miestration (Report)	150	Inspection	
Mandatory Petroleum Allocation Program and the Regulation of Po- stoleum Pricing (Report)	102	Information Processing		Polloway on Certain Monters Concern- ing the Inspection and Regulation of Outer Continental Shell Oil Opera-	
Statistical Data on Petroleum and Pe-		The Changing Role of the General Ad-		tions (Report) The Geological Survey's Inndensate	208
troleun Products (Report)	079	counting Office in Energy Informa- tion and Data Programs (Speeck)	186	Action on Recommendations Con-	
France-Airska Oil Papelson-Progress of Convitation through November 1975 (Report)	084	Proposed Energy Inventory Act of 1974 (Letter)	160	earning Inspection and Regulation of Quier Continental Shelf Oil Opera- tions (Report)	222
				Improved Inspection and Regulation Could Reduce the Pessibility of Oil-	
Infletion		Information Services Center for Energy Studies (CES)	443	spulls on the Outer Continental Shelf	100
The Effects of Oil Price Increases on Small Business Contracts (Report)	122	Comments on the Energy Information Act (Latin)	120	(Report) Improvements Needed in the Program	100
		Energy Abstracts for Policy Assists		for the Protection of Special Nuclear Meterial (Report)	034
Information Centers Criticality Data Center	445	(EAPA) Energy Research, Development, and	441	Opportunities for Improvements in Re- cisiming Strip-Mined Londs under	
Environmental Information Analysis		Demonstration levertory  Environmental Information Analysis	447	Coal Purchase Contracts (Report)	092
Conter (RIAC) Environmental Resource Conter	448	Center (EIAC)	448	The Reacter Inspection Program of the Atomic Energy Commission (Report)	
(ERC)	449	Environmental Resource Course (ERC)	449	Reports of the Review Committee on	931
National Energy Information Center (NEIC)	367	ERDA Energy Research Abstracts (ERA)	431	Safety of Outer Continental Shelf Po- trology Operations to the United	
National Natural Resources Library and Juformanco Systems		ERDA Hendquarters Technical Li-	413	States Geological Survey  Role of the Incorpational Atomic Ro-	251
(NNBLIS) National Solar Heating and Cooling in-	239	Pedeval Energy Information Locator		ergy Agency in Safeguarding Nuclear	
formation Center	422	System (PEILS) Foreil Esergy Update	366	Material (Report) Shockeepings in the Systems Used to	240
Technical Information Center (TIC)	459	FPC Library	410	Control and Protect Highly Danger- ous Nuclear Material (Report)	062
		Information Center for Energy Safety (ICES)	433	op react mixtue (ages)	-
Information Discomination According of Spier Energy Coordination		Logid Motel Fast Brooder Reactor Fuel-Cladding Information Center		Insulation	
and Management Propest The Energy Information Act, S 1864	302	(LMFBR)	450	Analysis of the Energy, Economic, and Budgetary Impacts of 11.R. 6860	
(Tennesony)	176	National Geothermal Information Re- source (GR1D)	451	(Stoff study) Energy Conservation (Tenmony)	129 015
National Program for Solar Heating and Cooling	308	National Program for Solar Heating and Cooling	308	FEA Household Energy Survey	384
Dater Contracted Shelf Oil and Gas Development Improvements Needed		Review of the Information-Gethering		Project Conserve Ways in Wirch Department of Housing	344
in Determining Where to Lease and at		Practices of the Federal Energy Ad- ministration (Report)	180	and Urben Development Can Pre-	
What Gallar Value (Report) Proposed Energy Investory Act of	235	Special Reports Issued by the FPC and Potenti Fower Consellation Publica-		mote Energy Conservation (Report)	003
1974 (Lester)	160	tions	411	Insurance	
		Technical Books and Monographs Technical Information Contex (TIC)	409	Selected Aspects of Nuclear Power-	
Information Exchange International Cooperation in Energy Research and Development (Ten-			427	plant Reliability and Beanomics (Re- port)	050
Almony)	245	Information Starage and Ratrieval Improvements Still Needed in Pedent		Interagency Agreements	
Technical Information Ceaser (TIC)	429	Energy Data Collection, Analysis, and Reporting (Report)	162	Information on Certain Oil and Gas In-	
Information Needs		RECON (REmote CONsole)	440	dustry Oversight Responsibilities (Re- port)	105
Actions Needed to Improve Pederal BF-					
forts in Collecting, Analysing, and Reporting Energy Data (Report)	159	Information Systems		Interogency Cooperation	
A Bill to Establish a National Energy	152	Actions Needed to Improve Pederal Ef- forts in Collecting, Analyzing, and		Access of the Pederal Power Commis- sion to Suress of Reclamation Re-	
Information System (Teatmong)	156	Reporting Energy Data (Report)	159	cords to Insues Compliance with the	

Energy Digest SEPTEMBER 1977

Subject Index Investments

Pedent Power Act (Letter)	163	The Purchase of Short-Supply, Energy-		International Trade	
A Will to Establish a National Energy		Related Itoms through the Export-		The Experiment of Coal (Report)	244
Information System (Testimony) Efforts to Encourage Conservation in	128	Import Bank of the United States (Report)	236	Minorals Information System (MINFO)	322
the Prevate Sector (Report)  Energy Data Collection in the Federal	009	Ralo of the International Atomic En- ergy Agency is Safeguarding Nuclear Material (Aspert)	242	The Furchase of Short-Supply, Energy- Related Herm through the Export-	
Germment (Testmony) The Beersy Information Act, S 1864	157	Role of the International Atomic En-	***	Import Bank of the United States (Report)	236
(Tentenary)	176	ergy Agency in Safeguarding Nuclear Material (Termina)	242	Submission of USSR Energy-Related Transactions for Congressional Re-	
GAO's Energy Role (Speech) [gggrovements Still Needed in Federal	177	A Senerary of European Views on De-		VIEW	280
Energy Data Collection, Analysis, and Reporting (Report)	182	pendenty of the Fire World on Mid- die East Cel (Report)	224	A Summary of European Views on De- pendency of the Free World on Mid-	
Poor Management of a Nuclear Light		U.S. Fasseal Assettance in the Deve- lopment of Foreign Nuclear Energy		die East Oil (Report)	234
Water Reactor Safety Project (Report)	063	Programs (Report)	229		
Problems in Lecensing Hydroclectric	122	U.S. International Nuclear Safeguards Rights Are They Bring Effectively		Intersteta Commerce Natural Gas Regulations System (Pro-	
Proposed Changes to the Atomic En-	122	Exercised? (Unclassified Digest) (Re-		dance Rene) Natural Gas Regulation System (Pro-	414
ergy Commission's Arrangement for Carrying Out the Liquid Metal Fast		port/ U.S. Nuclear Non-Profiferation Palicy	243	dater Certificate)	415
Breeder Reactor Demonstration Pro-		(Report)	248		
Ject (Report)  Receipt and Coordination of Natural	032			Interstate Compacts Effect and Operation of Instantiac Com-	
Gas Reserve Dats (Report)	870	International Cooperation in Science Activities of Solar Energy Coordination		Effect and Operation of listeration Com- pacts Relating to Natural Gas	297
Review of Schooled Federal and Private Solar Energy Assertance (Report)	197	and Management Project	302		
Review of the Information-Gathering Practices of the Pederal Esergy Ad-		Proposed Agreements for Cooperation with Other Nations on Atomic En-		Interstate Gas Sales Actions Taken by the Pederal Power	
ministration (Report)	180	ergy	334	Commission on Prior Recommenda-	
		Proposed Distribution of Special Nu- clear Materials	900	sons Concerning Regulation of the Natural Cax Industry and Manage-	
Interest Financial Report on the Geothermal				esent of leternal Operations (Report) Need for Improving the Regulation of	1.0
Resources Development Fund	309	International Economic Relations		the Natural Gas Industry and Man-	
Purther Comments on Atomic Energy Communica's Proposed Arranga-		Economic Inglicanees of Current World Oil Prices (Staff study)	237	agentest of Internal Operations (Re-	113
ment for the Liquid Metal Fast Breeder Reactor Comenstration Pro-		A Summery of European Victor on De-			
jest (Report)	660	pendency of the Free World on Mid- die East Oil (Report)	234	Interstate Relations	
Repsyment Requirements of the Fed- eral Investment in the Tennessee Val-		U.S. Passonal Assistance in the Core- lepment of Porcign Nuclear Energy		The Creatal Zone Management Pro- gram An Uncomma Pattern (Report)	127
ley Authority's Electric Power System (Report)	099	Frograms (Report)	239	-	
System (Address	0,,			Inventories	
International Agencies		International Energy Program Review of Volumerry Agreement and		Bulk Fuels Need To Be Better Managed (Report)	014
Assessment of United States and Inter- national Controls over the Peaceful		Plan of Action To Implement the In-		Crude Oil Enrithements (Equalita-	353
Uses of Nuclear Energy (Report)	20	ternational Energy Program	276	Dolling Equipment Production Sur-	
Role of the International Atomic En- ergy Agency in Safeguarding Nuclear		International Organizations		vey	359
Material (Testmony)	242	U.S. International Nuclear Safeguards		Energy Research, Development, and Demonstration Inventory	40
		Rights. Are They Being Effectively Recroised? (Unclassified Digest) (Ar-		Nuclear Material Management Plan Propanc/Batane Allocation System	426
International Banking Submission of U.S.S.R. Energy-Rotated		parti	243	Proposed Energy Inventory Act of	
Transactions for Congressional Re- view	160			1974 (Leave) Shortcomings in the Systems Used to	160
***	200	International Relations Affacition of Uranium Enrichment Scr-		Control and Protect Highly Danger-	045
International Cooperation		vices to Puel Foreign and Ocmestic Nuclear Researce (Report)	228	ous Neclear Material (Report)	063
Assessment of United States and Inter- national Controls over the Peaceful		Issues Related to Poreign Sources of Oil		Inventory Management	
Uses of Nuclear Energy (Report)	2.0	for the United States (Report)	235	Bulk Fuels Need To Be Better Managed	014
Can the U.S. Breeder Resour Develop- ment Program By Accelerated by Us- ing Foreign Technology? (Report)	245	Review of Voluntary Agreement and Plus of Action To Implement the In- ternational Energy Program	274	(Report)	014
international Concernion in Burray		Role of the International Atomic Ba-		Investments	
Research and Development (Ter-	246	ergy Agency in Safaguarding Nuclear Material (Report)	240	California's Central Valley Project- -Proposed Fewer Rate Increase (Re-	
The Liquid Metal Fast Breader Reactor		U.S. Pinancial Assistance in the Deve- logment of Porcian Nuclear Energy		part)  Economic Implications of Correct	156
Program-Past, Present, and Patters (Report)	045	Programs (Report)	239	World Oil Prices (Stoff study)	237
Energy Digest SEPTEMBER 1977	,				141

Energy Digest SEPTEMBER 1977

					ii iiwaa
Insues Related to Foreum Sources of Oil				Department of the Interior's Views of	
for the United States (Report)  for the United States (Report)  Reports Requirements of the Pad-  tral inventor on in the Tourissee Val-	235	Stripmening and Land Reclamation In- formation System	435	Organisment of the Interior's views of Comments on Administration of Regulations for Surface Exploration, Mining, and Reclamation of Public	
ley Authority's Electric Power System (Report)	099	Land Transfers Outer Continental Shelf Post-Sale Sys-		and Indian Coal Lands (Report)  Fedoral Coal-Leasure Program of the	095
Irae		tem	331	Department of the Intense (Report) Followup on Certain Matters Consern-	221
Allocation of Unessen Euroberon Ser- vices to Fuel Foreign and Onnesto		Land Use Administration of Regulations for Sur-		ing the Inspection and Regulation of Outer Continental Shelf Oil Opera- tions (Report)	204
Nuclear Reservoirs (Report)	233	face Exploration, Minuag, and Reela- mation of Public and Indian Cost	093	Followup Review of the Naval Po- troleum Reserves (Report)	209
Israel Allocation of Urusum Especiment Ser-		Lands (Report)  Agreement between the Societary of the Interior and Officials of the State	093	Improved Inspection and Regulation Could Reduce the Possibility of Oil-	
vices to Fast Foreign and Demestic Nuclear Resents (Expert)	233	of Utah Perturing to Oil Shale Leases (Leaser)	209	spills on the Outer Continuinal Shelf (Report)  Lenie Management System	100
Jeron		Geologie Surveys, Investigations, and Research Program	327	Leading of Minorals on Public Leads (Report)	211
Con the U.S. Brooder Reactor Develop- ment Program Se Accelerated by Us-		Improved Policies and Procedures for the Exploration and Deselopment of Ostor Communical Shelf Resources (Terminant)	232	Oil and Gas Leasing on Federal Lands (Report)	210
ing Pareign Technology? (Report) International Cooperation in Energy Research and Development (Tex-	245	Indian Nesseal Resources-Part II- Cost, Oil, and Gas-diester Message- ment Can Interpret Development and		Owner Continoutal Shelf Oil and Gas Development Improvements Needed in Determining Wittre to Loase and at	
Amony)	246	Increase Income and Employment (Report)	225	What Dollar Value (Report) Outer Continental Shalf Post-Sale Sys-	218
Jet Fuel Cost and Fnoing System	374	Mineral Land Assessment Problems Caused by Coal Mening Near Federal Reservoir Projects (Tar-	321	tore Provisions of Navajo and Hopi Coal Leases (Report)	331
OliCD Energy Demand Model Refinery Cost Passinguigh	266 248	Amony)  Role of Federal Coal Resources in	076	Refunds on Outer Continental Shelf Leases	269
Regional Econometric Demand Model and Auto Simulation Model (RD4)	165	Mosting Energy Goals Noods to be Determined and the Leasing Process Improved (Report)	226	Role of Pederal Cost Reseasons in Moeting Beergy Goals Needs to be Determined and the Lausing Process	
Subpart L	369	Trans-Alaska Oil PipelinaPrograss of Construction through November 1975 (Report)	004	Improved (Report)	226
Kintucky		····· cgang	- Comman	Leases (Mineral)	
Problems Caused by Coal Mixing Near Federal Reservoir Projects (Report)	075	Loser Fusion Efforts to Osvelop Two Nuclear Con- cepts That Could Greatly Improve		Conservation Division Task Force Re- pers on the Ombree Lesse Manage- ment Program Study for the U.S. Goological Survey	249
Kerosene Cost and Pricing System	374	This Country's Fasure Energy Sites- tion (Report)	041	Onehore Lesse Management Program Study for the U.S. Goological Survey	149
Subpart I.	369			Royalty Accounting System Study of	250
Lober Supply Mespower Needs of the Nuclear Power		Letin America Issues Related to Foreign Sources of Oil for the United States (Report)	235	Solid Mineral Lessing Activities	254
Industry (Aspert)	039	Leese Management		Leases (Natural Gas) Review of Royalty Accounting System for Onshere Oil and Gas Leases	193
ond Land and Misseril Conservation Infor-		Onshore Lease Management Program Study for the U.S. Occlopiosi Survey			250
mation System	334		250	Lenses (Petrolaum) Review of Royalty Accounting System for Onshore Oil and Gas Losses	253
Administration Administration of Regulations for Sur- tice Explosures, Missag, and Recta-		Accelerated Outer Continental Shelf Development (Textinents)		Leasing	
matten of Pubble and Indian Coal Lands (Report) Department of the Interior's Proce-	092	Administration of Regulations for Sur- face Exploration, Mixing, and Reals-	216	Accelerated Outer Continuatal Shelf Dovelopment (Teatleney)	216
dates for Approxing Coal Mining Plans (Report)	228	tration of Public and Indian Coal Lands (Report)  Agreement between the Secretary of	093	Accelerated Outer Continental Shelf Development (Tealmany) Development of Federal Coal Re-	219
Oepartment of the Intersor's Views of Comments on Administration of Regularions for Surface Espioration,		the Interior and Officials of the State of Utah Pertaining to Oil Shole Leases (Leave)	200	Development of the Outer Continuents	223
Mining, and Reclamation of Public and Indian Coal Lunds (Report)	095	Cont Lease Data System	129	Shelf Possil Parl Resources (Ten- accomp)	215
Opportunities for Improvements in Re- elelening Strip-Mined Lands under		Department of the Inserior Study of Shut-In Oil and Oas Well Comple-		Further Action Needed on Recommen- dations for Improving the Adminis-	
Coal Purchase Contracta (Report)	001	tions and LeasesGAO Observations (Report)	224	tration of Federal Coal-Leasing Program (Report)	

Subject Index Liquefiad Petroloum Gos Beergy Conservation Flanneing (Terstoney/ Energy Data Collection in the Federal

143

177

GAO's Beergy Role (Speech)

Energy Digest SEPTEMBER 1977

GAO's Beergy Role (Speech)	177	Beergy Conservation Financing (Ten-	027	Effect and Operation of Interstate Com-	
Improved Policies and Procedures for the Exploration and Development of Outer		Energy Data Collection in the Federal		pacts Relating to Natural Gas Natural Gas Regulation System (Pre-	297
Continental Shelf Revenues (Testimon) Issues in Lentina the Atlantic Outer	232	Government (Tenneny) The Energy Information Acs, S. 1864	157	decer Certificate)	415
Continental Shell (Terturary)	213	(Testimony)  Energy Research and Development	176	Natural Gas Regulation Systems (Pipe- ine Certificate)	417
Outer Commental Shelf Sale #35- Problems Selecting and Evaluating Land to Lone (Report)	231	Advantage and Development Advantage of the Contingency Plan for More Burichtees Capacity at Forumouth, OH (Report)	COS	Problem Areas which Could Affect the Development Soledule for the Clinch River Esseder Rescoor (Stoff south)	nan
Outlook for Federal Coals to Acceler- ate Leasing of Oil and Gas Resources on the Outer Continental Shelf (Re-		An Evaluation of Proposed Pederal As- teatance for Financing Commercials	****	Problems in Licensing Hydraelectric Projects (Report)	132
pert)	214	zation of Emerging Energy Technologies (Report)	153	Proposed Changes to the Atomic En-	104
Problems in Identifying, Developing, and Using Geothermal Resources (Report) Resistant Exploration and Openiopment	199	An Evaluation of Proposed Pederal As- sistence for Financing Commercial- zation of Emerging Energy		ergy Commission's Arrangement for Carrying Out the Liquid Metal Plat Bronder Keasser Demonstration Pro- ject (Report)	652
of Oster Continental Shelf Resources (Testimony)	220	Technologies (Testimony)  Evaluation of the Admirestration's  Proposal for Government Assistance to Provide Usasing Resichment	152	Reducing Nuclear Powerplant Load- tines Many Obstocles Remain (Re- port)	069
Legislation		Groups (Report)  Meanong infrastructure in Energy	134	Security Systems at Commorcial Nu-	
Actions Taken by the Federal Power Communes on Prior Recommends-		Davelopment Aress of the Western		alear Powerplants (Report) Setteovah Norlear Plant (Staff mode)	039
tions Concerning Regulation of the		States (Speech) Future Energy Doznand (Speech)	175	Status of Pending Hydroelectric Ap-	-
Natural Gas Industry and Manage- ment of Internal Operations (Report)	147	GAO's Energy Role (Speech)	177	phostiens	410
Alternative Beergy Proposals (Ter-		Menagement of and Place for the Naval Petroleum Reserves (Report)	227		
Attentione Fuels for Avistics (H.R.	165	National Standards Needed for Res-	20	Licensing Protecting Special Neclear Material in	
12112) (Tentennyi Amendment of the Federal Energy Ad-	154	dential Energy Conservation (Report)	019	Transit: Improvements Made and Ex- isting Problems (Report)	605
ministration Act of 1974 and the Es- tension of its Espiration Date (Letter)	173	Opportunities for Improvements in Re- claiming Step-Mised Lands under Coal Pumbase Contracts (Report)	992		
Analysis of the Energy, Economic, and Budgettry Impacts of H.R. 6860 (Stoff study)	129	Procurement of Foreign and Comestic Petroleum by Department of Defense		Licensing Regulations Foor Management of a Nuclear Light	
Annual Report on the Columbia River Power System	275	(Report) Proposed Energy Investory Act of	091	Water Reactor Safety Project (Report)	063
A Bill to Establish a National Energy		1974 (Lexer) Using Solid Wants to Conserve Re-	160		
Information System (Texturous)  A Bill to Extend the Federal Energy	158	sources and to Cresto Energy (Report)	013	Energy Efficiency Ratios of Window	
Administration Act of 1974 (Tea- timony)	179		010	Air-Conditioners (Report)	003
Budgeting of Poderal Financial Incen- tives for Energy Development (Tes-		Librarius BROA Headquarters Technical Li-		Lighting	
ilmanji	150	brary	423	Exercy Conservation in Federal Office	
Comments on Energy Research and Development Administration's		FPC Library Library of Recouced Beetric Power Contracts	418	Buildings in Californis (Report)	002
Proposed Arrangement for the Clinch River Breeder Reactor Demonstra-		National Geothermal Information Re-	334	Light Water Reactor	
tion Plant Project (Report)	044	source (GRID)	451	Poor Management of a Nuclear Light	
Comments on H.R. 11212, 93rd Con- gross, a Bill to Further Research, De-		National Natural Resources Library and Information Systems		Water Resesor Safety Project (Report)	043
velopment, and Commercial Demonstrations in Goothernal En-		(NNRLIS)	319	This Country's Most Expensive Light Water Resetor Sefery Text Pacifity	
ergy (Lever)  Comments on Proposed Legislating to	196	Licanse Agresments		(Report)	059
Change Basis for Government Charge for Urasian Enrichment Services (Resert)	131	Considerations for Commercializing the Liquid Metal Fast Breeder Reac- tor (Report)	066	Lignite	
Comments on the Energy Information Act (Letter)	120			Coal Data Base	373
Construction Division Task Porce Re-	170	Licantee Responsibilities Improvements Needed in the Program			
port on the Ombore Lease Manage- ment Program Study for the U.S. Geological Survey	249	for the Protestion of Special Nuclear Material (Report)	034	Liquetised Natural Gas Information on the Proposed Alsaka Oil Pipeline (Report)	074
Developing and Commercializing En- ergy Technology (Tentestry)	142	Licentes		Natural Gas Shorange: The Role of Im- ported Liquefied Natural Gas (Report)	
Developing and Commercializing En- ergy Technology (Testimony)	146	Analysis of the Energy, Economia, and Sudgetary Impacts of H.R. 6860 (Stoff mode)	129	Parent and across services (sections)	241
Energy Conservation as Government Field Installations' Progress and		Development of Interagency Relation- ships in the Regulation of Nuclear		Liggafied Petroleum Gas	
Problems (Report)	028	Materials and Pacifities (Report)	055	Cost and Pricing System	374

Liquid Matel Feat Breader Reactors Liquid Moné Past Breeder Reactor Fuel-Cladeing Information Center (LMFBR)	450	Monogement Systems The Liquid Metal Fest Breeder Reactor Program-Plast, Present, and Future (Record)	045	pact of Natural Gur Curteslitteess dur- ing the Wisser of 1975-76 (Report) Pederal and State Solar Energy Re- search, Development, and Destey-	082
Liquid Mone Fast Breader Reactor Place Passmeter Information Sys-				stration Activities (Report)	200
tem	425	Macpower		Materials Management	
Literatura Reviews How Solar Energy Was Treated in the AEC Chapter's Report, "The Na-		Federal Energy Administration Efforts to Audit Fael Oil Supplies of Major Unitry Companies (Froject Utility) (Repen)	126	Review of the Progress and Problems of Resource Recovery Sesse the Passage of the Resource Recovery Act of 1970 (Pentanony)	016
ton's Energy Feture" (Report)	198	Renew of the Operations Dissum of the Federal Energy Aframateasten (Report)	11.5	Role of the International Atomic Eg- orgy Agency in Safeguarding Niolcur Muterial (Report)	240
Loon Guarantees Sudgrang of Federal Favoress Incom- nees for Energy Development (Ter-		Manpower Policy		Rote of the International Atomic En- ergy Agency in Safeguarding Nuclear Moterial (Zinthnony)	242
Energy Conservation Financias (Ter-	150	The Economic Impact of Energy Ac-	245	U.S. International Nuclear Safeguards	
(vecoup)	027	Maspower Needs of the Nuclear Power Industry (Report)	038	Rights. Are They Being Efficurely Exercised? (Unclassified Digest) (Re- port)	243
Loans Energy Conservation Financing (Tes-				Mathematical Madels	
Aments)* Property on the Geothermal	027	Manpower Training Programs  Manpower Needs of the Nuclear Power		Crude Oil and Natural Gas Production Model	309
Resources Development Fund Submission of U.S.S.R. Energy-Related	309	Industry (Report)	035	Crude Oil Pricing Model (DCROFS)	397
Transections for Congressional Re-	260	Manpower Utilization		Electrical Planscual Forcessing Model (888 Model, EUPINANCE)	377
		A Bill to Extend the Pederal Beergy Administration Act of 1974 (Tea-		FEA Crudo/Transportation Model	399
Location National Water Data Exchange (NAW- DEX)	325	treaty) The Federal Energy Administration's Progress in Reducting in Compli-	179	Fiscal Impact of Energy Price Changes on State and Local Government Per- chases of Goods and Services	395
		since and Enforcement Program (Re-	120	Income Distribution Impact Model	390
Magnetohydrodynamic Generalies Plans for Construction of a Magnetohy-		Manpower Needs of the Nacious Power	120	International Coal Supply Model International Col Supply Model	387 568
drodynamics Test Facility in Mon-		Industry (Report) Staffing of Federal Energy Administra-	038	National Cost Model (RMAC)	579
tint (Report)	086	use's Office of Communications and Public Alleira (Resert)	144	Natural Gas Distribution Model Natural Gas Shortage Model	419 382
Major Fuel Bureing lestaltations		Strategie Potroleura Reserves Program-		Neodiassesi Regional Growth and En-	
Major Part Scroung Installation-Early Planting Process Identification		Wide System (SPR)	363	ergy Price Model Oil and Gas Supply Model	389
(EPPE)	338			Plune Model	342
Major Feel Barning Installations (MFBE)	356	Monute Opportunities for More Effective Use of Animal Manute (Resent)	024	Reserves Allocation and Mine Cost Model (RAMC)	380
Management Evaluation				Severance Tax Model Short Term Petroleum Demand Fore-	396
Review of the Information-Gathering		Mops		custing Model	383
Practices of the Federal Energy Ad- ministration (Report)	189	Special Reports Issued by the FPC and Federal Power Commission Publica- tions	411	Site Distribution Model	354
Monogament information Systems				Metals Commodity Data Summanus and Min-	
Books eeping System	420	Marine Pollution		eral Estimates	266
Federal Efforts to Conterve Fuel in the Movement of Men and Materials (Re-		Recovery of Expenses from Cleanup and investigation of Oil Spills (Letter)		Minng and Minerals Policy	267
pon) Information-Guthering Activities of the Nuclear Regulatory Commission (Re-	604		107	Middle East Alloration of Ursaians Earlichment Ser-	
port) Officeal FPC Files and Records	188	Marketing Federal Hydenolectric Plants Can In-		vices to Fuel Foreign and Domestic Nuclear Resource (Report)	235
Research Information Management System (RIMS)	224	redeal Hydrodectric Flants Can In- cross Power Sales (Report) Market Shares System	201	issues Related to Foreign Sources of Oil for the United States (Report)	235
	-	Power Parter Requirements Imposed	370	A Summary of European Views on De- pendency of the Free World on Mid-	
Monogement Methods  Need for the Federal Power Commis- sion to insterve the Residation of the		by Federal Power-Marketing Agen- cies on their Customers (Letter)	204	die Bast Cill (Report)	234
Natural Gus Industry and Manage- sect of its Internal Operations (Tec- almany)	114	Moryland The Economic and Environmental Ita-		Miles Per Gellion Federal Billoris to Conserve Energy (Report)	010

Subject Index Natural Gos Problems Caused by Coal Musing Neur Federal Reservoir Properts (Ter-

Milliory The Department of Defense's Conser-		Problems Caused by Coal Muning Near Federal Reservoir Property (Tes-		Mentana Plans for Construction of a Magnetohy-	
varion of Petroleum (Report)	012	neery)	076	drodynamics Test Facility in Mon-	
Insprovements Needed in Controls and				tana (Report)	066
Accounting for Ground Vehicle Pe-					
troleum (Report)	018	Minerals Land and Mineral Conservation Infor-			
		East and Mineral Conservation Inter- mation System	226	Mater Vehicle Pallution Control Pederal Efforts to Interove the Feel	
Military Bases		Mineral Land Assessment	321	Economy of New Automobiles (Re-	
Recycling of Motorsals	260	Minerala Informațica System		part)	620
Solid Waste Management, Collection,		(MINFO)	322		
Disposal, Resource Recovery, Recy-	247	Mixing Research	323	Mater Vehicles	
aling Program	23/	Orl Shale/Baztacita Tela Clearance	330	Dual Fact Program (Report)	001
		Severance Tax Model	376	Pedoral Efforts to Conserve Find in the	
Military Swolles				Movement of Men and Materials (Re-	004
Bulk Fuels Noed To Be Better Managed		Mines		porty	004
(Report)	014	Commodity Data Summaries and Min-			
The Department of Defense's Consor-	012	crel Estimates	255	National Aeronautics and Space	
vation of Potroleum (Report) Strategie Petroleum Reserve Plan	289	Musing and Muserals Policy	247	Administration	
аппере гениени кенте инп	207			Conservation Drvision Task Force Re- port on the Onshore Lease Manage-	
		Mining		ment Program Study for the U.S.	
Milling		Administration of Regulations for Sur-		Geological Survey	249
Certain Actions That Can Be Taken to Help improve This Nation's Urangen		face Exploration, Mining, and Rocks-			
Parture (Recent)	061	mation of Public and Indian Coal Lands (Report)	093	Notional Cont Marial	
Tatala property		Certain Actions That Can Be Taken to	913	Reserves Allocation and Mine Cost	
		Help Improve This Nation's Unanum		Model (RAMC)	390
Mine Development		Picture (Report)	061		
Further Action Needed on Recommen- dations for Improving the Adminis-		Department of the Interior's Views of Comments on Administration of		Notional Defease	
tration of Federal Coal-Learing		Regulations for Surface Exploration,		Capability of the Naval Petroloum and	
Program (Report)	217	Mering, and Rechemition of Public		Oil Shale Reserves to Meet Ernor-	022
		and Indian Coal Lands (Report)	095	gency Oil Needs (Report) Capability of the Navel Petroleum and	072
		Federal Coal-Leasing Program of the Department of the Interior (Report)	221	Oil Shele Reserves to Meet Emer-	
Mineral Leases Leasing of Minerals on Public Lands		Opportunities for Improvements is Re-		gency Orl Needs (Termnory)	923
(Report)	211	claiming Strip-Mised Lands under			
		Coal Purchase Costracts (Report)	092	Notional Energy Plan	
				National Plan for Energy Research,	
Mineralogical Research Land and Mineral Conservation Infor-		Mining Leases		Development, and Demonstration: Creating Energy Choices for the Fe-	
mation System	326	Index Natural Resources-Part II. Coal, Gill, and Gus-Better Manage-		ture	428
		ment Can Improve Development and			
		Increase Income and Employment		National Uranium Resource	
Mineral Resources		(Report)	225	Evaluation Program	
Commodity Data Summaries and Mun- oral Estimates	264			U.S. Utanium Resources and Supply	
Department of the Interior Soudy of	200	Mining Research			432
Shut-In Oil and Gas Well Comple-		Mining Research	323		
tiess and Losses-GAO Observations	224	Research Information Management System (RIMS)	324	National Water Data Exchange	
(Agord) Geologic Surveys, Investigations, and	224	System Quantity	-24	National Water Onto Exchange (NAW- OEX)	925
Reseast Progress	327			VEAT	323
Indian Natural Resources-Part II		Models Review of the 1974 Project Independ-			
Coal, Dil, and Que-Better Manage-		ence Evaluation System (Report)	178	Natural Gas Accelerated Outer Continental Shelf	
ment Can Improve Development and Increase Income and Employment		Short Term Coal Demand Porcessing		Development (Tentiment)	216
(Report)	225	Model	376	Accelerated Outer Continental Shelf	
Mining and Minerals Policy	267			Development (Teolinesy)	219
Role of Pederal Coal Resources in		Monetary Policy		Actions Taken by the Pederal Power Commission on Proor Recommenda-	
Meeting Energy Goals Noods to be Determined and the Lessing Process		Economic Implications of Current		tions Concerning Regulation of the	
Improved (Report)	226	World Oil Prices (Sleff analy)	237	Natural Gas Industry and Manage-	147
				ment of Internal Operations (Report) Alternative Energy Proposals Deve-	14/
		Money Supply		laped by the General Accounting Of-	
Mineral Rights		A Summary of European Views on De-		fice in Response to Congressions!	
Problems Caused by Cost Mining Near Federal Reservoir Properts (Report)	075	pendeasy of the Free World on Mid- dic East Oil (Aspert)	224	Inquiries: Proposals and Supporting Analyses (Tentinosal)	166
Energy Digest SEPTEMBER 1977					145

Natural Gas Subject Index

Amount of Natural Gas that Coold Bo Released from Federal Proc Regula- uoms upon Esparation of Contracts		Oil and Gas Lossing on Federal Lands (Report)	210	Notural Gas Liquids (NGL) Problems in Regulating Natural Gas	
tions upon Experimen of Contracts from 1975 through 1985 (Terminay)	137	Oster Controcotal Shelf Oil and Gas		Prices by the Federal Energy Ad- ministration (Report)	136
Compensatory Royalty Agreements	272	Development Imporrements Needed in Determining Where to Lease and to			
Department of the Interior Study of		What Dallar Value (Report)	218		
Shat-In Oil and Cas Well Comple- ness and Lusses-GAO Observations		Outer Continental Shelf Sale #35:		Natural Gas Pipelines Annual Report of the Secretary of Tran-	
(Report)	224	Problems Selecting and Evaluating Land to Lease (Report)	231	apartation on the Administration of	
Dual Fuel Program (Report)	001	Outlook for Pederal Goals to Acceler-	231	the Natural Gas Pipeline Safety Act of 1968	277
Effect and Operation of Intentate Con-		ate Lessing of Oil and Gas Resources		Corporate, Progressi, and Economic In-	277
parts Relating to Natural Con	297	on the Dater Commental Shelf (Re-		formation Pile (RISCEID)	400
Employee Disclarates under the En- ergy Folicy and Conservation Act	265	port)	214	Gas Supply Indicators	400
Energy Information Reported to Con-		Problems in Regulating National Coa- Prices by the Federal Energy Ad-		Natural Gas Company Operating Infor-	
gress is Required by Public Law 93-	263	ministration (Asport)	139	matton File Netural Gas Distribution Model	413
Federal Assessance to State and Local	293	Progress and Problems in Developing		Natural Gas Distribution Model Natural Gas Regulation System (Pipe-	419
Gavernments in Developing and Ad-		Neelear and Other Experimental Techniques for Recovering Natural		line Rate)	416
munistering Energy Programs (Report)		Oas in the Rocky Mountain Area (Re-		Natural Cas Regulation System (Pro-	
Francial Disclosures by Employees	142	porti	077	docer Certificate)	415
Performing Fenctions under Regrey		Propuse/Butane Allocation System	347	Natural Gas Regulation Systems (Pipe- line Certificate)	417
Febry and Conservation Act	257	Queroscly Report of Production from		an Catalone	417
Fossi Energy Program Report	311	the Naval Petroteum and Oil Shale Reserves	256		
Fature Energy Demand (Speech)	175	Receipt and Coordination of Natural	2.50	Natural Gas Prices	
GAO's Energy Rale (Speech) Implications of Deregulating the Price	137	Gus Reserve Data (Report)	078	Natural Gas Regulations System (Pro- ducer Rate)	414
of Natural Cas (Report)	135	Reliable Contract Sales Data Needed		Natural Gas Regulation System (Pipe-	
The Implications of Deregulating the		for Projecting Amounts of Natural Gas That Could Be Deregulated (Re-		lizo Rate)	415
Prior of Natural Gas (Testimony)	136	ponti	172		
Importance of Financial Data to Eve-		Reports of the Review Committee on		Natural Gas Production	
lustreg Foderal Energy Programs (Speech)	144	Safety of Outer Continental Shelf Po-		Crade Oil and Natural Gas Production	
Improvements Needed in the Federal		trelease Operations to the United States Geological Survey	211	Model	398
Enhanced Oil and Our Recovery Re-		Reports of the Work Group on DCS	231	Oil and Gas Supply Model	378
search, Development, and Demon- stration Program (Report)	155	Safety and Pallution Control	252		
Indian Natural Resources-Part II	133	Review of FPC and FEA Actions in As-		Natural Gas Reserves	
Cool. Oil. and Got-Petter Manage.		sensing the Impact of Natural Gas		Clas Supply Indicators	460
men Con Improve Development and Increase Income and Employment		Curtailments during the Winter of 1976-77 (Leave)	Cére	Natural Gas Shoroage: The Role of Im- ported Liquefied Natural Gas (Report)	
(Report)	225	Special Reports Issued by the FPC and		porter acquainte retains can (migros)	241
folarmone on Certain Oil and Gua (o-		Pederal Power Commission Publics-		Oil and Gas Supply Model	378
dustry Os erught Responsibilities (Re- port)	105	tions	411	Progress and Problems in Developing	
State to Leaving the Atlantic Gurer	100	Statistical Data on Petroleum and Pe- troleum Preducts (Report)	979	Neelear and Other Experimental Techniques for Recovering Natural	
Continental Shelf (Texamony)	213	mental recogni (septen)	wy		
Major Feel Berreng Installations (MFBI)				parti	077
(MPBI) Management of and Place for the Naval	356	Notural Gas Curtoliments			
Petroinan Reserves (Report)	227	The Economic and Beautenmental Im- pact of Natural Cas Contailments dur-		Natural Gas Sales	
Monthly Energy Review	231	ing the Winter of 1975-76 (Report)	092	Natural Can Regulation System (Pro- door Certificate)	
Natural Cas Company Operating Infor-		The Economic and Environmental Im-		distair Continuate)	415
Maton File Natural Gas Cartalhagers	413	pact of Natural Oss Curtaliments Duning the Winter of 1975-76 (Ter-			
Natural Gas Industry Evaluation Sus-	357	timenty	083	Natural Gas Shortages	
Man Con Indanty Evansing 349	412	Need for the Pederal Power Commis-		The Economic and Environmental Im- pact of Natural Gas Curtailments dur-	
Need for Improving the Regulation of		sion to Evaluate the Effectiveness of		ing the Winter of 1975-76 (Report)	ceg
the Natural Ges Industry and Man- agentans of Internal Operations (Re-		the Natural Gas Curteskment Policy (Report)	120	Natural Gat Shortage Model	282
post	113	Review of FPC and FILA Actions in As-	120		
Need for the Federal Power Cornels-		sessing the Impact of Natural Gas		Netwol Gas Starage	
sion to Evaluate the Effectiveness of the Natural Gas Curtailment Policy		Curtailments during the Winter of		Underground Gas Storage System	271
(Reput)	190	1976-77 (Latter)	CEP		
Need for the Federal Power Commis-				Natural Resources	
tion to Improve the Regulation of the		Notural Gas Demand		Cost Lease Data System	329
Natural Gas Industry and Manage- ment of its Internal Operations (Tes-		Natural Gas Distribution Medel	419	Doneste Frence Bergues and Re-	345
(Among)	114			surve Estimates-Uses, Limitations,	
CECD Energy Demand Model	286	Natural Gas Distribution		and Needed Data (Report)  Energy Reorganization Legislation	233
Official FPC Files and Records	401	Natural Can Distribution Model	419	(Testerony)	194
146					
				Energy Digest SEPTEMBER 1	1977

Subject Index Nuclear Energy

Exploration of National Petroleum Re-	270	search, Development, and Demon- stration Activities (Resert)	200	The Evaluation of the Administration's Proposal for Government Assistance	
The Federal Ward Bourgy Program (Re-	200	sisting Administ Endoug	200	to Private Ucasium Enrichment	
port)	208			Groups (Takenny)	953
Improved Policies and Procedures for the Explanation and Development of Outer		New York		Evaluation of the Publication and Dis- tribution of "Shedding Light on Pasts	
Contracted Shelf Resembles (Festimore)	232	The Becomme and Environmental Im-		shout Nuclear Energy" (Report)	984
Immovements Needed in the Federal		part of Natural Gas Curtailments der- ing the Winter of 1975-76 (Report)	082	Evaluation of the Status of the Past Plex	945
Enhanced Oil and Gas Recovery Re- parch, Development, and Demon-		-4		Test Pacility Program (Report) Information on Selected Aspects of the	065
stration Program (Resort)	155			Power Operations of Tennessee Vol-	
Mining and Minerals Policy	267	North Corolina		ley Authority (Report)	167
National Energy Policy An Agenda for	191	The Boscome and Environmental for- part of Natural Gas Curtailments der-		International Energy Evaluation Sys- tem (IEES)	384
Analysis (Report) National Natural Resources Library	191	ing the Winter of 1975-76 (Report)	082	Liqued Mosel Fast Broader Resource	
and Information Systems		The Becomme and Environmental Im- pert of Neural Gas Curtailments		Program-Past, Present, and Fature (Testamonal	044
(NNRLIS)  Gil Shale/Bestonite Title Clearance	319	During the Winter of 1975-76 (Tee-		The Liquid Metal Past Breeder Resetor.	940
Progress of and Progre Place for Ex-	330	(Venony)	083	Promises and Unconsumides (Sug)	
ploration of National Petroleum Re-				Management of the Atomic Entray	049
perve in Alaska Report to the Congress on Matters Con-	271	North Slope (AK)		Commission's Controlled Thermono-	
Report to the Congress on Matters Con- tained in the Heltum Act	266	Monagement of and Pions for the Naval		clear Research Program (Report)	195
		Petroleum Reserves (Report)	227	National Energy Policy An Agenda for Analysis (Report)	191
				National Plan for Energy Research,	
Natural Resources Conservation All Purchases and Condemnators Pro-		Nuclear Energy		Development and Demonstration Financing and Analysis	305
ceedings Regarding the Naval Fe-		Assessment of Umned States and Inter-		Nuclear Regulatory Commission's Pro-	300
troleum and Oil Shale Reserves	259	national Controls over the Peaceful Uses of Neclear Energy (Report)	247	gram for Evaluating Environmental	
Land and Mineral Conservation Infor- mation System	326	Beligionte Nuclear Plant (Staff study)	054	Impacts of Construction and Opera- tion of Nuclear Powerplants (Report)	951
Protection of Oil Reserves	261	Budget History Tables	317	Operating Cast and Environmental	
		Certain Actions That Can Be Taken to Hele Improve This Nation's Uranium		Reduction Memoring at the Ship- magners Atomic Power Station (Re-	
		Picture (Repart)	061	part) remain rower attains (see	042
Naval Contracts Management of and Plana for the Naval		Competts on Energy Research and		Poor Management of a Nuclear Light	
Petroleum Resorves (Report)	227	Development Administrator's Proposed Arrangement for the Check		Water Resister Safety Project (Report)	063
		River Broader Reneter Demonstra-		Progress and Problems in Developing	
		tion Plant Project (Report)  Community on Proposed Legislation to	044	Nuclear and Ditor Experimental Techniques for Recovering Natural	
Naval Petroleum and Oll Shale Reserves		Change Basis for Government Charge		Gas in the Rocky Mountain Area (Re-	
Quarterly Report of Production from		for Unanum Envelopers Services (Record)	131	part) Proposed Agreements for Cooperation	027
the Naval Petroleum and Oti Shale Reserves	256	Comments on Selected Aspects of the	101	with Other Neurons on Atomic En-	
ALIAN TO THE PARTY OF THE PARTY	2.0	Adequistration's Proposal for Gov-		ergy	304
		Creentet Assistance to Privace Uranium Ermehment Groups (Report)		The Proposed Contract for the Clinch River Breeder Reactor Project (Tes-	
Naval Petroleum Reserve Number 4			145	(insty)	058
Strategie Petroleum Reserve Plan	289	Considerations for Commercializing the Liquid Metal Past Brender Reso-		Proposed Distribution of Special Nu-	300
		ter (Report)	966	Proposed Revisions to the Criteris and	300
Navigation		Controlled Pasion Atomic Data Cen-	***	Contracts for Uranium Enrichment	007
Reports of Costs of Certain Structures on Nunsovernezant Waters	106	Cost and Schedulo Estimates for the	444	Services (Riport) The Reserve Inspection Program of the	097
on rengovernment waters	25%	Nation's Past Liquid Metal Past		Atemic Energy Commission (Report)	
		Breeder Reactor Demonstration Pow- orptint (Report)	647	Report to the President by the Nuclear	031
Novy		Criticality Data Center	445	Regulatory Communities	318
The Navy's Fractice of Discharging First as Sea (Report)	020	Developing and Commercializing En-		The Safeguards and Security of the En-	
		ergy Technology (Tentercey) Ecological Segrees Information Cemer	146	ergy Research and Development Ad- ministration's Rocky Plats Platement	
		(ESIC)	446	Facility (Report)	060
New Jersey The Economic and Environmental Im-		Efforts to Develop Two Nuclear Con-		Selected Aspects of Nucleur Power- plant Reflebility and Economies (Re-	
nuct of Natural Gas Curtailments dur-		cepts That Could Greatly Improve This Country's Potent Strengy Situa-		post)	050
ing the Winter of 1975-76 (Report)	082	tion (Report)	0.48	Shortcomings in the Systems Used to	
The Economic and Environmental Im- met of Natural Gas Certalments		The Energy Resceech and Develop- ment Administration's Proposed		Control and Protest Highly Denger- eus Neclear Material (Report)	062
During the Winter of 1975-76 (Tar-	063	Contract with Project Management		Summary of Absormal Occurrences	
through	ces	Corporation, Commonwealth Edson, and the Tonnessee Valley Authority		Reported to the Nuclear Regulatory Commission	316
		(Report)	056	Survey of Federal Programs and Poli-	5.00
New Mexico		ERDA Energy Research Abstracts (ERA)	431	eins for Disposing of Obsolete and Unused Nuclear Facilities (Report)	057
Pederal and State Solor Energy Re-		(EKA)	AJI	United Petries Pacifics (Report)	057
Energy Digest SEPTEMBER 1977					147
and granger series to					

Nucleor Energy Subject Inde

The Country's Most Expensive Light Water Reason Safety Test Facility (Report)	059	Report Entelled "Safety and Tran- sportation Safeguards at Rocky Flats Nuclear Weapons Plant" (Report)	067	Nuclear Medicine Proposed Destribution of Special Nu- clear Materials	303
U.S. Financial Assistance in the Deve- lopment of Foreign Nuclear Energy					
Programs (Report) U.S. International Nuclear Safeguards Rights Are They Being Effectively Exernsed* (Unclassified Digest) (Re-	239	Nuclear Fuels Allocation of Unaware Errichment Services to Fuel Foreign and Domotto Nuclear Reactors (Report)	238	Nuclear Non-Proliferation U.S Nuclear Non-Proliferation Policy (Report)	248
porci U.S. Nuclear Non-Problemson Policy	243	Commerce on Selected Aspects of the Administration's Proposal for Gov-		Nuclear Powerplants	
(Report) U.S. Uranium Resources and Supply	243	errorest Assistance to Private Uranium Egrickment Groups (Report)		Beliefonse Nuclear Plant (Staff study)  A Computer Code for Concentral Cost	954
O a creation resources no supply	402		145	Estimates of Steam Electric Power Plants (Concept)	411
Nuclear Energy Industry Considerations for Commercializing		Considerations for Commercializing the Liquid Metal Past Brooder Reso- tor (Scient)	044	Considerations for Commercializing the Lexist Metal Pass Brooder Reac-	431
the Liquid Moral Past Brender Resc- our (Report)	066	Energy Efficiency of Nuclear and Con- ventional Faris Used to Produce	•••	ter (Report)  Cost and Schedule Estimates for the	066
Nuclear Engineering		Electrosty (Report) Energy Information Reported to Con-	036	Nation's Pers Legald Motel Feet Breefer Reactor Demonstration Pow-	
Considerations for Commerculousg		gress as Required by Public Law 93- 319	193	orpisat (Report)	647
tor (Report) Evaluation of the Status of the Fast Plays	065	Legald Metal Fest Breeder Reactor Poel-Cladding Information Conter		Energy Information Reported to Con- gress as Required by Public Law 92- 116	281
Test Fechty Program (Report) Insues of Nuclear Fort Reprocessing	045	(LMFBR) Proposed Reversors to the Criteria and	450	Beergy Research and Development	203
and Disposal of High Level Nuclear Wasse (Speech)	066	Creament for Urneum Enrichment Services (Report)	097	Administration's Contingency Plan for More Branchment Capacity at Personauth, OH (Report)	
Issues Related to the Closing of the Nu- ofcar Fuel Services, Incorporated, Re-			***	Environmental Information Analysis	052
processing Plant at West Valley, New York (Report)	670	Nuclear Fusion Controlled Person Atomic Data Con-		Center (EIAC) Evaluation of the Publication and Day-	446
Nuclear Experts		ter Biforts to Develop Two Nuclear Can-	444	tribution of "Shedding Light on Faces about Nuclear Energy" (Report)	064
U.S. Naulcur Non-Proliferation Policy (Report)	248	cepts That Could Gready Improve This Country's Feture Energy Stree- ties (Report)	OUR	Liquid Motal Fast Breader Reactor Program-Post, Present, and Feture	
Neclear Facilities		me inger	UNB	(Testomony) The Liqued Metal Fast Brooder Research	046
Considerations for Commercializing the Liquid Metal Fast Breader Resc-		Nucleor Materials Criticality Data Conter	445	Promises and Uncertainities (Single study)	049
tor (Report)  Energy Research and Development	066	From Place Total Facility Program (Stoff shade)	941	Nuclear Regulatory Commission's Pro- gram for Evaluating Environmental	
Admiration's Confequency Plea- for More Enrichmere Capacity at		Improvements Needed in the Program for the Protection of Special Nuclear	41	Impacts of Construction and Opera- tion of Nuclear Powerplants (Report)	031
Fortimench, OH (Report) ERDA Report of Review of Dosign,	652	Material (Appert)	034	Operating Cost and Brevironmerical Radiation Monitoring at the Ship-	
Construction, and Plancing of Plancaum Processing Pacifics Improvements Needed in the Program	299	and Disposal of High Level Nuclear Wante (Speech)	OVE.	pingport Atomic Power Station (Re- port)	042
for the Protection of Special Nucleus Material (Report)	mu	Issues Related to the Closing of the Na- clear Fuel Services, Inc., Reprocess-	-	Problem Areas which Could Affect the Development Schodulo for the Clinch	
Information-Guibening Activities of the Nicelear Regulatory Commission (Re-	-	ing Plant at West Valley, New York	621	River Breeder Renoter (Sinff study) Reacter Information File	040
pon) Issues of Nuclear Fact Reprocessing	158	Nuclear Material Management Plan Protecting Special Nuclear Material in	426	Reducing Nuclear Powerplans Lead- times: Many Obstacles Remain (Re-	
and Dripcost of High Lovel Nuclear Waste (Speech)	048	Trutell: Improvements Made and Ex- isting Problems (Report)	635	port)  Report by the U.S. Engray Research	069
Issues Related to the Cleaking of the Nu- olear Fiel Services, Inc., Reprocess-		Role of the International Assess: En- ergy Agency in Safeguarding Nuclear		and Development Administration: Status of Construction Projects and	
ing Floot on West Valley, New York (Tentencey)	671	Material (Report) Role of the International Assenic Ro-	240	Other Data	313
Report on the Status of Major Con- struction Projects Experiencing Sig- military Variances	300	ergy Agency in Sufreguesting Nuclear Material (Textinony)	242	Report on Activity and Program Index of the Energy Research and Develop- ment Administration: Status of Con-	
Role of the International Asserte Ra- ergy Agency in Sufeguarding Nuclear	550	The Sufeguards and Security of the En- ergy Research and Development Ad-		struction Projects and other Date The Safeguards and Security of the En-	312
Material (Report)  Role of the International Atomic En-	240	ministration's Rocky Plate Photoelum Pacility (Report)	060	ergy Research and Development Ad- ministration's Rocky Plats Platenium	
ergy Agency in Sufeguarding Nuclear Moterial (Textroop)	242	Shortcomings in the Systems Used to Control and Protect Highly Danger-		Pacifity (Report) Security Systems at Commercial Nu-	060
Survey of Federal Programs and Poli-	-	our Nuclear Material (Report) Survey of Poderal Programs and Poli-	062	clear Powerplants (Report) Selected Aspects of Nuclear Power-	027
Unused Nuclear Facilides (Asport)  An Unclassified Digost of a Classified	057	cies for Disposing of Obsolete and Unssed Nuclear Pacilities (Report)	067	plant Reliability and Economics (Re- port)	050

Energy Digest SEPTEMBER 1977

Sequepsh Nuclear Finst (Staff study) Shortcomings in the Systems Used to Control and Protect Highly Dangerous Nuclear Material (Report)

Nedsor Proliferation
Assumed of United States and Interasional Controls over the Peaceful
Uses of Nuclear Energy (Report)
Role of the International Atomic Encry Agency in Sufficient International Atomic

Material (Testenony)

Nucleor Recetors

ABocation of Unanium Revielment Services to Fuel Foreign and Domestic Nuclear Reactors (Report)

Can the U.S. Breeder Reactor Development Program Be Acuterated by Using Foreign Technology? Majorit Commetris on Energy Research and Development Admissionatoric Proposed Armagement for the Clinch River Brooder Reactor Demonstration Plant Proport (Report) Considerations for Commendations

the Liquid Motal Fast Steeder Resctor (Aspen)

Cost and Schedule Resembles for the Nation's First Liquid Metal Fast Breeder Reactor Decrementations Provceplant (Report)

The Energy Research and Development Administration's Proposed Contract with Propest Management Corporation, Commenwealth Edison, and the Tennessee Valley Authority (Recent)

Evaluation of the Status of the Past Plex Test Pacifity Program (Report) Fast Past Test Pacifity Program (Stag) smalls

Further Comments on Atomic Energy Commission's Proposed Arrangement for the Liquid Metal Fast Brooder Reactor Demonstration Project (Report) International Cooperation in Energy Research and Development (To-

The Liquid Motal Fast Breeder Reactor Program-Past, Prosess, and Feture (Report) Liquid Motal Fast Breeder Reactor

Progrem—Past, Present, and Puture (Tentroop)

The Lated Motal Fast Broader Reactors Promises and Uncorrelabilities (Staff)

Operating Cost and Environmental Radiation Meetitoring at the Shipphageout Asseste Power Station (Report)
Pose Management of a Nuclear Light Water Resolver Saftty Project (Report)

Problem Areas which Could Affect the Development Scholale for the Clack River Breeder Renoter (Sulff multi) Propused Agreements for Cooperhises with Other Nations on Atomic En-

Proposed Changes to the Atomio Energy Commission's Arrangement for

Out Carrying Out the Liquid Metal Past
Breader Reactor Demonstration Project (Supert)

The Proposed Commet for the Check
Ring Senader Reactor Proper (To.

