Department of Energy & Climate Change

Annex A

Feed-in Tariff with Contracts for Difference: Operational Framework

November 2012

Contents

Executive Summary

1. The introduction of a Contract for Difference (CfD)[1] is a key part of the Government's Electricity Market Reform (EMR) programme, which aims to secure the significant investment required to replace the generation capacity closing this decade and deliver a secure, low-carbon electricity system. The Government is committed to achieving these outcomes in the least-cost way.

2. Low-carbon generation with a CfD will sell their electricity into the market in the normal way, and remain active participants in the wholesale electricity market. The CfD is a long term, private law contract that pays the generator the difference between an estimate of the market price for electricity (the 'reference price') and an estimate of the long term price needed to bring forward investment in a given technology (the 'strike price'). This removes generators' long term exposure to electricity price volatility, substantially reducing the commercial risks faced by these projects, encouraging investment in low-carbon generation at least cost to consumers.

3. Since the draft Operational Framework in July 2012 the Government has worked closely with the System Operator National Grid, industry and other interested parties to develop further the CfD design. This operational framework sets out the details for how CfDs will be allocated and the key contract terms. The draft delivery plan will set out draft CfD strike prices, a fully termed contract, and the detail of the allocation processes.

4. The Energy Bill contains the legislation necessary to enable the design and implementation of the CfD. This document sets out proposals on the key design features of the CfD and is accompanied at Annex B by a Heads of Term setting out major terms of the contract. Key changes since the draft Operational Framework are:

    - A single CfD counterparty body which will be a Government owned, limited liability, company;
    - A 'two stage' allocation process allowing early contract allocation and price certainty;
    - Government will introduce a compulsory levy on all licensed suppliers in Great Britain and Northern Ireland (the Supplier Obligation), which will be raised by the CfD counterparty body, to fund the CfDs;

[1] This document refers to the 'Feed-in Tariff with Contracts for Difference' as the Contract for Difference, or CFD.

- The Government intends to exempt certain Energy Intensive Industries from the cost of CfDs, through the supplier obligation. The Government will define the scope of the exemption, including who will be eligible, and the mechanics for delivering it;

- The Government considers that the implementation of EMR – and CfDs in particular – will support the development of a competitive PPA market, and the Government will initiate a process to smooth the transition to EMR. The Government will also keep the PPA market under review and, to ensure that we can act in a timely way if necessary, we are seeking powers that would enable Government to act to reduce barriers to entry in the PPA market; and

- The Government is also seeking backstop powers in the Energy Bill to provide it with the flexibility to act to ensure market liquidity should industry actions and Ofgem reforms not secure the improvements necessary.

5. The table below summarises the design features of the Operational Framework which are discussed in more detail later in this document.

Design area	**Current position**
Price-Setting and Allocation	• Renewable strike prices will be issued and consulted on in the draft delivery plan in July 2013 and finalised by end 2013. • We will introduce a flexible allocation process which **delivers early contract allocation and price certainty for developers** whilst ensuring consumers are protected, through: a. Eligible projects being able to secure a CfD on proof of planning permission and an accepted network connection offer (or equivalent); b. CfDs issued on a first come, first served basis where allocation is anticipated to remain comfortably within the available budget (say, 50% of the budget remains unallocated); • Issued CfDs being subject to a substantive financial commitment milestone and a long stop date for delivery.
The Contract[2]	• The CfD will be a **private law, bilateral contract between the CfD counterparty and an individual low-carbon generator**.

[2] Chapter 3 of this annex provides a commentary on, and the rationale for, the key elements of the contract. It is supplemented by and refers to a separate 'Heads of Terms' for the contract which is set out at Annex B.

	The contractual arrangements should be largely standardised across technologies, but variations will be needed in some cases; • Projects that secure a CfD will gain access to **long term, inflation linked payments, removing wholesale price volatility;** • **Payments under the contract will be two way**, and pay the difference between the CfD strike price and reference price, for the volume of electricity produced by the generator; • The CfD will also provide investors with a **degree of protection against** certain **changes in law and regulation**. It will also set out a procedure for resolving disputes.
The CfD counterparty	• The CfD counterparty will be a Government owned limited liability company; • The CfD will be a private law bilateral contract signed by generators and the CfD counterparty; • The CfD contract is designed and set out by Government, not the CfD counterparty; • We anticipate that the running costs of the CfD counterparty will be met by industry and are considering the mechanisms for this.
Funding the CfD: Supplier Obligation	• The supplier obligation is a compulsory levy on all licensed suppliers in Great Britain and Northern Ireland; • The Government intends to exempt Energy Intensive Industries from the cost of CfDs, through the supplier obligation. The scope of this exemption will be subject to consultation and it will be subject to state aid clearance; • The Government is seeking views on the proposed approach to the supplier obligation on suppliers through a call for evidence.
Power Purchase Agreements and Market Liquidity	**Power Purchase Agreements** • The Government will also keep the PPA market under review and will continue to explore regulatory options with market participants in response to changes in the Power Purchase Agreements (PPAs) market; • To ensure that the Government can act if necessary we will seek

	powers in the Energy Bill to make modifications to electricity supply licences for the purpose of reducing barriers to entry associated with the PPA market. **Liquidity** • Ofgem is currently taking forward reforms to improve liquidity and we support its objectives and expect further progress shortly. The Government believes that regulatory intervention may be justified and that Ofgem remains the primary vehicle for delivering this. • However the Government is seeking backstop powers in the Energy Bill to provide it with the flexibility to act should industry actions and Ofgem reforms not secure the improvements necessary to support competition and effectively deliver EMR.

Document Overview

- Section 1 provides an overview of the legal and institutional framework, outlines the high level features of the design of the CfD regime, and includes a summary of the 'developer journey' as it moves from planning a project through to operation.

- Section 2 sets out the process to be followed by developers in order to secure a generic CfD and the principles informing the design of the allocation process.

- Section 3 sets out the framework of terms and conditions on which CfDs will be issued and outlines the principles behind them. The Government is also publishing a Heads of Terms alongside this document (Annex B). A table introducing the content of the Heads of Terms can be found at Appendix A to this document.

- Sections 4 and 5 provide details on the supporting institutional framework, the establishment of the CfD counterparty and the development of the supplier obligation, including the intention to exempt Energy Intensive Industries from the cost of CfDs.

- These five sections together constitute the CfD Operational Framework which will now be used to inform the development of the final terms of the CfD and the allocation rules which, alongside the delivery plan, will provide the basis for the first allocation of CfDs once the EMR arrangements are implemented in full.

- Section 6 outlines the need to ensure that the wholesale electricity market functions effectively, is liquid and is accessible to independent developers. A response to the call for evidence issued in July 2012 on the barriers to securing long-term Power Purchase Agreements for independent renewable generation is also presented.

- Section 7 explains how the Government's interventions in the electricity market are expected to evolve, and sets out the intention to transition towards greater competition for CfDs and the eventual return to a market that can support low-carbon investment without direct Government intervention. The Government's approach for stakeholder engagement to further develop the proposals and enable implementation in 2014 is also set out.

1. Introduction

6. This section provides an overview of the legal and institutional framework underpinning the CfD scheme, sets out the key design features of the scheme and includes a summary of the 'developer journey' as a developer moves from planning a project through to securing a CfD and generating low-carbon electricity.

7. The section also provides a summary of potential market reforms which may be required to support the EMR programme, including the results of a recent call for evidence on the difficulties faced by independent generators in accessing the market. Finally, there is a summary of the Government's longer term vision for the electricity market.

The Energy Bill: The Legal Framework for the CfD

8. The Energy Bill will establish the legal framework that will underpin the implementation and operation of the CfD scheme. In particular, the Bill will:

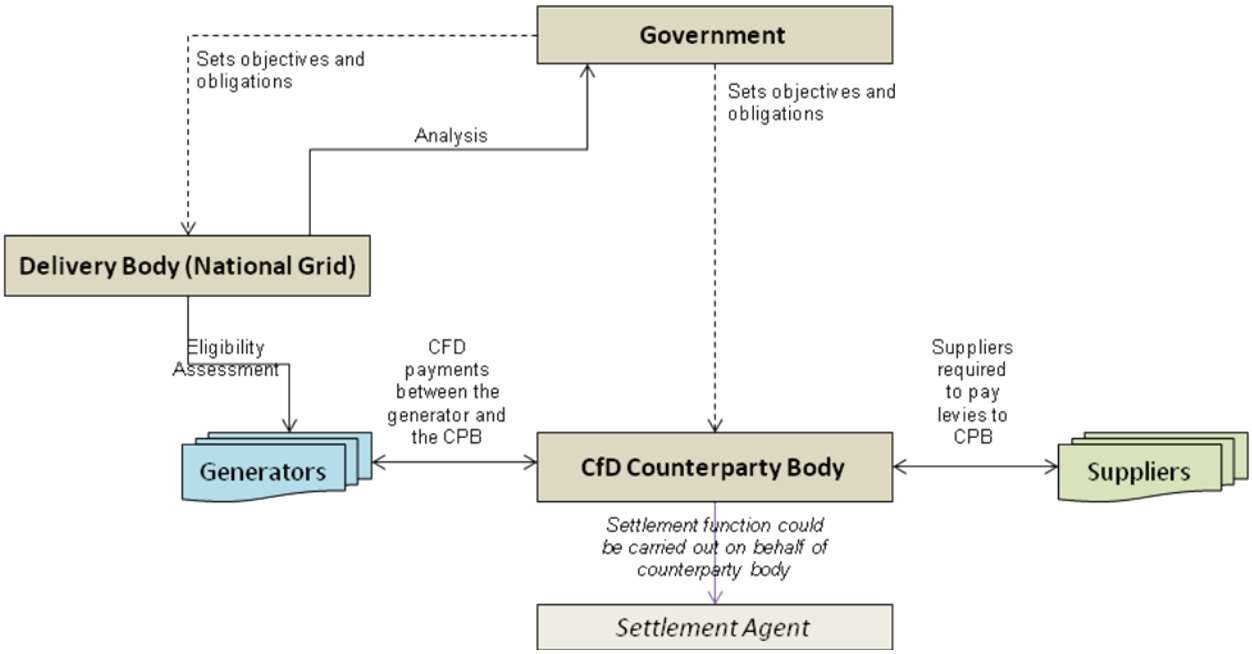
   a. Enable the Secretary of State to designate a company or a public authority to act as the counterparty **('the CfD counterparty')** to each CfD (and establish the duties of that counterparty);

   b. enable the Secretary of State and 'the System Operator' (National Grid acting as the delivery body) to issue a direction to the CfD counterparty to enter into a CfD contract with eligible generators;

   c. require the Secretary of State to provide for an obligation on electricity suppliers **('the supplier obligation')** to make payments to the CfD counterparty so that it can make payments to generators under CfD contracts; and

   d. provide a power for the Secretary of State to set maximum costs and targets relating to CfDs, for example to prevent the issuing of further CfDs where these costs may be breached.

Figure 1: Key institutional and legislative framework



9. The Energy Bill and the associated regulations will establish the institutional framework (illustrated in the diagram above) that will give effect to the CfD. The key features of this framework are:

   a. The System Operator will:

      i. administer the Government decisions on CfD strike prices and the amount of low-carbon generation for which to contract in a given period; and

      ii. run the CfD application system and determine an applicant's eligibility to receive a CfD (or otherwise) against set criteria.

   b. The CfD counterparty will:

      i. enter into contracts with eligible generators which contain obligations on both parties to make payments; and

      ii. administer the payment scheme, including the collection of the supplier obligation. The CfD counterparty may administer the flow of monies to electricity suppliers to CfD generators and vice versa itself or may use a 'settlement agent'. References to a settlement agent within this document should be taken to mean the CfD counterparty or a settlement agent working on the counterparty's behalf.

6. The Energy Bill will also provide transitional powers to enable the Government to issue early CfDs – referred to as 'investment contracts' – to developers. The process for working with developers on this issue is referred to in this document as the Final Investment Decision (FID) enabling process. Any investment instrument issued under the FID Enabling process

and the CCS Commercialisation Programme will initially be entered into by the Secretary of State. These contracts will subsequently be transferred to the CfD counterparty to be managed under the framework set out above.

The Developer Journey

7. The following paragraphs summarise the key elements of the developer journey as a project seeking to benefit from the CfD regime[3] moves from planning through to operation.

The pre-allocation phase

8. Well ahead of the first allocation of CfDs, the Government will set the overall budget and the CfD strike prices (for renewables, informed by evidence and analysis from the System Operator). The System Operator (in its capacity as delivery body) is commissioned as described in the Appendix to Annex E that accompanies this document to undertake this analysis. Its analysis will include modelling the impacts of CfD strike prices for renewables reflecting the Government's objectives and future projections of the likely low-carbon generation capacity requirements. It will do this by collecting and using the appropriate evidence and information. The CfD strike prices for renewables will be published by the Government in the first EMR delivery plan by the end of 2013 (subject to Royal Assent), and in annual updates thereafter[4]. The Government will also consider any potential wider economic and environmental impacts as appropriate when taking decisions on CfD strike prices for renewables.

9. The Government will define the principles for the allocation process to be run by the System Operator. This will include the criteria on which the system will move from allocating CfDs on a 'first-come-first-served' basis to allocation using rounds, auctions or other competitive processes, and the mechanisms used to remain within the existing Levy Control Framework and the budget determined by the Government.

10. In advance of the full implementation of EMR, and the allocation of CfDs using the above process, developers of low-carbon generation projects can approach the Government and seek additional comfort, where this is necessary to avoid delaying or deferring investment. This is referred to as the Final Investment Decision Enabling (FID Enabling) process.

[3] In the near term, this will be most renewable projects. The Government is continuing to develop options for the CfD allocation and price setting processes that will apply to CCS and nuclear projects, and will provide further detail on these processes alongside the Delivery Plan in July 2013. The allocation process for nuclear and CCS projects will follow the principles set out in section 2 ("CfD price setting and allocation") but the actual steps and timelines may vary to reflect the different technology and development characteristics.

[4] More information on the Delivery Plan process is set out in Annex E Delivering EMR

The allocation phase

11. Generators will be able to apply for a CfD at an early stage in their project development. For example wind projects will be eligible at the point that they have secured planning permission and accepted a network connection offer (if applicable). Other renewable projects may require different hurdles that give equivalent levels of certainty to the Government that the projects are likely to progress to construction. The equivalent hurdles for CCS and nuclear plant are still under consideration, but will reflect the different cost and development profiles of these technologies.

12. Each generator will specify a target date by which it intends to commence generation of a given volume of low-carbon generation capacity. If the System Operator determines that the project is eligible and affordable within the available budget, it will require the CfD counterparty to offer a CfD to the generator[5]. The delivery commitments will be included within the contract terms. Within a set period after contract award, the generator will provide evidence that it has made a significant financial commitment to the project, effectively demonstrating good progress in the project's development.

13. The terms on which CfDs will be issued will be set out in a standardised contract based on the principles set out in this document and the Heads of Terms at Annex B. For certain contract provisions, it will be necessary to provide for some variations on a technology-specific, or similar, basis (e.g. to reflect the different characteristics of intermittent and baseload generation). Whilst investment contracts are expected to broadly follow the same principles as CfDs, there may be some necessary differences reflecting the fact that the full EMR framework is not yet in place.

The construction phase

14. Generators will then work to commission their project within the 'Target Commissioning Window' (TCW), prescribed in the CfD. The duration of the TCW will be set by the Government, to reflect the practical realities of developing each technology, and provide developers with an appropriate degree of flexibility during the construction phase. Once a project can generate electricity, a developer can then nominate when – within the TCW – payments under the CfD should start, allowing them to either commence payments when projects are part-completed, or wait for when the full capacity of the project is ready.

15. Generators that commission after the end of the TCW still benefit from the strike price set out in the CfD, but have the term of the CfD reduced to reflect the length of the delay in commissioning beyond the end of the TCW. Failure to commission by a Long Stop Date leads to the termination of the contract; releasing budget for other projects to proceed.

[5] It is also the Government's intention that the Secretary of State will able to negotiate CFDs for certain projects directly, rather than them being allocated through the generic process.

Limited protection will be available to developers, to provide cover against certain delays in commissioning resulting from a Force Majeure event.

The generation phase

16. The plant generates and sells electricity in the market in the normal way (through long-term contracts with suppliers, or by selling through electricity markets). The developer will then either receive or make payments under the CfD, depending on whether the electricity price in the reference market is below or above the CfD strike price. This flow of payments removes long-term price volatility from developers, reducing financing costs, and reducing costs to consumers.

17. The CfD supports the simplification of Power Purchase Agreements (PPAs), as developers that require the assurance of a fixed (or minimum) price for their generation, can achieve this through entering into the CfD. PPAs with developers holding CfDs will, therefore, no longer need to provide a price floor, or cover the cost of providing a fixed electricity price.

18. The CfD counterparty will collect payments from electricity suppliers to fund payments that are due to CfD generators. This arrangement will be supplemented by robust mechanisms to ensure investor confidence in CfD payments, including a requirement to post collateral and mechanisms for managing supplier default. In the case that CfD generators are making payments under the CfD, the counterparty will redistribute these to suppliers.

Reforms to support transparent pricing and access to market for independent generators

19. The large vertically-integrated energy companies and other existing participants in the market are making significant investments in the UK's electricity sector and will continue to play an important role over the coming years. These companies cannot, however, deliver all the investment that is needed to meet the Government's objectives. It is critical, therefore, that the market is open to the widest possible range of investors and that the market framework supports different business models.

20. As well as attracting investment, low barriers to entry in the market drive competition, innovation and diversity; it is therefore in consumers' interest to achieve a broad investment base, including from new entrants and independent developers.

21. Market participants who are not vertically integrated need to be confident that they can manage risks associated with independent development at reasonable cost, including that there is an effective route to market for their power and an ability to manage their balancing risks.

22. The Government is, therefore, committed to ensuring that the EMR programme reforms are supported by action to deliver:

a. Sufficient liquidity in the forward, day-ahead and intra-day markets that ensures that all market participants have appropriate risk management and trading opportunities;

b. Power Purchase Agreements (PPAs) that facilitate independent generators' access to market, with PPA discounts that reasonably reflect the cost of managing their imbalance; and

c. Reference prices that reflect supply and demand fundamentals in order to provide reliable investment and operational signals, and ensure that payments under CfDs are not being manipulated.

Liquidity

23. There have been some recent improvements in day-ahead liquidity with increased volumes providing enhanced transparency[6]. Ofgem's analysis shows, however, that forward market liquidity remains low. Ofgem continues its work to improve liquidity in forward markets, and is expected to set out its position and next steps shortly. The Government supports this work, and sees Ofgem's process as the vehicle for delivering improved liquidity.

24. However, given the long-standing nature of this issue and its importance to the delivery of the Government objectives (including EMR), it is important that the necessary improvements are made. The Government is, therefore, including in the Energy Bill powers that will enable it to act in order to improve wholesale market liquidity as a backstop if Ofgem is unable to secure sufficient progress from industry.

Call for evidence on PPAs

25. Independent renewable developers have raised concerns about the current difficulties they face in securing bankable long-term contracts (Power Purchase Agreements or PPAs). PPAs are typically required to satisfy lenders that key risks are being managed, and therefore support the financing of projects at lower cost.

26. In response to these concerns the Government published a call for evidence[7] on 5 July 2012, seeking to build the evidence base for policy development in this area. The call for evidence closed on 16 August 2012. The evidence received broadly supports the views of

[6] http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=281&refer=Markets/RetMkts/rmr

[7] http://www.decc.gov.uk/en/content/cms/consultations/call_ren_inves/call_ren_inves.aspx

the independent generators that the market has shifted in recent years, and that generators are securing PPAs on terms that are not as beneficial as they used to be.

27. It is not clear, however, that the problems in today's market are likely to endure, particularly in light of the significant reforms that are proposed in the Energy Bill, including the introduction of CfDs, and the significant support offered to developers of low-carbon generation.

28. Indeed, there are good reasons to believe that conditions in the PPA market will improve when EMR is implemented. In particular, the introduction of CfDs lowers the risks faced by developers and makes it easier for suppliers to offer PPAs, supporting competition in the PPA market. The transition to EMR will also reduce the current levels of uncertainty affecting the PPA market, including that arising from the valuation of Renewables Obligation Certificates (ROCs).

29. The Government is committed to making the PPA market work, and supporting independent developers. In particular, it recognises that the move from the Renewables Obligation to the CfDs is a significant one and that the structure of PPAs will need to change, to reflect the changes to the risk profile and the structure of CfDs. Without some support, this transition could temporarily increase costs and make it more difficult for independents to secure reasonably priced PPAs.

30. Consequently, the Government proposes to initiate work with independent developers, suppliers, potential aggregators and financial institutions to help prepare for the introduction of the CfD. This work should ease the transition to CfDs, reduce the risks of any delay in taking projects forward, and, more generally, reduce costs. This 'market-led' process will provide an important impetus to the transition to the CfD and will produce key outputs including 'model' PPA contracts suited to CfDs and a voluntary code covering issues such as price transparency.

31. The Government will also keep the PPA market under review as EMR is delivered and, in particular, will consider the results of the first allocation of CfDs to identify whether there are further steps that are needed to support independent developers. To ensure that the Government can act in a timely way, should it be necessary, the Government will seek powers in the Energy Bill that would enable modifications to electricity supply licences for the purpose of reducing barriers to entry associated with the PPA market. These powers could be used to impose obligations on suppliers to participate in the market in certain ways if the PPA market does not develop as anticipated.

Long-term vision

32. The Government is committed to delivering against its decarbonisation objectives and maintaining security of electricity supplies, and to do so at least cost to the consumer.

33. For CfDs, this means progressively introducing more competition into the allocation and price-setting processes. As technologies mature, and the number of potential developers becomes greater than the level of deployment required, more competitive price-setting processes – such as auctions or tenders – will be introduced. Initially, this will be on a technology-specific basis, and could take place as early as 2017 for some renewable technologies. The ambition is to move to the next phase, in which there will be technology-neutral auctions, in the 2020s.

34. This will support the Government's longer-term ambition to move to a market where low-carbon technologies can compete on an equal footing, where emerging technologies are mature enough and the carbon price is sufficiently robust to allow all generators to compete without intervention, and without the need for CfDs.

Next steps

35. Although this document sets out the full CfD operational framework, some elements of the design are still being developed, notably: the setting of initial strike prices; the development of the detailed allocation rules; the appropriate contract milestones for each technology type; and the drafting of the final CfD contract terms.

36. The price-setting process for renewable technologies for the period to 2018 is already under way, with the System Operator having issued a call for evidence on 9 October 2012 to review technology cost and deployment potential assumptions and to understand the difference in investment decisions under the Renewables Obligation and CfD[8]. The information obtained in this process along with the existing RO data will be used by the System Operator, together with information on the CfD terms and the impact on the cost of capital, in its analysis which will inform the Government's decisions on strike prices. These will be published in the draft delivery plan in July 2013 for consultation. The Government will consider potential wider economic and environmental impacts as appropriate when taking these decisions.

37. For nuclear and CCS projects, the Government is continuing to develop options for the CfD allocation and price-setting processes that will apply after the FID Enabling window and the current CCS Commercialisation Programme competition close. Further detail on these processes will be provided alongside the draft delivery plan in July 2013.

38. The detailed Heads of Terms at Annex B provides a basis for the final contract terms. The Government will now use this document to support engagement with stakeholders on key

[8] http://www.nationalgrid.com/uk/Electricity/Electricity+Market+Reform/index.htm

issues underpinning the CfD arrangements, in order to turn the Heads of Terms into the fully termed CfD contract which will be published in July 2013.

39. The Heads of Terms should be read alongside this document, which provides commentary on the policy objectives, the general approach and the rationale behind the drafting of the provisions in the Heads of Terms.

