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House of Commons
Energy and Climate Change
Committee

Draft Energy Bill: Pre-legislative Scrutiny

First Report of Session 2012–13

Volume I



House of Commons

Energy and Climate Change Committee

Draft Energy Bill: Pre-legislative Scrutiny

First Report of Session 2012–13

Volume I

Volume I: Report, together with formal minutes

Oral and written evidence from witnesses is published in Volume II

Additional written evidence is contained in Volume III, available on the Committee website at www.parliament.uk/ecc

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The Energy and Climate Change Committee

The Energy and Climate Change Committee is appointed by the House of Commons to examine the expenditure, administration, and policy of the Department of Energy and Climate Change and associated public bodies.

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Dan Byles MP (*Conservative, North Warwickshire*)
Barry Gardiner MP (*Labour, Brent North*)
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Gemma Doyle MP (*Labour/Co-operative, West Dunbartonshire*)
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The Report of the Committee, the formal minutes relating to that report, oral evidence taken and some or all written evidence are available in a printed volume. Additional written evidence may be published on the internet only.

Committee staff

The current staff of the Committee are Sarah Hartwell-Naguib (Clerk), Jenny Bird (Senior Committee Specialist), Dr Stephen Allen (Committee Specialist), Luanne Middleton (Inquiry Manager), Áine Ní Bhreasail (Committee Specialist), Dr Patsy Richards (Committee Specialist), Katie Phelan (Senior Committee Assistant), Jonathan Olivier Wright (Committee Assistant), Danielle Nash (Administrative Assistant), and Nick Davies (Media Officer).

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Contents

Report	<i>Page</i>
Summary	4
1 Introduction	7
The pre-legislative scrutiny process	7
Role of the Treasury	8
Suggestions that the Bill be scrapped	9
Structure of this report	10
2 Omissions and unintended consequences from the draft Bill	11
A lack of detail: a framework Bill	11
Clarity about the key goals of the Bill	12
Improving clarity about decarbonisation	13
Improving clarity about minimising costs to consumers	15
Improving clarity about energy security	15
Proposed amendments to the draft Bill	15
Demand-side measures	16
An “Obligation” to source renewable energy	18
The Bill is likely to result in increased vertical integration and reduced competition	18
Fewer opportunities for smaller-scale players and CHP	19
3 Contracts for Difference	21
Counterparty model	22
The shift from a single counterparty underwritten by government to multiparty counterparty model	22
DECC’s current proposal (a multiparty counterparty)	24
The third way: a single counterparty without Government underwriting	27
The need for a more rigorous Impact Assessment	28
Allocation of CfDs: the Levy Control Framework and use of auctions	30
Impact of HM Treasury’s Levy Control Framework	30
Use of auctions	33
Ensuring routes to market	33
Other issues	36
Length of contracts	36
Setting the strike price	36
The strike price for nuclear	37
The likely cost of nuclear	37
Longer-term price visibility	38
State aid and a “one-size fits all” package	38
4 Investment Instruments	41
5 Capacity Mechanism	43
Need for the mechanism	43

Uncertainty over the mechanism	44
Design of the mechanism	45
Minimising costs for consumers	46
Technology options for providing capacity	47
Generation technologies	48
Non-generation technologies	49
6 Conflicts of Interest	52
7 Emissions Performance Standard	54
Grandfathering	54
Exemption for carbon capture and storage	55
Parliamentary Procedure	55
8 Timetable for delivery	57
Is a backup plan needed?	58
9 Wider concerns about the draft Bill	59
Political leadership in communicating costs	59
Clarity about the future role of gas	59
The Bill has the potential to damage low-carbon jobs and industries	60
Re-regulation of the energy system	61
A proper assessment of costs	61
10 Conclusion	63
Recommendations	64
Annex 1: Note from roundtable meeting	72
Are the current proposals investable?	72
Government engagement with the finance community	73
Making CfDs work	73
Capacity mechanism	74
Political leadership	74
The future role of gas	75
The future role of renewables	75
List of participants	75
Annex 2: Proposed amendments in conventional format for consideration during Committee Stage:	77
Formal Minutes	78
Witnesses	79
List of printed written evidence	80
List of additional written evidence	80
List of reports from the Committee during the current Parliament	82

Summary

While the energy market has served us well for many years, it is clear that the current arrangements are unlikely to deliver the level of investment that is needed to meet our energy security and climate change objectives. The Government's proposed Electricity Market Reform (EMR) therefore has a crucial role to play in securing a clean and reliable electricity system for the future, at the minimum cost to consumers. The pre-legislative scrutiny process has identified some serious concerns with the proposals as they currently stand, which could make the reforms unworkable if they are not resolved. But the perfect should not be the enemy of the good and we believe that it is difficult but possible for the Government to revise the plans into a workable model.

DECC's stated objectives for reforming the electricity market (to move to a secure, more efficient, low-carbon energy system in a cost-effective way) are uncontentious but vacuous; very few people would seriously object to these aims. However, the lack of specific *outcomes* means that there is still uncertainty about exactly what the Government is hoping to achieve through these reforms. The Bill would benefit from the inclusion of a set of much clearer and more specific objectives. In particular, providing greater clarity about the role that the electricity sector is expected to play in contributing towards the UK's long-term decarbonisation target would help to boost confidence amongst the investment community. We believe that an explicit reference to the carbon budgets in the Bill, as well as making the Committee on Climate Change a statutory consultee on the delivery plan, would help to create greater certainty about the UK's commitment to meeting its statutory obligations.

As with many aspects of energy policy, the Government has fallen into the trap of focusing far too closely on the supply side of the energy system, while neglecting to consider the contribution that demand-side activities could make to security and climate change objectives. Thinking about the demand-side needs to be given a much higher priority in the Bill, not least because it is likely to deliver much more cost effective solutions than building ever greater levels of generating capacity.

At the heart of the reforms is the proposal to establish a Feed-in Tariff with a Contract for Difference (CfD). There is a great deal of merit in the idea of CfDs—most notably the principle of revenue certainty provided by a long-term contract—but the implementing arrangements have become so complex that the proposal has now arguably become unworkable.

There are three major problems with the CfD model that is currently proposed by DECC. First, the payment model based on a "synthetic" counterparty is not bankable because there is genuine uncertainty about whether any contracts would be legally enforceable. Second, the impact of "rationing" CfDs under the Treasury's levy cap will be to increase development risk, possibly to the point that the project pipeline could dry up. Finally, the removal of an obligation to buy renewable energy could compromise the ability of independent generators to take part in the market, which could lead to fewer players and greater levels of vertical integration. Indeed, the Bill and associated documents do not give

sufficient consideration to the risk of negative impacts on smaller scale players in general.

Although these are significant concerns, we believe that it is still possible to make the proposals work. We recommend that the Government abandons the multiparty concept and reverts to a single counterparty model. We believe a single counterparty that is underwritten by the Government would be the best way to reduce the cost of capital, but if the Government does go ahead with a model that is not underwritten by the Government, it must specifically assess the effect of this decision in a new impact assessment. In addition, we believe that there may be merit in the two-step registration process for allocating CfDs that has been proposed in some quarters, as it appears to strike a balance between awarding a contract to anyone and everyone (possibly resulting in under delivery) and waiting so late in the development process that the risk of not getting a CfD becomes unacceptably high. Finally, we recommend that the eligibility threshold for small-scale Feed-in Tariffs should be extended to at least 10MW in order to allow smaller scale generators and community-owned schemes to continue to operate. We also suggest that DECC should consider options such as introducing a buyer of last resort or introducing an incentive to source energy from low-carbon generation to ensure that there is access to market for larger scale projects from independent generators.

A further problem with the CfD proposal relates to the treatment of nuclear power. The proposed process for agreeing the strike price for nuclear lacks transparency (both under the Investment Instruments process and CfDs when they are introduced) and any perception that decisions are being made “behind closed doors” could be hugely damaging to the low-carbon agenda. In order to help preserve confidence and trust in the process, a committee of independent experts should be appointed to oversee the negotiation process.

The Government is right to identify that there may be a risk to security of supply if investment in new capacity does not come forward to replace the existing generating plant that is scheduled to close down towards the end of this decade. It is unfortunate, therefore, that talk of the possibility of a capacity mechanism appears to be having the unintended consequence of freezing new investment. As a matter of urgency, more clarity is needed about the circumstances in which a capacity mechanism would be introduced. In addition Government must carry out a more rigorous analysis of the problem that the capacity mechanism is intended to address, with a specific consideration of the likely impact of integrating a large volume of intermittent generation on to the system.

The Emissions Performance Standard as currently proposed would be at best pointless. At worst, the decision to grandfather the initial level until 2045 may undermine our ability to meet long-term carbon targets and so the length of the grandfathering period should be reduced.

We do not believe that it is appropriate for a private company (National Grid) to act as the EMR delivery body and fear that this decision may lead to unnecessary additional costs to consumers.

The importance of ensuring a timely delivery of electricity market reform cannot be overstated: reform is vital if we are to meet low-carbon and energy security aspirations for 2020. It is therefore vital that DECC’s timetable does not slip. We do not underestimate the scale of the challenge that the Government is facing in preparing a Bill that is fit for

purpose in time for introduction in the autumn but every endeavour must be made to avoid further delays to the process.

1 Introduction

1. The Government's vision is to move to a secure, low-carbon energy system in a cost effective way. Achieving this goal will be no mean feat. Around a fifth of our existing generating capacity is scheduled to close in the next decade and there are also challenging climate change and renewable energy targets for 2020. DECC has estimated that up to £110 billion of investment for new electricity generation and transmission infrastructure is likely to be needed by 2020, which will require the current rate of investment to more than double.

2. At a time when both company and government balance sheets are stretched, and other faster growing economies are also seeking substantial investment in energy infrastructure, securing this level of investment represents an enormous challenge. What is more, rising gas prices and growing levels of fuel poverty have pushed questions of affordability to the fore. It will therefore be vital that, as we move towards a new energy system, every effort is made to maximise value for money and minimise costs to consumers.

3. Many witnesses argued that the framework in which the market currently operates will not deliver the necessary levels of investment (although some argued that the existing Renewables Obligation would be sufficient to deliver investment in renewable energy). There is clearly a problem in attracting investment at the moment. We have already fallen behind schedule, with only a third of the annual investment required in wind having been delivered and the prospects for new nuclear looking increasingly uncertain.¹

4. As a result, DECC has been working to develop a new framework that it hopes will provide the necessary incentives to secure investment. One of the main goals of this work has been to reduce the risks associated with investments in low-carbon generation, thereby making them more attractive to prospective investors.

5. The Government's initial proposals were published for consultation in December 2010.² We conducted an inquiry on these proposals and reported in May 2011.³ DECC subsequently published a White Paper in July 2011 and a technical update in December 2011.⁴ We heard evidence on the technical update in January 2012.⁵

The pre-legislative scrutiny process

6. We indicated our willingness to conduct pre-legislative scrutiny to the Department in January this year, but made clear at the time that this should not be at the expense of an early introduction of the Bill.⁶ The draft Bill was not published until 22 May 2012. We

1 Committee on Climate Change, Meeting Carbon Budgets – 2012 Progress Report to Parliament, June 2012

2 DECC, Electricity Market Reform Consultation Document, Cm 7983, December 2012

3 Energy and Climate Change Committee, Fourth Report of Session 2010-12, Electricity Market Reform, HC 742

4 DECC, Planning our electric future: a White Paper for secure, affordable and low-carbon electricity, CM 8099, July 2011; DECC, Planning our electric future: technical update, December 2011

5 Oral evidence taken before the Energy and Climate Change Committee on 24 and 25 January 2012, HC (2010-12) 1781-i and 1781-ii

6 Ev 107 (letter dated 31 January 2012)

support the Government's overall objectives for the electricity sector and see electricity market reform as vital to achieving these aims. We were therefore willing to take part in this process and have done so in the spirit of making a constructive contribution towards the Bill. We hope that the result will be better, more workable and more effective legislation.

7. However, our efforts to provide robust and effective scrutiny have been hampered by a number of factors. First, the timescale in which we have been asked to conduct and conclude our inquiry—just five sitting weeks—has made examination of what is a very complex set of proposals extremely challenging. This timescale is well below the 12 sitting weeks that a Joint Committee conducting a similar task would, by convention, be granted.⁷

8. Second, we have been dismayed by the lack of detail provided on key aspects of the proposals, most notably on the crucial question of who will be the counterparty for the new Contracts for Difference. In addition, DECC was still collecting evidence as we carried out our inquiry in many vital areas (for example, demand reduction, the Power Purchase Agreement market and detailed design of the capacity market, to name but three). It is very difficult for us to comment constructively on these aspects without having had access to this evidence base.

Role of the Treasury

9. Finally, the refusal of the Treasury to provide a witness or to answer our questions in writing has seriously undermined the pre-legislative scrutiny process.⁸ Treasury Ministers have given evidence to this Committee on several previous occasions and we are aware of at least one example of a Treasury Minister giving evidence to a Public Bill Committee on a Bill where it was not the departmental lead.⁹ We are therefore frankly astonished by the suggestion that providing evidence to the Committee would “establish a precedent” that would “undermine” its “role in Government as spending arbiter” (in the past the Treasury's approach has been more pragmatic, demonstrating an acceptance that, even within the parameters of joined-up government, there is scope for discussion and scrutiny of interaction between Treasury policy and that of other government departments).¹⁰

10. Numerous witnesses told us that Treasury policy (and in particular the levy control framework) was having a direct impact on energy investment decisions. What is more, the levy cap may, paradoxically, result in *increased* costs to consumers and may damage prospects for growth in low-carbon industries - exactly the outcomes the Treasury is seeking to avoid. These are important questions that must be addressed, but the Treasury's apparent refusal to engage with the possibility that its policies may have unintended consequences risks derailing DECC's proposals and producing a worse deal for consumers. All Government departments must explicitly support a policy framework that is evidence-based.

7 Ev 107 (letter dated 24 May 2012)

8 Ev 111, Ev 115

9 Child Poverty Bill, Public Bill Committee, 20 October 2009

10 Oral evidence taken before the Energy and Climate Change Committee on 4 May 2011, HC (2010-12) 1018-i; Oral evidence taken before the Energy and Climate Change Committee on 1 December 2011, HC (2010-12)1605 Ev 111

11. The draft Bill is a framework Bill, with much of the detail to be contained in secondary legislation. One witness argued that the Committee should undertake further scrutiny of these proposals, when the final models are available.¹¹ Since much of this detail is essential to understanding whether the reforms are likely to be effective, we have not limited our inquiry to the draft Bill itself, but have also explored some of the broader policy questions relating to the proposed reforms.

12. We received 79 submissions of written evidence and held five oral evidence sessions. We also held a roundtable discussion with investors and financial analysts. A note of the meeting, along with a full list of witnesses can be found at the end of this report.¹² We are very grateful to all those who contributed evidence to this inquiry. We would like to express particular thanks to Dr Robert Gross (Imperial College) and Professor Derek Bunn (London Business School) who were Specialist Advisers to the inquiry.¹³

Suggestions that the Bill be scrapped

13. The Government's original proposals for electricity market reform were based on four key measures: a Feed-in Tariff for low-carbon energy, a Carbon Price Floor, an Emissions Performance Standard and a Capacity Mechanism.¹⁴ The Carbon Price Floor has already been legislated for through the Finance Act 2011, so the draft Energy Bill focuses on the remaining three measures.

14. As we noted in our previous report on this subject, "Electricity Market Reform" is really a misnomer, since the proposals will not actually change the current British Electricity Trading and Transmission Arrangements (BETTA) system under which electricity is traded in the electricity market. Instead, they will "bolt on" additional market mechanisms, taxes and regulatory measures.¹⁵ As noted below, aspects of wholesale market reform appear critical to EMR (para 125). We were therefore not surprised by the lack of proposals to make changes to the wholesale market itself in the draft Bill.

15. Many witnesses believed that there was a need for reform of some kind (although it was widely known that the starting point would not be radical market reform). However, many also felt that the proposals *as currently constructed* would not deliver increased investment in low-carbon generation.¹⁶ As the Low Carbon Finance Group put it, the proposals "at present, do not form a framework or structure that financiers believe they could present to, and secure approval from, credit or investment committees".¹⁷

11 Ev w54

12 See Annex 1

13 Relevant interests can be found at www.parliament.uk/ecc

14 DECC, Electricity Market Reform Consultation Document, Cm 7983, December 2010

15 Energy and Climate Change Committee, Electricity Market Reform para 60

16 Ev 117, Ev 123, Ev 127, Ev w34, Ev 151, Ev w79, Ev w89, Ev w101, Ev 178, Ev w115, Ev 211, Ev 221, Ev w154, Ev w161, Ev w167, Q 46 [Mr McElroy], Q 96 [Mr Skillings], Q 97 [Prof Mitchell], Q 142 [Ms Hartnell, Mr Gardiner, Mr Kingsbury, Mr Temperton and Dr Edge], Q 188 [Mr MacDougall and Mr Rehmanwala], Q 231 [Mr Steedman and Ms Kelly]

17 Ev 211

16. Some witnesses argued that the proposals were fundamentally flawed and that the whole EMR process should be stopped.¹⁸ However, others thought that it was still possible to revise the proposals and to create a workable framework.¹⁹ While we are certain that significant changes are needed to the draft Bill, we also recognise that scrapping the plans at this stage would lead to even greater uncertainty, further delays in securing much needed new investment, and would undermine the credibility of UK energy policy. It would also seriously jeopardise the prospects for meeting our 2020 renewable energy and climate change targets and could even threaten energy security. It is therefore our intention in this report to engage constructively with the proposals that are on the table, rather than suggesting DECC rips up the Bill and starts again; the perfect should not become the enemy of the good. We aim to highlight the areas where DECC needs to carry out further work before introducing its Bill and, where possible, to make practical recommendations for how the draft Bill could be improved.

17. As well as Electricity Market Reform, the draft Bill also covers a number of other subjects (Energy Strategy and Policy Statement, the Office of Nuclear Regulation, Offshore Transmission and Government Pipeline and Storage System). Owing to the time constraints in which we have conducted this inquiry, we have not been able to include the detail of these other, less controversial areas in our scrutiny.

Structure of this report

18. Our report relates to the Chapters of the draft Bill as follows:

- draft Bill Chapter 1, Contracts for Difference – Chapter 3 of this report
- draft Bill Chapter 2, Investment Instruments – Chapter 4
- draft Bill Chapter 3, Capacity Market – Chapter 5
- draft Bill Chapter 4, Conflicts of interest – Chapter 6
- draft Bill Chapters 5, Contingency Arrangements and 6, The Renewables Obligation: Transitional Arrangements – we have not examined these chapters in great detail.
- draft Bill Chapter 7, Emissions Performance Standard – Chapter 7 of this report

19. As described above, we have focused our inquiry on Part 1 of the Bill and we have not looked at Parts 2 – 4 in great detail.

18 Ev 221, Ev w3

19 Ev 117, Ev 155, Ev 161, Ev w61, Ev 176, Q 2 [Mr Anderson], Q 46 [Mr de Rivaz], Q 97 [Dr Kennedy], Q 98 [Mr Skillings], Q 188 [Mr Taylor], Q 240 [Ms Kelly]

2 Omissions and unintended consequences from the draft Bill

20. In this section we provide an overview of key aspects that are missing from the draft Bill as well as a number of potential unintended outcomes from the proposals. The details behind each of these aspects are provided in subsequent chapters.

A lack of detail: a framework Bill

21. The draft Bill contains 50 individual provisions for delegated powers.²⁰ A substantial amount of detail relating to the basic design of the Contracts for Difference (CfD) and Capacity Market will be contained in secondary legislation that is not available for scrutiny at this time. This includes important terms of CfDs that are key to their operation, such as the length of contract, any penalties payable (for not completing projects on time), and the setting of two key prices that will determine payments under CfDs (the “strike price” and “market reference price”). We consider that these are more than technical details because they are of direct and immediate interest to developers and investors.

22. In some areas the draft Bill provides for limited (negative procedure), or even no Parliamentary scrutiny of secondary legislation. The absence of detail raised concern among many witnesses, who stressed that they could not have confidence in the outcomes until they had seen the detailed workings for these mechanisms.²¹ DECC’s Delegated Powers Memorandum says (in respect of CfDs):

The key elements and principles of the CFD scheme are set out on the face of the draft Bill...[and associated documents]... Further detailed work will be undertaken to give effect to these provisions, and elements of the mechanism such as targets and support levels will need to be updated periodically over the lifetime of the mechanism. Therefore, the Department considers that it is appropriate to address the detailed design of the scheme in secondary legislation.²²

23. Some witnesses perceived increased risk that future Secretaries of State would be able to amend the framework “with relatively low levels of Parliamentary scrutiny (because amendments will be subject to negative resolution procedure)”.²³

24. In the context of the challenging timescale we have been set for this inquiry, we have focussed on the policy objectives of the Bill. However, we note that the success of the EMR will lie in the detail. Since the basic design of CfDs and the Capacity Market will not be enshrined in primary legislation, the secondary legislation will be more than just technical implementation and the opportunities for further Parliamentary scrutiny should be maximised.

20 Ev w179

21 Ev 130, Ev 137, Ev w86, Ev w148, Ev w167

22 Ev w179

23 Ev 168, Ev w74, Q 2 [Ms Vaughan]

25. We asked the House of Lords Delegated Powers and Regulatory Reform Committee for its opinion on DECC's Delegated Powers Memorandum. Unfortunately it was not able to offer a formal view in the time available, but we will await with interest its view on whether the parliamentary procedures in the Bill provide for sufficient scrutiny of the detail of the proposals.