The Proposed Contract for the Check River Sensier Researe Propos (Fanoway) Resease Information File The Beacter Integrate of the

a:

20

934

533

11M Rectiful Hisjochus Frogram of the Alexanc Energy Contrassion (Report)
247 The Sufaguants and Security of the Energy Recenth and Development Administration's Rocky First Fistenium.
242 Facility (Report)

Society Systems of Commondal Noclear Powerplants (Espert)
This Country's Most Exponsive Light Water Reactor Selety Test Facility (Espert)

Nuclear Reactor Safety

5 Development of Interagency Relates

944

047

056

204

skips in the Regulation of Nuclear Materials and Faculties (Report) Problem Areas which Could Affect the Development Schadule for the Chiech River Broeder Resetts (Singl entity) Sequepah Nuclear Flast (Singl entity)

An Uncleanfed Digot of a Casolfod Report Earded "Sofety and Transportation Sefeguards at Society Teas Nuclear Wespies Plant" (Report) Nuclear Responts

RESISTER SERVICES

ESSENTIAL SERVICES

ESSENTIAL COULD GREATLY SERVICES

This Country's Future Energy Situation (Report)

Information-Gethering Activities of the
Nuclear Regulatory Commission (Re-

Nucleor Solegueds
 Assessment of United States and Insersitemed Centrols over the Proportil
 Uses of Nucleor Energy (Report)
 Bellstatte Nuclear Plant (Stat) and

Development of Interagency Relationthips in the Regulation of Nuclear Materials and Pacificia (Report) The Liquid Metal Fust Breeder Reaging Fromton and Uncertainties (Staff ready)

Opensing Cost and Enviscemental Radinton Moultoring at the Shippungset Atomic Power Station (Report)
Foor Management of a Nuclear Light Water Seasons Safety Project (Report)

Protecting Special Nuclear Meterial in Transit Impoorcements Made and Existing Froblems (Report) The Reactor Inspection Programs of the Atomic Burgy Commission (Report) Role of the International Atomic For-

63 ergy Agency In Safeguseding Nuclear Material (Report)

Role of the International Atomic Encity Agency in Safeguseding Nuclear Material (Technology)

Material (Facilities)

The Safeguards and Security of the Energy Research and Development Admiciatuation's Rocky Plata Finterior Facility (Report) Security Systems at Commercial Nuclear Fowerplants (Report) (09 Shortcomings in the Systems Used to Control and Protest Highly Dangerous Nuclear Material (Report) 645

Survey of Federal Programs and Polons for Disposing of Dissolvic and Unised Nuclear Facilities (Report) This Country's Most Expensive Light Water Resour Soliety Test Facility (Report)

US International Nuclear Safeguards Rights: Are They Being Effectively Exercated? (Unclassified Digest) (Report)

Nucleor Security
Assessment of United States and Interrational Controls over the Peacetil Uses of Nuclear Energy (Report) Improvements Needed in the Program

for the Protection of Special Nuclear Material (Report) Report to the President by the Nuclear Regulatory Commission

034

316

Role of the International Atomo Enorgy Agency in Safeguerding Nuclear Material (Taxingasy)

Nuclear Saturity Macauss
Issues of Nuclear Fuel Reprocessing
and Disposal of High Level Nuclear
Water Observed

Waste (Speech) of An Undataffied Digest of a Classified Report Emitted "Safety and Texaspectation Safeguarch at Rocky Plass Nuclear Weapors Plant" (Rgont) U.S. Nuclear Non-Problemtion, Policy

(Report) 248

Nucleor Testing
Newds Applied Ecology Information

Nucleor Weapons
Assessment of United States and Informational Controls over the Peneers'
Uses of Nucleor Hearty (Report)

Uses of Nuclear Energy (Report)

Report on the States of Major Construction Projects Expensioning Significant Verlanges

An Unrisualized Disjoint of a Classified Report Entitled "Sefrey and Transportation Sefresarch as Rooky Plais

Nuclear Weapons Pant" (Report)

U.S. Nuclear Non-Proliferation Policy (Report)

Nuclear Weapons Export Policy

U.S. Nuclear Non-Proliferation Policy

U.S. Nuclear Non-Proliferation Policy

Occupational Health and Safety
12 ERDA Report of Review of Design

ERDA Report of Review of Design, Construction, and Planning of Flatnainen Processing Facilities Indomesion Contex for Energy Sufety (ICBS)

Office Buildings Subject Index

				Improved Impection and Regulation	
Office Buildings Companies of Energy Use in Pive Ped- ecal Office Buildings (Report)	017	Development: Improvements Needed in Determining Where to Lesse sad at What Dollar Value (Report)	218	Improved Impection and Regulation Could Reduce the Possibility of Oli- spells on the Outer Continental Shelf (Resert)	100
				National Gream Policy Study (Tes-	100
Office of Pipeline Safety Americal Report of the Secretary of Title-		Oil Fields Survey of Publications on Explanation,		theory) Recovery of Expenses from Cleanup	212
speciation on the Administration of the Natural Gas Papeline Safety Act		Development and Delivery of Alas- lan Gil Market (Report)	189	and Investigation of Oil Spills (Lever)	107
of 1968	277	tan Gil Market (Argert)	189	Spill Provention Control and Counter- measure System (SPCCS)	342
Offshore Drilling		Oli Prices		Technical Assistance Data System	
Department of the Interior Study of Shar-In Oal and Oas Well Comple- tions and Leases—GAO Observations		The Effects of Oil Price Increases on Sreall Business Contracts (Report)	123	(TAOS) Trans-Alaska Osi Pepeline-Progress of Construction through Nevember	340
(Report)	224	Oil Producing Countries		1975 (Report)	084
Followup on Cernam Matters Concern- ing the Inspection and Regulation of		A Summary of Burcpeas Views on De- pendency of the Free World on Mid- die East Oil (Report)	234	Oil Storage	
Outer Commental Shalf Oil Opera-	208	die bist Oil (Xepon)	234	Spill Prevention Control and Country measure System (SPCCS)	242
The Geological Survey's fundequate		*** * * *		measure system (SPCCs)	342
Action on Percentendations Con-		Oil Production International Oil Supply Model	386		
cerning Importion and Regulation of Outer Continental Shelf Od Opera- tions (Resert)	222	Oil Reserves		Oll Well Drilling  Drilling Equipment Production Sur-	159
Improved Polyces and Procedures for the		leformation on Contres Oil and Oss In-		Outer Condposed Shelf Sele #35	227
Expiresture and Development of Outer ConsensalShell Ravaucov(Treasure)	232	dastry Oversight Responsibilities (Re- port)	195	Problems Selecting and Evaluating Land to Lease (Report)	231
Improved Inspection and Regulation Could Reduce the Possibility of Oil-				Progress of and Pature Plana for Ex- pleaston of National Potroleum Re-	
spills on the Outer Contractal Shelf		Oil Shale Rentenite Title Clearance System		serve in Alaska	271
(Report)	100	Land Base System	332	Rational Exploration and Development of Outer Commental Shalf Resources	
Outer Continental Shelf Sale #35 Problems Selecting and Explusing		Oil Shale/Bentonite Title Cleanance	330	(Tennsory)	230
Land to Lease (Report)	231				
Problems in Intentifying, Developing,		Oli Shole Reserves Combility of the Naval Petroleges and		Onshore Leases	
and Using Geothermal Resources (Report)	199	Oil Shale Reserves to Meet Emon-	022	Conservation Division Task Perce Re- port on the Onshore Losee Manage-	
Rational Exploration and Development of Guter Commercial Shelf Resources		gancy Oil Needs (Textmony)	ara	men Program Study for the U.S. Geological Survey	247
(Testimony)	233	Oil Sholes		Oashore Lease Management Program Study for the U.S. Geological Survey	
		Agreement between the Secretary of the Interior and Officials of the State		Study for the U.S. Geological Survey	250
Ohle The Economic and Egyronmonal Im-		of Utah Pertaming to Cil Shale Lenses (Lener)	209		
past of Natural Gas Certainment du-		All Purchases and Condemnation Pro-	209	Onshore Natural Gas	
ing the Wisser of 1975-76 (Report)	082	ceedings Regarding the Naval Po-	259	Review of Royalty Accounting System	
The Economic and Economicsal Im- pact of Nazaral Gas Coppulments		troleum and Oll Shale Reserves Alternative Foels for Aviation (H.R.	259	for Onshore Oil and Gus Lesses	253
During the Winter of 1975-76 (Tec-		12112) (Tammany)	154		
Description	083	Aenosi Report to Congress on Naval Potratown and Oil Shale Reserves	262	Onthere Petroleum Review of Royalty Accounting System	
Foderal and State Solar Beergy Re- solerch, Development, and Demon-		Capability of the Naval Petroleum and	202	for Onabore Oil and Gas Losses	250
suspect Activities (Report)	200	Oil Shale Reserves to Meet Emer- agency Oil Needs (Report)	072		
		Comments on the Administration's	002	Operating Costs	
OII		Proposed Synthetic Fuels Commer-		The Economic and Eaveromental Im-	
FEA Oil Import System	354	ciatination Program (Report) Fossil Energy Program Report	140	pact of Noteral Gas Curtailments During the Winter of 1975-76 (Ter-	
Federal Energy Advantation Annual Report to the President and Con-		Land Base System	332	Aveaup)	063
gros	290	Management of and Plans for the Naval		Information on the Proposed Alaska Oil Pipeline (Report)	074
Improved Policies and Procedures for the Brokenium and Development of Ower		Petroleum Reserves (Report) Oil Shale/Regionary Title Clearance	227	Libratic Deleton	
Connected Shelf Reviews (Texasion)	232	Protection of Oil Reserves	261		
Major Puel Burning Installation (MPBI)		Quarterly Report of Production from		Organization for Economic Cooperation and Development	
	356	the Navel Petroleum and Gil Shale	258	OECD Energy Domand Model	385
Monthly Energy Review	281	Reserves			
Monthly Energy Review Monthly Petroleen Stanties Report	265			Outer Continental Shelf	
Monthly Energy Review		Oli Spills Pollowan on Certain Matters Concern-		Accelerated Outer Continental Shelf	
Monthly Energy Review Monthly Petroleen Stanties Report	265	Oli Spillis		Outer Continental Shelf Accelerated Outer Continental Shelf Development (Tanksony) Accelerated Outer Continental Shelf	216

Energy Digest SEPTEMBER 1977

Subject Index (Reposs)

(Record)

(priory)

tions (Report)

Afternative Entrey Proposals (Tex-

Construct of the Interior Study of

Development of the Outer Continental

Following on Certain Matters Concom-

Shelf Fostil Feel Resources (Ter-

on the introction and Regulation of

Outer Centinereal Shelf Oil Onera-

Should Oil and Gus Well Comple-

fors and Leases -GAO Observations

399

Osal Fuel Program (Report)

Energy Resource Data Systems

corti

202 (Speech)

Errolosce Disclosures under the En-

ergy Policy and Conservation Act

Energy, the Economy and the Budget

Federal Efforts to Conserve Puel to the

Federal Energy Administration Appeal

Report to the President and Con-

Movement of Men and Materials (Re-

FEA Crude/Transportation Model

norgy Digost SEPTEMBER 1977					151
Controlled Fusion Atomic Data Ces- ter	444	Demestic Energy Resource and Re- sorro Estimatos-Uses, Limitations, and Needed Date (Report)	255	Management of and Plaza for the Navol Petroleum Reserves (Report)	235
trimination of the Publication and Dis- tribution of "Shedding Light on Pacts about Nuclear Energy" (Report)	064	Department of the Interior Study of Shat-In Oil and One Well Comple- tions and Leanes—GAO Observations (Report)	224	Issues Noeding Attention in Develop- ing the Strategie Petroleum Reserve (Report)  Issues Related to Foreign Sources of Oil for the United States (Record)	090
Evaluation of the Publication and Dis-			397	International Oil Supply Model	316
Cases (Asport)	123	tien) Crude Oil Procing Model (DCROPS)	352	Information on the Proposed Alaska Oil Papeline (Report)	074
the Pedetal Power Commission's Processing of Electric-Rate-Increase Cases (Report)	153	Crede Oil Bay/Self Program Crede Oil Entitlements (Equaliza-	350	dantry Oversight Responsibilities (Re- port)	105
(Report) Management Improvements Needed in	136	Crade Oil and Natural Gas Production Model	290	(Report) Information on Certain Oil and Gas In-	225
Overcharges Guif Oil Corposition's "Double Dip- ping" on Crufe Oil Product Costs		Capability of the Naval Petroloum and OI Stale Reserves to Meat Beser- geory Ol Needs (Report) Correspond Royalty Agreements	0F2 2F2	Indian Natural Resources-Fert II: Cost, Oll, and Gas-Better Manage- ment Can Improve Development and Increase Income and Employment	
Reports of the Work Group on OCS Safety and Polistion Control	251	fice in Response to Congressional Inquiries Proposals and Supporting Analyses (Testimony)	166	Improvements Needed in the Federal Enhanced Oil and Gis Recovery Re- search, Development, and Demon- acration Program (Report)	155
Reports of the Review Committee on Safety of Outer Continental Shoff Pe- troleum Operations to the United States Geological Survey		Costs on Gas Rattering Coupons (Letter)  Alternains Energy Proposals Deve- loped by the General Accounting Of-	110	Improved Improves and Regulation Could Reduce the Possibility of Oil- spills on the Outer Continental Shelf (Report)	100
and Investigation of Oil Spills (Lener) Refunds on Outer Continental Shelf Leners	107 269	Acotlerated Otter Continental Shelf Development (Testinony) Alleged Waste of Money in Printing	219	Importance of Fanagual Data is Evo- liating Foderal Energy Programs (Speech)	144
Rational Exploration and Development of Outer Continental Shelf Resources (Tennessy) Recovery of Expenses from Cleanup	220	Patroleum Accelerated Outer Continental Shelf Development (Testmony)	216	Gulf Od Corporation's "Double Dip- ping" on Crude Od Product Costs (Report)	138
Outlook for Faderal Goals to Acceler- ner Lassing of Oil and Gos Resources on the Outer Continental Shelf (Re- port)	214	Summing of Posteria Charge Administra- tion's Office of Communications and Public Affairs (Report)	164	Action on Recommendations Con- cerning importion and Regulation of Outer Continental Shelf Oil Opera- tions (Report)	222
Outer Connectal Shelf Sale #35: Problems Selecting and Evaluating Land to Lesse (Report)	231	The Proposed Contract for the Circle River Reeder Reasor Project (Te- arrows) Smiles of Pederal Engray Administra-	058	Funds Credited to the Account of the Virgin Islands for Refunds from Im- port License Fees (Report) The Geological Survey's Inadequate	124
What Dollar Value (Report) Outer Continental Shell Post-Sale Sys- tem	218 331	Information on Selected Aspects of the Power Operations of Tonnessos Val- ley Authority (Report)	167	Oster Commental Shelf Oil Opera- tions (Report) Fortil Energy Program Report	208
(Report) Outer Continental Shoff Oil and Gas Development, Improvements Needed in Destructing When to Lease and in	210	Parsonnel Monagement Federal Barry Administration Pesson- nel Turnover Rates (Report)	181	Performing Functions under Energy Policy and Conservation Act Followup on Certain Matters Conserv- ing the Inspection and Regulation of	287
National Ocean Policy Study (Tei- frenes)  Oil and Ges League on Federal Lands	212	and the Tennesice Valley Authority (Asport)	056	sace and Enforcement Program (Re- port)  Property Disclosures by Employees	120
spile on the Outer Continental Shelf (Report) Issues in Lessing the Atlantic Outer Continental Shelf (Trainmany)	100 213	Personnel The Europy Research and Development Administration's Proposed Contract with Project Management Corporation, Commonwealth Belson.		The Pederal Energy Administration's Compliance and Enforcement Pre- course (Pealmong) The Pederal Energy Administration's Progress in Redirecting Its Compli-	125
Outer Commental Shelf Oll Opera- tions (Aspect) Improved Inspection and Regulation Could Reduce the Possibility of Oil-	222	metion of Public and Indian Coal Lands (Report)	092	(Report) The Federal Energy Administration's Compliance and Endorcement Activi- ties (Tealmont)	116
The Geological Survey's Inadequate Action on Recommendations Con- cerning Inspection and Regulation of		Parformance Bonds Administration of Regulations for Str- face Exploration, Mining, and Recla-		Federal Energy Administration Efform to Audit Fael Orl Supplies of Major Utility Companies (Project Utility)	

Pencaful Uses of Nuclear Energy

clear Massenals

Pannavivento

Assessment of United States and Inter-

Uses of Nuclear Energy (Resent)

Processed Distribution of Special No-

The Economic and Environmental In-

eart of Natural Cos Cuttall moon for-

ing the Winter of 1975-76 (Report)

national Controls over the Percelui

165

215

Petroleum Subject Index

Monthly Energy Review	281	Patroleum Demond Short Term Petroleum Demand Fore-		Petroleum Pipelinos Survey of Publications on Exploration.	
Monthly Petroleum Staustics Report	285	Short Term Petroleum Gemand Pere- enting Model	263	Gevelopment and Delivery of Alus- kun Oli Market (Report)	189
The Navy's Practice of Discharging Fuel at Sea (Report)	020			and on market (suppose	100
Oil and Gas Supply Medel	278	Petrology Distribution		Petroloum Prices	
Outer Commental Shelf Oil and Gas Covalignment Improvements Needed in Octormining Where to Lease and at		Size Destribution Medal	364	The Cost of Living Council's Actions to Assure That Cost Increases for Pa- troleum Products Were Made in Ac-	
What Dollar Value (Report)	218	Patroloum Engineering		cordance with Petroleum Pricing Regulations (Report)	104
Petroloum Market Shares	284	Annual Report to Congress on Naval		Crude Oil First Panchaser	315
Problems in the Federal Energy Ad- matistration's Compliance and En- literatural Effort (Report)	118	Petroleum and Oil Shale Reserves	262	Economic Implications of Current World Oil Priors (Singl/analy)	237
Problems in the Federal finergy Office's Implementation of Emergency Pe- troloum Allocaton Programs in Re-		Petroleum Exploretion Exploration of National Petroleum Re- serve in Altaka		The Effects of Oil Price Increases on Small Business Contracts (Report) Exemption of a Refined Petrology Pro-	123
ground and State Levels (Report) Problems of Independent Refiners and	106	Progress of and Patere Plans for Ex-	270	duct from the Mandetory Petroleum Allocation and Price Regulations	291
Gasoline Residers (Report) Procedures for Evaluating Reasonable-	121	plantion of National Petroleum Re- serve in Alasks	271	Survey of Publications on Exploration, Development and Delivery of Ales-	
ness of Petroleum Pipeline Rates Nord Improving (Report)	094	Petroloun Imports		kun Oli Markes (Report)	189
Procurement of Foreign and Domesus Petroleuse by Department of Defense		FEA Oil Imperi System Mandatory Oil Imports Project	354	Petroloum Pricing Policy Denestic Crude Oil Pricing Policy and	
(Report) Quarterly Report of Production from	091	(MOIP) Trends in Refinery Capacity and Utili-	253	Related Production (Report)	112
the Naval Petroleum and Oil Shale Reserves	258	arous of Petroleum Refinence in the			
Refinery Cost Passthrough	346	United States and Foreign Refinery Exporting Centers	360	Petroleum Production The Federal Energy Administration's	
Reports of the Review Committee on Solicity of Outer Continental Shoff Pe- troleum Operations to the United				Progress in Rederecting Its Compt- ance and Enforcement Progress (Re- port)	120
Stores Geological Survey	251	Petroloum Industry		Management of and Plans for the Neval	120
Reparts of the Work Course on OCS Safety and Pollision Control	152	Federal Energy Administration's Ef- forts to Audit Domestic Crude Oil Producers (Report)	123	Petroleum Reserves (Raport) Oil and Gas Leasing on Pederal Lands (Resert)	227
Review of Compliants Concerning the Mandatory Petrolouis Allocation Program and the Regulation of Pe- trolouis Precing (Report)	100	Improved Policies and Procedures for the Exploration and Davelapment of Outer Continental Shelf Resources (Tentralism)	202	Oil and Gas Roserves System	372
Statistical Gats on Petroleum and Pe- troleum Products (Report)	079	Review of Voluntary Agreement and Plan of Astron To Implement the In-		Petroleum Products The Administration of the Petroleum	
A Summary of European Views on De- pondency of the Free World on Mid-		terretional Energy Program Survey of Publications on Exploration,	276	Set-Arida Program by State Energy Offices (Report)	122
die East Oil (Report)	234	Development and Delivery of Alas- kan Oli Market (Report)	199	Cost and Pricing System	374
Transfer Procing System Violation of Celifina Proces in a Defense	351	REST CHI STREET (ANDICA)	189	The Cost of Living Cosnell's Actions to Assure That Cost Increases for Po- trolous Products Were Made in Ac-	
Fact Supply Center Sale (Report) Which Alternative for Energy Policy?	128	Petroloum Leases Department of the Interior Study of		ordance with Potroleum Pricing Regulations (Report)	105
(Speech)	168	Shorts Oil and Gas Well Comple- tions and Leanes—GAO Cheervations (Report)		Energy Information Reported to Con- gress as Required by Public Law 93-	
Petroleum Allocation Program		Development of the Outer Continuated	224	319 Joint PEA/BOM Petroleum Reporting	253
Problems in the Federal Energy Office's		Shelf Fossil Fuel Resources (Tes-		System	375
Implementation of Emergency Pe- troleum Allocation Programs at Re-		almony)	215	Market Shares System	370
gronal and State Levels (Report)	108	leases in Leasing the Atlantic Outer Continental Shelf (Textmonal	212	Oil and Gas Reserves System	372
Review of Complaints Concerning the Mandatory Petroleum Allocation Program and the Regulation of Pe-		National Ocean Policy Study (Tea- theory)	212	Review of the Operations Divasion of the Federal Energy Administration (Report)	115
Program and the Regulation of Pe- troleum Pricing (Report)	102	Oll and Gas Lessing on Federal Lands (Report)	210	Subpart L	369
		Outlook for Federal Goals to Acceler- ate Lessing of Oil and Gas Resources		Patroleum Products Demand	
Patroleum Conservation The Department of Defense's Conservation of Petroleum (Report)	012	on the Outer Continental Shelf (Re-	214	Short Term Petroleum Dermad Fore- ousting Model	385
Sepressental Needed in Controls and	912	•			
Accounting for Ground Vehicle Pe- troleum (Report)	ons	Petroloum Monogement		Petroleum Refineries	
Potential for Using Electric Vehicles on Pederal Installations (Report)	022	Accounting for Ground Vehicle Pe- traleum (Report)	018	Effects of a Change in Size Standard for Small Business Petrologie Refiners (Report)	149
152				Energy Digest SEPTEMBER	1977

Subject Index Politation Control

Plant Florocine

troleum Operations to the United States Operation Survey

Reports of the Work Group on OCS Safety and Pollution Control

Solid Waste Management, Collection, Disposal, Resource Recovery, Recy-

Spili Prevention Centrel and Countermeasure System (SPCCS)

cling Program

257

142 153

Pleagnee Resin (CO)

System	275	Pinsance Basin (CO)		Plant Financing	
	2/3	Frogress and Problems in Developing		Puttine Structure of the Uranium En-	
Trends in Refinery Capacity and Utili- zation of Patrolough Refinence in the		Nuclear and Other Experimental Techniques for Recovering Natural		nchment ludustry (Testimony)	037
United States and Poreign Refinery		Gas in the Rocky Mountain Area (Re-			
Esporting Centers	360	port)	077	Plonts	
gaporing Cantons	300	J-110	007	U.S. Pinangal Assistance in the Dave-	
				lepment of Foreign Nuclear Energy	
Petroleum Reserves		Pipeline Construction		Program (Record)	239
All Pareinnes and Condemnation Pro-		Trans-Alaska Oil Pspeline-Progress of		rogana (rojery	207
ocedines Regarding the Naval Po-		Construction through November			
troleum and Orl Shale Reserves	239	1975 (Report)	084	Pleatics	
Alternative Engray Proposals Dave-	4.57			Statistical Data on Petroleum and Po-	
loped by the General Associating Co-				troleum Products (Report)	079
fice in Response to Congressions)		Pipeline Rates			
Inquires Proposels and Supporting		Natural Gas Regulation System (Pipe-			
Analyses (Terrmons)	166	line Rate)	416	Plenum Fill Experiment	
Annual Report to Congress on Naval				Poor Management of a Nuclear Light	
Petroleum and Oil Shale Reserves	262			Water Reactor Safety Project (Report)	
Capability of the Naval Petroleum and		Pipelines			063
Oli Shale Reserves to Meet Emer-		Assual Report of the Secretary of Tran- sportston on the Administration of			
sency Oil Needs (Recort)	079	the Natural Gas Pipeline Safety Act		Plutenium	
Capability of the Naval Petroleum and		of 1968	277		
Oil Shale Reserves to Meet Emer-		Corporate, Firancial, and Boonomic In-		Considerations for Commercializing the Locald Metal Past Breeder Reso-	
gency Oil Needs (Testiment)	073	formation File (RISCEID)	400	ter (Report)	956
Exploration of National Potroleum Re-		FEA Crude/Transportation Model	300	Environmental Information Analysis	
serve in Alaska	220	Gas Supply Indicators	400	Croter (EIAC)	441
Followus Roview of the Naval Po-		Greats of Rights of Way for Pipelines	403	ERDA Report of Review of Design.	
troloum Reserves (Report)	220	through Pederal Lands	273	Construction, and Planning of	
Issues Needing Attention in Develop-	220		2/3	Plutonium Processing Facilities	200
ing the Strategie Petroleum Reserve		Joint FEA/BOM Petroloum Reporting System	375	Nevada Applied Ecology Information	
(Report)	090		3/5	Croser	452
Management of and Plans for the Naval		Natural Gas Company Operating Infor- mation File	413	Shortcomings in the Systems Used to	
Potroleum Resorves (Report)	107			Control and Protect Highly Danger-	
Oll and Ota Reserves System	372	Natural Gas Distribution Model	419	ous Nuclear Mainrial (Report)	062
	2/2	Natural Gas Regulation System (Pipe-		An Unclassified Digest of a Classified	
Outer Continental Shelf Sale #35 Problems Selecting and Evolusing		line Rate)	416	Report Entitled "Safety and Trans-	
Land to Losse (Report)	231	Natural Gas Regulation System (Pro-		sportation Safeguards at Rocky Flots	
	2.01	dater Certificate)	415	Nuclear Wespons Plant" (Repart)	067
Progress of and Future Plana for Ex- ploration of National Petroleum Re-		Natural Gas Regulation Systems (Pipe-			
serve in Alaska	271	line Certificate)	417		
Protection of Oil Reserves	261	Procedures for Brainsting Reasonable-		Pellutonts Problems Caused by Coal Mining Near	
	391	ness of Petroleum Pipeline Rates	004	Federal Reservoir Projects (Ter-	
Receipt and Coordination of Natural		Need Improving (Report)	094	Organia Reservoir Projects (749-	076
Oas Reserve Data (Report)	65.9	Reports of the Review Committee on Safety of Outer Continents) Shelf Po-			
Strategie Petroleum Reserve Plan	289	troleum Operations to the United			
Strategia Potroleum Resorves Program-		States Geologiesi Survey	251	Polistion	
Wide System (SPR)	343			Resource Recovery and Source Reduc-	
				tion	279
		Pignolos			
Petroleum Resources		Annual Report to Congress on Naval			
Oil and Gas Reserves System	372	Petroleum and Oil Shale Reserves	262	Paliution Central	
		Energy Conservation at Government		Energy Data System (EDS)	341
		Field Installations: Progress and		Improved Inspection and Regulation	
Petroleum Storage		Problems (Report)	028	Could Reduce the Possibility of Oli-	
Issues Needing Attention in Develop-		Energy Policy Decisionmsking, Gran-		spells on the Outer Continental Shelf	
ing the Strategic Petroloum Reserve (Report)	090	Izarion, and National Energy Goels		(Report)	100
	364	(Report)	193	Potential for Using Electric Vehicles on	***
Site Distribution Model		Opportunities to Improve Planning for		Federal Installations (Report)	002
Strategio Petroleum Roserve Plan	289	Solar Energy Research and Develop-		Problems Caused by Coal Mining Near	075
		ment (Report)	202	Pederal Reservoir Projects (Report)	
		Power Production at Federal Dama		Respelling of Materials	260
Petrolsum Transport Precedures for Evaluating Reasonable-		Could Be Incomed by Madersizing Turbines and Generators (Report)	205	Reports of the Review Committee on Safety of Outer Continuatal Shalf Po-	
Procedures for Evaluating Resionable		rutteres and Generalists (Algori)	200	Salety of Other Continuation Shall Pa-	

Progress of end Pature Plans for Ex-

Research Information Management

Plant Design Sequeyah Nuclear Plant (Skaff study)

serve in Alaska

System (RD65)

plossion of Netlocal Petroleum Re-

271

324

043

ness of Petroleum Pipeline Rases

Trans-Alaska Oli Pipeline--Progress of

Construction through November

Need Improving (Report)

Joint PEA/BOM Petroleum Reportuse

Energy Digest SEPTEMBER 1977

Technical Assusance Data System (TADS)	340	Electrical Pinancial Foreststing Model (RSB Model EUFINANCE)	277	Information Center for Energy Safety (ICES)	433
Trans-Aleska Dil Pipeline-Progress of Construction through November		Hydrosloctric Fower Resources of the Uscord States (HPR)	407	ing the Strategic Potestern Reserve	
1975 (Report)	084	Estracy of Executed Electric Power Contracts	334	(Report)  Magagement and Papaing Aspects of Three Necessaries Energy Research,	090
Population Statistics		Operating Cost and Boveronmental Radiation Menitoring at the Shap-		Development, and Demonstration Subprograms (Report)	203
Comprehensive Human Resources	355	progress Assense Power Station (Re-	042	Mising and Minerals Policy	267
Data System (CHRDS)	353	parti		Mering Research	323
Soolo-Economic Enveronmental Domo- graphic Information System (SEB-		Planting and Billing System	339	Mosthly Petroleum Statistics Report	285
DIS)	414	Plant Operation and Power Schedul-	335	National Energy Policy An Agenda for	200
		ing Power Flow Program	336	Analysis (Report)	191
Power Equipment		Power Froduction at Federal Dams		National Program for Solar Housing and Couling	224
Survey of Fedoral and Electric Utility		Could Be Increased by Medernizing	205	RECON (REmote CONsole)	440
Propagaments of Power Equipment		Turbines and Generators (Report)	427	Resirv of FPC and FEA Actors in As-	440
(Report)	162	Reactor Information Pile	420	sensing the Impact of Natural Gas	
		Real-Time Operations, Dispatch and Spheduling (RDDS)	237	Cartalizants during the Winter of 1976-77 (Letter)	027
Power Generation		Reducing Nuclear Powerplant Lead-		Salar Energy Update	437
Federal Hydroelectric Plants Can In-		times Many Obstacles Romain (Re-	049	Submission of U.S.S.R. Energy-Related	
recesse Power Sales (Report) Pacific Northwest Hydro-Thermal	201	pare) Revenues and Costs Alfocated to Power	007	Transactions for Congressonal Re-	283
Power Program-A Regional Ap-		Operations at Multiple-Purpose Pro- ions in the Southwestern Pederal		Servey of Publications on Rustoration.	200
prouch to Meeting Heatric Power Re- quirements (Report)	141	Power System (Report)	096	Development and Delivery of Alas- kun Oli Market (Report)	160
Plans for Construction of a Magnetoby- drodynamics Test Facility in Mon-		Security Systems at Contractial Nu- olear Powerplants (Report)	039	U.S. Uranium Resources and Supply	432
tena (Report)	086	Shorwenings in the Systems Used to			
Reverses and Costs Allocated to Power		Control and Protest Highly Danger- ous Nuclear Material (Report)	062	Power Solas	
Operacions at Multiple-Purpose Pro-			002	Federal Hydroelectric Plants Can In-	
jects in the Southwestern Federal Power System (Report)	096	Status of Pending Hydroelectric Ap- olications	410	crease Power Sales (Report)	201
Southeastern Pederal Power Program-	UPS	Surrences of Abnormal Occurrences	*10		
-Pisancial Management and Program		Reported to the Nuclear Regulatory			
Operacions (Report)	174	Constitution	316	Power Systems	
		Supervisory Control and Data Acquis-		Repayment Requirements of the Fed- eral Investment in the Tennessee Val-	
		tion System (SCADA)	338	ley Authority's Electric Power	
Power Licenses				System (Report)	099
Problems in Lecessing Hydroelectric	132				
Properts (Report)	132	Powerplant Siting Environmental Information Apalysis			
		Create (EIAC)	448	Power Transmission	
Pawer Load Forecasting		Canan (BIAC)		California's Control Velloy Project- Proposed Power Race Increase (Re-	
Bell, Electric Power System Retubil-				and	156
By	404	Power Research		Pacific Northwest Hydro-Thermal	100
		Energy Information Reported to Con-		Power Program-A Regional Ap-	
		gress as Required by Public Law 93-		proach to Meeting Electric Power Ro-	
Power Loss		319	283	quirements (Report)	161
Status of Federal and Private Research				Power Factor Requirements Imposed	
and Development Efforts to Conserve Energy by Reducing Electric Power		Power Resources		by Roderal Power-Marketing Agen-	204
Transpiror Louis (Suff mah)	015	Acceptes of Each Geothermal Decron-		cies on their Contenners (Letter)	204
		stration Project	307	Status of Federal and Private Research and Development Effects to Conserve	
		Activities of the Goothermal Coordina-	-	Energy by Reducing Electric Power	
Powarplant Construction		tion and Management Project	206	Transmission Losses (Shaff study)	625
Liquid Metal Fast Breeder Rescoor		Center for Bearry Studies (CES)	443	Status of the Grand Coslee-Raver	
Program-Past, Present, and Putare	044	Domostic Energy Resource and Re-		Transmission Line Project (Report)	104
(Tatimony)	046	serve Betimetes-Uses, Limitations,			
Nuclear Regulatory Communica's Pro- gram for Evaluating Environmental		and Needed Data (Report)	233		
impacts of Construction and Opera-		Effect and Operation of Interstate Com-		Pradiction	
tion of Nuclear Powerplants (Report)	951	purts Relating to Natural One	297	Domestic Energy Resource and Re- serve Estimates-Uses, Limitations,	
, and the second		Energy Abstracts for Policy Analysis		and Needed Data (Report)	133
		(RAPA)	441	Putare linergy Demand (Speech)	175
Powerplonts		Beergy Resource Data Systems	328	rooms morely account tobered.	
Beliefonte Neclear Flant (Smill study)	054	Evaluation of the Status of the Past Flux			
A Compater Code for Conceptual Cost		Test Pacility Progress (Report)	065	Price Policy	
Estimates of Steam Electric Power		The Federal Wind Energy Program (Re-		An Evaluation of the Pederal Power	
Plants (Concept)	431	port)	204	Commission's Rulemaking on Utili- ties' Construction Work in Progress	
Cost and Schedule Estimates for the Nation's First Liquid Metal Past		Improvements Needed in the Pederal Enhanced Oil and Oas Recovery Re-		(Report)	229
Breeder Reactor Domposterdion Pre-		search, Development, and Demon-		Natural Gas Shortage: The Role of Im-	
ceptace (Report)	0.47	stration Program (Report)	153	ported Lippeliod Natural One (Report)	241
Conducto		success regular (Adord)	,00	parties and interest on hispart	***

Subject Index Procurement

Problems of Independent Refiners and Gescline Betalers (Report) Violation of Calling Prices in a Defense	121	Violation of Colling Prices in a Defense Feel Supply Center Safe (Repart)	123	Printing Legality of Administration Actions in Printing and Storing Gas Coupons	
Fuel Supply Center Sale (Report)	128			(Lever)	104
Which Altennative for Energy Policy? (Speech)	168	Prices Amount of Natural Gus that Could Be Released from Federal Price Regula- tions upon Expiration of Contracts		Printing Costs Alligns Waste of Money in Printing	
Price Regulation Alternative Energy Proposals (Tea-		from 1975 through 1985 (Tennency) Austress of the Boesey, Bennencie, and	137	Costs on Gas Rationing Coupons (Lower)	110
Alternative Energy Froposols Deve-	165	Budgetary Impacts of H R 6860 (Sing) study)	129		
laped by the General Accounting Df- fice in Response to Congressional Inquiries Proposals and Supporting Analysis (Textinosy)	166	Comments on Proposed Legislation to Change Base for Government Chargo for Unaviern Eurochment Services		Privote Industry The Exclusion of the Administration's Proposal for Government Assistance to Permit Unanum Enrichment	
Amount of Natural Gas that Could Be		(Report)	131	Groups (Tennesons)	053
Rotecood from Fuderal Price Regula- tions upon Expetition of Contracts from 1975 through 1985 (Testimony)	197	Cost and Prizing System Crude Oil Entitlements (Equaliza-	374		
California's Control Valley Project-	13/	Curtalizated of Electric Power Service	332	Privately-Owned Utilities	
-Proposed Power Rate Incense (Re-	156	by the Teameson Velley Authority (Report)	117	Bulk Electric Power System Reliabil- sty Conseque, Financial, and Bossome In-	404
The Cost of Living Council's Actions to		Electric Rate Demonstration Data Sys-		Corporate, President, and Economic In- formation File (RISCEID)	402
Assure That Cost Increases for Po- troloum Products Were Made in Ac- cordance with Petroloum Proma		tem Boergy Efficiency Radios of Window	345	Hydro and Electric Recurring Data Re-	496
Regulations (Report)	105	Air-Conditioners (Report)	005	Power Surveys and Systems Evalua-	
Crude Oil First Purchaser Doseostic Crude Oil Pricing Policy and	255	Energy, the Economy and the Budget (Speech)	169	tion	409
Reinted Production (Report)	112	FEA Household Energy Expenditure			
Electric Regulatory Activities	408	Model (HEEM)	393	Processing Plants Status and Obstacles to Commercializa-	
Energy Policy Decisioneraking, Organ- ization, and National Energy Goals		GAO's Energy Role (Speech) Implications of Deregulating the Price	199	tion of Coel Liquetsches and Gasifi-	
(Report)	193	of Natural Gas (Report)	133	antion (Report)	085
Energy, the Economy and the Budget (Speech)	169	The implications of Deregulating the Price of Natural Cas (Textrecop)	135	Procurement	
Exemption of a Refined Petroleum Pro-		Information on Selected Aspects of the		Contracting Out Basic Planning and	
duct from the Mandatory Petroleum Allocation and Price Regulations	291	Power Operations of Termesson Val- ley Authority (Report)	167	Management Program Pacetions (Re- port)	085
Pedaral Energy Administration Armsel Report to the President and Con- arcas	290	Leaning of Minerals on Public Lands (Report)	211	Contracts Information System (CIS) Curredment of Electric Fower Service	430
The Federal Barray Administration's Compliance and Enforcement Activi-	2,0	Middle Distillate Price Monstoring Sys- ters	247	by the Temessee Valley Authority (Report)	117
tion (Testimory)	119	Need for Improving the Regulation of the Natural Gas Industry and Man-		Energy Efficiency Ratios of Window	925
Pederal Energy Advansariation's Ef- forts to Audit Domesus Caude Oil		egement of Internal Operations (Re-		Ast-Conditioners (Report)  Energy Research and Development	935
Producers (Report)  GAO's Energy Role (Speed))	133	port) Need for the Pederal Power Commu-	113	Administration's Contragency Pleaser for More Barichment Caracity at	
Oulf Oil Corporation's "Double Dip-		sion to Improve the Regulation of the Natural Gra Industry and Manage-		Partiments, DH (Report)	052
ping" on Crude Oil Product Costs (Report)	128	ment of its internal Operations (Tes- through	114	Piscel Impert of Energy Price Changes on State and Local Government Pur-	
Implications of Deregulating the Price of Natural Gas (Report)	135	Neoclassical Regional Growth and Be-		chases of Goods and Services	395
Middle Distillate Price Mountaine Sys-		ergy Price Model	399	The Legality of the Reported Use by the Energy Research and Development	
tem	347	Problems of Independent Reliners and		Administration of Certain Fossii Bu-	
Problems in Regulating Natural Gas Prices by the Federal Beergy Ad- mountration (Report)	139	Gasoline Retailers (Report)  Frequencest of Foreign and Domestic	121	argy Punds (Letter) Management of and Plons for the Novel	007
Problems in the Pederal Engray Ad-	139	Petroleum by Department of Defense (Report)	001	Potroleson Reserves (Report)	227
ministration's Compliance and Ba-		Refinery Cost Passthrough	349	Policies and Programs Being Developed To Expand Programmen of Products	
forcement Effort (Report)	118	Suppliers' Compliance with Allocation		Containing Recycled Materials (Re-	
Refinery Cost Passthrough Reliable Contract Sales Data Needed	344	and Price Regulations (Report)	109	pen)	023
for Projecting Amounts of Natural Gas That Could Be Derogalated (Re-		Transfer Prioring System Which Alternative for Energy Pelicy?	351	Processment of Ferrigo and Domestic Petroleum by Department of Defense	001
port)	172	(Speech)	169	(Report) Survey of Federal and Electric Units	091
Review of Complaints Concerning the Mandatory Petroleum Allocation				Procurements of Power Equipment	
Program and the Regulation of Pe-		Pricing Violations		(Report)	162
troleum Pricing (Report)	102	Pedoral Energy Administration's Ef- forts to Audit Domestic Crede Oil		Using Solid Waste to Conserve Re-	
Suppliers' Complessor with Allocation and Price Regulations (Report)	109	Freducers (Report)	133	sources and to Create Energy (Report)	013

155

Energy Digest SEPTEMBER 1977

Procurement Procadures Subject Index

Procurement Procedures		Project Independence		Public Buildings	
Contracting Out Basic Planning and		Acerierated Outer Continental Shelf	216	Energy Conservation in Pederal Office Buildings in Collfornia (Report)	000
Management Program Punctions (Re-	CER	Development (Testinory)  Accelerated Outer Continental Shelf	216	How Federal Agencies Can Conserve	002
The Legality of the Reported Use by the	veo	Acodemical Outer Continental Shell Development (Testmony)	219	Unities and Reduce their Cost /Re-	
Energy Research and Development		Development of the Opter Continuental		porti	007
Administration of Certain Fossil En-		Shelf Fould Fact Resources (Ter-		Progress and Problems of the Govern-	
ergy Funds (Lesser)	067	(mary)	215	ment's Utility Conservance Program (Report)	691
		Outlook for Fedoral Goals to Acceler- ate Lensing of Col and Gas Resources		anguno	621
Production Central		ate Lenning of Gil and Gild Resources on the Outer Continental Shelf (Re-			
Amount of Natural Gas that Could Bo		port/	214	Public Heelth	
Rejeased from Federal Price Regula- tions upon Expination of Continons		Review of the 1974 Project Independ-		Report to the President by the Nuclear Regulatory Commission	315
from 1975 through 1985 (Testresty)	127	ence Evaluation System (Report)	128	Summery of Absormal Occurrences	316
Development of Pederal Coal Re-				Reported to the Nuclear Regulatory	
sources (Tentusony)	223	Project Independence Evaluation		Commission	316
		System			
Productivity		Reserves Allecation and Mine Cost	200	Public Lands	
Statistical Data on Petroleum and Pe-		Model (RAMC)	380	Accelerated Outer Continental Shelf	
troleum Products (Report)	079			Development (Testimony)	216
		Preject Managament		Accelerated Outer Continontal Shelf Openinterest (Texturgery)	219
Productivity In Government		Pacific Northwest Hydro-Thermal Fower Program-A Regional Ap-		Administration of Regulations for Ser-	217
Review of the Operations Drivings of the Federal Energy Administration		protect program of Registra Ap-		face Exploration, Mining, and Recks-	
(Report)	115	quirements (Report)	161	mation of Public and Indian Coal	pen
,,		Southessern Pederal Power Program-		Lands (Report) Agreement between the Secretary of	593
		-Figure is Management and Program Operations (Enport)	174	the lesterior and Officials of the State	
Program Administration Patrice Northwest Hydro-Themsal		Cytototas (anyes)		of Utah Pertsining to Oil Shale Leases	
Power Program-A Regional Ap-				(Letter)	209
preach to Meeting Electric Power Re-		Project Utility Federal Energy Administration Efforts		Compensatory Royalty Agreements  Department of the Interior's Proce-	272
quicineus (Riport)	161	to Andit Pael Oil Supplies of Masor		dures for Approving Coal Mining	
		Utility Companies (Project Utility)		Placs (Report)	221
Program Evaluation		(Report)	126	Department of the Interior's Views of	
The Changing Role of the General Ac- counting Office in Energy Inform-		The Pederal Energy Administration's Compliance and Enforcement Pro-		Comments on Administration of Regulations for Surface Exploration,	
tion and Data Programs (Speech)	186	cemes (Testimony)	125	Mining, and Reclamation of Public	
Pederal Assistance to State and Local				and Indian Coal Lands (Report)	495
Governments in Osyeloping and Ad-				Development of Federal Coal Re- sources (Testimons)	223
ministering Energy Programs (Report)	143	Propagenda Evaluation of the Publication and Dis-		Development of the Outer Continents	223
Importance of Financial Data in Byt-		tebution of "Shedding Light on Pacts		Shelf Foul Puel Resources (Ter-	
losting Federal Energy Programs		about Nuclear Energy" (Riport)	064	zimanyi <sup>2</sup>	215
(Spencis)	144			Federal Cool-Leasing Program of the	221
Nuclear Regulatory Commission's Pro- gram for Evaluating Environmental		Propona		Department of the Interior (Report)  Purther Action Needed on Recommen-	221
Impacts of Construction and Opera-		Market Shares System	370	denous for Improving the Adminis-	
tion of Nuclear Powerplants (Report)	051	Propane/Butane Allocation System	349	tration of Pederal Coal-Leasing	
Onahore Loase Management Program Scody for the U.S. Geological Servey		Redintry Cost Passtbreegh	340	Program (Report)	217
y na uno o un Gaungade Servey	250	Subpert L	369	Grants of Rights-of-Way for Pipelines through Pederal Lands	273
Pacific Northwest Hydro-Thermal				Issues in Leasing the Atlantic Opter	
Power Program-A Regional Ap- proach to Meeting Electric Power Re-		Prospecting		Continental Shalf (Teathrong)	213
quirements (Report)	161	Role of Federal Coal Resources in Meeting Energy Quals Needs to be		Leasing of Minerals on Public Lands	\$11
		Determined and the Lessing Process		(Report) Management of and Plans for the Navai	311
		Improved (Reptiri)	226	Petroleum Reserves (Report)	227
Program Management				National Energy Policy: An Agenda for	
		Protectiva Systems		Analysis (Report)	191
	140	Imperennests Needed in the Program		Oil and Gen Lessing on Federal Lands (Report)	210
	.40	for the Prosection of Special Nuclear Material (Report)	034	Outer Continental Shelf Oil and Gas	210
			-	Development Improvements Needed	
				in Determining Where to Leuss and at What Dollar Value (Report)	216
		Prodhow Boy (AK) Survey of Fublications on Exploration,		Outer Continental Shelf Sale #35:	410
		Development and Delivery of Alas-		Problems Selecting and Evaluating	
		kan Oli Market (Arport)	199	Land to Lesse (Report)	231
				Energy Digest SEPTEMBER	1977

Subject Index Rodiographs eral fovestment in the Tennessee Vallty Aschonty's Electric Power

> Requested Utility Ente logresse by the Peterse Electric Power Company

System (Resert)

Radiasctive Contemination

000 Center

Neverta Applied Ecology Information

452

048

071 OAR 970

050

188

157

Nuclear Regulatory Commission (Re-

port

Public Relations

The Costal Zone Management Pro-

eram An Uncertain Puture (Resort)