2. CfD price-setting and allocation

Summary Box

- CfDs will be allocated on a first come, first served basis while there is expected to be sufficient headroom in the overall budget envelope.
- Developers will be able to apply for a CfD at an early stage; for example, wind developers can apply once they have received planning permission and have agreed a network connection.
- Once the CfD is secured, the developer must prove significant financial commitment to moving the project towards construction, within a set period.
- Developers identify a Target Commissioning Date, which will then determine the technology-specific Target Commissioning Window (TCW).
- Developers can nominate CfD payments to start at any point within the TCW (assuming the satisfaction of certain conditions).
- If a project is able to generate prior to the TCW, the developer can sell into the market but CfD payments will not start until the Target Commissioning Date or the start of the Target Commissioning Window if that is earlier.
- If a developer commissions beyond the TCW, the term of the contract will reduce by the length of any delay; providing a proportionate penalty for late delivery.
- If a project does not start by the long-stop date the CFD counterparty will terminate the contract. Developers could, however, then reapply for a new CfD.

Introduction

40. This section sets out how prices will be set for CfDs and how developers can secure a CfD. The principles underpinning the Government's approach to allocation and price-setting for all low-carbon generation are to:

    a. **minimise** costs **to consumers** by,

        i. improving the price-setting processes used under the Renewables Obligation; and

        ii. allowing for a transition to competitive price-setting in the medium term;

b. **reduce costs to developers** by allowing them to secure a CfD at an early stage in their project's development; and

c. **support the Government's decarbonisation objectives,** by ensuring that CfDs are allocated to credible projects, and placing meaningful incentives on developers to develop their projects in a timely fashion.

41. For the avoidance of doubt, the systems and processes for CfD strike price-setting and CfD allocation outlined in this section are the 'generic systems' which in the near term will apply to the majority of renewable energy projects.

42. While the price-setting and allocation processes for nuclear and CCS projects will follow the principles set out above, the actual steps and timelines may vary to reflect the different technology and development characteristics. The Government is continuing to develop options, and will provide further detail alongside the delivery plan in July 2013.

43. Where investment contracts are issued through FID Enabling or through the CCS Programme, the approach to price-setting will be dependent on the technology and the scale of investment; but could include prices negotiated directly with individual developers, or prices set through appropriate competitive price-setting processes, or the Government could draw on published strike prices.

Summary of the generic price-setting and allocation processes

44. Generic price-setting and allocation processes will apply to the majority of renewable energy projects. CfD strike prices will initially be set administratively by the Government (as is the case under the Renewables Obligation) and published in the EMR delivery plan. In time, the administrative process will be replaced with competitive price-setting.

45. During the administrative phase, CfD strike prices will be published in the first EMR delivery plan in 2013, for each technology, and for each of the five commissioning years from 2014/15 to 2018/19 (see Annex E for more detail). This will provide developers with early clarity about these strike prices, enabling them to assess potential project returns and make informed decisions about whether to invest in pre-development.

46. Awarding contracts to highly speculative projects could jeopardise the delivery of the Government's decarbonisation objectives and absorb part of the CfD budget that could be better used by more credible projects, ultimately increasing the costs to consumers of meeting the Government's objectives. Reflecting this, the CfD allocation process will include eligibility requirements for all applicants which will prevent highly speculative projects from securing CfDs. These requirements will not, however, be so onerous that investors are deterred from entering the market.

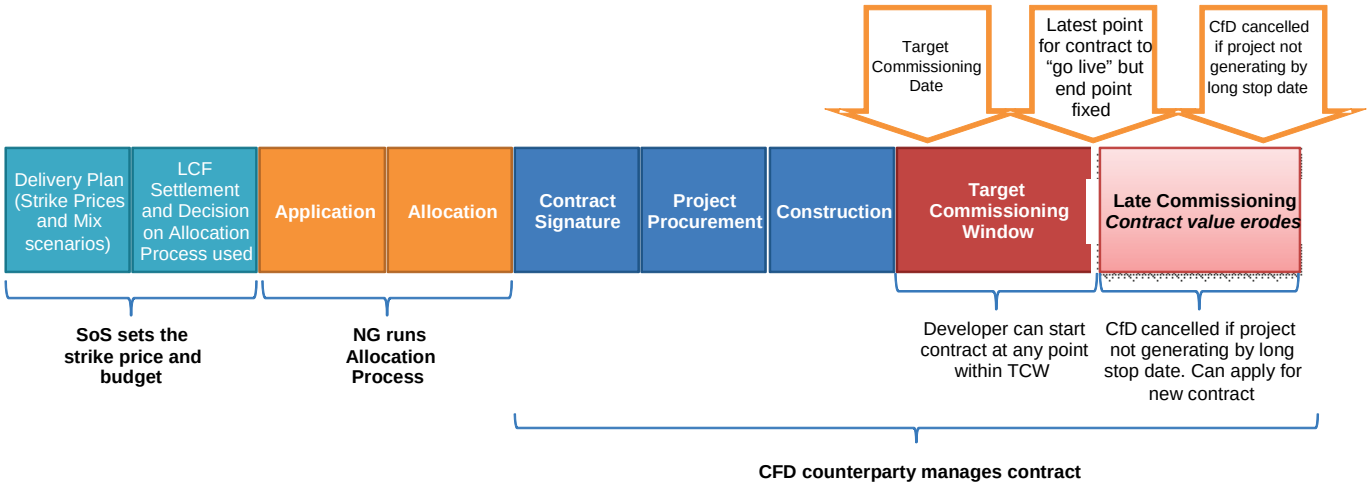
47. The Draft Operational Framework[9] set out the Government's proposal for a CfD allocation process involving a single, relatively high, eligibility threshold that required developers to reach financial close at the point of securing a contract. This approach allowed the Government to be confident that CfDs would be issued to viable projects that would contribute to renewables and decarbonisation targets. However, feedback from the Energy and Climate Change Committee, developers and investors has highlighted that making financial close a pre-requisite to securing a CfD could deter investment in project development, due to the significant financial and time commitments needed before a CfD is entered into.

48. Following discussions with stakeholders and further analysis, the Government has identified an alternative approach to the CfD allocation process that provides developers with earlier certainty of CfD award whilst managing the risk of non-delivery for Government and consumers by ensuring that developers will have started making significant progress and financial commitment to delivering the project. Under this approach, developers will be able to apply for CfDs at a much earlier stage, well-ahead of financial close. For example, for a wind project, a CfD could be obtained once a developer has successfully achieved planning permission and has accepted a grid connection offer (where an offer to connect is required). Other technologies will have eligibility requirements that are similar in magnitude but may change as appropriate. However, to mitigate the risk that projects secure CfDs but do not then proceed to construction and operation in a timely manner, the contract will place obligations on developers to commence generation in a reasonable time frame. The Government is continuing to work with stakeholders to identify and mitigate any new or additional risks posed by this change in approach.

49. The diagram below provides a summary of the allocation process.

[9] http://www.decc.gov.uk/assets/decc/11/policy-legislation/EMR/5358-annex-b-feedin-tariff-with-contracts-for-differe.pdf

Figure 2: The allocation process.



The administrative price-setting process

50. The CfD strike prices will be set to reflect the construction and operating costs of each technology, and also to reflect the risks facing investors, which determine the cost of attracting finance to fund projects. The CfD removes long-term electricity price uncertainty from projects, in order to lower costs to developers and to consumers. Consequently, the strike prices will be set to reflect the lower cost of raising finance (i.e. the lower cost of capital) that the CfD aims to facilitate.

51. The System Operator, National Grid, will conduct analysis to inform the Government's decisions on renewables strike prices, which will draw on the data collected in the recent Renewables Obligation Banding Review. This process is now underway: the System Operator issued a call for evidence on 9 October[10] which includes a request for additional data to help inform price-setting for renewable projects commissioning from 2016 and information on other relevant economic assumptions which will inform the analysis required for the first EMR delivery plan.

52. The terms of the CfD will ultimately determine the risks faced by developers and, consequently, the cost of financing projects. Reflecting this, Government has issued a 'Heads of Terms' for the CfD – set out in Annex B – which will enable market participants to begin to develop their view of the risks associated with the CfD, and use this to inform their response to the call for evidence. The publication of the final CfD in 2013 will allow developers to refine further their views on risk allocation and provide further inputs to the

[10] http://www.nationalgrid.com/uk/Electricity/Electricity+Market+Reform/index.htm

price-setting process, through the formal consultation on draft strike prices. More information on the delivery plan process is set out in Annex E.

53. Renewable strike prices will reflect both the market costs of building and the deployment potential of each renewable technology, informed by the analysis undertaken by the System Operator. This analysis will involve modelling of the electricity market. In the Appendix of Annex E, the Government has commissioned this analysis from National Grid and set how the analysis will carried out based on this model to examine the impact of different strike prices on deployment and Government's objectives.

54. The Government will appoint a Panel of Technical Experts to review and report on the System Operator's analysis and ensure that the System Operator's process is robust.

55. The Secretary of State will determine the strike prices that support the achievement of the objectives being pursued through EMR, in consultation with the Devolved Administrations, and having been informed by the evidence and analysis from the System Operator, and the report from the Panel of Technical Experts and any other relevant evidence as appropriate on, for example, potential wider economic and environmental impacts[11]. The proposed strike prices will be published in the draft EMR delivery plan, which will be subject to formal consultation.

56. Final strike prices for renewable technologies will be published in the EMR delivery plan by the end of 2013, subject to Royal Assent, alongside the final details of the allocation process, and more information about the transition to more competitive forms of allocation and price-setting. This will provide developers with the information that they need to allow them to prepare for the allocation of the first CfDs, which will take place during 2014. These timings are summarised below in Section 7 on Next Steps.

The allocation process

57. This section discusses: the criteria which projects must meet in order to be eligible for a CfD; the process that developers will follow to apply for a CfD; and the proposed approach to allocating CfDs across different low-carbon technologies, whilst remaining within the budget envelope.

Eligibility

[11] Note that CFD contracts will be available in Northern Ireland for projects commissioning from 2016. The first delivery plan will contain UK wide strike prices for renewables that will give an indication of the strike prices in Northern Ireland. Confirmed strike prices for Northern Ireland will be in the 2015 annual update and could vary from the strike prices in the rest of the UK if there are any the differences in the Irish and GB markets.

58. The Draft Operational Framework, and earlier Electricity Market Reform publications, set out that new CCS and nuclear generation, as well as those types of renewable generation which are currently able to receive support under the Renewables Obligation (RO), will be eligible for CfDs.

59. Projects that are able to receive support under the small scale Feed-In Tariffs (FITs) will not be eligible for CfDs.[12]

60. Renewable energy generation already accredited under the Renewables Obligation will not be permitted to transfer to the new CfD regime. Developers of new projects will be able to progress their projects with a view to entering the RO but switch and apply for a CfD, so long as this application is made before the projects are accredited for the RO.

61. In line with the policy intent to provide new renewable generation with a one-off choice of scheme the Government is minded that existing RO-accredited co-fired units that convert to full biomass after CfDs become available, will be provided with a one-off choice between support under the RO biomass conversion band or support under CfDs.

62. Consequently, CfD eligible generation will include conversion of individual boilers (in line with RO policy announced in the July 2012 publication).[13] Further details on eligibility and the choice of scheme will be set out in the forthcoming consultation on the RO transitional period when generators will be able to choose between the RO and CfDs. This transitional period will run from when CfDs first become available (expected mid 2014) until closure of the RO to new generation on 31 March 2017.

63. CfDs could in principle be used to support generation that is located outside of the UK. Generators outside of the UK should have access to CfDs, where there is a clear overall benefit to the UK and it is technically possible to effectively implement and enforce CfDs in other jurisdictions. Reflecting this, the access by non-UK generation to CfDs is likely to take the following form:

- as far as possible, non-UK projects should be accommodated within existing or developing policy and regulatory frameworks;
- the CfD would be awarded to the generation project, with the connection to the UK market regulated separately;

[12] http://www.decc.gov.uk/en/content/cms/meeting_energy/renewable_ener/feedin_tariff/feedin_tariff.aspx

[13] The publication set out the eligibility requirements for the biomass conversion band, which is for combustion units in co-firing generating stations that convert to 100% biomass (excluding up to 10% fossil fuel which may be used for permitted ancillary purposes, such as emission control). RO-accredited co-firing units that move to enhanced co-firing but do not achieve conversion to full biomass will not be permitted to chose to generate under CfDs. This policy position reflects the need to balance maintaining support for expanding cost-effective generation with a process that delivers stability for the RO mechanism.

- the contract terms should, as far as possible, reflect those for domestic projects, while noting that there is likely to be a need to include additional provisions to ensure the contract can be enforced in full, that regulatory issues are addressed and to ensure UK consumers are protected. Such provisions may be more onerous than in the standard CfD; and

- Joint projects[14] should be able to apply for an administratively set strike price.

64. There are a number of issues still to be resolved, notably relating to contract design and regulation of the transmission connection. The Government will initially focus on establishing arrangements for projects that can directly connect to the UK networks, either exclusively or in addition to their home network, noting that there is a need to explore further the benefits and risks of projects that are not exclusively connected.

65. More generally, the Government will give further consideration to how the CfD framework can be applied to non-UK generation, including changes that might be needed to the contract, and would welcome views from stakeholders on this issue. Ofgem is separately considering regulatory issues relating to the transmission connection through its Integrated Transmission Planning and Regulation project (ITPR), within the broader context of the North Seas Countries Offshore Grid Initiative, and we would encourage interested parties to engage with Ofgem's planned ITPR consultation next year.

66. The Government continues to assess the potential for renewables trading following this summer's call for evidence on the issue. The Government will continue to engage with the sector, and will provide further clarity in this area in the coming months.

Applying for a generic CfD

67. The System Operator in its capacity as the EMR delivery body, will be responsible for administering the application system for the CfD[15]. The System Operator will assess projects against the eligibility criteria and administer the allocation process for CfDs and – after determining which projects are eligible and within the budget envelope - will instruct the CfD counterparty to offer to enter into CfDs with successful projects.

[14] Joint projects under Articles 7 – 10 of the Renewables Directive are whereby a new offshore or onshore renewable energy project in one Member State can be co-financed by another Member State and the 'renewable value' of the energy can be shared between the two. This form of trade between Member States may take place with or without any accompanying physical flows of energy, but if there was no physical flow then it would likely take the form of a statistical transfer. Joint projects for renewable electricity can also occur between a Member State and a third country (including Crown Dependencies), but only if the energy produced in the third country is imported into the EU.

[15] The SoS will have a power to instruct the CfD Counterparty to issue a contract in certain circumstances. Work is currently underway to determine when this power might be used.

68. Following discussions with stakeholders and having undertaken further analysis, the Government has amended the approach set out in the Draft Operational Framework, and will implement an allocation process that will provide developers with earlier certainty of CfD award by enabling them to apply for a CfD at an earlier stage in their project development. This means that CfDs will provide pricing certainty to developers much earlier than under the RO and earlier than under the Government's original proposals.

69. Reflecting this, project developers that wish to apply for CfDs will be required to provide the System Operator with the following:

    a. Eligibility: evidence that the proposed project is from an eligible generation technology and that the company proposing it is a legal entity that qualifies for the CfD scheme;

    b. Demonstrate that the project is at the right stage, e.g. for wind projects proof that planning permission has been obtained and a grid connection offer has been received and signed: a copy of the successful award of planning permission and a signed Grid Connection Offer that confirms that the grid will be developed at or before the 'Target Commissioning Date' will be required. The criteria will be further developed to ensure it is appropriate for all technologies.

    c. Capacity of the proposed generating facility: the size in MWs or GWs of the project that the developer intends to develop; and

    d. Target Commissioning Date (TCD): the date by which the project is aiming to commence operation.

70. The System Operator will use this information to confirm that the minimum requirements have been met for a CfD to be issued. The TCD will also determine the appropriate CfD strike price to be awarded to the generator, as set out in the most recently published delivery plan.

71. These are the minimum criteria that developers must meet in order to apply for and be eligible to receive a CfD. Developers can choose to make more progress in developing their projects before submitting their application for a CfD, if that approach enables them to better manage their risks and uncertainties.

The process for allocating generic CfDs: First-Come, First-Served and the transition to rounds

72. The Draft Operational Framework outlined three options for managing the award of CfDs:

    i. Allocate a proportion of the budget available to each technology – creating specific budgets for them and clearly indicating the extent of the market opportunity;

    ii. Operate a general pot of money for which all technologies can apply; or

iii. Adopt a hybrid model where most technologies have access to a general budget pot, but with a few technologies – those which are capable of rapidly progressing from conception through to commissioning or whose costs can rapidly fall - are subject to a separate budget.

73. After further consideration and discussion with stakeholders, the Government has decided to adopt the third, hybrid model. We believe this is the most appropriate means of addressing the unpredictable nature of a small number of renewable technologies without unduly constraining the allocation to the majority of renewables projects.

Technologies in the 'General Pot'

74. As set out above, the System Operator, in its capacity as the EMR delivery body will instruct the CfD counterparty to enter into CfDs with any generator that brings forward an eligible project and provides the supporting information outlined above. However, the Government's policies have to operate within a financial envelope and there may come a point at which there is greater demand for CfDs than the number that can be allocated under the available budget. In such circumstances there is a need for a process to ration the requests for CfDs to the available budget.

75. The Government will structure its available budget for CfDs to reflect the rates of deployment for different groups of renewable energy technologies. The majority of renewable energy technologies have relatively slow and predictable rates of deployment, and these projects should fall under one budget envelope – the 'General Pot'. Technologies that are capable of more rapid deployment – biomass conversion and solar – will need to apply under a separate ring-fenced budget. This section discusses allocation of CfDs within the 'General Pot'.

76. Notwithstanding the need to allocate CfDs within a budget envelope, the Government's intention is not to artificially restrict the allocation of CfDs, or to impose allocation processes that are unnecessarily costly. Reflecting this, when the System Operator has a high degree of confidence that the demand for CfDs in any given year will comfortably fit within the overall budget envelope, CfDs will be issued on a 'first-come-first-served basis'. Under this approach, developers can submit an application for a CfD at any time. This will ensure that developers have flexibility in when they can apply for CfDs, without needing to shape their project development process to meet the needs of a more restrictive allocation system. Government will provide the System Operator with the criteria to apply when assessing whether first-come-first-served allocation can take place and when to move to allocation rounds. The Government will continue to work over the next six months with National Grid, the CfD Expert Group, industry and others to develop the criteria, for inclusion and consultation in the draft delivery plan.

77. When the criteria for first-come-first-served allocation do not apply, the System Operator will instigate a process of allocating CfDs through allocation rounds. Government will set the criteria for switching to allocation rounds in a way that should mean that the switch takes place once a number of CfDs have been issued and once the budget envelope (set within

the Levy Control Framework for that year) available to future projects has been reduced. For example a move to allocation using rounds might occur when it is expected that there will be less than, say, 50% of the CfD budget left remaining for each delivery year once CfDs have been allocated over the next twelve months. We will continue to work with National Grid and industry stakeholders to develop the mechanism.

78. This will enable the System Operator to monitor and control the number of projects coming in to the system. It will ensure that there is an orderly process of securing CfD contracts, and will allow effective rationing when demand for CfDs exceeds the available budget. Government will work with the System Operator and other stakeholders to design the system of allocation by rounds used by the System Operator. The Government will need to ensure that the system minimises disruption to developers' project pipelines and also limits gaming risks.

79. Once allocation rounds are in use in the system, Government anticipates that the system might function as set out below:

    a. The System Operator will announce the move to allocation rounds.

    b. Allocation rounds will occur once every 6 months.

    c. Government anticipates an allocation round will take 3 months and during this period

        i. Projects will have 4 weeks to apply (in the application period);

        ii. Following the application period, the System Operator will have 2 weeks to assess the projects that have been submitted to check their eligibility;

        iii. If allocation to all the eligible projects would not exceed the available budget, then CfDs will be issued to all applicants; and

        iv. If allocation to all the eligible projects would exceed the budget envelope set by Government, an objective methodology will be applied to enable the System Operator to identify successful projects.

80. At this stage the dates are indicative. The Government expects to finalise the design details working with industry and others, and set the details out alongside the workings of the financial framework for CfDs in the draft delivery plan in July 2013.

Approach for technologies outside the "General Pot"

81. There are a handful of technologies that have the potential to have a disproportionate effect on the rate of spending by the Government under the CfDs. Some forms of low-carbon generation can be built particularly quickly (such as biomass conversion and solar) and so if the differential between biomass and fossil fuel costs changes markedly there could be a rapid change in the potential demand for CfDs, and the speed with which the budget

available to other projects is used up. Deployment rates for other low-carbon technologies could vary significantly if learning effects materialise more rapidly than anticipated and result in a mispricing of an administratively set CfD strike price. For example, solar technologies might fall within this second group.

82. Rather than include these technologies in the General Pot - and risk disturbing the overall allocation approach - the Government will set them a separate budget. While it is possible to have sufficient confidence that the CfDs for these technologies can be granted without exceeding the specified budget the Government aims to operate a first-come-first-served approach moving to allocation rounds when criteria set by Government are met. As with allocation rounds for renewables projects in the General Pot, if the cost of the projects entering the allocation round is likely to exceed the budget envelope set by Government then an objective methodology will be applied to enable the System Operator to identify which projects will be awarded a CfD.

Incentives to ensure the timely delivery of CfD generation

83. The CfD should place obligations on developers to build and commission their low-carbon generation within agreed timescales. This is necessary to enable the effective management of the costs of the scheme (including enabling suppliers to plan their customer tariffs) and to enable the Government to make a meaningful assessment of progress towards renewable energy targets as well as the overall rate of decarbonisation.

84. While moving to an allocation process that awards CfDs at an earlier stage in project development reduces the uncertainty faced by developers (as to whether they will secure a CfD, and at what strike price), it also means that Government and consumers are left with the risk that contracts may be awarded to highly speculative projects, which do not end up being built and therefore do not produce the low-carbon electricity that is desired, or do so only after significant delays.

85. To enable effective management of the costs of the scheme, assess progress in meeting renewable energy targets and the rate of decarbonisation, and mitigate the risk of speculative projects failing to deliver, each project will be subject to the following mechanisms:

    a. **'Evidence of Substantive Financial Commitment'**, effectively an obligation on the developer to demonstrate that they have made substantive financial commitment to the project by either spending a minimum amount on the development of the project within a designated period of entering into the contract or to demonstrate that a Final Investment Decision has been taken. Failure to do so would normally lead to the termination of the contract; Government is minded to implement this policy through a minimum spend amount.

b. **'Target Commissioning Window (TCW)',** which will be set around the nominated TCD in a prescribed manner, and within which the developer will need to build and commission the facility, in order to secure the full support of the CfD[16]; and

c. **'Long-Stop Date'**, which will be set based on the TCD in a prescribed manner, and by which time the developer is required to build and commission the facility, or have the contract terminated[17].

[16] The entitlement to receive payments under the contract (and conversely the obligation to make them) is conditional on the generator satisfying a number of conditions precedent. See chapter 3 'The Contract' for further detail.
[17] As above.

Substantive Financial Commitment

86. The objective of the Substantive Financial Commitment milestone is to provide the CfD counterparty with a means to assess whether a developer is committed to developing its project and to provide Government with assurance that the available budget will not be absorbed by highly speculative projects that fail to progress to commissioning. Where a developer fails to meet the milestone, the CfD counterparty will normally terminate the CfD, allowing the budget to be reallocated to other projects. The milestone will also provide an early signal to Government on the timely delivery of a project and gives confidence that the UK is making sufficient progress towards its decarbonisation and renewables objectives. Further information is provided in section 3, 'The Contract'.

Target Commissioning Window (TCW)

87. The Government will set TCWs on a technology-specific basis. These windows will constitute a prescribed period of time either side of the Target Commissioning Date (TCD), with the latter being nominated by developers as part of their application for a CfD. The length of the TCW will be set to reflect the practical realities of developing each technology group, and therefore may vary by technology. The TCW durations will be set out in the delivery plan.

