



Department for
Business, Energy
& Industrial Strategy

CONTRACTS FOR DIFFERENCE SCHEME FOR RENEWABLE ELECTRICITY GENERATION

Government response to consultation on
proposed amendments to the scheme - Part B

&

Follow-up consultation on implementation,
contract changes, and a revised CHPQA
standard



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Introduction

1. Achieving clean growth, while ensuring an affordable energy supply for businesses and consumers, is at the heart of the UK's Industrial Strategy. As set out in the Clean Growth Strategy, that means nurturing low carbon technologies, processes and systems that protect our businesses and households from high energy costs and securing an industrial and economic advantage from the global transition to a low carbon economy.
2. The UK has made substantial progress in building a successful renewables industry as part of our move to a low carbon economy and to support meeting our carbon reduction and renewable energy targets. In 2016, businesses active in the low carbon and renewable energy economy generated £42.6 billion in turnover and employed an estimated 208,000 full-time equivalent employees. Installed capacity of renewable electricity generation has more than quadrupled since the end of 2010 from 9.3GW to 38.9GW at the end of 2017. Alongside the Renewables Obligation and the small-scale Feed-In Tariffs (FIT) scheme, the Contracts for Difference (CfD) scheme is playing a significant part in this effort. Our Industrial Strategy¹ sets out how government will ensure that the UK continues to benefit from the transition to a low carbon economy.
3. A CfD is a private law contract between developers of low carbon electricity (referred to in the contracts as the generator) and the Low Carbon Contracts Company (LCCC), a government-owned company (the CfD Counterparty). The generator is paid the difference between the 'strike price' – a price for electricity reflecting the cost of investing in a particular low carbon technology – and the 'reference price' – a measure of the average GB market price for electricity. CfDs incentivise investment by giving greater certainty and stability of revenues to electricity generators by reducing their exposure to volatile wholesale prices, whilst protecting consumers from paying for higher support costs when electricity prices are high.
4. The CfD scheme is currently supporting 42 projects across a range of technologies, providing nearly 10GW of new renewable electricity capacity. In the Clean Growth Strategy the government confirmed that up to £557 million would be available for further CfDs. In July 2018 the government announced that the next CfD auction would open by May 2019, with the parameters to be set out later this year, as well as an intention to run subsequent auctions around every two years after that.²

December 2017 consultation on changes to the CfD scheme

5. In December, the government published a consultation document covering a wide range of proposed changes to on the CfD scheme ("the December 2017 consultation")³. Three public events were also held during the consultation, which ended in March 2018. The consultation attracted around 1,500 written responses, of which 89 were individual replies from a range of stakeholders, including renewable electricity developers, trade associations, local authorities and members of the public, and the remainder were similar responses sent in the context of campaigns.
6. Part A of the government response, which dealt mainly with those proposals requiring legislative amendments to the scheme, including the treatment of onshore wind on remote islands, requirements applied to new combined heat and power

¹ *Industrial Strategy: building a Britain fit for the future*, published in November 2017 and available at gov.uk

² *Energy Minister Claire Perry hails success story of offshore wind in Newcastle today*, News story published 23 July 2018, and available at gov.uk

³ *Contracts for Difference for renewable electricity generation: proposed amendments to the scheme*, published in June 2018 and available at gov.uk

projects and a change to the definition of waste used in the CfD scheme, was published in June 2018, following which the Contracts for Difference (Miscellaneous Amendments) Regulations 2018 were made on 23 July 2018⁴.

Purpose of this document

7. This is the **Part B of the government response** to the December 2017 consultation. It provides a brief summary of the responses received and issues raised during the consultation, addresses the key issues raised, and sets out the government's policy response.
8. We expect this document will be of particular interest to current and prospective developers of renewable electricity generation projects, as well as stakeholders with an interest in the renewable energy sector or UK electricity markets.

Policy responses on specific issues that were consulted on (or, in some cases, wider issues raised by consultees) are indicated as grey boxes.

9. This is also a **further public consultation**:
 - The government is consulting on some of the details of how the changes proposed in December 2017 will be implemented (and in a few cases, to address associated issues that have arisen as a result of engagement during that consultation process, such as a proposed change to the way in which reference price forecasts are used during the allocation process).
 - The government is consulting on changes to the CfD contract required to implement the policy decisions set out in this consultation response. A draft of the CfD contract has been published alongside this document, with proposed changes underlined & highlighted in colour⁵.
 - The government is consulting on some further, relatively minor, proposed changes to the CfD contract that are designed to ensure that the contract terms remain effective.
 - The government is consulting on proposed changes to two documents that are required to implement the combined heat and power (CHP) proposals: a new issue of the CHPQA standard, and a new draft of Guidance Note 44. New versions of both these documents have been published alongside this document, with changes marked.

Specific consultation questions are indicated as green boxes. The government also welcomes any general comments on the proposed implementation (including the proposed changes to the CfD contract and CHP documents), whether they are an effective way to implement the desired changes, and whether the proposed changes could create unintended consequences.

10. This document refers to **“the CfD contract”**, which is composed of two elements: the CfD Agreement and the CfD Standard Terms and Conditions. The CfD Agreement is the document that a successful developer will sign which contains project-specific information and specifies which conditions of the CfD Standard Terms and Conditions apply to that developer. There are variants to the generic CfD Agreement drafted for phased offshore wind projects ('Phasing Agreements'), Private

⁴ The Contracts for Difference (Miscellaneous Amendments) Regulations 2018, 2018 No. 895, available at www.legislation.gov.uk

⁵ Available at www.gov.uk/government/consultations/contracts-for-difference-cfd-proposed-amendments-to-the-scheme

Network Generators ('Private Network Agreement') and Unincorporated Joint Ventures ('CfD Agreement for Unincorporated Joint Ventures'). The draft CfD contract published alongside this document is the generic CfD Agreement and the CfD Standard Terms and Conditions, and it is the intention that any final changes will be transposed into the other variants of the agreement in advance of the next allocation round.