26. DECC has noted that elements of the detail embodied in secondary legislation such as generic CfD terms “are not intended to change substantially over time”. It should therefore be possible to make generic designs available to Parliament to assist its scrutiny during the passage of the real Bill. **We recommend that in order to increase confidence and ensure that there is an opportunity for rigorous Parliamentary scrutiny, the Government should publish draft secondary legislation, including a model Contract for Difference, in time for formal consideration of the Bill.**

Clarity about the key goals of the Bill

27. The introduction to the draft Bill highlights the Government's ambition to move to a “secure, more efficient, low-carbon energy system in a cost-effective way”.²⁴ It also reaffirms the Government's commitment to meeting the UK's legally binding emission reduction targets and 2020 renewables target.²⁵ The Secretary of State confirmed the objectives of the draft Bill, telling us that:

They are to get energy security, to keep the lights on; they are to decarbonise, to ensure we stop polluting; and they are to do that at the least cost, because affordability has to be a consideration.²⁶

28. Nevertheless, we heard from many witnesses that the objectives for the Bill were not sufficiently clear.²⁷ We suggest that there are two reasons for this perception. First, the draft Bill does not specify the *outcomes* it is aiming to achieve: what level of reliability of supply is acceptable? What level of emissions would be considered “low-carbon”? How much is it reasonable for consumers to pay? Without providing a sense of what success looks like, stakeholders remain uncertain about what exactly the Government is hoping to achieve through these reforms.

29. We note that despite the Secretary of State's assertion that the objectives of the Bill were clear, they are not set out formally on the face of the Bill.

30. The second aspect of uncertainty stems from contradictory signals about which of these objectives takes priority. For example, achieving security and decarbonisation “at least cost” suggests that decarbonisation and security goals have priority over reducing costs. But the existence of the Treasury's levy control framework has created a perception that, in

24 Draft Energy Bill, CM 8362, May 2012, Introduction, p 9, para 1

25 Draft Energy Bill, CM 8362, May 2012, Introduction, p 9, para 2

26 Q 383

27 Ev 123, Ev 127, Ev 137, Ev w37, Ev 161, Ev 168, Ev w71, Ev 172, Ev 187, Q 122 [Dr Kennedy], Q 231 [Mr Benton]

practice, caps on consumer costs might trump carbon reduction.²⁸ The Energy Technology Institute stated:

The Bill and the accompanying documentation also does not clarify how the government will ensure coherence between its carbon budget, its published Carbon Plan, and its approach to delivering EMR. This, along with the closeness of the department to the delivery plan, may cause investors to perceive a significant risk that the EMR delivery plan and associated funding commitments will be subject to short-term spending review pressures.²⁹

31. We asked the Secretary of State to clarify whether the levy cap or climate change targets had primacy. He told us:

We are not going to break the law [...] ultimately we need to make sure we meet our legal obligations.³⁰

32. We welcome the Secretary of State's clarification that if faced with a choice between meeting legal climate change obligations and sticking within the levy cap, the Government would give primacy to statutory climate obligations. The investment community would have been further reassured had HM Treasury been able to confirm this. Because HM Treasury have told us that DECC spoke for all of Government in its evidence, we consider this a cast iron commitment to the primacy of statutory obligations over the Levy Control Framework. We would welcome an explanation from HM Treasury about how the working of the levy cap over the forthcoming funding period will be amended to make it compatible with the requirement to meet legal climate change obligations.

Improving clarity about decarbonisation

33. The Committee on Climate Change has recommended that the carbon intensity of the power sector will need to fall to around 50gCO₂/kWh by 2030 if we are to take the most cost effective route to meeting our 2050 decarbonisation objective.³¹ DECC adopted an “indicative target” of 100gCO₂/kWh by 2030 as the basis for the modelling that underpinned the White Paper.³² However, the UK does not currently have any statutory targets relating to carbon emissions or the energy mix in 2030.³³

34. Air Products told us that “the perception is that UK policy is becoming more uncertain and more unpredictable, particularly concerning the future of renewable energy post-2020”.³⁴ Numerous witnesses told us that a specific carbon reduction target for the

28 Q 21 [Mr Marchant, Ms Vaughn], Q 125 [Mr Skillings], Q 191 [Mr MacDougall]

29 Ev w139

30 Q 485

31 Committee on Climate Change, *The Fourth Carbon Budget: Reducing emissions through the 2020s*, 7 December 2010

32 DECC, *Planning our electric future: a White Paper for secure, affordable and low-carbon electricity*, CM 8099, July 2011, para 7.25

33 The UK has legally binding greenhouse gas emissions reduction targets for 2020 and 2050 and a renewable energy target for 2020.

34 Ev w98

electricity sector on the face of the Bill would help to address this concern and would boost investor confidence in the UK's commitment to decarbonisation.³⁵ Green Alliance said:

Without a specific carbon objective, it will be unclear to investors whether government will continue to issue a sufficient volume of CfDs for low carbon plant and force existing and future gas CCGT to operate as peaking plant or fit CCS, especially if the costs of low carbon generation are higher than anticipated.³⁶

35. Not everyone agreed that this was necessary and we heard that adding a carbon reduction target to the Bill would duplicate the existing targets in the Climate Change Act 2008.³⁷ However, the targets in the Act are not sector specific. Nick Molho (WWF) pointed out that the targets in the Act have not yet been sufficient to bring forward investment in the electricity sector so investors need more clarity about what is expected on a shorter timescale up to 2030.³⁸ David Kennedy (Committee on Climate Change) told us:

At the beginning of the Climate Change Act, we have, “This is about this is the long-term target”. I think in this piece of legislation you write, “This is about decarbonising the power sector to achieve legally binding carbon budgets”, and then you put a process in place to make sure that the governance arrangements following the legislation achieve the objective.³⁹

36. He also highlighted the importance of linking to the Carbon Budget process:

A fourth carbon budget, which we legislated for last summer, will be reviewed in 2014, and a fifth carbon budget covering the period 2028 to 2032 will be set in 2015. So we will have all the debates around cost and affordability as we go through legislating for the fifth carbon budget. To join those up, and to make sure that the Levy Control Framework is adaptable to what is agreed in the context of carbon budgets, rather than the other way round—that we miss carbon budgets because it doesn't have the support in the Levy Control Framework—is the right way forward.⁴⁰

37. It is right to prioritise the decarbonisation of the electricity system because this is likely to deliver the most cost effective route to meeting our 2050 climate change targets. Although statutory carbon reduction targets are set out in the Climate Change Act 2008, these are economy wide, rather than sector specific. We conclude that providing greater clarity about the contribution that the power sector is expected to make towards meeting these targets would help to provide certainty to investors. The Government should set a 2030 carbon intensity target for the electricity sector in secondary legislation based on the recommendation of the Committee on Climate Change.

35 Ev 127, Ev w26, Ev 137, Ev w37, Ev 161, Ev w71, Ev 172, Ev 187, Ev w163, Q 119 [Dr Kennedy], Q 231 [Mr Steedman and Mr Benton]

36 Ev 172

37 Q 124 [Prof Newbery], Q 232 [Ms Kelly]

38 Q 233

39 Q 122

40 Q125

38. We recommend that the Committee on Climate Change should be made a statutory consultee to the EMR delivery plan in order to assess whether the proposals are in line with legally binding carbon budgets.

39. We further recommend that the Committee on Climate Change should be given a role in advising whoever is the Transmission System Operator in the development of the delivery plan to ensure that it is in line with legally binding carbon budgets.

Improving clarity about minimising costs to consumers

40. While decarbonisation is a priority, it should not be delivered at any cost. Consumer Focus recommended amending Clause 1, subsection (1) of the draft Bill to introduce a focus on keeping costs down.⁴¹ The importance of minimising costs and protecting vulnerable consumers is also a high priority for the Committee and is addressed in paragraphs 117, 134, 136 and 172-175.

Improving clarity about energy security

41. Witnesses also recommended introducing a reliability standard in order to provide greater clarity about the security of supply objective. This point is addressed in more detail in Chapter 5.

Proposed amendments to the draft Bill

42. In this section we propose a number of amendments to the draft Bill to deliver the outcomes recommended in paragraphs 37, 38, 40 and 164. We do not have the benefit of Parliamentary Counsel advice on drafting but propose below what seems to be required. We request that the Government addresses the *spirit* of the amendments in its response and in the Bill it introduces in the autumn. We provide in Annex 2 a list of proposed amendments in conventional format for consideration during the Committee Stage of a Bill.⁴²

43. We recommend that Clause 1, subsection (1) of the Bill be amended to read “The Secretary of State may make regulations about contracts for difference for the purpose of encouraging low carbon electricity generation in order to achieve legally binding carbon budgets at least possible cost to consumers”.

44. We recommend that Clause 8, subsection (2) be amended to add “[...] (d) a 2030 target for carbon intensity of the electricity sector compatible with meeting statutory carbon budgets and the 2050 target (e) a reliability standard”. We believe that setting a decarbonisation target should be a duty on the Secretary of State. However, the current wording of Clause 8 (*the Secretary of State “may” by order provide for [...]*) suggests that the introduction of “other targets” would be at the Secretary of State’s discretion. Therefore we recommend that the Bill be amended to make this a statutory obligation within a fixed timeframe, possibly by way of further amendment to Clause 8. We note

41 Ev 123

42 Annex 2

that a carbon intensity of the order of around 50gCO₂/kWh by 2030 is compatible with legally binding carbon budgets.

45. We recommend that Clause 9, subsection (1) be amended to add “[...] (e) the Committee on Climate Change [...]” and that Clause 44, subsection (4) be amended to add “(d) the Committee on Climate Change”.

46. We recommend that Clause 20, subsection (1) of the Bill be amended to read “The Secretary of State may by regulations make provision for the purpose of providing capacity to meet the demands of consumers for the supply of electricity in Great Britain, while achieving legally binding carbon budgets at least possible cost to consumers”

47. We recommend that the long title should be amended to read “Make provision for contracts for difference and investment instruments in connection with encouraging low carbon electricity generation in order to achieve legally binding carbon budgets and provide security of supply at least cost to consumers [...]”. We recommend that the long title should be further amended to delete “contracts for difference” and insert “support mechanisms”.

Demand-side measures

48. The predominant approach to meeting electricity policy goals (presented in the draft Bill and associated documents) is to focus on the *supply side* – to ensure sufficient power stations are available to meet demand. However, the *demand-side* can also contribute. By reducing the total demand for electricity, for example through improved energy efficiency, fewer power stations and power lines would be needed. By encouraging demand to become more flexible and responsive, it would be easier to accommodate low-carbon electricity from a combination of intermittent and inflexible power stations, such as wind and nuclear generators.⁴³ Reducing demand, and facilitating the management and prioritisation of demand to ensure the lights stay on, would almost certainly provide a cheaper, easier and less polluting way to meet our electricity needs.

49. We note that virtually the sole mention of the possibility of the inclusion of demand side measures in the Energy Bill is contained in a paragraph in the preamble to the Bill, which states that the Department is “currently reviewing the potential for incentivising further demand reduction in the electricity sector. This work will report over the summer, in time to fit with legislative timetables, should it be required”.⁴⁴ DECC published a draft of this work the day before our scrutiny concluded, too late for us to be able to give it proper attention.⁴⁵

50. **The draft Bill and its associated documents are fundamentally flawed by the lack of consideration given to demand-side measures, which are potentially the cheapest methods of decarbonising our electricity system. Responsive demand features only to a limited extent in the proposed capacity market, a subject we discuss in Chapter 5.**

43 Parliamentary Office of Science and Technology, February 2011, POSTnote 372: Future Electricity Networks

44 Draft Energy Bill, CM 8362, May 2012, Introduction, p 21, para 35

45 DECC, *Draft Report: Capturing the full electricity efficiency potential of the UK*, July 2012

Reducing overall demand, meanwhile, is entirely absent from the Bill. Indeed, the Secretary of State admitted to us that “there is a lot of work we should be doing and are doing on that”.⁴⁶ We recommended, over a year ago, that “demand reduction should be placed at the heart of EMR”.⁴⁷ It is completely unsatisfactory that DECC’s work was not completed in time to be published alongside the draft Bill. This suggests that DECC is still failing to give enough priority to ensuring that demand-side measures contribute to our energy policy goals. We are concerned that adding last-minute measures to an already pre-determined structure of a Bill may severely limit what can be achieved on demand reduction and management through EMR.

51. We note that DECC’s draft report on capturing the full electricity efficiency potential of the UK identified approximately 155TWh of demand reduction potential in 2030 (which represents around 40% of total demand). Of this potential, current policy is estimated to capture only around 35%. We recommend that permanent end-use reduction in electricity demand should feature much more prominently in the Bill in order to realise some of the remaining 65% savings.

52. A systematic understanding of electricity demand and its interaction with wider energy policy will become increasingly important if, as the Government’s Carbon Plan suggests, electricity is used increasingly for heating and transport, and if demand increases by 29-60% between 2007-2050.⁴⁸ This vision of increasing demand is in stark contrast to some other countries. Germany, for example, aims to *reduce* electricity demand by 25% by 2050, while at the same time reducing greenhouse gas emissions by 80-95%.⁴⁹

53. A number of our witnesses emphasised the cost-effectiveness of reducing overall demand, although Professor Newbery did warn us of some “unsubstantiated claims that all demand-side is necessarily cost-effective”.⁵⁰ Analysis by Garrad Hassan for WWF showed that energy efficiency measures could reduce the required capital investment in renewables, gas power stations, CCS and interconnection infrastructure by up to £40bn by 2030.⁵¹

54. A number of witnesses called for a Feed In Tariff for energy efficiency, although Professor Newbery and the CBI thought the existing demand-side policies outside of EMR were sufficient.⁵² Dustin Benton of Green Alliance told us:

There is a refrigerator programme that has been running in the United States and it costs £33 per megawatt hour of electricity saved. The cheapest low-carbon form of power we can find right now is onshore wind at about £83 per megawatt hour. What we need the Bill to be able to do is procure that £33 megawatt hour of saved energy

46 Q 513

47 Energy and Climate Change Committee, Electricity Market Reform, summary

48 Ev w126, HM Government, The Carbon Plan: Delivering Our Low Carbon Future, December 2011

49 German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, The Energy Concept and its accelerated implementation, October 2011

50 Ev 137, Ev 172, Ev 187, Q 135 [Professor Newbery], Q 235 [Ms Kelly]

51 Ev 187, Ev 241

52 Q 96 [Professor Mitchell], Q 235 [Mr Benton], Ev w26, Ev 172

over the £83 megawatt hour of new low-carbon energy. That is what a Feed In Tariff mechanism would do.⁵³

55. We note that any feed in tariff for energy efficiency would require robust methods to establish baseline energy use and then verify the energy savings subsequently achieved. The RSPB recognised this issue but also said that similar mechanisms in the US have demonstrably reduced demand and prices.⁵⁴

56. DECC told us that the provisions of Chapter 1 of the draft Bill could not be used to introduce a FiT for energy efficiency, and that an amendment to the Bill would be required to enable this.

57. E3G called for the Bill to specify minimum volumes of demand reduction that the System Operator should procure, because current markets for energy efficiency are diffuse and immature, and hence a positive incentive is needed to develop those markets to become self-sustaining.⁵⁵

58. We note the publication of DECC's draft report on capturing the full electricity efficiency potential of the UK and recommend that measures to encourage permanent end-use reduction in electricity demand are included in the Bill. We recommend an amendment to the draft Bill to provide the Secretary of State with powers to introduce a Feed In Tariff for energy efficiency, if this cannot be achieved through existing legislation. The Bill should also include stronger measures to encourage flexible, responsive demand, as we discuss in more detail in later recommendations.

An "Obligation" to source renewable energy

59. The Renewables Obligation provides an incentive for energy suppliers to purchase renewable energy. This will be removed under the CfD arrangements. This could make it difficult for independent renewable generators to sell their electricity at reasonable prices (see Chapter 3).

The Bill is likely to result in increased vertical integration and reduced competition

60. The electricity market is currently dominated by six "vertically integrated" companies that are involved in both generating electricity and supplying customers. Independent generators account for around 30% of power production and independent suppliers just 1% of Britain's domestic retail market.⁵⁶ Both the Government and Ofgem have stated a desire to increase competition in the electricity market and Ofgem is currently working to improve the opportunities for new entrants through its Retail Market Review. The Secretary of State reaffirmed the Government's aspirations to us in his oral evidence:

53 Q 235 [Mr Benton]

54 Ev w26

55 Ev 127

56 Ev 193, "Ofgem sets out road map to open up electricity market for independent suppliers", Ofgem Press release, 22 February 2012

We want there to be many players. We want a competitive market. [...] I am going to say in quite a strong way we need to see the market working so that these players [smaller independents] can get involved.⁵⁷

61. Witnesses told us that the EMR proposals as they stand will in fact deliver the exact opposite of this ambition; they are likely to lead to greater levels of vertical integration and fewer independent players in the market. It will become a “big boys’ game” that will not work for “little people”.⁵⁸

62. For independent generators, the proposals have introduced serious concerns about “routes to market” that is, whether they will be able to get a Power Purchase Agreement (PPA) on good enough terms to be able to sell their power in the future. This is addressed in more detail in Chapter 3.

63. For independent suppliers, the proposed counterparty arrangements for Contracts for Difference (CfDs) are a major difficulty. Requirements to provide letters of credit or cash as collateral against CfD payments and the potential balance sheet implications of the multiparty model might make independent supply businesses untenable. This is addressed at greater length in Chapter 3.

64. The EMR provisions as they stand are likely to undermine Ofgem’s efforts to increase competition in the wholesale markets. We therefore recommend that the Government amend its current proposals to avoid the likelihood that they will lead to more- not less- vertical integration and consolidation in the market. (See Chapter 3).

Fewer opportunities for smaller-scale players and CHP

65. We heard that smaller- and community-scale projects in particular would be likely to be squeezed out by the proposals.⁵⁹ Again this outcome is in direct contradiction to the Government’s declared ambitions; the Coalition Agreement states that “we will encourage community-owned renewable energy schemes where local people benefit from the power produced”.⁶⁰

66. The problems for smaller-scale projects include:

- A lack of financial capability to deal with the complexities and uncertainties of CfDs, resulting in high transaction costs; and
- Difficulties in obtaining the full “reference price” for the electricity they generate, resulting in lower income per unit of energy generated.

67. The Secretary of State told us:

57 Q 510

58 Annex 1: Note from roundtable meeting

59 Ev w26, Ev 137, Ev w37, Ev w50 (Co-Operatives UK), Ev w66, Ev 172, Ev 198, Ev w137, Ev 217

60 HM Government, The Coalition: our programme for government, May 2010, p 17

Depending on the size, some of the smallest projects will get Feed-in Tariffs under the micro-generation regime, so the smaller community projects, I think below five megawatts, would not be in the Contract for Difference regime.⁶¹

68. However, Co-operatives UK pointed out that many community and co-operative energy projects are mid-size in generation capacity (up to 10MW) and so would not be eligible for the micro-generation FiT. They would therefore only be eligible for the CfD and would encounter all of the difficulties described above.⁶²

69. The Combined Heat and Power Association (CHPA) notes that combined heat and power (CHP) and district heating are omitted from the EMR proposals. It considers that EMR has focussed on three 'key' technologies that Government wishes to encourage (nuclear, offshore wind and CCS) even though these have limited prospects for deployment at scale within the next ten years. The CHPA suggests that the current small-scale Feed-in Tariff could support gas and renewables CHP if capacity limits were raised.⁶³ The Greater London Authority has also called for CHP low carbon electricity generating plants to receive more funding under the FiT scheme to reflect their production of heat as well as electricity and the cost of transporting that heat to its point of use. The GLA also calls for more support for smaller scaled decentralised renewable schemes.⁶⁴

70. The Coalition Agreement states that “We will encourage community-owned renewable energy schemes where local people benefit from the power produced”. However, the Renewable Obligation has not delivered community-owned schemes and the proposed CfDs are also unlikely to work for community schemes. A simple Fixed Feed-in Tariff would be a more appropriate form of support. We therefore recommend that this Bill provides for the Energy Act 2008 to be amended to allow for the eligibility threshold for small-scale FiTs to be extended to at least 10MW and potentially up to 50MW in size.

61 Q 512

62 Ev w50 (Co-Operatives UK)

63 Ev w101

64 Ev w137

3 Contracts for Difference

71. Three designs of feed in tariff (FiT) were initially considered by the Government as a replacement for the Renewables Obligation (RO):

- a Fixed-FiT (which would pay a fixed payment that generators receive *instead* of revenues from selling electricity in the market);
- a Premium FiT (PFiT) (which would pay a fixed premium on top of the variable wholesale electricity price); and
- a FiT with Contract for Difference (CfD) (which would provide a long term contract set at a fixed level where variable payments are made to ensure the generator receives the agreed tariff and where the generator would return money to consumers if electricity prices are higher than the agreed tariff).

72. The consultation published in December 2010 focused on the PFiT and CfD options and the White Paper put forward a CfD as the preferred choice. Clause 1 of the draft Bill enables the Secretary of State to make regulations about Contracts for Difference (CfDs).⁶⁵ However, not all witnesses were convinced that DECC had made the right decision. Professor Catherine Mitchell (along with many environmental NGOs) advocated scrapping CfDs in favour of a Fixed-FiT.⁶⁶ Climatechangematters claimed that a Fixed FiT “would provide certainty, simplicity and much better value for money”.⁶⁷ SSE preferred a PFiT, which, in its view, was “simple, understandable and bankable”. However, EDF warned that a PFiT could generate excessive profits for generators.⁶⁸

73. Nevertheless, there was a widespread view that CfD as a concept has attractions, most notably, the principle of revenue certainty provided by a long-term contract.⁶⁹ Nor is the concept “difficult”; energy companies are used to dealing with different regimes internationally, and CfDs are used in Denmark and were used in Britain’s previous electricity market Pool arrangements.⁷⁰

74. Yet the implementing arrangements proposed have become increasingly complex, arguably to the extent of being unworkable.⁷¹ Witnesses argued that the reforms could be made to work, and that there was considerable willingness to do this, more so than for ditching CfDs altogether (see also paragraph 16). But the proposals as they stand in the draft Bill:

65 DECC, Planning our electric future: a White Paper for secure, affordable and low-carbon electricity, CM 8099, July 2011p 37; DECC, Electricity market reform: policy overview, Annex B: Feed-in tariff with contracts for difference: draft operational framework, May 2012

66 Ev 137, Ev w34, Ev w130, Ev w165, Q 96 [Professor Mitchell], Q 237 [Mr Steedman]

67 Ev w165

68 Q 49 [Mr De Rivaz]

69 Ev w29, Ev 161, Ev w61, Ev 168, Ev w62, Ev w66, Ev w71, Ev w74, Ev 176, Ev 206, Ev w170, Ev w173, Ev 227, Q 7 [Ms Vaughan], Q 57 [Mr de Rivaz], Q 98 [Dr Kennedy]

70 Q 407 [Secretary of State], Q 24 [Mr de Rivaz]

71 Ev 232, Ev w79, Ev 178, Ev 211

- **Are not “bankable”** because a multiparty counterparty arrangement may be neither legally enforceable, nor creditworthy, and could require companies to post collateral and possibly be exposed to balance sheet fluctuations;
- **Introduce unacceptable levels of risk** because of the possible effect of ‘rationing’ under the Treasury’s levy cap and a future move towards auctions affecting access to contracts;
- **Could result in a more concentrated market** because independents and smaller-scale generators will be squeezed out and be unable to find routes to market;
- **Are overly complex**, because they are trying to cover too many disparate technologies.