88. The generator will not receive any payments under the contract until the first day of the TCW, even if it commences generation before that date, but will be free to sell its power and generate revenues in the normal way.

89. However, generators that meet the eligibility criteria set out in the contract (referred to as 'conditions precedent') and commence generation within or before their TCW, will be entitled to receive (and conversely will be obliged to make, as the case may be) payments under the contract for its full duration or 'payment term'. The developer will be able to nominate a 'start date' from which the entitlement to payments will commence, as long as this date falls within the window. That the duration of support will be 15 years for all renewable energy projects. Further detail on the duration of support and on conditions precedent is set out in section 3, 'The Contract'.

90. Where a project fails to either start generating or starts generating but fails to meet the eligibility criteria (i.e. the conditions precedent) before the expiry of the TCW, the payment term will start from the last day of the window, but the entitlement to receive payments will remain conditional on the generator building and commissioning the plant and satisfying these 'conditions precedent'. This means that the duration of the generator's CfD will reduce by an amount commensurate with the length of the delay up until the long stop date.

Long-Stop date

91. Where projects fail to commission ahead of the Long-Stop Date, the CfD counterparty will terminate the contract. In addition, the CfD counterparty will have the right to terminate the contract if it determines that the generator is unable to satisfy the conditions precedent

before the prescribed 'Long-Stop Date'. This will ensure that the budget available to support low-carbon generation is released from the stalled project and can be reallocated to other developers.

92. The Long-Stop Date will vary by technology, reflecting the operational characteristics of each technology type, in order to set it based on the timeline within which reasonably well-run projects would be able to commission. The longstop date will be set taking into account a desire to allow developers time to resolve delays which might normally occur in the construction process. We will work with industry over the next six months to ensure that both Target Commissioning Windows and Long-Stop Dates are set at the right points for the differing technologies. For inclusion and consultation in the draft delivery plan.

93. Projects that fail to commence generation by the Long-stop Date and have their CfD terminated will be able to apply for a new CfD. This may mean that the project has to enter a competitive price-setting process, may result in the project failing to secure a CfD, or may result in the project receiving a lower level of support than that offered in their initial CfD.

94. The Government is minded to provide limited relief from the consequences of failing to meet the milestones for demonstrating significant financial commitment, the TCW and Long-Stop Date, in the form of a force majeure provision. This provision will be finalised in light of the nature of the flexibility afforded by the above milestones, TCW and Long-Stop Date, and taking account of consequences to the developer of failing to meet each of these deadlines. We are also minded to provide some flexibility to reflect the risk of failure on the part of a Transmission or Distribution Network to delivert the agreed connection.[18]

95. This package of incentives provides a proportionate approach to mitigating the risk of late delivery, encourages developers to manage their project risks, and should not deter developers from bringing appropriate projects forward for support through the CfD.

Options for phased projects

96. Some large projects may not commission at a single point in time. For example, offshore wind projects may require more than one summer of good weather to build out all the turbines for the facility.

97. Under the Renewables Obligation regime the Government already allows offshore wind projects to benefit from phasing. The intention is to allow projects to phase under the CfD subject to them adopting appropriate metering arrangements.

98. There are two options for developers who wish to phase their project:

[18] This is based on the current regime as regards compensation for late connection. Should that regime change in future, we would review our position.

- the developer submits a single application for a number of separate CfDs, with each CfD covering an individual phase of the project, with a different TCD, and the strike price that relates to each of these TCWs/phases[19]; or

- the developer applies for a single CfD which covers the whole of the capacity from all of the different phases of the project. The developer then nominates a TCD that reflects the developer's own view of the TCW within which they would be able to commission the project's capacity.

99. Under either approach, the developer is able to nominate a date – within the TCW – on which payments (and the payment term) start, under each of the CfDs. This allows developers to nominate a date ahead of the completion of the project, and thus realise some early revenue. This cashflow benefit might help some developers to bring down the overall costs of financing the project.

Amending the capacity of project

100. The CfD application process requires the developer to set out the intended installed capacity of their project. The contract will place an obligation on the developer to deliver this agreed installed capacity. This commitment is necessary to enable the Government to manage the wider scheme, to have sufficient confidence in its forecasts of the rate of decarbonisation, the budgetary impacts of CfD support and the wider impacts on electricity system security.

101. However, recognising that there are occasionally circumstances that necessitate a change in the size of a project the Government is minded to allow a limited degree of flexibility to developers to adjust the contracted capacity of their projects.

102. The principal mechanism for developers wishing to increase their agreed installed capacity will be the ability to apply for an additional CfD. Allowing generators to increase the capacity of existing 'CfD projects' outside of this mechanism would make it increasingly difficult for the Government to manage the overall budget for CfDs.

103. As regards developers who wish to decrease their agreed installed capacity, the Government is minded that the CfD counterparty should have the right to permit limited downward reductions in capacity, subject to certain conditions. These would limit reductions in capacity to those resulting from physical, rather than commercial, factors. If projects were able to reduce the capacity of their projects for purely commercial reasons and without constraint, this would pose a risk to the Government's ability to use the available budget in the most effective way. In particular the Government is mindful of the risk of projects effectively

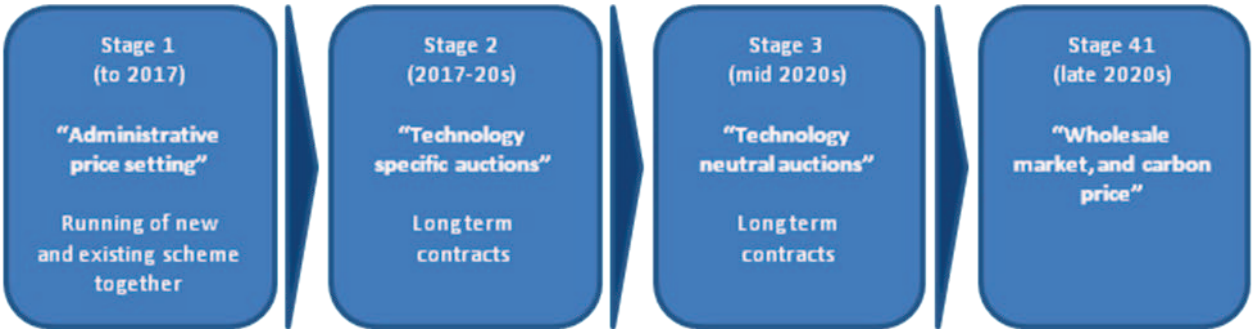
[19] The developer would specify what configuration of phases it would be prepared to accept in the event it was not allocated all those for which it applied

reserving (or 'bed blocking') the budget and unreasonably preventing other projects from progressing.

Transition to competitive price-setting

104. The Government has clearly stated its intention to move to a competitive price discovery process for all low-carbon technologies as soon as practicable. Introducing competition through tenders or auctions should enable strike prices to be set more efficiently and reduce the costs of achieving our decarbonisation objectives. The Government anticipates that the conditions for moving to technology-specific competitions for some renewables could be present as early as 2017 and it is possible that the system could move to technology-neutral processes in the 2020s.

Figure 3: Stages for transition to competitive price-setting



105. Given the EU 2020 renewables Target, and the different build times and stages of development of technologies, it is not deemed appropriate to set a hard deadline for transition to competitive price discovery for all renewables; instead a phased transition currently seems appropriate. It is therefore proposed to introduce competitive price discovery when this is consistent with our objectives.

106. In this context, the Government is mindful of the interaction between the number of projects that can be brought forward to support the UK in meeting the 2020 renewables target and the need for a sufficient number of projects relative to these targets in order to ensure that an auction/tender has a genuinely competitive outcome.

107. The Government will continue to work over the next six months with the System Operator (National Grid acting as Delivery Body), the CfD Expert Group, industry and other stakeholders to develop the approach to technology-specific, technology-neutral and competitive allocation processes. More information on these processes will be published with the draft delivery plan.

3. The Contract

Summary Box

- CfDs will be implemented by means of a bilateral private law contract between the generator and a single CfD counterparty. Contractual arrangements should be largely standardised across technologies, but variations will be needed in some cases.
- Payments commencing under the contract will be contingent on the generator meeting a milestone designed to ensure that construction commences in a timely manner and meeting a number of eligibility criteria (i.e. conditions precedent).
- Entitlement to receive payments under the contract will last for 15 years for renewables projects. The duration of support is to be determined for nuclear and CCS.
- Payments under the contract will be made on the basis of net 'green' electricity that is generated and available for sale. To mitigate the risk of spiralling negative prices, payments will be capped at an amount equal to the value of the contract strike price.
- The payment obligation on the single CfD counterparty will be conditional on it having received payments from electricity suppliers under the supplier obligation.
- The reference price for intermittent generation will be the hourly, day ahead, 'GB Zone' Price resulting from market coupling arrangements from 2013. Government is conducting more analysis to determine the reference price for baseload generation.
- The contract strike price will be fully or partially index linked to the CPI and adjusted accordingly on an annual basis. Where the reference price is forecast to exceed the strike price, the generator must provide collateral to the CfD counterparty.
- The contract will provide investors with a degree of protection against certain changes in law and regulation. It will also set out a procedure for resolving disputes, informally if possible, or otherwise by an independent third party.
- Generators will need to make formal warranties and undertakings on signing the contract and subsequently. The CfD counterparty will have the right in prescribed circumstances, where the generator is in material default, to terminate the contract.

108. The Government has decided to implement the CfD by means of a bilateral contract between the Generator and a single CfD counterparty (see Section 4).

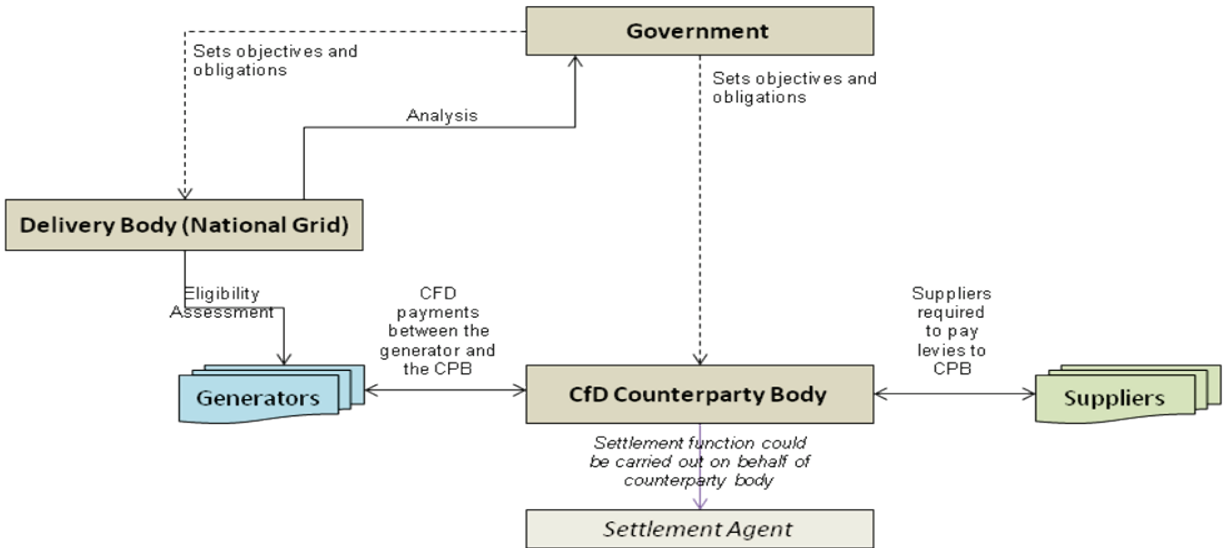
109. The implementation of the CfD by means of a legally binding, bilateral contract will give investors and generators greater clarity and earlier certainty as to the terms of the support offered by the CfD arrangements than was offered under the Renewables Obligation. The contract will be available before a developer has to commit a large amount of capital to the project, will be binding upon its execution, detailed in its terms and subject to limited and well-defined change provisions. Consequently, the overall structure of the CfD should lower project risks and, ultimately, reduce costs to consumers.

110. This section provides a commentary on, and the rationale for, the key elements of the contract. It is supplemented by and refers to a separate 'Heads of Terms' for the contract which is set out at Annex B. A table introducing the content of the Heads of Terms can be found at Appendix A to this document. By definition, the 'Heads of Terms' provide an outline of key contract terms and do not constitute a full form contract. Although detailed in several places, the text of the Heads of Terms does not represent definitive drafting of the contract's terms. The Government will develop the detail of the contract – within the framework proposed in this document – seeking input from stakeholders, with a view to publishing a final contract in July 2013. The final contract will be subject to the outcome of the legislative process which is needed to underpin the CfD arrangements and further work to establish the institutional arrangements supporting the contract.

Introduction

111. Figure 1 of this annex illustrates the key features of the institutional and legislative framework that gives effect to the CfD.

Figure 4: Key institutional and legislative framework



112. At a high level the key features of the contract are:

- It is a private law, bilateral contract between the CfD counterparty and an individual low-carbon generator. Government will not be a signatory to the contract or have any obligations under it;

- It can, and will generally, be entered into prior to the construction of the asset, but at a point at which developers have made a meaningful commitment to a project, such as after a developer has secured planning permission and has accepted an offer for connection to the electricity network[20];

- It will oblige both the CfD counterparty and the 'CfD generator'[21] to make payments, reflecting the two-way nature of payment flows under the contract. The CfD counterparty will, however, only be required to make payments to the generator to the extent that it has received the necessary funds from electricity suppliers under the terms of the supplier obligation, with any shortfall being accrued for future payment.

113. Payment under the contract will provide long-run electricity price stability to generators. The contract terms need to support that principal obligation and the design principles that have informed the development of the contract remain as set out in previous publications. These include ensuring that the arrangements: enable cost-efficient investment; manage costs to consumers; provide an efficient allocation of risk between generators and consumers; and are practical, both with respect to the management of the contracts and the need to adapt to potentially changing future market environments.

114. The Government remains of the view that the contractual arrangements should largely be standardised across different low-carbon technologies. This provides a stable basis for investment, and is aligned with the Government's longer term plan to deliver least cost decarbonisation by providing a framework in which technologies compete for CfDs. For certain contract provisions, it will, however, be necessary to provide for some variations on a technology-specific, or similar, basis to ensure that a range of low-carbon technologies can come forward at a reasonable cost and in a manner that reflects distinguishable differences in risk profile. For example, the Government considers that a degree of distinction should be drawn between intermittent plant and baseload plant, given their different characteristics and that variations are likely to be needed for early stage CCS projects.

115. Investment contracts entered into as part of the FID Enabling process may also require additional variation due to the timing of the agreement of such contracts. For example, they

[20] Where an offer to connect is required. Separate arrangements may be agreed for the FID Enabling and CCS Commercialisation Programmes.
[21] References to the "CfD Generator" includes developers, generators and investors

may require additional conditions precedent relating to state aid and enactment of the EMR legislative regime.

116. The Government remains of the view that any such variations should constitute an efficient allocation of risk, should represent value for money for the consumer, and should be consistent with State Aid requirements. At this stage however, the Heads of Terms provides a single framework of the principal terms and conditions that will be included in the CfD. The Government will determine the need for any variations as the Heads of Terms are developed into the full set of contract terms. The FID Enabling and CCS Commercialisation Programmes will inform the development of the contract as necessary and within the parameters set out above.

117. At this stage, the Heads of Terms assumes a single phase project. As noted in the previous section, the Government is developing options for structuring the CfD allocation process and contract terms to allow developers to bring their project into operation in a number of discrete blocks over a period of time. The Heads of Terms have also been prepared for simplicity on the assumption that the generator is a limited liability company incorporated in England and Wales. Variants will be considered in the context of the development of the final contract.

118. In terms of geographical coverage, whilst the general framework and approach set out in this document apply to generation assets to be located in the UK; at this stage, in case of doubt, the Heads of Terms and following commentary should be read as applying to the GB market. The Government will continue to discuss the development of the CfD with the Northern Ireland Executive in light of the ongoing review of its market arrangements. A Heads of Terms will be subsequently developed to reflect the Single Electricity Market in due course once there is more clarity on the nature of the new market arrangements. The intention of these discussions will be to ensure that the CfD is implemented in a uniform manner across the UK, whilst respecting any differences in market arrangements. CfDs will be allocated to Northern Irish generation commissioning from 2016.

119. We are also mindful of the changes that are taking place to the UK and EU financial regulatory regimes. In the next phase of the development of the contract and institutional framework, the Government will continue work to ensure that where necessary the CfD arrangements and institutions are fully compliant with all relevant regulations. Similarly, we will continue to work with the relevant authorities to clarify the accounting and tax treatment of the CfD arrangements.

120. Finally, the Government is bound by EU State Aid rules and is designing the CfD, as well as the rest of the EMR mechanisms and institutional arrangements, to be consistent with those rules. We will continue to work with the European Commission to ensure that our policies are compliant with State Aid rules. This is important to ensure that we have a stable and certain regime that has the confidence of industry and delivers best value to consumers.

The Contract Terms

121. This section sets out the contractual terms which have been divided into four basic categories. These are:

- **Commencement and Term** (the provisions relating to the start of the contract – from its execution[22] through to commercial operation of the asset – and its duration);
- **Payment** (the terms relating to the value (and frequency) of payments to be made under the contract, and associated metering and billing arrangements);
- **Change Provisions** (which allocate risk between the parties and provide mechanisms for adapting the contract as appropriate to changing market and regulatory environments); and
- **General Obligations** (in addition to the above, terms which commit the parties to a standard of performance and terms which deal with the breach by the generator of the CfD and the related consequences).

Commencement and Term

122. This subsection provides commentary on those terms of the contract which relate to the phases of the project from planning permission to the start of commercial operations. It also provides commentary on the duration of support provided by the contract.

123. As noted in the previous section 'CfD Price-Setting and Allocation' - low-carbon generation projects will be eligible for a CfD at a much earlier stage, for example, for wind, from the point at which they have obtained planning permission and have accepted an offer for connection of the facility to the transmission or distribution network[23]. This is in contrast to the Renewables Obligation where projects are required to successfully commission the facility in order to qualify for accreditation under the scheme.

124. Whilst allocating contracts at an earlier phase in the project's development provides additional certainty for developers and supports their ability to decide to invest in project development, it also means that the contract needs to: mitigate the risk of 'bed-blocking'; incentivise the developer to build the plant by a set date; provide a clear trigger point for payments under the contract to commence; and ensure that the consumer is only providing support for bona fide projects.

[22] The point at which it is signed by both parties.
[23] Where an offer to connect is required.

125. The Government's view is therefore that it is appropriate for the CfD counterparty to sign a contract with the developer at an early stage, provided that the contract:

a. places an obligation on the developer to demonstrate substantive financial commitment towards the construction and development of the facility within a set time period of signing the CfD, or otherwise risk termination of the contract;

b. provides that the developer's entitlement to receive payments under the contract (and, conversely, its obligation to make them) is conditional on the developer satisfying a number of 'conditions precedent' relating to successful commissioning and authorisation;

c. provides incentives for the developer to commission within a prescribed 'Target Commissioning Window'; and

d. permits the CfD counterparty to terminate the contract if these conditions are not met by a defined longstop date.

Evidence of substantive financial commitment

126. The contract should place an obligation on the developer to provide evidence that it has spent a minimum amount on *bona fide* construction and development of the project, or that the project has reached a Final Investment Decision (that cannot be readily reversed). The Government does not have a firm view at this stage on what constitutes acceptable expenditure for this purpose or the minimum expenditure required, or on the time period afforded to the developer to provide evidence in support of that spend, albeit that we envisage that this period could be around one year from entering into the contract. If the minimum expenditure has not been made by the designated time the CfD counterparty will normally terminate the CfD.

127. The Government will work with stakeholders and advisors as the Heads of Terms are developed into a final contract, in order to take a view on these points and their application to projects of different scales and technology types. In principle, the minimum spend amount should provide Government with a necessary degree of comfort that developers are appropriately incentivised and sufficiently advanced to deliver the project within agreed timescales, without making an impractical demand (for example, an unduly high minimum spend amount) of a reasonable and prudent developer.

128. Demonstration of such a commitment will allow Government to be comfortable with less onerous interim conditions in the contract relating to precise construction milestones; noting that developers will wish for flexibility on how they manage construction relative to the precise circumstances of the project and the prevailing conditions of the supply chain.

Conditions Precedent

129. Conditions Precedent are those conditions that a generator needs to satisfy to begin receiving payments under the contract.

130. The Government's intent in this regard is to ensure that consumer support is provided only for eligible low-carbon generation that has satisfied the necessary regulatory requirements and industry standards, and that can deliver the low-carbon electricity envisaged at the point the contract is allocated.

131. In line with this general objective, the contract provides that the right for the generator to begin receiving (and, conversely, its obligation to begin making) payments is conditional on the generator fulfilling a number of conditions (i.e. 'the conditions precedent'), including providing evidence to the CfD counterparty that it has done so. The generator will be required to satisfy these conditions within the target commissioning window in order to receive payments under the contract over its full term. If the generator cannot satisfy all of the conditions within this target commissioning window, the duration of support provided by the CfD will be reduced by a period of time commensurate with the generator's delay in satisfying those conditions.

132. The CfD counterparty will normally terminate the contract if the generator is unable to satisfy the conditions precedent before the prescribed 'long stop date' (as to which, see section 2, Price-Setting and Allocation, for further detail).

133. In general terms, the conditions proposed are largely aligned with existing compliance processes and so should not place significant additional requirements on CfD generators. The conditions include:

a. receipt of detailed planning permission and any other required permits and consents;

b. (for transmission connected generation) evidence that an Interim Operational Notification has been issued by the SO under the Grid Code Compliance Process;

c. (for distribution or private wire connected generation) evidence that the Distribution Code Compliance Process has been satisfied and, as applicable, confirmation that an Interim Operational Notification has been issued by the SO under the Grid Code Compliance Process;

d. evidence that the CfD Counterparty or any settlement agent acting on the CfD counterparty's behalf has the information it requires for the purposes of processing payments under the contract; and

e. confirmation that the installed capacity at the facility is not less than a very high proportion, say 95%, of the capacity agreed at contract signature.

134. It is important in the Government's view that the contract provides a reasonable and meaningful incentive on developers to commission the installed capacity as agreed at contract signature. This is necessary for the management of the wider CfD scheme, and to mitigate the risk that a developer might deliberately overstate its installed capacity in order to increase the likelihood that its competitors will not receive a CfD.

135. The Government's intent is not, however, to introduce a cliff edge for developers, for example where only a marginal shortfall in achieving the expected installed capacity could lead to termination of the contract. The Government acknowledges that the construction phases of projects can be long, and unforeseen events can arise which may affect the ability of the developer to commission the full agreed capacity, either at all, or before the long stop date. The Government is considering options to ensure that the contract provides developers with clarity but also flexibility on the consequences of failing to meet this condition, whilst still proving appropriate incentives to deliver the expected installed capacity.

136. The contract places a duty on the developer to inform the CfD counterparty as soon as an event occurs that is likely to change the eventual capacity of the constructed project. The CfD counterparty will have the right to waive the condition precedent and amend the 'contract volume' accordingly. These variations are likely to be subject to limitations that prevent increases in capacity above the agreed level, and which only permit significant reductions in capacity that result from physical – rather than commercial – factors.

137. The Government acknowledges the need to provide further clarity in this area and will engage with industry and other stakeholders with a view to developing firm proposals for inclusion in the draft delivery plan in July 2013.

Duration of support

138. This subsection focuses on the duration of support or 'payment term' provided by the CfD, being the period of time during which the generator is entitled to receive, or obliged to make, payments under the contract. This period will be reflected in the contract as the period of time:

from the earlier of:

a. the date on which the conditions precedent are fulfilled and the generator gives notice of its wish to begin the contract support, this date not being earlier than the first day of the Target Commissioning Window

and

b. the last day of the Target Commissioning Window

until:

c. the last day of the contract term.