Progress of Energy Conservance Pre-

Repayment Requirements of the Pod-

**Energy Digest SEPTEMBER 1977** 

gram for Consumer Products Other		Requested Utility Fate Increase by the			
Than Automobiles	294	Peterser Electric Power Company (Report)	127	Radioactive Materials	
Staffing of Pederal Energy Administra- sion's Office of Communications and	***		127	Issues of Nuclear Fact Reprocessing and Disposal of High Level Nuclear	
Public Affects (Report)	164	Quality Control		Waste (Speech)	
Public Transportation		The Reactor Inspection Program of the Atomic Energy Commission (Report)	031	Issues Related to the Cleaning of the Nu- clear Fuel Services, Incorporated, Re- processing Plant at West Valley, New York (Report)	
Energy Conservation Financing (Ten- among)	927	Quoties Alternative Energy Proposals Dese- loped by the General Accounting Of-		Issues Related to the Cleaning of the Nu- clear Finel Services, Inc., Repeaces- ing Plant at West Volley, New York	
Public Utilities  Bulk Electric Power System Rehabil- for	494	fice in Response to Congressional Impanies. Proposals and Supporting Applicate (Technology	166	(Textworey) Success of Pederal Programs and Poli-	•
Corporate, Pinancest, and Economic In- formation Pile (RISCEID)	422	Analysis of the Energy, Economic, and Endgestry Impacts of H.R. 6860	100	cers for Disposing of Obsolose and Unused Nuclear Facilities (Report)	
Bitcomeal Pinancial Processing Model (BSB Model EUFINANCE)	307	(Shiff shalp)	129	Redionctive Pollution Issues of Nuclear Park Reprocessing	
Electric Regulatory Activities	406	Rediction		and Disposal of High Level Nuclear	
Roergy Conservation Practices En- counaged by States (Report)	006	Operating Cost and Environmental Resistation Metricoring at the Star-		Waste (Speech) Issues Related to the Closing of the Nu-	
An Evaluation of the Federal Power Commission's Rulemsking on Utili- ties' Construction Work in Progress (Report)	229	pingport Ascence Fower Station (Re- port)	042	clear Facil Services, Inc., Repeacess- ing Plane at West Valley, New York (Termony)	
Federal Energy Administration Efforts	229	Radiation Accidents			
to Audit Putl Oil Supplies of Major Utility Companies (Project Utility)		Survey of Federal Programs and Pol- cies for Disposing of Obsolute and		Redionclive Waste Issues of Nuclear Fuel Reprocessing and Dispensi of High Level Nuclear	
(Report)	126	Unused Nuclear Facilities (Report)	667	Waste (Speech)	
PPC Library	418			Issues Related to the Closing of the No-	
How Federal Agencies Can Conservo Utilines and Reduce their Cost (Re-	007	Radiotion Moterials Assessment of United States and later- national Controls over the Procedul		clear Fool Services, Incorporated, Ro- processing Plant at West Velley, New York (Report)	
Hydro and Electric Recurring Data Re-		Uses of Nuclear Energy (Repart)	10	Test angero	
ports Library of Esecuted Electric Power	406	Selected Aspects of Nuclear Power- plant Reliability and Reponenties (Re-		Radioactive Waste Disresal	
Contracts Power Flow Program	334 336	peró	050	Considerations for Commerculizing the Liquid Motal Fast Breeder Reso-	
Power Surveys and Systems Evelon-	336			tor (Report)	
tion Prostess and Problems of the Govern-	409	Radiotion Sofety Environmental Information Analysis Center (EIAC)	448	Issues of Nuclear Part Reprocessing and Duposal of High Level Nuclear Waste (Speech)	
ment's Utility Conservation Program (Report)	021	ERDA Report of Rovice of Design, Construction, and Pleasing of	440	Insure Related to the Closing of the No- clear Feel Services, Incorporated, Re-	
Roal-Time Operations, Dispetch and Scheduling (RODS)	337	Pietensum Processing Pacifities Nevada Apphed Boology Information	299	processing Plant at West Valley, New York (Report)	,
ublic Utility Rotes		Conter Insues Related to the Cleans of the Nu-	452	Issuez Related to the Closing of the Ne- clear Fael Services, Inc., Reprocess- ing Plans as West Valley, New York	
Blectric Regulatory Activities  An Brainstian of the Foderal Power	408	clear Fuel Services, Inc., Reprocess- ing Flant at West Valley, New York		(Terminony)  Nevaria Applied Ecology Information	
Commission's Releasking on Utili- ties' Construction Work in Progress		(Testimony) Operating Cost and Environmental	071	Center Selected Aspects of Nuclear Power-	
(Report) How Pederal Agencies Can Conserve	229	Radiation Monitoring at the Ship- pleagnest Atomic Power States (Re-		plant Retiability and Economies (Re-	
Utilities and Reduce their Cost (Re- port)	007	post) The Reactor Inspection Program of the	042	Redigativity	
Information on Selected Aspects of the Power Operations of Tennessee Val- ley Authority (Report)	167	Atomic Secry Commission (Report)  Report to the President by the Neclear	031	Recommon-Gathering Activates of the Nuclear Regulatory Commission (Re-	
Management Improvementa Needed in		Regulatory Commission	315	porti	
the Federal Power Commission's Processing of Electric-Rate-Increase Cases (Report)	153	The Safeguards and Security of the En- ergy Research and Development Ad-		Radiobiology	
Cases (Report)  Progress and Problems of the Govern-	153	ministration's Rocky Plets Platentum Papelity (Report)	060	Report on the Status of Major Con- struction Projects Experiencing Sig-	
ment's Utility Conservation Program (Report)	921	Survey of Pederal Programs and Poli- elos for Disposing of Obsolete and		nificant Vastances	
Proposed Power Rate Incresse of the		Unused Nuclear Facilities (Aspert)	057	Radiographs	
Bureau of Reclamation's Central Val- ley Project (Testimony)	101	This Country's Most Exponsive Light Water Resetor Safety Test Facility		Information-Gathering Activaties of the Nuclear Regulatory Commission (Re-	

Water Renetor Safety Test Facility

(Report)

Rationing Courses

Ratiozing Coupans Legality of Administration Actions in Practing and Storing Cost Coupans	104	RECON (R Emate CONsole)	440	Review of the Progress and Problems of Rescarce Recovery Since the Passage of the Rescarce Recovery Act of 1970 (Pasthoogs)	016
(Letter)  Legaley of Printing Gasoline Rationing  Coupons by Federal Energy Advance-	104	Records Comments on H.R. 11212, 93ed Con-		Using Salid Watte to Conserve Re- sources and to Create Energy (Report)	
tration (Letter)	100	gess, a Bill to Futher Research, Development, and Commercial Demonstrators in Genthermal En-			013
Reactor Fuel Reprocessing Considerations for Continentalities the Liquid Metal Past Broader Resc-		oft (Yem)	196	Recycling of Waste Products Recycling of Materials	260
the Laglad Meter Fact into her Reports bases of Nuclear Fact Representing	066	Records Accessibility Access of the Federal Power Commis-		Resource Recovery and Source Roduc- tion	279
and Daposal of High Level Nuclear Waste (Speech)	cell	sees to Bureau of Reclamation Re- eards to Imure Compliance with the		Solid Waste Miniagement, Collection, Diaposil, Resource Recovery, Resy- cling Program	257
Issues Reloted to the Classing of the Nu- clear Firel Services, Incorporated, Re- processing Plant at West Valley, New		Pederal Power Act (Learn)  Actions Needed to Improve Pederal Ef- Sans on Collecting, Analysing, and	163	ung rugan	***
York (Report)	970	Reporting Energy Data (Report)  Amendment of the Pederal Energy Ad-	159	Referendo Evaluation of the Publication and Dis- tribution of "Shedding Light on Perts	
Reactors Comments on Energy Research and		minimization Act of 1974 and the liv- tension of the Experitors Date (Lever)	173	about Nuclear Energy" (Report)	064
Development Administration's Proposed Arrangement for the Clinch Rever Breeder Resour Demonstra-		The Changing Role of the General Ac- counting Differ in Energy Informs-		Refineries Crude Oil Bay/Sell Program	200
tion Plant Propost (Report)  The Energy Research and Develop- mont Administration's Proposed	044	tion and Data Programs (Speech)  Energy Data Collection in the Pederal  Government (Tenoway)	186	Crude Del Establements (Equaliza-	351
Contract with Project Management Corporation, Communicality Edward,		Patere Recogy Demand (Speech)  GAD's Energy Role (Speech)	175	The Pederal Energy Administration's Compliance and Enforcement Activi-	
and the Tennessee Valley Authorsy (Report) Feet Flas Ten Faculty Program (Staff	056	How Solar Energy Was Tremed in the APC Chairman's Report, "The No-		tus (Patencesy) The Pederal Energy Administration's Compliance and Enforcement Pro-	116
majyi Isases Reluted to the Cleaning of the Nu- clear Fael Services, Incorporated, Re-	041	tion's Energy Patent" (Report)	198	casses (Taxanony) The Pederal Ecorgy Administration's	123
processing Plant at West Valley, New York, (Report)	070	Records (Forms) The Energy Information Act. S. 1864	174	Progress in Redrecting Its Compl- ance and Enforcement Program (Re-	120
Liquid Metal Fast Breader Resistor Plant Parameter Information Sys- tem	425	(Tenziny)	1/6	port) Joint PEA/BOM Petroleum Reporting Statem	375
Poor Management of a Neclear Light Water Reactor Safety Project (Report)	063	Records Management Access of the Poderal Power Commis- sion to Surges of Rectastation Re-		Problems in the Federal Energy Ad- minutestion's Compliance and En-	
Problem Areas which Could Affect the Development Schedule for the Closh River Broader Reactor (Steff andy)	040	cords to lestire Compliance with the Pederal Power Act (Lette)	163	forcement Effort (Report) Problems of Independent Refiners and Ossolne Restilers (Report)	111
The Proposed Contract for the Closch River Breeder Resctor Project (Ten-		Ways to Strongthen Congressional Con- trol of Energy Construction Projects. Other Than Nuclear (Report)	199	Rollinery Cost Passthrough Statistical Data on Petroleum and Po-	345
Associal Research Information File	058 427		.,,,	troleum Products (Report) Trends in Refinery Capacity and Utili-	071
The Resease Inspection Program of the Atomic Energy Commission (Report) This Country's Mars Expensive Light	031	Recycled Materials Policies and Programs Being Developed To Espand Prospectors of Products		zation of Petrol-turn Refinerion in the United States and Foreign Refinery Experting Centers	244
Water Reactor Safety Test Panday (Report)	059	Continuing Resysted Materials (Re- port)	023	Injuting Climit	
Reciementon		Resysted Off		Refiners  Effects of a Change in Size Standard for Small Business Petroleum Refiners	
Administration of Regulations for Sur- face Exploration, Mining, and Recla- strates of Public and Indexs Cost Lunds (Report)	093	Polisies and Programs Bong Developed To Expand Programmen, of Products Continuing Recycled Materials (Re-		Small diminess Petroleum Relinors (Report)	140
Department of the Interior's Views of Constants on Administration of	493	parti	023	Refunds Management Improvements Needed in	
Regulations for Surface Exploration, Microg, and Reclamation of Public	095	Recycled Paper Policies and Programs Being Developed		the Foderal Power Commission's Processing of Electric-Rate-Increase Cases (Report)	15
and Indian Coal Lands (Report)  Parther Action Needed on Recommen- dations for Improving the Adminis-	u#5	To Expand Procucement of Products Communing Recycled Mazenals (Re- port)	023		
tration of Pederal Cont-Learing Program (Report)	217			Refuse Dispasal  Froblems Countd by Coal Mixing Near  Federal Reservoir Projects (Report)	07.
Opportunities for Improvements in Re- electing Strip-Minod Lends under Coal Purchase Contracts (Report)	092	Recycling Departunities for Mare Effective Use of Anienti Manare (Report)	626	Resource Recovery and Source Recipe-	27

Energy Digest SEPTEMBER 1977

Subject Index Regulatory Policy

Regional Multipliers Regional Industrial Multiplier System (RIMS)	392	Regulations Enforcement Administration of Regulations for Sur- face Exploration, Missing, and Recla- mation of Public and Indian Coal		Information on Certain Oil and Gas In- dustry Oversight Responsibilities (Re- port)  Management Improvements Needed in	10.
		Lands (Report)	093	the Federal Power Communion's	
Alleged Waste of Money in Printing		Department of the Interior's Views of		Processing of Electric-Rate-Increase	
Costs on Got Rationing Coupons		Concents on Administration of Regulations for Surface Exploration.		Cases (Report)	15
(Letter)	110	Minnes, and Resignation of Public		Management of the Atomic Energy Commission's Controlled Thermonu-	
Department of the Intence Study of		and Indian Coal Lands (Report)	095	clear Research Program (Report)	19
Stut-in Oil and Gas Well Comple- tions and Leases-GAO Observations		Pollowup on Certain Matters Concern-		Problems in Identifying, Developing,	
(Report)	224	ing the Impection and Regulation of Outer Continental Shalf Oil Opera-		and Using Goothermal Resources	10
Energy Polity Decisionmaking, Organ-		tions (Appen)	208	(Aspent) Problems in Licensing Hydroelectric	19
ization, and National Energy Goals		Improved Inspection and Regulation		Projects (Report)	13
(Report)	193	Could Reduce the Possibility of Od- spills on the Outer Continental Shelf		Proposed Power Rate Increase of the	
Pederal Energy Galdelines Weekly Supplement	282	(Report)	100	Bureau of Reclamation's Central Val-	10
Pinancial Disclosures by Employees	***			ley Project (Testimony) Reducing Nuclear Powerplant Lend-	10
Performing Ponetions under Energy				times: Many Obstacles Remain (Re-	
Policy and Conservation Act	287	Regulatory Agencias  Access of the Federal Power Commis-		port)	06
The Geological Survey's Inadequate		sion to Surena of Reclamation Re-		Requested Utility Rate Increase by the	
Action on Recommendations Con- orning Inspection and Regulation of		ecods to Insure Compliance with the Federal Power Act. (Letter)	163	Potenza Electric Power Company (Report)	12
Outer Continental Shalf Oil Opera-		Autions Taken by the Pederal Power	163	Requests to Regulatory Agencies by Oil	
tions (Report)	222	Commission on Prior Recommends-		Companies for Deviations from	
Violation of Celling Prizes in a Defense	128	tions Concerning Regulation of the		Standard Procedures (Report)	14
Fuel Supply Center Sale (Report)	128	Natural Gas Industry and Manage- ment of Internal Operations (Report)	147	Review of the Operations Dynalon of the Pederal Energy Administration	
		The Administration of the Petroleum		(Report)	- 11
egulations Compliance Department of the laterior's Proce-		Set-Ande Program by State Energy		Which Alternative for Energy Policy?	
dures for Approving Coal Mining		Offices (Report)	122	(Specis)	16
Piets (Report)	228	Alternative Energy Proposals (Tea-	165		
Pederal Energy Administration's Ef-		Amendment of the Federal Energy Ad-		Regulatory Policy	
forts to Audit Damestic Crade Oil	110	minutration Act of 1974 and the Ex-		Access of the Federal Power Counts	
Produces (Report)	120	tennon of its Expiration Date (Letter)	173	sion to Bureau of Reclamation Re- cords to Insure Compliance with the	
Pederal Energy Administration Efforts to Audit Parl Oil Supplies of Major		A Bill to Establish a National Energy		Pederal Power Act (Letter)	10
Utility Companies (Project Utility)		Information System (Testimony)	158	Actions Taken by the Federal Power	
(Report)	126	A Bill to Extend the Federal Energy		Commission on Prior Recommenda- tions Concerning Regulation of the	
The Federal Energy Administration's		Administration Act of 1974 (Tea-	179	Natural Gas Industry and Manage-	
Compliance and Enforcement Activi- tics (Textreory)	119	The Changing Role of the General Ac-		mest of Esternal Operations (Report)	34
The Federal Energy Administration's		ecenting Office in linergy Informa-		The Administration of the Petroleum Set-Aside Program by State Energy	
Compliance and Enforcement Pro-		tion and Data Programs (Speech) Commons on Selected Aspects of the	185	Offices (Report)	13
consex (Textmony)	125	Administration's Proposal for Gov-		Alleged Waste of Money in Printing	
The Federal Energy Administration's		emmont Assistance to Private		Costs on Gas Rationing Occapons	1
Progress in Redirecting Its Compli- ance and Enforcement Program (Re-		Uranium Enrichment Groups (Report)	145	Alternative Energy Proposals Deve-	
port)	120	The Cost of Living Council's Actions to		laped by the General Accounting Of-	
Need for Improving the Regulation of		Aware That Cost Increases for Pe-		fice is Response to Congressional	
the Natural Gas Industry and Man- agement of Internal Operations (Re-		troloun Products Were Made in Ac- sectance with Popoleum Profing		Inquines: Proposals and Supporting Analyses (Pestinery)	10
port)	112	Regulations (Report)	105	Amendment of the Poderal Energy Ad-	
Problems in Regulating Natural Gas		Energy Data Collection in the Pederal		ministration Act of 1974 and the Ex- tension of its Excuration Date (Letter)	
Prices by the Pederal Energy Ad-		Government (Testmony)	157	sension of its Expiration Date (Lester)	12
ministration (Report)	139	Brougs, the Economy and the Euriget (Speed)	159	America's Energy Petures (Speed)	12
Problems in the Poderal Energy Ad-		The Expertation of Coal (Report)	244	Amount of Natural Clas that Could Be	
ministration's Compliance and lin- forcement liffort (Report)	116	The Federal Energy Administration's		Released from Pederal Price Regula- tions upon Extension of Contracts	
Problems in the Federal Estray Office's	-	Compliance and Enforcement Pro-	125	from 1975 through 1985 (Tentract)	1
Implementation of Emergency Pe-		cesses (Testimony) The Federal Energy Administration's	125	Department of the Interior Study of	
troleum Allocation Programs at Re-	100	Progress in Redirecting Its Compli-		Shot-In Oil and Gas Well Comple-	
gional and State Levels (Report)	rve	ance and Briforcement Program (Re-	120	tions and Leases-GAO Observations (Report)	
The Reactor Inspection Program of the Atomic Energy Commission (Report)		port) GACY France Bala (Second)	120	Domestic Crude Oil Priolog Policy and	-
Atomic sategy Community (Asper)	031	GAC's Energy Role (Speech) Improving the Operations of the Fed-	177	Related Production (Report)	1
Requests to Regulatory Agencies by Oil		eral finergy Administration Region X		Energy Contervation Practices En-	
		Office (Report)	111	couraged by States (Report)	0
Companies for Deviations from					
Companies for Deviations from Standard Procedures (Report)	148	Information-Gathering Activities of the		Hourgy, the Becmeny and the Budget (Special)	5.4
Companies for Deviations from	148	Information-Gathering Activities of the Nuclear Regulatory Commission (Re- port)	188	(Speech) The Exportation of Coal (Report)	2

Subject Index Regulatory Policy This Country's Most Expensive Light

The Pederal Energy Administration's

tics (Testingag)	119	(Report)	059	sies (Tenmon)	141
The Federal Energy Administration's		Which Alternative for Energy Policy?	007	Fostil Engray Undere	424
Compliance and Enforcement Pro- cesses (Teatrony)	125	Speed:	168	How Solar Energy Was Treated in the	440
Federal Hydroelectus Plants Can In-				ABC Charman's Report, "The Na- tion's Energy Patter" (Report)	196
crease Puwer Sales (Aspen)	201	Reinbursements		How the Federal Government Partici-	
Politistrup on Certain Matters Concern- ing the Impection and Regulation of Outer Continental Shelf Oil Opera- tions (Report)	201	Funds Credited to the Account of the Virgin Islands for Refunds from Ire- port License Fees (Report)	124	pates in Activities Affecting the En- ergy Resources of the United States (Report)	098
Funds Credited to the Account of the				Improved Policies and Procedures for the	
Virgin Islands for Refunds from Im- port License Pecs (Report)	124	Reliability Bulk Electric Power System Rehabil-		Exploration and Development of Conce Centimental Shell Reseases (Testimony)	232
Future Energy Demand (Speech)	175	My	404	Improvements Needed in the Pederal	
GAO's Energy Rule (Speech)	177	Selected Aspects of Nacieur Power-		Behanced Cil and Gas Recovery Re-	
The Geological Survey's Insdequete Action on Recommendations Con- cernate Inspection and Regulation of		plant Rehability and Economics (Re- port)	050	search, Developmen, and Demon- stration Program (Report)	155
Outer Commental Shelf Oil Opera- tions (Report)	212			International Cooperation in Energy Research and Oevolopment (Ter-	
Gulf Oil Corporation's "Booble Dip-		Reprogramming of Appropriated Funds		(Onony)	246
ping" on Crude Oil Product Costs (Report) Implements of Deregulating the Proce	138	Report on Reprogramming Action for the Neclear Materials Program	314	The Liquid Metal Fast Breeder Rescoon Promises and Uncorporates (Shaff study)	049
of Natural Gas (Report)	135			Management and Punding Aspents of	
The Imphotoness of Dengelsting the Price of Natural Gas (Terminasy)	136	Research		Ture Nonmiclour Energy Research, Development, and Demonstration	
haproving the Operations of the Fed-		Energy Resource Data Systems	328	Subprograms (Report)	203
aral Energy Administration Region X Office (Rejort)	111	Goologic Surveys, Investigations, and Research Program	327	Management of the Asomic Energy Commission's Controlled Thermonu-	
Need for Improving the Regulation of the Natural Gas Industry and Man-		Information-Gathering Activities of the Nuclear Regulatory Corrections (Re-		clear Research Program (Report)	195
agement of Internal Operations (Re-		peri)	188	National Plan for Energy Research, Development, and Demonstration:	
part)	113	Land and Mineral Conservation Infor-		Creating Energy Choses for the Fu-	
Need for the Poderal Power Commis- sion to Evaluate the Effectiveness of		mation System	326	ture	428
the Natural Gas Certainment Policy		Mining Research	323	Opportunities to Interove Planning for	
(Report)	130	Research Information Management		Solar Energy Research and Develop-	
Need for the Pederal Power Commis-		System (R1M5)	324	ment (Report)	202
son to Improve the Regulation of the Natural Gas Industry and Manage-				Problem Areas which Could Affect the	
ment of its internal Operations (Tes-		Research and Development		Development Schedule for the Clineh River Breeder Reactor (Sinff study)	040
Armony)	114	Alternative Pauls for Avission (H.R.		Problems in Identifying, Developing,	040
Problems Caused by Coal Musing Near		12112) (Tiestlessey)	154	and Using Geothermal Resources	
Federal Reservoir Properts (Tes-	076	America's Energy Puteres (Speech)	171	(Report)	199
Problems in Identifying Developing.		Can the U.S. Breeder Resetor Develop-		Project Operations System (POS)	361
and Using Geothermal Resources		ment Program Be Accelerated by Us- ing Forcian Technology? (Report)	245	RECON (REmote CONsole)	440
(Report)	199	Certain Astorn That Can Be Taken to	245	Report by the U.S. Baergy Research	
Problems in Regulating Natural Gas Prices by the Poderal Energy Ad-		Help Improve This Nation's Uranium		and Development Administrations	
ministration (Report)	139	Picture (Report)	061	Status of Construction Projects and Other Case	313
Problems in the Federal Benzy Ad-		Comments on H.R. 11212, 93rd Con-			313
musiculties's Completee and En-		grees, a Bill to Purther Research, De-		Report on Activity and Program Index of the Energy Research and Dovolon-	
forcement Difart (Report)	1148	velopment, and Commercial Demonstrations in Geostermal Es-		ment Administration: Status of Con-	
Problems of Independent Refiners and Gaspine Resulers (Resort)	121	tray (Letter)	196	struction Projects and other Osta	312
The Purchase of Short-Supply, Energy-	.21	Energy Research, Dovelopment, and		Report on ERDA's Nonnuclear Activi-	
Related Items through the Export-		Demonstration Inventory	447	ties	310
Import Back of the Urated States (Report)	235	ERDA Energy Resenteh Abstracts		Review of Selected Federal and Private	
		(ERA)	438	Solar Energy Activities (Report)	197

An Evaluation of Proposed Federal As-

sistance for Prospeing Commerciali-

zetion of Emerging Energy

An Evaluation of Proposed Pederal As-

sistance for Financing Commerciali-

ration of Beneraling Energy Technologies (Tentimons)

Pederal and State Solar Energy Ro-

Federal Cost Research-Status and

Problems to Be Resolved (Resort)

stration Activities (Report)

search, Development, and Demon-

Technologies (Resert)

102

224

174

The Coasial Zone Management Program: An Uncertain Future (Resort) Pederal and State Solar Energy Research, Development, and Demonstration Activities (Report) **Energy Digest SEPTEMBER 1977** 

Status of Federal and Private Research

Transmission Losses (Staff study)

and Davelopment Efforts to Conserve

Energy by Reducing Electric Power

Solar Energy Undate

151

152 Research Grants

200

Planning for Commercial-sized

426 100 098

437

m

Requests to Regulatory Agencies by Otl

Review of Complaints Concerning the

Role of Federal Coal Resources in

Southeastern Federal Power Program-

-Financial Management and Program

Meeting Energy Goals Needs to be

Determined and the Leading Process

Mandagery Petrology Allocation

Program and the Regulation of Pe-

Standard Procedures (Report)

troloum Pricate (Resort)

Improved (Report)

Operations (Report)

Companies for Dovisions from

Sabled Index Safety Property and Perhitres in Developme Nuclear and Other Experimental Techniques for Receiveres Navet

Gas in the Rocky Mountain Area (Re-

societé and la Create Eatray (Assert)

A Bill to Estrad the Pederal Barry

Administration Act of 1976 (Ter-(Append)

Rocky Flats Plutoplum Facility

Rocky Mountains 603

part?

\*\*\*

The Saleguards and Security of the En-

menstration's Rocky Flats Phoseium Escitty (Report)

Progress and Problems on Developing rogens and Problems in Developing Noclose and Other Experimental Technology for Recovering Natural

Gas in the Rocky Mountain Area (Re-

\*\*\*

Research Management

Reservoirs

ANTIONNE

Residual Evol Off

Davelopment of Intersgency Relation-

Mesocale and Exchange (Bernet)

Problems Couted by Coal Mount Note

Problems Caused by Coal Mining Nete Federal Reservoir Projects (Tea-

Federal Reserveir Property (Report)

shirts in the Regulation of Nuclear

056

075

0410 Using Solid Waste to Comerve Re-

Resource Utilization 976

Energy Digest SEPTEMBER 1977					161
Development Improvements Needed in Determining Where to Lease and at What Dollar Value (Report)	218	Ropoet Entitled "Safety and Trin- apertation Safeguards at Rocky Pitts Nuclear Weapons Pinat" (Report)	667	This Country's Most Expensive Light Water Reactor Salety Test Pacify (Aspect)	059
Resource Recovery Outer Continental Shelf Oil and Gas		Rocky Flots Nucleus Weapons Plant An Unclassified Digest of a Classified		Summary of Abnormal Occumences Repected to the Nuclear Regulatory Commission	316
Resource Recovery Since the Passage of the Resource Recovery Act of 1970 (Testinony)	016	System	274	The Safeguards and Security of the En- ergy Research and Development Ad- ministration's Rocky Flats Platonium Parility (Report)	060
Review of the Progress and Problems of		Consolidated Flexneial Statement of the Federal Columbia River Power		Safety and Foliation Control	152
Problems in Identifying, Developing, and Using Geothermal Resources (Resort)	199	Rivers Annual Report on the Columbia River Power System	275	Safety of Octor Continuatal Shelf Pe- troloura Operations to the United States Geological Survey Reports of the Work Group on OCS	251
Resource Monagement Lensing of Minerals on Public Lands (Report)	211			Reports of the Review Committee on	001
meet Program Stady for the US Geological Survey	247	Right of Way Grants of Rights-of-Way for Pipelines theoreth Pederal Lands	273	The Uquid Motal Fast Boarder Reactor: Promises and Uncertainties (Stoff study) The Reacter Inspection Programs of the Atentic Bacray Commission (Report)	049
Resource Evaluation Conservation Devision Task Force Re- nort on the Ombore Lesse Manage-		Southeastern Federal Power Frogram  -Picanoisi Management and Frogram  Operations (Report)	174	Issues Rebood to the Closing of the Nu- oles: Pasi Services, Incorporated, Re- processing Pleas at West Valley, New York (Report)	070
Prosecus Infrastructure is Energy Development Areas of the Western States (Speech)	081	Operations at Multiple-Purpose Pro- jects in the Southwestern Peders! Power System (Report)	996	Platenum Processing Facilities Information Center for Energy Safety (ICES)	199 433
Resource Development		Leases (Report) Revenues and Costs Allocated to Power	207	ERDA Report of Review of Dougs, Construction, and Pleaning of	
Operations (Report) Subpart L	359	Land to Losse (Report) Provisions of Nerajo and Hopi Coel	231	Development of Interagency Relation- ships in the Regulation of Nuclear Materials and Farkites (Report)	055
Southeastern Federal Power Program- Financial Management and Program	174	(Report)  Outer Continuental Sheld Sale #15: Problems Sciencing and Evaluating	210	Sofety Criticality Data Center	445
Mandatory Oil Imports Project (MOIP) Propuse/Britane Allocation System	353	World Oil Prices (Staff study) Oil and Oas Lessing on Federal Leads	237	Security Systems at Commercial No- olear Powerplants (Report)	009
Pederal Energy Administration Average Report to the President and Con- gress FPC Budget Files	290 400	Revenues  Economic Implications of Current		Sobotoge Assessment of United States and Inter- national Controls over the Penceful Uses of Nuclear Energy (Report)	247
Crude Oil Estatements (Equalities- tion)	352	Retrofitting Project Conserve	244		
Crude Oil Bay/Sell Program	350			Solid Mineral Leaung Activities	254
Budget History Tables	317			Royalty Accounting System Study of	
Bookkeeping System	420	Potenicism Market Shares	284	Review of Royalty Accounting System for Osahore Od and Gas Lesses	253
Resource Allecation America's Barray Puteres (Speeck)	171	Patell Trade		Provisions of Navago and Hope Cost Leases (Report)	207
Subpert L	359	Problems of Independent Refiness and Guardine Returiers (Report)	121	(Report) Oil and Gas Lessing on Federal Lands (Report)	211
and Auto Similation Model (RD4)	385	Retailers		(Report)  Leating of Minerals on Public Laude	225
Regional Econometric Demand Model	366			Increase Income and Employment	
Market Shares System OECD Breegy Demand Model	370	Contingeral Shalt Resources (Featurery)	232	Cost, Git, and Gus-Better Manage- ment Can Improve Development and	
Cost and Pricing System	374	Improved Policies and Procedures for the Exploration and Development of Outer		Indus Natural ResourcesPart II:	
				Royalties	

Safety Regulations Subject Index

Searchy Maries  The Stand Principle Control of the Search Prin						
Section of the Process of the Proces	ofety Regulations				Comments on the Administration's	
se of the forestant classes between the control of	(Tentemony)	194				140
Mounted Christmans 1  Salve Assert Party Bellevier September 1  Salve Assert September 1	Role of the leternational Atentic En-		Uses of Nutrieer Energy (Report)	247		
U.S. Introduced National Control England Parameters (Parameters Services and Parameters (Parameters Services Se	ergy Agency in Safaguarding Nuclear Managing Continued	242	Role of the International Atomic Es-		ru-tion c-	
Flack on True Hospital States of the States and States of the States of the States of the States of the States of St		242	Material (Report)	240	Requests to Regulatory Agencies by Oil	
Services and the Administration of the Charles and Services and Servic	Rights Are They Being Effectively		The Safeguards and Security of the Ba-		Companies for Deviations from	
Forty Standard	Exercised? (Unalisatified Digest) (Re-	242	ergy Research and Development Ad-		Stanfard Procedures (Report)	145
Services and the Administration of processing and p		2-0	Pacility (Report)	060		
Annual Reprint du Euroscop (Time)  Annual Colle Reprint Steley Manual  Annual College Reprint Manual  Annual College Manual  Annual College Reprint Manual  Annual College Manual  Annual Col					Shipping	
spectrum on the Administration of the Collection of 1544 and 1545 received by the Collection of 1544 and 1544			ciese Powerplants (Report)	039		
The Control of the Could be Co	aportation on the Administration of					035
Selection between 100 at Cold for Education Construction	of 1968	277	Socurity Measures			
Section   Comment of Name Could be designed from the Country of Name Country			Protecting Spetial Niclear Material is: Transit languagements Made and Ex-		Shippingport Atomic Power Stolies	
Annex (A Flower Course of Course)  For Professor (A Flower Course)	eles Controls		isting Problems (Report)	(03	Operating Cost and Environmental	
Referred from Petrol File Engine In 19th Alloward SET All	Amount of Natural One that Could Re-				Radiation Monitoring at the Ship-	
See 1 Storage Mark Channels of the Control Con	Released from Pederal Price Resula-		Security Systems			042
Saight Course Sain Dan Norder  On Thi Could be Exempted the  Volution of College Prime in Different  Peril Sopicy Course Sain (Prime of December 1)  Folian Water  Peril Sopicy Course Sain (Prime of December 1)  Saint Francisco Ber Anne  Saint Francisco	from 1971 describ 1985 (Testimonal	127	Shorteominas in the Systems Used to			
for Thereing, Amenin of Notice for Postering for Postering Amenin of Notice for Postering Poster	Reliable Contract Sales Data Needed		Control and Protest Highly Danger-	-	Shine	
Selection of College Parties is Defended Parties and College Parties in Defended Parties (Parties Parties Part	for Projecting Amounts of Natural		on terran material (solve)		The Navy's Practice of Discharging	
Pellation Contact Polaries in Order  The William Contact	port)	172			Fuel at Sea (Report)	020
Pool Specified Court Selection (1997)  The Model of Selection Street Court Specified Court Spe	Violation of Ceiling Prices in a Defense					
Salves Wosser  Fine Foreignes für Aussel   San Foreignes für Aussel   Foreignes für Auss	Fuel Supply Center Sale (Report)	128	Potensi Reservoir Projects (Tas-		Shortoges	
See Production for American See Production See Production See Production for American See Production See			(dang)	C74	Natural Cas Shortage. The Role of In-	
See President Bay Asset   Color   Colo					ported Liquetted Natural Das (Kaport)	241
Section Beyond the Enteringency College Section Beyond the Entering College Section Beyond the Enteringency College Section Beyond the Entering Beyond the Enteringency College Section Beyond the Entering	Pleme Model	242				
See Frederick leifer Anne American Land Property Studies Fred See See See See See See See See See S						
Service Andrew Company Notice First By Company Notice First Service Compan				100		
DB) 46 Suppoyals Moder Pace (Service Clark Pace) 150 Count Clark Pace (Service Clark Pace) 150 Count Pace (Service Pace) 150 Count P	Socio-Romente Environmental Deno-				Models	429
Seripen Annie Per Bellg mell 20  Seripen Annie Bellg mell 20  Seripen Annie Per Bellg mell 20  Seripen Annie Per Bellg mell 20  Seripen Annie Per Bellg mell 20  Seripen Annie Bellg mell 20  Seripen Annie Per Bellg mell 20  Serie Be	DIS)	434			Crude Oll and Natural Gas Production	
Search Andre  To the Rebert of Proping Second COI  To the United Steam (Pager)  Service Copys  Contense on Pagers Legislate to  Services College  Contense on Pagers Legislate to  Services Services  Pagers Legislate to  Services Services  Contense on Pagers Legislate to  Services Services  Services Serv				043		398
There & State   Section	oud! Arabia				cross our riting atoms (Denoral)	377
Schedung (Childran Department of Comments's State State State Department of Comments's State State State State Department of Comments's State State State Department of Comments's State State State State Department of Comments's State St	Issues Related to Foreign Sources of Oil				Dynamic Input-Output Linear Pro-	
Serfacey Citation  Serfacey Citation  Fig. Citation (Figure)  Serface Citation (Figure)  Service Selface  Freshind New Plant Birth (Figure)  Freshind New Plant Birth (Figure)  Figure Plant Service (Figure)	for the United States (Report)	235	Contracts on Property Legislation to			201
See Facung (Collecte manuments "Failife and Collecte Manuments and C			Change Basis for Government Charge			
State of the second states and the second states are second states and the second states are second states and second states are second states are second states and second states are second st	svEnergy Cilotions			121	(BSE Model, EUFINANCE)	377
The control for the control		094				405
Position Residence   Positio	1.00					309
The This Tail Indian Prayers delight form which Cold Mitter the Development Schedule for the China Proposal Notice That Gill made Development Schedule for the China The Administration of the Requirem The Administration of the				284	PEA Household Rosrey Expenditure	407
Angle of the Control of Mint					Model (HEBM)	397
Descriptions debated in the Clinia.  The Automotive of the Parksen  File Fine Fine States (and the file of the File Fine States)  A Clinical States (and the File States)  A Clinical States (and the Fil	analy)	041				
Short finder Seneric Billy midel Services Services Billy midel Services Benefits Services Billy midel Services Billy middle Services Bills middle Services Billy middle Services Bill middle Services Bill middle Services Bill middle Services Bill middle Services Billy middle Servic			The Administration of the Petraleum		chases of Goods and Services	365
Secretary rotes rate sing may be a final frage Office in formation of the control	River Breeder Renetor (Stoff study)	040	Set-Aside Program by State Record			390
Schedule	Sequoyah Nuclear Place (Stoff mudy)	043		122		387
Schedeling before the failures for the failures for the failure for the failur			Implementation of Emergency Po-		International Energy Evaluation Sys-	104
Cost and Schmidte Billinstes for the Billinstes for	heduling		trakum Alocation Programs at Re-			265
Be coder Reinter Demonstration Fou- orplant (Report)  OF Severance Texas  Severance Texas  Severance Texas  Severance Texas  Severance Texas  Manual Class Description Model  Result Class Serverance Texas  Manual Class	Cost and Schedule Estimates for the		grand and State Levels (Expert)	106		329
ceplant (Report) 047 Servarance Texas Natural Cas Shortage Model Severance Tax Model 296 Necolastical Regional Cirowth and Energy Price Model	Nation's Part Liquid Metal Past Breeder Retoter Demonstration Proc-					419
ergy Price Model	orplant (Report)	047				389
			Severance 122 Septid	396		169
Sea OECD Energy Demand Model	ia .				OECD Energy Demand Model	366
The Navy's Practice of Discharging Shele Olis	The Navy's Practice of Discharging					275
Paol at Ses (Report) 600 Oli Shain/Bentosite Title Cleanance 330 Fluore Model	Pilot of Sea (Keport)	920	On asservermonte Tiple Clearance	333		262
Project Independence Evaluation Sys-					Project Independence Evaluation Sys-	
Seasonal Factors Shales tem (PIES) The Recognition and Environmental In- Capability of the Naval Patroleum and Regional Recognition Demand Model						361
pact of Natural Gas Custalinesets due Oil Shale Reserves to Meet Emer- and Auto Simulation Model (RD4)	pact of Natural Gas Curtallments dur-		Oil Shale Reserves to Meet Erner-			
ing the Winter of 1975-76 (Report) 662 gency Cill Needs (Report) 572	ing the Winter of 1975-76 (Report)	682	gency Oil Needs (Report)	072		265
162 Energy Digest SEPTEMBER 1						

Statistical Date

Regional Industrial Multiplier System (RIMS) Reserves Allocation and Mine Cost Model (RAMC) Severance Tax Model	392 380 394	How Solar Energy Was Treated in the AEC Chairmen's Report, "The Na- tion's Energy Financ" (Report) Management and Fanding Aspects of Three Nessuccast Beorgy Research,	198	Specifications Reports of the Review Committee on Safety of Outer Continents! Shelf Pe- treleam Operations to the United States Geological Survey	251
Short Term Petroleum Demand Fore- easting Model	383	Development, and Demonstration Subprograms (Report)	203	anna companancy	401
Site Destribution Model	354	National Program for Solar Heating and Cooling	308	Standards Effects of a Change in Size Standard for	
Sha Salection Accelerated Outer Continental Shalf		Opportunities to Improve Planning for Solar Energy Research and Develop- ment (Research	202	Sensil Business Petroleum Refinera (Repost) Energy Efforcing Revisa of Window	149
Development (Tennency) Accelerated Outer Continental Shalf	216	Review of Selected Federal and Private Soler Energy Activities (Report)	197	Air-Canditioners (Report)  Dishore Lease Management Program	006
Development (Testhony)  Development of the Outer Continental Shelf Possil Poet Resources (Tes-	219	Solar Energy Update	497	Souty for the U.S. Geological Survey	250
(Nuclear Regulatory Commission's Pro- gram for Evaluating Environmental Impacts of Construction and Opera- tion of Nuclear Powerplants (Repert)	215	Soler Heating Federal and State Solar Energy Re- scarch, Development, and Octoor- scration Activities (Report)	100	Reports of the Review Committee on Safety of Owner Continental Shelf Pe- troleum Operations to the United States Geological Survey Review of Avenue Fuel Economy	251
Outer Contracental Shelf Sale #35 Problems Selecting and Evaluating		National Program for Solar Heating and Cooling	304	Standards under Title V of Motor Vehicle Information and Cost Savanas	
Land to Lease (Report)	231	National Solar Heating and Cooling In- formation Conter	422	Act	278
Smoli Business Effects of a Change in Size Standard for		Report on Solar Energy Demonstra- tion	263	State Agancies The Administration of the Petroleum	
Small Demense Petroleum Reflects (Report)	149	Review of Sejected Federal and Private Solar Energy Activities (Report) Special Report on Solar Heating and	197	Set-Aside Program by State Energy Offices (Report)	122
The Effects of Oil Price Increases on Small Business Contracts (Report) Energy Conservation Financing (Tos-	123	Cooling Demonstration Program	264		
Almony)	027			State and Energy Resources Operation of State Energy Conserva-	
Secioeconomic Indicators Socio-Economic Environmental Demo- graphic Information System (SEE-		Solid Minarals Royalty Accounting System Study of Solid Minaral Lessing Activities	254	tion Plans State Energy Conservation Plan	295
DIS)	424	Solid Wasta Opportunities for More Effective Use of Arrenal Manues (Report)	024	Operation of State Energy Conserva- tion Plans	295
Selor Cooling Federal and State Solar Energy Re- search, Davelopment, and Gemon-	200	Resource Recovery and Source Reduc- tion	279	State Finance Pedesal and State Soler Energy Ro-	
stration Activities (Report) National Program for Solar Heating and Cooling	200	Solid Wests Menegament		streto, Development, and Demon- stration Astronies (Report)	200
National Solar Heating and Cooking In- formation Center	422	Review of the Progress and Problems of Resource Recovery Since the Passage of the Resource Resovery Act of 1970		State Local Relations	
Report on Solar Energy Demonstra- tion	263	(Testimony) Using Selid Waste to Conserve Re-	016	Financing Infrastructure in Energy Development Areas of the Western	
Rostew of Selected Federal and Private Solar Energy Activities (Report) Special Report on Solar Heating and	197	sorvers and to Create Energy (Report)	013	States (Speech)	081
Cooling Demonstration Program	264	South Carolina		State Programs The Administration of the Petroleum	
Solor Energy Activities of Solar Beergy Coordination and Management Project	002	The Bostonia and Environmental In- pact of Natural Gas Cartalimans dur- ing the Winter of 1975-76 (Report)	082	Sci-Aside Program by State Energy Offices (Report)	122
Alternative Paols for Avantion (H.R. 12112) (Testimony)	154	Southaustern Federal Power		States Fiscal Impact of Beergy Prize Changes	
An Evaluation of Proposed Federal As- alatance for Financing Communicali- zation of Energy Technologues (Report)	151	Program Southeastern Federal Power Program -Pinancial Menagement and Program Operations (Report)	174	on State and Local Government Per- chases of Greeks and Sorvices	395
An Bysisselon of Proposed Federal As- sistence for Financing Commerciali- zation of Beerging Beorgy Technologies (Teamany)	152	Soviet Union	1/4	Statistical Data Information on Certain Oil and Gas In- dustry Oversight Responsibilities (Re-	105
Pederal and State Salar Energy Re- search, Development, and Demon-		Submission of U.S.S.R. Energy-Related Transactions for Congressional Re-		Statistical Data on Patrolecum and Pe-	
stration Activities (Report)	200	view	280	troleum Produots (Report)	079
Energy Digest SEPTEMBER 1977					163

Subject Index

Stanza Subject Index

Storage Legality of Adjustmentation Actions in Printing and Storage Gao Coupets (Legal)	104	Surety and Fidelity Francial Report on the Geothermal Resources Development Find	329	Toxestion The Federal Income Taxon of Class A and 8 Electric Utilities (Report)	185
Ludergraund Gr. Storage System	371	Surface Mining Adamstration of Regulations for Sur- face Exploration, Mining, and Rech- mation of Public and Indian Cell		Tox Audits The Federal Income Taxes of Class A and 8 Blezine Utilities (Kepore)	185
Strotogic Poleolaum Roservo Issuev Needing Attention in Develop- ing the Seategs, Petrotrum Reserve (Report)	000	Lands (Report)  Department of the Interior's Views of Comments on Administration of	093	Tox Cradits  Analysis of the Energy, Economic, and Budgeton's Impacts of 11.R, 6360	
Strategic Petroleum Reserve Plan	269	Regulations for Surface Exploration, Missing, and Realization of Pubbic and Indian Coal Lands (Report)	095	(Staff study) Energy Conservation (Teatmony)	129 015
Strip Mining		t		Energy Conservation Fittenning (Ten- nman)	027
Opportunities for Justice entering Ru- charging Strip-Mired Lands under Coal Patchase Contracts (Report)	092	Surveys FEA Household Energy Survey	394	Tox Lows	
Supersong and Land Reclaration In- formation System	435	Synthetic Fools		The Pederal Income Taxes of Class A and 9 Electric Utilities (Report)	185
Structures Reports of the Review Communice on		Alternative Facts for Avazion (H R 12112) (Textusory) Commonts on the Administration's Proposed Synthesis Pacis Commer-	154	Tempot Doms (WY) Management of and Plans for the Nava) Petroleum Reserves (Report)	227
Safety of Ouner Commontal Shell Pe- treleure Operations to the United States Geological Survey	351	cushaston Program (Report)  Developing and Commercialiting En- ongy Technology (Technology)  Developing and Commercialiting En-	142	Tachnical Assistance Development of Internactory Relation-	
Submonine Oil Well Drilling		ergy Technology (Testmony)  An Evaluation of Proposed Pederal As- suitance for Financing Conferration	145	ships in the Regulation of Neclear Materials and Facilities (Report)	055
Ranoval Exploration and Development of Owier Continental Shell Resources (Testanosy)	230	amon of Emerging Energy Technologies (Aspen) An Evaluation of Proposed Federal As- sistence for Financing Commerciali- ation of Emerging Energy	151	Tachnological innovations Alternative Fasts for Aviotion (H.R. 12112) (Tatchnony) Budgeoug of Federal Financial Incon-	154
Submerged Lunds		Technologies (Tennany) Financial for Commercial-sized	152	tives for Energy Development (Tes- mony)	150
Reseast Englaration and Development of Ower Continental Shell Resources		Demonstrations of Energy Technolo- gies (Technologi Fund Energy Program Report	141	Developing and Commercializing En- ergy Technology (Terrosony) Oppolytoist and Commercializing En-	142
(Testocoty)	290	Natural Gas Industry Evaluation Sys- tems	412	ergy Technology (Testimony) An Evaluation of Proposed Federal As-	146
Subaldies Developing and Commercializing En- ergy Technology (Tenancy)	142	States and Distantes to Communication- tion of Coal Liquefaction and Gasifi- cotion (Report)	085	sistence for Financing Communicali- zation of Emerging Energy Technologies (Report)  An Environment of Proposed Pederal As-	151
Developing and Communicating En- ergy Technology (Technolog)	146	Systems Analysis		sistance for Financing Congnerciali- zation of Emerging Energy Technologies (Tenhyson)	152
Selected Aspects of Nuclear Power- plant Reliability and Economics (Re- port)	050	Reports of the Review Constitute on Safety of Outer Consected Shelf Pe- troleum Operations to the Missed		On Contervation and Innovation (Speech)	029
		States Geological Survey	251	Technology	
Substotion Centrol Supervisory Control and Data Acquisi- tion System (SCADA)	238	Tenkers The Nevy's Freeties of Discharging		Developing and Commercializing En- ergy Technology (Testhnony) Introsvements Needed in the Pederal	142
	***	Fuel at Sea (Report)	020	Enhanced Oil and Gas Recovery Re- search, Development, and Demon- stration Program (Report)	155
Sun Oil Co. Requests to Regulatory Agencies by Dd Companies for Octisions from Standard Procedures (Report)	148	Toriffs Pands Credited to the Account of the Virgon Islands for Refunds from Import Leonuse Pees (Report)	124	Technology Transfer Can the U.S. Breeder Resolec Development Program Re Arcelerated by Using Parelys Technology (Report)	245
Supply Systems Bulk Fuols Need To 80 Better Managed		Tex Administration The Pederit Income Taxes of Class A		International Cooperation in Boorgy Research and Development (Ter- throuse)	246
(Report)	014	and B Electric Ushines (Report)	185	Technical Information Center (TTC)	479
164				Energy Digest SEPTEMBER	1977

United Kingdom Subject Index

Tertiary Oil Recovery Alternative Fiels for Avvation (H R 12112) (Teatrony)	154	Tidal Power Soler Encryy Update	437	Transportation Safety An Unclassified Organ of a Classified Report Enteled "Safety and Tran-	
An Evaluation of Proposed Federal As- sistance for Pressuring Commercials- zation of Emerging Energy Technologies (Teasweep)	152	Timeliness Cost and Schedule Zaturates for the Nation's First Liquid Motal Fast		sportation Safeguards of Rocky Plats Norther Weapons Plant" (Report)	967
		Reader Rescirc Demonstration Pow- erplant (Report)	047	Trensurenies Ecological Sciences Information Center (ESIC)	446
Test Facilities  Fast Flux Test Facility Program (Single study)  Fluxes for Construction of a Measureshy-	041	Trede Funds Credited to the Account of the Virgor Intrade for Refunds from Im-		Newda Applied Ecology Information Cupier	452
deodynamies Test Facility is Mon- tane (Report)	085	port Liconse Fore (Report)	124	Treaties Role of the Insperational Atomic Da-	
This Country's Most Expressive Light Water Resetter Safety Test Pacifity (Report)	059	Trade Agreements Issues Related to Foreign Sources of Oal for the United States (Report)	235	cegy Agency in Sofoguarding Nuclear Material (Report)	240
Testing Oli Recovery  An Evelustion of Proposed Federal Assistance for Functing Commercialization of Emerging Restay Testinologies (Rypot)	151	Training Matpower Needs of the Nuclear Power Industry (Report)	031	Treaty on the Non-Proliferation of Nuclear Weapons Assessment of Unsted States and latter- mational Controls over the Pencelal Uses of Nuclear Energy (Argort)	247
Texaco Requests to Regulatory Agencies by Oul Compeler for Orwaltors from Stundard Procedures of Reserve	146	Trans-Alaska Pipelite System Servey of Publications on Exploration, Development and Dedway of Alas- han Oll Market (Report)	199	Trition Environmental Information Analysis Center (EIAC)	448
Theft Shortecental in the Systems Used to Centrel and Protect Highly Danger- on Nuclear Material (Report)	062	Trenamission Loss Status of Foderal and Polystic Research and Gevelopienst Efficients Conserve Strengt by Roboting Electric Power Trenemission Lesion (2018 1986)	605	Trucks The Parchase of Short-Supply, Energy-Related licens through the Expect-Import Bank of the United States (Report)	236
Thermal Polision Ecological Sciences Information Center (ESIC)	445	Transportation Alternative Energy Proposals (Tai- acrosp) Alternative Energy Proposals Onvo- loped by the Content Accounting Of- fice in Restoner to Congressions	165	Ulste Besin (UT) Progress and Problems in Developing Nuclear and Other Experimental Techniques for Recovering Natival Gas in the Rocky Mountain Area (Re- port)	697
Thermal Powerplants Activities of Each Geathermal Danon- stration Project Activities of the Geathermal Coordina-	367	legister Proposits and Supporting Analyses (Termony) Energy Conservation (Testanony) Energy Conservation Featuring (Tes-	156 015	Underground Storage Issues Needing Attention in Develop- ing the Strategy Potroleum Reserve	
tion and Management Project A Conventor Code for Conceptual Cost	356	Neargy Energy, the Economy and the Budget (Seech)	169	(Report)	090
Entimates of Steam Electric Power Placts (Concept) Electric Power Fiel and Environmental Analyses Operating Cost and Environmental	431 405	Federal Effects to Connerve Fiel in the Movement of Men and Matemals (Re- port)  Properties Special Nuclear Matemal in	004	Unemployment The Economic and Revenous cotal Impact of Natural Gas Cuttakness During the Winter of 1975-76 (Tex-	080
Reclistion Monitoring at the Ship- pingport Atomic Power Station (Re-	042	Transit Improvements Made and Ex- leting Problems (Report)	035	assonyd	089
peri) Thermonucleur finergy	042	Transportation Contracts  Procedures for Brainsting Reasonable- ness of Petroleum Pipelno Rates	mu	Unless of Saviet Socialist Republics Can the U.S. Breeder Reaster Dovelop- ment Program Be Accelerated by Us- ing Foreign Technology? (Report)	245
Controlled Fusion Atomic Data Con- tor	644	Need Improving (Report)	094	International Cooperation in Energy Research and Development (Tes- strong)	245
Thermonuclear Research Messgenset of the Atomic Energy Commission's Controlled Thermons-	195	Transportation of Hozordous Substances Criticality Data Czolar	445	United Kingdom  Can the U.S. Brander Resease Development Program Be Accelerated by Us-	
clear Rosesoch Progress (Report)	193	Transportation Rates Procedures for Einsteining Resistantile-		ing Foreign Technology? (Report) International Cooperation in Boorgy Research and Development (Technology)	245
Thorlum Baccay Resource Cata Systems	321	ness of Petroleum Pipeline Rates Need Improving (Report)	094	finally	246
Energy Digest SEPTEMBER 1977	7				165

Subject Index

Uronium Cerium Actions That Can Be Taken to Help largrow That Nation's Uranium Picture (Report)	661	Proposed Revisions to the Crisma and Contracts for Unatian Eurobatent Services (Report) Science Aspects of Naciona Power-	097	Virginie The Economic and Environmental Import of Natural Oas Cartalinacyte during the Winter of 1975-76 (Report)	os
Demetric Energy Resource and Re- serve Estimatos-Uses, Lamitations, and Needed Data (Report)	223	Scienced Aspects of Nations Power- plant Reliability and Economics (Re- pun)	050	Voluntery Programs	
Energy Research and Development Administration's Contingency Plan for More Enrichment Capacity at	052	Ubah Ascenses between the Secretary of		Industrial Energy Efficiency Program  Review of Voluntary Agroement and	25
Porsmouth, OH (Repert) Energy Resource Data Systems The Evaluation of the Administration's Proposal for Government Assistance	328	the latence and Officials of the State of Utah Pertaining to Oil Shafe Leases (Letter)	209	Pieto of Action To Implement the In- ternational Energy Programs	27
to Private Unauge Enrichment Groups (Fernassy) The Liquid Metal Fast Breeder Reactors Promises and Uncertainties (Staff)	053	Progress and Problems in Developing Nuclear and Other Experimental Techniques for Recovering Natural Gas in the Rocky Mostelan Arts (Be-		Woges Information on Selected Aspects of the Power Operations of Tentesize Val- ley Authority (Rayer)	
Promises and Uncertainties (Stell)  itself)  Nevada Applied Ecology Information  Conner	04P 452	port)	6277	Welvers	,
Progosed Distribution of Special Nu- clear Materials Delected Aspects of Nuclear Power-	303	Utilities Electric Rate Demonstration Data Sys- tem	346	Requests to Regulatory Agencies by Oil Companies for Deviators from Standard Procedures (Report)	14
plant Relability and Economics (Re- part)  Shortcomings in the Systems Used to	050	Electric Regulatory Activities  Energy Countrystics Practices De- comaged by States (Report)	408	Waste Combustion	
Control and Protect Highly Danger- nas Nuclear Material (Report)  An Uncleanfied Digest of a Cleanfied Report Epithics "Safety and Trate-	082	Power Surveys and Systems Evalua- tion Progress and Problems of the Govern-	409	Alternative Puels for Avuation (H R. 12112) (Teatways) An Evaluation of Proposed Fudoral As- sistance for Pasarcing Commercial-	10
portation Safeguards at Recky Fists Nuclear Wespons Flant" (Report) U.S. Uraman Resources and Sarohy	067	ment's Unitry Conservation Program (Repart) Proposed Power Rate Increase of the	621	zation of Emerging Energy Technologies (Report)  An Erabasion of Proposed Faders) As-	11
	432	Bureau of Roshunation's Control Val- ley Propost (Textproeg)	101	sistance for Financing Commercial- zation of Emerging Energy Technologies (Technolog)	11
Uranium Enrichment Alloranes of Uranem Enrichment Ser- vocs to Feel Ferraga and Domestic Nuclear Rassours (Report)	228	Utilities Cests Companion of Energy Use in Pive Federal Office Buildings (Report)	017	Using Solid Waste to Conserve Re- sources and to Crease Energy (Report)	01
Budgening of Fodoral Tensecial Incon- tives (or Energy Development (Ten- trescop)	150	National Standards Needed for Residential Storagy Construction (Support)	019	Woste Disposol Using Solid Wiste to Conserve Re- sources and to Create Energy (Report)	01
Comments on Proposed Legislation to Change Basis for Government Charge for Leavent Enrichment Services	121	Utilizies Monogement			01
(Repost)  Comments on Sciented Aspects of the  Assumotrator's Proposti for Gov- crament. Associates to Private.	121	Hew Federal Agencies Can Cocserve United and Roduce their Cost (Re- port)	007	Weste Memogement Issues Related to the Closing of the Nucleur Fuel Services, Inc., Repos- coins: Hast at West Valley, New	
Unanum Enrichment Groups (Report)  Elforts to Develop Two Nucleir Cen-	145	Progress and Problems of the Govern- ment's Unday Conservation Program (Report)	621	York (Teamsey) Opportunities for More Effective Use of Animal Manage (Report)	00
cepe. That Could Greatly Improve This Country's People Energy Signa- tion (Report) Energy Efficiency of Nuclear and Con-	048	Veldez (AK) Servity of Publications on Exploration.		Scienced Aspects of Nuclear Power- plant Reliability and Economics (Re- port)	05
ventional Fuels Used to Produce Electrony (Report)  Energy Royarch and Development	036	Development and Delivery of Alas- ten Oil Market (Report)	189	Waste Products Issues Related to the Closing of the Na-	
Administracion's Contingency Plan for More Encoherent Capacity at Portymouth, OH (Espert)	052	Vehicle Fuels Improvements Needed in Controls and		clear Feel Services, Incorporated, Re- processing Plant at West Valley, New York (Repart)	e
The Evaluation of the Administration's Proposel for Government Assistance to Private Unestan Enrichment Getups (Trainworp)	053	Acessesing for Ground Vehicle Po- trofesse. (Rigard)	618	Opportunities for More liffective Use of Assenti Manure (Report) Policies and Programs Being Developed	e;
Evaluation of the Administration's Proposal for Government Assistance to Private Uranium Enrichment		Vehicles Potential for Using Electric Vehicles on	022	To Expand Procestenant of Products Contaming Recycled Materials (Re- port)	00
Groups (Report)  Future Structure of the Uttanium Em- richment Industry (Testimony)	134	Federal Installations (Report)  Venezuele	<b>U</b>	Resource Recovery and Source Rodoc- tion  Review of the Progress and Problems of	27
International Cooperation in Energy Research and Development (Ten- troopy)	246	Issues Related to Foreign Sources of Oul for the United States (Report)	235	Resource Recovery State the Passage of the Resource Recovery Act of 1970 (Tastimony)	0
166				Energy Digest SEPTEMBER	197

Subject Index Wyoming

Using Solid Winds to Consider lie sources and to Crossid Interrgy (Report)	DIT
Vater Annual Report on the Columbus River Peace System Consolidated Featnoisi Statement of the Federal Columbia River Power	275
System	274
National Water Data Eschange (NAW- DEX)	195
Fater Poliution Plume Model	262
Problems Caused by Coal Mining Near Federal Roservoir Projects (Report)	075
Technical Assistance Data System	
(TADS)	340
fater Polletten Control  Electric Pawer Fuel and Environmental Analyses Recovery of Expenses from Cleanup and Investigation of Oil Spills (Letter)	405
	107
Spill Prevention Control and Counter- measure System (SPCCS)	342
fother Power Provinction at Pederal Darris Could Be Increased by Modernizing Turbinan and Generates, (Report) Reparts of Costs of Certain Structures on Nongoverement Waters	205 298
Feapens Report on the Succes of Major Con- screetien Projects Repersearing Sig- sificant Variances	300
felis Information on Certain Oil and Gas It- destry Oversight Responsibilities (Re- port)	165
fest Virginio Problem Caused by Coal Manne Near Fedoral Reservoir Projects (Report)	crs
find Energy Solar Energy Update	437
find Power The Federal Wind Energy Program (Re- pert)	206
Fyoming  Frogress and Problems in Developing Nuclear and Other Experimental Techniques for Recovering Natural Gas in the Rocky Mountain Area (Re-	



## AGENCY/ORGANIZATION INDEX

Includes both Federal agencies and nongovernmental corporate bodies with which the document is concerned, in one alphabetic sequence.