Counterparty model

75. The Secretary of State helpfully clarified that there are three different models of counterparty referred to in the debate:

- a single counterparty with liabilities underwritten by government;
- a multiparty counterparty arrangement, comprising suppliers; and
- a single central counterparty organisation of new design, which is reliant on the payment flows between suppliers and their customers (and which is not underwritten by government).⁷²

The shift from a single counterparty underwritten by government to multiparty counterparty model

76. One of the most fundamental questions about the design of CfDs is where the liability for payments will ultimately sit. The 2010 EMR Consultation’s Impact Assessment and July 2011 White Paper’s EMR Impact Assessment both suggested that under the CfD, the risk would be borne by Government. For example, Table 4 of the White Paper Impact Assessment shows the price risk being borne by Government balance sheets under a CfD model.⁷³ The 2010 Assessment stated:

Fixed payments, premium payments and CFD provide a relatively high degree of policy certainty for investors as they would take the form of a **contract between Government and industry**.⁷⁴ (emphasis added)

The 2011 EMR White Paper impact assessment had this to say about the advantage of Contracts for Difference over Premium FiTs:

72 Q 433

73 DECC, Impact Assessment, Electricity Market Reform – options for ensuring electricity security of supply and promoting investment in low-carbon generation, 12 July 2011

74 DECC, Impact Assessment, Electricity Market Reform – options for ensuring electricity security of supply and promoting investment in low-carbon generation, 14 December 2010, p 66, para 69

A FiT CfD, insulates generators and consumers from both short-term volatility and the impacts of long-term price trends; higher- or lower-than expected gas prices have no effect on price received by the generator or bills paid by consumers. This means that consumers will be shielded from longer-term wholesale price increases, but also that they will not gain from longer-term wholesale price decreases. Changes in wholesale prices only affect the amount of support paid out by Government; hence the price risk is borne by Government balance sheets.⁷⁵

77. However, the draft Bill published in May 2012 proposed instead a “multiparty” payment model whereby liabilities would be borne collectively by all energy suppliers.⁷⁶ DECC claimed that in fact, it had never been the intention that Government would act as the counterparty, and told us:

When you look at the description in the White Paper, what we always envisaged would happen was the payments would always flow from suppliers through to generators to make the CfD whole. I don’t think anyone really thought we would be talking about tax money or Treasury money being used to pay out these contracts.⁷⁷

78. While no-one would have expected the Government to be *paying* these contracts, witnesses had understood that the Government would *underwrite* them.⁷⁸ In fact, we understand that DECC’s messaging to the investment community when the White Paper was published indicated that the Government would be underwriting the liabilities and we did not come across any witnesses who had not believed that this would be the case. John McElroy (RWE npower) outlined:⁷⁹

I would have to say clearly the original consultation and what was set out in that with regards to the Contract for Difference was quite important in the sense that the Government as the counterparty underwriting the contract in some way and the nature of the risks associated with these large low carbon projects, that we saw Government’s role in this as important in terms of reducing the cost of capital. Now that Government seems to be trying to push its involvement in these contracts away from itself, partly driven by Treasury constraints, partly driven by the State aid rules, inevitably that claimed cost of capital benefit is not there.⁸⁰

79. DECC’s claim to us that “in the [White Paper’s] Impact Assessment the drafting was a little bit unfortunate” therefore appears to be disingenuous to say the least.⁸¹ We find it impossible to believe that this “unfortunate drafting” does not in fact represent a policy shift. We suspect that this is the hand of HM Treasury at work, but its outright refusal to

75 DECC, Impact Assessment, Electricity Market Reform – options for ensuring electricity security of supply and promoting investment in low-carbon generation, 12 July 2011, para 100

76 DECC, Electricity market reform: policy overview, Annex B, Feed-in tariff with contracts for difference: draft operational framework, May 2012 p 68

77 Q 424

78 For example: Ev 117, Ev 123, Ev 130, Ev 137, Ev 151, Ev w37, Ev w71, Ev w74, Ev w98, Ev 187, Ev w112, Ev 198, Ev 198, Ev 217, Ev 221, Ev 227, Q 24, Q 25, Q 66, Q 156 [Mr Temperton], Q 193, Q 239

79 Q 66 [Mr McElroy]

80 Q 161

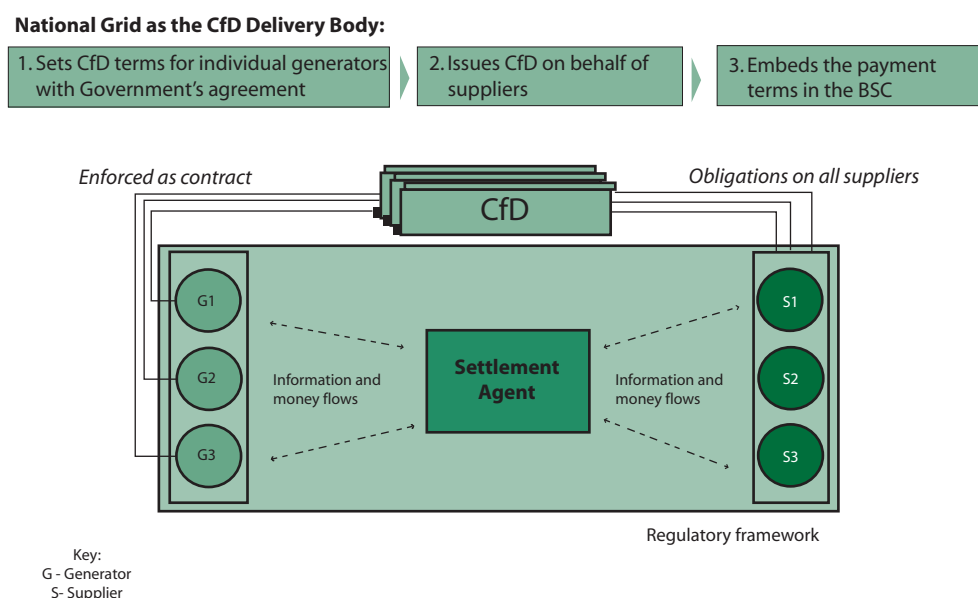
81 Q 419, Q 424

co-operate with our inquiry means we have not been able to explore the dynamic between HM Treasury's balance sheet concerns and its deficit reduction priorities and DECC's policy objectives.⁸²

DECC's current proposal (a multiparty counterparty)

80. The draft Bill published in May 2012 proposed a “multiparty payment model” whereby liabilities were borne collectively by all energy suppliers.⁸³ The CfD would be an instrument created by statute that set out obligations on the generator on one side, and on all licensed suppliers on the other side. The payment model would run in a similar way to the existing Balancing and Settlement Code with a settling agent such as Elexon to invoice generators and suppliers. Regular but variable payments would flow to and from generators and suppliers and in both directions.

Figure 1: The multiparty payment model



81. None of the evidence received for this inquiry suggested that the draft Bill's proposed “multiparty contract” (termed a “synthetic” or “virtual” counterparty by some) would work in practice.⁸⁴ Three major problems were identified with the proposal: that it might not be legally enforceable, that it might not be creditworthy, and that it would have a negative impact on suppliers' balance sheets.

82 Ev 111, Ev 115

83 DECC, Electricity market reform: policy overview, Annex B, Feed-in tariff with contracts for difference: draft operational framework, May 2012 p 68

84 Ev 130, Ev w61, Q 59 [Mr de Rivaz], Q 153 [Mr Kingsbury]

Is it legal?

82. The proposed structure has no clear legal precedent and witnesses argued that in the case of a contractual dispute, it was not clear with whom generators would engage to resolve the dispute.⁸⁵ Several witnesses had seen legal advice that a contract with a synthetic or virtual counterparty would be legally unenforceable and for this reason, the model was considered to be uninvestable.⁸⁶

Is it creditworthy?

83. Witnesses told us that it was difficult to assess how creditworthy a “synthetic” counterparty was.⁸⁷ The CBI said:

The current approach is different from what was anticipated at the beginning of the EMR process, when it was thought that Government would underpin the contracts, meaning the liability would ultimately sit with an entity with an AAA credit rating. Under the current model, where the liability would sit collectively with suppliers, it is not clear what the effect on the cost of capital would be.⁸⁸

84. The Minister has subsequently told us:

We understand some stakeholders have said that Government signing contracts would reduce credit risk, but given that payments ultimately flow from suppliers to generators, the credit risk in the scheme should reflect the robust financial health of the UK electricity market and form a solid base for investment.

The Government aims to provide investors with a system with a level of certainty equivalent to a contract with a counterparty that has a strong credit rating, not that Government would be the counterparty. Our intention was not for Government to be signing contracts but for a credit worthy investable system.⁸⁹

What are the implications for suppliers?

85. There is uncertainty about the accounting treatment of CfDs and in particular, whether they might be classed as “derivatives” (financial instruments that involve making defeasible payments under contract).⁹⁰ If this is the case, the long term liability for CfDs may need to be “marked to market”, that is, shown on suppliers’ profit and loss accounts. This, in turn, may have implications for credit ratings. DECC has not yet received a definitive view on this from the large accountancy firms.⁹¹ Some of the large, vertically integrated energy

85 Ev 117, Ev 130, Ev 161, Ev 168, Ev w74, Ev w98, Ev 178, Ev w112, Ev 198, Ev 198, Ev 206, Ev 211, Ev 227

86 Ev 130, Qs 58-59 [Mr Sambhi, Mr McElroy, Mr de Rivaz], Q 69 [Mr Sambhi]

87 Ev 137, Ev 151, Ev 198, Ev 206, Ev 211

88 Ev 206

89 Ev 116

90 DECC, Electricity market reform: policy overview, Annex B, Feed-in tariff with contracts for difference: draft operational framework, May 2012 p 80, para 36-37

Contracts which involve uncertain outcomes might be classed as derivatives.

91 Ev 130; DECC, Electricity market reform: policy overview, Annex B, Feed-in tariff with contracts for difference: draft operational framework, May 2012 p 80

companies expressed concerns about this introducing volatility into their balance sheets that might make their investors nervous.⁹² However, E-ON had received limited reassurance on that point:

The derivative point is a real worry and I would share the concerns already expressed on that. It is important that the contract, whatever it is, is not viewed as a derivative. We have had some good news on that in that if it is attached to a particular asset then it is less likely that it will be viewed as such.⁹³

86. A further concern for suppliers was the potential requirement to post collateral. Small suppliers in particular were worried about this point and argued that it would not be feasible for small organisations to do this. Good Energy told us:

It is quite evident that there are concerns about having a large volume of cash linked to a day-ahead price going to your balance sheet. As a small supplier, that has impact in terms of credit and you also have to consider the collateral requirements ... It is one of those areas that we think needs a lot more investigation. The most recent impact assessment that we have seen, and I think it is publicly available, is from July 2011, and there is no mention of small suppliers in there.⁹⁴

87. Ecotricity said that the risk to small suppliers was “massive” in terms of the collateral required, given that even the large energy companies had concerns about effects on their credit ratings. They called for a 250,000 customer threshold if these proposals were taken forward, to prevent barriers to entry to the market.⁹⁵ This would be similar in effect to proposals already implemented by DECC to exempt suppliers with under 250,000 customers from liability for levies. Independent suppliers agreed that DECC’s proposals to look at shorter arrears periods would lessen but not remove the burden.⁹⁶ Ofgem shares concerns about the potential impact of increased credit and collateral requirements on small suppliers and the risks to new entry, despite DECC’s reassurances in the “Policy Overview”.⁹⁷ **We consider that suggestions that small suppliers might be exempted partially or wholly from obligations to post collateral have merit and recommend that the Government takes steps to ensure that small suppliers are not disadvantaged.**

Other concerns

88. In addition to these three problems, SSE identified a further difficulty with the multiparty contract model, relating to the potential for miscalculation of subsidy collection. It said:

Suppliers will have to collect money in advance from consumers to pay these contracts. Suppliers may get this wrong and over or under collect, with huge

92 Q 24 [Mr Marchant and Mr Anderson]

93 Ev 168 and Q 24 [Ms Vaughan]

94 Q 202 [Mr Gill]

95 Q 190 [Mr Rehmanwala]

96 Q 227 [Mr Rehmanwala, Mr Gill and Mr Smith]

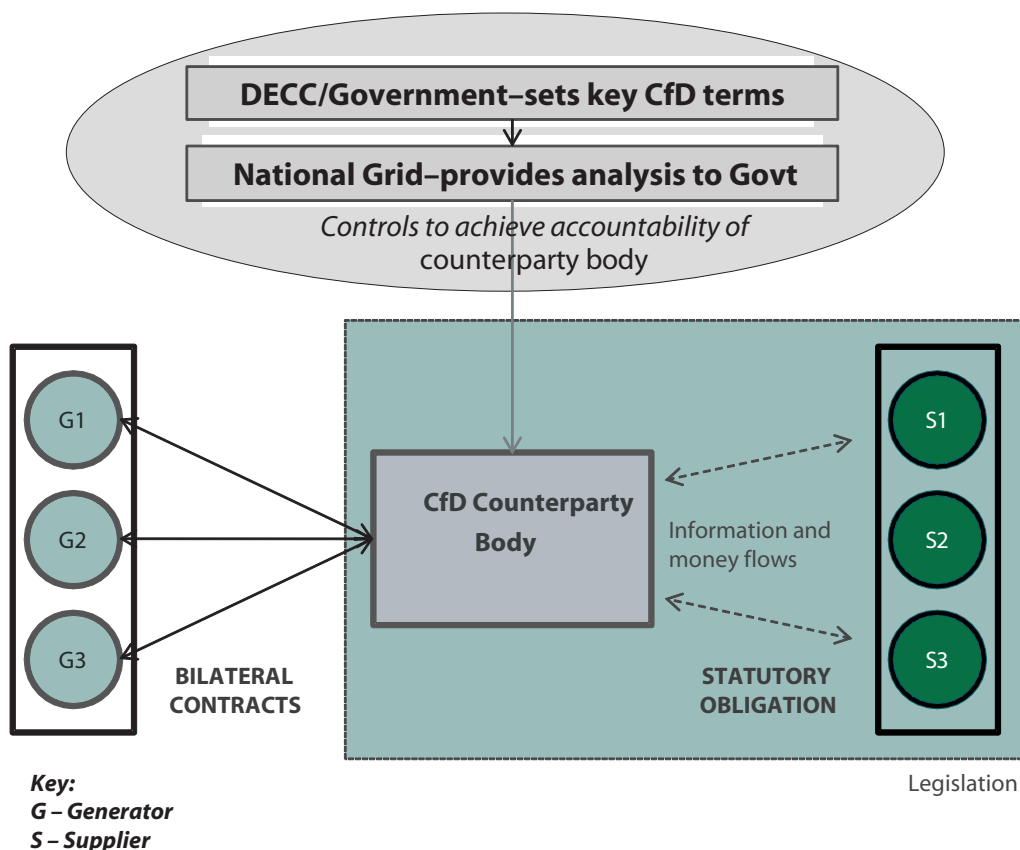
97 Ev w115

financial implications for them and consumers. This is a large threat for all suppliers and a huge additional barrier to new retail market entrants.⁹⁸

The third way: a single counterparty without Government underwriting

89. The evidence suggests very strongly to us that the multiparty proposal is not workable.⁹⁹ Centrica and EDF supported an alternative simpler bilateral model with a creditworthy counterparty.¹⁰⁰ A recent document from DECC confirms that an “Alternative Model” with a central counterparty is now under discussion.¹⁰¹ There would be a newly created central body that would sign bilateral contracts with generators. It could be Government or privately-owned. It would collect payments from suppliers, and the obligation on suppliers would require them to post collateral to cover any liabilities in a given period. Crucially, however, the single counterparty *would not be underwritten by Government*. Key issues under consideration include the impact of the obligation on suppliers, administratively and financially.¹⁰²

Figure 2: The Alternative (central, single) Counterparty Model



98 Ev 151

99 Ev 130, Qs 58-59 [Mr Sambhi, Mr McElroy, Mr de Rivaz], Q 69 [Mr Sambhi]

100 Q 59 [Mr Sambhi, Mr de Rivaz]

101 DECC, Electricity Market Reform (EMR): Alternative Payment Model for Contracts for Difference, (undated)

102 *ibid*

90. It seems to us that the main difference between these two models is that in one the counterparty body signs contracts with generators, so addressing the legal signatory issues. It certainly does not change the underwriting issue.

91. National Grid felt that the current debate was between a multi-party counterparty and “a thin-balance-sheet sole counterparty, effectively, which would be set up in some convenient way”, akin to the settlement role established in 1989 for Elexon.¹⁰³ It is “doing work with DECC to understand how you might structure such an organisation” including checking that no unexpected issues might arise.¹⁰⁴

92. The Secretary of State told us that the model put forward by many in the industry for a single-party counterparty model *without Government underwriting* was unproblematic.¹⁰⁵

93. While many witnesses were aware that an “alternative model” was under consideration, the novelty of this proposal meant that considered input to our inquiry about its merits and drawbacks was limited. We also suspect that some stakeholders have mistakenly interpreted the new single counterparty model to be one that is *underwritten by Government*.

94. We recommend that the Government abandons the multiparty concept and reverts to a single counterparty payment model, with a contract and counterparty design that is legally enforceable.

95. The main purpose of the reforms was to reduce the cost of capital for investors. The nature of the counterparty will affect the cost of capital (see paragraph 97). In our view, a counterparty model that is underwritten by Government would be the best way to instil investor confidence and reduce financing costs.

96. DECC must fully assess the implications of a single counterparty without government underwriting on suppliers’ balance sheets and on the cost of capital before adoption of this model. This should include an assessment of what impact this model would have on smaller suppliers to ensure that this counterparty model would not threaten the viability of these businesses.

The need for a more rigorous Impact Assessment

97. The Impact Assessment published alongside the White Paper in 2011 concluded that financing costs under a CfD would be £2.5 billion lower than under a Premium Feed-in Tariff. Numerous witnesses told us that this calculation was no longer valid, since it was based on the assumption that the Government would be the counterparty, whereas the draft Bill now suggests the “multiparty contract” model. The Combined Heat and Power Association explained why this was relevant: “the Government, as counterparty would have had a top AAA credit rating, but a different counterparty may not have such a high

103 Q 263

104 Q 269 [Mr Ripley]

105 Q 427

rating. A lower than AAA rating would increase credit risk for investors and, therefore, the cost of capital”.¹⁰⁶

98. However, DECC told us that in fact, the Impact Assessment was based on the impact of removing the volatility in the revenue streams, and did not take account of the nature of the counterparty. The Secretary of State said that the “numbers from the impact assessment would not have been different” under a Government-underwritten or a multiparty contract model.¹⁰⁷ The Minister subsequently told us:

The Impact Assessment would not [...] need re-working, in order to analyse an alternative payment model, because the choice of counterparty doesn’t impact on its underpinning assumptions – which for the counterparty would be the same in either scenario. However, we will of course produce an updated Impact Assessment when we introduce the Bill.¹⁰⁸

99. We believe that the nature of the counterparty will have an impact on the cost of capital. DECC’s claim that the nature of the counterparty would not affect the outcome of the Impact Assessment (IA) merely reflects the lack of sophistication in the original assessment, rather than the likely real-world impact on the cost of capital.

100. The Low Carbon Finance Group has questioned the broader assumptions underpinning the Impact Assessment and has suggested that the results reflect a “theoretical approach to capital pricing, not how banks and investors allocate capital to, or price capital, for various investment opportunities”.¹⁰⁹

101. Investors also highlighted wider concerns about the direct impact of political and policy uncertainty on market perceptions of risk (for example, the changes to the counterparty arrangements and the interaction between the levy control framework and the CfD). The draft Bill and associated documents fail to properly assess the cumulative impact of policy changes and pronouncements on cost of capital. We return to this in paragraphs 229 – 231.

102. DECC must update its methodology as well as the figures when revising the Impact Assessment (IA). The model needs to reflect real world approaches to capital pricing and should incorporate the impact of new risks on the cost of capital (including counterparty risk, development risk, risks to credit ratings and basis risk). The IA should specifically address the issue of how Government-underwriting (or lack thereof) of the CfD counterparty affects investor risks and costs.