139. In determining the duration of support provided by CfDs, the Government is mindful of the need to provide an appropriate balance between minimising the overall costs to electricity consumers, ensuring that the CfD scheme is affordable, and facilitating lower costs of capital. To inform this decision, the Government has carried out analysis focussing in particular on the impact of different CfD lengths on electricity consumers, the affordability of the CfD scheme, and investor financing structures and costs of investment.

140. In the Draft Operational Framework, the Government indicated that it was minded to set the duration of support provided by CfDs to renewable technologies at 15 years. The Government remains of this view and has not identified any issues which would require the duration of support to be varied to suit the needs of any of the renewable energy technologies currently deployed in the UK. Adopting a standard 15 year duration for renewable technologies is consistent with the Government's broader approach to ensuring that the terms of the CfD are largely standardised, provides a stable basis for investment and is aligned with the Government's long term goal of moving to competitive processes for allocating CfDs.

141. For Carbon Capture and Storage (CCS) projects supported under the Commercialisation Programme competition the duration of support for successful projects will either be 10 years, or such other period as determined under the competition process. For other CCS projects, analysis suggests that support under the contracts for new-build CCS-equipped generation plant should be at least 15 years in duration. The Government will keep this under review in light of developing CCS financing routes and mechanisms.

142. The Government will consider means to determine the appropriate contract length that will apply to nuclear projects following EMR implementation alongside its consideration of the allocation and price-setting processes.

Payment

The obligation to make payments

143. The contract will contain payment obligations on both the generator and the CfD counterparty. These obligations will not become effective until the generator has satisfied a number of conditions (see paragraphs above).

144. The CfD counterparty's payment obligations will be underpinned by legislation. To give comfort to generators that the CfD counterparty will be able to make payments under the contract, it will have significant credit-backing through the supplier obligation which will allow monies to be raised from licensed suppliers.

145. Reflecting the importance of ensuring that payments under the CfD scheme are robust, the arrangements will be further supported by:

a. supplier collateral;

b. loss mutualisation;

c. the supplier of last resort arrangement; and

d. a special administration regime for suppliers (see section 5: 'Funding the CfD: supplier obligation').

146. All these protections, taken together, will provide CfD generators with significant comfort that payments under their CfDs will continue throughout the life of the contract. However, to protect the CfD counterparty and the sustainability of the system, the contractual obligation on the CfD counterparty to make payment under the CfDs will be conditional on its having received payment under the supplier obligation and its immediate liability will therefore not exceed the amount it has received under the supplier obligation in respect of the contract.

147. It should be emphasised that this 'pay when paid' principle should not affect the overall amount of support due to a generator under the CfD. In most conceivable circumstances payments should be made.

148. In order to implement the 'pay when paid' principle, the Government is minded that:

a. the CfD counterparty should be obliged to make appropriate requests to suppliers (on the basis provided for by the supplier obligation regulations) to ensure that it has sufficient funds to make the payments due;

b. in the event of having received insufficient amounts under the supplier obligation (and if there is insufficient supplier collateral which can be accessed to make up the shortfall), the CfD counterparty would make payments to generators on a pro-rata basis to spread any shortfall evenly across CfD generators; and

c. in subsequent periods, the CfD counterparty would be obliged to request amounts to recover and so make good the accrued shortfall against the full payments to CfD generators.

149. These powers for, and obligations on, the CfD counterparty will be contained in regulations under the Energy Bill, rather than in the contract.

CfD 'difference payments'

150. The two-way 'difference payments' to be made under the contract will be based on price and volume variables. More precisely – for each 'settlement period'[24] – the 'difference amounts' will be calculated as the amount (in sterling) that is the product of:

a. the metered output of the plant; and

b. the difference between the (index linked) CfD strike price and the CfD reference price[25].

151. The actual amounts payable under the contract will be an aggregation of these difference amounts over a given 'billing period' – not likely to be more than monthly.

152. For payment purposes, the output of the plant will be capped by the 'contract volume'; that is, the maximum output (expressed in MWh per settlement period) that can be delivered by the contracted capacity (the level of capacity for which the contract has been allocated). As set out in the previous section, consumers should not provide support payments for any additional output resulting from additional project capacity which has not been allocated CfD support. Instead, developers would have the option of applying for an additional CfD to cover the additional capacity.[26]

153. The following paragraphs provide further detail on:

a. the price and volume variables;

b. payments in the event that the CfD reference price falls below zero;

c. the timing of payments; and

d. the contractual obligations on generators to provide collateral.

Defining metered output

154. Payments under the CfD will be made on the basis of net[27] 'green' electricity that is generated and is available for sale. This approach, relative to alternative options, better maintains the link between the support provided and the electricity produced, and reflects the Government's objective to decarbonise the power sector.

[24] Which may be each half hour, for example, as defined in the Balancing and Settlement Code.
[25] Further details on the reference price are set out later in this section.
[26] In practice, if the developer is allocated the CfD, this change could be implemented through a variation to the existing contract, avoiding the need for the project to hold two CfDs.
[27] To exclude the demand used directly by the power station, for example, for carbon capture equipment. This is similar to rules applied under the RO to determine the net eligible generation for RO payment.

155. As such, for the purposes of calculating payments under the contract, output will be defined as the 'loss adjusted net metered energy'. This would be scaled where appropriate to reflect low-carbon content in the case, for example, of eligible biomass co-firing or CCS-equipped plant. The Government is undertaking further work with the System Operator and will work with stakeholders to establish an appropriate mechanism for determining low-carbon content for these purposes.

Measuring metered output

156. For the vast majority, if not all, of the projects that will receive support under the contract, payment for loss adjusted net metered energy means that plant output would be measured at the network boundary point, and then adjusted for transmission or distribution losses to reflect the volume of electricity available for sale in the market. This process of measurement and loss adjustment is also used by Elexon for 'Balancing and Settlement Code purposes'.

157. The Government noted in the Draft Operational Framework that:

a. there are well established systems for measuring output and processing output data for various purposes; and

b. CfD volume should be based on the output recorded by 'BM units' with a multiplier to take account of transmission losses.

158. Since the Draft Operational Framework, Government has considered this issue further, informed by advice from the System Operator on the approach to the measurement of output from different CfD plants, ranging from large transmission connected plant to smaller distribution connected ('embedded') plant.

159. The Government is proposing that:

a. existing data should be used to calculate the loss adjusted metered energy of CfD plants;

b. where transmission connected, and some distribution connected, plants are registered with the Central Meter Registration Service, the loss adjusted metered energy of CfD plants will be calculated from data used for the purpose of settlement of imbalances under the Balancing and Settlement Code;

c. other CfD plant connected to the distribution network will be required to register – via its offtaker - an Additional BM Unit under the Balancing and Settlement Code; and

d. the loss adjusted metered energy of this additional BM Unit, as calculated under the Balancing and Settlement Code, will be used for the purpose of calculating CfD payments.

Figure 5: Illustration of measurement of output from generators registered with the Central Meter Registration Service

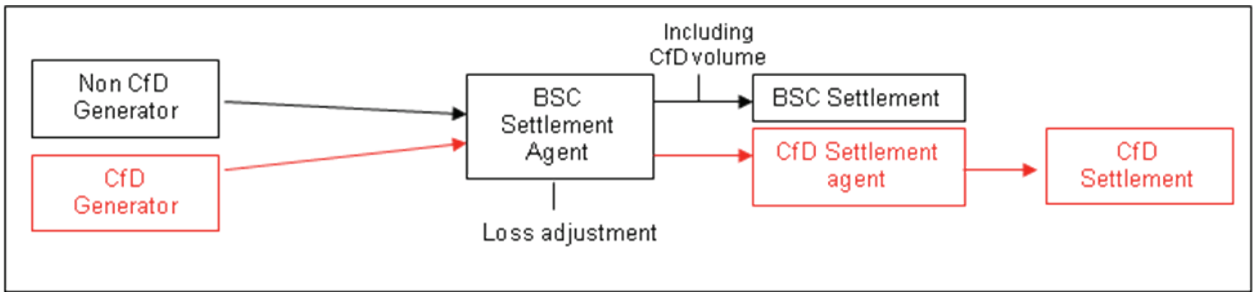
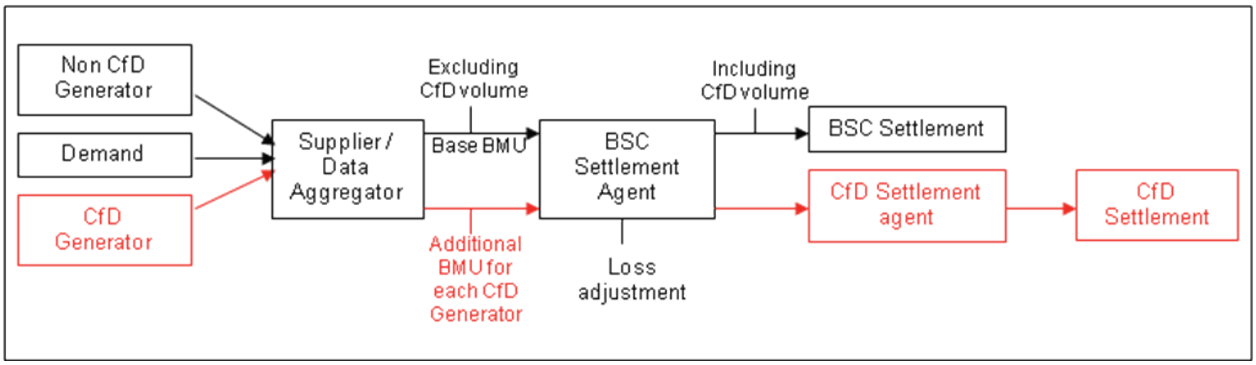


Figure 6: Illustration of measurement of output from generators registered as an additional BM Unit



160. This approach is appropriate for, and applicable to, the vast majority of low-carbon generation. However, the Government is considering whether some adjustments may be required to ensure that other generation sites can participate in the CfD, for example, generation connected to private wire networks. The nature of such solutions will be explored with the System Operator and relevant parties over the coming months.

Payment in the event of negative reference prices

161. The Draft Operational Framework outlined a proposal to pay CfD plant on availability in the event that the reference price dropped below zero[28], in order to:

a. prevent spiralling negative prices which may otherwise occur as low marginal-cost generators outbid each other to continue generating and access CfD support payments; and

b. avoid an increase in the challenge faced by the System Operator in balancing the system.

[28] This is only expected to be an issue for intermittent plant, where the reference price is drawn from a day-ahead index. For baseload plant, with a forward reference price, it would only turn negative under the most extreme scenarios.

162. The Government indicated that it would undertake further work with the System Operator to develop this approach. The System Operator has now carried out further analysis with its advisor, Redpoint Energy, exploring two key questions:

a. How to pay CfD plant in the event of an System Operator action to curtail it for balancing or system stability reasons; and

b. How to mitigate the risk of spiralling negative prices driven by the bidding behaviours of intermittent CfD plant, looking at two options:

i. pay on output unless the reference price is negative, in which case pay on availability (the Draft Operational Framework proposal); and

ii. pay on output in all periods, but cap the difference payment at an amount equal to the value of the strike price (i.e. if the strike price is £100/MWh and the reference price is -£20/MWh, the generator would receive a difference payment of £100/MWh notwithstanding that the difference between -£20/MWh and £100/MWh is £120/MWh).

163. These questions, and the Redpoint analysis, have also been discussed with the CfD Expert Group.

Payments for the curtailment of CfD plant

164. As regards the curtailment of CfD plant by the System Operator, the Government has considered whether CfD generators should in such cases be compensated:

a. through the CfD in the form of an availability payment; or

b. through the balancing mechanism on the basis of output.

165. The System Operator analysis noted that:

a. the need for the System Operator to take actions to curtail low-carbon plant will be a far more frequent event (as it can result from energy balancing, system operability and transmission constraint reasons) than negative day-ahead prices (which arise from a long energy market overall);

b. in the future, the way in which CfD generators are compensated for lost support payments in the event of curtailment will be important for the overall level of system balancing (BSUoS) costs paid by customers, as well as the economic signals that the System Operator, and indirectly the Transmission Operators, are exposed to in their decision making;

c. the option of an availability payment through the CfD would mean that CfD generators would not be at risk of losing their difference payment and so could be

expected to bid close to zero[29] into the balancing mechanism. This would provide the System Operator with a 'free option' and increase the curtailment of CfD plant relative to the option to pay on output through the balancing mechanism;

d. the option of compensation through the balancing mechanism would mean that CfD generators would be expected to place negative bids into the balancing mechanism equivalent to minus the difference payment. This would enable the System Operator to factor in the true costs of curtailing CfD plant into its balancing actions and investment decisions. It would decrease the curtailment of CfD plant relative to the option of an availability payment through the CfD; and

e. whereas compensation through the CfD would reduce the overall level of system balancing costs paid by customers, this would be offset by correspondingly higher CfD payments, such that the overall effect would be broadly neutral.

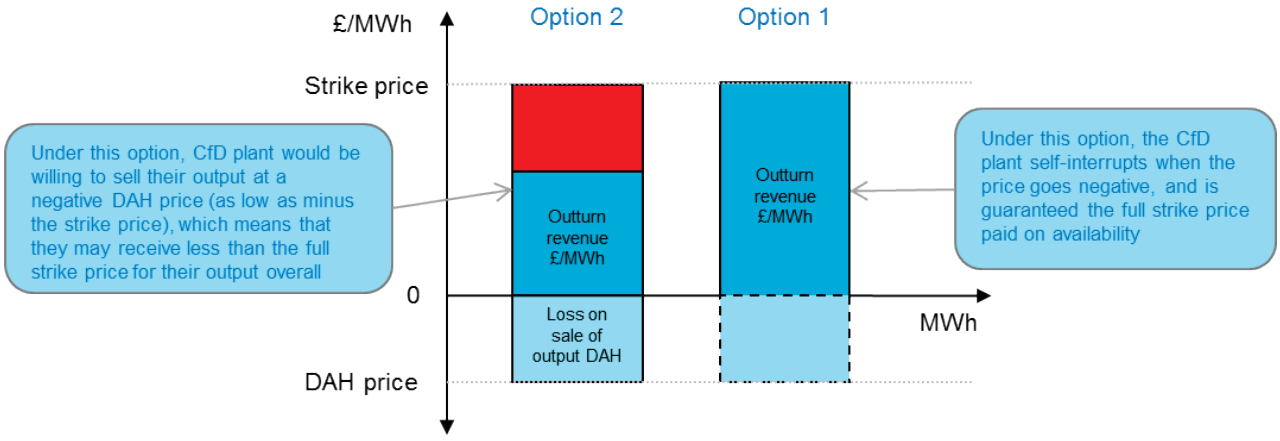
166. Having considered the System Operator's analysis, and the views of the CfD Expert Group, the Government has decided where CfD generation is curtailed by the System Operator, it should receive compensation through the balancing mechanism, rather than through a CfD 'availability payment'. The Government's view is the costs of curtailment should be transparent and the CfD should avoid indirectly providing false signals for the System Operator to curtail low-carbon generation. The Government also notes that compensation through the balancing mechanism delivers stronger incentives for prioritising the despatch of low-carbon generation, which is consistent with the UK's renewable and decarbonisation targets[30].

The settlement of CfDs under negative prices

167. As regards the treatment of CfD plant in the event of a long energy market (negative reference prices), the System Operator has, based on its analysis, identified a number of technical and operational concerns with the approach set out in the Draft Operational Framework that the CfD would pay on availability when prices are negative, and recommended moving from the original proposals (option 1, in figure 5) to paying on output, with payments capped at the strike price (option 2). The Government agrees with this approach, for the reasons set out below.

[29] In the case of intermittent plant.
[30] The System Operator would be free to contract with CfD plant in a range of different ways, in order to reduce the overall cost of balancing the system; reflecting the System Operator's current approach to contracting with generation and demand-side response.

Figure 7: Settlement of CfDs in the event of negative prices [31]



168. The System Operator's analysis confirmed that the Government's original proposal would mitigate the risk of spiralling negative prices since CfD generators would have incentives to self-curtail if prices fall negative, where they can. The analysis also indicated that this would reduce the need for System Operator actions. However, the System Operator raised concerns that payment on availability:

a. could have unintended impacts on the market;

b. may complicate system operation;

c. whilst technically achievable, would introduce an unnecessary element of complexity to the CfD scheme, particularly as regards the determination of availability and in terms of its application to smaller generators; and

d. may increase reserve holding requirements.

169. The System Operator's view is that paying on availability in the event of a negative reference price may produce a distortionary 'cliff-edge' effect. This means that when wholesale prices are close to zero the incentives to generate faced by a group of CfD generators would be extremely sensitive to small changes in market prices. CfD plant could suddenly switch between a desire to run at full output and access the difference payment (when prices are zero or above); or to turn off and be paid on availability (when prices are below zero).[32] This could disrupt the operational and trading decisions of all generation in the market, and could as a result complicate system operation. The System Operator may need to procure additional reserves to account for the uncertainty introduced when the system has a lot of intermittent generation operating in a similar way, which may increase overall costs on

[31] The figure is based on intermittent generators, and shows day ahead prices. However the figure holds true in the case of other non-intermittent generators.
[32] All CFD plant with very low marginal costs – including wind generation – would respond at similar price points, reflecting the marginal cost of their generation. Other forms of low-carbon generation would be expected to respond at different prices, reflecting their marginal costs.

consumers as reserve costs are ultimately passed through to energy bills. Finally, the System Operator considered that the need to develop a set of rules for determining availability to accommodate the occurrence of negative prices risked adding unnecessary complexity and cost.

170. Adopting option 2 does not prevent CfD generators from contributing to the occurrence of negative prices. It would, however, prevent spiralling negative prices, as intermittent CfD generators would have no economic incentive to continue generating below a certain level. In particular, however, the System Operator's analysis is that payment on output would avoid the potential for the extent of the unintended market impacts set out above, as CfD bidding behaviour would be determined by the strike prices (which vary between technology and depending upon when the CfDs were issued) and thus 'smooth' the cliff-edge problem discussed above. This approach would also establish broadly consistent bidding incentives across CfD and Renewables Obligation plant.

171. The Government has considered the advice from the System Operator and has sought views from the CfD Expert Group. While some Group members agreed with the advice provided by the System Operator, others argued that the alternative option would increase risks to the CfD generator, since it can no longer guarantee total revenue at a level broadly consistent with its CfD strike price in the periods when prices become negative. This risk of negative day-ahead prices is difficult to quantify accurately and, in consequence, investors may take a conservative view when incorporating the impact of negative price periods on their business plans. This might lead to an adverse impact on financing costs, and lead to a relative increase in the strike price required to secure the required level of investment.

172. The Government acknowledges, however, that this approach will increase revenue risk to investors – as revenue would not be guaranteed when prices are negative - and the difficulty of assessing accurately the magnitude of this risk. At the same time, the Government notes that investors under the Renewables Obligation are currently prepared to accept this risk. The Government has also had regard to the System Operator's latest modelling which indicates that periods of negative prices are expected to be infrequent and are unlikely to occur until far into the future (less than 2% of the hours in 2030). On the basis of this modelling, the effect of this risk on strike prices is considered to be relatively marginal.

173. On balance, the Government considers that the risks of instability resulting from generators' incentives shifting in a discrete way, coupled with the latest assessment of the frequency of negative prices, suggest payment under the CfD being made against output. Consequently, the Government has decided that the CfD should be paid on output with payments capped at an amount equal to the strike price.

The reference price

174. The reference price is a proxy for the market price of electricity and is used in the CfD to calculate the value of 'difference payments' against the strike price. The Government is mindful of the need to meet its objectives when deciding upon the format and source of the

reference price. In particular, the reference price must be reliable and robust against potential gaming, having regard to the available legislative and regulatory protections against gaming of market indices.[33] This points to using a reference price taken from a market which has a reasonable level of liquidity and sufficient transparency.

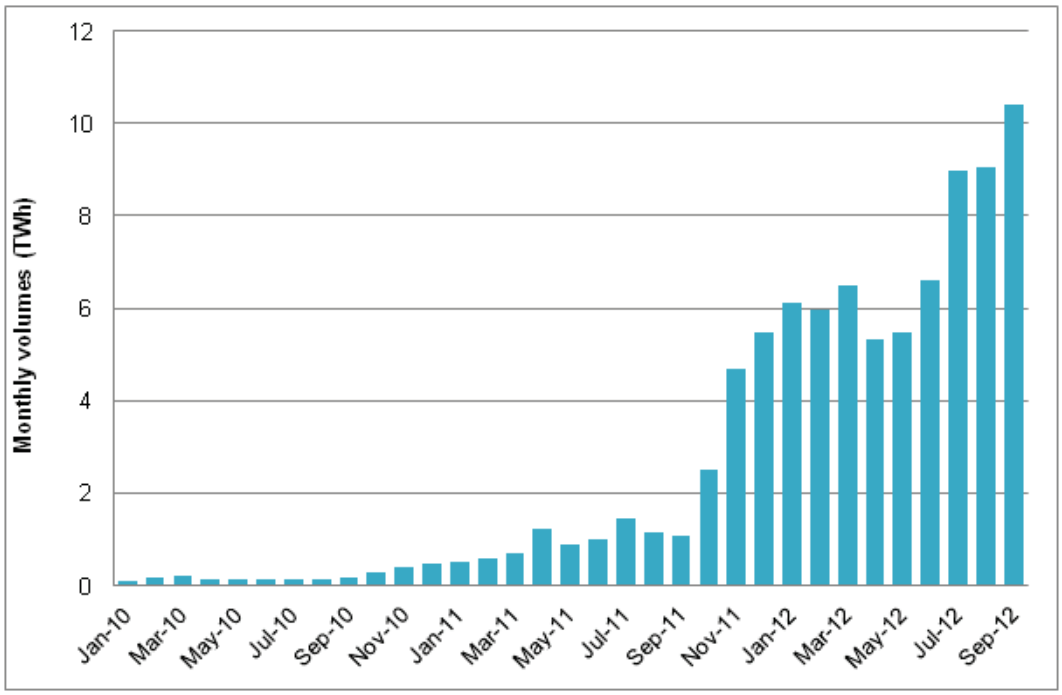
175. Further, in order for generators to realise the value of the CfD, they must be able to sell their power and achieve a reasonable approximation of the reference price. Although the reference price itself need not necessarily be constructed in a way that allows generators to exactly match the reference price, it should be reflective of price levels that can be achieved by generators (through their route to market for the physical trading of power), otherwise CfD strike prices would need to be increased to reflect any risk of significant shortfalls[34]. Finally, the choice of reference price should not distort the incentives of plant to operate efficiently: plant should remain exposed to appropriate price signals in the market that provide an incentive to operate reliably and schedule maintenance efficiently.

Intermittent

176. For intermittent generation, the Government's view remains that the day-ahead market should be the market segment from which the reference price is drawn[35]. Intermittent generation is less able to forecast reliably its generation far in advance. Therefore, using a day-ahead index in the CfD is a reasonable balance between enabling plant to manage volume risk, while still encouraging the development of more accurate forecasting techniques, and providing more general incentives to find ways to mitigate the consequences of intermittency. Moreover, recent improvements in liquidity in this market have been sustained, with increasing volumes traded on the APX and N2Ex day ahead exchanges.

[33] In this respect, we note that when the first CfDs are allocated, the regulation of market indices will have been further strengthened, including through the implementation of the Regulation of Energy Market Integrity and Transparency (REMIT).
[34] However, generators with a PPA may face discounts to the price they receive reflecting other risks taken by the PPA provider, such as imbalance risk.
[35] Responses to the call for evidence on the availability of long-term contracts for independent renewable generators identified an alternative approach to securing PPAs for these generators. If adopted, this approach – referred to as the 'Green Power Auction Market' – would have the effect of replacing this reference price with the price achieved in an auction by each project.