Reporting Energy Data (Report)

A Bill to Establish a National Energy

Information System (Testamoral

1.59

Power ladustry (Report)

Problem Areas which Could Affect the

Development Schedule for the

638

crease Power Sales (Report)

Pacific Northwest Hedro-Therreal

Power Program-A Regional Ap-

Energy Digest SEPTEMBER 1977

greach to Meeting Electric Power Requirements (Report)	161	Burson of Land Monagement Administration of Regulations for Sur- free Exploration, Mining, and Rec-		California's Central Valley Project- -Proposed Power Rate Increase (Re- port)	,
Place Operation and Power Schoolsing	335	lamation of Public and Indian Coal Lands (Report)	093	Federal Hydroelectric Plants Can In- ercase Power Sales (Report)	24
Power Parter Requirements Imposed		Lapis (Report) Coal Lesse Data System	229	How the Federal Government Parties	24
by Federal Power-Marketing Agen- nes on their Customers (Letter)	204	Compressiony Royalty Agreements	272	pates in Activities Affecting the En-	
	334	Denarross of the Intense's Proce-	***	orgy Resources of the Unsted States	
Power Flow Program Real Time Operances, Deloateh and	335	Oures for Appropring Cost Mining		(Report)	0
Schoduling (RODS) Stazas of the Grand Coulee-Rayer	337	Plans (Report) Department of the latener's Views of	228	Library of Essented Electric Power Contracts	×
Transmission Line Project (Report)	184	Commonts on Administration of Regulations for Surface Exploration, Manta, and Reclamation of Public		Pacific Northwest Hydro-Thermal Power Program-A Regional Ap- proach to Meeting Electric Power	
Supervisory Creenal and Data Acquest- ann System (SCADA)	339	and Indian Coal Lands (Roper)	095	Requirements (Report)	10
Survey of Federal and Electric Unity Procurements of Power Equipment		Grants of Rights-of-Way for Pipelines through Pederal Lands	273	Problems Caused by Coal Mining Near Federal Reservoir Projects (Tes-	
(Report)	162	Information on Certain Oil and Gas In-		tanagi	60
		dustry Oversight Responsibilities	155	Proposed Power Rate Increme of the Bureau of Reclamation's Central	
		(Report) Lund Rase System	332	Valley Project (Testimony)	10
esten Edison Co. Manuscopen, Improvements Needed		Lesse Management System	333		
is the Pederal Power Commission's		Dd Shale/Sentonite Trile Clearance	335	Colifornie	
Processing of Electric-Rate-Increase		Ower Continental Shelf Post-Sale Sys-			
Cases (Report)	152	ten Problem in Menufung, Developing,	331	Energy Resources, Conservation, and Development Conceinsion	
		and Using Conthermal Resources		issues of Nucleur Fuel Reprocessing and Disposal of High Level Nucleur	
readar Reactor Corp.  Cost and Schedule Estatusors for the		(Report)	199	Waste (Speech)	06
Neson's First Legad Metal Past		Role of Pederal Cost Resources in Meeting Energy Goals Needs to be			
Specier Resctor Demonstration		Determined and the Lessing Process		Coastal Stotus Gas Producing Co.	
Pawerglasa (Report)	647	Improved (Report)	225	Receipt and Coordination of Natural	
The Energy Research and Develop- ment Administration's Proposed				Gas Reserve Data (Report)	60
Contract with Project Management		Bureau of Minas			
Corporation, Communwealth Edu-		A Bill to Establish a National Energy Information System (Tenhants)	150	Coost Guard How the Federal Government Parties	
son, sed the Tennessee Valley Au-		Consociaty Data Stramogies and Mus-	158	pates in Activities Affecting the En-	
thenty (Report)	056	cral Estimates	266	ergy Resources of the United States	
Parther Comments on Atomic Energy Commission's Proposed Arrange-		Energy Data Collection in the Federal		(Report)	C/S
ment for the Liquid Melal Post		Government (Tistisecept)	157	Improved Inspection and Regulation Could Reduce the Possibility of Oil-	
Breeder Rescuer Domonstration		The Experiation of Coal (Argent)	244	stills on the Outer Concinental Shelf	
Project (Report)	033	Federal Holium Program	320	(Report)	10
Proposed Changes to the Assenie En-		How the Poderal Government Panici- pages in Astrology Affecting the En-			
ergy Commission's Arrangement for Carrying Out the Liquid Metal Past		ergy Resources of the United States		Commonwealth Edison Co.	
Breeder Reactor Demonstration		(Report)	998	Comments on Energy Research and	
Project (Rupon)	032	Improvements Still Needed in Federal		Development Administration's Proposed Arrangement for the	
The Proposed Central for the Clinch		Energy Data Collection, Analysis, sed Reporting (Report)	182	Clinch River Broeder Rescior	
River Broader Reactor Project (Tec- court)	058	lecture National Resources-Part II:	104	Demonstration Plant Project (Re-	
and and a	voe	Coal, Oil, and Gar-Better Manage-		porti	04
		ment Can Imprave Development		Cost and Schedule Essimples for the Nation's First Liquid Metal Past	
urees of Engraving and Printing Alleged Wasse of Money in Printing		and Increase Income and Employ- ment (Report)	225	Breeder Reactor Demonstration	
Costs on Gas Rangaing Coupons		Information on Certain Oil and Gas In-	11.5	Powerplant (Report)	04
(Lever)	110	dustry Oversight Responsibilities		The Energy Research and Develop- ment Administration's Proposed	
		(Arport)	105	Contract with Project Management	
ureau of Indian Affairs		Mineral Land Assessment	321	Corporation, Commonwealth Edi-	
Administration of Regulations for Sur-		Minerals Information System (MINFD)	3/22	son, and the Tennessee Valley Au-	
face Exploration, Mining, and Rec-		Missag and Minerals Policy	267	thonty (Aspect) Purther Comments on Asomic Energy	0.5
lattetion of Public and Indian Coal Lands (Report)	093	Mining Research	223	Countision's Proposed Arrange-	
Department of the intenor's Views of	0.0	Report to the Congress on Mattern		ment for the Liquid Metal Past	
Comments on Administration of		Contained in the Helisen Act	268	Breeder Reactor Demonstration Project (Report)	93
Regulations for Surface Exploration,		Research Information Management			DC)
Mirrog, and Reclamation of Public and Indian Coal Lands (Report)	095	System (RIMS)	324	Proposed Changes to the Atomic Es- ergy Commission's Arrangement for	
Indian Natural Resources-Part II:	OND			Carrying Dut the Liquid Metal Past	
Cost, Oil, and Gas-Better Manage-		Buracus of Reclamation Access of the Federal Power Commis-		Breeder Resetor Demonstration	63
ment Cas Irsprove Development		sion to Suresu of Reglamation Re-		Project (Report)  The Proposed Contract for the Clinch	63
and Increase become and Employ-		cords to Instee Compliance with the		River Broader Reactor Proport (Tes-	
mont (Report)					

Consumer Oil Operations, Secremente, CA Poderal Energy Administration's Ac-		The Effects of Oil Price Increases on Small Business Contracts (Report) Energy Conservation as Government	123	Issues Related to Foreign Sciences of Oil for the United States (Report)	235
trons on Allocation and Pricing of Foel (Repart)	116	Field Installations Progress and Problems (Report)	028	Role of the International Atomic Eg- ergy Agency in Safeguarding Nu- clear Material (Report)	240
		Energy Conservation Program at Five		U.S. Naciest Non-Prohitestion Policy	240
Cost of Living Council The Cost of Living Council's Actions to Assure That Cost Increases for		Government Contractors (Report) The Energy Impact of Moving Department of Defense Activities from the	008	(Report)	248
Potroleum Products Were Made in Accordings with Petroleum Prioring Regulation (Report) Domosus Crude Oil Prioring Policy and Related Production (Report)	105	Military Deman Terminal, Breoklyn, New York, to Buyenne, New Jenny (Report) Pollowup Review of the Noval Pe- troleum Rassernes (Report)	911	Department of the Air Force The Department of Defense's Conservation of Petroleum (Report) Improvements Needed in Controls and Accounting for Ground Vehicle Po-	012
	112	How Federal Agencies Can Conserve Utilistes and Reduce their Cost /Re-	220	troleum (Report)  Procedures for Evaluating Restorable-	018
Council on Environmental Quality Department of the Interior's Views of Commercia on Advancementation of Rogalismons for Surface Emploration,		part) Improvements Needed in Controls and Accounting for Cound Vehicle Po- trology. (Report)	007	ness of Petroleum Pipeline Rasss Need Improving (Report)	094
Mirray, and Reclaration of Public and Indian Coal Lands (Repen)	095	issues Needing Assession in Develop- ing the Strategic Petroleum Reserve (Separt)	010	The Department of the Army The Department of Defease's Countries 191100 of Petroleum (Report)	012
Defense Supply Agency Efforts of a Change in Size Standard for Smill Bateness Petrologia Rollingra (Report)	149	Policies and Programs Being Devel- oped To Expand Procurement of Products Containing Recycled Materials (Report)		The Energy impact of Moving Depart- men of Defense Activities from the Military Ocean Terminal, Brooklyn, New York, to Bayeron, New Jersey	
Deportment of Agricultura		Procedures for Eveloting Reasonable- ness of Petroleum Pipeline Rates	023	(Report) Improvements Needed in Controls and	011
Pederal and State Solar Energy Re- search, Development, and Demon-		Need Improving (Especi) Propagations of Foreign and Domestic	094	Accounting for Ground Vehicle Pe- troleum (Report)  Pacific Northwest Hydro-Thermal	018
stration Activities (Report) The Foderal Wind Energy Program (Report)	200	Petroleum by Department of De- fense (Supert)  Progress and Problems of the Govern-	091	Power Program-A Regional Ag- proach to Meeting Electric Power	
Opportunities for More Effective Use of Animal Manuce (Report)	025	ment's Utility Conservation Pro- grem (Report)	021	Requirements (Report)  Power Production at Pedecal Dams Could Be Increased by Modernizing	161
		Beforse Fael Supply Center,		Turbines and Generators (Report)	205
A Bill to Establish a National Energy Information System (Tembusan)	158	Alexandria, VA  Bulk Fuchs Need To Be Bester  Managed (Report)	014	Problems Caused by Coal Mining Near Federal Reservoir Projects (Rejun) Revenues and Costs Allocated to	075
The Costal Zone Management Pro- gram: An Uncertain Future (Report)	182	Violation of Ceiling Prices in a Defense Feel Supply Conter Sale (Report)	128	Power Operations at Multiple-Pur- pose Projects in the Southwestern Federal Power System (Report)	094
Department of Commerce's "Savilla- eray Citations" (Report)	024	Deportment of Housing and Urban		Solid Waste Management, Collection.	098
The Economic Impact of Energy Ac- tions	255	Davelopment National Standards Needed for Resi- dontal Energy Conservation (&c.		Disposal, Resource Recovery, Recy- eling Program	257
Energy Data Collection in the Foderal Government (Testimony)	157	port)  Report on Solar Energy Demonstra-	019	Army Audit Agency Southeastern Pederal Power Program-	
The Energy Information Act, S. 1864 (Testinony)	176	tion Special Report on Solar Heating and	263	-Pinancus Managament and Pro- gram Operations (Report)	174
How the Federal Government Partici- pates in Anthrones Affecting the En- ergy Resources of the United States		Cooling Demonstration Program Ways in Which Department of Hous-	264	Corps of Engineers How the Pederal Government Partici-	
(Report) Improvoments Still Needed in Federal	093	ing and Urban Development Can Promote Energy Conservation (Re- port)	003	pates in Activities Affecting the En- ongy Resources of the United States (Report)	008
Energy Data Collection, Analysis, and Reporting (Report)	162			Pacific Northwest Hydro-Thermal	070
The Purchase of Short-Supply, Energy- Related James through the Espart- Impert Bank of the United States		Department of Justice Antitrust Div.		Power Program—A Regional Ap- proach to Meeting Electric Power Regulationness (Report)	141
(Report)	236	Review of Valuetary Agreement and Plan of Action To Implement the In-		Problems Caused by Coal Mining Near Pederal Reservoir Prolects (Record)	075
Statistical Data on Petroleum and Pe- troleum Products (Report)  U.S. Nuclear Non-Proliferation Policy	079	tentational Energy Program	276	Problems Caused by Coal Mining Near Pederal Reservoir Projects (Ter-	ws
(Report)	243	Department of State Allocation of Unation Enrichment		rimony)  Revenues and Costs Allocated to Power Operations at Multiple-Par-	674
Department of Defence Bolk Facts Need To Be Better		Services to Parl Foreign and Domostic Nuclear Resotors (Report)	238	pose Projects in the Southwestern Pederal Power System (Report)	094
Managed (Repart) The Department of Defense's Conservation of Petroleum (Report)	014	Issues Needing Attention in Dovelop- ing the Strategic Petroleum Reserve (Report)	090	Southeastern Federel Power Frogram- Francial Management and Pro- gram Operations (Report)	174
Energy Digest SEPTEMBER 1977					171

Department of the Interior Accelerated Outer Continental Shelf		Could Reduce the Possibility of Oil-		Statustical Data on Petroleum and Pe- troleum Products (Resert)	q;
Development (Testimony)	215	spills on the Outer Coutesestal Shelf		Status of the Grand Coules-Rayer	-
Accelerated Outer Continental Shelf		(Report)	100	Transmission Line Project (Report)	16
Development (Teamony)  Actuals Needed to Interove Pederal	219	Improvements Still Needed in Federal Energy Data Collection, Analysis,		Survey of Fublications on Exploration,	
Elforts in Collecting, Analyzing, and		and Reporting (Report)	182	Development and Dolivery of Alas- ion Oil Market (Resert)	
Reporting Energy Data (Report)	159	Inches Natural Resources-Part III:		Trans-Alaska Oil PipelineProgress of	15
Administration of Regulations for Sur- face Exploration, Mirrorg, and Rec-		Coal, Cil. and Gas-Better Manage- ment Can Improve Development		Countration through November	
lamation of Public and Indian Coal.		and increase increase and Employ-		, 1975 (Report)	08
Lands (Report)	093	ment (Report)	225		
Agreement between the Secretary of		Information on Centres Oil and Ges In- distry Oversight Responsibilities		Department of the Navy	
the Interior and Officials of the State of Unit Personning to Oil Shale		(Report)	105	All Purchases and Condemnation Pro- ceedings Regarding the Naval Pe-	
Leases (Lease)	209	Information on the Proposed Aleska		troleum and Oil Shale Reserves	25
A fiell to Establish a Nancoal Energy		Oil Papeline (Report)	074	Annual Report to Congress on Naval	
Information System (Teatmony) California's Count Velley Project-	158	lines in Leaning the Arlance Outer Continental Shelf (Testworp)	213	Petroleum and Oil Shale Reserves	
-Proposed Power Rate Increase (Re-		Issues Needing Attention to Develop-	212		25
port)	155	mg the Strategie Petroleum Reserva		Capability of the Naval Petroletan and Oil Shale Reserves to Meet Emer-	
Capability of the Naval Petroleum and		(Report)	090	genty Oil Needs (Report)	07
Oil Shale Reserves to Most Emer- gency Cil Needs (Repart)	072	Learing of Missents on Public Lands (Report)	211	Capability of the Naval Petroleum and	
Correspos on the Energy Information		National Energy Policy An Appada		Oil Shele Reserves to Most Errer-	
Act (Letter)	170	for Atalysis (Report)	191	gency Oil Needs (Testimony)	673
Department of the leatener's Proce- dusts for Approving Coal Mining		Nessenti Nessetti Resources Library and Information Systems		The Department of Defense's Conser- vation of Patroleum (Report)	91:
Plans (Report)	225	and leformation Systems (NNRLIS)	319	The Energy Impact of Moving Depart-	41.
Department of the Interior Study of		Natural Gos Shortage The Role of Ira-		most of Defease Activities from the	
Shut-In Oil and Gas Well Comple- tions and Leases-QAO Observe-		poned Liquelled Natural Gas /Re-		Military Ocean Terminal, Brooklyn,	
TIONS AND Lesses-UAO Observa-	124	pon) Oil and Gaz Lessing on Federal Lands	241	New York, to Bayonne, New Jersey (Report)	011
Department of the Interior's Views of	224	(Appart)	210	Followup Review of the Naval Po-	VII
Comments on Administration of		Outer Continental Shelf Cel and Gas		troleum Reserves (Report)	220
Regulations for Surface Engloration, Mining, and Reclamation of Public		Orvelopeness Improvements		Improvements Needed in Controls and	
and lector Coal Lands (Report)	095	Needed in Datermaning Where to Lease and at What Dellar Value (Re-		Accounting for Ground Vehicle Pe- incleum (Report)	
Development of Federal Coat Re-		pen)	218	Issues Needing Assession in Develop-	018
SOURCES (THISTHERA)	223	Outer Continental Shelf Sale #35:		ing the Strategic Patroleum Reserve	
Domestic Beergy Resource and Re- serve Economic-Uses, Limitations.		Problems Selecting and Evoluting Land to Lease (Aspect)	221	(Report)	090
and Needed Data (Report)	233	Outlook for Pederal Goals to Accorden.	231	Management of and Plans for the Na-	
Employee Disclasures under the En-		ate Lessing of Oil and Gas Ro-		val Petroleum Reserves (Report)	227
ergy Policy and Conscivation Act	265	sources on the Outer Continental Shell (Report)	214	The Nasy's Practice of Discharging Paol at Sea (Report)	020
Energy Data Collection in the Pederal	200	Pacific Nontrees Hydro-Thornal	214	Protection of Cel Reserves	261
Government (Teatropsy)	157			Quarterly Report of Production from	1.01
The Energy Information Act, S. 1864 (Texasony)		protch to Meeting Bleetre Power Requirements (Report)	161	the Naval Petroleum and Oil Shele	
Energy Pukry Decisionmaking, Or-	176	Power Production at Federal Dama	161	Rostryes	256
perlawner, and Namesal Engray		Coold the Increased by Moderatzing		Recycling of Maternals	260
Goals (Aspen)	193	Turbuses and Generators (Report)	201	Office of Naval Petroleum and Oil	
Pederal Coal-Leaning Program of the Department of the Insertion (Report)		Progress and Problems in Developing Nuclear and Other Experimental		Shale Reserves	
Potenti Hydroelegane Plants Can le-	221	Techniques for Recovering Natural		Followup Review of the Naval Pe-	
errore Power Sales (Report)	201	Gas in the Rocky Mountain Area		troloum Reserves (Report)	220
Followup on Contain Mattern Concern-		(Report) Revices Exploration and Develop-	077		
ing the Inspection and Regulation of Outer Continental Shalf Oil Opera-		ment of Outer Confinental Shoff Re-		Department of the Treasury Requested Utility Rate Increase by the	
tions (Report)	208	sources (Testimony)	230	Potenso Electric Power Company	
Punds Crecked to the Account of the		Requests to Regulatory Agencies by		(Report)	127
Virgin Inlands for Refunds from lea- port License Fees (Report)		Oil Companies for Devastors from Standard Procedures (Report)	148		
Parther Acrice Needed on Reson-	124	Revenues and Cours Alborried to	1-04	Department of Transportation	
mondations for Improves the Ad-				Annual Report of the Secretary of	
menestration of Pederal Coal-Leaning Program (Report)		pose Projects to the Southwestern Pederal Power System (Report)	006	Transportation on the Administra- tion of the Natural Gaz Pipelma	
Fusite Energy Oceand (Speech)	217	Role of Federal Coal Resources in	190	Safety Act of 1968	277
GAO's Energy Role (Speech)	175	Meeting Energy Goals Needs to be		Pederal Efforts to Improve the Puel	
How the Federal Government Partiti-	100	Determined said the Lessing Process Improved (Report)		Economy of New Automobiles (Re-	
pates in Artivities Affective the Re-		Sententen Federal Power Program-	226	port)	630
ongy Resources of the United States (Report)				Requests to Regulatory Agencies by Oil Companies for Deviations from	
to design	CPS	gram Operations (Aspen)	174	Standard Procedures (Report)	146
170					

141

071

Duquesne Light Co., Pittsburgh, PA Operating Cost and Environmental Radiation Monstering at the Stuppingpart Atomic Power Station (Re-

Energy Research and Development Administration

Activates of Solar Energy Coordinaton and Management Project Allocation of Upanium Enrichment

Services to Paul Porceyn and Domestic Nuclear Reactors (Report) Alternative Pauls for Avission (H.R.

12112) (Tenerousy)
Assessment of United States and International Controls over the Procedul Uses of Nuclear Energy (Report)
A Bill to Extend the Pederal Energy

Administration Act of 1974 (Tenimners)

Budgeting of Poderal Pinancial Incontives for Energy Development (Tentiment)

Can the U.S. Breeder Reactor Development Program Be Accelerated by Using Poreign Technology? (Report)

Center for Energy Stockes (CES)
Certain Actions That Can Be Tisken to
Help Improve This Nation's
Uranium Picture (Report)
The Changing Role of the Onetral Accounting Office in Bronzy Informa-

dos and Data Programs (Speed)

Comments on Energy Research and
Development Administration's
Proposed Airmagnment for the
Clinch Rover Breeder Reactor
Derronstration Flant Project (Re-

port)
Comments on Proposed Legislation to
Change Basis for Convenment
Change for Unsalam Enrichment
Services (Report)

Comments to Selected Aspects of the Administration's Proposal for Oovstates assessed to Private Uranium Enrichment Groups (Report)

Comments on the Administration's Proposed Synthetic Fuels Commercialization Program. (Report) A Computer Code for Conceptual Cost.

Estimates of Steam Biostric Power Plants (Concept)

Considerations for Commercializing the Liquid Metal Past Resource Resource

tor (Report)

Contracting Out Basic Planning and
Management Program Pusctions
(Report)

Contracts Information System (CIS)

Controlled Fenun Attende Data Center Cost and Schedule Estimates for the Nation's First Liquid Metal Past

Nation's Pirst Liquid Motal Past Breeder Reactor Democatration Powerplant (Report) Coupled Energy System - Economic Models

Cricicality Data Center
Developing and Commercializing Energy Technology (Tentesony)

Development of Interagency Relationthips in the Regulation of Nacional Materials and Pacificac (Report) Demontic Energy Resource and Reserve Entracon-Uses, Limbations, and Nacional Data (Report)

042

179

245

041

Oaa

429

445

146

serve Estimates-Uses, Limitations, and Nexded Data (Report)
Beological Sciences Information Conter (USIC)
Biffers to Descript Two Nexteen Con-

ospis Tost Could Greatly Improve This Country's Future Energy Stantion (Report) Energy Abstracts for Policy Apolysis

236 (EAPA)
Energy Conservation Figurery (Tesalmony)

Borngy Pilms Distribution The Energy Information Act, S. 1864 (Teathway)

Itengy Policy Decisionmaking, Organization, and National Energy Goals (Report) Energy Research and Development Administration's Comingancy Han

for More Barlehment Capacity at Pentsmouth, OH (Report)

The Boorgy Research and Development Administration's Proposed Contract with Project Management

Corporation, Communwealth Bdison, and the Tennesson Valley Authority (Report) Energy Research, Development, and

Denosatration leventury

Environmental Information Analysis
Center (EIAC)

Environmental Resource Contr

41

100

as:

200

206

(ERC)
ERDA Energy Research Abstracts
(ERA)
ERDA Hendquarters Technical Li-

BRDA Report of Review of Design, Construction, and Planning of Flatenine Processing Pacificies An Evaluation of Proposed Pederal Assispance for Pignateling Communical Zation of Emerging Energy

Technologies (Report)

An Evaluation of Proposed Federal Assistance for Financing Commercialization of Benegling Energy
Technologies (Fantonop)

The Evaluation of the Administration's Proposal for Government Assisance to Private Unadam Enrichment Groups (Pestenasy) Evaluation of the Administration's

Proposal for Government Assistance to Privote Urasium Barichment Groups (Rapent)

Evaluation of the Publication and Distribution of "Shedding Light on Parts about Notione Energy" on

Anti)
Brainston of the Sistes of the Past
Flax Test Pacifity Program (Report)
Federal and State Solar Borry; Research, Directoprient, and Demonstration Activities (Report)

search, Dreitoprient, and Detrosstration Activities (Report)
Rodersl Coal Research—Status and Problems to Be Resolved (Report)
The Pederal Wind Energy Program (Report)
Financial Information System. Personny for Commontal-steed Demonstrations of Energy Technologies (Technology Fossil Energy Update Improvements Needed in the Federal

Bahaneed Oil and Oax Recovery
Research, Development, and
Demonstration Program (Report)
Information Center for Energy Safety
(ICES)
433

(ICES)
International Cooperation in Energy
Research and Development (Teainscript)

441 Insues of Nuclear Fuel Reprocessing and Disposal of High Level Nuclear Seates (See Marie (Speed))
424 Insues Related to the Closing of the Nuclear Fuel Services, Incomposated, Reprocessing Plant at West

Valley, New York (Report)
Issues Related to the Closing of the Noolean First Services, Inc., Reprovissing Plant as West Valley, New York
(Pastheory)
The Legality of the Reported Use by

The Legality of the Reported Use by the Beergy Research and Developness Administration of Corona Possii Beorgy Funds (Lence) Liquid Metal Fast Breeder Reactor

Fuel-Cladding Information Center (LMFBR)

Liquid Metal Past Breeder Reactor Plant Parameter Information Sys-

The Liquid Motal Fast Breeder Reactor Program-Fast, Pressot, and Future (Report)
Liquid Metal Fast Breeder Reactor

Program-Past, Present, and Feature (Features)

The Ligard Motel Past Recoder Reacter Frommes and Uncertainties (Staff Staff)

Management and Funding Aspects of Three Nonmelous Energy Research, Development, and Demonstration Subprograms (Report) National Energy Policy An Agenda

for Antiysis (Report)

National Geothermal Information Renauroe (GRID)

National Plus for Energy Research, Development, and Demonstration

Creating Energy Choices for the Potors 428 National Sciar Hesting and Cooling Information Center 422 National Seminada Nandral for Resi-

dential Rzergy Conservation (Report)

Newada Applied Boolegy Information
Center
Nuclear Material Management Plan
Deporturities for Merce Effective Lie

of Animal Massare (Report)
Opportunities to Improve Planning for
Solar Energy Research and Devetopment (Report)
Plans for Communities of a Magcombated of the Test Berlifts in

notehydrodynarries Test Fedility in Montena (Report) OR6 Poor Management of a Nyplene Light Water Reactor Safety Project (Report) O63

Problems is Identifying, Developing, and Using Geothermal Resources (Report)	100	Assistant Administrator for Solar, Geothernal, and Advenced Energy Systems		of 1970 (Tennony) Sequeyah Nuclear Plant (Sinff study) Stell Prevention Control and Counter-	0
Proposed Agreements for Cooperation with Other Nations on Assess En-		Activities of Each Geothermal Demonstration Project	307	measure System (SPCCS) Technical Amianator Data System	9
ergy	324	Activities of the Goothermal Coords- nation and Management Project	306	(TADS)	3
The Proposed Contract for the Clinch River Breeder Reactor Project (Ten- tomore)	CSB	Pinancial Report on the Goethermal Resources Development Fond	309	Office of the Assistant Administrator for Air and Weste Management	
Proposed Distribution of Special Nu- clear Materials	323	Namonal Program for Solar Heating and Cooking	308	Resource Recovery and Source Reduc- tion	2
Resoner Information File	437	Office of Public Affairs		E. S. Addison, Inc.	
RECON (REmote CONtole)	440	Foatel Energy Program Report	311	Federal Energy Administration's Ac-	
Report on Fast Flax Test Pacifity Renort on the Status of Major Con-	331	Report on ERDA's Nonnuclear Ac-	310	tions on Allocation and Pricing of	
struction Projects Experiencing Sig- infigure Variances	300	Office of the Controller	310	Fiel (Report)	1
Role of the International Atomic En- orgy Agency in Safeguarding Nu- clear Material (Report)	240	Proposed Establishment of Joint Fed- erni-Industry Neurosciear Corpora- tion	315	European Afemic Energy Community Assessment of United States and Impensional Controls over the Peaceful	
The Safeguards and Security of the En-	240	Report by the U.S. Esergy Research		Uses of Noticer Energy (Report)  U.S. International Nuclear Soleguards	2
ergy Research and Development Administration's Rocky Flats Platorson Facility (Report)	060	and Development Administration Status of Construction Properts and Other Data	313	Rights Are They Being Effectively Exercised? (Unclassified Digest)	
Shortcomings to the Systems Used to	000	Report on Activity and Program Index		(Report)	
Control and Protest Highly Danger- ous Nuclear Material (Report)	042	of the Energy Research and abovol- opening Afronsistration Status of Construction Projects and other		Export-Import Bank of the United States	
Socia-Economic Environmental		Data	312	The Purchase of Short-Supply, Energy-	
Demographic Information System (SEEDIS)	434	Report on Reprogramming Action for the Nuclear Materials Program	314	Related Bens through the Export- Import Bank of the United States (Report)	
Solar Energy Update Status and Obstacles to Commercial-	407			Submission of U.S.S.R Energy-	
zation of Coal Legueleouse and Gasification (Report)	085	Energy Resources Countil  A Bill to Extend the Federal Energy Administration Act of 1974 (Ten-		Related Transactions for Congres- monal Review	2
Status of Federal and Private Research and Development Efforts to Con-		nysop/ Pederal Efferts to Interese she Fuel	179	U.S. Pinancial Assistance in the Dove- lopmens of Poreign Nuclear Energy	
serve Energy by Reducing Electric Power Transmission Losses (Shiff		Economy of New Automobiles (Re- port)	000	Programs (Report)	3
analy) Striprotung and Land Reclamation In-	025			Federal Energy Administration	
formation System	435	Environmental Protection Agency Energy Data System (EDS)	341	Action Proposed Concerning Conflict of Interest	2
Survey of Federal Programs and Poli- cies for Disposing of Obsolete and		Federal Efforts to Improve the Fuel Economy of New Automobies (Re-		The Administration of the Petroleum Set-Axide Program by State Energy	
Unused Nuclear Facilities (Report)	057	sord	030	Offices (Report)	1
Technical Books and Menographs	442	Followap on Certain Matters Concern-		Alleged Weste of Money in Printing	
Technical Information Center (TIC) This Country's Meet Expensive Light	439	ing the inspection and Regulation of Outer Continental Shelf Gil Opera-		Costs on Gas Retioning Coupons (Letter)	,
Weter Reactor Safety Test Feculity		tices (Report)	208	Amendment of the Federal Energy	
(Report)  An Unelassified Digest of a Classified Report Establed "Safety and Trans-	059	How the Federal Government Partici- pates in Activities Affecting the En- ergy Resources of the United States		Administration Act of 1974 and the Extension of its Expansion Date (Letter)	
porturion Safaguards at Rocky Flats		(Rosn)	098	Analysis of the Roorey, Repressie, and	
Nuclear Weapons Plant" (Report)	067	Improved Inspection and Regulation		Budgenary Impacts of H.R. 6860 (Staff analy)	
Using Solid Waste to Conserve Re- sources and to Create Energy (Re-		Could Reduce the Possibility of Oil- spills on the Outer Continental Sholf		Astomobile Classification Data Base	2
port) U.S. International Nuclear Safeguards	013	(Report) Opportunities for More liffective Use	100	A Bill to Establish a National Energy	
Rights Are They Being Effectively Exercised? (Unclassified Diges)		of Arimal Manure (Report)  Policits and Programs Being Deve-	926	Information System (Testimony)  A Bill to Extend the Pederal Energy  Administration Act of 1974 (Ter-	
(Report)	243	loped To Expand Procurement of		(imany)	
U.S Nuclear Non-Proliferation Policy (Report)	248	Products Containing Recycled Motorials (Report)	023	The Changing Role of the General Ac- counting Office in Heorgy Informa-	
U.S. Uzunium Resources and Supply	432	Potential for Using Electric Vahicles on Pederal Installations (Report)	922	tion and Data Programs (Speech)	1
Ways to Strengthen Congressional Control of Strengy Construction		Requests to Regulatory Agencies by Oil Compasses for Devasious from	***	Coal Data Base Comments on the Energy Information	-
Projects Other Than Nuclear (Re- port)	192	Standard Procedures (Report)	148	Act (Letter) Comprehensive Human Resources	1
Assistant Administrator for Planning		Review of the Operations Division of the Pedocal Energy Administration		Data System (CHRDS)	2
and Analysis		(Report)	115	Cost and Pricing System Crude Oil and Natural Gas Production	2
National Plan for Energy Research, Development and Demonstration		Review of the Progress and Problems of Resource Receivery Since the Pas-		Model	
Planning and Analysis	305	sage of the Resource Recovery Act		Crade Oil Buy/Sell Program	2

Amency / Organization Index Federal Energy Administration Foderal Beergy Administration Personnal Turnever Rates (Report) The Federal Reggy Administration: Questerly Report on Private Greev-

The Pederal Energy Administration's

The Federal Energy Administration's Compliance and Enforcement Pre-

Compliance and Enforcement Ac-

ances and Redress

tivities (Terminan)

coises (Terrimony)

Monthly Beegy Review

for Analysis (Resent)

Natural Gas Curreliments

Natural Gas Shortage Model

(NEIC)

Morably Petroleum Staustics Report

National Recept Information Center

National Energy Policy An Agenda

National Coel Medel (RMAC)

181

256

125

356

353

570

347

Short Term Petroleum Demand Pore-

Staffing of Federal Roorgy Administra-

tion's Office of Communications and Public Affairs (Resort)

353

354

164

175

casting Model

Site Distribution Model

281

285

379

347

357

303

Crude Oil Encolements (Econhagators)

Crude Oil Pricing Model (DCROPS)

Department of Commerce's "Savilg-

Demestic Crade Oil Priolog Privry and

Comestic Beergy Resource and Re-

serve Estimates-Uses, Limitations.

Movement of Men and Materials

Pederal Energy Administration Efforts to Audit Puel Oil Supplies of Major

Utility Companies (Project Utility)

(Report)

(Resert) Energy Digest SEPTEMBER 1977

Related Production (Report)

and Needed Data (Report)

Crude Oil Pest Purchastr

ergy Ciutaxus' (Report)

352

255

397

233

Drilling Equipment Production Survey	359	Federal Energy Adericostrution's Ef- forts to Audit Demostic Crude On Producers (Report)	130	Natural Cas Shormage The Role of Im- ported Liquelled Natural Cas (Re- port)	241
Dynamic Input-Output Linear Pro- gramming Model for Regional En- ergy Imput: Analysis (DIOLP)	291	The Pederal Energy Administration's Progress in Rectirecting Its Counti-	100	Neodassical Regional Growth and Ex- ergy Price Model	389
The Economic and Environmental Im-	391	ance and Enforcement Program (Re-		OECD Barrgy Damand Model	385
pact of Natural Gas Curtailments		porti	120	Off and Gas Reserves System	372
during the Winter of 1975-76 (Re-		Federal Energy Conservation Porfer-		Oil and Gas Supply Model	378
port)	082	monce System	140	Ostiloak for Federal Geels to Acceter-	
The Economic and Environmental Im- pact of Natural Cas Canalinante Dunng the Whiter of 1975-76 (Tes-		Pederal Energy Guadelines Weekly Supplement Federal Energy Information Locator	252	ate Lessing of Oil and Cas Re- sources on the Guter Continental Shalf (Report)	214
simony)	083	System (FEILS)	366	Potroleum Market Shaees	214
Efforts to Encourage Contervation in		Financial Disclosures by Employees Performing Penetions under Energy		Plume Model	362
the Private Sector (Report)  Bloctnest Pinancial Porcessing Model	009	Policy and Conservation Act Piscal Impact of Energy Price Changes	257	Problems in the Federal Energy Ad- mulatration's Compliance and En-	
(BSE Model SUPINANCE)	377	on State and Local Government		forcement Effort (Report)	118
Bloctric Rate Demonstration Data Sys- tem		Purchases of Goods and Services	395	Problems in the Federal Energy Of- fice's Implementation of Emergency	
	346	Funds Credited to the Account of the		Potroleum Allocation Programs at	
Beergy Conservation at Government Field Installations, Progress and		Vergin Islanda for Refunds from Im-		Regional and State Levels (Report)	108
Probjems (Report)	028	port Lisense Poes (Report)	124	Problems of Independent Refiners and	
Energy Conservation Plannoing (Ter-		Future Beargy Domand (Speech) GAO's Energy Role (Speech)	175	Gasoline Retailers (Report)	121
(Nervege)	027	Oulf Oil Corporation's "Double Dip-	1377	Project Cosserve	344
Barrgy Conservation Practices En- couraged by States (Report)	005	ping" on Crude Oil Product Costs (Report)	122	Project Independence Evaluation Syz- tom (PIES)	281
Reergy Data Collection in the Federal		How Paderal Agencies Can Consurve	132	Propost Operations System (FOS)	361
Government (Tennsony)	157	Utilities and Reduce their Cost (Re-		Propano/Butane Allocation System	349
The Energy Information Act, S. 1864 (Testimony)	176	parti Intervance of Pinancial Data in Eva-	007	The Purchase of Short-Supply, Energy- Related Jums through the Expert- Import Bank of the United States	
Energy Information Reported to Con- gress as Required by Public Law 92-		landing Federal Baergy Programs		(Report)	226
310	283	(Spench)	144	Refinery Cost Passthrough	349
Entrey Policy Depalementing, Or-		Improvements Needed in the Federal Enhanced Oil and Oas Recovery		Regional Econometric Demand Medel	
ganization, and National Energy		Research, Development, and		and Auto Simulation Model (RD4)	355
Goals (Report)	19/3	Demonstration Program (Report)	155	Regional Industrial Multiplier System (RIMS)	392
Energy Reorganization Legislation (Testinone)	194	Improvements Still Needed in Federal Energy Data Collection, Analysis,		Requests to Regulatory Agencies by	3,2
An Evaluation of Proposed Federal As-	,,,,	and Reporting (Report)	162	Oil Companies for Deviations from	
sistance for Presenting Commercials		Income Distribution impact Model	390	Streeted Procedures (Report)	148
zation of Benorging Energy		International Coal Supply Model	387	Reserves Allocation and Mine Cost	
Technologies (Report)	151	International Energy Evaluation Sys-		Model (RAMC)	350
The Exponention of Coal (Report)	244	tem (TEES)	384	Review of FPC and FEA Actions in Assessing the Impact of Natural Gas	
PEA Cross/Transportation Model	399	International Oil Supply Model	358	Cuttailments during the Winter of	
FEA Data Dictionary	360	Issues Needing Attention in Develop-		1976-77 (Letter)	089
PEA Household Energy Expenditure Model (HEEM)	393	ing the Strategic Petroleum Reserve (Report)	090	Review of the Pederal Energy Ad- ministration's Advisory Committees	
FEA Horsehold Energy Survey	394	Joint PEA/EOM Petroleum Reporting		(Report)	183
PRA OII Impert System	354	System The Liceld Metal Past Resider Reso.	375	Review of the Information-Oathering Practices of the Paderal Hueray Ad-	
Pederal Assistance to State and Local		tor: Promises and Uncertainties		ministration (Report)	150
Governments in Doveloping and Administring Energy Programs		(Staff mody)	049	Review of the 1974 Project Independ-	
(Report)	143	Major Firel Eurolog Installation-Early		ence Eveloption System (Report)	178
Pederal Efforts to Conserve Breegy		Pleaning Process Identification		Spetrance Tax Model	396
(Report)	010	(EPPE)	356	Short Term Coal Demand Personning	
Federal Efforts to Conterve Fuel In the		Major Fuel Burning Installations (MPBI)	356	Model Shart Team Betroleum Damand Bone.	376

Market Shares System

Middle Distillate Price Monitoring

Off Imports Project

Mandatory (MOIP)

Strategic Petroleum Reserves Pro-		Federal Government Accountaints		Futere Energy Demand (Speech) GAO's Energy Role (Speech)	175
gram-Wide System (SPR)	363	Association, Philodelphia		Gao's Energy Rose common Gas Supply Indianors	400
Sabpart L	269	Chopter, Eighteenth Annual		How the Federal Government Parties-	
Survey of Publications on Exploration, Development and Delivery of Alas-		Symposium Energy, the Economy and the Budget		nates to Activities Affeoting the lin-	
kan Oil Market (Report)	169	(Sperch)	149	ergy Resources of the United States	000
Transfer Printing System	351			(Report)	099
Treeds to Refingry Closesty and Utili-		Federal Marillane Commission		Hydro and Electric Recurring Data Reports	#06
curren of Petroleum Refinence in the		December to Regulatory Apparets by		Hydroelectric Power Resources of the	400
United States and Footign Reflectly Expering Centers	260	Oil Companies for Develoors from Standard Procedures (Report)	148	United States (HPR)	407
Underground Gas Storage System	371	Statistical Elementum (authors)	,	Improvements Suit Needed in Pederal	
Violation of Cesting Prices in a Defense				Energy Data Collection, Analysis,	182
Fuel Supply Center Sale (Report)	126	Federal Power Commission Access of the Paderal Power Commis-		and Reporting (Report)	182
		some to Bureau of Reclamation Re-		Information on the Proposed Alaska Oil Pareline (Report)	074
Office of Energy Conservation and Environment		cards to Insure Campisance with the Federal Power Act. (Lewe)	163	Management Improvements Needed	
Energy Corpervation Pederal Energy		Actions Needed to Improve Pederal	100	is the Pederal Power Commission's	
Munagement Program	292	Efforts in Collecting, Analyzing, and		Processing of Electric-Rate-Increase	153
Federal Energy Micongenness Program	223	Reporting Energy Data (Report)	159	Cases (Report)	133
Assual Report Industrial Energy Efficiency Pro-	293	Actors Taken by the Federal Power		Nucional Energy Policy: An Agenda for Analysis (Report)	191
green greenly districtly Fig.	275	Commission on Perar Recommenda- trons Concerning Regulation of the		Named Gos Company Operating In-	
Operation of State Energy Conserva-		National Gas Industry and Manage-		fremuion Pile	413
non Plans	295	ment of Internal Operations (Report)	1.07	Natural Gas Distribution Model	419
Progress of Energy Conservation Pro-			140	Natural Gas Industry Evaluation Sys-	
gram for Consumer Products Other Than Automobiles	274	Amount of Natural Gas that Coold Be Released from Poderal Price Regula-		tems	412
		tions upon Expiration of Contracts		Negaral Gas Regulations System (Pro- ducer Rate)	414
Office of Energy Resource		from 1975 through 1985 (Testimony)	137	Natural Cas Regulation System (Pape-	
Development Strategic Petroloum Reserve Plan	207		130	line Rate)	416
annight resonant mounts from		A Bill to Establish a National Energy Information System (Teatmont)	158	Natural Out Regulation System (Pro-	
has transported to ormo		A Bill to Extend the Federal Energy		decer Certificate)	415
Administration Federal Energy Administration At-		Administration Act of 1974 (Per-	129	Natural Gas Regulation System (Pape- isse Certificate)	417
real Report to the President and		Avenny) Rulk Electric Power System Reliability	179	Natural Gas Shortage The Role of Im-	
Congress	290	Bulk Electric Power System Reliability	404	ported Liquefied Natural Gas (Re-	
		The Changing Raio of the General Ac-		port)	241
Office of Regulatory Progress Eventure of a Refined Petroleum		counting Office in Energy Informs-		Need for Improving the Regulation of the Natural Cas Industry and Man-	
Product from the Mandatory Pe-		tion and Data Programs (Special)	156	agament of Internal Operations (Re-	
troleum Aliocation and Price Regu-	291	Commons on the Energy Information Act (Letter)	170	port)	113
120000	,,,,	Corporate, Pinterval, and Economic		Need for the Federal Power Commis-	
Region I Office, Baston, MA		Information File (RISCEID)	422	sion to Evaluate the Effectiveness of the Natural Gas Curtailment Police	
Review of the Operations Davision of		The Economic and Environmental Im-		(Report)	130
the Feders) Energy Administration (Restal)	115	pact of Natural Gas Consulments during the Winter of 1975-76 (Re-		Need for the Pederal Power Commis-	
Supplyon' Compliance with Allocation		party	062	sion to Improve the Requiremen of	
and Price Regulations (Report)	100	The Economic and Economicosal Im-		the Natural Gas Industry and Man- agement of its Internal Operations	
Region IX Office, Son Francisco, CA		pact of Natural Gas Considerents		(Tennsy)	114
Federal Energy Administration's Ac-		During the Waster of 1975-76 (Tea-	063	Official FPC Pries and Records	401
nors on Allocation and Profes of		Electric Power Fuel and Environmen-		Power Surveys and Systems Evalus-	
Feel (Report)	116	tal Analyses	405	tien	429
Region X Office, Septile, WA		Electric Regulatory Activities	408	Problems in Lecensing Hydroclectric Projects (Report)	132
Improving the Operations of the Fed-		Seergy Conservation Practices Su- contaged by Sastes (Report)	006	Progress and Problems in Developing	
eral Energy Administration Region X Office (Report)	111	Energy Data Collection is the Federal	000	Nuclear and Other Experimental	
x Citize (Alpert)	111	Government (Tenhann)	157	Techniques for Recovering Natural Gas in the Rocky Mountain Area	
Foderal Energy Office		The Energy Information Act, S. 1864		(Aeost)	977
Actions Needed to Improve Pederal		(Testmany)	176	Proposed Power Rate Increase of the	
Efforts in Collecting, Analyzing, and		Energy Policy Decadosmaking, Or- generation, and National Energy		Bureau of Reclamation's Control	
Reporting Energy Date (Report)	159	Goals (Report)	193	Valley Project (Transcorp)	101
The Cost of Living Connell's Actions to Assure That Cost Increases for		As Evaluation of the Pederal Power		Receipt and Coordination of Natural Gas Reserve Data (Report)	078
Petroleum Products Ware Made in		Contribuce's Relembling on Utili-		Reliable Contract Sales Data Needed	
Accordance with Petraleum Pricing		ties' Construction Work in Progress (Resert)	229	for Projecting Amounts of Natural	
Regulations (Report)	106	The Federal Income Taxes of Class A	/	Gas That Could Be Decogulated (Re-	172
Review of Complaints Concerning the Mandatory Petroleum Allocation		and B Electric Utilities (Report)	185	Requests to Regulatory Agencies by	172
Progress and the Regulation of Pe-		PPC Budget Piles	400	Oil Companies for Deviations from	
troleum Pecing (Report)	102	FPC Library	418	Standard Procedures (Report)	140