How to respond to this consultation

11. The **closing date** for this consultation is the **10th October 2018**.
12. The government welcomes responses on all questions, or on specific parts of this consultation. Responses will be most useful if they are framed in direct response to questions posed, though further comments and evidence are also welcome.
13. Please provide your name and email address (or other contact address) as part of your response. We will only use this if we need to contact you to ask about any of your responses.
14. Electronic responses (in PDF, Word, Rich Text or ODF formats) are preferred however we aim to consider responses in any accessible format. Responses should be sent to BEISContractsForDifference@beis.gov.uk, or to *CfD consultation, c/o David Curran, Clean Electricity Directorate (Level 3 Spur), BEIS, 1 Victoria Street, London SW1H 0ET*.

Confidentiality and data protection

15. Information you provide in response to this consultation, including personal information, may be disclosed in accordance with UK legislation (the Freedom of Information Act 2000, the Data Protection Act 2018 and the Environmental Information Regulations 2004).
16. We will process your personal data in accordance with all applicable UK and EU data protection laws. See our privacy policy in the Annex to this document.
17. If you want the information that you provide to be treated as confidential please tell us, but be aware that we cannot guarantee confidentiality in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not be regarded by us as a confidentiality request.
18. We will summarise all responses and publish this summary on GOV.UK. The summary will include a list of names or organisations that responded, but not people's personal names, addresses or other contact details.

Quality assurance

19. This consultation has been carried out in accordance with the government's Consultation Principles⁶. If you have any complaints about the consultation process (as opposed to comments about the issues which are the subject of the consultation) please address them to enquiries@beis.gov.uk.

Wind on remote islands

In the December consultation, the government proposed to differentiate Remote Island Wind (RIW) projects from other onshore wind projects, to allow RIW projects to compete in future Pot 2 allocation rounds, with a separate administrative strike price. The consultation also sought views on how RIW projects awarded a CfD would benefit local communities.

State aid approval for separate treatment of RIW was received in January 2018.

Questions 1 and 2 in the December 2017 consultation related to the overall proposed approach and the definition of RIW. Responses received, and the planned policy response, were considered in the **Part A of the government response**, which was published on 6 June 2018⁷.

This **Part B response** considers the scope for ensuring that RIW projects will deliver lasting benefits to the islands in more detail.

As noted in the Part A response, the government also intends to make changes to the CfD contract associated with the introduction of the new category of RIW projects; this chapter also briefly explains what changes are proposed and seeks views on the proposals.

Responses received to the consultation

20. **Question 3** in the December 2017 consultation sought views on how local communities, developers and other stakeholders can work together to ensure that remote island wind projects will deliver lasting benefits to the islands.
21. Responses addressing this part of the consultation were received from local councils, community and environmental groups, developers, trade associations, and members of the public.

Benefit to island communities

22. Many respondents provided evidence of the benefits that RIW projects could deliver at a local level. Examples included economic diversification and helping to combat emigration from island communities by providing skilled jobs. Because of the restricted scale of a typical island economy and the fact that they are separated from the mainland, it was argued that RIW projects could have a proportionally bigger positive impact on the local economy than onshore wind on the mainland. Respondents commented that benefits should be of lasting value, and that remote island wind projects had the potential to contribute to the five foundations of productivity set out in the Industrial Strategy.
23. Some respondents noted that RIW projects, by enabling the construction of new transmission links, have the potential to improve security of supply and alleviate fuel poverty. RIW projects could result in island electricity demand being met in full by island generation in certain cases. In this context, it was noted that this could also reduce carbon emissions and improve air quality, when displacing local fossil fuel generation. It was also suggested that the new transmission links could help to unlock the potential of wave, tidal and floating offshore wind, and that building a new

⁷ *Contracts for Difference for renewable electricity generation: proposed amendments to the scheme - government response (Part A)*, published in June 2018 and available at gov.uk

transmission link to Shetland could facilitate the development of further electrical links to Norway, improving security of supply more widely.

24. Some respondents noted that local communities might benefit directly from employment opportunities during construction, operation and decommissioning, rental payments to landowners or crofters, improvements to infrastructure required to deliver the projects, and local supply chain benefits (including through planning agreements / conditions).
25. Some respondents were concerned about the possible impact RIW developments might have on tourism, which is important to the island economies. Others noted the potential for negative outcomes, such as damage to social cohesion, if community benefits were not shared throughout the island group and went instead to only that part of the island or island group that hosts the project.

Local flexibility

26. Respondents described three main types of benefits that developers had offered to local communities: equity shares in projects; community benefit funds; and commitment to support local supply chains.
27. Many developers and local communities had been working together effectively for some time to design and agree appropriate benefits packages. In this context, it was noted that different island groups, projects and communities had different needs and preferences. Many respondents argued that that this flexibility should be retained.
28. Some respondents expressed concerns that more prescriptive approaches to community benefits risked placing additional burdens on projects that had already demonstrated an ability and willingness to work with local communities. Many respondents expressed support for the Scottish government's existing policies and guidance on community benefit and shared ownership.
29. Some respondents argued that while flexibility in agreeing a package was important, a mechanism was needed to tie developers to delivering any commitments made to the local community. It was questioned whether this might be achieved through the CfD allocation process, or if the CfD contract could be amended to community benefit agreements binding, including if the project was later sold. It was noted that enforcement powers were currently limited.

Community benefit funds

30. Many respondents noted that developers on Scottish remote islands were committed to the Scottish Government Good Practice Principles for Community Benefits from Onshore Renewable Energy Developments⁸, which recommends a minimum payment of £5000 per MW per annum in to a community benefit fund, and many were committed to going beyond these guidelines. Some responses argued that this minimum should be a CfD eligibility requirement.
31. There was no clear consensus among respondents on the optimal use of community benefit funds, but it was considered that the local community was best placed to manage them and to decide on priorities. Some respondents noted that RIW projects could help to alleviate fuel poverty, which was a problem in the remote islands.

⁸ *Scottish Government Good Practice Principles for Community Benefits from Onshore Renewable Energy Developments*, published in November 2013 and available at www.gov.scot.