Figure 8: Traded volume on GB exchange-based day-ahead auctions



Source: DECC calculations, based on APX Group and Nord Pool Spot data

177. The Government also remains of the view that for intermittent generation, the contract should be referenced to the hourly, day-ahead 'GB Zone Price', which will result from the market coupling arrangements scheduled for implementation in 2013. These arrangements are an integral part of the broader project, supported by the European Commission and other key bodies[36], to integrate national energy markets by 2014. Intermittent generators operating on a merchant basis will be able to trade their power on the day-ahead APX or N2Ex auction, in the knowledge that they will be paid the price determined by the auction for each hour the following day. Therefore as the reference price is drawn from the auction, the generator has certainty that it will be able to achieve the reference price for its power at the point of sale; effectively managing basis risk[37]. The use of an index that is based on a relatively large number of actual trades (rather than being based on reported price levels) also acts to mitigate risks of gaming.

178. It is acknowledged that smaller generators will in many cases not be able to participate directly in either exchange. Section 7 of this document outlines the Government's views on the impact of the CfD on generators accessing the electricity market through an off-taker, noting that the CfD offers the potential for Power Purchase Agreements to be simpler, more

[36] Including ACER (Agency for the Cooperation of Energy Regulators), ENTSO-E (European network of transmission system operators for electricity) and the regulators in the region. National Grid is also an active participant in the project.
[37] Intermittent generators will still have to manage forecasting risk, and will still be required to manage their output onto the system.

transparent and to support an improvement in the terms offered, in part due to the simplification of risk management under the CfD.

Baseload

179. The Draft Operational Framework set out that the Mandatory Auction proposed by Ofgem could be a suitable candidate for the CfD baseload reference price. However, the Authority[38] has not yet taken a decision on intervention to improve liquidity and may decide not to introduce the auction. Whilst further details on Ofgem's liquidity project are expected before the end of 2012, it is useful to provide greater clarity on the alternative options that Government is considering.

180. The Government remains of the view that the baseload reference price should be drawn from the forward markets. Such a model encourages baseload generators, who have reasonably stable and predictable output, to sell their energy forward and incentivises them to be reliable. It can also ensure that baseload generators are exposed to normal system incentives to operate at times of system stress and plan their maintenance accordingly. This is consistent with the Government's intention to avoid undue interference with price signals that incentivise efficient operation. The Impact Assessment accompanying the EMR White Paper[39] sets out in more detail the analysis underpinning this position. In addition to these points, clarity on the expected level of difference payments due to baseload generators in advance of delivery can help suppliers to understand the likely size of CfD payments, aiding effective risk management and planning of consumer tariffs.

181. However, the Government has noted the concerns raised by industry about the fallback option proposed in the Draft Operational Framework, to use the average of summer and winter EFA[40] baseload contracts each business day in the year for the following year's delivery. In particular, the Government notes that liquidity remains primarily concentrated in season-ahead and shorter-term products. The Government also acknowledges that there are concerns about the level of collateral required to trade power a year ahead of its delivery.

182. The Government has considered the proposal of some industry members that the baseload reference price should be drawn from the day-ahead auction. However, the Government has concerns that such an approach would:

a. undermine the valuable reliability and operational incentives referred to above, and thus increase overall costs to consumers;

b. undermine regulatory efforts to improve liquidity in the forward markets; and

[38] The Gas and Electricity Markets Authority.
[39] http://www.decc.gov.uk/assets/decc/11/policy-legislation/EMR/2180-emr-impact-assessment.pdf
[40] Electricity Forward Agreement.

c. exacerbate the risk of negative prices in the day-ahead market, as the larger volumes of low marginal cost plant selling power in this market increases the likelihood that this plant would be 'at the margin' and willing to accept negative prices in order to continue accessing the CfD payment.

183. For these reasons, the Government is clear that relying on the day-ahead market to set the CfD reference price for baseload generation is not appropriate.

184. However, the Government is also clear that the reference price must be drawn from a transparent, reliable, liquid market, to reduce the risk of manipulation, and to ensure that generators are able to achieve a reasonable approximation of the reference price. The Government has commissioned advice from KPMG and, through them, Contango Markets on viable price sources for delivering these headline objectives. This work is ongoing and will involve market testing of emerging proposals.

185. At this stage, Government is considering with its advisors whether a basket of indices, drawn from different points on the forward curve, may provide a viable reference price for the baseload CfD. The Government believes this approach could have the following benefits:

a. Aggregating prices from different points on the forward curve, where there is adequate liquidity, should increase the robustness of the reference price (including reducing risks of gaming), compared with relying on a single index;

b. Drawing the reference price from different points along the curve may also better match the trading patterns that generators would prefer in order to manage their fuel and price risks, enable generators to manage their basis risk more effectively and reduce the collateral burden associated with solely trading significantly ahead of time; and

c. Using a variety of indices means that the reference price could be more easily adapted to changing market conditions, as liquidity along the curve increases.

186. The precise source, mix of products and weighting of different indices that would be used to form a basket for the baseload reference price has yet to be determined, and Government will continue to work with industry and stakeholders as these proposals are further developed. A decision on the reference price source for baseload generation will be set out alongside the final contract in July 2013.

Indexation for inflation

187. As mentioned above, as part of the determination of the 'difference payments' due under the contract, the CfD counterparty will need to calculate the difference between the CfD strike price and the CfD reference price for each 'settlement period'. The Government remains of the view that at least a proportion of the CfD strike price should be index-linked to a general measure of inflation like CPI on an annual basis, since:

a. it represents a more efficient allocation of risk between consumers and investors, and avoids having investors price in their expectations of inflation and seek strike prices on that basis;

b. it may help deliver the Government's objective of facilitating significant levels of investment in low-carbon generation through opening up the sector to new capital flows from a wider pool of investors, particularly institutional equity investors (e.g. pension funds) seeking index-linked exposure; and

c. it is capable of general application across the wide range of technologies that the Government is seeking to bring forward.

188. The Draft Operational Framework set out that the Government was still considering:

a. the choice of index (RPI or CPI); and

b. whether an inflation link to the full strike price, a proportion of it or some other arrangement (e.g. CPI-X) achieves the right balance between reflecting inflation risk and attracting a wider range of investors.

189. The Government remains of the view, following discussions with a range of stakeholders, that the CfD strike price should be linked to the consumer price index (CPI) on the basis that it is an internationally established inflation measure which will be familiar and relevant to a wider range of investors. CPI is also recognised as having advantages over RPI as a measure of macroeconomic inflation, and thus is more suitable for inflating the strike price to reflect general changes in the economy[41]. Given CPI was established, and is governed, by a set of legally-binding European regulations, this should make it a credible, stable inflation index source over the longer term.

190. The Government acknowledges that a basket of indices may provide closer correlation to the actual costs of a particular project that are subject to inflation; however, adopting a basket approach would be difficult to standardise across projects, administratively burdensome, more open to manipulation, and very difficult to hedge. While noting the concerns of some developers that CPI is not perfectly matched to their construction and operating costs, the Government also notes that developers and their sponsors in most cases are able to manage this risk through existing mechanisms (such as fixed price EPC turnkey or principal construction contracts) and, although not a perfect or consistent correlation, it is likely that a high degree of indexation against a general inflation measure will often directionally reflect inflation movements in more specific and contributory indices.

[41] Implications of the differences between the Consumer Prices Index and Retail Prices Index, ONS, 2011.

191. As regards the extent of the indexation (the proportion of either the strike price or the index), the Government notes that:

a. the elements which constitute the majority of project costs (construction and debt financing) are generally either fixed as standard, or can be structured in this way. This leaves operations and maintenance, and equity (if fixed in real terms) as the key variable costs exposed to inflation. This may suggest that only the proportion of the strike price reflective of these costs should be linked to inflation; and

b. the degree of uncontrollable inflatable costs varies between technologies, and indeed individual projects. Thus either different levels of indexation would have to be adopted for each technology, which would be complex to administer and undermine the aim of a standardised approach, or an average value would have to be set, which would fail to match closely the costs of all projects.

192. Furthermore, institutional equity investors have highlighted to Government the benefits that could be generated by providing long-term prices that are 100% linked to CPI, as this approach should prove attractive to investors seeking a fully indexed return, in order to match the indexation of their liabilities. As noted above, one of EMR's aims is to unlock new pools of investment, in order to meet the significant expenditure on generation assets required in order to maintain security of supply and decarbonise the electricity system.

193. The decision on whether to provide full or partial indexation is a finely balanced one, and the Government has not yet established a sufficiently clear evidence base to support choosing one approach over the other. The Government would therefore welcome evidence from investors on the difference to their financing costs (and consequently the strike price required) for their projects under the scenarios of full and partial indexation for inflation, and any other evidence that might be relevant to choosing between full and partial indexation.

194. The Government will draw on this and other information in continuing to assess the merits of different approaches, and will discuss with stakeholders before arriving at a decision in the new year, in order to inform the strike price-setting process. The Government is clear that whichever approach is taken must deliver value for money to consumers, as well as supporting investment.

195. The CfD Draft Operational Framework in May 2012 set out the intention to provide indexation against fuel price movements within the CfD for projects supported by the CCS Commercialisation Competition. The Government will continue to assess the value for money of this proposal as part of the negotiations with developers of these initial projects. The mechanics of how such an adjustment would be implemented are still under consideration, but are expected to include:

a. Indexation to gas or coal prices, depending on the fuel used;

b. Indexation against 100% of the price movement of the fuel used to generate clean electricity, up to the contracted volume of the plant;

c. An adjustment to remove any double counting with inflation indexation as outlined above.

196. While the Government continues to believe that the baseload CfD model is suitable for the first CCS projects, market circumstances may be somewhat different over the period of time that CCS moves to full deployment. The Government is continuing to consider the appropriate processes for CCS plants seeking to come forward outside of the Commercialisation Competition, and will set out more details on the allocation and price setting process in July 2013. It is acknowledged that such plant are likely to be seeking long-term revenue certainty through the CfD, and thus fuel price indexation will be considered as part of wider design decisions.

Collateral Requirements

197. The Government remains of the view that in order to manage settlement risks[42] effectively, and thus to ensure the sustainability of the scheme, both suppliers and CfD generators will be subject to collateral requirements. The risk of uncovered payments could decrease the perceived credit standing of the CfD counterparty, affect the confidence that investors have that they will receive payments under their CfDs and hence affect financing costs.

198. Collateral requirements on suppliers will be imposed through the supplier obligation regulations and enforced as a relevant requirement by Ofgem. For CfD generators the contract will include an obligation to provide collateral.

199. As regards the level of collateral, the Government remains minded that this should be equivalent to the generator's (or conversely, supplier's) anticipated payments under the contract (or under the supplier obligation) over a given period. The Government currently anticipates that this period may need to cover both the billing period and payment period[43].

200. The effect of this for CfD generators is that the requirement to provide collateral will apply where the CfD counterparty reasonably considers that the CfD reference price will be greater than the strike price over a given future period. The required amount of collateral would be equivalent to the anticipated payments due to the CfD counterparty for that period, which would be calculated on the basis of the projected price differential and a reasonable anticipated volume of generation. The contract will set out that the CfD counterparty will notify generators of the requirement to post collateral and the required terms of the collateral. Generators will have a contractual obligation to fulfil this request within a defined period.

[42] The risk to the CFD counterparty that generators or suppliers do not make payments that are due under the CfD or the supplier obligation.
[43] Period from the end of the billing period up until payment is due.

201. Either cash or letter of credit from a qualifying issuer would constitute acceptable forms of collateral. The Government considered the option of allowing credit in the form of a Parent Company Guarantee, however this is not considered appropriate as it would disadvantage smaller or independent generators who do not have access to such support, and would require greater administration from the CfD counterparty in conducting due diligence with respect to the quality of the guarantor.

202. In the case of a letter of credit, the required period for which the collateral must be valid and the minimum required credit rating for the qualifying issuer will be determined as the fully termed contract is developed. At this stage, the Heads of Terms sets out the framework for providing, extending or replacing letters of credit, and the circumstances in which the CfD counterparty is entitled to make a demand under a letter of credit, or alternatively draw down on any cash collateral.

Timing of payments, and billing and payment mechanics

203. Amounts payable under the contract will be an aggregation of difference amounts over a given billing period.

204. The Government's intention is that payments made under the contract (for example, from the CfD counterparty to a generator), will not be made more frequently than payments made under the supplier obligation (for example, from suppliers to the CfD counterparty). As such, a decision on the timing of payments under the contract will depend on the design of the supplier obligation (discussed in the 'Funding the CfD' section of this document).

205. However, the Government currently anticipates that the billing period is not likely to exceed one month, and as such payments under the contract would flow on at least a monthly basis. The Government remains minded that invoicing and reconciliation will follow the Balancing and Settlement Code Schedule.

206. The Government will undertake further work to develop the detailed settlement rules and processes – including timescales – that will provide for billing and the making of payments under the contract.

207. The Heads of Terms provides an outline of provisions relating to issues including: the use of estimated data to inform payment where relevant information is not available; reconciliation in the event that information on a billing statement is subsequently found to be incorrect; and interest payable on late payments.

Change Provisions

208. This subsection discusses those parts of the contract which enable it to adapt as appropriate in response to certain events.

Change in Law

209. As noted earlier, the CfD is a bilateral private law contract, designed to provide long-term price certainty for low-carbon generators. Investors and developers will be concerned that long-term price certainty is not undermined by legislative and regulatory changes that target CfD generators, either individually, by technology type or because a generator holds a CfD.

210. Therefore, in addition to providing long-term pricing certainty, investors will be provided with a degree of protection against certain changes in law and regulation. Similar risk sharing arrangements are relatively typical in contracts between the Government and private sector investors in major capital projects. Such arrangements, properly scoped, are likely to represent better overall value for money for consumers than not providing any such protection.

211. The Heads of Terms reflects the Government's proposed approach, with the detailed scope and nature of the arrangements to be defined in the full-form contract. This approach is designed (both on a standalone basis and with reference to the overall approach to risk allocation within the CfD) to provide clarity to investors; avoid compromising the wider objectives for the EMR programme; and provide a credible and appropriate balance of risk between the parties to the CfD.

212. The Government does not view the CfD as an instrument allowing generators to pass through all costs and risks associated with generation. There are a range of risks that developers can, do and should take without material incremental pressure on strike prices and hence, noting the objectives of EMR, the CfD will not be designed to pass otherwise bearable risks fully to the consumer. The change in law provisions reflect the Government's appraisal of this set of finely balanced considerations, and go further than simply providing the long-term price certainty that is the key feature of CfDs.

213. In shaping an approach to sharing change in law risks the Government has examined:

a. what should be considered to be a 'change in law';

b. what types of 'change in law' should qualify for protection; and

c. the nature and scale of protection that the contract should provide for these 'qualifying changes in law'.

214. In developing its approach to change in law, the Government has considered the structure and learning associated with change in law in PFI and other contracts, but has also taken account of the different objectives and balance of overall risk allocation in the wider CfD contract.

215. The Government's view is that 'change in law' should be defined to cover not only formal changes in law but also a broad range of legislative and regulatory interventions, changes to

industry codes. This avoids making a possibly artificial distinction between legislation and other 'quasi-legislative' changes.

216. However, not all such changes will qualify for protection under the contract. Investors and developers should carry out effective due diligence on the legislative and regulatory landscape, and so risks from 'foreseeable' changes should sit with generators. In the interests of focussing the administrative role and resources of the CfD counterparty, it is also proposed that the risks of changes which are not considered to have a material impact on generators will also sit with generators. At this stage the Government is not proposing a materiality threshold, but will engage further with stakeholders and consider whether this is appropriate when developing the final contract.

217. Further, it is not appropriate for CfD generators to be protected from 'general' changes in law that apply across the economy or across the energy sector as a whole. This would go beyond protections offered elsewhere, would risk the CfD scheme being perceived as being difficult to manage within the required budget, and may (in certain circumstances) discourage necessary changes in law that benefit consumers. We also note that the approach to indexation (outlined above) means that payments under the CfD are linked to a measure of inflation and so will rise over time in line with general macroeconomic changes, including those driven by general changes in law. We are, therefore, mindful of the risk that the CfD could be perceived as providing two forms of protection against general changes in law, ultimately at increased cost to consumers.

218. The Government notes the arguments made by some stakeholders that CfD projects will be unable to pass through the costs of change in law to the wholesale price of electricity. There is however a need to consider change in law as part of the overall arrangements that are offered to investors in low-carbon. The Government considers that while generators may need to price general change in law events into strike price expectations if they are left as uncovered risks, the wider long term indexed revenue protection offered by the CfD as a whole is a sufficient counter balance to any inability that a generator may have to pass through costs associated with a general change in law. We also note in this regard that in a market where prices are set based on the costs of the marginal plant, low-carbon generation is expected to be price-taking and so unable to expect a perfect correlation between its own valuation of the costs of change in law and the cost of a change in law that may be passed through to the wholesale power price.

219. However there will be protection against specific and discriminatory 'changes in law'. These will include those which apply specifically to: the particular CfD project; projects of the same or similar type; projects of a similar type that are subject to a CfD; or CfD projects as a class. A more precise definition is contained in the Heads of Terms at Annex B.

220. As regards the nature and scale of protection offered, the Government is proposing that compensation for a qualifying change in law should wherever possible be administered through an adjustment to the strike price as opposed to a lump sum payment. A lump sum payment for change in law events that affect multiple contracts could create working capital

issues for electricity suppliers under the levy and thus potentially destabilise the system. The Government is minded to develop a standard formula for calculating the adjustment to the strike price. In principle this should strike an appropriate balance between achieving a reasonable level of compensation for generators, and protecting consumers against unduly high compensation, for example where change in law costs may in large part be recovered by the generator through market revenues after its CfD contract has expired. We will develop a proposal for discussion with stakeholders in the new year.

221. The change in law provisions are designed to be symmetrical. Consequently, if there are material cost savings to the generator as a result of a change in law, these will be taken into account and, where appropriate, there may be a downwards adjustment to the strike price. We anticipate that the CfD counterparty – potentially in consultation with consumer groups and suppliers – would normally be responsible for proposing contract adjustments that would reduce strike prices.

222. Finally, in order to ensure the proper application of the protections, generators will be under a contractual duty to:

a. take reasonable steps to mitigate the effects of a qualifying change in law, including minimising additional costs and maximising available cost savings;

b. (where appropriate) ensure that the facility recommences operation as soon as practicable; and

c. provide detailed supporting evidence when notifying a qualifying change in law (both as to the existence of the qualifying change in law and as to the (financial) impact on the generator).

Dispute resolution

223. The contract will set out a procedure for resolving any dispute between the CfD counterparty and the CfD generator which relates to the CfD. In summary, the Government's proposal, reflected in the Heads of Terms, is based on a view that disputes should be settled in a timely manner, informally between parties to the contract where appropriate and otherwise by an independent third party. The process should also be designed so as to minimise costs.

224. There will therefore be a staged process, whereby:

a. senior representatives of both parties will first attempt to resolve the dispute informally;

b. where this is not possible, the dispute will be referred to arbitration under the London Court of International Arbitration rules; or

c. in limited cases, to an independent expert where this is considered by Government in developing the contract to be more appropriate than arbitration.

225. Where disputes are referred to arbitration or expert resolution, the award or decision would be final and binding on both parties. Ultimately, either party could apply to the English courts to seek to enforce the decision of the arbitrator or expert.

226. The proposal also includes a power, set out in the Heads of Terms, for an arbitrator or independent expert to consolidate (and resolve in the same proceedings) a number of closely connected disputes.

227. More detail on the proposed dispute resolution procedure is set out in the Heads of Terms.

Adjustment of reference price and other parameters

228. To preserve the original intended effect of the contract, it is important that the derivation of the price and volume variables applied in the settlement of the CfD remain valid over time. These could be affected by changes in trading or other market arrangements. The Government therefore outlined in the Draft Operational Framework that it was minded to include an 'independent expert role'[44] within the framework, to review such developments and advise whether consequent changes to the contract terms are required.

229. At this stage the Government has yet to take a view on the precise format and terms of the 'independent expert role', including for example whether its functions should be triggered by pre-determined changes in the market. In developing the role the Government will consider industry guidance such as the Futures and Options Association guidelines on market price indices (which advocates the formation of an Index Oversight Committee). Stakeholders will be invited to give their views on the emerging proposal through market testing and the CfD Expert Group, and further details will be set out alongside the final contract in July 2013.

Refinancing

230. In order to ensure a diverse, secure and low-carbon generation mix, significant investment is required; analysis shows that around £75 billion of investment could be needed in new electricity generation capacity to 2020[45]. The combined balance sheets of the existing 'Big Six' energy companies are unlikely to be able to provide this scale or pace of investment. At the same time, overcoming investment constraints will also require additional models of financing to encourage the participation of alternative sources of funding for generation and transmission projects. Given the importance of debt to finance new energy projects and the

[44] This is distinct from the Panel of Technical Experts that will scrutinise analysis underpinning strike prices.
[45] http://www.decc.gov.uk/assets/decc/11/policy-legislation/EMR/2180-emr-impact-assessment.pdf

constraints faced by banks, it is also desirable that providers of debt are able to refinance their capital commitments in the capital markets. As they refinance projects whose risk profiles have reduced, this increases the opportunity for capital to be freed up and recycled into further investment.

231. The Government has to balance the aim of facilitating the recycling of capital into further investment through refinancing, against the risk that undue profit-taking by investors will occur if projects refinance once the risk profile of the project has changed. Consequently, the Government is considering whether the developer should take the full risk and reward of any refinancing, or share a proportion of any refinancing gains received with consumers.

232. Whilst maintaining consistency with the Renewables Obligation would argue against including refinancing gain share arrangements within the CfD, PFI arrangements include refinancing clauses. However, experience under PFI has shown that finding the right balance is difficult, and refinancing gain share mechanisms have had to be revised over time to reflect prevailing market conditions. It is also important to note that there are some key differences between PFI and the CfD regime: whereas PFIs are issued on a project-specific basis (which allows significant scrutiny of costs, expected returns and actual returns), CfDs will be a more standardised measure and will not have the administrative resource to conduct an equivalent level of scrutiny[46]. Specifying the precise nature of any gain share mechanism would add complexity to the CfD.

233. However, the nature of some projects eligible for support under the CfD (e.g. large projects where the technology and supply chain is still evolving) means that perceptions of cost and risk could change rapidly. Consequently, relatively small changes in the financing costs could drive significant refinancing gains, and this could attract negative sentiment to the sector.

234. Therefore the Government has not yet decided whether to include a refinancing clause in the generic CfD contracts. Further analysis will be carried out on this issue, including discussion with market participants, before reaching a position which will be outlined in the final CfD in July 2013. Larger, complex schemes such as CCS or nuclear awarded through the FID Enabling process or CCS Competition may include refinancing clauses if the Government determines that they are the appropriate tools for managing risks in these contracts.

[46] There are other mechanisms in the CfD which are designed to reduce the scope for excess profits; most significantly the two-way nature of the CfD, which caps excess returns driven by high electricity prices.

Obligations

235. This sub-section discusses some of the more important remaining rights and obligations of the CfD generator and the CfD counterparty.

Representations, Warranties and Undertakings

236. The Government is clear that it would be inappropriate for consumers to provide support to projects where the generator is unable to provide certain assurances both at defined points of time (representations and warranties) and on an ongoing basis (undertakings), about such matters as its status, the legally binding nature of its obligations under the contract and its compliance with laws and authorisations. Likewise the Government considers that the CfD counterparty should give certain formal comfort to the CfD generator.