106 Ev w101

107 Q 431

108 Ev 116

109 Ev 211

Allocation of CfDs: the Levy Control Framework and use of auctions

Impact of HM Treasury's Levy Control Framework

103. CfDs will fall under a cap, introduced in the 2010 Spending Review, on DECC levy-funded spending. Deficit neutral DECC policies that are classified by the Office of National Statistics as tax and spend are included in the cap. HM Treasury's Levy Control Framework (LCF) already sets spending limits to 2014/15 for the RO, Feed in Tariffs, and the Warm Home Discount.¹¹⁰ The Framework says that if forecast or out-turn spend for any policy varies beyond a 20% "headroom" of the cap, DECC must urgently develop plans for bringing them back into line - or the Treasury may seek a financial contribution.¹¹¹

104. The draft Bill states "The Government is minded to instruct the System Operator to only issue CfDs for low-carbon generation up to the value of the amount set out in the Levy Control Framework. The same principle will also apply when the Secretary of State is issuing any investment instruments in relation to projects that require final investment decisions in advance of EMR implementation, and when issuing any CfDs after the CfD regulations come into force".¹¹²

105. Clause 8 of the draft Bill provides for the Secretary of State, by Order subject to parliamentary approval, to set out the maximum cost for the scheme by setting a financial cap on the scope of the national system operator to issue CfDs. It also provides for a power to direct the system operator "not to issue CFDs if the Secretary of State determines that doing so would exceed the cost cap".¹¹³

106. Witnesses argued that rationing CfDs to fit within a levy cap would introduce a new risk to developers, who could not be sure that they would be able to secure a CfD for an otherwise fully consented project.¹¹⁴ The Low Carbon Finance Group told us that certainty over the allocation process would be central to the ability of developers to bring forward a project for financing and that "at present this is one of the weakest parts of the package".¹¹⁵ Keith Anderson (Scottish Power) said:

The concern for us would be that once we start investing [...] on a large offshore project where I am likely to have put at risk £100 million to £150 million to get it there and then I get to FID [Final Investment Decision] and I do not know if I am going to get a contract or not, that is an unacceptable risk. So there needs to be enough transparency of how that levy control works and where we are against it all the way through that investment process and we would want enough flexibility in the way it is moved to say, "By the time we get to FID bring forward your project and

110 DECC, Control Framework for DECC levy-funded spending: questions and Answers, 8 December 2011

111 HM Treasury, Control Framework for DECC Levy-Funded Spending, March 2011

112 DECC, Electricity market reform: policy overview, Annex B, Feed-in tariff with contracts for difference: draft operational framework, May 2012pp 25-26, para 28.

113 Ev w179, para 33

114 Ev 130, Ev w37, Ev w74, Ev w89, Ev 227, Q 29 [Mr Anderson], Q 80 [Mr Sambhi and Mr McElroy], Q 161 [Dr Edge], Q 203 [Prof Newbery]

115 Ev 211

look for the contract”, you are not going to get told, “Wait 18 months because there is no money left”. That would be absolutely unacceptable.¹¹⁶

107. Shaun Kingsbury (Low Carbon Finance Group) noted that there were also risks with offering contracts too early in the development process and suggested that a balance between the two extremes needed to be found:

If you say up-front to anyone with even an idea of a wind farm, “Please apply for a CfD”, you may get 20 or 30 GW of applications. This is what happened, for example, in Turkey. If you wait until the very end, then people will not invest the capital to get there because of the risk.¹¹⁷

108. Witnesses suggested that one way of dealing with this problem would be to introduce a pre-registration process that could provide greater security that a contract will be awarded earlier in the project development process.¹¹⁸ Gaynor Hartnell (Renewable Energy Association) said:

What we think is important is that a project developer can essentially reserve a CfD at the point of winning planning permission; for example, they might have an option to take it up for, say, 18 months or a couple of years, by which time they take that project to the point of the making the final investment decision. Then the contract kicks in, and then they have a certain period of time in which to build it. It seems to us essential that that happens to de-risk the process. Obviously you can’t hold on to that allocation of a CfD or future allocation indefinitely, because you would have funding sterilised by, say, a project that was not going to reach fruition, so that is why we are suggesting, say, 18 months or two years to take it to the financial investment decision.¹¹⁹

109. Rationing the number of CfDs under the levy cap increases development risk. We recommend that DECC introduces a two-step or pre-registration process to give developers greater confidence that they will be able to obtain a CfD before reaching Final Investment Decision.

110. Two further problems with the levy cap were identified: first, the fact that early projects brought through under investment instruments (Chapter 4) might use up the pot of CfDs before other projects were able to apply. Second, that large scale projects like nuclear and offshore wind are “chunky” investments and may use up an annual allocation in one go, leaving other projects that year without CfDs.¹²⁰

116 Q 29

117 Q 262

118 Ev w89, Ev w98, Ev 198, Ev 211

119 Q 160

120 Q 20 [Ms Vaughan], Q 80 [Mr McElroy]

111. Suggested options for dealing with these included improving flexibility between each year's allocation of CfDs, a longer term (multi-year) approach, and specifying in advance how many CfDs will be available for each type of technology each year.¹²¹

112. A recent letter to us from the Minister of State has outlined further how the Levy Control Framework (LCF) will operate. It says that the agent allocating contracts will, in principle, have limited discretion over who should be allocated contracts and that precise allocation arrangements will depend on the "affordability within the LCF", with legal obligations being fully taken into account.¹²² Continuing RO payments and possibly other levies such as ECO will come within the Levy Control Framework. **The Government should clarify what will be defined as falling within the Levy Control Framework at an early date.**

113. **It is essential that the Government makes clear how choices will be made by the agent allocating contracts, in particular in allocation between technologies. We recommend that reporting against the delivery plan should include details of commitments already entered into at FIDs or during FID-enabling discussions, and is transparent to other players in order to assist long term planning.**

114. Dr Kennedy (Committee on Climate Change) told us:

We know what that [the Levy Control Framework] is out to 2015, but it is important to understand what that is going out beyond 2015 to 2020. We need to see a high-level number that is commensurate with the required power sector decarbonisation in 2020 sooner rather than later, and we need to see some flexibility in that number, given the huge range of uncertainties around the kind of support that might be required.¹²³

115. The Committee on Climate Change has recently recommended that a funding envelope of around £8 billion in 2020 should be agreed now, with flexibility of +/-20-25% depending on gas prices and low carbon technology costs.¹²⁴ **We recommend that in order to provide greater confidence to developers, Government should set out**

- a) **the level of the funding that will be available under the Levy Control Framework until 2020**
- b) **whether the present rules on headroom will remain as they are or will be amended to provide more flexibility for levy allocation over the next spending period; and**
- c) **whether the present mechanism of capping expenditure annually and longitudinally by line will be maintained or relaxed during the next spending period.**

We note the Committee on Climate Change's suggestion that funding available under the Levy Control Framework until 2020 should be around £8 billion in 2020.

121 Ev 232, Ev 198, Ev 167, Ev w74, Ev w89, Q 17 [Mr Anderson], Q 109 [Dr Kennedy], Q 163 [Ms Hartnell], Q 194 [Mr Taylor]

122 Ev 116

123 Q 109

124 Committee on Climate Change, Meeting Carbon Budgets – 2012 Progress Report to Parliament, June 2012

Use of auctions

116. DECC's current proposals envisage moving to competitive CfD allocation processes, such as tenders or auctions, as early as 2017 for some technologies.¹²⁵ Many witnesses thought that this date was too early.¹²⁶ Some witnesses were opposed to the use of auctions at all, suggesting that it would introduce a similar type of development risk to the levy cap, and thus increase the cost of finance.¹²⁷ RenewableUK said:

Introducing auctions discourages investment because there is less certainty to investors that their projects will receive a contract, and at what price. This will discourage investment in development and slow down the rate at which renewable projects come forward.¹²⁸

117. An additional problem with auctions is that they do not *guarantee* a cheaper outcome for consumers. **Auctions may be useful but they are not the only means to secure cost reduction. We recommend that DECC should learn from experiences overseas and consider setting out a planned reduction pathway for strike prices. This would guarantee a reduction in the level of subsidy paid by consumers over time.**¹²⁹

Ensuring routes to market

118. The third major problem identified with the current CfD proposals is whether independent generators would still be able to sell their electricity under the new arrangements. Low levels of liquidity in the market mean that it is difficult for smaller and independent generators to sell directly into the market (for example via the power exchanges). Instead, smaller generators often sign long-term contracts called Power Purchase Agreements (PPAs), usually with large vertically integrated energy suppliers. Through these, independents sell power at a discount to market rates; they receive less for their energy because they are reducing their risk through having longer term contracts. PPAs are important for smaller generators who do not have a large in-house trading capacity, and for intermittent generators who cannot produce electricity on demand in the same way as a traditional generator.¹³⁰ Vertically integrated businesses, in contrast, are not reliant on PPAs because they are able to hedge risks between the generation and supply parts of their business.

125 Draft Energy Bill, CM 8362, May 2012, Introduction, p 28, para 56

126 Ev w89, Ev w115, Ev 211

127 Ev 130, Ev w58, Ev w86, Ev w130, Ev 221, Q 120 [Mr Skillings]

128 Ev 130

129 German experience with degression, both planned and in response to price reductions is discussed in:

DBCCA (2011) The German Feed-in Tariff for PV: Managing Volume Success with Price Response, Deutsche Bank Climate Change Advisors [Online] Deutsche Bank Group, Frankfurt, Germany. May 23, 2011 and DBCCA. (2009) Paying for Renewable Energy: TLC at the right price. Deutsche Bank Climate Change Advisors [Online] Deutsche Bank Group, Frankfurt, Germany.

Investor preferences for stable regimes, which avoid the perception that policies are over-rewarding unproductive technologies is discussed here.

Gross, R., Heptonstall, P. & Blyth, W. (2007) Investment in electricity generation the role of costs, incentives and risks, UK Energy Research Centre, London, UK

130 DECC, Electricity market reform: policy overview, Annex B, Feed-in tariff with contracts for difference: draft operational framework, May 2012 pp 82-83

119. The Renewables Obligation (RO) provided an incentive for larger suppliers to enter into PPAs, but the CfD proposals do not. In the absence of an obligation, PPAs might only be available at a steep discount – leading to a concern that the price received under any future PPAs will be significantly below market price.¹³¹ In CfD terms, this means independent generators would not be able to achieve the “reference” price, leaving them with lower returns than the bigger players. Gordon MacDougall of Renewable Energy Systems told us:¹³²

One thing in terms of maintaining the RO, which seems to be lost, is that the RO was more than just a certificate system. It was a physical obligation on the suppliers to source the right kind of energy and that has been lost in all of this. I think that is a much more significant departure than many people seem to recognise because one of the big problems with a CfD is there is not sufficient liquidity in the market for independent generators to trade and, as such, they require a PPA. Without the obligation on the supply companies, there is no incentive for them whatsoever to offer sensible PPAs to make these projects bankable.

120. The absence of “bankable” PPAs could mean that independents will struggle to raise finance for new projects. Ian Temperton (Climate Change Capital) told us that “people wanting third-party finance will need Power Purchase Agreements. They will need to give their financiers a surety that their product is going to get into the market”.¹³³

121. Annex B of the EMR policy overview states that Government “believes suppliers and independent aggregators will continue to offer PPAs as there will be commercial opportunities for doing so”.¹³⁴ Witnesses were sceptical about this idea, suggesting that historical precedents were not promising.¹³⁵ For example, the NETA trading arrangements that were introduced in the 2001 were expected to encourage aggregators, but in practice delivered vertical integration.¹³⁶ The Renewable Energy Association told us “they [aggregators] will only enter the market if there is some margin that they can earn. There is none”.¹³⁷ RES argued that the existence or not of aggregators was “wholly missing the point” because “the question is not whether or not PPAs will be offered, but it is whether the PPAs will be viable or not”.¹³⁸

122. RES warned that failure to resolve this issue could lead to the pipeline of new renewable energy projects drying up. It said:

If there is not an effective route-to-market available by mid 2015, the market for independent renewable generators will come to a halt, with independents being

131 Q 213 [Mr MacDougall]

132 Q 190 [Mr MacDougall]

133 Q 181

134 DECC, Electricity market reform: policy overview, Annex B, Feed-in tariff with contracts for difference: draft operational framework, May 2012p 83, para 7

135 Ev w161

136 Q 279 [Dr Edge]

137 Ev 198

138 Ev 117

unable to progress projects under either the old RO structure or the new CfD Structure.¹³⁹

123. DECC has belatedly acknowledged that access to the market is a serious problem and on 5 July 2012, it launched a call for evidence “to help independent renewable generators access the electricity market”.¹⁴⁰ This is yet another example of the policy and practical arrangements underpinning EMR still being in the process of formation.

124. Access to market for independent generators under the CfD arrangements is an extremely serious issue that must be resolved before a Bill can be introduced. We recommend that DECC expedites its review of evidence on access to the electricity market for renewable generators to ensure that a solution to this issue is identified before the Bill is introduced to Parliament in the “autumn”.

125. One possible answer is to improve the liquidity in the market. Ofgem has work underway in this area and is currently consulting on proposals to require vertically integrated companies to sell 25% of their generation output in the forward market.¹⁴¹ However, we heard concerns that Ofgem’s current work would not deliver sufficient liquidity and that it would probably not include enough mandatory measures.¹⁴² Ofgem’s evidence did not address the wider market liquidity issues.¹⁴³

126. Three other potential solutions were put forward:

- A “buyer of last resort” mechanism could be introduced.¹⁴⁴ The impact of this would be equivalent to a fixed FiT and capacity using this route would not be responding to market signals (because generators would be guaranteed a buyer, even when the market price was low and indicating that their generation was outweighing consumer demand). It would therefore go against the overall principle of maintaining a competitive market.¹⁴⁵
- Introduce an obligation (or some other incentive) on suppliers to source energy from low carbon generation. For example, by making a proportion of the costs of CfDs proportional to the amount of low carbon energy they secure.¹⁴⁶
- Delay the closure of the RO to new entrants.¹⁴⁷

127. In paragraph 70 we recommended that the FiT for small-scale generation should be increased to include projects at least 10MW in size. This would eliminate the route to

139 Ev 117

140 DECC, A call for evidence on barriers to securing long-term contracts for independent renewable generation investment, 5 July 2012

141 “Ofgem sets out road map to open up electricity market for independent suppliers”, Ofgem press release, 22 February 2012

142 Q 211 [Mr Smith and Mr Taylor], Q 212 [Mr MacDougall]

143 Ev w115

144 Ev 117, Ev 130, Ev 172, Ev 198, Q 187 [Dr Edge] Q 210 [Mr MacDougall and Mr Gill]

145 Ev 198

146 Ev 117, Ev 198

147 Ev 198

market problem for all projects in this category. In paragraph 211 we make recommendations about the timetable for closing the RO.

128. We recommend that as part of its review of access to market for independent generators, DECC should examine the following options: introducing a buyer of last resort; introducing an incentive for suppliers to source energy from low-carbon generation; extending the micro-gen FiT to projects up to 50MW in size; and holding open the RO for new entrants in the event that the PPA market disappears.

Other issues

Length of contracts

129. Clause 4 of the draft Bill allows the terms of a CfD to include its duration. DECC's draft operational framework for CfDs proposes that this will be 15 years for renewable technologies and 10 years (with the possibility of varying this) for CCS projects under the commercialisation programme. The Government has not yet formed a view on how long nuclear CfDs will last for, but says it would expect no less than 15 years.¹⁴⁸ Renewables and CCS organisations argue that the length of CfDs for their technologies should be linked to project lifetime and therefore longer than the 15 or 10 years proposed.¹⁴⁹

Setting the strike price

130. Clause 5 of the draft Bill allows for the setting of strike prices either administratively, competitively or through a combination of the two methods. Initially, strike prices will be set administratively for each technology, before moving to the use of auctions. The negotiation processes will be different for different types of low-carbon energy:

- **Renewables:** the process will be similar to the most recent RO Banding Review. The System Operator (National Grid) will conduct an analysis of costs and deployment potentials, which will feed in to a cost benefit analysis of different strike prices on security, carbon and cost objectives. Based on this analysis, a report from a panel of experts, and—possibly—the advice of the Committee on Climate Change, the Secretary of State will make a decision on the strike prices. However the experience of the latest RO review, when for example the decision about the support for onshore wind was widely rumoured to be the subject of disagreement between DECC and the Treasury, does not inspire confidence among potential investors that the process will be determined exclusively by an objective analysis of the available evidence.
- **CCS:** for early stage CCS projects (including those supported under the CCS Commercialisation Programme), there will be a negotiation between developers and DECC. It will be possible to set different strike prices for different projects in order to take account of the wide variety of technologies and location-specific costs.

¹⁴⁸ DECC, Electricity market reform: policy overview, Annex B, Feed-in tariff with contracts for difference: draft operational framework, May 2012, pp 55-57

¹⁴⁹ Ev 130, Ev w31, Ev w52, Ev 198, Ev w161

- **Nuclear:** the level of the strike price will be determined through an administrative price setting process, which will involve “negotiation with developers on a project by project basis”.¹⁵⁰

The strike price for nuclear

131. Witnesses raised concerns about transparency in setting the nuclear strike price in bilateral negotiation, with little opportunity to move to auctions or competitive price setting.¹⁵¹ Although Vincent de Rivaz (EDF) told us that “the strike price will not be defined in a cosy way through hidden decisions” and that the result would be “absolutely open and transparent”,¹⁵² Richard Hall (Consumer Focus) was not convinced:

In a bilateral negotiation where there is only one player in the room and that player can say, “Take it or leave it; these are our terms”, I have very little confidence that that is an efficient way of deriving a price.¹⁵³

132. Which? recommended that further detail was needed in the Bill about how contract negotiations will be made transparent, how arrangements will be scrutinised and how the Government and System Operator will be held accountable.¹⁵⁴

133. The Government is proposing that an “expert panel” will be appointed to scrutinise the System Operator’s assessment of costs and deployment potentials for renewables. We asked the Secretary of State whether an expert panel might also scrutinise the negotiation of the nuclear strike price. He told us: “We do not currently believe they should have a role”.¹⁵⁵

134. We are concerned that the proposed process for setting the nuclear strike price lacks sufficient transparency. The perception that decisions are being made “behind closed doors” could be highly damaging to the low-carbon agenda and may further undermine consumer trust in energy companies. It is essential that the negotiations deliver, and are perceived to deliver, value for money to consumers. We recommend that an independent panel of experts should be appointed to oversee the negotiations and to report to Parliament on the adequacy of the outcome and value for money for consumers.

The likely cost of nuclear

135. Witnesses from environmental NGOs, argued that the strike price for nuclear was likely to be higher than that for renewables, perhaps as much as £160/MWh.¹⁵⁶ We note that a Times report of the 16th July 2012 indicated that the asking strike price for new nuclear

150 DECC, Electricity market reform: policy overview, Annex B, Feed-in tariff with contracts for difference: draft operational framework, May 2012 pp 11-17

151 Q 189

152 Q 144

153 Q 248

154 Ev w54

155 Q 543

156 Ev 137, Ev w37, Ev w130

would be £165/MWh. Vincent de Rivaz (EDF) however said “we are confident that the strike price agreed will reveal the competitiveness of nuclear new build compared to other forms of low carbon generation”.¹⁵⁷

136. Since there is little competitive pressure or prospect of moving to auctions for new nuclear, we are concerned that the strike price for nuclear could be driven upwards. We hope that industry claims that the cost of nuclear is competitive with other forms of low-carbon energy will be reflected in the offers they put forward during strike price negotiations. We do not believe that a nuclear strike price higher than that given to offshore wind would represent good value for money to the consumer. The Secretary of State should not agree to contracts of this nature.

Longer-term price visibility

137. To provide developers and investors with the visibility to make investment decisions, the draft operational framework for CfDs proposes that five years of strike prices for renewables will be published in the delivery plan in late 2013 with indicative prices in the draft delivery plan, published in mid 2013.¹⁵⁸

138. Aquamarine Power (a company involved in developing wave power devices) told us that they needed more certainty about what the strike price would be on a longer timescale. It said:

It is the strike price for marine energy *after* 2017 which is critical for the growth of the marine energy industry. We remain concerned that early-stage investors will find it hard to make an investment case for early arrays without clear sight of the market towards 2020 and beyond.¹⁵⁹

139. Government should provide clarity on the strike price level beyond 2017 as soon as possible in order to provide certainty and help secure investment for emerging technologies, such as wave and tidal power.

State aid and a “one-size fits all” package

140. EU state aid rules seek to ensure that Member States do not unjustifiably distort the single market through financial or other interventions. Any new scheme under EMR will have to be submitted to the European Commission and many aspects of the EMR proposals will need clearance.¹⁶⁰ If a scheme or technology falls under previous case law or block exemptions however, then the clearance process may be completed quickly. Article 23 of the General Block Exemption Regulation provides (subject to conditions, such as the

¹⁵⁷ Letter from Mr de Rivaz to Tim Yeo MP, 5 July 2012, available at: www.parliament.uk/eccpublications; Ev 165

¹⁵⁸ DECC, Electricity market reform: policy overview, Annex B, Feed-in tariff with contracts for difference: draft operational framework, May 2012 p 12

¹⁵⁹ Ev w58

¹⁶⁰ Q 488 [Mr Virley], Q 493

amount of aid provided) that environmental investment aid for the promotion of energy from renewable energy sources is compatible with the single market.¹⁶¹

141. SSE considered that the clearance process for CfDs might be lengthened through them covering both renewables and nuclear, to which Article 23 does not apply.¹⁶² There are also questions about the nature of the counterparty and whether this could fall foul of state aid rules; if the Secretary of State or a government owned body were the counterparty, the funds could be perceived as belonging, albeit temporarily, to the state and being directed by it. This might increase the likelihood of a scheme being viewed as state aid.

142. DECC accepts that “the eventual assessment [of whether CfDs amount to state aid] may depend on the detail of policy design”. If EMR is classified as state aid, DECC considers that this should still be approvable under the Treaty because:¹⁶³

The EMR is designed to secure new investment in low carbon generation, while maintaining energy security and diversity. EMR will minimise costs to the consumer, and the specific instruments under EMR are designed to minimise distortions of competition. So long as the balance of assessment is positive, any aid should be compatible with the Treaty.

143. The Secretary of State told us that “We think we will find favour” with the EU, because the EMR proposals share EU objectives.¹⁶⁴ Nuclear wrapped up within an EMR package *may* therefore pass an approval process, whereas if presented outside the package, it likely would not. It is possible that the Commission will take a view on different technologies, but DECC told us that they did “not see the fact that we are notifying for nuclear necessarily holding up any decision on renewables”.¹⁶⁵

144. Witnesses shared the widespread perception that EMR, and specifically CfDs, are a fig leaf over support for new nuclear.¹⁶⁶ The Green Alliance thought that the state aid issue was probably why the “obvious” and “simple” decision, to have the government as counterparty, had not been taken.¹⁶⁷ The REA believed that the state aid question had been driven by nuclear, and it was a “great pity” that renewables had been tied up in that policy.¹⁶⁸

145. We conclude that state aid as well as political considerations have influenced the design of the CfD package, and have caused policy and financial support for nuclear to be rolled up with that for renewables. Logic suggests that the Government should differentiate nuclear from other low-carbon technologies within an overall FiT regime.