Local and community ownership

32. Some respondents argued that communities should be given the opportunity to invest in RIW projects, to maximise the equity owned by local people and retain investment returns within the community. It was also argued that a minimum of 15% of the project should be owned locally and the developer should produce a Shared Ownership Plan setting out the approach to shared ownership. Respondents considered that this should be in addition to, and not a replacement for, community benefit funds.
33. Some respondents noted that the Scottish Government had produced Good Practice Principles for the Shared Ownership of Onshore Renewables⁹ and that the Scottish Government's Energy Strategy¹⁰ sets out targets for shared ownership, and community and local ownership.
34. Various suggestions were made on how such approaches could work. These included enabling the community to pay a proportion of development and construction costs without a developer premium or allowing the community to buy in later (for example after the project starts to produce power) which would allow more time to raise funds. It was noted that guaranteeing a minimum rate of return could de-risk community investments. Some respondents questioned if offers of shared ownership would be bankable without a binding agreement in place, and if local communities would be able to access suitable finance. It was also suggested that communities might be given the option to capitalise community benefit payments towards investment.

Policy response: The government recognises, and welcomes, the fact that some RIW developers are already offering substantial community benefit packages. Having considered the responses received, the government considers that specifying the benefits that remote island wind projects must deliver may have some advantages but could hamper innovation and make it less likely that the package offered reflects local priorities. The government does not, therefore, propose at this stage to make changes to the CfD application process, or to the CfD contract to mandate a particular form of community benefit.

Decisions on the details regarding how projects can deliver local benefits are best taken locally, but the government expects that developers, and operators, of remote island wind projects should seek to provide community benefits consistent with Scottish Government or other relevant guidance and good practice principles. This includes providing an opportunity for communities or local people to invest in the project, with any offer additional to a community benefit fund. Community benefits are expected to last for the lifetime of a wind farm and it is our expectation that the operator, or any subsequent owner if the project is sold on, will honour agreements with the local community.

The government also expects developers to register community benefits package on the relevant community benefits register (which for projects on the remote Scottish islands is on the Scottish Government's Register of Community Benefits), so that delivery can be monitored.

⁹ *Good Practice Principles for the Shared Ownership of Onshore Renewables*, published in March 2015 and available at gov.scot

¹⁰ *Scottish Energy Strategy: The Future of Energy in Scotland*, published in December 2017 and available at gov.scot

Supply chain

35. Several respondents suggested that developers of RIW projects should actively work to maximise the opportunities for local businesses during development, construction and operation of projects. It was noted that some islands have a civil engineering and construction base so were well placed to benefit. Some respondents commented that planning conditions had been used successfully, in connection with other renewable energy projects, to ensure that developments supported and further developed strong local supply chains.
36. Some respondents suggested that the minimum size for which RIW projects need to submit Supply Chain Plans – currently a capacity over 300MW – should be reduced, perhaps significantly, so that the requirement could encompass most (or all) RIW projects. These respondents suggested that this could help ensure lasting benefits are delivered to local communities. Some respondents noted that this could represent an increased regulatory burden, but that this could be managed by taking a proportionate approach to assessing Supply Chain Plans for smaller projects.

Policy response: The government is encouraged that developers are, in many cases, already working with local companies to explore the opportunities that RIW projects can bring.

The Supply Chain Plan process is primarily focussed on the largest projects, as they have the greatest ability to make a material impact on competition, innovation and the development of skills in the wider industrial supply chain. The government considers that extending the Supply Chain Plan requirement, in its current form, to much smaller projects could create a significant administrative burden on developers applying for a CfD. There is no specific assessment criterion relating to the engagement of local supply chain companies in particular in the Supply Chain Plan process. Government therefore believes that local supply chain considerations are more effectively accommodated as one part of community benefit discussions.

The government intends to keep operation and efficacy of the Supply Chain Plan process under review, and will consider whether the size threshold of 300MW remains appropriate for all technologies before future allocation rounds.

Community projects

37. Some respondents argued that wholly community-owned wind projects can potentially generate the highest level of direct benefit to island communities, noting that several such projects are currently in operation. However, many of these respondents also noted that such projects can be more challenging to develop, and less financially viable, due to a combination of factors including higher proportionate grid connection costs, the challenge of securing financing, more limited scope for economies of scale, and in some cases difficulty accessing specialist development expertise. A few respondents commented that some renewable support schemes in other European countries (such as the one Germany) had made various specific provisions for community projects.
38. A suggestion was made that that the minimum size of RIW projects eligible for CfD support should be reduced to allow sub-5MW community generation schemes to compete. Some respondents commented that there might be potential for community energy groups to jointly develop larger scale projects, to compete in future CfD allocation rounds. Some respondents suggested that community-owned projects should be able to compete in a separate 'community energy' CfD auction

pot, similar but separate to the 'less established technologies' pot, or in favour of a carve-out within the RIW definition reserved specifically for community-owned projects, with a tailored strike price and accreditation requirements.

39. Respondents expressed concern as to whether new transmission links would have sufficient spare capacity to accommodate all of the community projects currently in development. Some of these respondents noted that larger commercial developments were needed in order to underwrite the cost of constructing the new links to the mainland.

Policy response: The government recognises that RIW projects developed and wholly-owned by the local community could potentially engage and benefit local people in a way that projects brought forward by commercial developers might not. However, introducing a separate sub-category of community projects, in a way that would not distort the competitive CfD allocation process, while representing value for money for electricity consumers, could be challenging.

Wider benefits and other issues

40. Some respondents argued that environmental impact should be considered as part of a community benefit package. It was suggested that projects could be required to deliver net environmental gain, or by contributing to wider environment enhancement measures, such as peat restoration designed to compensate for the environmental impacts of the project and to increase the resilience and natural capital of the islands.
41. Some respondents argued that there was an inherent tension between developers' (and the government's) desire to maximise the community benefit of island wind projects, and the need for these projects to compete against other technologies (and each other) on price to deliver best value to the consumer. Some respondents expressed concern that RIW developers could incur costs relating to providing community benefits that may not necessarily be incurred by other competing projects.

Proposed changes to the CfD contract

42. The government intends to make minor amendments to the CfD contract, associated with the introduction of the new category of RIW projects. In general, RIW will be subject to similar standard terms and conditions as onshore wind projects.
43. The definition of remote island wind in the proposed amendment to the Allocation Regulations currently before Parliament contains a requirement relating to the minimum length of the electrical connection between the project and the *Main Interconnected Transmission System* (MITS). Having considered the responses to the consultation, the government is proposing a minor amendment to the contract to make clear that if the MITS were to be extended after the application closing date in respect of the relevant CfD allocation round, the developer will not be in breach of the representations in the contract regarding the project continuing to deploy the *Facility Generation Technology* as a result.