237. Reflecting this the contract provides that it will be a termination event in favour of the CfD counterparty if the generator's representations or warranties are materially untrue when they are given or on the limited occasions that they are repeated (and remedial action is not taken), and equally a termination event if the generator is in material breach of its undertakings, which if remediable, cannot be remedied within a defined time period.

Transfer and Assignment

238. The CfD should not be capable of being separated from the generation asset, so that the two have to be transferred together. Omitting such restrictions on transferring the asset, or alternatively the contract, would leave consumers open to the risk that generators could walk away once they expect the contract to be "out of the money", by divorcing the plant from the underlying contract. Reflecting this the contract will provide that if a generator sells its plant, it must ensure that the buyer takes a transfer of the CfD. Equally, in circumstances where the CfD counterparty is agreeable to the contract being transferred, that transfer must be accompanied by the sale of the plant to the same transferee.

239. The restrictions on transfer are not intended to prevent a generator from using the plant as security in relation to financing or refinancing its business activities. Nor will it prohibit the development of arrangements which some generators have suggested may be helpful in facilitating PPA arrangements, whereby payment flows are nominated to go directly to a third party (i.e. the PPA provider).

Termination

240. The CfD counterparty should have the right, in certain circumstances, to terminate a CfD. Accordingly, the contract will set out those events affecting the generator which will give rise to a termination right for the CfD counterparty and the consequences of any such termination. The Government's ultimate objective is that low-carbon generation should be built and operate for the full term of the contract, and the intent is not to provide for

termination of contracts as a result of generator performance issues that might normally occur during the life of a project.

241. The CfD counterparty will normally terminate the CfD if the developer fails to meet the development milestones set out in the contract, does not deliver the agreed capacity (unless prevented from doing so by physical, rather than commercial, factors) or does not commission the project ahead of the longstop date. There will only be limited flexibility afforded to the developer in respect of these key milestones, including provisions for Force Majeure and when delays are caused by a failure on the part of the Transmission or Distribution Network operator to provide the necessary connection assets.

242. It is not appropriate for a generator to continue to benefit from the CfD if it is in material default, for example through failing to make payments, or no longer being in a position to perform its obligations under the contract. The contract will afford generators remedy periods for most events of default and the Government is also minded to provide for a standard form CfD Direct Agreement which would be entered into with the funders of a generator. These mechanisms will allow the CfD counterparty to work with CfD generators and other interested parties to ensure that, where possible, the generator moves back into a position of compliance with the contract, rather than triggering the termination of the contract.

243. However, where events of default cannot be remedied and the termination right is triggered, the Government is proposing that the CfD counterparty should have the right to recover a lump sum termination payment by way of compensation, in order to protect consumers and suppliers from the consequences of termination. We are minded that this payment, which would be one way, would be calculated mechanically as the present value of the projected difference payments to be made by the generator over the remaining term of the contract. This termination payment ensures that there is no incentive on the generator to seek to prompt termination as a way of avoiding the obligation to make payments to the CfD counterparty, if and when market prices are expected to rise above the strike price.

244. The Government has considered whether termination rights should also be available to the generator as a result of CfD counterparty default. Our view is that such rights would be not be appropriate. The legislative underpinning of the scheme, together with the restrictive purpose of the CfD counterparty (that is, to enter into CfD contracts with low-carbon generators), should provide sufficient comfort to investors that the CfD counterparty will perform its obligations under the contract. The CfD counterparty will also be required by law to raise revenue from suppliers in order to make payments to CfD generators. This will, in turn, be supported by the secondary legislation on the detail of the supplier obligation, which will also be enforced as a relevant requirement. Unlike generators, the CfD counterparty will therefore have express legislative support in meeting its CfD obligations and will have no further commercial incentive that might lead to non-performance under the contract.

245. Reflecting the above, the Heads of Terms set out the list of termination events.

4. The CfD counterparty

Summary Box

- The Government has changed the proposed legal structure and payment model for the CfD having considered feedback from the ECC Committee, industry and others.
- The CfD will be a private law bilateral contract signed by generators and a CfD counterparty.
- The CfD contract is designed and set out by Government, not the CfD counterparty.
- The CfD counterparty is bound by the terms of the CfD. The CfD will set out circumstances where variations are allowed, where the CfD counterparty has decisions to take and where there could be scope for discretion. Before the CfD scheme is implemented the Government will develop the processes for the CfD Counterparty to follow should such circumstances arise.
- Any guidance or requirement on the CfD counterparty to consult, or seek the consent of, Government will not affect the rights of the generator under the contract.
- The CfD counterparty will be a Government owned limited liability company.
- The Energy Bill also introduces a revenue raising power (the “supplier obligation”) which will enable the CfD counterparty to collect money from licensed suppliers to meet the payments to generators under the CfDs. This is covered in more detail in the next section.
- The CfD counterparty or a settlement agent acting on its behalf will calculate what is owed and settle payments between suppliers and generators.
- We anticipate that the running costs of the CfD counterparty will be met by industry and are considering the mechanisms for this.

Overview

246. This section explains how our proposals for the legal framework and payment model have developed since the publication of the Draft Operational Framework and Draft Energy Bill in May 2012. Having assessed the feedback received, the Government is introducing a private law bilateral contract between individual generators on one side and a new counterparty, a Government owned company, on the other. This section goes on to set out key features of

this regime that will be of interest to potential investors, including the counterparty's role in relation to the CfD, the relationship of the counterparty to the Government and the System Operator, and the creditworthiness of the CfD counterparty.

247. The draft Energy Bill proposed that the CfD would be a statutory instrument that placed obligations on suppliers and participating generators. Under that model, all suppliers would have been parties to the statutory instrument and obliged to make payments for the output from each low-carbon generator with the obligations enforceable as if they were contractual. The generator who had applied for the CfD would have been on the other side of this arrangement. This model aimed to provide investors with a level of certainty about the legal status of the CfD equivalent to a conventional contract with a strong counterparty.

248. However, market participants raised significant concerns with this model particularly regarding to the dispute resolution procedures that would apply, the novelty of the form the CfD took and the impact on suppliers' balance sheets. The ECC Committee also raised concerns about the suitability of this model in its report[47]. A number of investors considered that a framework akin to a conventional bilateral contract with a single counterparty would be preferable to the model originally proposed by the Government.

249. We have now assessed the feedback we received and developed an alternative payment model. As a result of this, we have updated the Energy Bill and accompanying documentation to reflect a revised model. The principle constituents of this model are:

- a bilateral contract between the generator (of each low-carbon project) and a newly established CfD counterparty, which will manage the contract over its lifetime;
- a revenue raising power which will enable the CfD counterparty to collect funds from licensed suppliers to meet the payments to generators under the CfDs;
- the CfD counterparty, or an agent on its behalf, calculating what is owed and settling payments between suppliers and generators; and
- the CfD counterparty being a limited liability, not-for-profit company, wholly owned by Government.

250. A statutory obligation will be placed on suppliers to pay the CfD counterparty the amounts due to generators under the CfDs and to otherwise support the CfD counterparty function. The obligation on suppliers will be enforced through suppliers' licences. A series of backstops will be in place designed to facilitate payment flows from suppliers in the event of supplier default. The detailed design of the supplier obligation will be developed over the coming months. The supplier obligation is covered in more detail in the next section.

[47] *Draft Energy Bill: Pre-legislative scrutiny. First Report of Session 2012-13 Volume 1*, 2012 http://www.publications.parliament.uk/pa/cm201213/cmselect/cmenergy/275/275.pdf

251. Our analysis, expert advice and stakeholder testing has concluded that introducing this payment model overcomes key concerns about the complexity and novelty of the model proposed in the draft Energy Bill. The introduction of private law bilateral contracts creates a model with which investors will be familiar, with equally familiar processes for dispute resolution (more detail on dispute resolution is set out earlier in this document). The inclusion of an enforceable revenue raising power within the Energy Bill brings confidence as to the reliability of payment. The CfD counterparty gives a single institution for investors to deal with over the lifetime of the contract. As such, this model will be preferred by investors and will better support our objectives of securing increased investment in low-carbon generation.

Table 1: Examples of the functions of the CfD counterparty:

- Once the delivery body or Government has allocated a contract for difference to a generator, signing that contract;
- Establishing whether contract milestones and conditions precedent to payment start date are met;
- Managing payments between suppliers and generators including data collection and calculating the payments due to generators;
- Collecting and holding collateral from suppliers and generators as appropriate;
- Providing information to the delivery body and Government as appropriate;
- Dealing with disputes; and
- Monitoring whether the terms of the contract have been met and taking action accordingly in line with the terms of the contract.

The CfD counterparty's relationship with the CfD, the Government and the delivery body

252. The CfD counterparty will be a limited liability company owned by Government. For Government's classification purposes it will be considered a public sector body as it will be set up and owned by Government, delivering a Government policy through the signing and management of CfD contracts, and it will have an ongoing relationship with the Government.

253. The Government will design the generic CfDs and set out the criteria against which the delivery body must consider whether a generator is eligible when allocating CfDs. Once the delivery body has allocated a contract, under the terms of the legislation the CfD counterparty will be under a duty to offer (and therefore enter into) those contracts. Some

investment contracts may be agreed through the FID-enabling process with developers who need to take final investment decisions ahead of full implementation of EMR. The expectation is that these would initially be entered into by the Secretary of State, but would be transferred to the CfD counterparty once the CfD regime is fully established.

254. As the CfD counterparty is the signatory to these contracts, it is bound by the terms of the CfD. It is, however, important that the CfD can adapt, where appropriate, to changing market and regulatory circumstances. The CfD will set out such circumstances and the processes to be followed, giving visibility to those applying for CfD as to the extent of these potential changes. The CfD counterparty will not be able to change the terms of the contract.

255. More broadly the contract will confer on the CfD counterparty functions and rights to take decisions, for instance on whether a generator has met conditions precedent, or on when a generator is required to post collateral, or when to request information from a generator in respect of a project. Whilst the CfD counterparty will be bound to act within the parameters of the contract, in practice many of these cases will necessarily require it to exercise a degree of discretion in making a decision or enforcing a right.

256. Before the CfD scheme is implemented, the Government will therefore consider what further guidance is necessary to the counterparty body on how it takes decisions in respect of CfD contracts. The Secretary of State should not have any powers to impose a settlement on the parties to the contract. Instead, this will include consideration of circumstances where the CfD counterparty body may be required to consult, or seek the consent of, Government before taking such decisions or, possibly, in some prescribed circumstances, where Government may direct the CfD counterparty to take a decision in relation to the contract. Any guidance to, or requirement on, the CfD counterparty body to consult, or seek the consent of, the Secretary of State, or any ability of the Secretary of State to direct the CfD counterparty body, will not affect the rights of the generator to have recourse to independent resolution of the dispute in accordance with the procedures in the contract.

257. There will be a clear accountability framework prescribing the relationship between the CfD counterparty and the Government. The outline of this framework is:

- The Energy Bill provides for the designation of the CfD counterparty as the entity to enter into CfDs with generators and sets out the framework within which the CfD counterparty will be required to enter CfDs that are allocated by the delivery body or the Government;

- Secondary legislation will set out the detail of the supplier obligation arrangements which will be used by the CfD counterparty to fund its payment obligations to generators under CfDs;

- As a private limited company, the CfD counterparty will need to adopt articles of association. The Secretary of State will draft the articles of the company. The company's articles could not be amended without the Secretary of State's consent in his capacity as sole shareholder of the CfD counterparty;

- We will clearly set out in advance the roles of the CfD counterparty and the parameters within which the CfD counterparty is to fulfil its functions in relation to the CfDs and will consider the best mechanism to do this;

- The Government currently envisages appointing the chair and a minority of the board of directors and processes will be developed with regard to the appointment of the remainder of the board;

- The CfD counterparty will administer the CfDs once they have been entered into, within the parameters provided for in the governance structure outlined above and the terms of the contract.

Solvency and creditworthiness of the CfD counterparty

258. For the CfD to meet its objectives of attracting investment in low-carbon generation, it is important that the CfD counterparty's ability to deliver payments and remain solvent has the confidence of investors.

259. The CfD scheme requires payments to flow between generators and suppliers via the CfD counterparty. Both generators and suppliers have an interest in ensuring that the CfD counterparty remains solvent and able to make payments even in the event of a default by a supplier or generator.

260. Consequently, Government will seek to design and structure the company to ensure that, as far as possible, the CfD counterparty will be 'insolvency remote' – that is, to reduce or limit as far as possible the risk that there would ever be grounds for a court to grant a winding up or administration order.

261. The CfD will set out that the CfD counterparty is only obliged to pay generators what it has received in from suppliers (the 'pay when paid' principle). Therefore, if the CfD counterparty does not receive monies from suppliers, it will not be under an obligation to pay generators (until such time as the monies have been collected in full from suppliers). This approach raises the possibility that, whilst generators will receive the payments due under the CfD, there could be a delay in them receiving part of the monies that they are due.

262. However, without mitigation measures, late or non payment could create potential credit risks to all CfD participants which could increase financing costs, or even prevent financing of projects. This is particularly the case given that the CfD counterparty will only be obliged to pay generators monies it has received in from suppliers, as described above. As explained further in the next section, to address this risk there will be mechanisms in place designed to allow continued payment of the supplier obligation as follows:

- If a supplier chose not to make a payment due under the supplier obligation but otherwise remained solvent this would be a breach of a relevant requirement of its license (and would remain a breach even if a supplier were insolvent). The consequences for such a breach can include the imposition of financial penalties (of up to 10% of annual turnover of the licensee) and ultimately the revocation of its supply licence.

- In addition, specific CfD collateral requirements will be placed on participating generators and suppliers to cover future payment (and possibly arrears) periods. This approach has operated under the Balancing and Settlement Code successfully.

- The small risk from losses as a result of supplier default that are not covered by the collateral lodged by that supplier ('unsecured' losses), would be met through a mutualisation process, spreading the loss across all suppliers, similar to the arrangements that currently apply under the Balancing and Settlement Code.

- Furthermore, should a supplier become insolvent then the payments will resume pursuant to the Supplier of Last Resort regime or the Energy Supply Company Administration Regime, which would result in an administrator taking over the supply and statutory obligations of the failed supplier.

- As a backstop to ensure that payments under the CfD contracts would continue to be made in extreme circumstances where the CfD counterparty was not performing, the Energy Bill also provides powers for the Secretary of State to transfer CfD contracts to a new CfD counterparty should it need to.

263. The Government will consider further measures to underline the solvency of the body as part of the detailed company design, such as whether to restrict the CfD counterparty's activities to the entry into and administration of CfDs, so that it cannot run up debts for other activities; or the desirability of controls such as an "asset lock" so that the CfD counterparty is disabled from distributing surplus assets to the people in control of it.

Accounting for the CfD

264. The CfD counterparty, generators, and suppliers will have to account for the CfD and/or related supplier obligation. CfDs are contracts between generators and the CfD counterparty. They are designed to deliver a policy to provide top-up payments to generators that contribute to specific policy objectives.

265. Generators and suppliers will have to consider how they account for the arrangements. The Government would not expect to provide an opinion on the appropriate accounting treatment for generators and suppliers given that different companies may legitimately account for CfDs in different ways. However, it would seem likely that the new payment model removes a concern for suppliers regarding the original model that they would have to recognise on

their own balance sheet a liability for their market share of CfDs taking into account the full duration of the contracts.

266. For generators, while the reference price is below the strike price, we would not expect CfDs to represent a liability. We are working with generators to understand the potential accounting treatments and the materiality of any consequences.

Operational costs

267. The CfD counterparty must have the ability to meet its operational costs. While upfront costs will be met by Government, we anticipate that running costs will be met by industry. We are considering options for costs to be met by electricity suppliers, recognising that operational costs will ultimately be passed through to consumers. These costs are small within the overall benefits of the regime, but nonetheless will require a robust framework to ensure that they are being incurred appropriately.

268. We are also considering whether there are events or instances under the CfD that the generator should pay for; if so, we would anticipate that these would be set out in the contract. At present, the heads of terms published alongside this document reflects only one such instance, where the generator may pay the costs of responding to any notice of a change in law. This is to disincentivise generators from submitting claims that are not material in value.

5. Funding the CfD: supplier obligation

Summary Box

- The supplier obligation is a compulsory levy on all licensed suppliers in Great Britain and Northern Ireland;
- We are currently minded to introduce a variable rate obligation, meaning the precise amounts owed to generators over a specified period will be collected from suppliers as soon as possible after that period;
- The Government will seek to use existing data and mechanisms where possible to implement the obligation;
- Payment protections will be built into the system, including suppliers posting appropriate credit and collateral to cover the given settlement period;
- The Government intends to exempt Energy Intensive Industries from the cost of CfDs, through the supplier obligation. The scope of this exemption will be subject to consultation and it will be subject to state aid clearance;
- We are interested in the impacts of the proposed approach to the supplier obligation on suppliers, and we are seeking views through a call for evidence. This will inform our decisions and design of the obligation.

Introduction

269. The Government intends to introduce a statutory obligation on suppliers to make payments to the CfD counterparty to fund the payments that are due under the CfD to generators. The contract with each CfD generator will determine the payments to be made, with the amounts owed by individual suppliers dependent on their market share. Market share will be based on volume of energy supplied rather than the number of customers. The supplier obligation will be a relevant requirement of each supplier's licence.

270. The detail of the supplier obligation will be set out in secondary legislation which will be laid following Royal Assent of the Energy Bill. This section provides an overview of the Government's intended approach to the supplier obligation and the secondary legislation. The Government is considering implementing a variable rate obligation, where the precise amounts owed to the generators under the CfD contracts in a given period are collected from

suppliers as soon as possible after that same period and passed swiftly through to generators. Further details of how this will work, including the measures that will be put in place to ensure certainty of payments and an exemption for Energy Intensive Industries are outlined below. In addition, we have issued a call for evidence seeking supplier's views on the supplier obligation proposals, the responses to this consultation will inform the detailed design of the obligation.

Summary of approach to supplier obligation design

271. The supplier obligation clauses in the Energy Bill require the Secretary of State to make a supplier obligation for the purpose of enabling the CfD counterparty to meet the costs of the CfDs.

272. The design of the supplier obligation has taken into consideration how best to ensure that the CfD counterparty can meet its contractual obligations and how best to ensure that generators receive the amounts due to them under the CfDs. We are also interested in impacts on suppliers, which are outlined further below.

273. The supplier obligation is a compulsory levy and is likely to be classified as a direct tax for the purposes of the Government administering its taxation programme. Therefore HM Treasury's tax-raising principles need to be considered in the design of the obligation to ensure an efficient approach.

274. To facilitate the delivery of the obligation, Government has considered what mechanisms and data processes already exist to enable the suppliers to make the payments due under the supplier obligation. Using existing, familiar, mechanisms and data will reduce the cost of implementing new mechanisms where possible, and make implementation more straightforward.

275. The Government is considering implementing a variable rate obligation whereby the precise amounts owed to the generators under the CfDs in a given period (such as a month) are collected by the CfD counterparty from suppliers as soon as possible after that period and passed swiftly through to generators. An alternative would be a form of fixed rate obligation, which would be derived from predictions of the likely payments arising from the generator's CfDs in a future period and predictions of supplier market share, and a reconciling mechanism to make up any under or overpayment.

276. Under a fixed rate obligation, the risk of underpayment would need to be managed to avoid damaging investor confidence in the regime. The most straightforward way to mitigate this would be over-collection from suppliers. On the evidence available, the Government is therefore minded to introduce a variable rate levy because this offers the most efficient approach to raising funds for the CfD counterparty:

- It allows the CfD counterparty to meet the precise payments it needs under the CfD, when required;
- Wherever possible it uses actual rather than estimated data, and particularly in calculating the amount owed to generators; and
- It does not lead to surpluses or deficits in the amount of payment collected from suppliers, and minimises the need for adjustment payments.

277. However, this approach means suppliers will need to manage the variability in payment amounts that would exist under this form of obligation and how this impacts on consumers. The Government is mindful of these impacts and is therefore keen to see evidence from suppliers on how they may approach this and other aspects of the obligation alongside their day to day business. Further evidence is needed to test impacts in detail, and to establish whether measures to mitigate any impacts are desirable and achievable. Responses to the call for evidence will inform policy design and development of the supplier obligation.

Delivering the supplier obligation

How does the obligation work?

278. The Energy Bill will make provision that all licensed suppliers in Great Britain and Northern Ireland be will be obliged to pay the supplier obligation. This is similar to how the Renewables Obligation is delivered.

279. In considering the design of the CfD counterparty, and the functions it may carry out, there is evidence to suggest that the systems and data required to process payments for the supplier obligation may already exist, or the skills to develop them may sit better outside of the CfD counterparty.

280. The Government is considering whether the CfD counterparty will develop its own systems or whether the settlement function would be better carried out by an organisation which operates similar systems on behalf of the CfD counterparty. The settlement function is likely to draw heavily on data gathered through the Balancing and Settlement Code. Procedures for collection of such data from suppliers and generators and management of disputes relating to it are already in place. The Government is considering whether it can benefit from these existing procedures and is minded to use Elexon as the settlement agent on behalf of the CfD counterparty.

281. The CfD counterparty would require suppliers to post collateral for the period in which payments are outstanding to secure against defaults. This is covered in greater detail below.

282. The CfD counterparty will receive data from the generator for the period in question. The generation data would need to be verified, either through a mechanism the CfD counterparty

has or potentially through existing processes if the information is provided via the Balancing and Settlement Code.

283. The CfD counterparty will calculate the amount to be paid to the generator based on the reference price and strike price, according to the terms of each CfD. The CfD counterparty will also receive estimated supply data from all licensed suppliers, potentially through the Balancing and Settlement Code, to estimate the market share for each supplier for the relevant period. A mechanism is expected to be needed to "true up" any estimates and reconcile payments as data becomes more certain. The CfD counterparty will charge the suppliers the amount owed under the CfD in proportion to their market share. An example of this is shown below. The CfD counterparty will aggregate these payments and transfer to the CfD generator in accordance with its contractual payment obligations set out in the CfDs. The Government is not mandating that the costs of the supplier obligation are passed on through consumer bills although it is likely suppliers will do so.

284. There are options for the frequency of CfD payments and the supplier obligation levy. Our current view is that making payments to the CfD counterparty on a monthly basis may be preferred given the need to provide regular payments to generators, whilst also providing a relatively stable cash-flow requirement on suppliers. The suppliers (or generators should they be paying back) will be expected to make payments in arrears of the settlement date. This could be around 28 days following the end of the billing period; this will be explored further as the detailed mechanics of the obligation are designed.

Data collection

285. Under the variable rate obligation we propose to use the data that is provided to the Balancing and Settlement mechanism to assess the amounts owed by suppliers in a given period. This information is trusted by industry and is verified and audited under the rules of the Balancing and Settlement Code and regulated by Ofgem. At present we would anticipate that similar requirements would apply. Amendments to the Balancing and Settlement Code or alternative arrangements may be necessary to access this data. There would also be an additional requirement on the CfD counterparty to gather the relevant reference price data.

286. The data required is, therefore:

- Generation data – when a CfD generator produces energy in a given period the CfD counterparty will be notified of that amount (either directly, or through the Balancing and Settlement Code or similar arrangements). This will therefore be actual rather than estimated data;

- The CfD counterparty will also need information on the reference price to calculate difference payments;

- Supply data – in a given period the CfD counterparty will be supplied with supply data (either directly, or through the Balancing and Settlement Code or similar arrangements) to enable the CfD counterparty to apportion costs correctly by market share. Supply meters are checked on an irregular basis and supply data is not finalised until around 15 months after the supply day. Therefore the CfD counterparty will receive refined data at regular periods, when these data runs are made adjustments will be made in future invoicing periods to take account of inaccuracies.

Measures to ensure the certainty of payment

287. A number of protections will be built into the proposed system to mitigate the risk that the CfD counterparty does not have access to the monies owed to generators. Payment of the supplier obligation will be enforceable as a licence requirement. In addition, requiring suppliers to post collateral as they do under the Balancing and Settlement Code is the first step in minimising the risk that unsecured losses arise.