¹⁶¹ Commission Regulation EC 800/2008; renewables defined as “renewable non-fossil energy sources: wind, solar, geothermal, wave, tidal, hydropower installations, biomass, landfill gas, sewage treatment plant gas and biogases”, i.e. not including nuclear.

¹⁶² Ev 232

¹⁶³ Ev 109

¹⁶⁴ Q 486

¹⁶⁵ Q 494 [Secretary of State]

¹⁶⁶ Ev 137, Ev w37, Ev 172, Ev w148, Ev 221, Q 104 [Prof Mitchell]

¹⁶⁷ Qq 245-246 [Mr Benton]

¹⁶⁸ Q 158 [Ms Hartnell]

The Committee will consider further the building of new nuclear and its associated challenges later in the year.¹⁶⁹

146. Given that the Government (and the Committee on Climate Change) see nuclear playing a key role in the future energy mix, Government should consider how carbon and security objectives could be delivered if no new nuclear is forthcoming.

¹⁶⁹ *Building new nuclear: the challenges ahead*, 27 April 2012

4 Investment Instruments

147. The White Paper stressed the need for clarity and certainty to engender investor confidence. But it also recognised that changes to the market under EMR could lead to some investment decisions being delayed because they are planned to be taken before the introduction of CfDs in 2014.¹⁷⁰

148. Chapter 2 (Clauses 14-19) of the draft Bill provides for the Secretary of State to issue “investment instruments” in order to prevent investment decisions being delayed by the EMR process. The instruments will in effect be as binding as the forthcoming CfD regime and seek to avoid a hiatus by providing “certainty for developers on the revenue stream that will be forthcoming”.¹⁷¹

149. DECC will enter into discussions with developers whose projects meet certain criteria (including timing, and ineligibility for support under the RO).¹⁷² A range of “Final Investment Decision [FID]-enabling products” may be used varying from letters of comfort to an issue of a CfDs once powers exist; to be determined on a case by case basis.¹⁷³ The negotiation process may produce binding arrangements on the terms of the CfD, including the contract duration, risk allocation, strike price and financeability.¹⁷⁴

150. The main focus of the debate on investment instruments has been the plan for a new nuclear power plant, Hinkley Point C. EDF said:

EDF Energy and our co-investor Centrica have recently started discussions with DECC on Final Investment Decision (FID) Enabling to support our project at Hinkley Point C. It is important that this process is conducted in a timely manner and results in a legally binding agreement.¹⁷⁵

151. As with the general debate on setting the strike price for nuclear (see paragraphs 131-134), many witnesses expressed concern that there was a lack of transparency and accountability in the investment instrument negotiations for Hinkley C.¹⁷⁶ EDF and Centrica have sent in their letter of eligibility for Hinkley C, so the negotiations “have not really started” although the next step is how to arrive at a strike price.¹⁷⁷ EDF assured us that there would be openness and transparency in the process and that the outcome would be “as good as if there was an auction”.¹⁷⁸ RWE npower (who are trying to sell their

170 DECC, Planning our electric future: a White Paper for secure, affordable and low-carbon electricity, CM 8099, July 2011p 37; DECC, Electricity market reform: policy overview, Annex B, Feed-in tariff with contracts for difference: draft operational framework, May 2012

171 Draft Energy Bill, CM 8362, May 2012, Explanatory Notes, pp 199-200, paras 39-40

172 DECC, Planning our electric future: technical update, December 2011, p 38

173 DECC, Electricity Market Reform (EMR): Final Investment Decision (FID) Enabling, Impact Assessment, IA No: DECC0083, 16 April 2012 Fig. 3, p 13

174 DECC, Electricity Market Reform (EMR): Final Investment Decision (FID) Enabling, Impact Assessment, IA No: DECC0083, 16 April 2012 p 7

175 Ev 161

176 Ev 123, Ev 137, Ev 151, Ev w37, Ev w71, Ev w74, Ev 187, Ev w112

177 Q 51 [Mr Sambhi]

178 Qq 51-52 [Mr Sambhi and Mr de Rivaz]

Horizon Nuclear Power project) were not convinced and wanted to see more transparency around the Hinkley C project.¹⁷⁹ Given that EDF and Centrica was the first project to be put forward for consideration, RWE wanted transparency around the terms and conditions offered, so that subsequent projects were not disadvantaged.¹⁸⁰

152. SSE argued that if an investment instrument was provided to a nuclear developer, it would be hard to see how it would not be challenged by the Commission as state aid.¹⁸¹ However, EDF were not perturbed and told us that the “principle of the transitional arrangements is to make early investment possible, for which there is a strong case. It is simply a practical arrangement with, we believe, no bias and therefore no State Aid implications”.¹⁸²

153. We share the concerns of many witnesses about the transparency of the FID-enabling process. Hinkley C is the first project to be considered under the process. We recommend that DECC ensures that any contract terms agreed are published as soon as possible. We also recommend that, as with setting strike prices under the CfD mechanism, an independent panel of experts should be appointed to oversee the investment instrument negotiations, and should report to Parliament on value for money for consumers (see paragraph 134).

154. Under Clause 14 an investment instrument may provide for payments based on a strike price and a market reference price and include such provision as the Secretary of State considers necessary or desirable and, in particular, provision about various matters listed in clause 14(6) and covering the same areas as those to be covered in provisions included in a CfD. The draft Bill provides for investment instruments to be issued during the passage of the legislation and, if they comply with certain conditions including being laid before Parliament, puts a duty on the Secretary of State to issue the instruments after the Bill is enacted.¹⁸³ Clause 16 provides for a similar process for the issuing of instruments between the Bill’s enactment and the end of 2015.

155. Although Clause 19 does provide for further provision to be made in regulations about investment instruments (and those regulations will be subject to the negative procedure), there is no provision for formal Parliamentary scrutiny of investment instruments (no negative or affirmative procedures), beyond the requirement for the instruments to be laid. The implication is that instruments which may form a key aspect of the development of the electricity market until at least the end of 2015, will not be subject to the same level of Parliamentary scrutiny as those made through CfD regulations (which will be negative procedure), after the Bill becomes an Act. This may lead to concerns over a lack of transparency and Parliamentary control.

179 Ev 178; In 2009 RWE npower formed a joint venture with E.ON UK called Horizon Nuclear Power to explore the possibility of developing new nuclear power station in the UK

180 Q 52 [Mr McElroy]

181 Ev 151

182 Ev 161

183 Clause 15 imposes a duty on the Secretary of state to issue investment instrument if it has been laid before Parliament in the period between introduction of the Bill and Royal Assent (together with a statement containing specific information see Clause 15(2)) and that and that the consent of the relevant generator/supplier was given.

5 Capacity Mechanism

156. The aim of a capacity mechanism would be to provide an insurance policy to reduce the likelihood of future blackouts and to ensure a reliable electricity supply to consumers. At the moment, generators are only paid for the electricity that they produce. A capacity mechanism would change this by making payments for the *availability* of capacity in order to ensure there is sufficient spare capacity on the system to avoid blackouts.

Need for the mechanism

157. DECC believes there is no immediate threat to the security of electricity supply, with 83 GW of generating capacity available at the end of 2010 compared to a peak demand of 61 GW.¹⁸⁴ Beyond this its analysis suggests a risk to security of supply as a large amount of existing generating plant is due to close while an increasing amount of low-carbon, intermittent or inflexible generation is needed to meet the UK's carbon reduction targets. Renewables and nuclear plant have low running costs, and future fossil fuel plant such as gas will therefore only run to supplement this generation.¹⁸⁵ This will create uncertainty of revenues for fossil plant, and DECC is concerned that this could lead to under-investment and uncomfortably low levels of reliable capacity.¹⁸⁶

158. Although the central scenario in DECC's modelling indicated that a capacity problem would not occur until the 2020s, its "stress test" (i.e. worst case scenario) suggested that a capacity problem could occur in the second half of this decade.¹⁸⁷ DECC argued that this uncertainty meant the legal framework for a capacity mechanism needed to be put in place as soon as possible, so that the first capacity auction could be held in 2014 for capacity to be in place "by 2015/2016" if necessary.¹⁸⁸ Its modelling suggested that "in some years" we could see blackouts affecting up to 2.5 million homes unless action was taken.¹⁸⁹

159. The Minister told us that because DECC does not envisage the mechanism being needed "for a couple of years at least", the detail of its operation does not need to be finalised.¹⁹⁰ Chapter 3 of the draft Bill (Clauses 20 to 30) therefore only provides enabling powers for the Secretary of State to design and introduce a capacity market in Great Britain.¹⁹¹ With many details of the market still lacking, our scrutiny of the proposals embodied in the draft Bill was unavoidably limited. However, we do have some high-level comments based upon the evidence we received during this inquiry.

184 DECC, Electricity Market Reform: Policy Overview, Annex C, Electricity Market Reform: Capacity Market—Design and implementation update, May 2012, p 4

185 Steggals W, Gross R, Heptonstall P, Winds of change: How high wind penetrations will affect investment incentives in the GB electricity sector, Energy Policy, 2011, Vol:39, Pages:1389-1396

186 DECC, Electricity Market Reform: Policy Overview, May 2012, p 15

187 DECC, Electricity Market Reform – Capacity Mechanism , Impact Assessment, IA No: DECC0076, 15 December 2011

188 DECC, Electricity Market Reform: Policy Overview, May 2012, p 16

189 DECC, Electricity Market Reform: Policy Overview, Annex C, Electricity Market Reform: Capacity Market—Design and implementation update, May 2012, p 5

190 Q 399

191 Note that capacity payments already exist for Northern Ireland, as part of the all-Irish Single Energy Market

Uncertainty over the mechanism

160. The draft Bill would give the Secretary of State powers to introduce a capacity market, but these would only be used if and when Ministers decide a market is needed. This decision will be based on analysis provided by the System Operator – National Grid – and possibly other technical experts including Ofgem.¹⁹² Although not all of our witnesses were convinced that the case has been made for a Capacity Mechanism, others were supportive.¹⁹³ In any case, there was general agreement that now the Government has proposed the mechanism, clarity is needed to avoid a hiatus in investment in new capacity.¹⁹⁴ Ian Marchant of SSE, for example, told us that:

the biggest issue at the moment is the uncertainty: effectively, the Government has created a known unknown. They have said there will be a capacity mechanism but not what it will be, and once you've gone down that road you've got to get it certain quickly so that any investments can be decided, because boards, my board included, will say, "We will wait until we see what that mechanism is." We have created a situation where we now need to get a capacity mechanism in.¹⁹⁵

161. The Secretary of State told us that DECC has "tried to give a very clear signal" that there need not be such a hiatus, because any capacity built since publication of the draft Bill will be categorised as "new" in any future capacity auction.¹⁹⁶ Nevertheless, there is a risk that the need for a capacity mechanism may now become a self-fulfilling prophesy – that an investment hiatus caused by policy uncertainty will deliver the precise capacity problem that DECC aims to avoid.

162. We heard that a standard of reliability could provide helpful clarity over what a capacity market would be aiming to achieve.¹⁹⁷ This is the approach taken in some US markets, where decisions on the required level of capacity are based on a minimum standard of reliability, such as "interruption of electricity supplies due to insufficient capacity on no more than 0.1 days per year".¹⁹⁸ Indeed, National Grid, who would run the proposed auction, told us that "one would have to define what output we are trying to have" and that an "objective way of discussing security of supply would be useful to everybody".¹⁹⁹

163. The Secretary of State told us that he is "open-minded about the role of targets", and DECC is considering defining and using an enduring "reliability standard" to inform Ministers' decision on the amount of capacity needed.²⁰⁰ However, in Annex C to the EMR

192 DECC, Electricity Market Reform: Policy Overview, May 2012, p 16

193 Ev 178, Ev 206, Ev 151, Ev 193

194 Ev 206, Q 1 [Ms Vaughan], Q 2 [Mr Marchant]

195 Q 2 [Mr Marchant]

196 Q 528 [Secretary of State]

197 Ev w143

198 DECC, Electricity Market Reform: Policy Overview, Annex C, Electricity Market Reform: Capacity Market—Design and implementation update, May 2012, p 10

199 Q 338

200 Q 386; DECC, Electricity Market Reform: Policy Overview, Annex C, Electricity Market Reform: Capacity Market—Design and implementation update, May 2012, p 10

Policy Overview, DECC also said that “if we did adopt a reliability standard, we would expect Ministers to retain scope for their annual decision on the amount of capacity to contract for to vary from the reliability standard to ensure that costs and reliability can be balanced”. This would introduce a political element into the decision making process, which could reduce certainty for investors.²⁰¹

164. The deferral of a firm decision to implement a capacity market creates uncertainty and risks a hiatus in investment. The Energy Bill should be based on a clear Government position on the circumstances in which a market will be introduced, and how this will be reviewed and updated over time. The Government should set out an enduring reliability standard, which, along with a decarbonisation target for electricity, would provide a clear framework for the System Operator to work within when operating a capacity market.

Design of the mechanism

165. There are three steps involved in the design of capacity mechanisms:

- a) Analyse the risks to reliability that the mechanism will need to address;
- b) Determine the products or services that the mechanism will need to procure; and
- c) Decide how the required products or services should be valued.

166. We heard that the focus of debate to date has been on the third step: whether or not the System Operator should run a market-wide auction for provision of future capacity or procure “strategic reserve” capacity.²⁰² However, the first two steps are also important because we cannot assume that our traditional approach to ensuring reliability will be appropriate in the future, for example in the case of an electricity system with a high proportion of intermittent renewable generation.²⁰³

167. In Annex C of the EMR Policy Overview, DECC said that the Capacity Market would be a competitive auction, run by the System Operator, based on a forecast of future peak demand and its role would be to deliver a total required volume of capacity defined by Ministers.²⁰⁴ The European Climate Foundation told us that this “total volume” approach is based on the assumption that system reliability is most under stress at the time of peak demand, and that delivering a total volume of capacity that sufficiently exceeds peak demand will ensure reliability at all times.²⁰⁵

168. This assumption may not hold true for our future electricity system. Modelling for the south of Great Britain has suggested that the greatest challenge to reliability by 2030 will arise not at times of peak demand, but when consumer demand and the varying output of

201 Ev w64

202 Ev w143

203 Ev w143

204 DECC, Electricity Market Reform: Policy Overview, Annex C, Electricity Market Reform: Capacity Market—Design and implementation update, May 2012, pp 5-11

205 Ev w143

intermittent renewable generation are changing in opposite directions.²⁰⁶ This could occur at any time and to the greatest extent when demand is increasing to a maximum while intermittent generation is reducing to a minimum, or vice versa. The *flexibility* of the remaining capacity on the system will thus become at least as important as its total volume.²⁰⁷ Other witnesses have agreed that the characteristics of capacity, such as how long it takes for it to respond and then remain available, are crucial and need attention.²⁰⁸

169. DECC has stated that the market will not specifically contract for flexible capacity.²⁰⁹ It anticipates that the electricity market will continue to provide adequate signals to bring forward the right mix of flexible capacity, and that the existing balancing mechanism will continue to ensure moment-to-moment system balancing through services such as Short Term Operating Reserve (STOR). However, DECC also said that it intends to consider this further when developing the design of the Capacity Market.²¹⁰ Indeed, the Minister told us that “the capacity mechanism [...] is actually something that needs to represent flexibility.”²¹¹

170. In our original EMR inquiry we said that the Government needed to analyse more fully the potential need for flexible capacity and demand-side measures at all times, not just at times of peak demand.²¹² In its White Paper of July 2011, DECC committed to outlining its electricity systems policy in summer 2012, “focusing on challenges around balancing and system flexibility”. It is very unsatisfactory that this policy was not published alongside the draft Bill to be available for our pre-legislative scrutiny.

171. We are extremely concerned that the capacity market proposals are based upon out-dated assumptions and an insufficient analysis of the future risks to reliability. We recommend that the Government undertakes much clearer analysis of the problem that the capacity market is trying to solve, particularly the integration of the large volume of intermittent generation that is likely to be required to decarbonise our electricity supplies, and of the role capacity payments can play in furthering demand side response and reduction measures. The enabling legislation in the Energy Bill must be able to meet our future reliability challenges.

Minimising costs for consumers

172. At the initial consultation stage, the Government stated a preference for a “strategic reserve” capacity mechanism but subsequently decided, in light of representations from industry and elsewhere, that a market-wide mechanism would be better.²¹³ However, RWE

206 Ev w143

207 Ev w143

208 Ev w14, Ev 193, Q 140 [Professor Newbery]; Oral evidence taken before the Energy and Climate Change Committee on 25 January 2012, HC (2010-12) 1781-i, Q 2, Q 29 and Q 30 [Ms Kruisdijk]

209 DECC, Electricity Market Reform: Policy Overview, Annex C, Electricity Market Reform: Capacity Market—Design and implementation update, May 2012, p 11

210 DECC, Electricity Market Reform: Policy Overview, Annex C, Electricity Market Reform: Capacity Market—Design and implementation update, May 2012, p 11

211 Q 538

212 Energy and Climate Change Committee, Electricity Market Reform, para 192

213 Oral evidence taken before the Energy and Climate Change Committee on 25 January 2012, HC (2010-12) 1781-ii, Q 116 (Mr Hendry)

npower²¹⁴ has since told us that a reserve would be more than ten times cheaper – a cost of £300-650m over the period 2015-25 compared to £7.5bn for a market-wide mechanism.²¹⁵ DECC's own analysis, as published in its Capacity Mechanism Impact Assessment, also found a strategic reserve to be cheaper. The estimated net cost was £1.1bn over the period 2010-2030²¹⁶ compared to a business as usual scenario, whereas the estimated net cost of a capacity market was £2.5bn.²¹⁷ However, DECC did not believe that these costs were representative of the impacts of each mechanism, and so also compared them qualitatively.

173. One of DECC's key qualitative concerns, not modelled in the net costs, was the "slippery slope" problem.²¹⁸ This would occur if, by preventing high prices at times of system stress, the strategic reserve reduced the market-based incentive for investment in new capacity. As we discussed in our previous inquiry on EMR, more and more capacity would then be required in the reserve to ensure the reserve remained effective.²¹⁹

174. Evidence we received suggested that if the proposed capacity market delivers insufficient flexible capacity, there is a risk that the System Operator would have to use additional mechanisms to ensure reliability, leading to unnecessarily high costs.²²⁰ The European Climate Foundation told us that the Energy Bill should include a mandate for the Regulator to establish an incentive framework for the System Operator to minimise the costs of delivering reliability.²²¹

175. We recognise that a more thorough assessment of cost-effectiveness must await the publication of detailed capacity market proposals. DECC should conduct further analysis on the costs of the capacity market to ensure it is not significantly higher than alternative options such as a strategic reserve. The Government should clarify how the Energy Bill will ensure that the capacity delivered by auctions will have the appropriate characteristics, such as flexibility, and how this relates to the System Operator's existing system balancing role, in order to ensure that costs are minimised.

Technology options for providing capacity

176. Clause 20(3) of the draft Bill states that "providing capacity" to the capacity market means providing electricity or reducing demand for electricity. The market would be open to new or existing generating capacity as well as non-generation approaches such as demand response, storage and interconnection.

214 Memorandum submitted by RWE to the Energy and Climate Change Committee, Electricity Market Reform Technical Update, EMRT 07, section 15

215 Present Value 2015 to 2025, real 2010.

216 DECC states that "all costs occur between 2024 and 2030 because that is when a Capacity Mechanism would be triggered under the central scenario."

217 DECC, Electricity Market Reform – Capacity Mechanism, Impact Assessment, IA No: DECC0076, 15 December 2011, p 22

218 DECC, Electricity Market Reform – Capacity Mechanism, Impact Assessment, IA No: DECC0076, 15 December 2011, p 36

219 Energy and Climate Change Committee, Electricity Market Reform, p 51-52.

220 Ev w143

221 Ev w143

Generation technologies

177. In terms of generation technology, we heard two conflicting stories of what EMR will achieve: some said not enough gas power stations; some said too many. We discuss the future role of gas further in Chapter 9 (paragraphs 221 – 223).

178. Intergen, an independent generator operating gas-fired power stations, told us of a range of issues that need to be addressed for the capacity mechanism to support both existing and new generation.²²² Among these, it highlighted that to build a new combined cycle gas turbine takes around seven years – three to gain consent, one to tender and contract, and three to construct. If the Government identifies a need for new generation capacity this decade, Intergen’s evidence suggests that it is unlikely to be brought about by capacity auctions that may or may not be held from 2014, as the Government currently suggests.

179. Stag Energy, a company with interests in gas generation and storage, argued that it will be challenging to maintain a 15 – 20 % capacity margin without the construction of 12 – 15 GW of new gas generation over the coming decade.²²³ Its analysis showed that existing coal and gas plant has “much higher running costs” than new combined cycle or open cycle gas turbines. These new, more flexible plant are more expensive to build but have a lower overall running cost at reduced levels of demand. Stag Energy warned that the proposed capacity market, with its single clearing price model, risks penalising new, more efficient plant while rewarding existing plant.²²⁴

180. Indeed, experience in the USA suggests that while capacity markets are attractive to existing resources, they do not encourage investment in new generation. The New England 2010 Annual Report notes that with the looming possibility that some of the region’s older resources will retire, the ability of its capacity market to attract timely investment in new generation “remains largely untested”.²²⁵

181. The Committee on Climate Change has said that investment in around 10 GW of new unabated gas generation over the next two decades, and a total gas-fired capacity of 30 GW in 2030, would have an important role in balancing intermittent renewable generation by generating at low annual load factors (less than 10% on average in 2030). However, the Committee has expressed concern that EMR proposals – particularly the Emissions Performance Standard – will allow a greater role for gas generation.²²⁶ It said that if 30 GW of gas plant were to generate at baseload (i.e. the majority of the time) in 2030 instead of only as balancing plant, average emissions would be 200 gCO₂/kWh – well over what we need them to be to meet our statutory carbon budgets.