Consultation question

1. The government welcomes views on the proposed changes to the CfD contract in connection with Remote Island Wind (which have been published alongside this document).

Mitigating budgetary risk

Budgetary risk under the CfD scheme arises because there may be a difference between the forecast cost when allocating contracts and the actual cost once projects generate. There are many reasons for uncertainty when forecasting CfD costs, but the main ones are uncertainty over how much power CfD-supported plants will produce and uncertainty about the future price of electricity.

The December 2017 consultation set out proposals to mitigate one aspect of budgetary risk: load factor uncertainty. If CfD-supported projects produce more power than expected, the support paid by electricity suppliers and passed onto consumers will be larger than initially forecast. The government proposed to mitigate this risk by using higher assumed *load factors* (the ratio of how much electricity a generating unit produces over a given period of time divided by its theoretical maximum output) at the time of allocating contracts. The government also proposed to require successful developers to submit estimates of their expected generation output to improve forecasting of CfD costs.

In light of responses to the consultation, the government also proposes to improve the accuracy of future budget estimates by changing the market price assumptions used at the time of allocating contracts. Forecasts of the expected average prices that will be captured by new baseload and intermittent technologies respectively (where each of these price forecasts is estimated by taking a generation-weighted average across the respective technologies) would be used for each delivery year.

This proposal should ensure that a more reliable estimate can be made of the budget allocated in a CfD auction at the valuation stage; it will not affect actual payments received under the CfD. Reference price forecasts will continue to be published in the Allocation Framework in advance of each allocation round.

Responses received to the consultation

44. Seventeen unique responses from industry, trade associations, and non-governmental organisations addressed this part of the consultation.
45. Whilst it was noted that the risk of overspend has already been reduced due to the government applying more accurate load factor assumptions, many respondents recognised the importance of protecting consumers from unexpected costs and welcomed the proposals as striking the right balance to achieve this aim.
46. The consultation responses also raised other factors that lead to budgetary uncertainty, such as the reference price assumptions used in CfD allocation rounds.

Reducing load factor risk in CfD allocation rounds

47. **Question 4** sought views on the proposal to use higher forecasts of generation (by using higher load factor assumptions), set by the government, when valuing CfD applications in allocation rounds.
48. Most respondents broadly supported the proposals (in some cases with qualifications). Some expressed concerns that if load factors are set unrealistically high this could have a negative impact on the level of renewable capacity that could be supported in an allocation round. Some concerns were expressed over the quality of available data or suitability of using high assumptions in certain cases - for example, that higher load factor estimates would be less accurate, that load factor estimations are less certain for some of the less established technologies, and that

as load factors for different technologies evolve over time they may reach a plateau as technologies approach maturity, at which point central load factor assumptions would be most appropriate.

49. The government recognises the concerns that this could reduce the amount of capacity supported but notes that the purpose of the scheme is to support renewable technologies and the government is committed to meeting its targets, including the ambitions set out in the Clean Growth Strategy and Industrial Strategy. The proposal is not to use the highest theoretical load factor for each technology. For future allocation rounds the government will use high values that represent an upper portion of the load factor distribution for each technology, rather than using a central average load factor. The intention is to protect consumers if projects with higher load factors are successful in future auctions whilst continuing to meet ambitious decarbonisation goals.
50. A suggestion was made that applicants could submit project-specific load factor assumptions at the time of application, however this approach could have some benefits. However, it also poses significant challenges including ensuring confidentiality, verifying accuracy and avoiding scope for potential gaming. The government does not intend to take such an approach forward in the next allocation round but may review this suggestion for future rounds.
51. **Question 5** sought views on proposals to set different load factor assumptions for subsets of a technology, for example if some geographical regions are expected to have significantly higher wind speeds.
52. Whilst the approach did receive some support in principle, many respondents expressed concerns on issues including the complexity of identifying causal mechanisms underlying apparently different load factors for subsets of technologies, the lack of evidence for some regions and technologies, and the risk of distorting auction competition dynamics. Some respondents noted that they would need to see more detailed proposals before they could assess whether the proposal would be practical and beneficial.

Policy response: The government intends to implement the proposal to use higher load factor assumptions that represent an upper portion of the expected distribution of load factors for each technology, rather than central load factor assumptions, in the valuation formula in the next CfD allocation round.

The government does not intend to use different load factor assumptions for technology subsets for the next allocation round, but will keep this position under review for future rounds.

The government will continue to consider the issue of load factor uncertainty and whether to introduce any other measures for future allocation rounds.

Improving load factor estimates for successful CfD projects

53. **Questions 6 and 7** sought views on proposals for successful CfD developers to submit additional information on the expected generation output of their project over the CfD contract term. This information would be used to increase confidence levels around forecasts of CfD cost and when setting the parameters for future CfD and capacity market auctions.
54. Most respondents broadly supported the proposed approach. A few noted that cost projections could be improved by information provided by developers, including that if published in an aggregated form it could assist suppliers in planning their CfD

payments. At the same time, respondents emphasised the commercial sensitivity of this information and the importance of it being treated appropriately.

55. Many respondents raised concerns regarding the number of milestones proposed, their timing in relation to other key contractual milestones, and the timeframe for developers to respond to a request for information from the LCCC.
56. The consultation did not propose to require developers to submit additional *Directors' Certificates* and/or supporting evidence to the LCCC, but question 7 sought views on whether additional requirements would be suitable to ensure that the submissions are accurate. Most of the respondents who addressed this question did not support such requirements.
57. CfD developers are required to submit forecasts of their expected output, availability and, if applicable, renewable and CHP multipliers (together known as *Forecast Data*) covering the 12 months following the next 1 April to the LCCC annually by 30 September, with monthly updates. During the consultation process, it was noted that the currently used date of 30 September does not align with the LCCC's annual reporting requirements at the end of the financial year, and that this could result in out of date project information being used.
58. The government therefore proposes to amend the deadline for the submission of *Forecast Data* from 30 September to 31 January. The new expected generation output submissions will also be due on 31 January, to align these submissions and minimise the administrative burden for developers.
59. In addition, the government proposes to add a requirement for developers to submit *Forecast Data* six months before their expected start date. This would provide the LCCC with additional information to improve the accuracy of short-term forecasting and setting the supplier obligation levy.