Mossachusetts Amancy / Organization Index Energy Conservation at Government Field Installations: Progress and Problems (Report) Energy Conservation in Pederal Office

Buildings in California (Report)

Energy Efficiency Ratios of Window

How Federal Agencies Can Conserve Utalities and Reduce their Cost (Re-

Policies and Programs Being Dovel-

Progress and Problems of the Govern-

esent's Utility Conservation Pro-

oped To Expand Procurement of

Products Containing Recycled

Air-Conditioners (Report)

Materials (Report)

gram (Record)

port)

and Incress Income and Employ-

destry Oversight Responsibilities

Information on Certain Oil and Gas In-

Land and Mineral Conservation Infor-

National Water Data Exchange

Problems in Identifying, Developing,

Progress of and Puttire Plans for Ex-

Refunds on Outer Continental Shalf

and Using Geothermal Reseneces

picestion of National Petroleum Reserve in Alsaka

225

324

199

271

269 225

185 118

240 230 263

177

ment (Report)

mation System

(NAWOEX)

(Report)

(Report)

028

002

005

007

023

Revenues and Costs Allocated to

Federal Power System (Report)

1976-77 (Letter)

tions States of Pending Hydroelectric Ap-

phentions

Renew of FPC and FEA Actions in

Southeastern Pederal Power Program-

Special Reports Issued by the FPC and

Federal Power Commission Publics

gram Operations (Report)

Assessing the Impact of Natural Gen

Currentments during the Winter of

-Frencial Management and Pro-

Power Operations at Minisple-Pur-

page Property in the Southwestern

096

069

174

411

Survey of Federal and Electric Unitry		gram (Report)	021	Refunds on Outer Continental Shalf
Procurements of Power Equipment (Report)	162	Requested Utility Rate Increase by the Posomic Electric Power Company		Lesses Role of Federal Coal Resources st
Reveau of Natural Gas		(Report)	127	Meeting Energy Gonis Needs to be Outermined and the Leasing Process
Effect and Operation of Interstate		Geological Survey		Improved (Report)
Corrects Relating to Natural		Administration of Regulations for Sur-		
Gas	297	face Exploration, Ministe, and Rec-		Gulf Olf Cerp.
		Inmetten of Public and Indian Cod		Gelf Oil Corporation's "Double Dip-
Buyers of Fower		Lands (Report)	093	ping" se Crude Oil Product Costs
Reports of Costs of Cortain Structures		A 2016 to Establish a National Energy		(Report)
on Nongovernment Waters	298	Information System (Testinony)	158	Imbato
		Comments on the Escrey Information		
Federal Supply Service		Act (Letter)	170	Internal Revenue Service
Dual Fuel Program (Report)	001	Department of the Interior's Proce-		The Federal Ireome Taxes of Class A
Energy Efficiency Ratios of Window		dance for Approving Cost Mining		and B Electric Utilities (Report)
Arr-Conditioners (Report)	005	Plans (Report)	223	Problems in the Federal Energy Ad-
		Department of the Intener Study of		ministration's Compliance and En-
		Shut-In Oil and Gas Wall Comple-		forcement Effort (Report)
Federal Trade Commission		tions and Leases-GAO Observa-		
Comments on the Energy Information	170	tions (Report)	224	International Atomic Energy
Act (Laure)	170	Department of the Interior's Views of		Agency
The Energy Information Act, S. 1864	174	Comments on Administration of Regulations for Surface Espheration,		Assessment of United States and Inter-
(Terrmony)	17.6	Mining, and Regionarion of Public		national Controls arer the Perceful
Requests to Regulatory Agencies by		and Indian Cost Lands (Report)	085	Uses of Nuclear Energy (Report)
Oil Companies for Devasions from Standard Procedures (Report)	148	Effects of a Change in Site Standard		Role of the International Asserts Es-
Statistical Literatures (Volesco	140	for Small Business Petroleum Rafin		ergy Ageory in Safeguarding Na-
		scs (Report)	149	cion Meterial (Report)
Financial Accounting Standards		Energy Data Collection in the Federal		Role of the International Atomic Ex-
Board		Gevernment (Timbrony)	157	ergy Agenty in Safiguarding No-
Importance of Financial Data in Eva-		Energy Reserve Data Systems	318	clear Manerial (Texthons)
Justing Federal Energy Programs	144	Exploration of National Petroleum Re-		U.S. Pienecial Assistance in the Dovel-
(Speeck)	144	serve in Alaska	270	agment of Foreign Nuclear Borrgy
		The Happresson of Coal (Report)	244	Programs (Report)
Florida		Pollowup on Certain Matters Concern-		U.S. International Nuclear Sufraguards
		ing the Insection and Regulation of		Rights. Are They Being Effectively
Office of Petroleum Allecotion		Outer Certisental Shelf Oil Opera-		Exercised? (Unclassified Digest)
The Administration of the Petroleum Set-Ande Program by State Energy		tions (Report)	208	(Report)
Offices (Resert)	122	The Geological Survey's Inadequate		
Offices (Amport)	122	Action on Recommondations Con-		Interstate Commerce Commission
		corning Inspection and Regulation		Actoria Needed to Improve Federal
Ford Foundation		of Outer Centinonial Shelf Oil Oper-	222	Efforts in Collecting, Analyzing, and
Amenta's Energy Futures (Speech)	190	ations (Report)	222	Reporting Sharpy Data (Report)
National Opens Policy Study (Ter-		Geologic Surroys, Investigations, and Rosesuch Program	337	Procedures for Evaluating Resemble-
sweey)	212		0.0	nest of Potestrum Pipoline Rates
		How the Federal Government Partici- pates in Activities Affecting the En-		Need improving (Report)
Fredericksen Tank Lines		orgy Resurces of the United States		Requests to Regulatory Agencies by
Pockral Energy Administration's Ac-		(Report)	098	Oil Companies for Deviations from
tions on Allocation and Pricing of		Improved Inspection and Regulation		Standard Procedures (Report)
Firel (Report)	116	Could Redgee the Possibility of Oil-		and and a second second
		spills on the Outer Constituted Shelf		
General Services Administration		(Report)	100	Massachusetts
Comparison of Energy Use in Pres		Improvements Still Needed in Federal		
Pederal Office Buildings (Repart)	017	Energy Data Collection, Analysis,	182	Dept. of Public Utilities Management Interovements Needed
Dual Fuel Program (Report)	001	and Reporting (Report)	182	in the Pederal Power Commission's
The Effects of Oil Price Incresses on		Indian Natural Resources-Part III Coal, Oil, and Gas-Bester Manage-		Processing of Electric-Rate-Increase
Small Business Contracts (Report)	123	ment Can Improve Development		Cuses (Report)
		injecte Desirphica		
Energy Digest SEPTEMBER 1977				

**Energy Digest SEPTEMBER 1977** 

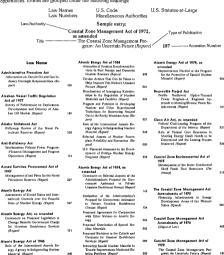
Scenal Legisletive Communion on New York 069 Menne Foundames and Parameter Report to the President by the Neclean bases in Leasure the Adequa Ocean Energy Responds and Davelopment Regulatory Continues ... Continental Shelf (Teatmone) Authority Issues Related to the Closuse of the Services Nuclear Place (Scott model) Naciear Fact Services, Inc., Reproc-Summary of Abnormal Occurrences Reported to the Nuclear Regulatory National Advisory Council on esting Plant or West Valley, New York (Tennenal Commission International Managery and Financial Peliries This Country's Mess Expensive Larke The Purchase of Short-Supply, Energy-Office of Petrolaum Aliacetics Water Reactor Safety Test Pacility Related Items through the Export-(Report) The Administration of the Percelous letter first of the Droad States Set-Aside Program by State Energy U.S. Neclear Non-Proliferation Policy (Berent) Offices (Recent (Report) North Atlantic Treaty Organization National Agreementics and Space Office of Emergency Proporedness Administration A Summary of European Views on De-Information on the Proposed Aleska pendency of the Free World on Mid-Company on H.R. 11717 93rd Con-Oil Partine (Report) 074 die Fast Od Mesoni \*\*\* ates, a Bill to Further Research. Deselvences and Commercial Demonstrations in Geothermal Re-Office of Monogement and Budget Nuclear Fuel Services, Inc. cray (Learn) 104 Amendment of the Pederal Pagers liance Related to the Cloung of the Administration Act of 1974 and the Federal and State Solar Energy Re-Nuclear Feel Services, Inc. Reproc Estension of its Expiration Date search, Development, and Demon-Nuclear rues services, inc., emproc-Stratute Activities (Report) (Letter) York (Tentonony) The Federal Wind Energy Program The Energy Information Ass, S 1864 (Testamony) (Report) Nuclear Regulatory Commission Outer Continental Shelf Sale #35: Problems in Identifying, Developing, Assessment of United States and later Problems Selection and Evaluation and Lines Grothernal Resources national Controls over the Penceful Land to Loope (Report) (Resent) 100 Uses of Nuclear Socrey (Report) 247 Bellefonte Nuclear Plant (Sest) study) Oklohema National Highway Traffic Safety Bodget Honory Tables 217 Administration Can the U.S. Breeder Reactor Dove Office of Petroleum Altoration Rente of Avenue Fort Connector Anterest Program Be Accelerated by The Administration of the Petroleum Standards under Tele V of Moore Lung Foongn Technology? (Report) Set-Aside Program by State Energy Vehicle Information and Cost Say-Offices (Report) 199 241 ines Ari Cost and Schedule Estimates for the Nation's Pirst Legand Metal Past Organization for Franceis National Oceanic and Almospheric Breeder Reactor Demonstration Cooperation and Davelopment Powerplant (Report) Administration Issues Releted to Foreign Sources of Development of Interspency Relation Oil for the United States (Report) The Coastel Zone Management Prosteps in the Regulation of Nuclear A Summery of European Views on De gram An Uncertoin Fature (Report) Materials and Facilities (Report) pendency of the Free World on Mid-055 die East Oil (Resort) Report to the Congress on Countal The Energy Information Act S 1864 234 (Tennmony) Zone Management 176 Information-Guthering Activities of Organization of Petroleum the Nuclear Regulatory Commission Exporting Countries National Science Foundation 100 Economic Implications of Correct Comments on HR 11212, 93nd Con-International Cooperation in Engra World Cit Prices (Stoff rouly) 237 gress, a Bill to Farther Research Research and Development (Ten-Issues Related to Foreign Sources of Development, and Commercial (Imony) Oil for the United States (Report) 225 Demonstrations in Geschermal En-A Summery of European Views on De-Issues of Nuclear Fuel Reprocessing and Desposal of High Level Nuclear pendoncy of the Pres World on Mid-Federal and State Solar Engray Re-Waste (Speech) 948 dle Bast Oil (Report) search, Development, and Demon-Issues Related to the Closing of the stersion Activities (Report) Nuclear Page Services The Federal Ward Energy Program Pocific Gas and Electric Co. porated, Reprocessing Plant at West (Repart) Proposed Power Rate Incresse of the 206 Valley, New York (Report) Bureau of Reclementaria Central 070 How the Federal Government Partici-Issues Related to the Closing of the Valley Project (Tendenany) potes in Activities Affecting the En-Noticer Fuel Services, Inc., Remneergy Resources of the United States essing Plant at West Valley, New (Report) Petroleum Tank Lines York (Testinary) Problems in Identifying, Developing, Pedocal Energy Administration's Ac-National Energy Policy: An Agenda and Using Geothermal Resources tions on Altocation and Pricing of for Analysis (Report) 101 Fuel (Report) (Report) 116 Nuclear Regulatory Communica's Review of Selected Pederal and Private Program for Evaluating Bayleon-Solar Energy Activities (Report) Potomoc Electric Power Co. mental impacts of Construction and Operation of Nuclear Personniants Requested Utility Rate Increase by the (Argent) Potomac Blectric Power Company New Mexico 051 (Repart) 127 Poor Management of a Nuclear Light Office of Petroleum Allocation Water Roscoar Safety Project (Re-The Administration of the Petroleum Professional Audit Review Team 063 Set-Aside Program by State Energy Reducing Nuclear Powerplant Lead-Energy Policy Decisionmeking, Or Offices (Report) gonization, and National Energy times: Many Obstacles Remain (Re-Goals (Report)

rigeray . 2-gonitonion mosx		World Wildlife	Punal, F	courth International Congress, Son Francis	ce, C
Energy Reorganization Legislation (Testimony)	194	Standard Oil Co., Inc. Survey of Probautions on Exploration,		United States Tariff Commission Statistical Date on Petrology and Pe-	
		Development and Delivery of Alas- ion Dil Market (Report)		troleum Products (Report)	071
Project Management Corp.		tan bu sinter (Aspar)	107		
Commerce on Energy Research and Development Administration's				Urasium Enrichment Associates	
Proposed Arrangement for the		Suppliers' Compliance with Allocation		Comments on Selected Assects of the	
Clinch River Breeder Reactor		and Price Regulations (Expert)	100	Administration's Proposal for Gov-	
Demonstration Plant Project (Re-		true migration (paper)	109	ernment Assessance to Private Uranum Enrichment Groups (Re-	
Cost and Schodule Estimates for the	044	Tennessee Volley Authority		port)	145
		Bellefanie Naclear Plant (Shelf mady)	054	The Evaluation of the Administration's	
Brooder Reactor Demonstration		Bookkeeping System	420	Proposal for Government Assist-	
Powerplant (Report)	047	Comments on Energy Research and	4.00	ance to Private Urassem Enrich- most Greeps (Testassay)	053
The Energy Research and Develop-		Development Administration's		Evaluation of the Administration's	
ment Administration's Proposed Contract with Project Management		Proposed Arrangement for the			
Corporation, Commonwealth Edu-		Clinch River Breeder Reactor Department Plant Project (Re-		spor to Private Urrayen Enrich-	
son, and the Tennesson Valley Au- thority (Report)	056	pen)	044	ment Groups (Repart)	134
Purther Comments on Atomic Energy	056	Cost and Schodule Expresses for the			
Commission's Proposed Arrango-		Nation's Pent Liquid Metal Fast Scooler Resetor Demonstration		Uteh	
		Powerplant (Recent)	047	Agreement between the Scoretory of	
Breeder Remotor Demonstration		Cuttainest of Electric Power Service		the Interior and Officests of the State of Utah Persolving to Oil Shale	
Propose (Report) Proposed Changes to the Atomic En-	033	by the Tennessee Valley Authority		Leaner (Lener)	200
orgy Commission's Arrangement for		(Report)	117		
Carrying Oct the Liquid Metal Plant		The Energy Research and Develop- ment Administration's Proposed		Virginia	
Breeder Reactor Demonstration				-	
Project (Report)	032	Corporation, Commonwealth Edi-		Office of Paireleum Allecetion	
The Preposed Contract for the Clinch River Breeder Reactor Project (Tes-		sen, and the Tennessee Valley Au- thorsy (Report)		The Administration of the Petroleum Set-Aside Program by State Energy	
Newsonia School States	058	Further Comments on Alexand Energy	056	Offices (Report)	122
-		Contrastor's Proposed Arrange-			
Rural Electrification Administration		mest for the Lurund Motal Pass		Virgin Islands	
How the Federal Government Parties-		Breeder Reactor Demonstration		Funds Credited to the Account of the	
pines in Activities Affecting the En-		Project (Report)  How the Pederal Government Particu-	033	Virgo Inlands for Refunds from Im-	
ergy Resources of the United States (Report)	008	pates in Activities Afferture the En-		part Licerse Fees (Report)	124
Survey of Pederal and Electric Utility	w	orgy Resources of the United States			
Propurements of Power Equipment		(Report)	098	World Wildlife Fund, Fourth International Congress, Son	
(Report)	162	Information on Selected Aspects of the Fower Operations of Tetracasec Val-		Francisco, CA	
		ley Authority (Report)	167	On Conservation and Innovation	
Securities and Exchange		Dyportunities for Improvements in Re-		(Speech)	029
Commission		churum Strip-Mined Lands under			
Importance of Financial Data in Ilva-		Coal Purchase Contracts (Report)	092		
unting Pederal Energy Programs (Speed)	144	Power Production at Fodgral Dams Could Be Inscensed by Modernizing			
Receipt and Coordination of Natural		Turbines and Generators (Report)	205		
Ges Reserve Data (Report)	078	Proposed Changes to the Atecolo En-			
Requests to Regulatory Agencies by		ergy Community's Arrangement for Carrying Out the Liquid Metal Fast			
Oil Companies for Deviations from Standard Procedures (Report)	148	Breeder Reactor Demonstration			
District Processing (Argent)	140	Project (Report)	032		
Smoll Business Administration		The Proposed Contract for the Clinch			
Effects of a Change in Size Standard		River Breeder Resesor Project (Ter- tanoni)	056		
for Small Business Petroleum Relig-		Repayment Requirements of the Pad-	USB		
ces (Report)	149	cral Investment in the Tennessos			
		Valley Authority's Electric Power			
Southeastern Power Administration		System (Report)	099		
Southeastern Federal Power Program- -Pinancial Managament and Pro-		Sequeyah Nuclear Plant (Sing) study) Servey of Pederal and Blooms Utility	943		
gram Operations (Resort)	174	Procurements of Power Equipment			
and the state of t	.,,	(Report)	362		
Southwestern Power Administration					
Pederal Hydroelectric Plants Can In-		Texoco, Inc.			
crease Power Sales (Report)	201	Vigiation of Colling Prices in a Defense			
Power Feeter Requirements Imposed by Federal Power-Marketing Agen-		Fuel Supply Center Sale (Report)	128		
cies on their Outomers (Letter)	204				
Revenues and Costs Allocated to		YRW, los-			
Power Operations at Multiple-Pur-		Contracting Oct Bassa Placeting and			
pose Projects in the Southwestern Pederal Power System (Report)	006	Management Program Punctions	ces		
		(Report)			



### LAW/AUTHORITY INDEX

Includes entries under the law, or other statutory or nonstatutory authority, referenced in the citations and appendices. Entries are grouped under the following headings:



Low Name

Low / Authority Index

Financing Infrastructure at Fourgy De- velopment Areas of the Western States (Streek)	681	Economic Stabilization Act of 1970, as amended Energy Data Collection as the Federal		Energy Independence Act of 1975 Followup Review of the Navel Po- troleum Reserves (Report)	220
Issues at Leasing the Atlentic Outer Continental Shelf (Teatmenty)	213	Government (Pastwarp)	157		
National Docum Policy Study (Fes-	212	Emergency Energy Act		Energy Independence Authority Act of 1975	
Report to the Congress on Constal Zone Management	256	Legality of Printing Guickee Retioning Coupons by Federal Energy Administration (Letter)	103	Developing and Commercializing En- ergy Technology (Technolog)	145
Colorado River Bosin Project Act of 1948		Emergency Highway Energy		Energy Information Act	
Problems in Identifying, Developing,		Conservation Act		Comments on the Energy Information Act (Letter)	170
and Using Geothermal Resources (Report)	199	(Digest of Law)	460	The Energy Information Act, S 1864 (Testinosy)	174
Congressional Budget Act of 1974 Comments on Selected Aspects of the Adressimmon's Proposal for Gov-		Emergency Netwol Ges Act of 1977 (Diges of Law)	472	Improvements Still Needed in Federal Energy Data Collection, Auslysis, and Reporting (Report)	183
cristiant Assistance to Private Unagan Estachment Groups (Report)					
	145	Emergency Petroleum Allocation Act of 1973		Energy Inventory Act of 1974 Proposed Energy Inventory Act of 1974 (Letter)	160
Congressional Budget Act of 1974, titles LIY		(Digest of Law)	459		
An Evaluation of Proposed Federal As- sistance for Financing Commercial- taises of Emerging Energy		The Administration of the Petroleum Set-Aside Program by State Energy Offices (Report)	122	Energy Policy Act of 1973 Antices Needed to Improve Pederal Ef-	
Technologies (Report)	151	Energy Data Collection in the Federal Government (Termsony)	157	forts in Collecting, Analyzing, and Reporting Energy Outs (Report)	159
Defense Production Act		Exemption of a Refined Petroleum Pro- duct from the Mandatory Petroleum		A 2011 to Establish a National Energy Information System (Tenteness)	158
Trans-Alaska Oil PipelineProgress of Consusation through November		Allocation and Price Regulations Federal Energy Administration Efforts	291		
1975 (Report)	084	to Audit Puel Oil Supplies of Major Utility Companies (Project Utility) (Report)	194	Energy Policy and Conservation Act (Depos of Law)	460
Defense Production Act of 1950 Energy Data Collection in the Federal		Federal Breegy Administration's Ef- forts to Audit Domestic Crusic Ort		A Bill to Extend the Federal Energy Administration Act of 1974 /Ter-	
Government (Testinopy) Procuments of Foreign and Domestic	157	Producers (Report)	123	Assassi	179
Petroleum by Department of Defense (Report)	091	Galf Oil Corporation's "Double Dip- ping" on Crude Dil Product Costa		Domestic Energy Resource and Re- serve EsteratesUses, Literatorics,	
Renew of Compliants Concerning the Mancincey Perpoleum Allocation		(Report) Petroleum Market Shures	136	and Needed Data (Report) Employee Disalorates under the En-	233
Program and the Regulation of Pe- troleum Pricing (Report)	102	Problems in Regulating Natural Gen Prices by the Foderal Energy Ad-		ergy Folicy and Conservation Act Energy Conservation at Government	265
Violation of Colling Prices in a Defense Finel Supply Conter Sale (Report)	128	ministration (Report) Problems in the Perioral Energy Ad-	13P	Field Installations Progress and Problems (Report)	028
	120	Printerior's Compliance and En- forcement Effort (Report)	115	Energy Conservation Passering (To-	m
Defense Production Act of 1950, es amended		Problems in the Federal Energy Office's	118	The Energy Information Act, S. 1864	***
Logality of Printing Guardene Rationing Company by Federal Energy Adminis-		Implementation of Emergency Pe- troleum Allocation Programs at Re-		(Tentency)  Boergy Policy Occisionmaking, Organ-	176
tration (Letter)	103	ground and State Levels (Report) Problems of Independent Reliners and	108	ization, and National Energy Goals (Report)	193
Deportment of Energy Organization		Gasoline Retailers (Report) Procurement of Porcuga and Domestic	121	An Evoluttion of Proposed Federal As-	193
Act Beergy Policy Decembersking, Organ-		Petroleum by Department of Defense (Report)	091	notance for Financing Commerciali- zation of Emorging Energy	
station, and National Beergy Goals (Report)	192	Review of Complaints Concerning the	091	Technologies (Report)  Pederal Assistance to Store and Local	151
in-yary	ING	Mandatory Petroleum Allocation Program and the Regulation of Pe-		Governments in Developing and Ad- ministering Energy Programs (Report)	
Department of the Interior and Related Agencies Appropriation		troleum Pricing (Report)	102		143
Act of 1975		Energy Conservation and		Performing Functions under Energy	
Plane for Construction of a Magnesoby- drodynamics Test Facility in Mon-		Production Act		Policy and Conservation Act Future Harryy Demand (Speech)	287 175
tion (Report)	086	(Digest of Law)	471	GAO's Energy Role (Speech)	177
Economic Stabilization Act of 1970		The Changing Role of the General Ac- counting Office in Energy Informa-		Gulf Dd Corporation's "Double Dip- ping" on Crude Gil Product Costs	
Review of Completes Concerning the Mandatory Penoleum Afficiation		non and Data Programs (Speech) Demestic Energy Resource and Re-	184	(Report)	138
Fregram and the Regulation of Pe- trolcom Pricing (Report)	102	serve Esomates-Uses, Limitations, and Needed Data (Report)	233	Insting Pederal Reergy Programs	144
182				Energy Digest SEPTEMBER	1977

w / Authority Index Low Name

Improvements Still Needed in Federal Buorgy Data Collection, Analysis, and Reporting (Report)	182	clear Fuel Services, Incorporated, Re- processing Plant at West Valley, New York (Report)	aro	Environmental Policy Act of 1969 How Solar Energy Was Treased in the AllC Charman's Report, "The Na-	
Industrial Energy Efficiency Program	296	The Legality of the Reported Use by the Energy Research and Development		tion's Energy Future" (Report)	198
Issues Needing Attention in Develop- ing the Strategic Petroleum Reserve (Report)	090	Administration of Certain Foral En- ergy Funds (Letter) The Liquid Metal Fast Breeder Resolve:	067	Export Administration Act of 1969 Assessment of Liganed States and Inter-	
Operation of State Energy Conserva- tion Plans	295	Promises and Uncertainties (Staff	649	national Controls over the Preserval Uses of Nuclear Energy (Report)	26
Progress of Energy Conservation Pro- gram for Consumer Products Other Then Automobiles	294	Management and Funding Aspects of Three Normoeless Energy Research, Development, and Demonstration		Export-Import Bank Amendments of	
Review of Average Fuel Bosnomy Standards under Title V of Moor Vehicle Information and Cost Savage		Subprograms (Report) National Energy Policy: An Agenda for	203	1974 Submission of U.S.S.R. Energy-Related	
Act Review of the Pederal Energy Adminis-	278	Analysis (Report) National Standards Needed for Resi-	191	Transactions for Congressional Re-	390
tration's Advisory Committees (Re- port)	163	dential Energy Conservation (Report)	019	Expert Reorganization Act of 1976	
Review of Voluntary Agreement and Plan of Action To Implement the In-	276	Natural Oss Shorings The Rote of Im- ported Liquefied Natural Oss (Asport)		Covelapment of Interagency Relation- ships in the Regulation of Nuclear	
ternational Energy Program Stratogic Petroletin Reserve Plan	289	Opportunities to Improve Planning for	241	Materials and Facilities (Report)	653
		Solar Energy Research and Develop- ment (Report)	202	Fadarol Advisory Committee Act of	
rgy Polity and Conservation Act § 1975 The Changing Role of the Ocneral Ac- counting Office in Energy Informa-		Problems in Identifying, Developing, and Using Geothermal Resources (Report) Reducing Nuclear Powerplass Laud-	199	Review of the Federal Energy Administration's Advancy Committees (Report)	183
tion and Data Programs (Speech) Vasancing for Commercial-Sized Democratistions of Energy Technolo-	185	neses: Many Obstacles Remain (Re- port)	GSP	Faderol Cool Leasing Amendments	
gies (Tentworp) folioles and Programs Being Developed	141	Report to the President by the Nuclear Regulatory Constitution	318	Act of 1975 (Duces of Leve)	400
To Expand Procurents of Products Containing Recycled Materials (Re- port)	023	Sequoyah Nuclear Plant (Staff study) Sammary of Absormed Occurrences Reported to the Nuclear Regulatory	043	Domentic Energy Resource and Re- serve Buttraton-User, Limitations, and Needed Data (Report)	237
		Commission The Country's Most Expensive Light Water Reactor Safety Test Facility	316	Energy Policy Decisionsmoking, Organ- mation, and National Energy Goals (Report)	195
gy Reorganization Act of 1974 Digast of Law)	465	(Вероге)	059	Financing Infrastructure in Energy Development Arous of the Western	
asexament of United States and Inter- national Courses over the Peaceful Uses of Nuclear Energy (Report)	247	Energy Reorganization Act of 1974.		States (Speech)	681
generate on the Administration's Proposed Synthetic Foels Commer-		§ 108 Pederal Efforts to Improve the Puel Economy of New Assessibiles (Re-		Fadarol Cool Mins Health and Sofety Act of 1969	
cialization Program (Report) outracing Out Basic Planning and Management Program Functions (Re-	140	pon)	030	Curatheest of Electric Power Service by the Terresset Valley Asthony (Report)	116
port/ ost and Schedule Estimates for the	380	Energy Supply Act of 1975		Energy Reorganization Legislation (Testmony)	19
Nation's First Liquid Metal Plast Breader Reactor Demonstration Pow- erplant (Report)	047	Development of the Outer Continuenal Shelf Fossil Part Resources (Tiz-	215	How the Federal Government Partici- pates in Activities Affecting the En- ergy Resources of the United States	
evelopment of lateragency Relation- ships in the Regulation of Natelear Materials and Parlisles (Report)	055	henory)	213	(Report)	091
omestic Snergy Resource and Re- serve Estimates-Uses, Lumbations,	033	Energy Supply and Environmental Coordination Act of 1974		Faderol Columbia River Power System Complished Pinancial Statement of	
and Needed Data (Report)	233	(Digest of Lass) Decrease Energy Resource and Re-	462	the Federal Columbia River Power System	27-
ribution of "Shedding Light on Pacts shout Nuclear Energy" (Report)	064	serve Batterstee-Uses, Lamitations, and Neederl Data (Report)	233		
uluntion of the Status of the Post Plea Fest Facility Program (Report)	065	Energy Information Reparted to Con- gross as Required by Public Law 93-		Federal Energy Administration Act of 1974	
derni and State Solar Energy Re- earch, Development, and Demon- tration Artivities (Report)	200	319 Improvements Still Needed in Pederal	287	(Digest of Low) Action Proposed Concerning Conflict	46
deral Cosi Research-Status and 'roblems to Be Reseived (Report)	200	Heergy Data Collection, Analysis, and Reporting (Report) National Energy Policy: An Agenda for	182	of Interest The Administration of the Petroleum Set-Aside Program by State Energy	28
yes Released to the Closing of the No-	.00	Analysis (Report)	191	Offices (Report)	122

183

Low / Authority Index law None

174

100

456

Energy Digest SEPTEMBER 1977

Endard Power Act. § 10(f) Faderal Energy Administration Act Amendment of the Federal Energy Ad-Southeastern Policial Power Program marythmen Arrest 1974 and the Fe. of 1074 5 12 Financial Management and Program-The Federal Energy Administration's season of his Expression Date (Leave) Oversoons (Reserv) Commission and Enforcement Activi-110 nes (Tentrespel A Boll as Extend the Federal Energy Administration Act of 1974 (Tes-The Boleral Beerey Administration's Federal Power Act, 1 202(c) Countinger and Enforcement Pro-Curtificant of Electric Power Service 111 Centern Across Shut Can Re Taken to censa (Tenaversi by the Tennessee Valley Authority Help Improve The Nation's Uranger GAO's Foreign Role (Sweet) (Report) Dates (Second The Changes Role of the Gregori As-Fadarol Power Act 5 303 counting Office on Energy Informs-Factoral Rearray Administration Access of the Poderni Power Corona zon and Data Prosters (Sweet) sees to Bureau of Rectamation Re-Common on the Factor Information Energy Construction Financing (Teo costs to Issue Compliance with the 1300 Act (Cener) Pederal Power Act (Letter) Darston: Energy Resource and Reserve Emperoranties I recorners and Needed Data (Reserve) 233 Federal Energy Development Impact Endard Property and The Economic Impact of Energy Ac-Assistance Act of 1976 Administrative Services Act of 255 Developes and Commercializing Se-1040 140 The Energy Information Act. S. 1864 coay Technology (Teasyons) Polyana and Propriates Berna Devistance (Testmont) 176 To Except Propurpment of Products The Experience of Cost (Report) 244 Containing Recycled Materials (Re-Pederal Assistance to Scale and Local Governments in Developing and Ad-Federal Nen-Nuclear Energy mentenng Energy Programs (Report) Research and Development Act Forteral Property and 140 of 1974 Administrative Services Act of Federal Energy Administration Annual (Deept of Loan 457 1949, os omended Report to the President and Con-Commons on the Administration's Pototree Blootre Power Company Proposed Symbolic Reels Commer-Federal Energy Adaptementation Efforts (Rescui) culibration Program (Asport) to Audit Parl Oil Supplies of Major Utility Companies (Project Uniny) Pedecal and State Solar Energy Re-(Resent) search. Development and Damon-Federal Regulation of Lobbying Act The Federal Regrey Administration erration Astrones (Second) Evaluation of the Publication and Dis-Courtedy Senso on Private Cores investorements Needed in the Federal tribution of "Shedding Light on Facts ances and Redress about Nucteur Energy" (Report) Enhanced Oil and Gas Recovery Re-Federal Energy Administration's Ed search. Development, and Deminform to Audit Deetestic Crude Gel stortion Program (Report) Federal Water Pollution Control Act Produces (Resent The Leastley of the Reported Use by the Federal Energy Management Program Interwood Impaction and Regulation Energy Research and Development Could Reduce the Possibility of Oil-101 Administration of Certain Possel Enselfs on the Outer Continueral Shelf Galf On Consension's "Double Disetgy Fends (Lever) (Resort) ping" on Crude Oil Product Costs National Plan for Energy Research, (Report) 122 Development and Demonstration Insprovements Staff Needed as Federal Federal Water Poliution Control Art Plenung and Analysis 335 Energy Data Collection, Analysis. Amendments of 1972 Pennsyl Establishment of Joint Federand Reporting (Report) Problems Caused by Cont Mintre News al-Industry Nonnucleur Corpora-National Energy Policy An Agenda for Saderal Reservoir Projects (Report) Analysis (Report) Reducing Nuclear Powerslant Lead-Resert on ERDA's Necesseleur Activitittes. Many Obstacles Remain /Re-Natural Gas Shortage: The Role of Ignported Liquefied Natural Gas (Report) Ways to Strengthen Congressional Con-241 Need for the Federal Power Commistrol of Regrey Consequence Projects Other Than Nuclear (Report) Federal Water Polistics Control Act, 199 soon to Evaluate the Effectiveness of os omandad the Natural Gas Curtailment Policy Recovery of Exponent from Cleans (Report) 130 Faderal Power Act and investigation of Oil Stills (Laws) Problems in the Federal Beergy Ad-Need for the Federal Power Controls measurers's Compliance and Reson to Eveluate the Effectiveness of Sortement Effort (Report) the Naturel Can Curtailment Policy Problems of independent Reflects and Federal Water Power Act (Record) (Direct of Law) Gaschne Retailers (Report) 121 Review of the Federal Beergy Adminis Domestic Energy Resource and Restation's Advisory Committees (Re-Federal Power Act, as amended serve Estimates-Uses, Limitacions, and Needed Data (Report) part) 233 183 Management Improvements Nonded in the Federal Power Commission's Need for Improving the Regulation of Processing of Blestric-Rate-Increase the Natural Gas Industry and Management of Internal Operations (Ac-Federal Energy Administration Act Cates (Repart) 153 port) of 1974, § 5(b)(11) Problems in Licensing Hydroelectric Problems in Regulating Natural Con-Pederal Pawer Act of 1935 Projects (Report) Prices by the Pederal Energy Ad-Problems in Licensing Hydroelectric minutestan (Report) Reports of Costs of Certain Structures. Projects (Report) as Nongovernment Waters

Low / Authority Index Low Name

263

OK4

223

092

210

207

221

917

093

_	d Control Act of 1944
	evenues and Costs Allocated to Power
	Operations at Multiple-Parpose Pre-
	ents as the Southwestern Pederal
	Power System (Report)
Si	sotheastern Foderal Power Program-
	-Piesnoul Management and Program.
	Operations (Report)

Foreign Assistance Act of 1974

U.S. Financial Assetance in the Development of Foreign Nuclear Energy
Programs (Report)

# Foreign Investment Study Act of

Certain Actions That Can Be Taken to Help improve This Nation's Uranum Peture (Reset)

## Fraudom of Information Act Can the U.S. Breader Reactor Development Program its Associated by Us-

ing Foreign Technology? (Report)

Federal Coal-Leasing Program of the
Department of the Interior (Report)
International Cooperation in Energy
Research, and Development (Technology)

ASSESSED.

Act of 1974

(Recent)

## Geothermal Energy Research, Development, and Domenstration

(Digital of Line)
Activities of Each Goothermal Damonstream Project
Activities of the Goothermal Coordination and Management Project

44

983

336

191

037

ton and Management Proposi Francial Report on the Goothornal Resources Development Fund The Liquid Metal Fast Broader Resetce. Promises and Uncertainties (Sigf) marks

Netronal linergy Policy: An Agenda for Analysis (Report) Problems in Identifying, Developing, and Using Goothermal Resources

#### Goothsemal Steam Act of 1970 How the Pederal Government Particlpates in Activities Affecting the Er-

ergy Resources of the United States (Report)
Problems in Identifying, Developing, and Using Geothermal Resources (Recort)

## Government Corporation Control

Fisture Structure of the Unterium Esrichment Industry (Testinospi)
Pacific Northwest Hydro-Thormal Power Fragram-A Regional Approach to Meeting Stoctale Power Requirements (Report)

## Helium Act

Report to the Congress on Matters Contained in the Hellum Act

Energy Digest SEPTEMBER 1977 Housing and Community
Davelopment Act of 1974
Report on Solar Energy Domostra-

Report on Solar Energy Domossestion

17.4 Act of 1952 Evaluation of the Publication and Distribution of "Shadding Light on Parts about Nuclear Energy" (Report)

Indian Reergonization Act of 1934 Indian Natural Recourses-Part III Cost, Oil, and Gas-Better Management Can Improve Development and Increase Income and Employment (Report)

#### Indian Self-Daterminotion and Education Assistance Act of 1975 Indian Natural Resources—Part II:

iniam Natural Resources—Part II: Coal, Oil, and Gus.—Better Menugemant Can Improve Development and Instease Income and Employment (Report)

Interstate Commorce Act
Procedures for Evaluating Reasonablestess of Petroleum Pippline Rates
Need Improving (Report)

Mineral Lands Act of 1920, as amended Administration of Regulations for Sur-

face Exploration, Mining, and Reclamation of Public and Indian Coal Lunds (Report)

Minard Londs Lansing Act

Leasing of Minorats on Public Lands (Report)

Dil and Gas Leasing on Poderal Lands (Report)

Provisions of Navago and Hopi Coel

Leases (Report)

Role of Pederal Coal Resources in
Mosting Energy Goals Needs to be
Determined and the Leasing Process
Improved (Report)

#### Mineral Leasing Act Department of the Interior's Vurws of

Comments on Administration of Regulators for Surface Exploration, Minerg, and Reclamation of Public and Indian Coloid Lands (Report) Rederat Concluding Program of the Department of the Interior (Report Further Astron Needed on Recommendations for Improving the Administration of Pederal Coal-Leading Interior of Pederal Coal-Leading

Program (Report)

Mineral Leasing Act for Acquired Lands

Lends
Administration of Regulations for Surface Replanation, Mining, and Redamation of Public and Indian Coal Lands (Report)

Conservation Division Task Porce Report on the Onshore Lease Management Program Study for the U.S. Geological Survey Omilion: Lease Management Program Study for the U.S. Grobancal Survey

250
Review of Royalty Accounting System
for Onshore Oil and One Leaves 253
Role of Federal Cost Resources in

Mosting Energy Gests Noeds to be Determined and the Leasing Process Improved (Repart) Royalty Accounting System Study of Solid Misseral Leasing Accounts

Mineral Leasing Act of 1920

scorees (Partiestoy)

Francese, industructure in Energy
Development Areas of the Western
States (Speech)

Survey of Publishines on Exploration,
Development and Delivery of Alas-

003

kan Oil Market (Report)

Mineral Leasing Act of 1920, as

Mineral Leasing Act of 1920, as amended Conservation Division Task Perce Report on the Onleys Laste Massey.

ment Program Study for the U.S.
Goological Survey 249
Onshore Lesso Management Program
Study for the U.S. Geological Survey 240

Review of Royalty Accounting System for Onshore O'll and Gas Leases 253 Royalty Accounting System Study of Solid Mineral Leasus Activities 254

Mineral Leasing Act Revision of 1960 Compensatory Royalty Agreements

Mining and Minerals Policy Act of 1970 Domestic Exergy Resource and Reserve Estimates—Uses, Limitations,

and Needed Data (Seport)
Mining and Minerals Policy
Mining Low of 1872

Conservation Division Task Force Report on the Ombore Lease Management Program Study for the US Deological Survey Otshere Lease Management Program

Study for the U.S. Geological Survey

Review of Royalty Accounting System
for Onahore Off and Gua Leases

Royalty Accounting System Study of
Solid Migeral Leasing Activities

## Motor Vehicle Information and Cost

Savings Act
Review of Average Pael Bococary
Standards under Talle V of Motor
Vehicle Information and Cost Savings

233

257

250

211

214

lo:

252

National Accommunics and Space
Act of 1958, 5 203
Comments on H.R. 11212, 93ed Con-
grem, a Bill to Further Research, De-
velapment, and Commercial
Cenonstratoces in Geothermal En-

## Notional Energy Production Bacod Act of 1975

### Shell Fossi Fuel Resources (Tenarange) National Environmental Policy Act Organizates of the Internative Juries of Comments on Administration of

Department of the Internot's Vision of Constraint on Administration of Regulations for Surface Explorations, Miretag, and Reclamation of Public and Indias Coal Lands (Regunt) Further Action Needed on Recommundances for Inspersing the Administration of Pedeval Coal-Leasing

# Program (Aspert) National Environmental Policy Act

of 1967

Nuclear Regulatory Communicative Program for Evaluating Environmental Impacts of Construction and Optimtion of Nuclear Powershoots (Basens)

## National Environmental Policy Act

of 1969
Administration of Regulations for Steface Exploration, Mixing, and Redistration of Public and Indian Coal Loads (Report)
National Ocean Policy Study (Tax-

Reducing Nucleia Powerplans Leadtracer Many Obstacles Remain (Report)

Servey of Pablications on Explosition, Development and Delivery of Alia-

# ken Cil Market (Report) National Science Foundation Act of 1950, 9.3-4

Comments up H R 11212, 93sd Congrein, a Bill to Further Research, Development, and Commercial Occommissions in Geothermal Energy (Lene)

## Noturel Ges Act

Actions Token by the Federal Power Contestings on Prior Recommendations Concerning Regulation of the National Gas Industry and Management of Internal Operations (Report

Domestic Reergy Resource and Resorve Estrator-Lier, Limitanees, and Needed Data (Report) Effect and Operation of Inspersion Com-

pacts Relating to National Gas

Need for Improving the Regulation of
the Natural Gas Industry and Missagenest of Internal Operations (Re-

Need for the Federal Power Commission to Evaluate the Effectiveness of

## the Natural Gas Cartalinent Policy

(Report)
Need for the Federal Power Commission to Imperor the Regulation of the Natural Gos Industry and Management of its Internal Commisson, Tim-

Natural Gas Industry and Management of its Internal Operations (Ter among)

Passers and Construction of Natural

### Recept and Coordination of Natural Gas Reserve Data (Report)

## Natural Gas Act of 1938

104

215

217

051

233

107

Relable Contract Sales Data Needed for Projecting Amounts of Natural Gas That Coold Be Decagulated (Report) Status and Obstacles to Commercialization of Coal Liqueduction and Guadi-

# natural Gas Act of 1998, as

amended
Natural Cas Shorings: The Raic of imported Lagerfed Natural Gas (Report)

# Ported Liquesell Natural Coll (Report) Netural Gas Pipeline Safety Act of

1968
Annual Report of the Secretary of Transportation on the Administration of the Natural Gas Pipelles Safety Act

## Novel Petroleum Reserves Production Act of 1976

Annual Report to Congress on Naval Potentiess and Oil Shale Reserves Exploration of National Petroleum Reserve in Alaska Management of and Plans for the Naval Propless of and Februar Plans for Ex-

# plication of Nannat Pervisem Reserve in Alaska Nonnetteer Energy Research and Development Act of 1974 National Energy Policy: An Agonda Ser Analysis (Report)

Nuclear Fuel Assurance Act of 1975 Budgeing of Federal Penassal Incotives for Energy Overlagment (Te-

1915 for Energy Development (Tesstrong)
Comments on Scienced Aspects of the Administration's Proposal for Goverment Assistance to Present

United Employed Groups (Report)
Borry Research and Development
Administration's Confessors Has
for More Employed Opposity at
Pertamonth, OH (Report)
The Evaluation of the Administration's

Proposal for Government Assistance to Private Unusum Enrichment Groups (Testimosa) Evaluation of the Administration's

Probation of the Administration's Proposal for Committees Assistance to Private Untrium Enrichment Groups (Roger)

### Omnibus Energy and Natural 120 Resources Reorganization Act of

1977
Energy Pokey Deculormaking, Organ-

Instruct, and National Energy Goals (Eupon)

Outer Continental Shelf Act of 1953

# Accelerated Outer Continental Shelf Development (Festivary) Outer Continental Shelf Lands Act

Improved Impection and Regulation Could Reduce the Postebility of Odspills on the Outer Continental Shelf (Report) information on Certain Oil and Gas in-

internation on Certain Oil and Oil industry Oversight Responsibilities (Regord)

Lessing of Misserols on Public Lands

(Report)
Oil and Gas Lossing on Pederal Lussia
(Report)
Outer Continental Shelf Oil and Gas

Other Continental Shelf Oil and Gas
Development-Terprovinents Needed
in Determining Where to Lowe and a:
What Dollar Value (Report)
Onize Condinental Shelf Solo #35;
Problems Selecting and Evalueting

Problems Selecting and Evaluating
Land to Lease (Report)
Outlook for Federal Goals to Accelerate Lessing of Oil and One Resources
on the Outer Confinential Shelf (Re-

part)
Problems in Identifying, Developing, and Using Gootherned Researces (Report)
Recovery of Expenses from Cleanup

Reports of the Roview Contribute on Safety of Onter Contributed Shell Potrolorum Operations to the United States Geological Survey

## Reports of the Werk Group on OCS Safety and Pollution Control

Outer Continental Shelf Lands Act, § S Followup on Certain Matters Concessing the Interestion and Regulation of

# Oster Continental Shelf Oil Operations (Report) Outer Continental Shelf Lands Act

Amendments of 1975
Development of the Outer Comments
Shelf Femil Fuel Resources (To-

## Outer Continental Shalf Lands Act

(Strong)

of 1983
Accelerated Outer Continental Shelf
Development (Testimony) 216

Development of the Owner Continents!
Shelf Pompi Foel Resources (Testimony) 215
Robustis on Outer Continental Shelf

Low / Authority Index Lew Name

Outer Continental Shelf Lands		Resource Recovery Act of 1970		Linng Solid Watte to Conserve Re-	
Menagement Act of 1975 Fromping Infrastructure in Rinergy Development Areas of the Western		Policies and Programs Bong Developed To Expand Processment of Products Contacting Recycled Materials (Be-		sources and to Create Energy (Repart)	013
States (Speech)	061	part) Resource Recovery and Source Reduc-	023	Special Energy Research and Development Appropriation Act	
Permanent Tax Reduction Act of 1975		teen. Review of the Progress and Problems of	279	of 1975 The Administration of the Petrology	
Developing and Commortishing En- trgy Technology (Taxanas)	142	Resource Recovery Steer the Passage of the Resource Recovery Act of 1970		Set-Aside Program by State Energy Offices (Report)	122
		(Testinguy) Using Solid Waste to Conserve Re-	016	Plans for Construction of a Magnetohy- deedynamics Test Facility in Men- tura (Report)	984
Price-Anderson Act, as amended Selected Aspects of Nuclear Power- plant Reliability and Ecotomics (Re-		sources and to Croite Energy (Report)	013		046
pen)	050	Securities Act of 1933		Supplemental Appropriations Act of 1974	
		Receipt and Coordination of Natural		Followap Review of the Naval Po-	
Price-Anderson Act of 1957		Gas Reserve Data (Report)	078	trofeum Reserves (Report) Legality of Administration Actions is	220
Evaluation of the Publication and Du- tribution of "Shadding Light on Peets about Nicolay Energy" (Report)	964	Securities and Exchange Act of 1934		Legality of Administration Actions in Printing and Storing Gas Coupeau (Letter)	104
and the same and the same	004	Receipt and Coordination of Natural Gas Reserve Data (Report)	G79	Legality of Printing Gaseline Rationing Coupons by Federal Energy Admini- tration (Legar)	
Private Ownership of Special				station (Light)	103
Nuclear Materials Act Proposed Revisions to the Cataria and					
Contracts for Unansum Enrichment		Solar Energy Research Development and Demonstration Act of 1974		Synthetic Fuels Demonstration Plants Bill	
Strvices (Report)	097	(Digost of Law)	466	Alternative Feels for Assation (51 R	
		Anteriors of Soler Energy Coordination and Management Project	302	12112) (Testimony) Budgeting of Federal Pinascial Incon-	154
Private Ownership of Special		Federal and State Solar Energy Re-	302	tives for Energy Development (Tes-	
Nuclear Materials Act of 1964 Comments on Proposed Legislation to		scarch, Development, and Demon-		Amony) An Evilantion of Proposed Federal As-	150
Change Bases for Generalisent Charge		stration Activities (Report) National Energy Policy: An Agenda for	200	estance for Pleanung Commercial-	
for Umstern Estickment Services	121	Analysis (Report)	199	untion of Emerging Energy Technologies (Technology)	122
Scienced Aspects of Nusicae Power- plant Reliability and Economies (Re-				remenages (venerally	152
pert)	050	The Solor Heating and Cooling		Synthetic Liquid Fuels Act of 1964	
		Demonstration Act of 1974 (Durot of Lan)	443	Status and Obstacles to Commerciality- tion of Coal Liquidiction and Gasili-	
Private Ownership of Special		Poteral and State Solar Esergy Ro-	400	cation (Report)	065
Nuclear Materials Act of 1964, as		search, Development, and Demon-			
emended Eveluation of the Administration's		stration Activities (Report) The Liquid Metal Plat Recoder Reactor	200	Taylor Grozing Act, § 7	
Proposal for Government Assistance		Promises and Uncertainities (Singl'		Agreement between the Secretary of	
to Payere Utenium Remelument Groups (Report)	124	studyi	049	the Interior and Officials of the State of Utah Permissing to Oil Shale Leases	
Crosses (majore)	124	National Energy Policy: An Agenda for Analysis. (Report)	191	(Laner)	209
Public Utility Act of 1935		National Program for Solar Heating and			
Need for Improves the Regulation of		Cooling National Standards Needed for #gas-	308	Tennesses Velley Authority Act of	
the Natural Gas Industry and Man- agement of Internal Operations (Re-		Netternal Standards Needed for Ego- dential Energy Conservation (Egort)		1923 Information on Sciented Autoests of the	
port)	113		019	Power Deerstings of Teamestee Val-	
		Opportunities to Improve Planting for Solar Energy Research and Develop-		ley Authority (Report)	147
Public Works Appropriation Act of		ment (Report)	202	Tennessee Volley Authority Act, 5	
1970		Special Report on Solar Heating and Cooking Demonstration Program	254	154	
Pacific Northwest Hydro-Thormal Power Program-A Regional Ap-		Cooling Decisional Program	264	Repayment Requirements of the Ped- ural Investment to the Tennesses Val-	
preach to Meeting Blocine Power Re-				ley Authority's Electric Power	
quirements (Report)	161	Solid Worte Disposel Act of 1965 Policies and Programs Beng Developed		System (Report)	099
		To Expand Procurement of Products		Trade Act of 1974	
Refuse Act of 1899 Problems Caused by Coal Missing Near		Continuing Recycled Materials (Re- port)	023	The Exponsuses of Coal (Report)	244
Poderal Reservoir Projects (Report)	075	Review of the Progress and Problems of	1000		
Problems Caused by Coal Mesung Near		Resource Recovery Since the Passage		Trans-Alaska Authorization Act, 5	
Poderal Reservoir Projects (Tas- Neces)	C76	of the Resource Recovery Ast of 1970 (Testimony)	- 016	800 Review of the Information-Cathoring	
Energy Digest SEPTEMBER 1977	,				187