288. The Energy Bill enables regulations to provide that suppliers will be obliged to post collateral for the upcoming supplier obligation payment they are due to make. This will be a mandatory requirement and is likely to be set by the CfD counterparty at a level that covers the upcoming payment period (or payment plus arrears period) of the individual supplier at any one point in time. It is likely that collateral will be required in the form of cash or a letter of credit from a creditworthy party[48]. The amount of collateral required is affected by how often supplier obligation payments are made, for instance weekly or monthly, and how far in arrears the payments are made. The detailed mechanics of the payment of the supplier obligation will be set out in secondary legislation. The Government is interested in receiving evidence about the impacts of posting collateral from relevant stakeholders as part of its call for evidence.

289. Analysis undertaken by the Government on the Balancing and Settlement Code's collateral requirement has shown that holding collateral reduces the overall level of unsecured losses. Over the past 8 years (2004-2011) the total unsecured losses from suppliers as a result of defaults and insolvencies has been around 0.26% of the Balancing and Settlement Code revenue. Prior to 2004 the largest company to become insolvent was TXU in 2002. As a result of robust credit and collateral arrangements there were no unsecured losses following this insolvency, as the combination of collateral and the Supplier of Last Resort regime ensured that payment obligations continued to be met despite the disruption created by the insolvency event .

[48] This is discussed in more detail in "The Contract" section of this document.

290. Under the Balancing and Settlement Code, unsecured losses arising from settlement obligations are mutualised across the other remaining Balancing and Settlement Code Parties. Should there be any unsecured losses (i.e. payments owed to generators that have not been recovered from suppliers), the supplier obligation legislation will also allow for the CfD counterparty to recover any unsecured amounts by allowing the mutualisation of losses across the other suppliers by reference to market share.

291. In addition to collateral and mutualisation there are a number of existing and recently introduced regulatory and legislative measures available to Ofgem and the Secretary of State that are designed to protect consumers to ensure the market continues to function in instances of supplier default. When activated, these measures would further protect CfD payments by ensuring that the impact of unsecured losses is kept to a minimum.

292. The Supplier of Last Resort (SOLR) process can be instigated by Ofgem with respect to a supplier in financial distress and would facilitate the continued flow of CfD payments from consumers to generators in the event of supplier failure. This process allows Ofgem to revoke the failed supplier's licence and appoint another supplier to take on its customers. The SOLR arrangements have been tested several times over the last few years when small suppliers have failed. However, although the arrangements have worked well to date, experience has shown that there may be particular challenges in the event of a large supplier becoming insolvent because of the volume of customers involved.

293. As an additional contingency measure to protect the market, the Energy Act 2011 provided for an Energy Supply Company Administration Scheme (ESCAS). In the event of a large supplier facing potential insolvency from creditors or the Secretary of State determining that a large supplier is likely to become insolvent, the Secretary of State may petition a court to appoint a special administrator in order that customers continue to be supplied with gas and electricity. This will be done as cost-effectively as possible until the company in difficulty is either rescued, sold or its customers are transferred to other suppliers. We would expect that the continuation of supplier obligation payments, as a licence obligation, would be considered in an ESCAS situation.

294. The combination of collateral, mutualisation, SOLR and ESCAS should ensure that payments to generators will be met by suppliers and that any shortfalls are temporary and are ultimately made good. Although the various levels of protection should be able to be implemented in short order, there may still be a delay in payment to generators in some scenarios. As set out earlier in this document, the Government is minded to provide that in the event of the CfD counterparty having received insufficient amounts under the supplier obligation, the CfD counterparty would be able to make payments to generators on a pro-rata basis to spread any shortfall evenly across generators, and that in subsequent periods, the CfD counterparty would request amounts to recover and so make good the accrued shortfall.

295. Although the CfD counterparty is owned by the Government, payments will come from suppliers through the statutory obligation supported by the above protections. This is more appropriate and efficient than the Government making payments which it would then need to

recoup from suppliers, or underwriting supplier default risk for low-carbon generation (a risk that industry already manages under today's electricity market arrangements). It provides a sustainable, financially credible and market-based underpinning to CfD payments.

Enforcement of the supplier obligation

296. It is the intention to make the supplier obligation a "relevant requirement". This means that a failure to comply with the obligation can be enforced as if it were a breach of a supplier's licence.

297. The CfD counterparty will have a number of mechanisms to manage general disputes on data and payments, and these will be designed as the secondary legislation is developed. There are precedents for this through the Balancing and Settlement Code and the Renewables Obligation that may offer models for this system.

Exemptions for Energy Intensive Industries

298. In the Chancellor's Autumn Statement 2011[49], the Government announced its intention to explore ways to mitigate the impact of electricity costs arising from EMR on the most Energy Intensive Industries (EIIs), where this significantly impacts their competiveness, and subject to value for money and state aid considerations.

299. In order to maintain the competitiveness of the UK as a place to do business the Government intends to exempt EIIs from the cost of CfDs, and is currently minded to do so through the operation of the supplier obligation. The Department for Business Innovation and Skills will work closely with DECC to define the scope of the exemption, including who will be eligible, and the mechanics for delivering it. The work to deliver this exemption will be part of the EMR programme, delivering on the same timescale, and subject to further consultation. Any exemption is also dependent on state aid clearance.

Impacts and Call for Evidence

300. The Government response to the ECC Committee Report is published alongside this document. The ECC Committee heard evidence from a number of stakeholders on the breadth of the EMR measures within the draft Energy Bill. Some of the evidence highlighted

[49] http://www.hm-treasury.gov.uk/as2011_index.htm

the need for the Government to consider the impacts on small suppliers, indeed two recommendations were made to this effect. The supplier obligation will clearly have an impact on all suppliers, and the Government is keen to understand these impacts in the context of a supplier's overall business, and whether or how they can be managed.

301. The Government has been testing the approach to the supplier obligation with stakeholders. Some have raised concerns that the reference price for CfDs could prove unpredictable which, if then combined with changeable generation mixes, could create obligation payments which are difficult for suppliers to predict. As set out above, the Government is currently considering a variable rate obligation as the most efficient method in which to deliver payments for the CfDs. However, the Government is interested in exploring these impacts further and understanding whether mitigating actions can be taken when designing the mechanics of the obligation.

302. The posting of credit and collateral is an essential part of the CfD system to ensure that in the unlikely event of default, generators can still be paid and mutualisation across suppliers is minimised. Some stakeholders have questioned the ability for suppliers to manage this alongside the forms of credit and collateral required for other electricity measures such as codes. In particular there have been comments on the scale of collateral required for the CfD obligation alongside the need for collateral in other schemes and the cost to suppliers of providing that collateral to the CfD counterparty. We are interested in the impacts of posting collateral for CfDs alongside other regimes and whether these should be mitigated.

303. Therefore the Government is asking for suppliers to come forward with their views on the proposed supplier obligation approach.

Call for Evidence

We would welcome suppliers reviewing the detail of the proposed approach for the supplier obligation as set out briefly in this section. The particular questions we would like responses to include:

1. Do you have concerns about the predictability of the amount of potential volatility of CfD payments?
2. Does this differ based on different scenarios for how the generation mix evolves?
3. How would you manage the fact that CfD payments are changeable, noting that they are inversely related to wholesale price movements, and looking at this from the perspective of variations in total costs to serve (i.e. wholesale price/other cost variations in conjunction with CfD payment variations)?

4. Is there a hedge that suppliers can utilise that may mitigate any risks?
5. Overall what are your views on the proposed variable rate obligation and are there any other issues we should be considering?
6. What are the potential impacts on suppliers of implementing the supplier obligation, including:
   - cost effects of posting collateral both for the CfD obligation and alongside other requirements in the electricity market;
   - method of data collection;
   - changes to internal systems;
   - and the proposed payment periods?
7. Are there any factors to consider in order to mitigate risks or shorten the timescale for implementation?

Information that should assist suppliers in responding also include:

- The future generation mix set out under the Carbon Plan scenarios[50]
- Demand forecasts from the UEP[51]
- Fossil fuel price and carbon price projections[52]
- EMR Energy Bill Impact Assessment (gives details of EMR modelling approach)[53]

We may publish responses to the call for evidence in the future, if you do not wish your response to be made public please indicate this, and the reasons why, on your return.

Please provide your responses by 15th January 2013 and send to elec.marketreforms@decc.gsi.gov.uk.

Next Steps

304. We will analyse the responses from the call for evidence to assess what the impacts of the supplier obligation are on suppliers and consider what mitigations could be taken to address these, if needed. We will respond to the call for evidence by July 2013.

[50] http://www.decc.gov.uk/en/content/cms/emissions/carbon_budgets/carbon_budgets.aspx

[51] http://www.decc.gov.uk/en/content/cms/about/ec_social_res/analytic_projs/en_emis_projs/en_emis_projs.aspx

[52] http://www.decc.gov.uk/en/content/cms/statistics/energy_stats/prices/prices.aspx

[53] http://www.decc.gov.uk/en/content/cms/legislation/energybill2012/energybill2012.aspx

6. Access for independent market participants

Summary Box

Power Purchase Agreements

- The evidence received in response to the call for evidence on Power Purchase Agreements (PPAs) shows that the market has shifted in recent years and that generators are finding it hard to secure PPAs on terms that are as beneficial as previously.
- The Government's view is that the CfD offers a number of advantages and that most of the current concerns are likely to be temporary in nature. However, there are concerns over: competition; the difficulty of pricing imbalance risk; and the transition to the CfD.
- The Government will ensure that the EMR programme is delivered in as efficiently as possible, and will initiate a process with market participants to smooth the transition to the CfD.
- The Government will continue to explore regulatory options with market participants. To ensure that the Government can act if necessary we will seek powers in the Energy Bill to make modifications to electricity supply licences for the purpose of reducing barriers to entry associated with the PPA market.

Liquidity

- Wholesale market liquidity is an important enabler of the EMR programme and a key feature of a well functioning and competitive market. The GB market is currently characterised by relatively low levels of liquidity and it is especially poor in the forward markets.
- Ofgem is currently taking forward reforms to improve liquidity and we support its objectives and expect further progress shortly. The Government believes that regulatory intervention may be justified and that Ofgem remains the primary vehicle for delivering this.
- However the Government is seeking backstop powers in the Energy Bill to provide it with the flexibility to act should industry actions and Ofgem reforms not secure the improvements necessary to support competition and effectively deliver EMR.

Introduction

305. The large vertically integrated energy companies are making significant investments in the UK's electricity sector and will continue to play a critical role over the coming years. These companies cannot, however, deliver all the investment that is needed to meet our objectives. It is critical, therefore, that the market is open to the widest possible range of investors and that the market framework supports diverse business models. As well as attracting investment, low barriers to entry into the market drives competition, innovation and diversity; it is therefore in the consumers' interest to achieve a broad investment base, including investment from new entrants and independent developers.

306. The Government's vision is for a competitive and efficient market that attracts a wide pool of investment. In recent years independent developers have played an important role in delivering new capacity in the renewable and gas generation sectors and they will play a key role in meeting the Government's goals and deliver essential investment in the future, provided market conditions are right.

307. Market participants who are not vertically integrated need to be confident that they can manage risks associated with independent development at reasonable cost, including having an effective route to market for their power and an ability to manage appropriately their balancing risks.

308. The Government is, therefore, committed to ensure that the EMR programme is supported by action to deliver:

a. Sufficient liquidity in the forward, day-ahead and intra-day markets that ensures that all market participants have appropriate risk management and trading opportunities;

b. Power Purchase Agreements that facilitate independent generators' access to market, with PPA discounts that reasonably reflect the cost of managing their imbalance; and

c. Reference prices that reflect supply and demand fundamentals in order to provide reliable investment and operational signals and ensure that payments under the CfDs are not being manipulated, at a cost to consumers.

Power Purchase Agreements

309. Independent renewable developers have raised concerns about current difficulties they face in securing bankable long-term contracts for the sale of their power (Power Purchase Agreements, or PPAs). A PPA with a credit-worthy counterparty is usually required before lenders will provide finance for a project, as it provides comfort that revenues are reasonably

secure and risks will be appropriately managed. In response to these concerns the Government published a call for evidence[54] on 5 July, seeking to build the evidence base on the state of the current market for PPAs and views on ways to ensure that independent renewable generators can continue to participate in the market. The call for evidence closed on 16 August.

310. The Government received 56 responses to the call for evidence from a wide range of stakeholders with the majority from independent renewable generators or electricity suppliers and aggregators that offer PPAs. This section provides the Government Response to the Call for Evidence.

311. Separately, in May 2012 the Government issued a "Call for evidence on the role of gas in the electricity market[55]" to consider the challenges to investment in new gas fired electricity generation plant. Around 70 responses were received to that call for evidence including a number from independent gas generators who raised similar issues regarding their route to market as those raised by independent renewable generators.

Summary of responses

312. This section includes a summary of response to the PPA Call for Evidence relating to independent renewable generation.

Evidence of changes

313. The evidence that we received broadly supports the views of the independent generators that the market has shifted in recent years and that generators are finding it difficult to secure PPAs on terms that are as beneficial as they used to be.

314. Generators reported that the tightening of the PPA market has led to the following:

- Typical discounts have increased on a like-for-like basis.
- Terms used to be 15 years as standard, but are now more likely to be around 10 years.

[54] http://www.decc.gov.uk/en/content/cms/consultations/call_ren_inves/call_ren_inves.aspx

[55] http://www.decc.gov.uk/en/content/cms/consultations/gas_elec_mkt/gas_elec_mkt.aspx

- Discounts used to be with reference to a year-ahead index, but offers are now against a day-ahead or intra-day index. This introduces a greater degree of price risk for the generator.[56]

- Price floors, which provide certainty over minimum revenues, were once common, but are now scarce.

- Whilst the numbers of tenders received are reported to be around the same level, or have increased, developers say that fewer of these tenders are 'bankable'. Issues such as whether floor prices area are offered or not and the pricing of imbalance risk affect the view of bankability.

Reasons for the recent changes

315. The current economic climate appears to be having a significant effect on the PPA market, with financiers being increasingly risk averse, reducing the number of PPA counterparties that will satisfy their lending criteria. At the same time, the large vertically integrated utilities are under pressure to reduce their credit exposure, with the accounting treatment of floor prices becoming a particular constraint.

316. There is also evidence that views of the future costs and risks of managing a PPA (such as balancing costs), are being reflected in higher discounts, or are resulting in a relative reluctance to offer long-term PPAs.

317. The proposed closure of the Renewables Obligation from 2017, when combined with the current balance between the demand for and availability of Renewables Obligation Certificates (ROCs), appears to be having a significant impact on current contracting behaviour. In particular, the large utilities appear to be taking a cautious approach to contracting for ROCs, reducing the value that they place on entering into a PPA in order to increase their allocation of ROCs. Indeed evidence was submitted that showed that the majority of large suppliers can meet the Renewables Obligation for their customer base from the combination of ROCs generated by their own generation and available under the terms of existing PPAs. Consistent with this, several respondents reported that in some recent PPA offers ROCs were not included or the terms stipulated that only 50% of ROCs generated would be purchased.

318. Independent gas and nuclear generators and developers also raised concerns about their ability to secure PPAs, both now and in the future. The reasons that were cited include the currently low market price due to current high levels of supply of thermal generation, and the large energy companies focusing on developing their own generation.

[56] The year-ahead index will be less volatile than the day-ahead or intra-day index. The day-ahead price will tend to fall when generation is expected to be high, for example when it is expected to be windy. In this way wind power will receive lower prices when paid on a short-term index, rather than a year ahead index where forecasting has little effect.

Transition to Contracts for Difference

319. The responses to the Call for Evidence revealed differences of opinion over the likely impact of the introduction of CfDs. We set out in the Call for Evidence the Government's view that the CfD offers a number of advantages compared to the Renewables Obligation, particularly in the context of the PPA market. Most notably the CfD provides long-term price certainty to the generator, which removes the need for floor prices and should help provide a more transparent approach to PPA contracting (as PPA providers will not have to price the risk of offering a fixed-price, or minimum price, contract).

320. The removal of the need to offer floor prices and/or fixed prices will also change the way that PPAs are accounted for by suppliers. In particular, under the CfDs, the impact of PPAs on the balance sheet of suppliers will be lower than under the RO, reducing the extent to which credit conditions limit competition in the PPA market. Competition in the PPA market will also be supported by the removal of the need to value and market the ROC.

321. Consequently many of the issues that were identified as current concerns are, or are likely to be, temporary in nature. However there, there are three particular issues raised in the call for evidence that may present challenges as we move to the CfD:

a. Some respondents suggested that there were low levels of competition in the PPA market and that this will continue under the CfD;

b. That imbalance risks are difficult to price accurately; and

c. That the transition to the CfD creates uncertainty and presents administrative barriers to early projects.

322. In respect of the first issue, the evidence available suggests that the large suppliers are offering PPAs, though there is concern about the terms offered. The lack of 'bankable' PPAs appears to be in part a feature of the commercial constraints that large suppliers are operating within. In this respect, we note that the change to the CfD will support competition as the balance sheet impact on Big 6 and small suppliers is lower. In addition the simpler nature of CfD PPAs is likely to promote greater price transparency. Improved liquidity will also lower barriers to entry, and support the entry of aggregators.[57]

323. There was broad consensus that imbalance risk is a key concern. It is likely to become more difficult to price accurately, as levels of intermittent generation increase and due to regulatory uncertainty associated with the cash-out review. It is important to note that imbalance risk, when compared to wholesale price risk, is a relatively small part of overall project economics and volatility in imbalance costs is likely to have a lower impact on project economics than

[57] The next section of this document details the actions we are taking to improve liquidity.

volatility in wholesale electricity prices does currently. Furthermore, the CfD will consider the costs associated with imbalance risks when setting the strike price. Ofgem's cash out review will be at an advanced stage before CfDs are issued, which should improve market participants' ability to take a view of the likely costs of imbalance.

324. We will consider further the role that imbalance risk plays in the development of the PPA market as part of the consideration of case for regulatory intervention.

325. However, concerns about transition issues appear valid, as it will take time to develop contract terms for the first tranche of CfD projects and for credit committees to be comfortable with the arrangements. This could increase risks and costs for generators developing the early CfD projects.

326. There is, therefore, a case for action to ease this transition, and ensure that the first CfD projects do not face disproportionate costs associated with making the market comfortable with the new arrangements.

327. We, therefore, propose working with market participants to prepare for the introduction of the CfD and to ensure that advance consideration has been given to contract approaches and structures, financing arrangements and division of risks between PPA counterparties. The outputs of this process could include, *inter alia*, model PPA contract terms to serve as a basis for commercial negotiation, and a code of conduct on transparency of PPA pricing.

Regulatory options

328. The evidence available does not yet demonstrate that there is a sufficiently clear case for intervening in the PPA market. However, due to the important role that independent generators are likely to play in delivering investment over the coming years, we will continue to work with market participants to examine possible regulatory options to ensure that the costs and benefits are fully tested.

329. The Call for Evidence set out a number of high-level regulatory options that may address the concerns raised about the PPA market. Other suggestions were made by respondents.

Obligation to offer terms

330. This approach would require participation in the market by obliging licensed suppliers to offer PPA terms in certain circumstances. This may require minimum terms for a PPA relating to contract duration and change of law provisions for example, but would not go as far as setting prices. Responses to the Call for Evidence questioned the efficacy of this approach. It was noted that it would provide no guarantee that the costs of a PPA are acceptable, but may improve competition for PPAs by raising levels of participation. However, it was also noted that there is little risk of unintended consequences or market distortion as there is no compulsion to enter into contracts that are not commercially beneficial.

331. We believe that this approach could enable generators to agree PPAs and could offer a potential way forward if it can be shown that it would lead to greater market participation or lower barriers to entry. It might also oblige suppliers to overcome the costs of moving from the RO to the CfD, and thereby reduce the costs of this transition to generators seeking PPAs. We will be conducting further work on this with a view to understanding the likely market responses.

Off-taker of last resort

332. Some respondents felt that an offtaker of last resort would provide a guaranteed route to market, and was therefore the most certain response to the issue. Respondents also suggested that a first resort purchaser of renewable power would be an effective approach. However, it was also noted that there are significant risks associated with such approaches. The intervention would require an administrative price setting mechanism which could lead to significant market distortions.

333. In addition, we are concerned that this could act as a barrier to market entry for independent aggregators or small suppliers. Our assessment is that the risks to normal market development of an intervention of this scale are significant and the Government does not currently favour this regulatory option. In particular, we are concerned about the risks associated with any approach that involves the Government making interventions that mandate the way that costs are priced in commercial contracts.

Short-term PPA auction setting reference price for CfD.

334. Several responses to the Call for Evidence suggested that an auction platform selling short-term PPAs could provide a possible route to market for independent generators. A similar auction is operated by the Non-Fossil Purchasing Agency (NFPA)[58]. The price achieved in the auction would provide the reference price for the CfD and provide improved price certainty for the generator. It was argued that because it is easier to price imbalance over the short-term, such a model would provide a more competitive and liquid PPA market.

335. By guaranteeing that the price the generator receives is taken for the reference price for each project, this mechanism would ensure that each generator always receives the CfD strike price. As such, from a generator's perspective, this mechanism resembles a fixed FiT. The EMR White Paper set out the Government's reasons for preferring a FiT with CfD over a fixed FiT. In particular, Government is concerned about the likely impacts of completely removing imbalance risk from the generator and potential additional risk transferred to consumers.

[58] www.nfpa.co.uk

336. This model would also transfer additional risks to the consumer (in particular the imbalance risk faced by each project) and add complexity to the operation of the CfD. A PPA auction may include a CfD counterparty (similar to the NFPA) that issues long-term PPAs to CfD eligible projects and markets the power through the auction. Such a body would need to be underwritten by consumers through a supplier levy or other arrangement.

337. We will conduct further analysis of the impact of these approaches including consideration of the way that they deal with risks, the effects that it may have on the operation of the CfD, and whether it satisfies the requirements of financiers.

Next steps

338. The evidence that we received broadly supports the views of the independent developers that the market has shifted in recent years and that generators are finding it harder to secure PPAs on terms that are as beneficial as they used to be. It is not clear, however, whether the problems in today's market are likely to endure.

339. Taken with the lower risk profile of the CfD and the removal of a number of temporary factors – including the constrained credit conditions during the recent recession, the transition from the Renewables Obligation and the current levels of regulatory uncertainty – the Government expects that EMR will support increased levels of competition in the PPA market.

340. The structure of a PPA will need to change under the CfD, to reflect the changes to the risk profile. The market will need to adjust to this new approach and will over time develop appropriate contracting approaches. We believe that the market can take steps now to prepare for the introduction of the CfD. In the call for evidence we suggested that market participants should work to understand how PPAs will need to change under the CfD could reduce the time it takes to take projects forward and could reduce associated costs.

341. Responses to the call for evidence noted that approaches such as these would not affect the fundamental incentives to enter into contracts, but they could provide benefits and speed up the transition to the CfD. Now that more detail is available on how the CfD will operate, it will be possible to consider the likely shape of the PPA market in the future and we are working with stakeholders through the trade associations to explore options.

342. The Government will, therefore, ensure that the EMR programme is delivered in as efficient a way as possible, and will also take steps with market participants to smooth the transition to the CfD. The Government will therefore initiate a process from January 2013 to prepare for the CfD and identify the changes to the PPA market that may be required to ensure a smooth transition. The Government anticipates that this process can provide important impetus to the transition to the CfD and will produce key outputs including CfD-friendly PPA contracts and a voluntary code covering issues such as price transparency.