Policy response: The government intends to implement the proposal as consulted on, with minor amendments to the timing of submissions in response to concerns over the administrative burden for developers.

The timing of submissions will be:

- 2 months after the *Agreement Date*;
- 2 months after the *Milestone Delivery Date*;
- Annually throughout the contract term by 31 January, starting from the 31 January immediately prior to the *Start Date*, or in the year after the year in which the *Milestone Delivery Date* falls, whichever is earlier;
- As a new *Operational Condition Precedent*;
- As soon as reasonably practicable and no later than 10 business days after a request from the LCCC;
- As soon as reasonably practicable and no later than 10 business days after the developer becomes aware of an event or circumstance which will, or is reasonably likely to, affect the generation output of the *Facility*.

Developers will be able to confirm that their forecasts have not changed materially from their last submission, rather than submitting the full set of data, if that is the case.

With the exception of the submission which is an *Operational Condition Precedent*, Developers will not be required to submit a *Directors' Certificate*. However, the information will need to be submitted in accordance with the *Reasonable and Prudent Standard* and Condition 32.3, which require that the submissions be prepared in good faith on a reasonable basis.

The information contained in these submissions, which will be specific to individual

projects, will be able to be used by the LCCC for forecasting CfD costs and shared with BEIS on a confidential basis. Information will be provided and protected under the existing confidentiality provisions of the CfD.

The government also proposes to amend the submission deadline for *Forecast Data* from 30 September to 31 January, and to introduce an additional requirement for developers to submit *Forecast Data* 6 months before their expected *Start Date*. These proposals are intended to align with the timings described above and improve the accuracy of forecasting the costs of the scheme.

Consultation questions

2. The government welcomes views on the proposal to amend the deadline for *Forecast Data* from 30 September to 31 January.
3. The government welcomes views on the proposal to require developers to submit *Forecast Data* 6 months before their expected *Start Date*.

Proposed changes to the CfD contract

60. The government intends to amend the CfD contract to implement the proposal to improve load factor estimates for successful CfD projects described above.
61. The 'Definitions and Interpretation' section of the contract will be amended to include a new definition: *Expected Generation Output Data*. This will define the data that developers will be required to submit to the LCCC, including the electrical output of the *Facility*, the expected *Renewable Qualifying Multiplier*, and the expected *CHP Qualifying Multiplier* for each year. The developer will be required to explain the underlying assumptions and uncertainties and explain any significant changes in data between submissions. For the purposes of this consultation, part (A) of the definition of *Expected Generation Output Data* in the contract includes two limbs. If taken forwards, the Standard Terms and Conditions will contain only the first limb, which describes the application of TLM(D) related loss adjustments. The second limb, which describes the application of any *Line Loss Factor* adjustments (and which is only applicable for Private Network projects), will apply to only those projects which have a CfD Private Network Agreement.
62. Condition 32.1 (*Provision of Information to the CfD Counterparty*) will be amended to include an additional limb (J), which sets out when the developer will be required to submit this data to the LCCC. A consequential amendment to Condition 32.3 (*Accuracy of Information*) will be made to ensure that this data is covered by this requirement. The change to the timing of *Forecast Data* submissions will be implemented through an amendment to Condition 32.1(C).

Consultation question

4. The government welcomes views on the proposed changes to the CfD contract to implement this proposal (which have been published alongside this document).

Reference price forecasts

63. The December 2017 consultation set out proposals to address one aspect of budgetary risk; load factor uncertainty. There are other factors that lead to budgetary uncertainty and one that was raised in consultation responses is the market price assumptions used at the time of allocating contracts.
64. Under the CfD, top-up payments are made to developers based on the difference between their strike price and the market reference price set out in the contract, which is a season-ahead price for baseload technologies (such as fuelled technologies) and a day-ahead hourly price for intermittent technologies (such as offshore wind). This means that to forecast CfD costs, a forecast of the market reference price must be used.
65. During a CfD allocation round, the *Delivery Body* values all eligible applications to establish whether the applications fit within the available budget. To do this the *Delivery Body* uses a valuation formula to estimate the budget impact of all eligible applications to establish whether they fit within the available budget. A factor of the valuation formula is a forecast of the market reference price. The valuation formula and the market reference price assumptions are set out in the Allocation Framework for each round. Currently, the reference prices published in the Allocation Framework are the government's view of the GB average wholesale market price for each of the delivery and valuation years in that allocation round.
66. However, as more intermittent renewable projects (such as offshore wind) are installed, they can push electricity prices down when they simultaneously generate at scale (an effect known as 'wholesale power price cannibalisation'). If a developer mainly produces electricity when the electricity price is low, they will receive higher CfD top-up payments than if they are to generate at times when the electricity price is high (although their overall payments, made up of both market payments and CfD top-up payments, will be the same).
67. This means that an average forecast market reference price applied to both baseload and intermittent technology types may no longer be a reliable estimate of the actual market prices that projects will receive (known as the 'capture price'). Therefore, the current average wholesale price used in valuing applications may not be the most appropriate way of producing an accurate forecast of the top-up payments to be made under the CfD.
68. The government proposes to use different reference price forecasts in the valuation formula instead of one average price; a 'baseload' reference price and an 'intermittent' reference price. These prices will be based on estimates of the average prices that are expected to be captured by baseload and intermittent technologies respectively (the generation-weighted average prices) for each year. Different reference prices may be used for each technology pot to take into account the different eligible technologies and their typical generation patterns. These price forecasts will continue to be calculated by BEIS and published in the Allocation Framework in advance of each allocation round.
69. The aim of this proposal is to remove any systematic underestimation of the budget impact of projects by improving the accuracy of the reference price forecast. It may have a slightly negative effect on the ability of large intermittent projects to secure CfDs within a specific overall budget allocation if the proposed capture reference price is lower than the current average reference price. However, the purpose is to improve the accuracy of valuations in the auction, and this is important in ensuring that consumers remain protected from unbudgeted costs.

70. The proposal will not affect the actual payments received by successful bidders, which remain based on the market reference prices set out in the CfD contract.

Consultation question

5. The government welcomes views on the proposal to improve the accuracy of the reference price forecast in the valuation formula, by taking account of expected capture prices for new intermittent and baseload projects. Points respondents may wish to consider include:
- The potential effect of the changes, and whether the impact could vary for different scheme participants.
 - Whether the proposal is likely to have the required impact.
 - Any other proposals regarding how to produce a more accurate valuation.