Practices of the Federal Energy Ad- ministration (Report)	160	masses of Public and Indian Cost Lands (Report)	093	Review of Royalty Accounting System for Ombore Oil and Gas Leasos	25
Truns-Aleskon Pipeline Act		Conservation Daugen Task Force Re- port on the Oushore Lease Manage-		Royalty Associating System Study of Solid Mineral Leasing Activities	25
Inter-Austron Piperine Act		ment Program Study for the U.S. Geological Survey	240		
Energy Data Collection, Analysis,		Onshore Lease Management Program	***	P.L. 86-777	
and Repenses (Report)	182	Study for the U.S. Geological Survey		Report to the Congress on Matters Con-	
			250	tained in the Helium Act	26
Trans-Alaskon Fipelino Act, 1 409		Review of Royalty Accounting System			
The Energy Information Act, S 1864		for Oashore Oil and Gas Leases	253	P.L. 87-653	
(Tatesny)	176	Royalty Accounting System Study of		Programment of Foreign and Domestic	
		Solid Mineral Leasing Activities	254	Petroleum by Department of Defense	
Trons-Alaska Pipeline				(Report)	09
Authorization Act		P.L. 63-212			
(Darst of Law)	458	Information on Certain Oil and Gas In-		P.L. 87-796	
Grass of Rights-of-Wey for Proclines	-	destry Oversight Responsibilities (Re-		Protostion of Oil Reserves	26
shrough Federal Lands	273	port	105		
Servey of Publications on Exploration,		Refereds on Outer Continental Shelf	240	P.L. 87-796, § 1(10)	
Ocyclopinent and Othvery of Alas-		Reports of the Raysew Commission on	209	Quarterly Report of Production from	
kno Gil Market (Report)	189	Safety of Outer Continental Shelf Po-		the Naval Petroleum and Gil Shale	
Trees-Alaska Oct PapelingProgress of		troleum Operations to the United		Reserves	256
Construction through November		States Geological Survey	251		
1975 (Report)	084	Reports of the Work Group on OCS		P.L. 88-489	
		Safety and Pollution Control	252	Comments on Proposed Legislation to	
				Charge Basis for Government Charge	
freesury, Postal Service, and		P.L. 83-703		for Uranium Enrichment Services	
Ganeral Government		Eveluation of the Administration's		(Report)	131
Appropriation Act of 1976 Evelution of the Publication and On-		Processi for Government Assistance		Evaluation of the Administration's	
unberson of the Participate and Oil- unberson of "Shedding Light on Partic		10 Private Urgerers Ennehment		Proposal for Government Assistance to Provide Uranium Enrichment	
about Nuclear Energy" (Report)	064	Greeps (Report)	124	Octupa (Report)	124
real manage inspersy		Progress and Problems in Developing		Protested Revisions to the Criteria and	134
		Nuclear and Other Esperimental		Contracts for Uraniem Engelment	
fruth to Negatioticas Act of 1962		Techniques for Recovering Natural Gas in the Rocky Mountain Area (Re-		Services (Report)	697
Procedures for Evaluating Reasonable-		port)	077	Selected Aspects of Nuclear Power-	
ness of Petroleum Pipeline Rates				plant Reliability and Beomornica (Re-	
Need Improving (Report)	094	P.L. 84-1028		port)	050
Procurersess of Foreign and Demostre		All Parehous and Condensation Pro-			
Petroleum by Department of Defense (Report)		otedings Regarding the Naval Po-		P.L. 89-448	
turbout	091	professe and Oil Shale Reserves	259	Consolidated Pinancial Statement of	
				the Pederal Columbia River Power	
Voter Quality Improvement Act of		P.L. 85-256		System	274
		Selected Aspects of Nuclear Power-			
How the Pederal Government Partici-		plant Reliability and Boonsenies (Re-			
pates in Activities Affecting the En-		port)	050	P.L. 90-481, § 14	
ergy Resources of the United States				Annual Report of the Secretary of Tree- sportation on the Administration of	
(Ripori)	098	P.L. 85-508		the Natural Gas Pipeline Safety Act	
		Pollowap Roview of the Naval Po-		of 1968	277
		troloum Reserves (Report)	220		
		P.L. 86-127		P.L. 91-144	
Low Number		Replyment Requirements of the Pag-		Pacific Northwest Hydro-Thermal	
		eral lawsoment as the Tennessee Val-		Power Program-A Regional Ap-	
L. 66-290		ler Authority's Electro Proper		proson to Meeting Bleetrie Power Re-	
(Digest of Law)	456	System (Report)	099	quirements (Report)	161
Reports of Costs of Certum Structures					
on Neegovernment Waters	298	P.L. 86-705			
		Administration of Regulations for Sun.		P.L. 91-190	
L. 75-688		Stor Exploration, Mining, and Review		Administration of Regulations for Sur-	
(Digest of Law)	457	metion of Public and Indian Cost Lands (Report)		face Exploration, Mining, and Recis- mation of Public and Indian Cost	
Differt and Operation of Incorporate Com-			093	Lands (Report)	091
pacts Relating to Natural Gas	297	Compensatory Royalty Agreements	272		***
		Conservation Division Task Poore Re-			
		port on the Onshore Lease Manage- ment Program Soudy for the U.S.		P.L. 91-224	
		Geological Survey	249	How the Federal Government Partici-	
		Onshore Lease Management Program	2-0	pates in Activities Affecting the En-	
		Study for the U.S. Geological Survey	250	ergy Resources of the United States (Report)	098
			100	\$100pM	CMS.
				Energy Digest SEPTEMBER	1077

Low / Authority Index Law Number

P.L. 91-273 Comments on Energy Research and		pot (Report) Processed Changes to the Alexand Fe-	023	P.L. 93-245 Followup Rensew of the Naval Pe-	
Development Administration's Proposed Americanness for the Clinch River Breeder Reactor Demonstra-		ergy Conmission's Arrangement for Carrying Out the Liquid Metal Fast Breefer Record Demonstrates Pre-		trolcom Roserves (Report)  Legality of Administration Actions in  Proxing and Storing Cas Company	2
tion Plant Project (Report)  Purther Comments on Atomic Energy  Commission's Proposed Arrange-	044	pect (Report)	032	(Letter) Legality of Printing Gasoline Rationing	١
ment for the Liquid Metal Past Breader Resolut Demonstration Pre- ject (Report)	m	P.L. 92-463 Review of the Federal Energy Admiros- tration's Advancy Committees (Re-		Coupous by Federal Energy Admissis- tration (Leave)	1
Proposed Changes to the Atomic Er- ergy Commission's Arrangement for	003	port)	183	P.L. 93-275 (Duck of Law)	
Carrying Out the Liquid Metal Plast Broader Reactor Dessenstration Pro- ject (Report)	002	P.L. 92-500 Recovery of Expenses from Classup and Investigation of Oil Soills (Lene)		The Administration of the Petroleum Set-Aside Program by State Energy Offices (Report)	,
P.L. 91-379		ass investigation of Oil agrits (221th)	107	Amendment of the Pederal Energy Ad- mentional and Act of 1974 and the Ex-	
Review of Complaints Concoming the Mandatory Petroleum Allocation		P.L. 92-583		tension of its Expension Date (Leaver)	17
Program and the Regulation of Pe- troleum Pricing (Repent)	102	The Constal Zone Management Pro- gram An Uncertain Future (Report)	157	Energy Conservation Practices En- couraged by States (Report)	00
P.L. 91-439		P.L. 92-583, § 313(a) Report to the Congress on Coastal Zone		Comments on the Energy Information Act (Letter)	1
Pacific Northwest Hydro-Thermal Power Program-A Regional Ap- proach to Meeting Electric Power Re-		Management	256	The Boergy Information Act, S. 1864 (Testinony)	13
Quantinis (Esperi)	161	P.L. 93-14 Using Solid Waste to Conserve Re- sources and to Create Energy (Report)		The Exportation of Coal (Export) Improvements Still Needed in Federal Energy Data Collection, Arathysis,	24
Policies and Programs Being Developed To Expand Procurement of Products Constitute Resouled Materials (Ar-			013	and Reporting (Report)  Natural Gas Shortage: The Role of Imported Liquelind Natural Gas (Report)	1
pen) Resysted Melecula (Re-	023	P.1. 93-153 (Digest of Law) The Energy Information Act, S. 1864	458	Problems in Regulating Natural Gas Prices by the Federal Energy Ad-	2
P.L. 91-512, § 104(e) Resource Recovery and Source Reduc-		(Tantenny) Grants of Rights-of-Way for Populates	176	monstration (Report)  Review of the Federal Energy Admins-	12
tion	279	through Federal Lands Improvements Still Needed in Federal	273	mation's Advisory Committees (Re- port)	18
P.J. 91-560  Connects on Proposed Legislation to Change Bases for Government Charge		Energy Data Collection, Analysis, and Reporting (Report) Review of the Information-Gatherina	182	P.L. 93-275, § 15	
for United Enrichment Services (Repert)	131	Practices of the Pederal Energy Ad- assistanton (Report)	180	Pederal Energy Management Program Annual Report	25
Selected Aspects of Nuclear Power- plant Reliability and Economics (Re-		Survey of Publications on Exploration, Development and Dollvery of Also- ken Od Market (Report)	189	P.L. 93-975, § 15(c)	
penti	850	Trans-Alaks Oil Pipeline-Pengross of Construction through Nevember	iev	Federal Energy Admissitution Annual Report to the President and Con-	
P.L. 91-581  How the Pederal Government Partiel- pates in Activista Affecting the En-		1975 (Report)	C#4	Store .	35
ergy Resources of the United States (Report)	098	P.L. 93-159 (Diges of Law)	450	P.L. 93-275, § 18(d) The Economic Impact of Energy Ac-	
P.L. 91-604		The Administration of the Petroleum See-Ande Program by Store Energy		tuersi	22
Pederal Coal-Leasing Program of the Department of the Interior (Report) Role of Pederal Coal Resources in	221	Offices (Report) Problems in Regulating Natural Gas Prices by the Pederal Energy Ad-	122	P.L. 93-275, 8 21(c) The Federal Energy Administration: Quarterly Report on Private Oriex-	
Mosting Energy Goals Needs to be Determined and the Leasing Process Improved (Asport)	226	musistration (Repost)  Review of Completers Concerning the  Mandatory Petroleum Allocaton	139	ances and Redress	28
P.L. 91-431		Program and the Regulation of Pe- troleum Pricing (Report)	102	P.L. 93-275(4)(I)(1)(A) Action Proposed Concerning Conflict	
Mining and Minerala Policy	267	P.L. 93-159, 5 4		of Interest	28
P.1. 92-84 Further Comments on Atomic Beergy		P.L. 93-159, 9 4 Petroloum Market Shares	284	P.L. 93-319 (Digest of Law)	40
Commission's Proposed Arrange				Improvements Still Needed to Federal	

189

Low Number Low / Asthority Index

P.L. 93-319, § 11		Financial Report on the Goothermal	309	P.L. 93-479 Certain Actions That Con Be Taken to	
Energy Information Reported to Con-		Resturces Development Fund	309	Help Improve This Nation's Uranium	
gress as Required by Pubbic Law 93-	253	The Legard Metal Fast Breeder Resider		Picture (Report)	061
319	583	Prestates and Uncertainties (Staff	049	Tittee brig-re	
		Problems in Identifying, Developing,			
P.L. 93-322		and Uning Geotherical Resources		P.L. 93-485 Proposed Agreements for Cooperation	
The Administration of the Petroleum Set-Ande Program by State Energy		(Report)	199	with Other Nationa on Atomic En-	
Offices (Report)	122			ELEA	934
Figure for Construction of a Magnetohy-		P.L. 93-438		-	
drodynamics Test Facility in Mon-		(Dept of Law)	465	P.L. 93-552	
stria (Report)	085	Assessment of United States and Inter-		Recycling of Materials	260
		namonal Controls over the Peaceful		Solid Weste Management, Collection,	
P.L. 93-324		Uses of Nuclear Energy (Report)	247	Dianesal, Resource Recovery, Rocy-	
Using Solid Waste to Conserve Re-		Contracting Out Batte Planning and		cling Program	257
senices and to Create Energy (Report)	013	Managoment Program Functions (Re-	OND.		
		part)	OBE	P.L. 93-559	
P.L. 93-364		Evaluation of the Publication and Dis- tribution of "Shedding Light on Facts		U.S. Financial Assistance in the Deve-	
Comments on Selected Aspects of the		shout Nuclear Energy' (Report)	064	lopment of Foreign Nuclear Energy	
Administration's Property for Gov-		Eveloption of the Status of the Past Flex		Programs (Report)	239
estiment Assistance to Private		Test Fectity Program (Report)	065		
Uracum Ennehment Groups (Report)	145	Foderal and State Solar Energy Re-		P.L. 93-577	
	143	tearch, Development, and Demon-		(Digost of Law)	467
An Evaluation of Proposed Federal As- ostunes for Francisc Commentals		stration Activities (Report)	200	Federal and State Solar Energy Re-	
astone of Emerging Energy		The Laguel Metal Past Breeder Resetor		tearch, Development, and Demon- stratum Activities (Report)	200
Technologies (Rosen)	151	Promuses and Uncertagailes (Sing)		Immercurants Needed in the Pederal	200
		audy)	0.49	Enhanced Oil and One Receivery Re-	
P.L. 93,377		Management and Funding Aspects of		secret. Development, and Demon-	
Preposed Distribution of Special Na-		Three Noneschar Energy Research, Development, and Demonstration		stration Program (Resert)	155
close Marcuala	303	Subprograms (Report)	200	The Legality of the Reported Use by the	
		National Standards Needed for Resi-		Bootgy Research and Development	
P.L. 92-383, § #14		dental Energy Conservation (Report)		Administration of Certain Fossil In- orgy Pands (Letter)	607
Report on Solar Energy Demonstra-			619	National Plan for Energy Rescents,	car
000	263	Natural Gas Shortage The Role of In-		Development and Demonstration	
		ported Lequefied Natural Gas (Report)		Plenning and Analysis	305
P.L. 93-404			241	Proposed Establishment of Joint Foder-	
Plans for Construction of a Magnesohy-		Opportunities to Improve Planning for Solar Energy Research and Develop-		al-Industry Nonneclear Corpora-	
drodynamics Test Pacity is Mon-		mes (Report)	202	ban	315
tana (Report)	086	Problems in Identifying, Developing,		Ways to Strengthen Congressional Con- trol of Energy Construction Projects	
		and Using Goothernal Resources		Other Than Nuclear (Report)	192
P.L. 93-409		(Report)	199		
(Diges of Lan)	452	Sequoyah Nuclear Plant (Shaff atady)	043		
Federal and State Salar Emergy Re-		States of Federal and Private Research		P.L. 93-577, § 15(a)	
anarch, Development, and Demon-		and Development Efforts to Consurve		Report on ERDA's Nonmaclour Activi-	210
stration Activises (Report)	200	Heargy by Reducing Electric Power Transcription Losses (Staff study)	025		
The Legad Metal Past Breeder Reactor		This Country's Most Expensive Light	023		
Promotes and Uncertainties (Staff model		Water Reneter Safety Test Facility		P.L. 93-580	
	CHP	(Report)	059	Indian Natural ResourcesPart II- Cool, Oil, and GarBotter Manage-	
National Program for Solar Heating and Contine	308			ment Can Improve Development and	
National Standards Needed for Rete-	244			Increase Income and Employment	
dennal Energy Conservation (Report)		P.L. 93-438, 5 208		(Report)	225
	019	Surmery of Absormal Occurrences Reperced to the Nuclear Regulatory			
Opposituations to Improve Pleasure for		Communica	316	F.L. 93-618	
Solar Energy Research and Develop-			310	The Expectation of Coal (Report)	244
mem (Report)	202			The additional in Cost (Adjon)	244
		P.L. 93-438, § 307(c)			
P.L. 93-409, 6 12		Report to the President by the Nuclear		P.L. 93-638	
Special Report on Solic Heating and		Regulatory Commission	318	Indian Natural Resources-Part III	
Cooling Demonstration Program	264			Coal, Oil, and Gas-Better Manage- ment Can Improve Development and	
		P.L. 93-473		increase income and Employment	
P.L 93-410		(Degest of Low)	466	(Report)	225
(Deposit of Law)	464	Activities of Solar Energy Coordination			
Arthress of Each Conthermal Demon-		and Management Project	302		
strature Project	307	Pederal and State Solar Energy Re-		P.1. 93-646, 6 5 Submission of U.S.S R. Energy-Related	
Attention of the Geothernst Coordon- tion and Management Project	206	search, Development, and Demon-		Transactions for Congressionsi Re-	
reconstruction of the second	206	stration Astrosies (Report)	200	view	280
190					
				Energy Digest SEPTEMBER	1977

U.S. Code Low / Authority Index

P L 9441		Progress of and Fotore Pleas for Ex-		Processed Arrangement for the Cliech	
Systemas of the Publication and Dis- tribation of "Shedding Light on Facts		pieration of National Petroleum Re- serve in Alaska	271	River Breeder Reactor Demonstra- tion Plant Project (Papers)	0
abost Nuclear Energy" (Report)	064			The Energy Research and Develop- ment Administration's Proposed Contract with Project Management	
P.L. 94-163		P.L. 94-370		Compraire, Commonwealth Edison,	
(Digest of Lun)	468	(Degrat of Law)	459	and the Teamessee Valley Authority	
Employee Disclosures under the En- ergy Policy and Conservation Act	265			(Expant)	0.
The Energy Information Act, S. 1864 (Textinony)	174	P.L. 94-377	470	S U.S.C. 3107 Staffing of Federal Energy Administra-	
An Emiratios of Proposed Federal As- solution for Pleaning Commercial		(Digos of Law) Reergy Policy Decisionmaking, Organ-	400	tion's Office of Communications and Public Affacts (Report)	,
awion of Emerging Emergy Technologies (Repon)	151	conton, and National Energy Goals (Report)	193		
Exemption of a Refined Petroleum Pro-				10 U.S.C. 641	
duct from the Mandacory Petroleum Allocation and Price Regulations	291	P.L. 94-385		Management of and Plans for the Naval Potroleum Reservon (Report)	2
Freezest Disclosures by Employees		(Digest of Law)	471		
Performing Functions under Emergy Policy and Conservation Act	287	Domestic Energy Resource and Re- serve Estimates-Dur. Lambsticos.		10 U.S.C. 7421-38	
GAO's Energy Role (Spend)	122	and Needed Data (Report)	223	Ongahifity of the Neval Petroleum and Od Shale Reserves to Meet Emm-	
Improvements Stall Needed in Federal	129	As Evaluation of Proposed Federal As-		story Oli Needs (Resent)	99
Escrey Data Collection, Amstysis,		satapon for Financing Commercial-		Capability of the Naval Petroleum and	
and Reporting (Report)	152	zation of Smerging Energy		Oil Shale Reserves to Meet Emer-	
Industrial Energy Efficiency Program		Technologies (Payori)	121	goney Oil Needs (Ternstony)	60
	296				
Issues Needing Attention in Develop- ing the Strategic Peopleum Reserve				10 U.S.C. 7424(b)	
(Report)	000	P.L. 94-438 Cost and Schedule Estimates for the		Protection of Oil Reserves	26
Commics of State Breezy Connerva-		Nation's First Lineid Metal Fau			
tion Plans	295	Breeder Reseter Demonstration Pow-		10 U.S.C, 7425(b)	
Polices and Programs Being Developed		erplant (Report)	047	All Parchases and Condemnation Fre-	
To Expand Procurement of Products		The Logality of the Reported Use by the		condings Regarding the Naval Pe- troleum and Oil Shale Roserves	25
Containing Recycled Maternia (Re-	022	Energy Research and Development Administration of Ortion Papel He-		GOLDING OF THE KONIVES	•
Progress of Energy Conservation Pro-		Administration of Certain Fresi be- ergy Fands (Letter)	067	10 U.S.C. 7431(b)(c)	
green for Consumer Products Other		ugy rams (Later)	367	Annual Report to Congress on Naval	
Then Autemobiles	294			Petroleum and Oil Shate Reservos	20
Roverw of Average Paci Becomeny		P1. 95.2			
Sundants under Tota V of Motor					

Standards under Title V of Motor (Digest of Law) Vehicle Jeformation and Cost Savings Quarterly Report of Production from Act the Naval Petroleum and Oil Shale Roview of the Federal Energy Adminis-Reserves tratice's Advisory Committees (Re-181 port) U.S. Code 12 U.S.C. 635(b)(3) Royers of Volumery Agreement and Submission of U.S.S.R. Emergy-Related Plac of Actor To Implement the International Energy Program Transactions for Congressional Re-2 U.S.C. 261-270 Strategic Permission Reserve Plan Evaluation of the Publication and Dis-

tribution of "Shedding Light on Feets 12 U.S.C. 1701 x-5(e) shoot Noticer Energy" (Report) P.L. 94-187 Report on Solar Energy Demonstra The Legatory of the Reported Link by the Energy Research and Development Administration of Certain Possil Sin-5 U.S.C. 532 13 U.S.C. 9 crity Funds (Letter) Can the U.S. Beseder Resetor Developmeet Program Be Accelerated by Us-Improvements Still Needed in Pederal

Energy Data Collection, Austysis ing Poreign Technology? (Report) and Reporting (Report) P.L. 94-197 leformation on Certain Oil and Gas to-Evaluation of the Publication and Disdustry Oversight Responsibilities (Retribution of "Shedding Light on Facts 101 15 U.S.C. 77a shout Neclear Entrey" (Report) Receipt and Coordination of Natura Gas Reserve Data (Report)

5 U.S.C. 552(b)

P.L. 94-258 Account Report to Congress on Noval Federal Cost-Laurent Program of the 15 U.S.C. 78a Petroleum and Oil Shale Reserves Department of the letterior (Report) 262 Receipt and Coordination of Natura Exploration of National Petroleum Re-Gas Reserve Data (Report) 270 serve in Alaska Management of and Plans for the Naval 5 U.S.C. 2105(e)

Petroleum Reserves (Ceport) 222 Comments on Energy Rosearch and 15 U.S.C. 717 Domestic Energy Resource and Re-Development Administration's

Energy Digest SEPTEMBER 1977

191

U.S. Code					
serve Estimatet-Unit, Limitations,		15 U.S.C. 771		Processing of Blectine-Rate-Increase	
and Needed Data (Report) Need for largeoving the Regulation of	233	GAO's Energy Role (Speech)	177	Cases (Report)	153
the Natural Gas Industry and Man- agenesis of Internal Operations (Re- port)	113	15 U.S.C. 772(f) (Supp. V) Domestic Energy Resource and Ro- sorve Entrypos-Uses, Limitations,		16 U.S.C. 863(f) Southeastern Poderal Power Program- -Pragress Management and Program	
Need for the Federal Power Comput- tion to Evaluate the Effectiveness of the Natural Gas Containent Policy		and Needed Data (Report)	223	Operations (Report)	174
(Report)  Bilishle Connect Selet Data Needed for Projecting Amounts of Natural	130	15 U.S.C. 774  Pederal Energy Administration Assessi Record to the President and Con-		Reports of Costs of Certain Structures on Nongovernment Waters	278
Gas That Could Be Deregulated (Re- port)	172	gress	290	16 U.S.C. 824o(c)	
Status and Obstacles to Commercializa- mon of Coal Linesthorne and Gesti- cation (Agent)	065	15 U.S.C. 774(e) Federal Energy Management Program Annual Report	293	Curtainment of Electric Power Service by the Tennessee Valley Authority (Report)	113
15 U.S.C. 717(o)(w)		15 U.S.C. 777		16 U.S.C. 825	
(Digest of Law)	472	The Economic Impact of Energy Ac- torus	255	Access of the Federal Power Commis- sion to Bussau of Reslamation Re- cords to Invare Compliance with the	
15 U.S.C. 717g (b) Record and Coordination of Natural	078	15 U.S.C. 781		Federal Power Act (Letter)	163
Gus Restrice Data (Report)	078	The Federal Energy Administration Quarterly Ropers on Private Oriev- ances and Redress	286	16 U.S.C. 825s Reveaues and Costs Allocated to Power Operations at Multiple-Parasse Pro-	
Effect and Operation of Interstate Com- picin Relating to Natural Gas	297	15 U.S.C. 791 (Supp. IV)	200	jects in the Southwestern Federal Power System (Report)	096
18 U.S.C. 717-717w		(Digest of Line)	462	Southeastern Federal Power Program- Presented Management and Program Operations (Report)	174
Natural Gas Shortage The Role of Im- ported Laquelled Natural Gas (Report)		15 U.S.C. 796(a)			17.4
15 U.S.C. 751 et seq. (Supp. III)	241	Energy Information Reported to Con- gross as Required by Peblic Law 93- 319	279	16 U.S.C. 831 of seq. Information on Sciented Aspects of the Power Operations of Tennessee Val-	
(Digen of Law)	459	15 U.S.C. 2002(e)(2)		ley Aethority (Report)	167
15 U.S.C. 753		Review of Average Fiel Boonomy Stendards under Title V of Mesor		16 U.S.C. 832e Pacific Norshwost Hydro-Thermst	
Petrolaum Market Shares	284	Vehicle Information and Cost Savings Act	278	Power Program—A Regional Ap- present to Morning Electric Power Re- quirements (Report)	161
15 U.S.C. 760u(d)(2) Evenyment of a Religed Petroleum Pro- duct from the Mandatory Petroleum Allocation and Price Regulations	291	16 U.S.C. 12A Repayment Requeements of the Ped- cual investment in the Tensance Val-		16 U.S.C. 835j Controllated Financial Statement of	
IS U.S.C. 761		ky Authority's Bleetric Power System (Report)	099	the Pederal Cottanbia River Power System	274
Comments on the Energy Information Act (Lester)	170	16 U.S.C. 791		16 U.S.C. 971	
Problems of Independent Refiners and Gaspline Retailers (Report)	121	Domesto: Energy Resource and Re- serve Estimates-Uses, Limitations, and Needed Data (Report)	223	Need for Improving the Regulation of the Netural Gua Industry and Man- agement of Internal Operations (Re-	
S U.S.C. 761 of sec, (Supp. IV) (Digest of Law)	461	Need for Improving the Regulation of the Natural Oss Industry and Man- agement of Internal Operations (Re-		part) 16 U.S.C. 1426(a)	113
S U.S.C. 761 (Supp. V) Domestic Energy Resource and Re-		port) 16 U.S.C. 791 et seq.	113	Report to the Congress on Coastal Zone Management	256
serve Estimates-Uses, Limitations, and Needed Data (Report)	233	Problems in Licensing Hydroelectric Projects (Report)	132	18 U.S.C. 1905 Problems is the Pederal Thoray Administration's Complessee and En-	
				forcoment Effort (Report)	118
Cention Actions That Can Se Taken to		Need for the Federal Power Commis-		141156 144	
	061	16 U.S.C. 792 Need for the Federal Power Commis- sion to Bushase the Effectiveness of the Natural Gas Custailment Policy (Report)	130	18 U.S.C. 1913  Evaluation of the Publication and Dis- tribution of "Shedding Light on Facts about Nuclear Barrey" (Parter)	O.C.
Help Improve This Nation's Uranium	061 288	Need for the Federal Power Commis- sion to Evaluate the Effectiveness of the Natural Gas Curtainness Policy	130	Evaluation of the Predication and Dis-	064

Low / Authority Index U.S. Cede

25 U.S.C. 396 Indian Natural Resources-Part 11 Coal, Oil, and Oas-Botter Menage- ment Can Improve Development and		30 U.S.C. 185(w)(2) Orants of Rights-of-Way for Populates through Federal Leasts	273	30 U.S.C. 1144(c) Francial Report on the Goothermal Resources Development Fund	301
Increase Income and Employment					
(Report) 25 U.S.C. 466	225	30 U.S.C. 191 Agreement between the Secretary of the Internor and Officults of the State of Unit Partitioning to On Shale Leases		30 U.S.C. 1162 (Supp. IV) (Diges of Law)	464
Indon Natural Resources-Part II Coal, OR, and Gas-Better Manage- ment Can Improve Development and Increase Income and Employment		(Letter) 30 U.S.C. 201(o)	209	30 U.S.C. 1162(e) Arthritis of the Geothermal Coordina- tion and Minnagoment Propert	335
(Report)	225	Further Action Needed on Recommen- dations for Improving the Adminis- tration of Federal Coal-Leasing		30 U.S.C. 1162(b)	
30 U.S.C. 1 Domestic Energy Resource and Re- serve Estimates-Uses, Lamitations,		Fragnum (Separa)	217	Activities of Each Geothermal Demon- stration Project	307
and Needed Data (Report)	233	30 U.S.C. 207 Further Action Needed on Recommen- dances for Improving the Admini-		31 U.S.C. 426	
30 U.S.C. 21e Denotic Energy Resource and Re- serve Telemates-Uses, Limitations,		tration of Federal Coal-Leasing Program (Report)	217	Improvements Still Needed in Federal Energy Cata Collection, Analysis, and Reporting (Report)	185
and Needed Data (Haperi) Mirring and Minerals Pulsey	223 267	Role of Pederal Coal Recommen in Meeting Energy Goals Needs to be Octomised and the Lessing Process			
30 U.S.C. 22 Construction Diversor Task Force Re-		Improved (Report)	226	31 U.S.C. 4820 Evaluation of the Publication and Dis- tribution of "Shelding Light on Facts	
port on the Onshere Lease Manage-		30 U.S.C. 226(g) Compensatory Repulty Agreements	222	obust Nuclear Energy" (Report) Lessing of Museruls on Public Lands	044
ment Program Study for the U.S Geological Survey Onshore Lesse Management Program	249		272	(Report)	211
Study for the U.S. Geological Survey	250	30 U.S.C. 321 Status and Obstacles to Commerciality		31 U.S.C. 665	
Review of Royalty Accounting System for Onshore Gil and Gas Leanes	253	tion of Coal Liquefaction and Gasifi- cation (Report)	031	Southeastern Federal Power Program- Prospent Management and Program	
Royalty Accounting System Study of Solid Mineral Lensing Activities	254	30 U.S.C. 351	043	Operations (Report)	174
30 U.S.C. 181		Administration of Regulations for Sun-		31 U.S.C. 841	
Administration of Regulations for Sur- face Exploration, Mixing, and Recta- mation of Public and Indian Coal		face Exploration, Mining, and Recia- mation of Public and Indian Coal Lands (Report)	093	Fatere Structure of the Uransum Ba- nehment ladiastry (Texasoccy)	007
Lands (Report)	093	Conscription Division Task Force Re- port on the Outhern Lease Manage-			
Conservation Division Task Force Re- part on the Onshore Lease Manage-		ment Program Study for the U.S. Geological Survey	249	33 U.S.C. 407 Froblems Crused by Coal Mining Near	
ment Program Study for the U.S. Geological Servey	249	Onshore Lesso Management Program Study for the U.S. Geological Survey		Pedoral Reservoir Projects (Report)	075
Department of the Intence's Views of Comments on Administration of		Review of Royalty Associating System	250	30 U.S.C. 1151	
Regulations for Surface Exploration, Mining, and Reclamation of Public		for Ossbore Oil and Gas Leases	253	Reducing Nuclear Powerplant Lead- tenses Many Obstacles Remain (Re-	
and Indian Coal Lands (Report) Lesses of Museuls on Public Lands	095	Role of Federal Coal Resources to Meeting Energy Goals Needs to be Determined and the Leasing Process		post)	069
(Report) Oil and Oas Lossing on Federal Lands	211	Improved (Report)  Royalty Associating System Study of	226	33 U.S.C. 1161	
(Report) Onthure Lease Management Program	210	Solid Mineral Leasing Activities	254	Improved Inspection and Regulation Could Reduce the Possibility of Oil-	
Study for the U.S. Geological Survey	250	30 U.S.C. 801		spills on the Outer Continental Shelf (Report)	100
Provisions of Navajo and Hopi Coal Leases (Report)	207	Cartailment of Blootric Power Service by the Tennessee Valley Audustry (Report)	117	Recovery of Expenses from Cleanup and Investigation of Oil Spills (Letter)	102
Review of Repulty Accounting System for Onshare Oil and Oas Leases	253	Energy Reorganization Legislation			100
Role of Federal Coal Resources in Meeting Energy Goals Needs to be		(Textioney) How the Federal Government Particl-	194	33 U.S.C. 1321 (Supp. II)	
Determined and the Leaning Process Improved (Report)	226	pages in Activities Affecting the En- ergy Resources of the United States		Recovery of Expenses from Cleanup and Investigation of Oil Spills (Lene)	107
Royalty Accounting System Study of Solid Mineral Leasing Activities	254	(Report)	098		lur
-		30 U.S.C. 1001-25		40 U.S.C. 481	
30 U.S.C. 184 Federal Coal-Lessing Program of the Department of the Interior (Report)	221	Problems in Identifying, Developing, and Using Geothermal Resources (Report)	199	Requested Utility Rate Increase by the Potential Electric Power Company (Report)	127
Energy Digest SEPTEMBER 1977					193

U.S. Code Low / Authority Inda

40 U.S.C. 486 Requested Uniny Race Increase by the Potomage Electric Power Congressy		42 U.S.C. 2133(d) Captionis on Selected Aspetts of the Administration's Proposal for Gov-		42 U.S.C. \$\$17 (Supp. IV) (Digest of Law)	46
(Report)	127	erament Assetsane to Petrane Uranium Ennobment Groups (Report)	145	42 U.S.C. 5551 et seq. (Supp. IV) (Digest of Law)	45
42 U.S.C. 220(i) Improvements Newtod in the Program for the Protection of Special Nuclear Material (Report)	094	42 U.S.C. 2153 Censum Actions That Can Be Triken to Help Improve This NetCon's Unsalus: Paties (Record)	961	42 U.S.C. 5562 Activation of Solar Energy Coordinators and Management Project	30
42 U.S.C. 315f		Littue (Million)		42 U.S.C. 5801	
Agreement between the Secretary of the Interest and Officials of the State of Unit Persanang to Orl Shale Leases (Leases)	209	42 U.S.C. 2153d Proposed Agreement for Cooperation with Other Nations on Astenic En-		Comments on the Administration's Proposed Synthesic Fiels Commor- cialization Program (Report) Development of Interrupting Relation-	14
42 U.S.C. 1857		ent!	304	ships in the Regulation of Nuclear Materials and Facilities (Accord)	05
Pedent Coll-Lenning Program of the Dopurcisies of the Interior (Report) Role of Federal Coal Resources in	221	42 U.S.C. 2201 (b) Projecting Special Nuclear Material in Transic Improveness Made and Ex-		Evaluation of the Publication and Dis- tribution of "Shedding Light on Pacts about Nuclear Energy" (Report)	06
Meeting Energy Goels Needs up be Determined and the Learing Process		song Problems (Report)	<b>CD3</b>	Pedictal Coal Research-Status and Problems to Be Resolved (Report)	ce
Improved (Report)	225	42 U.S.C. 2210 Evaluation of the Publication and Dis- tribution of "Shedding Light on Parts		Reducing Nuclear Powerplant Lead- times: Many Obstacles Remain (Re- and)	06
42 U.S.C. 1862 Congress on H.R. (1212, 93rd Con-		about Nuclear Energy" (Report)	064		
gress, a Bill to Further Research, De- velopment. and Commercial Demonstrations in Geothermal En- cray (Latter)	196	Selected Angerts of Nuclear Power- plant Rebability and Economics (Re- port)	050	42 U.S.C. \$801 of seq. The Legality of the Reported Use by the Recryy Research and Development Administration of Contain Possil En-	
		42 U.S.C. 2473 Commonity on 16.R. 11212, 93rd Con-		orgy Funds (Letter)	C.E
42 U.S.C. 2011 Allocation of Uninom Entertheen Services to Fiel Feeign and Domestic Nuclear Resource (Report) Instruments Needed in the Pragram	226	gress, a Bill to Facther Research, De- velopment, and Commercial Demonstrations to Geothermal En- ergy (Letter)	196	42 U.S.C. 5801 (Supp. V)  Domestic Energy Resource and Re- source Entiretos-Uses, Limitatores, and Needed Data (Report)	23
for the Protection of Special Nuclear Maximal (Aspert)	034	42 U.S.C. 3251 Using Solid Waste to Conserve Re-		42 U.S.C. 5818	
Proposed Revisions to the Criteria and Contracts for Uniness Enrichment Services (Report)	097	summs and to Creeke Energy (Report)	013	Federal Efforts to Improve the Puel Economy of New Automobiles (Re- port)	631
Protecting Special Nuclear Material in Trainin Improvements Made and Ex-		42 U.S.C. 3253(a)		42 U.S.C. 5841	
ning Problem (Report)  Role of the International Assume En- rige Agency in Safeguarding Nuclear	035	Resource Receivery and Source Reduc- tion	279	Issues Related to the Closing of the Nu- clear Fuel Services, Incorporated, Re- processing Plant at West Valley, New	
Material (Report) U.S. Prosecul Assistance in the Deve- lopment of Percian Nucleus Energy	240	42 U.S.C. 4321 Forther Action Needed on Reconstru- dations for Improving the Adminis-		York (Report) 42 U.S.C. 5948	OF
Programs (Repair) 42 U.S.C. 2051	229	tration of Federal Cont-Leaning Fragman (Report) Reducing Nuclear Powerplant Lead-	217	Summary of Absorptial Congresses Reported to the Nuclear Regulatory Commission	310
Progress and Problems in Developing Nucleor and Other Experimental Techniques for Recovering Natural		tizes Many Distades Rossin (Re- part)	Cep	42 U.S.C. 5876 Reducing Nuclear Powerplant Load-	
Ges as the Rothy Moustain Area (Re- pert)	077	42 U.S.C. 4332 Now Solve Energy Was Treated in the AEC Charman's Report, "The Na- tion's Energy Future" (Record)		times: Many Obstacles Remain (Re- port)	040
42 U.S.C. 20\$1(a)(4)  Converses on Selected Aspects of the Administract Proposal for Gasterment Assistance to Provide Union Employment Control (Report)		42 U.S.C. 5081 (Supp. IV) (Digos of Low)	198	42 U.S.C. 5877(c) Report to the President by the Nuclear Regulatory Contrision	311
COMMON CONTRACTOR CHOCKS (Supply)	145	42 U.S.C. 5510(4) Network Program for Solar Heating and		42 U.S.C. 5901 Comments on the Administration's Proposed Synthesis Paris Commer-	
42 U.S.C. 2074(a)(ii) Proposed Distribution of Special Nu-		Croling Service Report on Solar Housing and	308	olalization Program (Report)	140

Energy Digest SEPTEMBER 1977

Low / Authority Index U.S. Statutes

The Legabity of the Reported Use by the		42 U.S.C. 6801 (Digital of Liev)	471	50 U.S.C. 167n Report to the Congress on Matters Con-	
Energy Research and Development Administration of Certain Possit En-		43 U.S.C. 31		turned in the Hellum Act	20
ergy Funds (Lever)	067	Domestic Energy Resease and Re-			
		serve Estimates-Usos, Limitations,		50 U.S.C. App. 2061 Review of Complaints Concerning the	
		and Needed Data (Report)	233	Mendetory Petroleum Allocation	
12 U.S.C. 5901 at seq. (Supp. IV)				Program and the Regulation of Pe-	
(Diges of Law)	457	43 U.S.C. 851-852		troleum Priestg (Report)	10
		Agreement between the Secretary of the Interior and Officials of the State			
12 U.S.C. \$906(b)(7)(A)		of Utah Pertaining to Oil Shate Leases		50 U.S.C. App. 2071(b)	
Proposed Baseblishment of Joint Feder-		(Letter)	209	Legality of Proping Galefine Reticulog	
at-Industry Nonauclear Corpora-	315			Cospees by Federal Baergy Admires-	
usa	215	43 U.S.C. 1331		tration (Letter)	10
		Leasing of Minerals on Public Lands	211		
2 U.S.C. 5914(a) National Plan for Energy Research,		(Report)	211		
Development and Domestrates		Oil and Gas Lessing on Paderal Lands (Report)	210		
Planning and Analysis	305	Outer Continental Shelf Sale #35	-10	U.S. Statutes	
		Problems Selecting and Evaluating			
2 U.S.C. 6201		Land to Lesse (Report)	231	35 Stot. 781	
(Digget of Law)	468			Administration of Regulations for Sur-	
Record Conservation at Government		43 U.S.C. 1331-1343		face Exploration, Mining, and Recla-	
Pield Installations Progress and		Problems in Identifying, Developing, and Using Geothermal Resources		meter of Public and Indian Coal Lands (Report)	
Problems (Report)	028	(Report)	199	renigg (Nobert)	0
Review of Voluntary Agreement and				4) Steel 437	
Plan of Action To Implement the In- ternational Energy Program	276	43 U.S.C. 1332		41 Stat. 437 Oil and Gas Lessing on Pederal Lands	
Consortal Entry Program	2/0	Improved Inspection and Respiration		(React)	2
		Could Reduce the Possibility of Od-			
t U.S.C. 6201 (Supp. V)		spills on the Outer Continental Shelf (Record)	100	41 Stat. 1963	
Domestic Energy Resource and Re- serve Estimates-Uses, Laminstons,		Information on Certain Oil and Gas In-		(Degrat of Law)	43
and Needed Data (Report)	233	dustry Oversight Responsibilities (Re-			
		port)	105	41 Stat. 1070	
U.S.C. 6245		Outer Continental Shelf Oil and Gus		Reports of Costs of Cortain Structures	
Strategic Petroleum Reserve Plan	160	Development: Improvements Needed in Determining Where to Lesse and at		on Nongovornment Waters	21
	100	What Dollar Value (Report)	215		
U.S.C. 6308		Outlook for Federal Goals to Acceler-		52 Shot. 347	
Progress of Energy Conservation Pro-		ate Leasing of Oil and Ges Resources		Adminutration of Regulations for Sur-	
gram for Consumer Products Other		on the Outer Continental Shelf (Re-	214	face Exploration, Missing, and Recla- mation of Public and Indian Coal	
Than Automobiles	294	Records of the Rowert Committee on	*14	Lands (Recort)	
		Safety of Outer Continental Shelf Pe-			-
U.S.C. 6225		treleam Operations to the United		\$2 Shot. 821	
Operation of State Boergy Conserva-		States Geological Survey	251	(Digest of Luw)	43
uen Plans	295	Reports of the Work Group on OCS Selety and Pollution Control	252		
		service condition Copies	432	52 Stat. 827	
U.S.C. 6345		43 U.S.C. 1332 et seu.		Effect and Operation of Intentate Com-	
Industrial Energy Efficiency Program		Recovery of Expenses from Cleanup		poots Relating to Natural Cox	21
	276	and Investigation of Oil Spills (Leave)	100		
				67 Stat. 463	
U.S.C. 6392		43 U.S.C. 1339(b)		Oil and Gas Leasing on Federal Lands	
Financial Disclostors by Employees		Refunds on Dater Continental Shelf		(Repart)	2
Performing Punctions under Energy		Leases	269		
Polyty and Conservation Act	227			67 Stot. 469	
		43 U.S.C. 1501 Problems in Identifying, Developing,		Refeeds on Outer Continental Shelf	21
2 U.S.C. 6392(b)(2)		and Using Geotherma Resources		Leneca	21
Ensployee Disclosures under the En-		(Report)	199	70A Stot. 458	
ergy Policy and Conservation Act	345			All Purchases and Condemnstree Pre-	
		44 U.S.C. 3512		ceedings Regarding the Naval Pe-	
U.S.C. 6504(d)(2)		Improvements Still Needed in Federal		troleum and Oil Shalo Reserves	2
Reploration of National Petroleum Re-		Energy Data Collection, Analysis, and Reporting (Asport)	189		
	270	mer authorizing Harboah	102	74 Stat. 783	
serve in Alaska		49 U.S.C. 1683		Compensatory Royelty Agreements	22
		Accused Report of the Secretary of Tran-			
U.S.C. 6504(a)(3)				74 Stel. 923	
2 U.S.C. 6504(d)(3) Progress of and Puture Plans for Ex-		speciation on the Administration of			
2 U.S.C. 6504(d)(3) Progress of and Puture Plans for Ex- ploration of National Petroleum Re-		the Neteral Gas Pipeline Safety Aut		Report to the Congress on Matters Con-	
2 U.S.C. 6504(d)(3) Progress of and Puture Plans for Ex-	271	speciation on the Administration of the Neteral Gas Pipeline Safety Art of 1968	277		24

U.S. Stelutes Law / Authority Index

76 Stat. 905 Presention of Oil Reserves	261	troleum Afficeation Programs at Re- portal and State Levels (Report) Problems of Indopendent Reflects and	108	88 Stot. 627 Problems in the Poderal Energy Ad- ministration's Complemes and En-	
76 Stat. 906 Quantrily Report of Production from the Natal Petroleum and Od Shale		Gasakee Resulers (Report)  Review of Complaints Concerning the Mandatory Petroletim Allocation	121	(arcement Effect (Report)	118
Raterves	258	Program and the Regulation of Pe- trolous Pricing (Report)	102	Report on Solar Energy Demonstra- tion	263
76 Stat. 1124 Acuse Proposed Concerning Conflors of Interes:	283	87 Stot. 631 Petroleum Market Steres	384	88 Steh. 803 Plans for Construction of a Magneroby-	
80 Stat. 200 Consistent Financial Streemen of		87 Stot. 1946 (Digest of Law)	460	dredynamies Test Facility in Mon- tana (Report)	085
the Federal Columbs River Power System	274	88 Stat. 94 (Duret of Lan)	461	88 Spat. 1069 (Digest of Law)	453
82 Stat. 728		(Digital Law)	401		
Argual Report of the Secretary of Tran- sportation on the Administration of the Natural Gas Papeline Safety Act		88 Stat. 96 Paderal Energy Administration Annual Report to the President and Con-		88 Shat. 1076 National Program for Solar Heating and Cooling	200
al 1968	277	gress Pederal Energy Administration Efforts	390	Special Report on Solar Heating and Cooking Demonstration Program	264
83 Stot. 852 Administration of Regulations for Sur- tice Exploration, Minng, and Recta-		to Ander Fuel Od Supplies of Major Unity Companies (Project Utility) (Report)	126	88 Shelt. 1079 (Digrat of Law)	464
mercon of Public and Indian Coal Lands (Report)	093	Federal Energy Administration's Ef- form to Audit Demester Crude Oil Producers (Report)	123	48 Stot. 1088 Activities of Each Geothermal Demon-	
84 Seat, 799  Review of Complaints Conserring the  Mandatory Petroleum Allocation		Chaff Oil Corporation's "Double Dip- ping" on Crude Oil Product Costs		scration Project Acousties of the Geothermal Coordina-	307
Program and the Regulation of Pe- troleum Pricing (Report)	102	(Report)  Need for the Federal Power Commu- tion to Evaluate the Effectiveness of	138	tion and Management Project Pinencial Report on the Geothermal Researces Development Pand	336
84 Stot. 1229 Resource Recovery and Source Reduc-		the National Clas Curticlesont Policy (Report)	120		339
tion	279	Problems in the Federal Energy Ad- transtration's Compliance and En- forcement Effort (Report)	118	88 Shet. 1233 (Digest of Law) The Legality of the Reported Use by the	455
84 Stor. 1876 Maning and Manorals Policy	267	48 Stot. 109	110	Energy Research and Development Administration of Certain Fossil En- ergy Funds (Leuer)	
86 Stot. 816 Problems Caused by Coal Missing New		Federal Energy Management Program Annual Report	293	orgy Ponds (Letter)	067
Pederal Reservoir Proposis (Report)	075	88 Stat. 111		Summary of Abnormal Occurrences Reported to the Nuclear Regulatory	
86 Stat. 1288 Report to the Congress on Constal Zone Maniscrippi	256	The Sectionic Impact of Energy Ac- tions	255	Commission	316
87 Stot. 583		88 Sect. 113 The Federal Energy Administrations		88 Stat. 1251 Report to the President by the Nuclear Regulatory Commission	318
Grass of Rights of Way for Pipelssea theorgh Federal Lands	273	Quarterly Report on Private Grays- ances and Redress	286	88 Stot. 1431	310
87 Stoj. 584		88 Stot. 246		(Dagest of Law)	455
(Digast of Law)	456	(Digger of Low)	462	88 Stat. 1437	
87 Stol. 627 (Digratof Lun)	459	88 Shot. 262 Energy Information Reported to Con-		Artivities of Solar Energy Coordination and Management Project	302
Federal Energy Advenueration Efforts to Audit Fael Oil Supplies of Major Unitry Companies (Project Utility)		gress as Required by Public Law 93- 319	283	88 Stat. 1460 Proposed Agreements for Cooperation	
(Report) Federal Energy Administration's Ef- forts to Audit Desentic Crude Oil	126	88 Shot, 276 Plaza for Construction of a Magnetohy-		with Other Nations on Atomic En- ergy	304
Producers (Report)  Gulf Oll Corporation's "Datable Dip- ping" on Crude Oil Preduct Costs	123	drodynemics Test Pacifity in Mon- tens (Report)	005	88 Stel. 1759	
(Report)	138	88 Stat. 473		Recycling of Materials Solid Watte Management, Collection,	260
Problems in the Federal Energy Office's Implementation of Energency Pe-		Proposed Distribution of Special Nu- cless Metorials	203	Disposal, Rescures Recovery, Resy- sing Program	257
196				F	

Law / Authority Index Miscellaneous Authorities

8-1146SE (1974)

69 Stet. 1063

88 Stat. 1878

(Dupte of Law)	467	The Legality of the Reported Use by the		Paters Structure of the Uranum En-	
The Legality of the Reported Use by the	***	Energy Research and Development		richment Industry (Tenmony)	657
Energy Renearch and Development		Administration of Certain Fossil En- ergy Pands (Leave)	987		
Administration of Certain Fossil En-	687	trgy runa (Line)	ug/	8-11867# (1970)	
Report on ERDA's Normecles: Activi-	647	89 Stat. 1073		Lessing of Minerals on Pubbe Lands	
ties	310	The Legality of the Reported Use by the		(Report)	211
	***	Energy Research and Development			
88 Stat. 1894		Admirestration of Certain Fossil En-		8-163798 (1970) Revergets and Coats Allocated to Power	
National Plan for Energy Research,		ergy Funds (Lesser)	Q87	Roverses and Comp Allocated to Power  Goeratama at Multiple-Purpose Pro-	
Development and Demonstration				sects in the Southwestern Federal	
Planning and Analysis	305	90 Stat. 305 Exploration of National Petroleum Re-		Power System (Report)	096
		Exploration of National Pepeleum Re- serve in Alaska	270		
88 Stel. 2335		Progress of and Putare Plans for Ex-		B-168450 (1974)	
Submission of U.S.S.R. Energy-Related		plocation of National Petroleum Re-		Pressrement of Foreign and Dornestee	
Transpetions for Congressional Re- view	285	serve in Alaska	271	Penelpun by Department of Defense (Report)	091
VICE .	200			(Argun)	071
66 Stat. 7813		90 Stat. 311 Annual Report to Congress on Naval		8-178205 (1974)	
Proceed Establishment of Joint Fedor-		Annual Report to Congress on Naval Petroleum and Oil Shale Reserves	262	Energy Conservation at Government	
al-Industry Negaticles Coreous-		TATOMEN IND CL DING MADE TO	***	Field Installations Progress and	
tion	315	90 Stat. 1013		Problems (Report)	925
		(Decot of Law)	469		
89 Stat. 871		(mgan ar ann)		10 C.F.R., ch. II	
(Digest of Law)	468	90 Stat. 1083		Suppliers' Compliance with Allocation	
Review of Voluntary Agreement and		(Digest of Lass)	420	and Pesce Regulations (Report)	109
Plan of Action To Implement the In-					
tornational Energy Program	276	90 Stet. 1125		10 C.F.R. 40	
		(Depth of Low)	471	Certain Actions That Can Be Taken to Help Improve This Nation's Ursman	
89 Stat. 889				Potros (Report)	961
Strategic Petroloum Reserve Plan	289	91 Stat. 5		a server (page-1)	
		(Digest of Lusy)	472	10 C.F.R. 50	
89 Stat. 902				The Reacter Inspection Program of the	
Review of Average Fuel Economy Standards under Title V of Motor				Atomic Entrgy Commission (Report)	001
Vehicle Information and Cost Savings					
Aet	278	Miscelloneous Authorities		10 C.F.R. 70.12	
				Protecting Special Nuclear Material in	
89 Stat. 932		AEC Manual Appendix 2491		Transet: Improvements Made and Ex- isting Problems (Report)	635
Progress of Energy Conservation Pro-		Improvements Needed in the Program for the Protection of Special Nuclear		Bud Monus Indoo	033
green for Consumer Products Other	294	Material (Report)	024		
Than Automobiles	294	Proteoging Special Nuclear Material in		10 C.F.R. 73 Intercomments Needed in the Program	
		Transit: Improvements Made and Ex-	035	for the Protection of Special Nuclear	
89 Stat. 935		isting Problems (Report)	(05	Material (Report)	034
Operation of State Energy Conserva- tion Plant	201			Protecting Special Nuclear Meterial in	
and reads		AEC Manual Appendix 2405 Improvements Needed in the Program		Transat: Improvements Made and Ex- jetting Problems (Report)	035
89 Stat. 937		for the Protection of Special Nuclear		Bittle Montage (Solice)	033
Industrial Energy Efficiency Program		Maternal (Report)	034	10 C.F.R. 212	
100,000,000,000	296	Protecting Special Nuclear Material in		Problem in Regulating Natural Cas	
		Treasic Improvements Made and Ha-	035	Prices by the Federal Energy Ad-	
89 Stat. 951		inting Problems (Report)	033	ministration (Report)	139
Byemetics of a Refford Petroleum Pro-					
duct from the Mandatory Petroleum		Bureau of Land Management Manual, 5 3509		13 C.F.R. eb. 1, part 121	
Altonation and Price Regulations	291	Department of the Interior's Views of		Effects of a Change in Size Standard for	
		Comments on Administration of		Small Builtess Petroleum Retiners	149
89 Stat. 961		Regulations for Surface Exploration,		(Report)	149
Pinancial Disclosures by Employees Performing Functions under Energy		Mining, and Reclamation of Public and Indian Coal Lands (Report)	095		
Policy and Conservation Act	187	and trainer over trainer (adjust)		18 C.F.R. 3.735	
14117 2112		B-66927 (1972)		Actions Taken by the Federal Power Commission on Prior Recommends	
19 Stat. 962		Capability of the Naval Petroleum and		tions Concerning Regulation of the	
Prenivers Disclosures under the En-		Oil Shale Reserves to Meet Emer-			
ergy Policy and Conservation Act	265	gency Oli Needs (Tentrosy)	073	ment of Internal Operations (Report)	147
Energy Digost SEPTEMBER 1977	,				197