222 Ev 193

223 Ev w14

224 Ev w14

225 ISO New England, 2010 Annual Markets Report, 3 June 2011, p 21

226 Committee on Climate Change, 27 March 2012, Public letter from Lord Adair Turner to the Secretary of State

182. A number of our witnesses shared the concern that EMR, as embodied by the draft Bill, will lead to a “dash for gas” that will make it harder to achieve our statutory emissions reduction targets.²²⁷

183. **As we recommend in paragraph 223, it is vital to have an understanding of the likely impact of EMR of the future role for gas generation. DECC should conduct modelling work to assess the combined impact of the capacity market and the EPS on emissions and security outcomes under different scenarios. This should include both a “dash for gas before 2015” scenario and a “no new gas before 2015” scenario**

184. Related to the issue of new investment in generation Stag Energy highlighted the need for gas storage, both to ensure security of supply and to minimise fuel price volatility.²²⁸ In our energy security inquiry, we concluded that the UK needs to significantly increase its gas storage capacity.²²⁹ **We recommend that the Government, in its forthcoming Gas Strategy, considers the interrelationship between electricity market reform and the capabilities of the gas infrastructure, in particular the potential need for more gas storage.**

Non-generation technologies

185. In the supporting documentation to the draft Bill, DECC says it is keen that non-generation technologies and approaches, such as demand-side response, storage and interconnected capacity, “can play a fair and equivalent role to generation in a DSR Capacity Market”.²³⁰ However, many of our witnesses criticised the draft Bill and its supporting documentation for its lack of detail on these approaches.²³¹

186. Friends of the Earth told us that:

it is unlikely that the existence of a capacity market alone will provide sufficient incentive for investment in innovative storage and DSR technologies to be developed to the point that they can deliver capacity with complete certainty and be bid into a capacity market auction at a cost that can compete with established fossil fuel supply technologies. Getting technologies to this point requires significant R&D, early deployment support and preference within the capacity market.²³²

187. Green Alliance reported that experience from the USA demonstrated the risk that the market would not incentivise innovative technologies like demand-side response. It said that in the USA’s PJM market:

227 Ev 137, Ev 172, Ev w94, Ev 187, Ev w133

228 Ev w14

229 Energy and Climate Change Committee, Eighth Report of Session 2010-12, *the UK’s Energy Supply: Security or Independence?* HC 1065, October 2011

230 DECC, Electricity Market Reform: Policy Overview, Annex C, Electricity Market Reform: Capacity Market—Design and implementation update, May 2012, p 16

231 Ev 137, Ev w37, Ev w50 (Association for the Conservation of Energy), Ev 172, Ev w86, Ev 187, Ev w142, Q 2 [Mr Marchant]

232 Ev 137

much of the capacity payments initially went to existing fossil power stations and a ‘clean first’ priority system had to be introduced to ensure that DSR was able to compete fairly. As with demand reduction, given the immature nature of the demand response market, it is likely to be necessary to proactively seek out demand response to ensure that the maximum economic level of DSR is developed.²³³

188. A number of our witnesses agreed that, as innovative technologies, DSR and storage would need support to enable them to develop and compete in the market.²³⁴ This could be achieved by amending the Bill to require the System Operator to procure minimum volumes in the capacity auction, and/or to seek out and prioritise them over other approaches.²³⁵ Such support would help kick-start the market in the provision of these services and ensure the System Operator develops the necessary systems and expertise to exploit the benefits of demand response.²³⁶ RWE npower told us that it is vital that the legislation sets out a clear mechanism for the demand-side to contribute, because otherwise the £12bn that energy companies will invest in smart meters (ultimately at consumers’ expense) will be a substantial lost opportunity.²³⁷

189. However, two of our witnesses did not think extra measures to support demand-side measures were necessary in the Bill, since it is already complex and because demand-side policies exist elsewhere already.²³⁸ Professor Newbery also warned us of “unsubstantiated claims that all demand-side is necessarily cost-effective”.²³⁹

190. On storage specifically, the Electricity Storage Network (ESN) highlighted that existing legislation does not explicitly define or address the role of storage in the electricity market, and that this causes confusion and uncertainty about its treatment.²⁴⁰ The ESN suggested that it is not appropriate to include electricity storage simply as a generation activity, as it can provide other services such as absorbing power at times of excess production by wind and other intermittent generation. ABB, with experience of deploying the UK’s first battery energy storage device, also identified “significant legal challenges” that need to be overcome in relation to the treatment of energy absorption and resupply to the grid.²⁴¹

191. As innovative technologies, demand-side response and storage technologies should be recognised and defined explicitly in the Energy Bill. Support for innovation is given to the supply-side, for example by the banding of the Renewables Obligation, and the Bill should provide similar support to demand-side and storage technologies. DECC should investigate the legislative and other barriers to storage identified by our witnesses, and remove any that prevent it from competing fairly in the market.

233 Ev 172

234 Q 135 [Mr Skillings]

235 Ev 127, Ev 137, Ev w37, Ev 172, Ev w143

236 Ev w143

237 Ev 178

238 Q 135 [Professor Newbery], Q 235 [Ms Kelly]

239 Q 135 [Professor Newbery]

240 Ev w118

241 Ev w86

192. Witnesses warned that it is unclear how the proposed capacity market would work with the move to a more integrated European electricity market, and potentially larger balancing areas. Simon Skillings told us that if a neighbouring market does not have a margin of spare capacity, “all that happens is that you need to keep running to stand still, because every time you build something to get your margin, they will shut something next door to keep their price going up”.²⁴² This is another area the Government said it is considering as part of its detailed design work for the capacity market.²⁴³

193. The Government should clarify how the capacity market will be made compatible with increased interconnection and the move to a more integrated European electricity market.

²⁴² Oral evidence taken before the Energy and Climate Change Committee on 24 January 2012, HC (2010-12) 1781-i, Q 7 [Mr Skillings]

²⁴³ DECC, Electricity Market Reform: Policy Overview, Annex C, Electricity Market Reform: Capacity Market—Design and implementation update, May 2012, p 16

6 Conflicts of Interest

194. We previously recommended that if the role of administering CfDs was not taken by Ofgem, a new institution should be established to take this role. This institution should be “totally independent and not susceptible to political influence”.²⁴⁴ However, DECC has proposed that the System Operator (SO), National Grid, will provide analysis to Government on strike prices and will administer the CfD and the Capacity Market. Chapter 4 of the draft Bill acknowledges the potential for conflicts of interest between this EMR delivery role and National Grid’s existing roles (including transmission network ownership, CCS businesses, interconnection and offshore wind transmission).²⁴⁵ DECC is currently working with Ofgem to assess any conflicts of interest and to identify possible mitigating measures. This work is due to report by the end of 2012.²⁴⁶

195. A number of witnesses suggested that it was likely that the review would conclude that there *were* conflicts of interest. This was because the new role would give National Grid access to privileged information, which could be used to further its own commercial interests.²⁴⁷

196. While witnesses welcomed the fact that the Government is reviewing potential conflicts of interest, some problems with the timetable for the review were identified. Some witnesses believed that the review was *too early* because there is not yet enough information about what the precise role of the SO as the EMR delivery body will be.²⁴⁸ Others, on the other hand, felt it was *too late* because National Grid will need to begin collecting data for the Delivery Plan this summer, before any safeguards have been put in place.²⁴⁹

197. National Grid and DECC were confident that any conflicts of interest could be managed by applying business separation rules with oversight from Ofgem.²⁵⁰ Nick Winsor (Executive Director, National Grid) argued that this would not be a challenge for the company because there are already parts of National Grid that operate in this way. He said:

For example, we would expect the information that we get for EMR to only be used for EMR. We would expect, and are very likely to have, a data restriction on keeping that information just for purposes of EMR. There are all sorts of requirements on us in this area; it is part of our business, and we are used to managing it.²⁵¹

198. We do not believe that it is appropriate for a private company—which is ultimately motivated by profit making—to act as the EMR delivery body. DECC’s proposals for

244 Energy and Climate Change Committee, Electricity Market Reform, para 135

245 Draft Energy Bill, CM 8362, May 2012, Explanatory Notes, p 212 para 107

246 Q 517 [Mr Brearley]

247 Ev W1, Ev 130, Ev 137, Ev 168, Ev w66, Ev 178

248 Ev 178

249 Ev 130

250 Ev 155, Qq 350–357, Q 517

251 Q 352

the System Operator to take on this role will result in considerable conflicts of interest for National Grid and could result in unnecessary additional costs to consumers. We recommend that National Grid should be removed from this role and replaced by establishing a new independent, not for profit company.

7 Emissions Performance Standard

199. We have expressed our dissatisfaction with the Government's proposals for an Emissions Performance Standard (EPS) on numerous previous occasions.²⁵² We still believe that introducing the measure as currently designed would be pointless and would merely add complexity to an already overly-complicated package of reforms.

200. In this section, we highlight new factors that have emerged during the course of our pre-legislative scrutiny. We do not rehearse the arguments made in our previous reports. We refer interested readers to our previous inquiries on Emissions Performance Standards, Electricity Market Reform and Energy Security.²⁵³

Grandfathering

201. The principle of grandfathering means that once a fossil fuelled power plant receives building consent under a particular emissions limit, the plant will not be affected by any subsequent changes to that level for a pre-determined period. After an "informal consultation", DECC announced in March this year that the initial EPS of 450g/kWh would be grandfathered until 2045.²⁵⁴ This initial EPS will itself be reviewed in 2015.

202. Energy companies told us that these grandfathering arrangements were necessary to bring forward investment in new gas-fired generation.²⁵⁵ However, environmental organisations believed that the 30 year grandfathering period risked locking the UK into a high-carbon electricity system.²⁵⁶ This echoed the comments made by the Chair of the Committee on Climate Change in a letter to the Secretary of State earlier this year that while the EPS proposal "could be compatible with power sector decarbonisation requirements to meet carbon budgets, [it] also carries the risk that there will be too much gas-fired generation instead of low carbon investment".²⁵⁷

203. Simon Skillings (E3G) warned that if the EPS was grandfathered until 2045, the only lever available to future governments to regulate emissions from unabated gas-fired plant would be the carbon price. He said:

If you throw away that lever [an EPS that affects gas], you could end up in the situation where we have a hugely inefficient vehicle to drive this investment, which is a very, very, very high carbon price—and it will need to be very, very high. Germany [...] has exactly this problem. It has lots of coal on the system, and it doesn't matter how much renewables it subsidises on the system; if the carbon price stays at low

252 Energy and Climate Change Committee, Eighth Report of Session 2010-12, *The UK's Energy Supply: Security or Independence?*, HC 1065

253 Energy and Climate Change Committee, First Report of Session 2010-12, *Emissions Performance Standards*, HC 523; Energy and Climate Change Committee, *Electricity Market reform*; Energy and Climate Change Committee, *The UK's Energy Supply: Security or Independence?*

254 "Davey sets out measures to provide certainty to gas investors", DECC press release 2012/025, 17 March 2012

255 Ev 151, Ev w74, Ev 172, Ev 178, Ev 206, Ev w154, Ev 227, Q 92 [Mr Sambhi and Mr McElroy]

256 Ev w26, Ev w34, Ev w37, Ev 137, Ev 187, Ev w163, Q 259 [Mr Molho]

257 Committee on Climate Change, 27 March 2012, Public letter from Lord Adair Turner to the Secretary of State

levels, the coal is going to be pumping it out. It can't get rid of the carbon. This is where an emissions performance standard provides another tool, and we are going to face that situation with gas plant as we go through the 2020s.²⁵⁸

204. The Government's intention to review the EPS in 2015 is another source of uncertainty for investors. It may even cause a "dash for gas" itself, if investors rush to build gas plant before the review. We are concerned that DECC's decision to grandfather the EPS until 2045 is not compatible with our long-term decarbonisation objectives. If too much new unabated gas-fired plant comes forward under these arrangements, future governments could be faced with a tough decision either to miss the carbon budgets or to set an extremely high carbon price, which would ultimately increase costs to consumers. We recommend that a shorter grandfathering period commensurate with decarbonising the electricity system by 2030 should be adopted.

Exemption for carbon capture and storage

205. The Government intends to exempt projects that form part of the UK Carbon Capture and Storage (CCS) Programme on a case-by-case basis. The draft Bill defines stations that are eligible for exemption as "a generating station at which carbon capture and storage technology is or is to be, or has been, used in commercial electricity generation for the purposes of or in connection with a CCS demonstration project".²⁵⁹

206. Witnesses from environmental NGOs warned that new partial CCS plants could still produce significant greenhouse gas emissions.²⁶⁰ The RSPB and WWF provided an example: "the proposed 1852MW coal plant in Hunterston, Scotland, would emit 587-650gCO₂/kWh, and emissions from year one would be equivalent to adding 63% to Scotland's annual power sector emissions".²⁶¹ The NGOs concluded that the CCS exemption could undermine decarbonisation ambitions.²⁶² The CBI believed that the CCS exemptions were necessary to avoid undermining the development of CCS technology.²⁶³

207. CCS is a special case and it is important not to risk delaying or undermining the development of the technology. But DECC should ensure that the Bill provides sufficient safeguards so as to avoid the unintended consequence of undermining decarbonisation. There may be merit in the inclusion of a minimum proportion of emissions to be captured by CCS plants in clause.³⁷

Parliamentary Procedure

208. The Secretary of State will have the power to exempt plant from the EPS in the case that he or she thought there were security of supply concerns.²⁶⁴ According to DECC's

258 Q 126

259 Draft Energy Bill, CM 8362, May 2012, Part 1, Clause 37, p 91

260 Ev w26, Ev 137, Ev w37, Ev 187, Ev w126,

261 Ev w26, Ev 187

262 Ev w26, Ev 137, Ev w37, Ev 187

263 Ev 206

264 Electricity Market Reform: policy overview, Annex D: Electricity Market Reform: Update on the Emissions Performance Standard, May 2012

Delegated Powers Memorandum on the draft Energy Bill, this decision would be an “executive act” and therefore would not be subject to Parliamentary scrutiny, although the draft Bill does provide for an Order under this section to be laid before Parliament after it has been made.

209. We believe that any decision to exempt plant from the EPS on energy security grounds should be subject to Parliamentary scrutiny, even if this scrutiny has to be retrospective.

8 Timetable for delivery

210. The Committee has previously emphasised the importance of timely delivery of the reforms. The White Paper stated “we intend that this legislation will reach the statute book by spring 2013”.²⁶⁵ The indicative roadmap in the draft Bill shows that the timetable has already slipped, with Royal Assent now expected in the fourth quarter of 2013 (which would require the bill to be carried-over from one parliamentary session to the next).²⁶⁶ The Secretary of State confirmed to us that he expected Royal Assent at the end of calendar 2013 “at the latest”.²⁶⁷ However, we see no reason why, if introduced swiftly in the autumn as planned, the Bill could not reach the statute book by May 2013.

211. We are concerned that the uncompleted work in designing CfDs and the capacity market, combined with the need to gain state aid clearance, could lead to further delays in the timetable.²⁶⁸ This would have serious consequences for meeting our 2020 renewables and security of supply objectives. **In order to prevent this from happening, it may be necessary to consider pushing back the closing date for the RO (currently planned for 2017), for example to 2020, to reflect any slippage in the EMR programme. 269 We note that an extension of the RO to enable slippage to be accommodated would not compromise the government’s intention to combine underwriting for all low carbon technologies, since the date of 2018 as the year in which new nuclear power comes on stream has already slipped substantially.**

212. We heard particular concerns about the impact of uncertainty on offshore wind. The Combined Heat and Power Association told us:

The uncertainty over the EMR means that large scale renewables investments such as Round Three offshore wind projects are now on hold as they cannot be sure of commissioning before the 2017 date when the current support regime (the Renewables Obligation) will close to new entrants. For these projects the lack of certainty surrounding the CfD FiT combined with uncertainty over the timing of offshore transmission infrastructure development means that large developers and banks will not risk funding the development of a project, which, if not commissioned by 2017, has no certainty over its CfD revenue stream and its value.

213. **Delivery according to timetable is crucial if we are to meet our climate change and renewables targets and retain security of supply for 2020. We are extremely concerned that DECC’s delivery timetable has already slipped, and that there is still a great deal of work that needs to be done to finalise the legislation. In addition, there is a risk that state aid clearance will delay the implementation of the new support measures. If questions about CfDs are not resolved swiftly, there is a real risk that new low-carbon**

265 DECC, Planning our electric future: a White Paper for secure, affordable and low-carbon electricity, CM 8099, July 2011, para 43

266 DECC, Electricity Market Reform: policy overview, Annex E: Electricity Market Reform: Indicative Electricity Market Reform Implementation Roadmap

267 Q 373

268 Ev 130, Ev 151, Ev 168, Ev 172, Ev w86, Ev w89, Ev 178, Ev 187, Q 192 [Mr Benton]

269 Ev w29, Ev w86, Ev w98, Ev 178, Q 101 [Kennedy], Q 143 [Dr Edge]

projects in the pipeline will dry up, potentially jeopardising our 2020 targets. The Government must ensure that there are no further delays to the Bill and should aim for its formal passage in Parliament to be completed before the end of the current Session. If delays do occur, it may be necessary to delay closure of the RO in order to reflect slower progress in finalising the details of EMR.

Is a backup plan needed?

214. Given the major questions that still need to be resolved about the CfD mechanism, several witnesses suggested that it would be wise to have a backup option in case some of the problems proved insoluble. SSE, along with several independent suppliers said that a PFiT needed to remain an option in the Bill.²⁷⁰ WWF-UK called for other FiT options to be left open in the Bill, to allow for further flexibility should CfD be shown not to be the most suitable option for some or all renewables.²⁷¹ Others believed that the RO might need to be extended on a long-term basis.²⁷²

215. However, most witnesses were keen to get the proposals right first time and hoped that alternative options would not be necessary.²⁷³ Dr Kennedy of the Committee on Climate Change told us:

[Extending the RO] would have to be plan B, I think, but plan A is to get this set of arrangements right to make them such that they bring forward investment in renewables, and then you don't need to extend the renewables obligation. I think if we get it wrong, if we delay with the legislation, if we delay with the implementing arrangements or if we don't get the implementing arrangements right so that we have too much risk with the investor, you may then want to extend the renewables obligation, but that would be a bad thing. We have the opportunity to get EMR right.²⁷⁴

216. We do not believe that a backup plan is necessary at this stage. However, if DECC does not resolve the outstanding questions regarding the CfD payment model, allocation of CfDs and routes to market before the autumn, it may be necessary to consider keeping open the option to extend the RO and/or convert it into a PFiT.

270 Ev 151, Q 189 [Mr Smith, Mr Gill, Mr Rehmanwala]

271 Ev 187

272 Q 190 [Mr Gill]

273 Q 101 [Dr Kennedy], Q 247 [Mr Steedman]

274 Q 101 [Dr Kennedy]

9 Wider concerns about the draft Bill

Political leadership in communicating costs

217. As we noted in our previous report on EMR and our forthcoming report on the UNFCCC, a failure to communicate with the electorate about the fact that electricity prices are likely to increase in future may undermine the credibility of the entire EMR package and stifle action that consumers would otherwise take to improve energy efficiency, in order to keep bills down.²⁷⁵ (It is likely that prices will increase in the short-term even without action to decarbonise because global demand for gas is pushing up prices.)

218. This theme was raised during our roundtable meeting with investors and analysts. One participant said “There is a need for political leadership. If Government wants investors we need to see the Government standing behind its decisions and to have a discussion with citizens about proposals for the energy sector. If the discussion is fair and open we will trust their word is true. If not we will put you in the same box as the European bailout countries – we won’t believe what you say”.²⁷⁶

219. Investors are concerned that a failure to engage properly with members of the public now creates the possibility of a backlash from consumers at some point in the future. This could result in a future government reneging on commitments (as has happened recently in Spain). Although the purpose of using long-term contracts rather than a Feed-in Tariff is to make it more difficult for future governments to renege on commitments made now, adding an additional layer of certainty by specifying what compensation might be available in the case of the CfD being dismantled at some point in the future would help to increase certainty for investors.

220. Some investors are concerned that there may not be sufficient acceptance among members of the public for the EMR proposals to be delivered successfully. There is therefore a fear that a future Government may renege on commitments as a result of political pressure from the electorate. This is driven by the perception in some quarters that the Government is failing to warn consumers about likely increases in electricity prices. In order to increase confidence, DECC should spell out the provisions for recompense should the CfD be dismantled as the result of circumstances beyond its control.