Advanced Conversion Technologies

The December 2017 consultation proposed refinements to what is considered an Advanced Conversion Technology (ACT) in the CfD scheme so that support is directed to the more efficient, innovative forms of the technology. The government sought to make a clear distinction between ACTs and projects based on conventional combustion such as energy from waste and dedicated biomass, with or without CHP.

Responses received to the consultation

71. Twenty-two unique responses addressed this part of the consultation, including responses from trade associations, industry (a mix of developers and energy suppliers), consultancies, innovative energy organisations and non-governmental organisations.
72. Some individual responses, as well as responses received in the context of a campaign linked to Biofuel Watch, were supportive of the government's proposal to draw a clearer distinction between ACT and energy from waste projects, in order to encourage more innovative forms of the technology.

Incentives for efficient electricity generation

73. **Question 10** sought views on whether there are sufficient incentives on the efficient generation of electricity by ACT for an efficiency threshold *not* to be required.
74. Most respondents did not believe there are sufficient incentives for the efficient generation of electricity through ACT. Many cited the high levels of capital expenditure, and costly maintenance, associated with advanced systems. Some argued that gate fees (payments received by developers for disposing of waste) can act as a perverse incentive, as the more waste processed, the higher the revenue developers can receive. Some of these respondents suggested that an overall efficiency criterion, rather than the proposed approach of a conversion efficiency criterion, should be required.
75. Some respondents did believe there are sufficient incentives for the efficient generation of electricity through the CfD.
76. Having considered the responses received to the consultation, the government recognises an efficiency threshold is required to address the perverse incentives preventing the deployment of the most advanced and efficient ACTs. A minimum efficiency threshold would encourage efficient use of waste and valuable biomass resources by ensuring that developers extract energy efficiently from feedstock.
77. The government is aware of the impact that equipment costs and capital expenditure have in the development and deployment of these technologies. It is expected that by ensuring only efficient processes are eligible for the CfD, this will contribute to their deployment, enabling a decrease of these costs in the medium term.
78. With regards to the impact of gate fees, the government considers that the establishment of a minimum efficiency threshold will be beneficial. Only those developers with efficient processes will be able to meet the proposed threshold, ensuring that developers are incentivised to prioritise conversion efficiency of the energy in waste, rather than the processing of waste for gate fee revenues.

Policy response: Having considered the responses received, the government believes an efficiency threshold is necessary to support the deployment of suitable advanced ACT projects. The following section (question 8) addresses the form of the threshold in further detail.

Conversion efficiency of energy in the feedstock to the syngas/synliquid

79. **Question 8** sought views on the proposal that ACT projects should be subject to a requirement for 60% conversion efficiency threshold, of the biogenic energy content of the feedstock into syngas or synliquid or liquid (for the purposes of the contract biogenic is referred to as biomass).
80. Most respondents acknowledged the need to ensure efficient use of waste and biomass feedstocks. The proposal to include a conversion efficiency criterion was broadly accepted. Of those who supported the proposal, most believed that the proposed level was appropriate, achievable for most technologies and would make the best use of biomass resources.
81. Some respondents suggested that the 60% threshold was too low, claiming that higher conversion efficiencies are achievable by current technologies in other countries. However, others argued it was too high and would be unachievable for some technologies.
82. Having considered the responses received, the government considers that setting the conversion threshold at 60% seems appropriate and will incentivise efficient use of valuable biomass resources, by ensuring that the biogenic energy content in the feedstock will be utilised efficiently, while still being achievable for most technologies. Setting a lower threshold would incentivise technologies that should not be supported by the CfD scheme. This threshold could potentially be raised for future allocation rounds in line with the development of more efficient conversion technologies.
83. The government intends that all syngas / synliquid produced for a CfD project should meet the minimum efficiency standard, to the satisfaction of the LCCC, if the developer is to receive CfD payments for electricity generation.
84. Some respondents argued that the proposed criterion would not distinguish between conventional combustion processes and innovative forms of ACT. However, the policy intent of this criterion is not to prevent close-coupled combustion, but to promote efficient use of biomass feedstock for the generation of low carbon electricity through requiring efficient conversion processes.
85. Some respondents suggested that rather than measuring conversion efficiency of the energy in the biogenic energy content of the feedstock to the syngas/liquid, overall efficiency might be a more appropriate measure because it would give a more accurate representation of the efficiency of the process for electricity production. The government considers that an overall efficiency criterion is unnecessary, as there are sufficient incentives for developers to optimise the generation process as they receive payment for the electricity that they export to the grid. In addition, an overall efficiency calculation may not deliver low carbon electricity, as it would not be feasible to establish the proportion of electricity derived from biogenic energy content of the syngas / synliquid.
86. Some respondents were concerned that the facility boundaries would have to be carefully defined to avoid putting certain processes out of scope for measurement as

part of the criterion. Feedstock preparation and parasitic loads were the most commonly suggested processes that could be left out of the scope for measurement in this manner. The government recognises that parasitic loads and any energy input used in the gasification / liquefaction of the feedstock and the conditioning of the syngas / synliquid must be accounted for in the efficiency calculation to prevent subsidising inefficient processes.

87. In respect of both the feedstock used to produce syngas / synliquid, and the syngas / synliquid itself, developers will be required to agree sampling and testing arrangements satisfactory to the LCCC in order to demonstrate that they are compliant with the conversion efficiency criteria.
88. The government intends to add an additional requirement to the calculation proposed in the consultation to account for all additional energy inputs used in the conversion of the feedstock to syngas/synliquid and the processing of the syngas/synliquid. Preparation of the feedstock will not be considered as part of the calculation because it is not practicable to establish a common methodology to account for the variety of processes that may be used.

Policy response: The government intends to introduce a requirement to meet a 60% conversion efficiency of energy in the biogenic content of the feedstock into energy in the biogenic content of the syngas / synliquid.

The government intends to add an additional requirement to the calculation proposed in the consultation, to account for all additional energy inputs used in the conversion of the feedstock to syngas/synliquid and the post-production processing of the syngas/synliquid.

Preparation of the feedstock will not be considered as part of the calculation.