18 C.F.R. 154,93 Amount of Natural Gos that Coold Be Released from Federal Price Regula- tions upon Expiration of Contracts from 1975 through 1985 (Franceschi Rhalible Contine Soles Data Needed	127	41 C.F.R. 101-34,202 Requested Unity Rate Increase by the Petensne Electric Power Company (Report)	127	Executive Order 18748 Problems in the Federal Lineary Office's Implementation of Emergency Petroleum Allocation Progetters at Regional and Stone Levels (Report)	10
for Projecting Amounts of Natural Gus Thus Cound Be Deregulated (Air- pan)	172	43 C.F.R. 23 Administration of Regulations for Ser- face Exploration, Mining, and Recla- mation of Public and Indian Coal Lands (Report)	093	Executive Order 11814 Outlook for Federal Goals to Ancalerate Leaning of Orl and Clas Resources on the Oster Continental Shelf (Re-	
25 C.F.R. 171 Indian Natural Resources—Part II Coal, Gel, and Gas—Stetter Manage- rices Coa language Development and Innocesse Income and Employment (Report)	225	43 C.F.R. 23.5(e) Department of the Interior's Views of Comments on Adams's reason of Regulations for Surface Exploration,		gent)  Executive Order 11902  Assessment of United States and International Controls over the Percent	21
		Mining, and Reclamation of Public and Indian Coal Lands (Report)	095	Uses of Nuclear Energy (Report)	24
25 C.F.R. 172 Indus. Natural Resources—Part II Cool. Oil. and Gas—Better Menage- tion Con Impose Development and Increase Income and Employment (Report)	225	43 C.F.R. 23.7, 23.8  Department of the Interior's Views of Comments on Administration of Regolitions for Surface Exploration, Musing, and Reclamation of Publis		Federal Management Circular 74-1 Beergy Conservation at Occurament Field Installations: Progress and Problems (Papera)	cz
25 C.F.R. 177 Advanstration of Regulations for Surface Evaluation, Minney, and Recla-		and Indian Coal Lands (Report)  43 C.P.R. 3100	093	Pederal Management Circular 74-1, as supplemented Progress and Problems of the Govern- ment's Unity Conservation Progress	
metors of Public and Indian Coal Lands (Report)	093	Leasing of Minerals on Public Lands (Report)	211	(Report)	02
Department of the Insensor's Views of Connectes on Administration of Regulations for Surface Expirement, Mining, and Rectamenton of Publis		On and Cas Learning on Federal Lands (Report)	210	F.P.C. Opinion 699 Actions Taken by the Federal Power Communion on Prior Recommends	
and Indus Coal Lands (Report) Indus Natural Resources-Part II- Coal, Oil, and Gua-Better Manage-	095	Oil and Gas Learning on Foderal Leads (Report)	210	tions Constraint Segretation of the Natural Gas Industry and Manage- ment of Internal Operations (Report)	140
meni Can Impone Development and Increase Incente and Employment (Report)	225	43 C.F.R. 3120 Oil and Clas Leaning on Federal Lands (Report)	210	Need for Improving the Regulation of the National Gas Industry and Man- agement of Internal Operations (Re- port)	113
25 C.F.R. 183.45 Indian Natural Resources-Part III Goal Oil, and Gas-Barner Manage- man Can Improve Development and		43 C.F.R. 3300 Leaning of Minerals on Public Lands (Report)	211	F.P.C. Opinion 699-8 Actions Taken by the Foderal Power	
Increase Income and Employment (Report)	125	Cit and Gas Leaving on Federal Lauds (Report)	210	Commission on Prior Recommenda- tions Concerning Registration of the Natural Cas Industry and Manage- ment of Internal Operations (Report)	1.47
30 C.F.R. 200 Role of Federal Coal Resources to		43 C.F.R. 3500 Leaning of Minerals on Public Lunds			147
Meeting Energy Goals Needs to be Distributed and the Lessing Process Improved (Regori)	226	(Report) 79 Cong. Rec. 10379	211	F.P.C. Order 157 Management Inspovements Needed in the Federal Power Communica's Processing of Electric-Rate-Increase	
30 C F.R. 250		Access of the Federal Power Concess- tion to Bureau of Reclamation Re- cords to Jesus Compliance with the		Cases (Report) E.P.C. Order 402	153
Improved Inspection and Regulation Could Reduce the Possibility of Od- spills on the Outer Continuous Shelf		Federal Power Act (Lener)  Defense Procurement Circular 120	163	Actions Taken by the Federal Power Commission on Prior Recommenda- tions Concerning Regulation of the	
(Report) Oct and Gas Learning on Foderal Leads (Report)	210	The Effects of Oil Price Increases on Small Business Contracts (Report)	123	Natural Oss Industry and Manage- ment of Internal Operations (Report)	147
30 C.F.R. 250.43 Followup on Certain Marters Concern- ing the Inspection and Regulation of Outer Commercial Shelf Oil Opera- tions (Reguet)	201	Executive Order 3797-A Followsp Review of the Naval Pe- troleen Reserves (Report)	220	F.P.C. Order 402-A Actions Thiom by the Foderal Power Commission on Prior Recontracedu- tions Concerning Regulation of the Natural Con Instantry and Manage- ment of Internal Operations (Report)	147
30 C.F.R. 254,57 Information on Clemes Oil and Gas In- dustry Overright Responsibilities (Re- port)	105	Executive Order 11222 Across Telon by the Pederal Power Commission on Prior Recommenda- tions Concerning Regulation of the Natural Gas Industry and Manage-		F.P.C. Order 402-402-A Need for Improving the Regulation of the Noturel Gas Industry and Must- appropriat of Integral Operations (Re-	
198	148	mest of Internal Operations (Report)	147	port)	113

Low / Authority Index Miscelleneous Authorities

Need for the Pederst Power Commis- sion to Improve the Regulation of the Natural Gas Industry and Matrage- ment of Its Internal Operations (Ta- anaxy).	114	the Natural Gus Industry and Man- agement of Internal Operations (Re- port)  Need for the Federal Fower Commu- sion to Impose the Registron of the Natural Gas Industry and Manage-	113	H. Rejnt, 93-1301 Problems in Identifying, Developing, and Using Geothermal Resources (Repen)	199
F.P.C. Order 418 Autons Taken by the Federal Fower Commission on Prior Recommenda- tions Concerning, Regulation of the		ment of its Internal Operations (Termony)  E.P.C. Order 495	114	H. Ropt. 94-294 The Legally of the Reported Use by the Energy Research and Development Administration of Certain Postel En- ergy Funds (Letter)	087
Natural Gas Industry and Menage- ment of Internal Operations (Report) Need for Improving the Regulation of the Natural Gas Industry and Man- agement of Internal Operations (Re-	147	Energy Conservation Practices En- couraged by States (Report)  F.P.C. Order 513	004	H. Rept. 94-596 Plans for Construction of a Magnetohy- drodynamics Test Feeling in Mon- ters (Report)	004
port) Need for the Pederal Power Commission to Improve the Regulation of the Natural Gas Industry and Management of its Interest Operations (Tanameter)	113	Management Improvements Norded in the Federal Power Communication's Processing of Electric-Rate-Increase Cases (Report)	153	H. Rape, 94-942 Management of and Plans for the Naval Februleum Reserves (Report)	227
•		F.P.C. Corley 533		H. Res. 1189 (93rd Cong.)	
F.P.C. Order 431 Nood for the Federal Power Commis- sion to Evaluate the Effectiveness of the Natural Oss Containment Policy		The Economic and Environmental Im- pact of Natural Gas Cardadraenta dur- ing the Warter of 1975-76 (Rapan)	062	U.5 Financial Assistance in the Deve- lopment of Foreign Nuclear Energy Programs (Report)	239
(Report)  F.P.C. Order 431-431-A	130	F.P.C. v. Taxoco, 377 U.S. 33 (1964) Reliable Contract Sales Data Needed for Properting Amounts of Natural Gas That Could Be Deceguined (Re-		H. Ras. 1219 (93rd Cong.) U.S Financial Assistance in the Development of Foreign Nuclear Energy Programs (Report)	239
Need for Improving the Regulation of the Natural Gas Industry and Man- agement of Internal Operations (Re- port)	113	port)  38 F.R. 1052 Violation of Coding Proces in a Defense	172	H.R. 49 (94th Cong.) Pollowup Ronaw of the Naval Pe- trolouss Reserves (Report)	220
F.P.C. Order 455		Fool Supply Center Sale (Aspert)	128	H.R. 1614, § 208 (95th Cong.) Rational Exploration and Development	
Artices Taken by the Federal Power Commission on Prior Recommenda- tions Concerning Regulation of the Netural Gas Industry and Manage-	147	GSA Procurement Letter 105 The Effocts of Oil Price Increases on Small Business Contracts (Aspent)	123	of Outer Continental Shelf Resources (Tealmosp)	230
mont of leternal Operations (Report)	147	H.J. Ras. 47 (94th Cong.) Pollowup Rossew of the Naval Po-		H.R. 1614 (95th Cong.)  Outer Continental Shalf Sale #35: Problems Salecting and Evaluating	
Actions Taken by the Federal Power Commission on Progr Recommenda-		troleum Reserves (Repon)	220	Land to Lente (Report)	231
tions Concerning Regulation of the Natural Gas Industry and Manage- ment of Internal Diperations (Report)	10	H. Rapt. [89]-1409 California's Cesural Valley ProjectProposed Fower Rate Increese (Re- port)	156	H.R. 2385 (94th Cong.) Comments on the Energy Information Act (Letter)	170
F.P.C. Order 467-A The Economic and Reverenmental Im- pact of Natural Gas Curtainments dur-		Proposed Power Rate Increase of the Bureau of Reclamation's Central Val- ley Project (Tentropy)	101	H.R. 2650 (94th Cong.) Following Review of the Navai Po- troleum Reserves (Report)	220
ing the Wester of 1975-76 (Report)	082	H. Rept. 91-1219 Pacific Northwest Hydro-Thornal Power Program A Regional Ap-		H.R. 2788 (84th Cong.) Revenues and Coats Allocated to Power Operations at Multiple-Purpose Pro-	
F.P.C. Order 467-8 The Economic and Environmental Impet of Natural Gas Curtailments during the Writer of 1975-76 (Report)	062	presch to Meeting Blacene Power Re- quirements (Report)	161	Jests in the Southwestern Pederal Pewer System (Report)	096
F.P.C. Order 491 Actions Taken by the Pederal Power Commission on Prior Recommenda-		H. Rept. 92-1066 ERDA Report of Review of Design, Construction, and Planning of Platoness Processing Pacifiles	299	H.R. 3474 (94th Cong.) Comments on the Administration's Proposed Synthetic Facili Commer- cialization Program (Report)	140
tions Concerning Regulation of the Natural Gas Industry and Manage- ment of Internal Operations (Report) Need for Improving the Regulation of	147	H. Rept. 92-1123 Plens for Construction of a Magnetohy- deodynamics Test Facility in Mon- tana (Report)	OB5	H.R. 3474 (95th Cong.) Historing for Commercial-sized Democratrations of Energy Technologies (Teasways)	141

199

Miscellarregus Authorities Low / Authority Index

H.R. 5487 [94th Cong.] Review of the Progress and Problems of Resource Recovery State the Privage		H.R. 11903 (93rd Cong.) Actions Needed to Improve Federal lif- forts in Collecting, Analyzing, and		Power Operations of Tennessoc Val- ley Authority (Report)	167
of the Resource Recovery Act of 1970 (Tentoney)	016	Reporting Rearray Data (Report)	159	OMB Circular A-94, Revised Comments on Proposed Legislation to	
H.R. 5919 (94th Cong.) Followsp Review of the Naval Pe- scoloum Reserves (Report)	220	H.R. 11903 (94th Cong.) Energy Data Collection at the Federal Government (Testionery)	157	Change Bass for Government Change for Unadam Earnehment Services (Report)	131
H.R. 6218 (94th Cong.) Outer Constantal Stelf Oil and Out Development Improvements Needed in Determines Where to Lose and at		H.R., 12112 (94th Cong.)  Alternative Finels for Avanton (H.R. 12112) (Teathoroug)  Budgeting of Federal Financial Inten- tives for Henry Development (Tea-	154	42 Op. Aff'y Gen. 10 Agreement between the Socretary of the Interior and Officials of the State of Utsh Permissing to Oil Shale Leases (Lance)	209
What Dollar Value (Report)	218	omory) Developing and Commercializing En- ergy Technology (Tunning)	150	Outer Continental Shelf Order No. 7 Followep on Certain Matters Concern-	
H.R. 6860 (94th Cong.)  Analysis of the Energy, Economic, and Budgerny Impacts of H.R. 6560  Sinff profes	129	An Evaluation of Proposed Pederal As- sistance for Financing Commercial- sation of Emerging Energy Technologies (Report)	140	ing the Impection and Regulation of Outer Continental Shelf Oil Opera- tions (Report)	208
H.R. 7680 (94th Cong.) Passecing Infrastructure in Energy		An Evaluation of Proposed Federal As- astence for Financing Commercial- isation of Emerging Sucry Technologies (Tennon)	150	Outer Cantinental Shelf Order No. B Followsp on Cettain Missess Cenome- ing the Impection and Regulation of Otter Confinental Shelf Oil Opera-	
Development Areas of the Western States (Speech)	081		1302	tions (Report)	208
H.R. 8401 (94th Comg.) Comments on Selected Aspects of the Administration's Proposal for Gov-		H.R. 12112 (95th Cong.) Pinancing for Commercial-stool Demonstratons of Barrgy Technolo- gies (Technolog)	141	Outer Continental Shelf Order No.  11  Followup as Certain Militers Concerning the Impettion and Regulation of	
crastions Assistance to Private Uninium Engelment Groups (Report)	145	H.R. 12113 (94th Cong.) The Legality of the Reported Use by the Except Research and Development		Onter Confinenced Shalf Oil Opera- tions (Report)  Petroleum Allocation and Price	208
H.R. 8524 (94th Cong.) Doveloping and Commercialiting En- outy Technology (Technology)	142	Admicissation of Certain Possit lin- eigy Funds (Letter)  H.R. 12169 (94th Conts.)	087	Regulations, § 211.13 Suppliers' Compliance with Allecation and Price Regulations (Report)	109
H.R. 10108 (94th Cong.) Devatoping and Contexercialsing Energy Technology (Transcop)	142	Fine 12109 (van Cong.) Energy Centervation Financing (Ter- tionesy)  H.R. 12534 (93rd Cong.)	027	Petroleum Allocation and Price Regulations, § 211.102 Suppliers' Compliance with Allocation and Price Regulations (Report)	109
H.R. 10267 (94th Cong.) Developing and Commercialising Energy Technology (Technology)	142	Propried Energy Inventory Act of 1974 (Lover)  H.R. 14168 (93rd Cons.)	160	Phillips Petroleum Company v. Wisconsin (U.S., 1954) Reliable Contrast Sales Dats Needed for Projecting Amounts of Neous)	
H.R. 11212 (93rd Cong.) Comments on H.R. 11212, 93rd Congress, a Bill to Further Research, Development, and Commercial		Pacific Northwest Hydro-Thornal Power Program-A Regional Ap- passion to Macting Electric Power Re- quirements (Report)	161	Gus That Could Be Decagulated (Re- part)	172
Demonstrations to Geothermal En- ergy (Letter)	196	H.R. 14205 (94th Comp.) Energy Conservation Financing (Ter-	097	Presidential Directive  Energy Conservation: Pederal Beergy  Management Program	292
H.R. 11792 (94th Cong.) Developing and Commercializing En- ergy Technology (Technology)	142	Mandatory Petroleum Allocation Regulations, § 211.13(c)		Presidential Proclamation 3279 Funds Credited to the Account of the Virgin latinels for Refunds from Import Lucense Sees (Report)	124
H.R. 11793 (93rd Cong.) Actions Needed to Improve Federal Bi- forts in Collecting, Amstraleg, and Reporting Energy Data (Report)	159	Review of the Operation Division of the Federal Energy Administration (Report)	115	Presidential Preclamation 4210 Fonds Credited to the Account of the Vegin Islands for Refunds from Im-	124
H.R. 11793 (94th Cong.) A Bill to Beathlish a National Energy		OMB Circular A-25 Lessing of Misseuls on Public Lands /Report/	211	part License Pees (Report)  Presidential Proclamation 4227	124
Information System (Textinous)  Broogy Data Collection in the Pederal Government (Textimony)	158	OMB Circular A-76 Information on Selected Aspects of the		Funds Credited to the Account of the Virgin latends for Refunds from Im- part License Fees (Report)	124

200

Low / Authority Index Miscallonaous Authorities 5. 426 (94th Cong.) Descriptions of the Outer Continues of

S. 1864 (94th Cong.) The fineray Information Act. 5 1864

201

Public Land Order 1621

Followup Roving of the Navel Pe-

troleur	Reserves (Report)	220	Shelf Possil Fuel Resources (Tes-	215	(Tennesy) Improvements Soft Needed in Federal	176
Revanue 1972)	ommissioner of Informel , 454 F. 2d 1157 (9th Cir. in Identifying Developing,		Other Continental Shelf Oil and Gua Development: Improvements Needed in Determining Where to Lease and ot What Dollar Value (Aspect)	218	Energy Data Collection, Analysis, and Reporting (Report)	182
and U (Report	bing Goothermal Rescurges	199	S. 521 (94th Cong.) Development of the Otter Continental		<ol> <li>2035 (94th Cong.) Budgeting of Federal Financial Incre- tives for Energy Development (Ter- financy)</li> </ol>	150
Policway	3 (94th Cong.) Review of the Naval Pe- Reserves (Report)	220	Shelf Found Fael Resources (Pe- among)  Penanong infrastructure in Energy De- velopment Areas of the Western States (Speech)	215	Comments on Selected Aspects of the Administration's Proposal for Gov- eramont Assistances to Private Urearest Entscharges Groups (Report)	145
Followap	76 (93rd Cong.) Review of the Naval Pe- Reserves (Report)	220	Outer Continental Shelf Oil and Gas Davelopment: Improvements Needed in Determining Where to Lease and at What Dollar Value (Report)	214	Byahanion of the Administration's Proposal for Government Assistance to Powers Unneuen Enrichment Groups (Report)	134
Operati	-1764 send Costs Allecated to Power sees at Multiple-Purpose Pro- to the Southwestern Poleral		Outer Continuenal Shalf Sale #35. Problems Selecting and Evaluating Land to Lease (Report)	201	Sciented Aspects of Nuclear Power- plant Reliability and Economius (Re- port)	850
Fower:	System (Report) 470	096	S. 586 (94th Cong.) Development of the Guter Continental Shelf Fossil Fuel Resources (Ter- Almany)	215	S. 2176 (92ed Cong.) Actions Needed to Improve Pederal Effects in Collecting, Analyzing, and	159
erel lay	et Requirements of the Ped- estment in the Tenaessee Val- athority's Bleama Fower (Report)	099	Pastnersg Infrastructure is Energy Development Acess of the Western States (Speech)	681	Reporting Energy Data (Report) Communics on the Energy Information Act (Lever)	170
Constru	802 teport of Review of Design, action, and Planning of am Processing Parlities	299	5. 591 (95th Cong.) Energy Policy Decementsking, Organ- ization, and National Energy Goals (Report)	193	S. 2176 (94th Cong.) A life to flysblish a Nasional Energy Information System (Testimony)	158
S. Rapt. 93- Pleas for t	903 Construction of a Magnetohy- triks Test Facility in Mon-		Energy Reorganization Legislation (Tentenopy)  S. 594 (94th Comp.)	194	<ol> <li>2213 (94th Cong.)</li> <li>The Federal Income Taxes of Class A and B Electric Utilities (Report)</li> </ol>	185
tens (A S. Rapt. 93-	eport)	066	Pollonup Renew of the Naval Pe- trolsum Reserves (Report)	220	2532 (94th Cong.)     An Evaluation of Proposed Federal Assistance for Presenting Commerciali-	
Plant for 6	Construction of a Magnetohy- trafes Test Pacifity in Mon-	680	S. 740 (94th Cong.) Development of the Outer Continenal Shelf Possil Part Resources (Tec- amony)	215	nation of Emerging Energy Technologies (Report) Budgeting of Pederal Financial Incon- tives for Energy Development (Tec- tres)	151
Problem	ontinental Shelf Sale #35: as Solecting and Evaluating		S. 826 (95th Cong.) Energy Policy Decisionnaking, Organ-		Comments on the Administration's Proposed Synthetic Fuels Commer- olatization Program (Report)	140
S. 27 (94th	Lesse (Report)	221	ization, and National Barrgy Goals (Report) Beergy Reorganization Legislation (Testwood)	193	Developing and Commercializing Ea- orgy Technology (Teamsoup) Developing and Commercializing Ex-	142
Beergy Po	olicy Decisionmsking, Organ- and National Energy Goals	193-	5. 973 (94th Comp.) Developing and Commercutizing Be- ergy Technology (Farmony)	142	ergy Technology (Pasitmany)  5. 2589 (93rd Cong.) Legality of Printing Gasoline Radiosing	146
forts in	lected to Improve Federal III- Collecting, Analyzing, and		S. 1040 (93rd Cong.) Purther Action Needed on Recommen-		Cospons by Pederal Energy Adminis- tration (Letter)  S. 2726 (94th Cong.)	163
	ng Energy Data (Report) a on the Heargy Information ofer)	159	dations for Improving the Admini- tration of Pederal Coal-Leasing Program (Raport)	217	Beergy Polecy Decisionnaking, Organ- ization, and National Energy Ocela (Report)	193
S. 391 (94th Pinnoleg Develop States (	lefessirecture in Energy	081	<ol> <li>1439 (Mith Cong.) Development of Interspency Relationships in the Regulation of Nuclear Materials and Facilities (Report)</li> </ol>	055	<ol> <li>2776 (93ed Cong.)     Actions Needed to Improve Federal Efforts in Collecting, Analyzing, and Reparring Sucagy Data (Report)</li> </ol>	159

S. 2276 (92rd Cong.) Comments on the Energy Information Art (Letter)	170
<ol> <li>2776 (94th Comp.)         A Bit to Enabled a National Energy Information System (Tenamony)         Energy Data Collection in the Federal Government (Tenimony)     </li> </ol>	158
<ol> <li>2782 (P3rd Cong.)         Actions Needed to Insprove Pederal Efforts in Collecting, Analyzing, and Reporting Energy Data (Aspert)     </li> </ol>	159
<ol> <li>2782 (94th Conq.)</li> <li>A Bill to Bushlish a National Energy Information System (Teachness)</li> <li>Basegy Dan Collordon in the Federal Government (Tealers)</li> </ol>	158
5. 2072 (96th Cong.)  A Bill to Betsord the Pederal Energy Afterbolarmism Act of 1974 (Ten- thonogy) Irsportance of Financial Data in Eval- uniting Pederal Energy Programs	157

144

142

102

Developing and Commercializing En-ergy Technology (Termony) S. 3151 (93rd Cong.) Review of Complaints Concerning the Mandatory Petroleum Allecation Program and the Regulation of Potrolsum Pricing (Report)

(Smooth)

S. 3007 (94th Cong.)

5. 3338 (84th Cong.) Revenues and Costs Allocated to Power Operations at Mukiple-Purpose Projeets in the Southwestern Pederal Power System (Report)

 3362 (93rd Cong.)
 Facili: Northwest Hydro-Theoreal
 Power Program-A Regional Approach to Meeting Electric Power Requerements (Report) 161

#### CONGRESSIONAL INDEX

Includes entries under relevant congressional bodies and individual Representatives and Senators to whom documents are addressed. Entries are grouped under the following headings:

Congress (as a whole) House of Representat		Senate Joint Committees		Congressional Agencies Members (Individual)	
		Sample entry:			
,	Op	te Committee on Government erations U.S. Nuclear Non-Proliferation		Title	
Type of Publication		(Report)		248 — Accession Numb	er
Congress		zation of Energing Energy Technologies (Recent)	151	(Staff study)	049
_		Evaluation of the Publication and Dis-	101	Management of and Plans for the Na- val Patroleum Reserves (Report)	227
Congress Assessment of United States and Impr-		enbesion of "Sheeding Light on		Mining and Masorala Policy	267
national Controls over the Peaceful Uses of Nuclear Energy (Report)	247	Pacia about Nuclear Energy" (Re- port)  Evaluation of the States of the Paci	664	Monthly Energy Review Monthly Petroleum Statistics Report	281
Bulk Fuels Need To Be Better Managed (Report)	014	Flux Test Facility Program (Report)	665	National Energy Policy: An Agenda	285
Capability of the Neval Petroleum and Oil Shale Reserves to Meet Emer- gency Oil Needs (Report)	079	Federal Coal Research-Status and Problems to Se Resolved (Report)	080	for Analysis (Report)  National Standards Needed for Resi- ficulal Energy Conservation (Re-	191
Certain Actions That Can Be Taken to Help Improve This Nation's	W.Z	Federal Energy Administration An- rual Report to the President and	250	peri) Natural Gas Shorters: The Role of In-	919
Unavan Pietero (Report) The Contal Zoro Massgrmont Pro-	061	Congress The Federal Energy Administration Outstelly Report on Private Ories-	290	ported Laquefied Natural Gas (Re- port)	243
gram An Lincertoin Future (Report)	167	seces and Redress	286	Outer Continuetal Shelf Oil and Gas Development: Improvements	
Commodity Data Semeraries and Min-	256	Federal Energy Guedelines Weekly Supplement	282	Needed in Determining Where to Lease and at What Dollar Value (Re-	
Considerations for Commerciations	266	Federal Energy Menagement Program Annual Report	293	poet) Outer Continental Shelf Sale #15:	210
the Liquid Metal Fast Brooder Rosc- tor (Report)	566	Federal Hydroelectric Plants Can In- ercase Power Sales (Report)	201	Problems Selecting and Evaluating Land to Louse (Report)	221

Cost and Schedule Estimates for the Fanancial Disclosures by Employees Nation's First Liquid Motel Fast Performing Functions under Energy Breeder Reactor Demonstration Palicy and Conservation Act 227 Powerplant (Report) 047 How the Foderal Government Parties-Domestic Energy Resource and Repates in Activities Affecting the Enserve Estimates-Uses, Limbations, ergy Resources of the United States and Needed Data (Report) 223 (Report) Effect and Operation of Interstate Impostesents Needed in the Federal Compacts Relating to Natural Enhanced Oil and Gas Recovery Research, Development, and

Effects to Develop Two Nuclear Con-Demonstrasion Program (Report) 155 cepts That Could Greatly Improve Improvements Needed in the Program This Country's Peture Energy Situafor the Protection of Special Nuclear tion (Report) Mattenal (Report) Employee Diseleaner under the Es-Improvements Still Needed in Federal ersy Policy and Conservation Act Energy Data Collection, Austysis, 265 and Reporting (Report) 163 Brocky Conservation at Government Issues Needing Attention in Develop-Pield Installations Progress and ing the Stratesic Petroleum Reserve Problems (Report) 028 (Report) 090 Energy Conservation Federal Reargy Issues Related to Foreign Sources of Management Program 292 Oil for the United States (Report) 225

Energy Information Reported to Con-The Liquid Metal Past Breeder Resegress as Required by Fublic Law 93tor Program-Past, Present, and Feture (Record) An Evaluation of Proposed Federal As-

The Liquid Metal Past Breader Rescsistance for Frencing Commercialston Fronties and Uncertainties Pacific Northwest Evilin Thermal Power Program-A Regional Ap-

proach to Meeting Electric Power Requirements (Report) Policies and Programs Being Doveloped To Expand Procurement of Produces Containing Recycled Materials (Report)

Poor Management of a Muslear Liebs Water Renoter Safety Project (Report Problems in Identifying, Developing,

and Using Geothermal Resources (Report) 196 Problems in Licensing Hydroelectric Projects (Report) Procedures for Evaluating Reasonablenote of Petroleum Punction Rates

Need Improving (Report) Progress and Problems in Developing Nuclear and Other Experimental Techniques for Recovering Natural Ges in the Rocky Mountain Area

(Report) Progress of Energy Conservation Program for Consumer Products Other Than Automobiles

0.45

007

161

023

OA 2

Congressional Index

Reducing Nuclear Powerplant Lend- times: Many Obstacles Remain (Re-		House Committee on Appropriations Arousi Report of the Secretary of		FEA Crude/Tracaportation Model FEA Data Distrosery	399
part)	GSP	Transportation on the Administra- tion of the Netural Cas Precling		FEA Household Energy Expenditure	
Reports of Costs of Contain Streetures on Nongoversment Waters	298	Safety Act of 1968	277	Model (HEEM) FEA Household Beargy Survey	393
Review of the 1974 Project Independ-		Commodity Data Summaries and Min-		FEA Oil Import System	354
once Evaluation System (Report)  Role of Pederal Coal Resources in	178	eral Estimates Report on Past Plus Test Facility	366	Paderal Energy Conservation Perfor-	-
Meeting Znersy Goels Needs to be				manor System Federal Energy Information Locator	343
Determined and the Leasing Process Improved (Report)	226	HUO Independent Agencies		System (NSILS)	366
Shartograngs in the Systems Used to	***	Subcommittee Energy Onto System (ECS)	341	Pinencial Information System	421
Control and Protect Highly Danger-		Stell Provestion Control and Country-	341	Fiscal Impact of Energy Price Changes on State and Local Government	
ous Nuclear Material (Report) Southeasters Federal Fower Program-	662	measure System (SPCCS)	342	Princhages of Goods and Services	395
Personal Management and Pro-		Technical Assessance Data System (TADS)	240	Fossil Energy Update	436
gram Operations (Report)	174	(1A15)	340	Occiogic Surveys, Investigations, and Research Program	327
Status of the Grand Coulon-Rayer Transprinting Line Project (Resort)	184	Interior Subcommittee		Income Datribution Impact Model	390
Strategic Petroleam Reserve Plan	289	Applienced Outer Conferenti Shelf		Information Contex for Energy Safety	
Trans-Alaska Oil Psychiae-Progress of		Development (Tennsory)	216	(ICES)	433
Countraction through November 1975 (Report)	084	Accomplyin Classification Data Base	245	International Coal Supply Model International Recept Evaluation Sys-	337
Using Solid Waste to Construe Ro-		Copter for Energy Studies (CES)	449	ten (IEES)	354
sources and to Create Energy (Re- port)	013	Coal Data Rase	373	International Oil Supply Model	311
,	410	Coal Lesse Data System	329	Joint FEA/BOM Petroleum Reporting Swetzen	175
		Comprehensive Homan Resources Data System (CHRDS)	365	Land and Mineral Conservation Infor-	3/3
		A Computer Code for Conceptual Cost		mation System	326
		Estimates of Steam Electric Power Plants (Concept)	401	Land Base System	332
House of Representatives		Costracts Information System (CIS)		Lotte Management System Litzeid Metal Fast Breeder Resour	333
nesse of nepression			430	Puel-Cladding Information Center	
		Costrolled Fosion Asomic Dela Con-	***	(LMFBR)	450
House of Representatives		Cast and Pricing System	374	Liquid Messi Fest Breeder Resotor Plant Persenter Information Sys-	
Clark of the House Operation of State Energy Conserva-		Coupled Breegy System - Breenanic		len	425
tion Plans	295	Modela Crisicality Data Croser	429	Major Fuel Burning Installation-Early Planning Process Identification	
		Crade Oil and Natural Gas Production		(GPPE)	355
Species of the Husse		Model	392	Major Fuel Burning Installations (MFBI)	356
Exemption of a Refiged Petroleum		Crude Oil Bay/Sell Program Crude Oil Entitlements (Equality-	350	Mandetory Oil Imports Project	335
Product from the Mandatory Pe- troleum Allocation and Price Rega-		tion) (pquanta-	352	(MOIP)	353
fazione	291	Crude Oil First Purchaser	355	Market Shares System	370
Royegues and Costs Allocated to Power Contrations at Multiple-Pur-		Crade Oil Pricing Model (DCROPS)	297	Middle Distillate Price Monitoring System	30
pose Projects in the Southwestern		Drilling Equipment Production Sur-	any	Mintral Land Assessment	321
Politzal Power System (Report)	096	vey	359	Minerals Information System (MINFO)	322
		Dynamic Input-Output Linear Pro- gramming Model for Regional Zn-		Minus Research	322
		orgy liepact Analysis (DIOLP)	391	National Cost Model (RMAC)	379
		Ecological Sciences Information Con- ter (RSIC)	446	National Energy Information Conter (NEIC)	367
House Committees		Bloomical Planacial Forcessing Model (BSB Model, EUFINANCE)	377	National Goothormal Information Ro-	
		Electric Rate Opmonstruction Data Sys-		sourse (GRID)	451
House Committee on Agriculture Cost Lease Data System	209	ton	346	National Natural Resources Library and Information Systems (NNRLIS)	
Zorgy Plims Distribution	494	Entrgy Abstracts for Policy Analysis (EAPA)	443	and an internal of the state of	319
BRDA Headquarters Technical La-		Energy Films Distribution	424	National Plan for Energy Research,	
beary	493	Energy Research, Development, and Demonstration Invocatry	40	Development, and Desconstration Creating Energy Choices for the Fu-	
Financial Information System  Land Base System	330	Program Researce Data Systems	328	toric	428
Lesse Management System	333	Enriconnectal Information Analysis		National Solar Heating and Cooling In- formation Center	422
National Natural Resources Library		Center (EIAC) Travicosmecial Resource Conter	448	National Water Data Exchange	
and (eformation Systems (NNRLSS)	319	Triviosamental Resource Conter (ERC)	40	(NAWDEX)	325
Oil Shale/Bestoelte Title Clearance		SRDA Roorgy Research Abstracts		Natural Gas Cuestiments	357
Ower Continental Shelf Post-Sale Sys-	330	(ERA) ERDA Headquarters Technical Li-	426	Natural Gas Shortage Model Neceleszical Registeal Growth and En-	382
Ower Continental Shelf Post-Sale Syn- tem	321	puny nesseguiries (ectivis) Li-	422	ergy Price Model	389

**Energy Digest SEPTEMBER 1977** 

Congressional Index House Committees

Newsda Applied Ecology Information Center	452	Models	427	Reactor Information Pile	427
Nuclear Material Management Plan	452	Criticality Data Center	445	Resi-Time Operations, Dispatch and Scheduling (RODS)	557
THE STATE OF THE S	426	Ecological Sciences Information Con- ter (ESIC)	445	RECON (REmote CONsole)	440
OECD Energy Densard Model	386	Electric Power Fuel and Environmen-		Repayment Requirements of the Fed-	
Oil and Gas Reserves System	372	tal Analyses	405	eral investment in the Tennessee	
Oil and Gax Supply Model	378	Electric Regulatory Activities	408	Valley Authority's Electric Power System (Report)	099
Oil Shale/Bestorite Title Clearance		Energy Abstracts for Pohoy Analysis		Seco-Economic Environmental	0,,
Outer Continental Shelf Past-Sale Ses-	330	(EAPA)	441	Domographic Information System	
Vern	231	Energy Films Datebanea	424	(SEEDIS)	434
Plume Model	352	Energy Rosearch, Development, and Demonstration inventors	447	Solar Energy Update	437
Project Conserve	344	Environmental Information Analysis		Special Reports Issued by the FPC and Federal Power Concession Publica-	
Project Independence Evoluation Sys-		Center (BIAC)	448	Intes	411
tem (PIES)	331	Environmental Resource Conter		Storus of Proding Hydroelectric Ap-	
Project Operations System (POS)	361	(ERC)	449	plications	410
Propane/Butane Afforenon System Reuctor Information Pile	349	ERDA Energy Research Abstracts (ERA)	-OE	Stripmering and Land Recommender In-	
RECON (REmote CONsole)	440	ERDA Headquarters Technical Li-	431	formation System Supervisory Control and Data Acquisi-	435
Refinery Cost Pasythrough	248	bery	423	tion System (SCADA)	338
Remoral Econometric Denased Model		Pinancial information System	421	Technical Books and Menographs	442
and Area Stenulston Model (RD4)		Fossi Entray Update	436	Technical Information Center (TIC)	
	365	FPC Budget Files	400		439
Regional Industrial Multiplier System (RIMS)	392	FPC Library	418	U.S. Usanium Rescurees and Supply	432
Research Information Management	***	Gas Supply Indicators	403		432
System (R1MS)	324	Hydro and Electric Recurring Data			
Reserves Allocation and Mine Con		Reports	435	House Committee on Armed	
Medel (RAMC)	380	Hydroelectric Power Resources of the United States (HPR)	407	Services	
Sevenace Tax Model	396	Information Center for Energy Selety		All Purchases and Condemnation Pro- condinas Reserving the Navel Pe-	
Short Term Coal Demand Porcessing	57A	(ICES)	433	troleum and Oil Shale Reserves	259
Ston Term Porrelrum Demand Fore-	210	Library of Excessed Electric Power		Aurual Report to Congress on Neval	
oning Medel	383	Contracts	334	Petrelcom and Oil Shale Reserves	
ine Distribution Model	354	Liquid Metal Fast Broader Resour Peel-Cludding Information Conter			252
Scene-Rossorme Environmental Dens-		(LMFBR)	450	Contracts Information System (CIS)	433
ographic Information System (SEEDIS)	434	Liqued Metal Fast Breeder Researce		Energy Pilms Distribution	424
Setar Beergy Update	437	Plant Parameter Information Sys-		ERDA Headquerees Technical Li-	
Strategic Petroleum Reserves Pro-		Sen	425	brary	423
gram-Wide System (SPR)	363	National Geothermal Information Re- source (GRID)	451	Finneis Information System	421
Stripmoning and Land Reclamation In-	435	National Plan for Energy Research.		Protection of Oil Reserves	261
formation System Submart L	369	Development, and Demonstration		Quarterly Report of Production from	
Technical Books and Monographs	442	Creating Energy Cheeces for the Per-	428	the Neval Petroleum and OJ Shale	258
Technical Information Contex (TIC)	***	National Solar Heating and Cooking In-	428	Reserves Recycling of Maserials	260
	439	formation Center	422	Solid Waste Management, Collection,	100
Transfer Pricing System	351	Natural Gas Company Operating In-		Disposal, Resource Receivery, Resy-	
frends in Refinery Capacity and Utili-		formation Pile	413	cling Program	257
Zation of Petroleum Refinence in the United States and Poreign Refinery		Natural Gas Distribution Model	419		
Exporting Centers	360	Natural Gas. Industry Evaluation Sys-	412		
Underground Gas Stocage System	371	terns Natural Gas Regulation System (Pro-	412	House Committee on Banking,	
U.S. Uranium Resources and Supply		ductr Rate)	414	Currency and Housing	
	402	Natural Gas Regulation System (Fire-			
		line Rate)	414	Economic Stabilization Subsemmittee Developing and Commercializing En-	
ubile Works Subsemmittee	420	Natural Cox Regulation System (Pro-		ergy Technology (Testweety)	146
Bookkeeping System Belk, Electric Power System Rehabil-	-20	decer Cartificate)	415	Beergy Conservation Financing (Ter-	_
NV	404	Natural Gas Regulation System (Pipe- line Certificate)	417	Daysan)	027
Cemer for Energy Studies (CES)	443	Nevada Applied Scology Information	-1/		
A Computer Code for Conceptual Cost		Center	452		
Basimates of Steam Electric Power Plants (Concept)	431	Nuclear Material Management Plan		House Cammittee on Banking,	
Linite (crimole)			424	Finance and Urben Affairs	

Official PPC Files and Records

Plant Operation and Power School-

Planning and Billing System

Power Flow Program

ing

tion

430

ш

Contracts Information System (CIS)

Controlled Fusion Atomic Data Con-

ter

263

205

Report on Solar Energy Demonstra-

401

339

335

204

House Committees Congressional Index

House Committee on Education and Labor		(EPPE) Masor Fool Sturrors Installations	358	Management Program Functions (Report)	ce
Minoral Land Assessment	321	(MFBI)	356	Department of the Interior's Views of Comments on Administration of	
Minerala Information System (MINFO)	322	Mendanary Oil Imports Propert (MOIP)	353	Regularious for Strifage Exploration,	
Minung Research	323	Market Shares System	370	Mining, and Recisimation of Public and Indian Coal Lands (Report)	09
Research Joformasion Management System (RJMS)	324	Middle Distillers Price Monitoring System	247	Poderal Efforts to Conserve Energy	
aysten (Kirka)	324	National Cost Model (RMAC)	279	(Report) Followup on Certain Matters Concern-	01
House Committee on Government		National Energy Information Center		ing the Inspection and Regulation of	
Operations		(NEIC) Natural Gas Castaliments	347	Oster Continental Shelf Oil Opera- tions (Report)	20
Ameral Report of the Secretary of Transportation on the Administra-		Netural Oss Shortage Model	383	The Gosiagoni Survey's Inadequate	
tion of the Natural Gas Pepeline Safety Act of 1968	277	Necelessical Regional Growth and En-		Action on Recommendations Con- cerning Improves and Regulation	
Aysemblie Classification Data Faso	27	ergy Price Model OECD Energy Domand Model	319 316	of Outer Continuated Shelf Oil Oper-	
	345	Oil and Gas Reserves System	372	attons (Report) Improved languages and Regulation	22
Cost Date Base Comprehensive Human Resources	373	Oil and Gas Supply Model	378	Could Reduce the Possibility of Cul-	
Data System (CHRDS)	365	Plume Model	345	spills on the Outer Continuental Shelf (Report)	10
Cost and Pricing System	374	Project Consures Project Independence Evaluation Sys-	344	Issues Related to the Clowing of the	
Crude Oil and Natural Gas Production. Model	228	tem (PIES)	381	Nuclear First Services, Incor- porated, Reprocessing Plans at West	
Crude Oil Bay/Sell Program	350	Project Operations System (FOS)	361	Valley, New York (Report)	07
Crude Oil Entellements (Equality-	352	Prepane/Strone Allocation System Referry Cost Passthrough	349	Issues Related to the Closing of the Nuclear Fael Services, Inc., Reproc-	
Crade Oil First Perchaser	355	Regional Econometric Demand Model		assing Plant at Wast Valloy, New	
Crude Oil Pricing Model (DCROPS)		and Auto Simulation Model (RD4)	385	York (Testimony)	07
Drilling Equipment Production Sur-	397	Regional Industrial Meltiples System	502	Problems Caused by Coal Mining Near Federal Reservoir Properts (Report)	07
vey	259	(RIMS)	392	Problems Canned by Coal Mining Noar	
Dynamic Inper-Output Linear Pro- gramming Model for Regional En-		Report to the President by the Nuclear Regulatory Constitution	218	Foderal Reservoir Proyects (Tiz- shearsy)	0,7
orgy Impact Analysis (DIOLP)	391	Reserves Allocation and Mine Cost		Progress and Problems of the Govern-	
The Economic and Environmental In- sect of Natural Gas Curtailments		Model (RAMC) Severence Tax Model	390 396	mest's Utility Conservation Pro- gram (Report)	02
during the Winter of 1975-76 (Re-		Short Term Coel Demand Forecasting		Proposed Power Rate Increase of the	
part) Tieconosi Presnoisi Parecassing Model	062	Model Short Term Petroleum Demand Fore-	376	Bureau of Reclamation's Central Valley Project (Testimony)	10
(BSE Model EUFINANCE)	377	easing Model	283	Recovery of Exposses from Cleanup	
Electric Rate Demonstration Onto Sys-	246	Sate Distribution Model	354	and fovestigation of Oal Spalls (Lev-	10
Energy Policy Decisionmeking, Or-	340	Strategic Petrologis Reserves Pro- gram-Wide System (SPR)	363		
gazzation, and National Energy Goals (Resert)	193	Subpan L	349	House Committee on Interior and	
PEA Crede/Trassportation Model	399	Transfer Prieing System	351	Insular Affairs Activities of Each Goothermal	
FEA Data Dictionary	368	Trends in Rollnery Capacity and Utili- zation of Petroteum Rollneries in the		Denteration Project	30
FEA Household Energy Expenditure Model (HEEM)	293	United States and Possign Refinery		Activides of Solar Energy Coordina- tion and Management Propost	50
FEA Household Deergy Survey	394	Exporting Centers Underground Gas Storage System	360	Activities of the Geothermal Courts-	
FEA Oil Impart System	354			nation and Management Project All Purchases and Condemnation Pro-	30
Federal Energy Conservation Perfor- mance System	242	Centrarie, Consumer and Mosetary Affairs Subcommittee		condings Reporting the Navel Pro-	
Poleral Energy Information Locator		The Cost of Living Council's Actions to Assere That Cost Increases for		troleum and Osi Shale Reserves Annual Report on the Columbia River	25
System (FEILS)	366	Petroleum Products Were Made in		Power System	27
Federal Energy Management Program Annual Report	293	Accordance with Petroleum Prining Regulations (Report)	106	Annual Report to Congress on Naval Petroleum and Oil Shale Reserves	
Fiscal Impact of Energy Price Changes on State and Local Government					26
Purchases of Goods and Services	385	Conservation, Energy and Natural Resources Subconggittee		Bulk Electric Power System Rollabil- ity	40
Implessions of Deregulating the Price	135	Access of the Federal Power Commis- sion to Bureau of Reclamation Re-		Coal Lease Data System	32
of Natural Gas (Report) Income Distribution Inspect Model	390	ecods to Insure Cossellance with the		Commodity Data Summanes and Min-	
International Coal Supply Medel	367	Pederal Power Act (Lever)	163	oral Betimates Compensatory Royalty Agreements	26
International Recryy Evaluation Sys-		Administration of Regulations for Sur- fact Exploration, Mining, and Rec-		Consolidated Financial Statement of	-
ton (IEES) International Oil Supply Model	384	larretion of Public and Indian Coal Lunds (Report)	090	the Federal Columbia River Power System	17
Joint PBA/BOM Petroleum Reporting		California's Central Valley Project-	593	Corporate, Passecial, and Bensomic	-
System	375	-Proposed Power Rate Increase (Re-	154	leformation File (RISCEID)	40
Major Firel Burning Installation-Barly Planning Process Identification		Contracting Out Basic Planning and	-30	The Economic Impact of Energy Ac- tions	25

206

House Committees Congressional Index Planning and Billing System Pleas Operation and Power School-

Power Production at Pederal Dams

Could Be incremed by Modernizing

Turbines and Generators (Report)

Power Serveys and Systems Evolus-

Progress of and Future Plans for Explaneton of National Petroleum Re-

Progress of Emergy Conservation Pre-

Real-Time Operations, Dispatch and

gram for Consumer Products Other Then Astornobles

337

335

335 of Interest

271

261

Hause Committee on Interstate and

Action Proposed Concerning Conflict

Annual Report of the Secretary of Transportation on the Administra-

Automobile Classification Date Base

Bulk Riseins Power System Reliabil-

Consequents on the Energy Information

Comprehensive Human Resources

Hydrodectric Power Resources of the

United States (HPR)

407

207

Reports

234

Data System (CHRDS)

tion of the Natural Gus Fipelite

288

277

345

373

365

Foreign Commerco

Selety Act of 1968

Coal Data Base

Act (Letter)

Effect and Operation of Interstate Compacts Relating to Neoaral

Electric Power Paci and Environmen-

Employee Displosures under the Ba-

ergy Policy and Conservation Act

Exploration of Nanagai Percelaus Re-

Figuresi Report on the Geethermal

Resources Development Fend

Electric Regulatory Acomines

Energy Resource Data Systems

107

405

406

265

328

270

320

109

400

221

Subcommittee

A Summer of European Wires on De-

die Esst Oil (Repart)

pendency of the Pros World on Mid-

ing

Power Flow Program

torse is Alaska

Protection of Oil Reserves

Gu

tal Agelyses

serve in Aleska

PPC Budget Price

Outer Commental Shelf Sale #35

Lond to Lause (Report) Energy Digest SEPTEMBER 1977

Problem Selecting and Evaluating

Federal Helium Program

FPC Library	418	Kee-1866 Operations, Dispatch and	337	Data System (CHRDS)	303
Gas Supply Indicators	400	Scheduling (RODS) Refunds on Outer Continental Shelf		Corporate, Financeal, and Economic Information File (RISCEID)	402
Geologie Surveys, Investigations, and Research Program	327	Lesses	269	Cost and Printing System	374
Groots of Rights-of-Way for Piprinet		Reports of Costs of Certain Structures on Nongovernment Waters	298	Crade Oil and Natural Gas Production Model	390
through Federal Lands	273	Report to the Congress on Matters Contained in the Helium Act	268	Crede Oil Buy/Sell Program	350
Hydro and Electric Recurring Data Reports	406	Research Information Management System (RIMS)	324	Crude Oil Emitlements (Equaliza-	352
Hydroelectric Power Resources of the United States (HPR)	407	Resource Recovery and Source Reduc-	044	Crede Od Past Parchaser	355
Industrial Energy Efficiency Pro-		tion	279	Crede Oil Prining Model (DCROPS)	
gran	296	Special Reports Issued by the FPC and			397
Land and Museral Conservation Infor-		Pederal Power Commission Publics		Domestic Energy Resource and Re-	
metion System	326	tious	401	serve EstimatesUses, Limitations, and Needed Data (Report)	233
Land Base System	333	Status of Positing Hydroclottes Ap- physical	410	Drilling Equipment Production Sur-	200
Lease Management System	333	Strategic Petroleum Reserve Plen	287	ver	337
Library of Executed Electric Power		Supervisory Control and Data Acquisi-		Dynamic Input-Output Linear Pro-	
Contracts	334	tion System (SCADA)	335	gramming Model for Regional En-	
Mineral Land Assessment	321	An Uselastified Digest of a Chareled		orgy Impact Analysis (DIOLF)	391
Minerals Information System (MINFO)	322	Report Estatled "Safety and Tran- sportation Safeguards at Rocky Plats	047	Electroni Financial Forecasting Model (BSB Model EUFINANCE)	577
Mining and Minerala Policy	267	Nuclear Weapont Plant" (Report)	067	Electric Power Fuel and Environmen-	405
Mirring Research	323	Micros and Missing Subcommittee		tal Analyses Electric Rate Demonstration Data Sys-	
National Natural Resources Library and Information Systems	319	Department of the Interior's Proce- dures for Approving Coal Mining		Lean	346
(NNRLIS) National Plus for Esensy Research,	317	Plans (Report)	238	Electric Regulatory Activities	408
Development and Demonstration		Development of Foderal Coal Ro-		Energy Data System (EDS)	241
Plenning and Analysis	305	saurces (Testimory)	223	Exemption of a Refined Potroleum Product from the Mandatery Pe-	
Namenal Program for Solar Heating and Coolest	308	House Committee on Intersetional		troleum Allocation and Price Regu-	291
National Water Data Exchange		Relations		PEA Crude/Transportation Model	399
(NAWDEX)	325	Alteration of Uranium Enrichment Services to Fuel Foreign and		FBA Data Dictionary	358
Natural Gas Company Operating In- formation File	413	Domestic Nuclour Reactors (Report)	228	FEA Household Energy Expenditure Model (HEEM)	393
Natural Gas Industry Evaluation Sys-	412	Review of Valuetary Agreement and		PEA Horschold Energy Survey	394
terra	412	Plan of Action To Implement the In-		FEA D4 Import System	354
Natural Gas Regulacions System (Pro- discer Reit)	414	commenced Energy Program	276	Pederal Energy Conservation Peder-	
Natural Gas Regulation System (Pipe-		Role of the International Atomic En- oracy Agency to Stiftgoording No-		manca System	343
loc Rese)	416	clear Material (Arrest)	240	Pederal Energy Information Locator	
Natural Gas Regulation System (Pro- ducer Certificate)	415	U.S. Financial Assessance in the Devel- gement of Foreign Nuclear Energy		System (PEILS) Pirentis: Disclosures by Employees	356
Natural Gas Regulation System (Popu- logs Conflicate)	417	Programs (Report) US Interpotional Nuclear Softgantin	239	Performing Functions under Energy Policy and Conservation Act	287
Official PPC Files and Records	401	Rights: Are They Being Effectively		Fiscal Impact of Energy Price Changes	
Oil Shale/Bennente Tide Cleanance		Exercises (Unclassified Digest) (Report)	242	on State and Local Government Parahoses of Goods and Services	395
	330	U.S. Naulear Non-Problemston Pakey	2-3	PTC Budget Files	400
Operation of State Energy Conserva-		(Report)	249	FPC Librery	418
tion Plans	295			Ges Scoply Indicators	493
Outer Controvatel Shelf Past-Sale Sys-	231	Europe and the Middle East		Hydro and Electric Recurring Data	-300

House Complies: Congressional Index

Income Dumbation Impact Model International Coal Supply Model	390 387	Short Term Petrolnem Demand Fore- easting Model	383	House Committee on Merchant Marine and Fisheries	
International Energy Evaluation Sys-		See Distribution Model	364	The Coastal Zone Management Pro- gram: An Uncertain Putters (Recent)	
tem (IEBS) International Cel Supply Model	384	Special Reports Issued by the FPC and Pederal Power Commission Publics		-	18
Issues Needing Attention to Develop-		tices	411	Report to the Congress on Coastal Zone Management	25
ing the Strangle Petroleum Reserve (Report)	090	Spill Prevention Control and Counter- measure System (SPCCS)	242		-
Joint FEA/BOM Petroleum Reporting		States of Pending Hydroelectric Ap-		Hause Committee on Public Works	
System Major Puel Barrong Installation-Early	375	phonicus Strangic Potrology Reserves Pro-	410	and Transportation Annual Report on the Columbia River	
Planning Process Identification (EPPE)	355	gram-Wide System (SPR)	363	Power System Bookkeeping System	43
Major Fast Barrang Installations	358	Subpart L	269	Consolidated Pinancial Statement of	-
(MPBI)	354	Technical Assistance Data System (TADS)	340	the Federal Columbia Rever Power System	22
Mandatory Cel Imparts Project (MOIP)	353	Transfer Priesing System	351	Plenning and Billing System	33
Market Sharea System	270	Trends in Refinery Capacity and Utili- zation of Potroleum Refinence in the		Technical Assistance Data System (TADS)	34
Middle Disolate Proce Monitoring System	2.07	United States and Foreign Refinery		(IAM)	
National Coal Model (RMAC)	329	Exporting Centers	360	House Committee on Science and	
National Energy Information Center (NRIC)	367	Underground Gas Storage System	371	Technology Croser for Energy Studies (CES)	
Natural Gra Company Operating In-		Energy and Power Subsamplifies		Comments on H.R. 11212, 92ed Con-	-
formation Pile Natural Gas Curissiments	413	Abecastre Energy Proposits (Tes- tionary)	145	gress, a Bill to Further Research, Development, and Commercial	
Natural Gas Distribution Model	419	Amount of Natural Gus that Could Be		Demonstrations in Geothermal En- ergy (Letter)	19
Natural Gas Industry Evaluation Sys-		Released from Federal Price Regula- tions upon Expiration of Contracts		A Computer Code for Communical Cost	"
tens Nitural Gas Regulations System (Pro-	412	from 1975 through 1985 (Textinony)		Estimates of Steam Electric Power Plants (Concept)	43
ducer Rate)	414	Developing and Commercializing En-	137	Contracts Information System (CIS)	
Natural Gas Regulation System (Pipe- line Rate)	416	ergy Technology (Testimony)	1.45	Controlled Passon Atomic Data Con-	43
Natural Gas Regulation System (Pro-		The Economic and Environmental Im- uset of Natural Gas Custailments		ter	44
flucer Certificate) Network Gas Regulation System (Pres-	415	During the Winter of 1975-76 (Ter-		Coupled Energy System - Economic Models	45
line Certificate)	417	An Evaluation of Proposed Federal As-	063	Criticality Data Center	44
Natural Gas Shortage Model Necetossical Regional Growth and Ea-	362	sistance for Pinancine Commerciali-		Ecological Sciences Information Con- ter (ESIC)	44
ergy Price Model	369	zation of Emerging Energy Technologies (Technologies	159	The Economic Impact of Energy Ac-	
OECD Energy Demand Model Official FPC Files and Records	386 401	The Implications of Deregulating the	104	Inorea Energy Abstracts for Policy Analysis	25
Official FPC Files and Records Off and Gas Reserves System	401 372	Price of Natural Gas (Teatmany)	136	(EAPA)	44
Oil and Gas Supply Model	378	Review of FFC and FEA Actions in Assessing the Impact of Natural Gas		Energy Films Distribution Energy Research, Development, and	a
Petroleum Market Shares Plume Model	284	Curtiferents during the Winter of	092	Demonstration levestory	44
Power Surveys and Systems Evalua-	362	1976-77 (Letter)	COS	Environmental Information Analysis Center (EIAC)	44
tion	409	Overeight and investigations		Environmental Resource Center	
Project Conserve Project Independence Bushastion Sys-	344	Actions Taken by the Federal Power		(ERC) ERDA Energy Research Abstracts	44
ten (FIES)	381	Commission on Prior Recommends- tions Concerning Regulation of the		(ERA)	43
Project Operations System (POS)	349	Natural Gas Industry and Manage-		ERDA Headquarters Technical La- brary	42
Proposed Energy Investory Act of		ment of Internal Operations (Report)	147	An Evaluation of Proposed Federal As-	**
1974 (Lester)	160	An Evaluation of the Federal Power		natures for Planning Commerciali- nation of Emerging Energy	
Refisory Coat Passthrough Regional Econometric Demand Model	348	Commission's Ruterraking on Utili- ties' Construction Work in Progress		Technologies (Testimony)	15
and Auto Simulation Model (RD4)	205	(Report)	229	Federal Efforts to Improve the Fuel Economy of New Automobiles (Re-	
Regional Industrial Multiplier System	285	Need for the Pederal Power Commis- sion to Improve the Regulation of		pon)	69
(RIMS)	392	the Natural Gos Industry and Mac-		The Federal Wind Energy Program (Report)	20
Reserves Allocation and Mine Cont. Model (RAMC)	380	agement of its Internal Operations (Textirexag)	114	Financial Information System	42
Review of Average Fuel Economy			114	Powering for Commercial-Sized Demonstrations of Energy Tech-	
Standards under Tide V of Motor Vehicle Information and Cost Sav-		Transportation and Commerce Subcommittee		nologies (Terrenory)	14 31
Ings Act	278	Review of the Progress and Problems		Possil Energy Program Report Possil Energy Update	43
Severance Tax Model Short Term Coal Demand Porceasing	396	of Resource Recovery Since the Pas- sage of the Resource Recovery Act		Improvements Needed in the Federal	
Model	376	of 1970 (Testimonal	016	Enhanced Oil and Gas Recovery	

Senota Committees Congressional Index Activities of Regulatory Agencies

Energy Data Collection in the Pederal

Review of Voluntary Agreement and Plan of Action To Implement the Re-

terestronal Energy Program

House Committee on Ways and

155 House Committee on Small Business

Government (Tearmoug)

450 House Committee on the Judiciary

Subcommittee

Magns

295

433

425

451

Demonstration Program (Report)

Industrial Energy Efficiency Pro-

Information Center for Energy Safety

Leguid Metal Fast Breader Resetor

Feel-Cladding Inturnation Center

Plant Parameter Information Sis-

National Geothermal information Re-

National Plan for Energy Research.