Clarity about the future role of gas

221. As we have noted previously, there is a delicate balance to be struck between ensuring there is sufficient gas capacity on the system to meet short-term security of supply objectives on the one hand, and preventing “lock-in” to a high-carbon system that does not achieve our long-term decarbonisation objectives on the other.²⁷⁷

²⁷⁵ Energy and Climate Change Committee, Electricity Market Reform, Energy and Climate Change Committee, The road to UNFCCC COP 18 and beyond (forthcoming)

²⁷⁶ Annex 1: Note from roundtable meeting

²⁷⁷ Energy and Climate Change Committee, The UK’s Energy Supply: Security or Independence?, para 101

222. It is not clear what the impact of the EMR proposals will be on the delivery of new gas-fired generating capacity or the extent to which it will be used in the future. For example, some witnesses told us that uncertainty may cause a hiatus in investment, while others told us that the EPS grandfathering proposals could encourage a rush of new build ahead of the 2015 review date (see paragraphs 177 - 183). It appears that there is the potential for different measures within the EMR package to pull in different directions and it is not yet clear which will prevail. WWF said:

We believe that the EPS and the capacity mechanism need to be looked at together as an integrated package of measures, the combined aim of which should be to ensure that the (i) UK has sufficient flexible peaking capacity to meet demand in 2030 and (ii) has sufficient safeguards in place to ensure that the generation mix in place by 2030 will comply with a carbon intensity target of 50gCO₂/kWh.²⁷⁸

223. **It is vital to have a clearer understanding of the likely impact of the EMR proposals on the future role for gas. We hope that the Government's forthcoming Gas Strategy will provide clarity about both the Government's vision for the role of gas in the electricity system, and how the EMR proposals will deliver this in practice. There would be merit in assessing the combined impact of the capacity market and Emissions Performance Standard on energy security and climate change objectives. We recommend that DECC conducts modelling work before introducing the Bill to investigate the combined impact of the capacity market and EPS on emissions and security outcomes under different scenarios. This should include "dash for gas before 2015" scenario and a "no new gas before 2015" scenario.**

The Bill has the potential to damage low-carbon jobs and industries

224. The Secretary of State told us that he believed the Bill would help to create growth and would generate "about a quarter of a million" new jobs.²⁷⁹ We also hope to see growth in the number of "green" jobs, but several witnesses told us that the proposals as they stand might damage the prospects for developing new manufacturing and supply chain industries. There was particular concern about the impact on industries associated with wave and tidal energy.²⁸⁰

225. The two main areas of concern were the proposals to move to auctioning of CfDs for renewable energy in 2017 and the lack of clarity about the strike price for marine energy after 2017. Catherine Mitchell and Bridget Woodman (Exeter University) told us that the proposals for auctioning were "reminiscent of the Non-Fossil Fuel Obligation from 1990-1998 [...] – an unsuccessful mechanism for a variety of reasons, which also destroyed the British wind manufacturing base because the level of competition was so great that cheaper overseas turbines were used".²⁸¹ Aquamarine Power asked "what incentive is there for companies to invest in the £10s of millions required to support the first marine energy arrays in the run up to 2017, without a clear idea there will be a clear and consistent market

278 Ev 187

279 Q 520

280 Ev 130, Ev w58, Ev 198, Ev w133, Ev w148, Ev 221

281 Ev 221

for these technologies in the decades ahead?”.²⁸² Auctioning of CfDs was explored in more detail in Chapter 3.

Re-regulation of the energy system

226. Although the Government is committed to a competitive market for electricity, in practice the proposed reforms will deliver a significant level of government intervention in the market.²⁸³ For example, nuclear and renewables will fall under the CfD regime, unabated coal will be ruled out by the EPS and new gas capacity may end up in the capacity market. Greenpeace noted that “thus all forms of power generation will be receiving direct support”.²⁸⁴

227. What is more, some witnesses told us that limiting the availability of CfDs under the levy cap would mean that choices will have to be made about which projects gain support. This means that in practice, the CfD awarding body will be making decisions about the nature of Great Britain’s generation mix. Climate Change Capital told us:

In our view none of the allocation mechanisms proposed either work or absolve DECC from needing to make qualitative judgements as to who they will award CfDs to. [...] In the (highly likely) event that the number of consented projects exceeds the available approved levy spend, then this means that the allocation body will need to make qualitative judgements as to which projects will achieve financing and hence should be awarded CfDs. We simply do not see any way around this.²⁸⁵

228. The Secretary of State did not accept this argument because “after 2017, [...] there is going to be a competition for who gets the Contracts for Difference”.²⁸⁶

A proper assessment of costs

229. The cost of capital offered by banks and other financial investors will determine whether projects to build new generation capacity are viable. The cost of capital is determined by the level of risk associated with the projects. The Government’s rationale for introducing Contracts for Difference (CfDs) is that they will reduce risk by improving long-term revenue certainty, which will lower the cost of capital for low-carbon generators.²⁸⁷

230. However, while witnesses agreed that the Government was right to aim to reduce the cost of capital, they also suggested that the current proposals were likely to introduce *new* risks, which could undermine any savings achieved through reduced revenue risk. These included:

²⁸² Ev w58

²⁸³ Ev w11, Ev w28, Ev w106

²⁸⁴ Ev w37, Draft Energy Bill, CM 8362, May 2012, Introduction, p 10, para 5

²⁸⁵ Ev 167

²⁸⁶ Q 458

²⁸⁷ Ev w37, Draft Energy Bill, CM 8362, May 2012, Introduction, p 28, para 52

- Risks associated with the proposed counterparty model, which is “new, complex and has no clear legal precedent”. The creditworthiness of the counterparty and legal enforceability of contracts were cited as particular concerns.²⁸⁸ (see Chapter 3)
- Development risk resulting from the levy cap and use of auctions (see Chapter 3).²⁸⁹ SSE pointed out that “since development is almost entirely funded by higher cost equity, increasing development risk will significantly impact adversely on overall financing costs”.²⁹⁰
- The potential for downgrading of credit ratings across the suppliers as a result of the counterparty arrangements, which would lead to an increase in borrowing costs for all of these organisations.²⁹¹ (see paragraph 85)
- Risks associated with the inclusion of contract term penalties in CfDs.²⁹²
- The introduction of basis risk (that the generator may not achieve the market reference price) that does not exist with the Renewables Obligation.²⁹³ (see paragraphs 118-119)
- The overall complexity of the proposals increases risk.²⁹⁴
- Transaction costs (such as credit and collateral requirements etc) are not considered.

231. In addition, the EMR proposals focus entirely on reducing revenue risk in order to attract new sources of finance, when in fact, other types of risk might be more influential in determining investment decisions. For example, pension funds would not be willing to take offshore wind construction risk, family office and private equity funds would be unlikely to fund projects costing more than €20 million and only utility companies would be likely to take on nuclear construction risk. This suggests a lack of proper understanding within DECC about how financing decisions are made by different types of financial institution.

232. We recommended in paragraph 102 that DECC should develop a more robust Impact Assessment methodology to account for these different types of risk.

288 Ev 117, Ev 123, Ev 137, Ev 151, Ev w58, Ev w101, Ev w112, Ev 206

289 Ev w112, Ev 117, Ev 172, Ev w139

290 Ev 151

291 Ev 151, Ev w71

292 Ev w98, Ev 130, Ev 161

293 Ev 151, Ev 172

294 Q 142

10 Conclusion

233. Reform of the electricity market is necessary to deliver new investment in low-carbon energy that will help to meet our climate and energy security objectives. It is disappointing that so many of the recommendations made in our previous report on this subject have not been adopted.²⁹⁵ It is not clear that the proposals as they stand will succeed in attracting new sources of finance. Nor is it clear that they will minimise costs to consumers. However, there is still time to rescue the package and to develop a coherent, workable package of reforms.

234. Despite having published a White Paper a year ago, there is still a large amount of detail that DECC needs to finalise before the Bill is introduced. This includes important terms of Contracts for Difference (CfDs) that are key to their operation (such as length of contract and what the strike price will be) as well as the crucial question of what the payment model will look like and who the counterparty will be. What is more, important evidence on demand reduction and access to market for independent generators was still being collected by DECC during our inquiry and it is completely unsatisfactory that this work was not completed in time to be published alongside the draft Bill. A speedy conclusion to all of these outstanding aspects is essential and DECC should introduce its Bill as soon as possible in the autumn, with a view to reaching Royal Assent by the end of the current Session.

235. The proposal to introduce CfDs to support investment in low-carbon generation is the cornerstone to the legislation. Without a working support system, we will have little chance of meeting our energy system objectives. The problems that have been identified with the proposed model raise serious concerns and it is clear that the proposals as they stand are unlikely to be workable in practice. DECC must focus its efforts on addressing the design flaws before introducing the Bill. If they are not resolved, policy credibility will be damaged and investor confidence seriously undermined.

236. Government must also pay particular regard to key omissions and unintended consequences that have been identified through the pre-legislative scrutiny of the draft Bill. These include the lack of specific objectives, the lack of consideration of demand-side measures and the potential for the reforms to lead to more vertical integration in the energy system.

237. The perceived conflict between DECC and HM Treasury on some aspects of EMR is also contributing to uncertainty among the investor community. We sincerely hope that these two departments can in future develop a better working relationship than they have demonstrated to us during the course of our inquiry. We hope that all departments will present a clear, consistent and united message as the Bill passes through the House.

²⁹⁵ Energy and Climate Change Committee, Electricity Market Reform [Fourth Report, Session 2010-12, HC 742]

Recommendations

1. We recommend that in order to increase confidence and ensure that there is an opportunity for rigorous Parliamentary scrutiny, the Government should publish draft secondary legislation, including a model Contract for Difference, in time for formal consideration of the Bill. (Paragraph 26)
2. We note that despite the Secretary of State's assertion that the objectives of the Bill were clear, they are not set out formally on the face of the Bill. (Paragraph 29)
3. We welcome the Secretary of State's clarification that if faced with a choice between meeting legal climate change obligations and sticking within the levy cap, the Government would give primacy to statutory climate obligations. The investment community would have been further reassured had HM Treasury been able to confirm this. Because HM Treasury have told us that DECC spoke for all of Government in its evidence, we consider this a cast iron commitment to the primacy of statutory obligations over the Levy Control Framework. We would welcome an explanation from HM Treasury about how the working of the levy cap over the forthcoming funding period will be amended to make it compatible with the requirement to meet legal climate change obligations. (Paragraph 32)
4. It is right to prioritise the decarbonisation of the electricity system because this is likely to deliver the most cost effective route to meeting our 2050 climate change targets. Although statutory carbon reduction targets are set out in the Climate Change Act 2008, these are economy wide, rather than sector specific. We conclude that providing greater clarity about the contribution that the power sector is expected to make towards meeting these targets would help to provide certainty to investors. The Government should set a 2030 carbon intensity target for the electricity sector in secondary legislation based on the recommendation of the Committee on Climate Change. (Paragraph 37)
5. We recommend that the Committee on Climate Change should be made a statutory consultee to the EMR delivery plan in order to assess whether the proposals are in line with legally binding carbon budgets. (Paragraph 38)
6. We further recommend that the Committee on Climate Change should be given a role in advising whoever is the Transmission System Operator in the development of the delivery plan to ensure that it is in line with legally binding carbon budgets. (Paragraph 39)
7. We recommend that Clause 1, subsection (1) of the Bill be amended to read "The Secretary of State may make regulations about contracts for difference for the purpose of encouraging low carbon electricity generation in order to achieve legally binding carbon budgets at least possible cost to consumers". (Paragraph 43)
8. We recommend that Clause 8, subsection (2) be amended to add "[...] (d) a 2030 target for carbon intensity of the electricity sector compatible with meeting statutory carbon budgets and the 2050 target (e) a reliability standard". We believe that setting a decarbonisation target should be a duty on the Secretary of State. However, the

current wording of Clause 8 (the Secretary of State “may” by order provide for [...]) suggests that the introduction of “other targets” would be at the Secretary of State’s discretion. Therefore we recommend that the Bill be amended to make this a statutory obligation within a fixed timeframe, possibly by way of further amendment to Clause 8. We note that a carbon intensity of the order of around 50gCO₂/kWh by 2030 is compatible with legally binding carbon budgets. (Paragraph 44)

9. We recommend that Clause 9, subsection (1) be amended to add “[...] (e) the Committee on Climate Change [...]” and that Clause 44, subsection (4) be amended to add “(d) the Committee on Climate Change”. (Paragraph 45)
10. We recommend that Clause 20, subsection (1) of the Bill be amended to read “The Secretary of State may by regulations make provision for the purpose of providing capacity to meet the demands of consumers for the supply of electricity in Great Britain, while achieving legally binding carbon budgets at least possible cost to consumers” (Paragraph 46)
11. We recommend that the long title should be amended to read “Make provision for contracts for difference and investment instruments in connection with encouraging low carbon electricity generation in order to achieve legally binding carbon budgets and provide security of supply at least cost to consumers [...]”. We recommend that the long title should be further amended to delete “contracts for difference” and insert “support mechanisms”. (Paragraph 47)
12. The draft Bill and its associated documents are fundamentally flawed by the lack of consideration given to demand-side measures, which are potentially the cheapest methods of decarbonising our electricity system. Responsive demand features only to a limited extent in the proposed capacity market, a subject we discuss in Chapter 5. Reducing overall demand, meanwhile, is entirely absent from the Bill. Indeed, the Secretary of State admitted to us that “there is a lot of work we should be doing and are doing on that”. We recommended, over a year ago, that “demand reduction should be placed at the heart of EMR”. It is completely unsatisfactory that DECC’s work was not completed in time to be published alongside the draft Bill. This suggests that DECC is still failing to give enough priority to ensuring that demand-side measures contribute to our energy policy goals. We are concerned that adding last-minute measures to an already pre-determined structure of a Bill may severely limit what can be achieved on demand reduction and management through EMR. (Paragraph 50)
13. We note that DECC’s draft report on capturing the full electricity efficiency potential of the UK identified approximately 155TWh of demand reduction potential in 2030 (which represents around 40% of total demand). Of this potential, current policy is estimated to capture only around 35%. We recommend that permanent end-use reduction in electricity demand should feature much more prominently in the Bill in order to realise some of the remaining 65% savings. (Paragraph 51)
14. We note the publication of DECC’s draft report on capturing the full electricity efficiency potential of the UK and recommend that measures to encourage permanent end-use reduction in electricity demand are included in the Bill. We

recommend an amendment to the draft Bill to provide the Secretary of State with powers to introduce a Feed In Tariff for energy efficiency, if this cannot be achieved through existing legislation. The Bill should also include stronger measures to encourage flexible, responsive demand, as we discuss in more detail in later recommendations. (Paragraph 58)

15. The EMR provisions as they stand are likely to undermine Ofgem's efforts to increase competition in the wholesale markets. We therefore recommend that the Government amend its current proposals to avoid the likelihood that they will lead to more- not less- vertical integration and consolidation in the market. (See Chapter 3). (Paragraph 64)
16. The Coalition Agreement states that "We will encourage community-owned renewable energy schemes where local people benefit from the power produced". However, the Renewable Obligation has not delivered community-owned schemes and the proposed CfDs are also unlikely to work for community schemes. A simple Fixed Feed-in Tariff would be a more appropriate form of support. We therefore recommend that this Bill provides for the Energy Act 2008 to be amended to allow for the eligibility threshold for small-scale FiTs to be extended to at least 10MW and potentially up to 50MW in size. (Paragraph 70)
17. We consider that suggestions that small suppliers might be exempted partially or wholly from obligations to post collateral have merit and recommend that the Government takes steps to ensure that small suppliers are not disadvantaged. (Paragraph 87)
18. We recommend that the Government abandons the multiparty concept and reverts to a single counterparty payment model, with a contract and counterparty design that is legally enforceable. (Paragraph 94)
19. The main purpose of the reforms was to reduce the cost of capital for investors. The nature of the counterparty will affect the cost of capital (see paragraph 97). In our view, a counterparty model that is underwritten by Government would be the best way to instil investor confidence and reduce financing costs. (Paragraph 95)
20. DECC must fully assess the implications of a single counterparty without government underwriting on suppliers' balance sheets and on the cost of capital before adoption of this model. This should include an assessment of what impact this model would have on smaller suppliers to ensure that this counterparty model would not threaten the viability of these businesses. (Paragraph 96)
21. We believe that the nature of the counterparty will have an impact on the cost of capital. DECC's claim that the nature of the counterparty would not affect the outcome of the Impact Assessment (IA) merely reflects the lack of sophistication in the original assessment, rather than the likely real-world impact on the cost of capital. (Paragraph 99)
22. DECC must update its methodology as well as the figures when revising the Impact Assessment (IA). The model needs to reflect real world approaches to capital pricing and should incorporate the impact of new risks on the cost of capital (including

counterparty risk, development risk, risks to credit ratings and basis risk). The IA should specifically address the issue of how Government-underwriting (or lack thereof) of the CfD counterparty affects investor risks and costs. (Paragraph 102)

23. Rationing the number of CfDs under the levy cap increases development risk. We recommend that DECC introduces a two-step or pre-registration process to give developers greater confidence that they will be able to obtain a CfD before reaching Final Investment Decision. (Paragraph 109)
24. The Government should clarify what will be defined as falling within the Levy Control Framework at an early date. (Paragraph 112)
25. It is essential that the Government makes clear how choices will be made by the agent allocating contracts, in particular in allocation between technologies. We recommend that reporting against the delivery plan should include details of commitments already entered into at FIDs or during FID-enabling discussions, and is transparent to other players in order to assist long term planning (Paragraph 113)
26. We recommend that in order to provide greater confidence to developers, Government should set out (a) the level of the funding that will be available under the Levy Control Framework until 2020, (b) whether the present rules on headroom will remain as they are or will be amended to provide more flexibility for levy allocation over the next spending period; and (c) whether the present mechanism of capping expenditure annually and longitudinally by line will be maintained or relaxed during the next spending period. We note the Committee on Climate Change's suggestion that funding available under the Levy Control Framework until 2020 should be around £8 billion in 2020. (Paragraph 115)
27. Auctions may be useful but they are not the only means to secure cost reduction. We recommend that DECC should learn from experiences overseas and consider setting out a planned reduction pathway for strike prices. This would guarantee a reduction in the level of subsidy paid by consumers over time. (Paragraph 117)
28. Access to market for independent generators under the CfD arrangements is an extremely serious issue that must be resolved before a Bill can be introduced. We recommend that DECC expedites its review of evidence on access to the electricity market for renewable generators to ensure that a solution to this issue is identified before the Bill is introduced to Parliament in the "autumn". (Paragraph 124)
29. We recommend that as part of its review of access to market for independent generators, DECC should examine the following options: introducing a buyer of last resort; introducing an incentive for suppliers to source energy from low-carbon generation; extending the micro-gen FiT to projects up to 50MW in size; and holding open the RO for new entrants in the event that the PPA market disappears. (Paragraph 128)
30. We are concerned that the proposed process for setting the nuclear strike price lacks sufficient transparency. The perception that decisions are being made "behind closed doors" could be highly damaging to the low-carbon agenda and may further undermine consumer trust in energy companies. It is essential that the negotiations

deliver, and are perceived to deliver, value for money to consumers. We recommend that an independent panel of experts should be appointed to oversee the negotiations and to report to Parliament on the adequacy of the outcome and value for money for consumers. (Paragraph 134)

31. Since there is little competitive pressure or prospect of moving to auctions for new nuclear, we are concerned that the strike price for nuclear could be driven upwards. We hope that industry claims that the cost of nuclear is competitive with other forms of low-carbon energy will be reflected in the offers they put forward during strike price negotiations. We do not believe that a nuclear strike price higher than that given to offshore wind would represent good value for money to the consumer. The Secretary of State should not agree to contracts of this nature. (Paragraph 136)
32. Government should provide clarity on the strike price level beyond 2017 as soon as possible in order to provide certainty and help secure investment for emerging technologies, such as wave and tidal power. (Paragraph 139)
33. We conclude that state aid as well as political considerations have influenced the design of the CfD package, and have caused policy and financial support for nuclear to be rolled up with that for renewables. Logic suggests that the Government should differentiate nuclear from other low-carbon technologies within an overall FiT regime. The Committee will consider further the building of new nuclear and its associated challenges later in the year. (Paragraph 145)
34. Given that the Government (and the Committee on Climate Change) see nuclear playing a key role in the future energy mix, Government should consider how carbon and security objectives could be delivered if no new nuclear is forthcoming. (Paragraph 146)
35. We share the concerns of many witnesses about the transparency of the FID-enabling process. Hinkley C is the first project to be considered under the process. We recommend that DECC ensures that any contract terms agreed are published as soon as possible. We also recommend that, as with setting strike prices under the CfD mechanism, an independent panel of experts should be appointed to oversee the investment instrument negotiations, and should report to Parliament on value for money for consumers (see paragraph 134). (Paragraph 153)
36. The deferral of a firm decision to implement a capacity market creates uncertainty and risks a hiatus in investment. The Energy Bill should be based on a clear Government position on the circumstances in which a market will be introduced, and how this will be reviewed and updated over time. The Government should set out an enduring reliability standard, which, along with a decarbonisation target for electricity, would provide a clear framework for the System Operator to work within when operating a capacity market. (Paragraph 164)
37. We are extremely concerned that the capacity market proposals are based upon out-dated assumptions and an insufficient analysis of the future risks to reliability. We recommend that the Government undertakes much clearer analysis of the problem that the capacity market is trying to solve, particularly the integration of the large volume of intermittent generation that is likely to be required to decarbonise our

electricity supplies, and of the role capacity payments can play in furthering demand side response and reduction measures. The enabling legislation in the Energy Bill must be able to meet our future reliability challenges. (Paragraph 171)

38. We recognise that a more thorough assessment of cost-effectiveness must await the publication of detailed capacity market proposals. DECC should conduct further analysis on the costs of the capacity market to ensure it is not significantly higher than alternative options such as a strategic reserve. The Government should clarify how the Energy Bill will ensure that the capacity delivered by auctions will have the appropriate characteristics, such as flexibility, and how this relates to the System Operator's existing system balancing role, in order to ensure that costs are minimised. (Paragraph 175)
39. As we recommend in paragraph 223, it is vital to have an understanding of the likely impact of EMR of the future role for gas generation. DECC should conduct modelling work to assess the combined impact of the capacity market and the EPS on emissions and security outcomes under different scenarios. This should include both a "dash for gas before 2015" scenario and a "no new gas before 2015" scenario (Paragraph 183)
40. We recommend that the Government, in its forthcoming Gas Strategy, considers the interrelationship between electricity market reform and the capabilities of the gas infrastructure, in particular the potential need for more gas storage. (Paragraph 184)
41. As innovative technologies, demand-side response and storage technologies should be recognised and defined explicitly in the Energy Bill. Support for innovation is given to the supply-side, for example by the banding of the Renewables Obligation, and the Bill should provide similar support to demand-side and storage technologies. DECC should investigate the legislative and other barriers to storage identified by our witnesses, and remove any that prevent it from competing fairly in the market. (Paragraph 191)
42. The Government should clarify how the capacity market will be made compatible with increased interconnection and the move to a more integrated European electricity market. (Paragraph 193)
43. We do not believe that it is appropriate for a private company—which is ultimately motivated by profit making—to act as the EMR delivery body. DECC's proposals for the System Operator to take on this role will result in considerable conflicts of interest for National Grid and could result in unnecessary additional costs to consumers. We recommend that National Grid should be removed from this role and replaced by establishing a new independent, not for profit company. (Paragraph 198)
44. The Government's intention to review the EPS in 2015 is another source of uncertainty for investors. It may even cause a "dash for gas" itself, if investors rush to build gas plant before the review. We are concerned that DECC's decision to grandfather the EPS until 2045 is not compatible with our long-term decarbonisation objectives. If too much new unabated gas-fired plant comes forward under these arrangements, future governments could be faced with a tough decision either to

miss the carbon budgets or to set an extremely high carbon price, which would ultimately increase costs to consumers. We recommend that a shorter grandfathering period commensurate with decarbonising the electricity system by 2030 should be adopted. (Paragraph 204)