Biogenic energy content of the syngas / synliquid used in the generation of any other energy products should be accounted for in the calculation of the efficiency. CfD payments remain only available for electricity produced from the biogenic content of the syngas/liquid.

Testing and monitoring

89. **Question 9** sought views on whether the proposed ^{12}C : ^{14}C testing methodology would be suitable to ensure ACT plants with mixed feedstocks are compliant with the conversion efficiency requirement, and **Question 14** sought information on the availability of laboratories that would be capable of carrying out the ^{12}C : ^{14}C tests, and the likely cost of testing.
90. Some respondents agreed that the proposed methodology was appropriate and implementable for mixed feedstock systems. Most respondents raised concerns with the methodology on grounds of cost, suggesting that it could be unduly expensive to implement given the regularity of testing that would be required. Some also suggested that the methodology was unnecessarily expensive and precise for the purposes required. Some respondents provided information on suitable laboratories.
91. The government recognises that many respondents were concerned with the ^{12}C : ^{14}C methodology on the grounds of cost. Therefore, the government intends to allow the developer to agree the methodology with the LCCC which may be the ^{12}C : ^{14}C methodology, or an appropriate alternative. It is intended that a guidance note will be published setting out alternative acceptable methodologies in order to assist

developers. The alternative methodologies are expected to have lower cost but are expected to underestimate the efficiency.

92. Many respondents also raised concerns with the accuracy of the proposed testing approach, suggesting that it may be inappropriate for certain technologies and feedstocks. A common concern was that it would be inappropriate for feedstocks that use older waste as it could miscalculate the carbon isotope level needed for the calculation. The government considers that the impact on the calculation of efficiency would be marginal. As above, it is proposed that developers concerned about using the $^{12}\text{C}:^{14}\text{C}$ method for their process would have the option of choosing an alternative methodology that is more suited to their specific technology.
93. Several respondents suggested alternatives to the $^{12}\text{C}:^{14}\text{C}$ testing methodology. Common suggestions included adapting existing fuel measurement and sampling (FMS) processes used to populate data for the *Renewable Qualifying Multiplier*. Respondents argued that these would be simpler and more affordable as they would not require implementing new processes or potentially costly laboratory testing for most technologies and could still accurately estimate the biogenic content of the syngas as the biogenic and non-biogenic content are converted at the same rate.
94. The government considers that it is necessary to measure the conversion efficiency of the biogenic energy content to deliver the policy intent. There is insufficient evidence to suggest that non-biogenic content is converted at the same rate as biogenic content. Support under the CfD scheme is directed at low carbon electricity generation, and in the case of ACT, this corresponds to the electricity generation produced from the biogenic portion of syngas/synliquid derived from the conversion of the biogenic energy content.

Policy response: The government intends to require the developer to agree an appropriate methodology with LCCC to determine the biogenic energy content of the syngas/ synliquid. This will allow the use of the originally proposed $^{12}\text{C}:^{14}\text{C}$ methodology or an appropriate alternative.

It is intended that a guidance note will be published setting out a list of alternative acceptable methods, to facilitate this.

95. **Question 18** sought views on three options for frequency of sampling, (weekly, monthly, or a combination of both) and the possibility of monitoring processes on a continuous basis.
96. This question received relatively few responses, most of which expressed concerns with weekly sampling. This was mainly due to concerns regarding the potential costs, usually linked to the cost of the $^{12}\text{C}:^{14}\text{C}$ testing methodology.
97. The government acknowledges these concerns and as mentioned above intends to allow developers the option to choose a different testing method more suited to their technology. The sampling/testing frequency and method to be agreed should enable the LCCC to assess the compliance of the developer with the conversion efficiency for periods of seven days or fewer within the relevant month. This will allow developers and LCCC the flexibility to determine a process that is most appropriate to their technology.
98. The government also acknowledges the concerns around the cost of reporting and intends to proceed with the option of requiring monthly reporting to the LCCC. This monthly report should contain the necessary information to assess compliance for periods of seven days or fewer within the relevant month. This option will minimise

the administrative burden on developers compared with more frequent weekly reporting.

99. With regards to the cost of regular independent testing, the government also acknowledges these concerns, and therefore proposes to apply the existing audit rights available to LCCC in relation to the *FMS Purposes* (as defined in the contract) if LCCC have concerns about the self-sampling and reporting processes, rather than the proposal in the consultation where independent testing was to take place monthly.

Policy response: The government intends to allow developers to agree a sampling methodology and frequency with the LCCC, which should enable the LCCC to assess the compliance of the developer with the conversion efficiency for periods of seven days or fewer within the relevant month. Results should be provided as part of the monthly reporting process.

The government intends to proceed with the option of requiring monthly reporting to the LCCC. The government also intends to apply the existing audit rights that LCCC has within the contract to cover these processes. This will allow the LCCC to inspect the implementation of the procedures which have been agreed with them and the developers including sampling procedures.

Syngas quality

100. **Question 11** sought views on the proposal to include a maximum level of incombustibles in the syngas.
101. Most respondents acknowledged the need to set a low level of incombustibles if the syngas was to be used for purposes other than electricity generation. Some respondents supported the proposed criterion, stating it would facilitate the development of the technology and enable syngas to be used for purposes other than electricity generation.
102. However, most respondents expressed concerns with the need for a criterion specifying the level of incombustibles in the syngas. The most common argument was that imposition of the criterion could significantly and unnecessarily increase costs of electricity generation due to the additional requirement of air oxygen separation and/or syngas conditioning processes required in air-blown ACT systems.
103. The government recognises the need to ensure a pipeline of ACT projects to encourage the continued development of the technology and accepts that this requirement could lead to higher costs for ACT. This limit would particularly affect air-blown gasification technologies due to the high cost of syngas conditioning required to remove the high levels of incombustibles in syngas generated by air-blown systems. While oxygen blown systems would be able to meet this criterion more easily than air-blown systems, oxygen-blown systems are also costly to run due to the cost of oxygen separation.
104. Some respondents did not support the proposed criterion, on the basis that it should measure contaminants (such as tars or sulphur compounds) rather than incombustibles. The given reason for this was that it would better support efficient electricity production rather than off-taking for use in non-electrical purposes because reducing contaminants allows syngas to be burned at higher temperatures with greater efficiency or used in more efficient prime movers (such as internal combustion engines and gas turbines). The government considers that an

incombustibles limit is unnecessary as developers are already sufficiently incentivised to remove contaminants to reduce equipment maintenance costs and extend the lifetime of the prime movers, which will result in lower costs over the life of a project.