51412

(ICES)

(LMFBR) Liquid Metal Fast Breeder Reactor

scorce (GRID)

tem

533

531

Lease Management System National Natural Resources Library

Oil Shale/Bestoute Title Clearance

Outer Continental Shelf Post-Sale Sys-

Annual Report of the Specetary of

Transportation on the Administra-

tion of the Natural Gas Pspeline

Information Systems

oad

tem

157

276

(NNRLIS)

Senete Committee on

Appropriotions

National Plan for Energy Research,		Magns		Sufery Act of 1968	277
Development, and Demonstration		Alternative Energy Proposals Deve-		Commodity Data Suramaries and Mit-	4//
Creating Energy Cheices for the Fu-		trped by the General Accounting Office in Response to Contractional		eral Estimates	265
twee	426	Office in Response to Congressional Impairies Proposals and Septecting		Report on Fast Plax Test Famility	301
National Solar Heating and Cooking In- Spreaston Center	422	Analyses (Testanory)	166		
Neveda Applied Ecology Information		Commodity Outs Summaries and Min-		HUD-Independent Apendes Seboggistites	
Conta	452	eral Estamates	266	Energy Data System (EDS)	341
Nuclear Material Management Plan	426	House Select Committee on Outer		Spdt Provestion Control and Counter-	
Opportunities to Interove Planning for	420	Continental Shelf		measure System (SPCCS)	342
Solar Engray Research and Dave-		Referal Expirenties and Develop-		Technical Assistance Data System	
lopment (Report)	202	most of Outer Continental Shelf Re-		(TADS)	340
Proposed Establishment of Josep Fed-		sources (Testamony)	230	leterles Subsempières	
eral-ledustry Nonsuolese Carpora-				Automobile Classification Data Sose	
110th	315				345
Reactor Information File	427			Center for Energy Studies (CES)	443
RECON (REmote CONsole)	440			Coal Dete Base	373
Redpoint Noclear Powerplant Lead-		Senate		Coal Lesse Data System	329
ternes Many Obstacles Remnie (Re-				Comprehensive Eurnan Resources	
port)	069	Senota		Dass System (CHRDS)	365
Socio-Economic Environmental		President of the Sarota		A Computer Code for Conceptual Cost	
Oemographic Information System (SEE 015)	424	Exemption of a Refined Petroloum		Business of Steam Electric Power	401
Solar Energy Update	427	Product from the Mandatory Pe-		Flants (Concept)	441
Strometing and Land Reclamation In-	447	poleom Allocation and Price Regu-		Contracts Information System (CIS)	430
Companies System	435	haliona	291	Controlled Fusion Atomic Data Con-	
Technical Books and Monographs	442			ter	444
Technical Enformation Cemer (TIC)		Secretory of the Senate		Cost and Pricing System	274
(17c)	432	Operation of State Energy Conserva- tion Plans	295	Cospled Entrey System - Bostomic	
U.S. Uramum Resources and Supply		and reason	***	Models	429
0 = Cimeli Attantii siis toppi	432			Oriticality Data Center	445
Ways to Strengthen Congressional				Crade Oil and Nateral Gra Production	
Control of Energy Construction				Model	398
Projects Other Than Nuclear (Re-		Senate Committees		Crade Oil Buy/Sell Program	350
part)	192			Crude Oil Brandements (Equaliza- tion)	252
Energy Responds, Davelagement and		Saneta Committee on Aeronovtical			255
Demonstration (Fassil Fuels)		and Space Sciences		Crude Oil Farst Purchaser	400
Subsommittee		-		Crudo Gil Pricing Medel (DCROPS)	397
Comments on the Administration's		Ad Not Assessors Technology and Noticeal Names Subsemplifies		Drilling Equipment Production Sur-	
Proposed Synthesia Fuals Commer-		Alteresive Facili for Aviation (H.R.		District Editional Consecution 2011	359
rishization Program (Report)	140	12812) (Testinos)	164	Dynamic Input-Output Linear Pro-	
Contracting Out Basic Flanning and Management Program Functions				graenming Model for Regional He-	
(Report)	068			ergy Impact Analysis (DIOLP)	371
The Legality of the Reported Use by		Senots Committee on Agriculture		Ecological Sciences Information Con-	
the Roomy Research and Develop-		and Ferestry ERDA Handquarten Technical Li-		ter (RSIC)	446
ment Administration of Certain Pos-		peach National security in-	423	Electrical Pinancial Foregasting Model (RSB Model, EUFINANCE)	377
sil Energy Funds (Letter)	987	44)		Electric Rate Demonstration Data Sys-	411
				Directing wave inclination trans ayor	346
Energy Research, Development and Demonstration Subcommittee		Senate Committee on Agriculture,		Energy Abstracts for Policy Analysis	
Issurational Conception in Energy		Nutrition, and Forestry		(EAPA)	441
Research and Development (Tep-		Coal Lesse Data System	327	Energy Films Distribution	424
Almony)	245	Energy Pilms Distribution	424	Energy Research, Development, and	
Review of Sciented Federal and Private		Pinnoisi Information System	421	Demonstration Inventory	447
Solar Reegy Activities (Report)	197	Land Rese System	332	Energy Resource Data Systems	328
Di					209
Energy Digest SEPTEMBER 197					209

wronzenal Informanau Analysis		National Water Data Escharge		Contraous Information System (CIS)	
Center (EIAC) Environmental Resource Center	448	(NAWDEX) Namesi Gas Curissleneets	325 357	Controlled Passe Atomic Data Can-	430
(ERC)	447	Natural Gus Shortage Model	382	ser	444
ERDA Energy Research Abstracts (ERA)	438	Necelassical Regional Growth and En- ergy Price Model	397	Corporate, Financial, and Economic Information File (RISCEID)	402
ERDA Hendquarters Technical Li- brary	423	Nevada Applied Ecology Information	452	Cougled Energy System - Boomorese Models	429
FEA Crude/Transportation Model	399	Nuclear Material Management Plan	~~	Criticality Data Center	445
FEA Data Dictionary	348	reaction in the second contraction of the	426	Ecological Sciences Information Cen-	
FEA Household Energy Expenditure	383	OECD Energy Dorsard Model	386	ter (ESIC)	446
Model (HEEM) FEA Hossehold Energy Survey	394	Oil and Gas Reserves System	372	Electric Power Fiel and Environmen-	405
FEA Cil Import System	354	Oil and Gas Supply Model	378	tal Analyses	403
Federal Energy Contenuous Perfor-	334	Oil Shale/Bustonite Title Clearance	330	Electric Regulatory Activities Energy Abstracts for Policy Analysis	400
mance System	343	Outer Continental Shelf Post-Sale Sys-	330	(EAPA)	441
Federal Energy Information Locator		tem	231	Energy Pilms Distribution	424
System (FEELS)	366	Plant Model	342	Energy Rescurch, Development, and	
Financial Information System Frield Impact of Energy Price Changes	421	Project Conserve	344	Demonstration Inventory	447
on State and Local Government Purchases of Goods and Services	295	Project Independence Evaluation Sys- tes: (PIES)	281	Environmental Information Analysis Center (EIAC)	448
Fossil Energy Update	404	Project Operations System (POS)	341	Environmental Resource Center	
Geologic Surveys, Investigations, and		Propene/Butane Allocation System	349	(ERC)	449
Research Program	397	Rescor Information File	407	SRDA Energy Research Abstracts (ERA)	438
Income Dambasso Impact Model	390	RECON (REmote CONsole)	440	ERDA Headquarters Technical Li-	
Information Center for Energy Safety (ICES)	433	Refinery Cost Passthrough	348	beary	423
International Coal Supply Model	433 397	Regional Econometric Demand Model		Financial Information System	421
International Energy Evaluation Sys-	337	and Auto Simulation Model (RD4)	115	Fessil Energy Update	436
tem (IEES)	384	Regional Industrial Meltipher Systom	260	FPC Budget Files	400
International Oil Supply Model	388	(RIMS)	392	PPC Library	415
Jose FEA/BOM Petroleum Reporting System		Research Information Management		One Supply Indicators	403
Land and Mercrai Conservation Infer-	375	System (RIMS) Reserves Allocation and Mine Cost	324	Hydro and Electric Recurring Data Reserve	405
maken System	326	Model (RAMC)	360	Hydroelectric Power Researces of the	
Land Sase System	332	Severance Tax Model	396	United States (HPR)	407
Lease Management System	333	Short Term Coal Demand Forecasting		Information Center for Buorgy Safety	
Leged Metal Fast Breeder Reactor		Model	374	(ICES) Library of Excessed Electric Power	433
First-Chicking Information Center (LMFBR)	450	Short Term Petroleum Demand Fore- casting Model	202	Contracts	334
Liquid Metal Fast Breeder Reactor		Site Distribution Model	364	Liquid Metal Fast Broader Rescore	
Plant Personner Information Sys-		Socio-Economie Environmental Dom-	304	Post-Cladding Information Center	
Major First Sursura Installation-Starty	425	ographic Information System		(LMFBR)	450
Plenning Process Identification		(SEEDIS)	434	Liquid Metal Past Brooder Reactor Plant Parameter Information Sys-	
(EPPE)	358	Solar Energy Update	437	tem	425
Major Puel Burning Installations (MPBI)	354	Strategie Passolener Reserves Pro- graco-Wide System (SPR)	363	National Geothermal Information Re-	
Mandasory Cil Importa Project	356	Simposing and Land Reclamation in-	353	source (ORID)	451
(MOIP)	353	formation System	435	National Plon for Energy Research, Development, and Demonstration	
Market Shares System	370	Subpart L	269	Creating Energy Chooses for the Fu-	
Middle Dutillate Price Monstering System		Technical Books and Monographs	442	ture	428
Mineral Land Assessment	30	Technical Information Center (TIC)		National Solar Heating and Cooling In- formation Center	
Miserals Information System	321	Transfer Pricing System	439	Natural Gas Company Operating In-	422
(MINFO)	312	Trends in Refirery Capacity and Utili-	351	Remation File	413
Mining Research	323	aution of Petrolour: Refinences in the		Natural Gas Distribution Model	419
National Coal Model (RMAC)	379	United States and Foreign Refinery Exporting Centers		Natural Gas Industry Evaluation Sys-	
National Energy Information Center (NEIC)		Underground One Storage System	360	tems	412
National Geothermal Information Re-	367	U.S. Uracum Resessors and Supply	371	Natural Gas Regulations System (Pro- ducer Rate)	414
source (GRID)	451	and oriental acceptances and supply	432	Natural Gas Regulation System (Pipe-	414
National Natural Resources Library					414
and Information Systems (NNRLIS)		Public Works Subcommittee Bookkooping System		Natural Gas Regulation System (Pro-	-
National Plan for Energy Research.	317	Bulk Electric Power System Reliabili-	420	ducer Certificate)	415
Development, and Demonstraturer		by thouse rower system measure.	404	Natural Gas Regulation System (Pipe- line Certificate)	417
Creating Beergy Chooses for the Pa-		Center for Energy Studies (CES)	40	Nevada Applied Ecology Information	417
Nettonal Solar Heating and Cooling In-	428	A Computer Code for Conceptual Cost		Center Special Specially Intermedia	452
formation Center	422	Estimates of Steam Electric Power Plants (Concept)		Nuclear Material Management Plan	
		- man (Contradic)	431		426

Congressional Index Security Committees

Official PPC Fries and Records	401 339	Senate Committee on Budget Sudgeting of Federal Financial Jacon-		Fintecral Information System	
Planning and Bilding System Plant Operation and Power Schedul-		tives for Energy Development (Tas-	150	Price Impact of Energy Price Changes on State and Local Government	
ieg	335	twicepy)	150	Perchases of Goods and Services	
Power Plaw Program	336			FPC Sudget Files	
Power Surveys and Systems Evalua-		Sanate Committee on Commerce		FPC Library	
ben	409	The Course Zone Management Pro- gram: An University Paters (Report)		Gas Supply Indicators	
Resour Information File	427	par as contrast ratio papers	187	Hydro and Electric Recurring Data Reports	
Real-Time Operations, Dispatch and Scheduling (RODS)	222	Development of the Orzer Continental		Hydroelectric Pawer Resources of the	
RECON (Remote CONsole)	440	Shalf Possil Puel Resources (Ter-	215	United States (HPR)	
Sacia-Programs Revinemental		Almony)	215	Income Distribution Impact Medal	
Demographic Information System (SEED15)	434	Nacional Ocean Policy Study (Tea- strong)	212	Industrial Energy Difficiency Pro- erent	
Solar Energy Update	437			International Coal Supply Model	
Special Reports Issued by the FPC and Federal Power Commission Publica-		Sanata Committee on Commerce, Science and Transportation		International Energy Evaluation Sys- tem (IEES)	
tions	411	Arrival Report of the Storetary of Transportation on the Administra-		International Dil Supply Model	
States of Pending Hydroelectric Ap-	410	non of the Natural Gas Pipeline		Jeint FEA/80M Petroloum Reporting	
pitrations Stromining and Land Reglamation In-	410	Safety Act of 1968	277	System	
formation System Supervisory Control and Data Assum-	435	Automobile Classification Data Base	345	Major Fuel Farring Installation-Early Planning Process Identification (ESPE)	
ton System (SCADA)	338	Bulk Electric Power System Rebabil-	404	Major Fact Burning Installations	
Technical Socks and Monographs	442	ity Coal Data Fees	404 575	(MF8I)	
Technical Information Center (TIC)		Coal Data Fase Comprehensive Horan Resources	3/3	Mandatory Oil Imports Project	
	429	Data System (CHRDS)	265	(MOIP)	
U.S. Uranium Resources and Supply	422	Contracts Information System (C15)		Market Shares System	
	432		430	Middle Distribte Price Menisoring	
State, Justice, Commerce, The		Corporate, Financial, and Economic		System	
Judiciary Subcompittee		Information File (RISCEID)	402 274	National Coal Model (RMAC)	
The Coastal Zone Management Pro-		Cost and Pricing System	274	National Beergy Information Center (NEIC)	
gram: An Uncertain Patero (Report)	187	Crude Oil and Natural Gas Production Model	398	National Geothermal Information Re-	
	140	Crude Oil Buy/Sull Program	350	source (GRID)	
ngte Committee on Armed		Crude Cil Betitlerrents (Equation-		Natural Gas Company Operating In-	
Sarvicas		tron)	352	formation File	
All Purchases and Condemnation Pro-		Crude Oil Part Purchiser	355	Natural Gas Curtailments	
ceedings Regarding the Naval Pe-		Crude Oil Pricing Model (DCROPS)	397	Natural Gas Distribution Model	
troloum and Oil Shale Reserves	259	Dritting Squipment Production Sur-	397	Natural Gas Industry Braduation Sys-	
Annual Report to Congress on Naval Petrology, and Oil Shale Reserves		number reference negative on-	359	Natural Gas Regulations System (Pro-	
Percent are On Mars Asserted	262	Dynamic Input-Output Linear Pro-		ducer Rate)	
Contracts Information System (CIS)		gramming Model for Regional En-		Natural Qua Regulation System (Pipe-	
	430	ergy Irreact Analysis (DIDLP)	391	line Rate)	
The Department of Defense's Conser-		Ecological Sciences Information Cen- ter (ESIC)	444	Natural Oas Regulation System (Pro-	
vation of Petroleum (Report)	012	Electrical Financial Porteasting Model	440	decor Cordficate)	
Energy Prims Distribution ERDA Headquarters Technical Le-	424	(BSB Model EUFINANCE)	277	Natural Can Regulation System (Pipe- line Certificate)	
brary	422	Electric Power Fuel and Environmen-		Natural Gas Shortage Model	
Pinencial Information System	421	tal Azalyses	405	Neoclassical Regional Occavith and En-	
Protection of Oli Reserves	261	Blectric Rate Demonstration Data Sys-	245	ergy Price Model	
Quarterly Report of Production from		tem	400	ORCD Rangy Demand Model	
the Naval Petroloum and Oil Shale		Electric Regulatory Activities Reserv Fritza Distribution	424	Official FFC Piles and Records	
Reserves	258	Environmental Information Applysis	-44	Od and Gas Reserves System	
Recycling of Materials Solid Waste Management, Collection.	260	Center (EIAC)	448	Oll and Cas Supply Model	
Solid Waste Management, Collection, Disposal, Rescuror Recovery, Recy-		Bavironmental Resource Center		Plane Model	
cling Program	257	(ERC)	449	Power Surveys and Systems Evalua-	
		ERDA Headquarters Technical Li-	422	Project Conserve	
note Committee on Banking.		bary	100	Project Conserve Project Independence Evaluation Sys-	
Housing and Urban Affairs		PEA Crude/Transportation Model FEA Data Dictionary	368	regier Independence Evaluation Sys- tem (PIES)	
Developing and Commercializing Ba-	142	PEA Household Energy Espenditum		Project Operations System (POS)	
ergy Technology (Testinous)	142	Model (HEBM)	393	Propage/Batase Allocation System	
Report on Solar Heergy Demonstra-	263	FRA Household Essergy Survey	394	Refinery Cost Passthrough	
Special Report on Solar Heating and		FEA Oil (gaport System	354	Regional Econometric Demand Model	
Cooling Demonstration Program	254	Federal Spargy Conservation Perfor-		and Auto Simulation Model	
			343	(RD4)	
Submission of U.S.S.R. Rosegy- Related Transactions for Congres-		reason System Federal Burry Information Locator		Regional industrial Multiplier System	

Report to the Congress on Constall Zone Management	256	Controlled Fusion Atomic Data Cen- ter	444	Performing Penetions under Energy Policy and Conservation Act	5
Reserves Allocation and Mine Cost	260	Corporate, Financial, and Economic	402	Pinantual Information System	
Model (RAMC)  Review of Average Fuel Economy	360	Information File (RISCEID) Cost and Prining System	374	Financial Report on the Ocothermal Resources Development Fund	
Standards upder Title V of Motor		Coupled Energy System - Becommic	204	Piscal Impact of Energy Price Changes	
Vehicle Information and Cost Sav-		Models	429	on State and Local Government	
ings Act	278	Crescality Data Center	445	Purchases of Goods and Services	3
Severance Tax Model	395	Crude Oil and Natural Gas Production		Fessil Snergy Program Report	3
Short Term Coal Demand Forecasturg Model	376	Model	358	Possil Energy Update	-
Short Term Petroleum Demand Fore-	200	Crase Oil Bay/Sell Program	350	FPC Budget Pites	4
casting Model	263	Crude Oil Estatlements (Rqualtus-	352	FPC Library	•
Site Distribution Medel	364	Crude Oil First Purchaser	355	Gas Supply Inclesions	40
Special Reports Issued by the FPC and		Crode Oil Frama Model (DCROPS)		Geologio Surveys, Investigations, and Research Program	33
Pederal Power Commission Publica-	411		397	Oreats of Rights-of-Way for Proclines	-
Sail Prevention Courtel and Country	****	Domestic Energy Resource and Re- serve EstimatesUses, Limitations.		through Federal Leads	27
measure System (SPCCS)	342	and Needed Data (Report)	212	Hydro and Electric Recurring Data	
Status of Pending Hydroelectric Ap-		Dollage Equation Production Sur-		Reports	40
phostoes	410	vey	359	Hydroelectne Power Resources of the United States (HPR)	40
Strategic Potroleum Reserves Pro- gram-Wide System (SPR)	243	Dynamic Input-Dutper Linear Pro-		Improved Policies and Procedures for the	**
Subnut L	369	gramming Model for Regional En- ergy Impact Analysis (DIOLP)	591	Exploration and Development of Outer	
Technical Assurance Data System	369	Boologioni Sciences Information Cen-	371	Continental Shoff Revisions (Testamons)	53
(TADS)	240	ter (ESIC)	445	Income Distribution Impact Model	39
Transfer Pricing System	351	The Economic Impact of Energy Ac-		Industrial Energy Efficiency Pro- gram	29
Trends in Refinery Capacity and Unb-		tions	255	Information Center for Energy Safety	41
zaneo of Petroleum Refinence in the		Effect and Operation of Intenstate Compacts Relating to Natural		(ICES)	43
United States and Foreign Refinery Experting Content	350	Gas	297	Internstrenel Coal Supply Model	38
Underground Oss Steenes System	271	Electrical Parancial Parecasting Model		International Energy Evaluation Sys-	
-		(BSB Medel EUFINANCE)	377	tem (IENS)	38
nate Committee on Energy and		Electric Power Paul and Environmen- tal Analysis	405	International Oil Supply Model  Joint FEA/BOM Petroleum Reporting	38
Natural Resources		Electric Rate Demonstration Date Sys-	403	System	37
Action Proposed Concerning Contact		tem	346	Land and Mineral Conservation Infor-	
€€ Raterest	288	Electric Regulatory Activities	400	mation System	32
Activities of Each Geothernal Demonstration Propert	507	Employee Disclosures under the En-		Land Base System	32
Astrotics of Solar Energy Coording-	20	orgy Policy and Conservation Act Energy Abstracts for Policy Analysis	365	Lease Management System	33
tion and Management Project	302	(HAPA)	447	Library of Executed Electric Power	53
Artivities of the Deothermal Coordi-		Energy Pilos Distribution	424	Liquid Metal Past Breeder Resorter	-
sation and Management Project	106	Energy Research, Development, and		Fuel-Cladding Information Center	
All Purchases and Condemnation Pro- ocedings Regarding the Naval Pe-		Demonstration Investory	40	(LMPBR)	450
troleum and Oil Shale Reserves	259	Energy Researce Data Systems	328	Liquid Metal Past Breeder Reactor Plant Parameter Information Sys-	
Aureal Report on the Columbia River		Environmental Information Analysis Center (BIAC)	448	tem	411
Power System	275	ERDA Knergy Research Abstracts	***	Major Fuel Surning Installation-Surly	
Annual Report to Congress on Naval Potroleum and Dil Shale Reserves		(ERA)	438	Pleasurg Process Identification	
recommission on State America	242	ERDA Headquerters Technical Li-		(EPPE) Major Fuel Burning Installations	335
Astomobile Classification Data Base		Exemption of a Refixed Petroleum	422	(MP81)	35
	345	Product force the Mandatory De-		Mandatory Oil Imports Project	
Bulk Electric Power System Reliabili-		troleum Allocation and Price Regu-		(MOIP)	353
Center for Reergy Studies (CES)	404	lationa	291	Market Shares System	370
Coal Data Face	443 373	Exploration of National Petroleum Ra- strye in Alaska	9700	Middle Distillete Price Monitoring System	
Coal Lesse Data System	322	PEA Crude/Transportation Model	299	Mineral Land Assessment	247
Commodity Data Summaries and Mis-	U.F	PPA Data Dictionary	248	Minerals leformation System	321
eral Espirance	266	FEA Household Energy Espenditure		(MINFO)	322
Compensatory Rayalty Agreements	272	Model (MSSH) laboM	393	Mining and Minerals Policy	267
Comprehensive Human Reseurces		FEA Hossehold Energy Survey	394	Mining Research	323
Data System (CHRDS)  A Computer Code for Concentral Cost	365	FEA Oil Import System	354	National Coal Model (RMAC)	379
Estimates of Steam Electric Power		Pederal Energy Conservation Perfor- mance System	343	National Energy Information Center	
Plens (Concept)	431	Federal Energy Information Locator	343	(NEIC)	347
Consolidated Pinenceal Statement of		System (PEILS)	366	National Geothermal Information Re- source (GRID)	451
the Pederal Columbia River Power System		Pederal Heltam Program	320	National Natural Resources   theses	401
System Contracts Information System (CIS)	274	The Pederal Wind Energy Program (Report)		and Information Systems	
	430	(Report) Financial Disclosures by Employees	206	(NNRLIS)	319
				National Plan for Energy Research,	

Congressional Index Senate Committees

Development and Demonstration Planning and Analysis	205	Regional Industrial Multiplier System	392	Senote Committee on Finance	
Nameral Program for Solar Heating	305	(RIMS) Reports of Costs of Certain Structures	392	Analysis of the Energy, Economic, and Budgetary Impacts of H.R. 6860	
and Cooling	103	on Nongovernment Waters	298	(Singly attribut)	1
National Solar Heating and Cooling In- formation Center	422	Report to the Congress on Matters		Commodity Data Summaries and Min- em) Estimates	
National Water Data Exchange		Contained in the Helium Act Research information Management	266	eni dittalis	
(NAWDEX)	325	System (RIMS)	324	Senate Committee on Foreign	
Natural Gas Company Operating In- formacion File	413	Reserves Allocation and Mine Cost		Relations	
Natural Gas Curtarianzons	357	Model (RAMC)	380	Review of Voluntary Agreement and	
Natural Gas Industry Evaluation Sys-		Severance Tax Model	396	Plan of Action To Implement the In- ternational Energy Program	2
toms	412	Short Term Coal Demand Forecasting Model	374	U.S. Nuclear Non-Proliferation Policy	
Natural Gas Regulatoresa System (Pro- ducer Rate)	414	Short Term Petroloum Domand Fore-		(Report)	- 2
Natural Gus Regulation System (Pipe-		easting Model	383		
line Rate)	416	Site Outribution Model	364	Senote Committee on Governmental	
Natural Gas Regulation System (Pro- ducer Centificate)	415	Some-Beenzene Environmental Demographic Information System		Affoirs Automobile Classification Date Base	
Natural Gas Regulation Systems (Pipe-		(SEBOIS)	424		3
line Consticute)	417	Solar Hoengy Update	437	Cool Data Base	3
Netural Gas Shortage Model	383	Special Reports Issued by the FPC and		Composhensive Human Resources	
Neothesteal Regional Growth and En- ergy Price Model	189	Pederal Power Communica Publica-	411	Date System (CHRDS) Cost and Pricing System	34
Nevada Applied Reology Information		States of Pending Hydroelectric Ap-		Crude Gil and Natural Gas Production	
Center	452	phentions	410	Model	•
Nuclear Material Management Plan OECO Energy Domand Model	426	Strategic Petroleum Reserve Plan	299	Crude Oil Bay/Sell Program	3
Official FPC Fries and Records	401	Strategic Petroleum Reserves Pro- gram-Wide System (SPR)	141	Crudo Oli Entitlements (Equaliza-	3
Oil and Gas Reserves System	372	Stripming and Land Reclamation In-	203	Crude Oil First thursbaser	i
Od and Gas Supply Model	378	formation System	435	Crude Oil Pricing Model (DCROPS)	•
Od Shale/Bestonne Title Clearance	330	Subpert L	369		3
Operation of State Energy Conserva- tion Plans	295	Supervisory Control and Data Acquis-	338	Oriting Equipment Production Sur-	35
Outer Continental Shelf Post-Sale Sys-	1.0	ton System (SCADA) Technical Books and Monographs	442	Oversmic lanus-Outest Linear Pro-	3
tem	331	Technical Information Center (TIC)	***	gramming Model for Regional En-	
Petroleum Market Shaces	284	Total and an area of the control of	439	ergy Impact Analysis (DIOLP)	3
Planning and Balling System Plant Operation and Power Schedul-	339	Transfer Pricing System	351	Electrical Pinancial Porecasting Model (BSB Model: EUFLNANCE)	á
ing	335	Trends in Reflecty Capacity and Udil- sation of Petroleum Reflecties in the		Electric Rate Demonstration Onto Sys-	
Plame Model	362	United States and Poreign Refinery		1903	3
Power Flow Program	326	Exporting Centers	360	Energy Policy Decisionmetring, Or-	
Power Surveys and Systems Evalua- tion	409	Underground Gas Storage System	371	gammetion, and National Energy Grals (Report)	1
Progress of and Pature Pleas for Ex-	407	U.S. Uranjam Resources and Supply	432	Energy Reorganization Legislation	
ploration of National Petroleum Re-		Ways to Strengthen Congressionsi	432	(Termony)	11
progress of Energy Cornervation Pro-	271	Control of Energy Construction		FEA Crude/Tearsportation Model FEA Data Dictionary	3:
gram for Consumer Products Other		Projects Other Than Neclose (Re-	192	PBA Household Energy Expenditure	-
Then Assompbiles	274	, mo	102	Model (HBEM)	31
Project Conserve Project Independence Evaluation Sys-	344	Energy Research and Development		FEA Household Energy Survey	25
tem (PIES)	381	Subcommittee Management and Funding Aspects of		PEA Oil Impart System	31
Project Operations System (POS)	361	Three Nonsuclear Energy Re-		Federal Energy Conservation Perfor- mance System	2
Propano/Binase Allocation System	349	search, Development, and Demon- stration Subprograms (Report)	203	Poderal Energy Information Locator	
Proposed Establishment of Joint Fed- eral-ledustry Nonsuclear Corpora-		stration suspengrams (support)	200	System (FEILS)	34
tion	315	Senote Committee on Environment		Pederal Exergy Management Program Amerial Report	21
Protection of Oil Reserves	261	and Public Works		Fiscal Impact of Energy Price Changes	21
Resotor leformstron File	427	Accust Report on the Columbia River		on State and Local Government	
Real-Time Operations, Disputch and Scheduling (RODS)	337	Power System Bookkeening System	275 420	Purchases of Goode and Services	31
RECON (REmote CONsole)	440	Consolidated Flastoriel Statement of	420	Income Distribution Impact Model	31
Reducing Nuclear Powerplant Land-		the Pederal Columbia River Power		International Cost Supply Model International Borrey Systuation Sys-	31
times: Many Obstacles Remain (Re- port)	049	System	274	tem (IBES)	31
Refinery Cost Pasethrough	348	Energy Data System (EDS)	341	International Oil Supply Model	3
Refunds on Ouner Continental Shelf		Planning and Eilling System Resource Recovery and Source Reduc-	339	Jeint PEA/BOM Petroleum Reporting	
Leases Regional Econometric Domand Model	266	tion	279	System Major Puel Burning Installation—Early	30
end Auto Simulation Model		Technical Assistance Osta System		Planning Process Identification	
(RD4)	385	(TADS)	340	(EPPB)	35
Energy Digest SEPTEMBER 1977					21:

Sanda Comilias Compressional Index

Major Fuel Barring Installations (MFBI)	356	port) Problems in the Federal Energy Ad-	120	Provisions of Navago and Hops Coal Leases (Report)	290
Mandatory Od Imports Project (MOIP)	353	transtrution's Compliance and En- forcement Effort (Report)	118	Survey of Publications on Exploration, Development and Delivery of Alas-	185
Market Shares System	370	Problems in the Federal Energy Of-		kan Od Market (Report)	107
Middle Dimilate Proc Moustoning	30	fice's terplementation of Emergency Petroleum Allocation Programs of		An Unclassified Digest of a Classified Report Estated "Safety and Tree-	
System.	34/	Regional and State Levels (Report)	108	sportagion Safeguards at Rocky Flats	
Mineral Land Association Minerals Information System	321	Problems of Independent Refiners and		Nuclear Weapons Plant" (Report)	067
(MINFO)	322	Gasolane Retailors (Report)	121	Minerals, Materials and Fuels	
ining Research	323	Role of the International Atomse En- ergy Agency in Sufeguarding No-		Subcarrenittee	
Inioral Coal Model (RMAC)	279	clear Material (Terrimony)	242	Department of the Interior's Proce-	
larional Energy Information Center	367	This Country's Most Expensive Light		dures for Approving Coal Missing Plans (Report)	226
(NEIC) Internal Gasi Communication	367	Water Resetter Safety Test Pacifity (Reserv)	059	I mis (Myste	
Interni Can Communeros Interni Can Shortago Model	383	U.S. Nuclear Non-Problemation Policy		Sanata Committee on Public Works	
(tectament Reporal Growth and En-		(Report)	248	Considerations for Commercializing	
ergy Price Model	389			the Liquid Metal Fast Breeder Renc-	w
ECD Energy Domand Model	286	Reports, Accounting and Management		tor (Report) States and Obstacles to Commerciali-	UDO
til and Gas Reserves System	372	The Federal Income Taxes of Class A		zation of Coal Liquefaction and	
NI and Gas Supply Model	349	and B Electric Utilities (Report)	185	Gaufication (Report)	0B
Jume Model	342	Sciented Aspects of Nuclear Power- plant Reliability and Economics (Re-			
roject Conserve roject Independence Evaluation Sys-	244	parts Reparently and Eventerines (Ac-	050	Sanate Committee on the Judiciary	
tem (PIBS)	381	Survey of Federal and Electric Utility		Review of Voluntary Agreement and Plan of Action To Implement the In-	
reject Operations System (POS)	361	Procusements of Power Equipment (Report)	162	Plan of Action To Implement the In- ternational Energy Program	276
ropane/Entane Allocation System	249	Languary	162		270
efinery Cost Passthrough	349	Synate Committee on Interior and		Administrative Practice and Procedure	
agronal Econometric Derrand Model and Auto Seguintice Model		Insular Affeirs		Subcermittee The Foderal Energy Administration's	
(RD4)	385	Actions Needed to Improve Federal		Correliance and Enforcement Pro-	
egional Industrial Multiplier System		Efforts in Collecting, Analyzing, and	159	ceines (Tentunony)	125
(RIMS)	392	Reporting Energy Data (Report)  A Bill to Establish a National Energy	109	Problems in Regulating National Gas	
sport to the Proudest by the Nuclear Regulatory Commission	318	Information System (Teamway)	158	Prices by the Poderal Energy Ad- encustration (Report)	139
stearch Information Management		Capability of the Naval Petroleum and			
System (RIMS)	224	Osi Shole Reserves to Meet Ester- gency Oil Needs (Testinous)	073		
eserves Allocation and Miss Cost Model (RAMC)	280	Development of the Duter Continental	-70		
Model (RAMC) protesto Tax Model	100	Shelf Formi Fuel Resources (Ter-		Joint Committees	
hort Torm Coal Dorsand Porecasting		sheep)	215		
Model	376	The Energy Information Act, S. 1864 (Teatroom)	176	Joint Committee on Atomic Energy	
Bert Tenn Petroleum Demand Fore-	383	Federal Efforts to Ireprove the Fuel		Activaties of Solar Energy Countina- tion and Management Project	302
casting Model ist Distribution Model	363	Economy of New Automobiles (Re-	nto	Budget History Tables	317
tystegic Petroleum Reserves Pro-	444	part) Interovencents Needed in the Federal	030	Comments on Energy Resourch and	317
gram-Wide System (SFR)	363	Enhanced Oil and Gas Recovery		Development Administration's	
sèpart L	369	Research, Development, and		Proposed Arrangement for the Clinch River Breeder Rescort	
unsfer Precing System	351	Demonstration Program (Report)	155	Clinth River Breeder Reactor Desconstration Plant Project (Re-	
reads in Refinory Capacity and Utili- pation of Fetroloum Refinence in the		Improvements Stall Needed in Federal Energy Data Collection, Analysis,		part)	044
United States and Foreign Refinery		and Reporting (Report)	182	Comments on Proposed Legislation to	
Experting Centers	340	Indian Natural Resources-Part II-		Change Basis for Government Change for Urseium Enrichment	
sdorground Gas Storage System	371	Cost, Oil, and Gas-Eetter Manage- ment Can Interova Davalogment		Services (Report)	131
		and Increase Income and Breploy-		Comments on Sciented Aspects of the	
ta Committaa on Govannant		enent (Report)	225	Administration's Proposal for Gov-	
eartions Bill to Ratend the Paderal Energy		Issues Needing Attention in Develop-		erement Assistance to Private Umasum Enrichment Groups (Re-	
Administration Act of 1974 (Ter-		ing the Strategic Petroleum Reserve (Report)	090	port)	145
sitting)	179	National Plan for Energy Research.		The Economic Impact of Energy Ac-	
evelopment of interagency Relation- ships in the Regulation of Nuclear		Development, and Demonstration:		tions	255
Materials and Facilities (Report)	055	Creating Energy Chosen for the Fu- ture	421	Beergy Research and Development Administration's Contingency Plan	
he Pederal Recray Administration's	-	Opportunides to Improve Planning for	-20	for More Enrichment Capacity at	
		Solar Boergy Research and Deve-		Portsmouth, OH (Report)	052
civities (Testimony) danit Baesay Administration's Ri-	119	ispenent (Report)	202	BRDA Report of Review of Design, Construction, and Planning of	
forts to Audit Domestic Crude Cul		Outer Continental Shelf Sale #35: Problems Scienting and Ryalundag		Plutonium: Processing Pasitities	200
Producers (Report)	133	Land to Lease (Report)	231	The Evaluation of the Administration's	.,,
he Pederal Bongy Administration's		Power Production at Federal Damx		Proposal for Government Assist-	
Progress in Redirecting Its Compli- ages and Enforcement Program (Re-		Could Be increased by Modernizing Turbines and Generators (Report)	205	ance to Private Uranusm Borsch- ment Occups (Tenimony)	953
		and otherway (Appell)	-30		433
4				Energy Digest SEPTEMBER	1977

Congressional Index Members Laurid Metal Post Boroder Bearter Program, Past, Present, and Faters

(Testimons)

Subcommittee

fense (Report)

Abourozk, Sen. Jomes

Priorities and Frances in Government

Subcommune
Procurement of Pereign and Oceanic

Petroleum by Department of De-

Members

124

m

037

195

de Poet, Rep. Pierre S.

(Report)

Findley, Ren. Paul

(Leaved

Frazer, Rep. Denotd M.

Electricity (Report)

Pagery Efficiency of Nuclear and Con-

verticeal Facils Lised to Produce

Need for the Federal Power Commis-

Legality of Administration Actions in

Printing and Storing Clus Coupons

size to Forkeste the Effectiveness of

the Natural Gas Curtailment Policy

635

120

104

Espherice of the Administration's

Purcher Comments on Attends Parries

Commission's Proposed Arrange-

Commission's Proposed Arrange-ment for the Liquid Metal Past Breeder Reactor Demonstration

Prove Structure of the Uranum Ennchmen industry (Texteson)

Management of the Attence Energy

Proposal Agreements for Conservation with Other Nations on Atomic En-

Commission's Controlled Ther-

Monrolear Research Program /Pa-

most General (Report)

Project (Report)

acrt)

Proposal for Generation Assau-

ance to Driver Hearten Ferich.

ergy Proposed Changes to the Atomic En- ergy Commission's Arrangement for Carrying Out the Liquid Metal Past	304	How Solar Energy Was Treated in the AEC Chairman's Report, "The Na- tice's Energy Fuzzer" (Report)	198	Domestic Crade Oil Pricing Policy and Related Production (Report)	112
Breder Rescor Demonstration Project (Report) The Proposed Contract for the Clinch	032	Albert, Rep. Corl Revenees and Costs Allecated to		Freshlich, Rep. Horold V. Legality of Printing Casaline Ration- ing Causees by Federal Buergy Ad-	
River Breader Reactor Project (Tes- Assess)	058	Power Operations at Maltiple-Pur- pose Projects in the Southwestern Federal Power System (Report)	995	misistration (Letter)	103
Proposed Distribution of Special Nu- clear Materials	303	Total Total System (Aspert)	910	Genzolez, Rep. Henry B.	
Preposed Revisions to the Criteria and Contracts for Uraniam Harichment Services (Report)	097	Aspin, Rep. Les Gulf Oil Corporation's "Double Dip- eins" on Crude Oil Product Costs		Receipt and Coordination of Natural Gas Reserve Data (Report)	07B
Protecting Special Nuclear Material in Transit Improvements Made and Existing Problems (Repart)	025	(Report) Information on the Proposed Alaska Oil Pipelian (Report)	133	Guda, Rep. Gilbert Potential for Using Electric Vehicles on Pederal legislations (Report)	022
Report by the US Energy Research and Development Administration, Status of Communities Property and Other Data	313	Bentsen, Sen. Lloyd M.	ura	Hechler, Rep. Ken	***
Report on Artivity and Program Index of the Energy Research and Devel- opment Administration: States of Construction Projects and other	313	The Purchase of Short-Supply, Energy- Related Items through the Esport- Import Bank of the United States (Report)	224	Opportunities for Improvements in Re- cisiming Strip-Mined Lands under Coal Parchase Contracts (Report)	092
Data Report on ERDA's Numuclear Ac-	313	Breck, Sen. Bill		Heilings, Son. Emest F. Department of the Interior Study of	
tsvities	310	Curtailment of Electric Power Service by the Tennessee Valley Authority		Strat-in Cit and Gas Well Comple- tions and Loanse-GAO Cheerva-	
Report on Past Plus Test Pacifity  Report on Reprogramming Action for	201	(Report)	117	tions (Report)	224
the Nuclear Materials Program	314	leformation on Selected Aspects of the Fower Operations of Tempessee Val-			
Report on the Status of Major Con- struction Projects Experiencing Sig- nificant Variances	300	ley Authority (Report)	167	Heltzmen, Rep. Elizobath Alleged Waste of Money in Printing Costs on Gas Rationing Compens	
Report to the President by the Nuclear Regulatory Commission	218	Corey, Rep. Hugh L. The Energy Impact of Moving Doorst-		(Letter)	110
Summary of Abnormal Occurrences Reported to the Nuclear Regulatory Communica	316	ment of Gefinse Activities from the Military Gossa Terminal, Brooklyn, New York, to Bryonne, New Jessey		Jackson, Sen. Henry M. Rebable Contract Sales Data Needed	
U.S. Niselear Non-Proliferation Policy (Report)	248	(Report)	011	for Projecting Amounts of Natural Our That Could be Dongstand (Re- port)	172
Joint Committee on Defense		Cronston, Son. Alon Department of the Intenor Study of		<b>3</b> 00	10.2
Production Commodity Gata Summaries and Mus-		Shut-In Oil and Oas Well Comple-		Lloyd, Rep. Morllyn	
eral Estimates	255	tions and Leases-OAO Observa- tions (Report)	224	Place for Construction of a Mag- netohydrodynamics Test Facility in	
Mixing and Minerals Policy	247			Montana (Report)	046
Joint Sconomic Committee Can the U.S. Breeder Reactor Deve- logment Program Be Accelerated by Using Feeeign Technology? (Report)		deluge, Rep. Ren Fands Credited to the Account of the Virgin Islands for Refuseds from Im- port License Pees (Report)	124	Megruson, Sen. Werren G. Department of the Issurer Study of Stylin Oil and Cas Well Comple- tions and Lesses-GAO Observa-	
The Economic Impact of Energy Ac-	245	Dole, San. Robert		tama (Report)	224
tions Federal and State Solar Energy Re-	255	Review of Complaints Concerning the Mandatory Petroleum Allocation		McCormotk, Rep. Mike	
search, Development, and Demon- stration Artivities (Report)	200	Program and the Regulation of Pe- troicum Pricing (Report)	102	The Effects of Oil Price Increases on Small Business Contracts (Report)	123
Energy Digest SEPTEMBER 1977					215

Members Congressional Index

<ul> <li>Melcolfe, Rep. Rolph H.</li> <li>The Navy's Pencure of Discharging Forl at See (Report)</li> </ul>	020	Roth, Sen. William V. Od and Gas Leasing on Pederal Lands (Report)	214
Miller, Rep. George Requests to Regulatory Agencies by Off Comparies for Deviations from Standard Procedures (Report)	148	Sthwelker, Sen. Richard S.  Opensing Cost and Environmental Redistron Monttering at the Step- praggort Attenue Power Station (Re- port)	06
Monkley, Rep. John J. Managemmi Improvements Needed in the Federal Power Commission's Processing of Ricette-Rate-Instease Class (Rigori)	153	Storp, Rep. Philip R. Department of Commonos's "SavEn- orgy Claimtes" (Report)  Stevenson, Sen. Adial E. Department of the Internor Study of	024
Mass, Rep. John E. The Barryy Research and Dovelop-		Shur-in Oil and Gas Well Comple- tions and Leases-OAO Observa- tions (Report)	224
ment Administration's Proposed Crement with Prefers Management Corporation, Commonwealth Ed- sien, and the Tennessee Valley Au- thority (Report) Effects of a Change in Son Standard	054	Tunney, Sen. John V.  Ospanment of the Interior Study of Stur-In Oll and Gas Well Completions and Leases-GAO Observa- ness (Report)	224
for Schill Business Petroleum Refin- ers (Report)  Followup Review of the Navel Pe-	149	Vonik, Rep. Cheeles A. Agreement between the Secretary of the interior and Officials of the State	
ireleum Reserves (Report) Firther Action Needed on Recom- recodettees for Improving the Ad- strongeration of Federal Conf-	220	of Utth Perturing to Oil Shale Leases (Letter) Companion of Entrgy Use in Pire Pederal Office Studengs (Reject) Leasing of Minerals on Public Lands	209 017
Leaning Program (Report) Information on Certain Orland Gas le- dustry Overaght Responsibilities (Report)	217	(Atyon) Wirth, Rep. Timethy E.	211
Need for Improving the Regulation of the Natival Gas Industry and Man- agement of Internal Operations (Re- port)	111	An Uncleaselind Digest of a Classified Report Entitled "Safety and Tran- sportation Saleguards at Rocky Plass Nuclear Weapons Plant" (Report)	067
Relablic Couract Sales Data Needed for Propering Amounts of Natural Gas That Could Be Deregalaced (Re- cent)		Welff, Rep. Lester L. Smilsteel Oats on Petroleum and Pe- trolcum Products (Report)	079
Requested Unitsy Rate Increase by the Pastense Electric Power Company (Regard)	172		
Requests to Regulatory Agencies by Oil Companies for Deviational from Standard Procedures (Report) Staffing of Federal Energy Administra-	148		
tion's Office of Communications and Public Affairs (Report)	164		
Moss, Sen. Fronk E.  Osparisens of the Intenor Study of Shot-In Cd and Gas Well Comple- tions and Leases—GAO Observa- tions (Apperl)	224		
Proximire, Sen. William Information on the Proposed Alaska Oil Pipeline (Report)	074		
Rouss, Rep. Heary S.  Federal Coal-Leasing Program of the Department of the Interior (Report)	221		