45. CCS is a special case and it is important not to risk delaying or undermining the development of the technology. But DECC should ensure that the Bill provides sufficient safeguards so as to avoid the unintended consequence of undermining decarbonisation. There may be merit in the inclusion of a minimum proportion of emissions to be captured by CCS plants in clause. 37 (Paragraph 207)
46. We believe that any decision to exempt plant from the EPS on energy security grounds should be subject to Parliamentary scrutiny, even if this scrutiny has to be retrospective. (Paragraph 209)
47. In order to prevent this from happening, it may be necessary to consider pushing back the closing date for the RO (currently planned for 2017), for example to 2020, to reflect any slippage in the EMR programme. We note that an extension of the RO to enable slippage to be accommodated would not compromise the government's intention to combine underwriting for all low carbon technologies, since the date of 2018 as the year in which new nuclear power comes on stream has already slipped substantially. (Paragraph 211)
48. Delivery according to timetable is crucial if we are to meet our climate change and renewables targets and retain security of supply for 2020. We are extremely concerned that DECC's delivery timetable has already slipped, and that there is still a great deal of work that needs to be done to finalise the legislation. In addition, there is a risk that state aid clearance will delay the implementation of the new support measures. If questions about CfDs are not resolved swiftly, there is a real risk that new low-carbon projects in the pipeline will dry up, potentially jeopardising our 2020 targets. The Government must ensure that there are no further delays to the Bill and should aim for its formal passage in Parliament to be completed before the end of the current Session. If delays do occur, it may be necessary to delay closure of the RO in order to reflect slower progress in finalising the details of EMR. (Paragraph 213)
49. We do not believe that a backup plan is necessary at this stage. However, if DECC does not resolve the outstanding questions regarding the CfD payment model, allocation of CfDs and routes to market before the autumn, it may be necessary to consider keeping open the option to extend the RO and/or convert it into a PFiT. (Paragraph 216)
50. Some investors are concerned that there may not be sufficient acceptance among members of the public for the EMR proposals to be delivered successfully. There is therefore a fear that a future Government may renege on commitments as a result of political pressure from the electorate. This is driven by the perception in some quarters that the Government is failing to warn consumers about likely increases in electricity prices. In order to increase confidence, DECC should spell out the provisions for

recompense should the CfD be dismantled as the result of circumstances beyond its control. (Paragraph 220)

51. It is vital to have a clearer understanding of the likely impact of the EMR proposals on the future role for gas. We hope that the Government's forthcoming Gas Strategy will provide clarity about both the Government's vision for the role of gas in the electricity system, and how the EMR proposals will deliver this in practice. There would be merit in assessing the combined impact of the capacity market and Emissions Performance Standard on energy security and climate change objectives. We recommend that DECC conducts modelling work before introducing the Bill to investigate the combined impact of the capacity market and EPS on emissions and security outcomes under different scenarios. This should include "dash for gas before 2015" scenario and a "no new gas before 2015" scenario. (Paragraph 223)

Annex 1: Note from roundtable meeting

The Committee held a roundtable discussion with representatives from financial institutions on 25 June 2012. Participants represented a range of different types of organisation, including large collective investment schemes, commercial banks, private equity and infrastructure fund managers, and analysts.

The aim of the meeting was to explore some of the likely impacts of the Electricity Market Reform proposals in the Draft Energy Bill on investment decisions and to gain a better understanding of what changes (if any) would be required to secure the levels of investment that are needed to meet our low-carbon and energy security objectives.

The discussion covered a wide range of topics. A summary of the key points is given below.

Are the current proposals investable?

“I have not spoken to a single other investor who thought that the publication of the draft Bill was a positive step forward.”

“The policy is on its way to a train wreck.”

“There is an assumption that £100 billion will be invested in the UK. Where will this come from? [...] This question of where the money will come from has not come close to being addressed.”

Participants agreed that the EMR proposals in their current form were uninvestable. Two main problems were highlighted: first, the proposals are too complex, especially in comparison to the policy landscape in other countries like Germany. Second, participants had serious reservations about the proposed structure of the Contracts for Difference (CfDs) (See below).

Some participants thought that it should be possible to fix the problems with the draft Bill and believed that stopping the process now was likely to cause even more difficulties. Others were less optimistic about the prospects for the Bill, suggesting that at best it could be improved but that it would never work especially well.

Several participants also said that the proposals were based on the assumption that the money will be there and that it is just a matter of tapping in to it. They argued that this assumption was incorrect and that in fact, there was no evidence that the money will be there on the scale that is needed. It was noted that none of the big utilities across the EU are making plans to invest at the moment (beyond replacing existing assets) because their “balance sheets are broken”. Therefore we are asking them to “go from zero investment to massive investment”, which is unlikely to work.

Government engagement with the finance community

“DECC doesn’t listen properly.”

“It feels like there are different departments with different agendas. It feels unwieldy.”

“From the outside it looks as if the CEO and the Finance Director are disagreeing. Who wants to invest against that?”

Whilst participants observed that there had been quite a lot of discussion with DECC, frustration was expressed about the nature of the engagement, per se. One participant suggested that their discussions with the Department often seemed to be at cross-purposes, while another felt that their conversations did not appear to flow through properly into conclusions.

Another frustration was that there is not enough detail available on the proposals, particularly the structure of the CfD. Participants said it was not sufficient for DECC to promise more detail at a later date because there was a danger that by passing the Bill now, we could lock ourselves into channels that have not been properly thought through and which could therefore cause significant problems further down the line.

Very few of the participants had spoken to the Treasury. There was agreement that although it had not really been necessary in the past, the Treasury should now be more actively engaging with the investment community.

There was a perception that communications between government departments was poor and that in fact there may be some conflicts between agendas. This situation creates uncertainty and risk for investors.

Making CfDs work

“The synthetic counterparty must be changed. Access to a CfD must be changed. Access to market must be changed.”

“If it had a government counterparty, it could possibly deliver.”

“The problem of route to market means this is a Bill for the big boys. [...] It won’t work for the little people. [...] Small generators will be wiped out.”

“Some risks are binary; if there is no counterparty, we won’t invest.”

Three big problems with the CfD model were identified:

- The majority of participants agreed that they had originally been led to believe that the CfD would be guaranteed by the State. The shift towards a new “synthetic” counterparty model has introduced significant problems. None of the participants thought that the model as currently planned would be bankable. This was because there was uncertainty about whether it would be legally enforceable and because it was seen as being too complex for big investors.

- Participants also noted that developers could not be certain that their project would get a CfD. It was suggested that there was a balance to be struck between handing contracts to anyone who said they wanted to develop a project and only awarding a contract at the point of final investment decision. It was suggested that the solution would lie somewhere between these two extremes.
- Route to market is also a concern. It is not clear whether all projects will be able to achieve the reference price. One participant suggested that the outcome of the proposals as they are currently formulated would be that smaller scale players would be squeezed out, leading to greater vertical integration in the market.

Some participants were not convinced that the CfD model would attract investment and argued that ultimately, the State would need to put its balance sheet behind big investments. There was also some support for a Regulated Asset Base model as an alternative.

Capacity mechanism

Although many participants liked the idea of a capacity market in principle, some felt that it was difficult to design a mechanism that worked well for anything other than large, diversified utilities.

Political leadership

“I don’t believe DECC’s figures on the costs to consumers.”

“The reality is to achieve our climate change and security targets, we have to pay. [...] we need to be honest about the cost.”

“There is a need for political leadership. If government wants investors we need to see the government standing behind its decisions and to have a discussion with citizens about proposals for energy sector. If the discussion is fair and open we will trust their word is true. If not we will put you in the same box as the European bailout countries – we won’t believe what you say.”

Some participants expressed strong concerns about the messages that Government is giving to consumers about the likely impact of EMR measures on energy bills. There was scepticism about DECC’s published figures on future costs to consumers, although it was acknowledged that it is very difficult to predict costs because they depend on commodity prices. One participant noted that it was even more difficult to forecast the costs of new nuclear because so few have been built in recent years.

Participants explained that this was a concern for investors because it introduces political risk – if consumers are not willing to pay the additional costs for decarbonisation and energy security, then Government may be forced to renege on its commitments. Some participants highlighted the example of Spain, where a tariff debt accumulated “because no-one wanted to tell consumers they had to pay more on their bills”.

The future role of gas

There was some disagreement about whether investment in gas was likely to come forward. Some participants believed that the investment case was strong, particularly because Great Britain will need peaking plant in the future. Others, however, pointed out that investment in gas at the moment is difficult because the spark spread is currently zero. In addition, there were concerns that the CfD might crowd out gas in the future and therefore clarity was needed about the non-regulated part of the market (i.e. the part not covered by CfD, capacity payments or Emissions Performance Standard).

The future role of renewables

There was some disagreement about future prospects for the renewables industry. One participant noted that share prices in several listed renewables manufacturers had fallen dramatically in the last few years. Another noted that some investment funds in London were now closing down. However, others did not accept this view, and noted that at a global level, investment in renewables was healthy. They suggested that while the current economic climate has reduced demand for renewables in Europe at the moment the sector is not in inexorable decline.

There was also disagreement about whether the cost reductions that had been achieved to date in technologies like solar PV and onshore wind meant that now was a good time to invest in renewables; or whether although moving in the right direction, further cost reductions were necessary.

There was a further disagreement about the impact of renewables on electricity system costs. One participant suggested that the additional costs associated with providing backup generation for intermittent renewables would lead to higher system costs. However, another participant argued that this would only be the case if the mix of generation was wrong. In addition, having an optimum mix of generating technologies would take away costs associated with the volatility of fossil fuel prices.

List of participants

1. Richard Budgett - RCM; analyst covering global utilities
2. Julian Wolfson - Odey Asset Management - fund manager
3. Daniel Roberts - Marshal Wace Asset Management; fund manager
4. Maurizio Carulli – AXA IM – Resources and Utilities Analyst
5. Graham Taylor - L&G - analyst covering UK utilities
6. Cornelia Furse - Fidelity International - analyst covering pan Euro utilities
7. Vantil Charles - Capital International - credit analyst
8. Verity Mitchell HSBC
9. Jose Lopez HSBC

10. Monica Merli, Moodys
11. Peter Atherton, Citi
12. Nick Gardiner, Low Carbon Finance Group
13. Shaun Kingsbury, Low Carbon Finance Group
14. Kirsty Hamilton, Low Carbon Finance Group
15. Ian Temperton, Climate Change Capital
16. Orlando Finzi M&G Investments
17. Anne Wade - Capital International - fund manager
18. Tim Yeo MP
19. Barry Gardiner MP
20. Dan Byles MP
21. John Robertson MP
22. Laura Sandys MP
23. Sir Robert Smith MP
24. Dr Alan Whitehead MP
25. Albert Owen MP
26. Dr Robert Gross, Specialist Adviser
27. Professor Derek Bunn, Specialist Adviser
28. Sarah Hartwell-Naguib, Clerk
29. Áine Ni Bhreasail, Committee Specialist
30. Jenny Bird, Senior Committee Specialist
31. Sarah Williams, Office of Tim Yeo MP

Annex 2: Proposed amendments in conventional format for consideration during Committee Stage:

Clause 1, page 1, line 7, after “low carbon electricity generation”, insert ‘in order to achieve legally binding carbon budgets at least possible cost to consumers.’

Clause 8, page 4, line 30, at end add—

‘(d) a 2030 target for carbon intensity of the electricity sector compatible with meeting statutory carbon budgets and the 2050 target; and

(e) a reliability standard.’

Clause 9, page 4, line 38, at end insert—

‘(e) the Committee on Climate Change, and’²⁹⁶

Clause 20, page 13, line 14, after ‘Great Britain’, insert ‘, while achieving legally binding carbon budgets at least possible cost to consumers.’

Clause 44, page 35, line 40, at end insert—

‘(d) the Committee on Climate Change.’

Long title, page 1, leave out from ‘Make’ to ‘for establishing a capacity’ and insert ‘provision for support mechanisms and investment instruments in connection with encouraging low carbon electricity generation in order to achieve legally binding carbon budgets and provide security of supply at least cost to consumers;’.

²⁹⁶ A drafting amendment would also be required to change the existing 9(1) (e) to 9(1)(f)

Formal Minutes

Tuesday 17 July 2012

Members present:

Mr Tim Yeo, in the Chair

Dan Byles
Barry Gardiner
Ian Lavery
Dr Phillip Lee
Albert Owen

Christopher Pincher
John Robertson
Laura Sandys
Sir Robert Smith
Dr Alan Whitehead

Sir Robert Smith declared the following interests:

Shareholding in Rio Tinto; mineral extraction and Shell Transport and Trading; oil-integrated.

Mr Tim Yeo declared the following interests:

Director of ITI Energy Limited; suppliers of gasification equipment; Director AFC Energy; company developing alkaline fuel cell technology; Director Eco City Vehicles plc; and Chairman of TMO Renewables Limited. Shareholdings in AFC Energy (share option) and Eco City Vehicles plc.

Mr Tim Yeo also declared a non-pecuniary interest as the President of the Renewable Energy Association.

Draft Report (*Draft Energy Bill: Pre-legislative Scrutiny*), proposed by the Chair, brought up and read.

Ordered, That the draft Report be read a second time, paragraph by paragraph.

Paragraphs 1 to [237](#) read and agreed to.

[Annexes](#) and Summary agreed to.

Resolved, That the Report be the First Report of the Committee to the House.

Ordered, That the Chair make the Report to the House.

Ordered, That embargoed copies of the Report be made available, in accordance with the provisions of Standing Order No. 134.

Written evidence was ordered to be reported to the House for printing with the Report (in addition to that ordered to be reported for publishing on 24 May, 12, 19 and 26 June, 3 July, and 10 July.)

[Adjourned till Tuesday 4 September at 10.00am]

Witnesses

Tuesday 12 June 2012

Page

Keith Anderson, Chief Corporate Officer, Scottish Power, **Ian Marchant**, Chief Executive of SSE, and **Sara Vaughan**, Director of Strategy & Regulation, E.ON UK

Ev 1

Vincent de Rivaz CBE, Chief Executive Officer, EDF Energy, **John McElroy**, Director of Policy and Public Affairs, RWE npower, and **Sarwjit Sambhi**, Managing Director of the Power Generation, Centrica

Ev 13

Tuesday 19 June 2012 (Morning)

Dr David Kennedy, Chief Executive, Committee on Climate Change, **Professor Catherine Mitchell**, Professor of Energy Policy, University of Exeter, **Professor David Newbery**, Emeritus Professor of Economics, University of Cambridge, and **Simon Skillings**, Senior Associate, E3G

Ev 25

Ian Temperton, Head of Advisory, Climate Change Capital, **Nick Gardiner**, Senior Director, Energy and Infrastructure, BNP Paribas, on behalf of the Low Carbon Finance Group, **Shaun Kingsbury**, Partner Hudson Clean Energy Partners, on behalf of the Low Carbon Finance Group, **Gaynor Hartnell**, Chief Executive, Renewable Energy Association, and **Gordon Edge**, Director of Policy, Renewable UK

Ev 35

Tuesday 19 June 2012 (Afternoon)

Asif Rehmanwala, generation and Trading Director, Ecotricity, **Ed Gill**, Head of External Affairs, Good Energy, **Andy Taylor**, Energy Markets Group Director, InterGen, **Gordon MacDougall**, Chief Operating Officer, Renewable Energy Systems UK and Ireland Ltd, **Dr Steve Riley**, Chief Executive Officer and President, UK-Europe, International Power Plc, and **Jonathan Smith**, Head of Pricing and Risk Management, First Utility

Ev 45

Rhian Kelly, Director of Business Environment, CBI, **Richard Hall**, Head of Energy Regulation, Consumer Focus, **Paul Steedman**, Senior Campaigner, Friends of the Earth, **Dustin Benton**, Senior Policy Adviser, Green Alliance, and **Nick Molho**, Head of Energy Policy, Climate Change Team, WWF UK

Ev 54

Tuesday 26 June 2012 (Morning)

Nick Winsor, Executive Director, and **Mark Ripley**, Project Director, Electricity Market Reform, National Grid

Ev 64

Tuesday 26 June 2012 (Afternoon)

Rt Hon Edward Davey MP, Secretary of State, **Charles Hendry MP**, Minister of State, **Kathryn Wood**, Bill Team Manager, **Jonathan Brearley**, Director, and **Simon Virley**, Director General, Energy Markets and Infrastructure, Department of Energy and Climate Change

Ev 79

List of printed written evidence

1	Correspondence between the Chair and DECC	Ev 107, 108-111, 116-117
2	Correspondence between the Chair and House of Lords Delegated Powers and Regulatory Reform Committee	Ev 107-108
3	Correspondence between the Chair and the Treasury	Ev 111-115
4	RES	Ev 117
5	Consumer Focus	Ev 123
6	E3G	Ev 127
7	Renewable UK	Ev 130
8	Friends of the Earth	Ev 137
9	SSE	Ev 151, 232, 238
10	National Grid	Ev 155, 158
11	EDF Energy	Ev 161, 165
12	Climate Change Capital	Ev 167
13	E.ON UK	Ev 168
14	Green Alliance	Ev 172, 241
15	Centrica	Ev 176
16	RWE npower	Ev 178, 184
17	WWF UK	Ev 187
18	InterGen	Ev 193
19	Renewable Energy Association	Ev 198, 203
20	CBI	Ev 206
21	Low Carbon Finance Group	Ev 211
22	Good Energy	Ev 217
23	Professor Catherine Mitchell and Bridget Woodman	Ev 221
24	Scottish Power	Ev 227
		Ev 232

List of additional written evidence

(published in Volume III on the Committee's website www.parliament.uk/treascom)

1	Campaign to Protect Rural England	Ev w1
2	Alex Henney	Ev w3
3	Office for Nuclear Regulation	Ev w8
4	EEF	Ev w11
5	Stag Energy	Ev w14
6	RSPB	Ev w26
7	Global Warming Foundation Policy	Ev w28
8	Statoil UK Limited	Ev w29
9	Carbon Capture and Storage Association	Ev w31, 175
10	Chris March	Ev w33
11	Andrew ZP Smith	Ev w34

12	Greenpeace	Ev w37
13	Association for the Conservation of Energy	Ev w50
14	Co-Operatives UK	Ev w50
15	2Co Energy	Ev w52
16	Which?	Ev w54
17	Aquamarine Power	Ev w58
18	Nuclear Industry Association	Ev w61
19	Confederation of UK Coal Producers	Ev w62
20	Barrie Murray	Ev w64
21	Drax Power Ltd	Ev w66
22	Peter Jones, OBE, Ecolateral Ltd	Ev w69
23	Institute for Public Policy Research	Ev w71
24	Energy UK	Ev w74
25	Scottish Renewables	Ev w79
26	Somerset County Council, Sedgemoor District Council and West Somerset Council	Ev w84
27	ABB	Ev w86
28	Statkraft	Ev w89
29	Banks Group Ltd	Ev w94
30	Air Products	Ev w98
31	Combined Heat & Power	Ev w101
32	Calor Gas Ltd	Ev w106
33	Tom Greatrex MP, Shadow Energy Minister	Ev w108
34	Oil & Gas UK	Ev w110
35	DONG Energy	Ev w112
36	Ofgem	Ev w115
37	Electricity Storage Network	Ev w118
38	National Energy Action	Ev w120
39	Engineering the Future	Ev w126
40	Dr David Toke	Ev w130
41	Seajacks	Ev w133
42	Andrew Mackay	Ev w134
43	Greater London Authority	Ev w137
44	Energy Technologies Institute	Ev w139
45	Energy Action Scotland	Ev w142
46	European Climate Foundation	Ev w143
47	Nuclear Free Local Authorities Steering Committee	Ev w148
48	Balfour Beatty plc	Ev w154
49	Nuclear Industry Safety Director's Forum	Ev w159
50	REG Windpower Ltd	Ev w161
51	TUC Clean Coal Task Group	Ev w163
52	Climatechangematters Ltd	Ev w165
53	Wood Panel Industries Federation	Ev w166
54	Vestas	Ev w167
55	Prospect	Ev w170

56	British Ceramic Confederation	Ev w173
57	KTI Energy Limited	Ev w178
58	Department of Energy and Climate Change	Ev w179

List of reports from the Committee during the current Parliament

The reference number of the Government's response to each Report is printed in brackets after the HC printing number.

Session 2010–12

First report	Emissions Performance Standards	HC 523 (807)
Second report	UK Deepwater Drilling—Implications of the Gulf of Mexico Oil Spill	HC 450 (882)
Third report	The revised draft National Policy Statements on energy	HC 648
Fourth report	Electricity Market Reform	HC 742 (1448)
Fifth report	Shale Gas	HC 795 (1449)
Sixth report	Ofgem's Retail Market Review	HC 1046 (1544)
Seventh report	A European Supergrid	HC 1040 (1684)
Eighth report	The UK's Energy Supply: Security or Independence?	HC 1065 (1813)
Ninth report	Solar Power Feed-In Tariffs	HC 1605 (1815)
Tenth report	The EU Emissions Trading System	HC 1476
Eleventh report	The Future of Marine Renewables in the UK	HC 1624
Twelfth Report	Consumption-Based Emissions Reporting	HC 1646
First Special Report	Low carbon technologies in a green economy: Government Response to the Committee's Fourth Report of Session 2009-10	HC 455
Second Special Report	Fuel Poverty: Government Response to the Committee's Fifth Report of Session 2009-10	HC 541
Third Special Report	The future of Britain's electricity networks: Government Response to the Committee's Second Report of Session 2009–10	HC 629

Session 2012-13

First Special Report	The Future of Marine Renewables in the UK: Government Response to the Committee's Eleventh Report of Session 2010-13	HC 93
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