343. However, reflecting the Government's commitment to ensuring that independent developers have appropriate access to the market, we are seeking powers in the Energy Bill that would enable Government to make modifications to electricity supply licences for the purpose of reducing barriers to entry associated with the PPA market. If appropriate, these powers would be used to impose obligations on licensed suppliers to participate in the market in certain ways. The Government will continue to explore regulatory options with market participants.

Liquidity

344. Wholesale market liquidity is an important feature of a competitive market. It provides market participants with a route to market, risk management opportunities and investment and operational signals. Liquidity is an important enabler of the EMR programme and the investment required in the GB generation market over the next ten years. A more liquid market will aid market entry, improve competition and increase the robustness of the CfD baseload reference price. To aid market entry and drive greater competition incumbents and potential entrants need to be able to buy and sell power readily in the volume and shape they require at prices that reflect demand and supply fundamentals. Greater depth will insulate the baseload reference price from gaming and manipulation.

345. The GB market is currently characterised by low levels of liquidity relative to some other major European power and international commodity markets, and is especially poor in the forward markets. Ofgem first identified liquidity as a significant barrier to entry in its 2008 Energy Supply Probe and since then has undertaken a number of market assessments and consulted on a range of proposals, Most recently (February 2012) Ofgem consulted on a proposal to hold a Mandatory Auction[59] in the forward markets. Ofgem is continuing to develop this and other proposals and we expect further details and next steps shortly.

346. Market participants have acknowledged that there is a need to improve liquidity and have taken steps to address this. In January 2010 a new exchange platform was launched and in the past twelve months there have been significant increases in the volume of power traded on the platform's day ahead auction. In September over 45%[60] of GB power was traded through the auction. The Government welcomes these developments which are positive for transparency, however they do not address the key issue of forward market liquidity which continued to deteriorate in 2012[61] from a low starting point.

347. There have been some recent improvements in day-ahead liquidity with increased volumes providing enhanced transparency[62]. Ofgem's analysis shows however that forward market

[59] http://www.ofgem.gov.uk/Markets/RetMkts/rmr/Documents1/Liquidity%20Feb%20Condoc.pdf
[60] Sources: APX Power UK Auction; Elexon Ltd; N2EX/Nord Pool Spot
[61] http://www.ofgem.gov.uk/Markets/RetMkts/rmr/Documents1/July%202012%20liquidity%20open%20letter.pdf
[62] http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=281&refer=Markets/RetMkts/rmr

liquidity remains low. This suggests that there has not been enough progress and that regulatory intervention may be justified. Ofgem is currently developing its proposals and is expected to set out its position and next steps shortly. Given the long-standing nature of this issue and its importance to the delivery of Government objectives, including EMR, it is important that the necessary improvements are made.

Next steps

348. The Government believes that market participants are best placed to deliver improvements and that they should go further and make progress faster. In the absence of adequate action the Government believes regulatory intervention may be necessary and that the Ofgem process is the primary vehicle for delivering this. However given the importance of liquidity to the success of EMR the Government considers that it should be able to act if it proves necessary. We are therefore seeking powers in the Energy Bill to allow Government to act should industry actions and Ofgem's reforms not secure the improvements necessary to support competition and effectively deliver EMR.

7. Next steps

349. This document sets out the full Operational Framework for CfDs. The next stage will be detailed work to further develop the design and enable implementation of the scheme in 2014. The Government will continue to develop the CfD and supporting framework, working with the Devolved Administrations, industry and other stakeholders.

350. This section sets out the key areas which require further consideration, and the steps Government will take in addressing these.

Transition from the current arrangements to CfDs

351. In introducing EMR, the Government is mindful of the need to avoid any hiatus in investment and ensure that the process is clear for developers. Previous documents[63] have set out details on the closure of the Renewables Obligation, including the intention to have a period of 'parallel running' with the CfD till 2017, enabling investors to make a choice between support mechanisms.

352. The Government has also established the Final Investment Decision Enabling Project and is committed to working with developers of projects which need to make early investment decisions prior to the full implementation of EMR. Projects which meet the characteristics set out in the Technical Update[64] have already been invited to contact the Department to discuss what form of comfort might be offered to them. This includes the possibility of issuing investment contracts – an early form of the CfD which may be implemented following full implementation of EMR. Where investment contracts are issued through FID Enabling, the approach to price-setting will be dependent on the technology and the scale of investment, but could include contracts negotiated directly with individual developers, competition, or use of published strike prices.

[63] Most recently in the Electricity Market Reform: policy overview document, May 2012. http://www.decc.gov.uk/assets/decc/11/policy-legislation/EMR/5349-electricity-market-reform-policy-overview.pdf

[64] Planning our Electric Future: technical update, December 2011. http://www.decc.gov.uk/assets/decc/11/meeting-energy-demand/energy-markets/3884-planning-electric-future-technical-update.pdf

Developing and implementing the CfD and supporting framework

353. The initial price-setting process is already under way, with the System Operator having issued a call for evidence in October 2012. This will be supplemented with work on the cost of capital benefits of CfDs, before draft CfD strike prices for renewables are published for consultation in the draft delivery plan in July 2013.

354. On allocation, Government will work with industry to determine the detailed rules of the process, including appropriate periods of time for Target Commissioning Windows, and costs for minimum spend amounts demonstrating financial commitment to a project, bearing in mind technology-specific considerations. In addition, further details will be set out on the process for CCS and nuclear plants seeking to apply for a CfD following the conclusion of the FID Enabling and CCS competition processes. The Government will also work with the market to develop a clear process for the introduction of more competition into allocation processes, as conditions allow. More details on all of these areas is expected to be published alongside the draft delivery plan in July 2013.

355. While the CfD has been designed reflecting the differing characteristics of intermittent and baseload plant, the Government is mindful that there may be a need to develop a CfD which reflects the ability of some low-carbon plant to provide flexible capacity to the system. The Government will consider when such plant may be required on the system and how it can be incentivised appropriately.

356. The Government will work to develop the detailed CfD Heads of Terms (Annex B) into a final fully termed CfD by July 2013. This will be achieved through building on the analysis conducted and decisions taken to date, supplemented by further discussion with industry and stakeholders on key policy areas. This will include arriving at a decision on issues including the level of inflation risk cover to provide, and the reference price source for baseload generation.

357. The CfD counterparty will be established, and further details governing its role and relationships with Government and other key organisations will be set out, including in legislation. Government will consider responses to the call for evidence on the supplier obligation issued through this document, we will publish further information on the detailed design of the Supplier Obligation in July 2013.

358. On route to market, the Government will support market participants to initiate a process, from January 2013, to prepare for the CfD and identify changes to PPAs which may be required to ensure a smooth transition. The PPA market will be kept under review, particularly following the initial allocation of CfDs in 2014, to see whether further action is required.

359. The Government is also reviewing progress made by market participants on improving liquidity and in the absence of adequate action will be ready to intervene. The Ofgem

process is the primary vehicle for delivering this, and further details are expected to be set out by the regulator before the end of the year.

Transition from initial CfD arrangements to greater competition

360. The Government intends to progressively introduce more competition into the allocation and price-setting processes for the CfD, to support the long term aim of delivering decarbonisation and security of supply at least cost to consumers. As technologies mature and market conditions allow, processes such as auctions or tenders will be introduced. These will cover individual technologies at first, but the ambition is to hold technology-neutral auctions in the 2020s, with an eventual vision of no longer needing to issue CfDs due to the existence of a competitive market which delivers low-carbon electricity without the need for Government support.

Table 1: Key dates and milestones

Date	Milestone
8 October to 10 December 2012 for Part One and 7 January 2013 for Part Two	National Grid issued call for evidence to support price-setting for renewable projects
December 2012	Stakeholder sessions to discuss and explain policy set out in the Operational Framework and the Heads of Terms
January 2013	Start of industry-led process on preparing the market for the introduction of CfDs
4 January 2013	Closing date for responses to call for evidence on supplier obligation
January 2013 onwards	CfD Expert Group workshops on outstanding policy issues
May 2013	Government response to call for evidence on the supplier obligation
July 2013	Draft delivery plan, including draft renewable CFD strike prices, published for consultation
July 2013	CfD final contract published
July 2013	Further detail published on CfD allocation and price-setting process for CCS and nuclear projects

Date	Milestone
July 2013	Initial details published on competitive allocation processes for the CfD
October 2013 onwards	Government consultation on secondary legislation
December 2013	2014-2018 delivery plan, including final renewable CfD strike prices, published
December 2013	Energy Bill receives Royal Assent - subject to Parliamentary time and the will of Parliament.
Mid 2014	CfDs issued
31 March 2017	Renewables Obligation closes
2017	Possible introduction of competitive allocation processes
2020s	Possible introduction of technology-neutral competition
2020s	Transition towards a market that does not require intervention, including in the form of CfDs

8. Stakeholders

CfD Expert Group and broader stakeholder engagement

361. Government welcomes input from stakeholders into the development of the CfD and supporting framework. In particular, following publication of the CfD Draft Operational Framework in May 2012, the CfD design has benefited from the input of the CfD Expert Group. The CfD Expert Group consists of representatives from a range of bodies within the electricity sector, including energy firms, Ofgem, National Grid and consumer groups. This has provided an opportunity to seek feedback on specific elements of the CfD design and allocation process, and allowed interested parties to share their expertise on these issues. This approach has proved effective, so it is intended that the Expert Group will continue to convene following publication of the Energy Bill, to help inform outstanding questions relating to the detailed technical design of the CfD.

362. However, Expert Group meetings will not replace broader discussions, particularly on key issues such as baseload reference price, where market-wide testing is currently ongoing. Stakeholder meetings will be held in December to explore the content of these documents and discuss outstanding issues. Over the coming months as the fully termed contract is developed and secondary legislation is drafted, regular stakeholder engagement will be maintained to ensure that interested parties are kept informed of progress and that the final design meets Government objectives whilst also addressing stakeholder concerns.

Devolved Administrations

363. EMR is designed to secure investment in electricity generation in all parts of the UK.

364. The Government has been working closely with the Devolved Administrations to ensure that the CfD proposals are as coherent as possible across the UK, whilst respecting the devolution settlements of each administration.

365. The CfD mechanism is expected to be implemented in a uniform manner across the UK, although some contract terms will need to be amended to reflect the differences in market arrangements (for example the provisions in the CfD which set out the calculation of the reference price will need to reflect the way in which the market in Northern Ireland operates). The eligibility criteria to be complied with as part of the allocation process will also need to be adjusted to reflect the different planning and grid connection processes which operate in Northern Ireland.

366. As noted in the Draft Operational Framework, CfDs will be allocated to Northern Irish generation projects commissioning from 2016. Prior to this, the Government will continue to work with colleagues in the Northern Ireland Executive as proposals on the reform of the single electricity market (SEM) are developed to agree how these can be reflected within the CfD.

367. Annex E Delivering EMR sets out more details on how the Devolved Administrations will be involved in the process of setting CfD strike prices. This will include consultation through the Devolved Administration Consultation Group, to allow the Devolved Administrations to provide their views to DECC as part of the process, and consultation with Devolved Ministers before setting CfD strike prices.

368. In addition, National Grid will work with the Systems Operator for Northern Ireland (SONI) as appropriate to ensure that the analysis presented properly covers the differences between the GB and Northern Ireland electricity markets. This will help inform Northern Ireland Ministers in their decision on giving consent to CfD strike prices in Northern Ireland.

Appendix A – Structure of the Heads of Terms

The following table sets out the structure of the Heads of Terms, a summary of the purpose of each main section, and highlights some of the key terms. This table should be read alongside the Operational Framework and the Heads of Terms, both of which set out more detail on the Government's policy intent.

Table 2: Structure of the Heads of Term

Heads of Terms reference	Description	Key elements of approach
Parties The contract is between the generator and the CfD counterparty.		
1. Definitions and Interpretation The contract terms should be read with reference to the definitions and interpretative provisions set out in this part.		
2. Term and termination		
Duration	Duration of support provided by the contract, being the period of time during which the generator is entitled to receive, or is obliged to make, payments under the contract.	Renewable energy projects: 15 years. Nuclear: term to be agreed. CCS: 10 years *or* as defined by the CCS competition for early-stage projects.
Termination	The right of the CfD counterparty to terminate the contract, and the consequences of termination.	The CfD counterparty will have the right to terminate the contract in prescribed circumstances, including (i) failure to meet the milestone; (ii) failure to satisfy a condition precedent; (iii) prolonged force majeure; or (iv) a generator event of default. In the case of termination for an event of default, the generator will pay a termination payment. The contract will afford generators remedy periods for

Heads of Terms reference	Description	Key elements of approach
		most events of default. The Government is also minded to provide for a standard form CfD Direct Agreement which would be entered into with the funders of a generator to provide appropriate cure periods and step-in rights.
3. Conditions Precedent		
Conditions precedent	The requirement on the generator to fulfil certain conditions prior to its entitlement to receive (and conversely to make) payments.	The generator should: - keep the CfD counterparty informed as to progress towards fulfilling the conditions precedent; - notify the CfD counterparty when a condition precedent has been fulfilled; - select a 'Start Date' from which entitlement to receive/obligation to make payments would commence. The Start Date must fall within a set time period after the conditions precedent have been satisfied. The CfD counterparty may agree to waive one or more of the conditions precedent.
4. Milestone		
Milestone	The requirement on the generator to satisfy a project milestone.	The generator must provide evidence of substantive financial commitment (through a minimum spend amount to be defined) within a set time period or otherwise risk termination of the

Heads of Terms reference	Description	Key elements of approach
		contract.
5. Metered Output, Reference Price and Strike Price		
Metered Output	The definition of metered output and how it is calculated.	Payments under the CfD will be made on the basis of loss-adjusted net metered electricity. Metered output will be calculated from data used for the purpose of settlement of imbalances under the Balancing and Settlement Code, or otherwise calculated in a manner consistent with the requirements of the Balancing and Settlement Code.
Reference Price	The market price referenced in the contract for the purposes of determining difference payments.	The reference price is not currently reflected in the Heads of Terms. Intermittent: The market (reference) price will be the (hourly) price set by the GB power exchanges (APX and N2Ex) for power sold in a day ahead auction. Baseload: The reference price is to be determined.
Strike Price	The contract strike price and how it is to be adjusted for inflation.	The strike price will be indexed annually by reference to the change in the Consumer Price Index (CPI). The link to CPI will be full or partial, to be determined as set out in the Operational Framework.
6. Payment Obligations		

Heads of Terms reference	Description	Key elements of approach
Payment of Differences	Description of the two way payment of difference amounts, and the extent of the CfD counterparty's liability under the contract.	When for a settlement period the strike price is above the reference price, the CfD counterparty will be obliged to make payment. When for a settlement period the strike price is below the reference price, the generator will be obliged to make payment. Payments under the contract will be calculated for each settlement period as the product of the metered output (capped at the contract quantity (see below)) and the difference between the strike price and the reference price. The CfD counterparty will raise funds through the supplier obligation to make payments under the contract, and its liability will not exceed the amount that it receives under the supplier obligation and allocated to the contract.
7. Billing and Payment		
Billing Statement	The content of billing statements, and provisions for calculating payments when information is not available.	For each billing period (the length of which is to be determined) the CfD counterparty will calculate the net amount payable, using estimated information where the actual is not available. The CfD counterparty will send a billing statement to the generator within a set period after each billing period.

Heads of Terms reference	Description	Key elements of approach
Payment Mechanics	The due date for payment, application of VAT and other taxes, provisions relating to deduction and withholding, and disputed payments.	Payments will be made to an account specified by the generator/CfD counterparty. Payment will be made in full without set off (except on termination) or withholding. The CfD counterparty will be able to suspend payment if the generator is failing, through its own fault, to comply with its metering obligations. Interest will be payable on amounts that are not paid under the contract by the due date.
8. Metering		
Metering	Generator undertaking with respect to metering and right of access and testing for the CfD counterparty.	The generator must comply with metering requirements and grant the CfD counterparty access to inspect and test metering equipment.
9. Information Provision		
Provision of information to the CfD counterparty	Obligation on the generator to provide the CfD counterparty with information.	The generator must when requested provide information to the CfD counterparty to help it perform its functions under or in connection with the contract.
10. Representations, Warranties and Undertakings		
Representations and warranties	Representations and warranties that the parties must make on signing the contract, at the milestone delivery date and at the Start Date.	The CfD counterparty and the generator will give usual formal warranties addressing such matters as their status and authority to enter into the contract. The generator will give additional warranties, for example as regards relevant authorisations

Heads of Terms reference	Description	Key elements of approach
		that it is required to obtain.
Undertakings	Undertakings made by the generator and CfD counterparty.	The generator will undertake to comply with applicable laws, authorisations and industry documents and to construct, operate and maintain its generation facility in accordance with the standards of a reasonable and prudent operator. The CfD counterparty will undertake to comply with applicable laws.
11. Contingencies		
Change in Law	Provisions which set out: - the process for notifying a change in law; - the information the notification should contain, - the process for determining whether a change in law is a 'qualifying change in law'; and the costs are 'material'; - the adjustment to the strike price; - the duty on the generator to mitigate the impact of the change in law; - the obligation on the generator to pay the CfD counterparty's expenses in dealing with the notification; - that a change in law cannot be a basis for	If a qualifying change in law results in the Generator incurring material costs, the Generator will be compensated by way of an increase to the Strike Price. Similarly, if a cost saving is made as a result of a qualifying change in law, the Strike Price will be reduced over the same period. A qualifying change in law is one that is not foreseeable and which applies specifically to: - the project or the generator; - generation facilities of the same or similar type; - generation facilities which are subject to a CfD; or - generation facilities of the same or similar type and which are subject to a CfD.

Heads of Terms reference	Description	Key elements of approach
	terminating the contract; - what happens if a dispute arises.	
Force Majeure	Relief from liability in the event of force majeure.	The Force Majeure provision will be finalised in the new year, but currently envisages relief from liability under the contract in the case of an event or circumstance that is beyond the reasonable control of the generator, which it could not reasonably have avoided or overcome and which is not due to its fault or negligence or that of its contractors, sub-contractors or agents, provided that neither non-availability nor the lack of funds will constitute Force Majeure.
12. Termination Events		
Termination events	Events which give the CfD counterparty the right to terminate the contract.	The CfD counterparty will be entitled to terminate the contract in response to a number of termination events affecting the generator, including insolvency, non-payment, breach of warranty or undertaking, failure to post collateral and loss of licence.
13. Credit Support		
Acceptable collateral	Provisions covering the requirement to provide and maintain collateral.	The requirement to provide collateral will apply where the CfD counterparty reasonably considers that the reference price will be greater than the strike price over a given future period. The required amount of collateral would be equivalent to the anticipated payments due to the CfD counterparty under the contract for that period.

Heads of Terms reference	Description	Key elements of approach
14. Confidentiality, Announcements, Freedom of Information		
Confidentiality and announcements	Provisions setting out when parties are permitted to disclose confidential information or make public statements relating to the contract.	The provisions limit disclosure and use of confidential information or the making of public statements.
Freedom of information	Provisions requiring the generator to co-operate with the CfD counterparty to enable it to comply with its obligations under the FoIA and Environmental Information Regulations.	The provision obliges the generator to co-operate with the CfD counterparty to enable it to comply with its obligations under the FoIA and Environmental Information Regulations.
15. Intellectual Property Rights		
Intellectual Property Rights (IPR)	Provisions covering licence of, and an indemnity for the CfD counterparty with respect to infringement of, IPR.	The provision protects each party's IPR as may be required.
16. Dispute Resolution		
Dispute Resolution Procedure	The procedure for resolving disputes that arise out of or in connection with the contract.	Disputes should be settled in a timely manner, informally between parties to the contract where appropriate and otherwise by an independent third party. The process should also be designed so as to minimise costs.
17. Miscellaneous		
General Provisions, Governing Law and Language	A number of miscellaneous provisions, including restrictions on transfer.	If a generator sells its generation asset, it must ensure that the buyer takes a transfer of the CfD. The CfD will not be capable of being separated from the generation asset, so the two will require to be transferred together. The restrictions on transfer are not intended to prevent a generator from using the

Heads of Terms reference	Description	Key elements of approach
		generation asset as security in relation to the financing or refinancing of its business activities.
Schedules		
Conditions Precedent	Sets out the conditions precedent.	The conditions proposed are largely aligned with existing grid compliance processes and are not intended to place significant additional requirements on CfD generators. The contract will incentivise generators to commission the installed capacity as agreed at contract signature.

Glossary

Balancing and Settlement Code	This contains the governance arrangements for electricity balancing and settlement in Great Britain.
Billing period	The period of time over which difference amounts will be aggregated to calculate payment due under the CfD.
CfD	The Feed-in Tariff with Contracts for Difference support mechanism, or an individual contract issued under that scheme.
CfD Counterparty	The body which signs and manages CfD contracts with eligible generators.
Change in law	Changes to laws or industry codes etc. as described in the Heads of Terms, which under certain circumstances may lead to an adjustment of the strike price in the CfD.
Day ahead market	Market for buying and selling electricity for delivery on the day after trading takes place.
Delivery Plan	A Government document which sets out key decisions to support effective delivery of EMR by the System Operator – for example CfD strike prices.
Delivery Body	The body responsible for delivering EMR including running the allocation system for CfDs – see also the System Operator, National Grid.
Difference amount	The amount of money due to (or to be paid by) the generator for a given settlement period. This will be calculated based on the difference between the reference price and the strike price, and on the amount of electricity generated.
FID Enabling	A process to enable projects to progress to timetable ahead of the implementation of the full EMR arrangements.
Forward market	Market for buying and selling electricity for delivery at a future date, e.g. month, season or year ahead.
Generic CFD	The standard CfD – whilst these principles are expected to underpin all CfDs, in the near-term this will primarily cover renewables, as those issued through the FID Enabling process may require varied terms to reflect the fact that the full supporting framework is not yet in place.
Heads of Terms	The document at Annex B, which provides an indication of the likely eventual drafting on key contract terms, where policy on these areas is sufficiently developed.
Levy Control Framework	A framework which Government uses to manage levy-funded spending, including CfDs, in order to deliver objectives whilst ensuring that policies are affordable.

Liquidity	Liquidity can be defined as the ability to buy or sell quickly a desired commodity or financial instrument without causing a significant change in its price and without incurring significant transaction costs. A key feature of a liquid market is that it has a large number of buyers and sellers willing to transact at all times.
Long stop date	A date following which a CfD may be withdrawn if the project has not yet successfully commissioned.
Metered output	The volume of 'green' electricity generated by a plant, adjusted for losses and net of any electricity used in generation.
Minimum Spend Amount	An amount, yet to be determined, that generators will be required to demonstrate they have spent on development or construction of their project, within a specified period of time after being awarded a CfD.
National Grid	The organisation responsible for managing the security of the power system and supply and demand of electricity – in GB this is National Grid. See also the Delivery Body and System Operator
Power Purchase Agreement	A long-term contract for the sale of electricity generated, usually to a supplier.
Reference price	A proxy for the market price of electricity used to calculate the value of difference payments under the CfD.
Settlement agent	The CfD Counterparty may administer the flow of monies to electricity suppliers to CfD generators and vice versa itself or may use a 'settlement agent'. References to a settlement agent within this document should be taken to mean the CfD Counterparty or a settlement agent working on the CfD Counterparty's behalf.
Settlement period	A half-hour period, as defined in the Balancing and Settlement Code.
Strike price	The agreed level of support a generator will receive as specified in the CfD, and used to calculate difference payments.
Supplier obligation	An obligation on electricity suppliers to make payments to the CfD counterparty in order that it can meet its liabilities.
System Operator	The organisation responsible for managing the security of the power system and supply and demand of electricity – in GB this is National Grid. See also the Delivery Body
Target Commissioning Date	A date, nominated by a generator when they apply for a CfD, at which they intend to have commissioned their plant and would like CfD payments to start.
Target Commissioning Window	A period around the target commissioning date, within which a generator can start the CfD without incurring a penalty.

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