105. Some respondents noted that there are more appropriate methods to finance or encourage ACT projects to produce syngas for non-electrical purposes than the CfD scheme, such as the Renewable Heat Incentive or innovation funding.
106. **Question 12** sought views on the proposed level of 20%. There were mixed views, with most respondents feeling the level was too low, but also some feeling the level was appropriate, and a few respondents arguing this the threshold was too high and should be lower for non-electrical purposes.
107. **Question 13** sought views on whether to include a limit on incombustibles for processes that produce a synliquid and whether certain incombustibles (such as water) should be included in the calculation. This question only received a few responses; most of which did not support such an approach.
108. With respect to how the limit of incombustibles is calculated, some respondents suggested that water in syngas/synliquid can be easily removed and that its presence in syngas/synliquid is commercially prohibitive and should not be included in the calculation of the incombustibles. Some respondents also noted that carbon dioxide is comparatively easy to remove from the gas stream in any post-processing and expressed the view that it should not be included in the combustibles limit.

Policy response: Having considered the responses to the consultation, the government does not intend to proceed with the proposal to include a maximum level of incombustibles in the syngas in the next CfD allocation round.

Separation of gasification and electricity generation

109. **Question 15** sought views on the two proposed options for ensuring separation of gasification and electricity generation processes.
110. *Option A* would require physical separation of the gasification or liquefaction process and the combustion process, and *Option B* would require the syngas or synliquid be used in an internal combustion engine, turbine or a fuel cell.
111. Most respondents favoured *Option A*, generally arguing that it would effectively distinguish between close-coupled combustion and more innovative ACT processes, whilst being simple and easy to administer. Some respondents also noted that it allows for the possibility of further syngas processing. Of the issues raised with *Option A*, most respondents said that separation will have to be defined precisely to prevent gaming. A few respondents noted that requiring separation alone would not be sufficient to ensure that further gas processing takes place.
112. The government, in line with the preferred consultation proposal, intends to proceed with *Option A* and require physical separation of the gasification/liquefaction and combustion units. This was the most supported option and the government considers that it will be relatively simple to administer for developers, the government and the LCCC. Generators will be expected to confirm that they meet these requirements at the point of applying for a CfD, along with submitting a suitable process flow diagram (a plan of the intended *Facility*).
113. The government acknowledges the concerns expressed regarding the effectiveness of *Option A* and intends to add a further requirement for plants to include either a

compressor or a gas purification unit between the gasification/liquefaction and combustion units, as part of a refined definition of what the physical separation requirement would mean in practice. While this is an additional requirement to the initial definition of separation, the government considers that this requirement can be met without additional costs to the more efficient, innovative ACT processes these changes aim to incentivise. Evidence received to date suggests that such processes generally already contain either a compressor and/or a gas purification unit in their design.

114. Some respondents preferred *Option B*. Of the reasons given in support of this proposal, the most common were that that it would effectively distinguish between close-coupled combustion and more innovative ACT processes and would require further syngas processing to remove contaminants for use in the prime mover¹¹.
115. Of the issues raised with *Option B*, most respondents raised the complexity of defining an engine, fuel cell or turbine, and the administrative burden required to implement this option. Some respondents took issue with the fact that this option would determine the end use of the syngas and would exclude processes using steam turbines from consideration.
116. Some responses suggested combinations of both proposals, felt neither was appropriate, or made alternative suggestions such as providing a list of approved prime movers, or prohibiting the use of a steam in the prime mover.
117. With regards to recommendations on *Option B*, the government recognises that this option was well supported, but considers that defining an engine, a turbine or a fuel cell in a way that would prevent gaming would be challenging. The government also considers that creating and maintaining a list of prime movers could present a significant administrative burden to the government and/or the LCCC.
118. **Question 16** sought views of the impact of these options on what types of project would be eligible to receive CfD support, and whether this change would encourage developers to carry out further clean-up or processing of the syngas.
119. Some respondents summarised the cumulative impact of all the changes proposed to ACT (criteria 1, 2 and 3). Of those who referred only to options A and B, most respondents indicated that they would either allow for the possibility of or require further syngas processing. Of this number, most suggested that *Option A* would allow for the possibility of further syngas processing. Some suggested that criteria 1 and 2 together with *Option A* would require further syngas processing. Most suggested that *Option B* would require further syngas processing. Despite concerns raised by consultees that *Option A* does not require further syngas/synliquid processing, the government considers that the additional provisions to require either a compression or a purification unit as part of the separation criteria will in practice require a basic level of syngas processing.
120. **Question 17**, which received relatively few responses, sought information on close-coupled combustion systems, that could be clearly differentiated from direct combustion technologies, and capable of delivering affordable and efficient low carbon electricity.
121. No respondents believed that close coupled systems could be clearly differentiated from direct combustion technologies, while also being capable of delivering affordable and efficient low carbon electricity.

¹¹ A mechanical device that converts the energy of the fuel into mechanical energy that can be used to generate electricity

Policy response: The government intends to require physical separation of the gasification/liquefaction and combustion units (in line with *Option A* in the consultation).

The government plans to introduce a refined definition of what the physical separation requirement would mean in practice, including a further requirement for plants to include either a compressor or a gas purification unit between the gasification/liquefaction and combustion units.

Penalties for non-compliance with the Criteria

122. **Question 19** sought views on the penalties for non-compliance with the criteria. To demonstrate compliance with the *Criteria 1* and *2*, the government proposed to require developers to submit information to the LCCC on a regular basis in addition to normal measurement and sampling procedures required under the CfD.

Suspension of payments for periods of non-compliance within an RQM Calculation Month

123. Most of the responses received expressed a preference for limiting or suspending CfD payments for the duration of non-compliance until remedial action has been taken and the plant is able to demonstrate compliance.

124. The government intends to proceed with the option outlined in the consultation to suspend payments for periods of non-compliance with *Criterion 1*. Compliance with *Criterion 1* will be assessed for each *ACT Efficiency Period* (four periods of seven days in each *RQM Calculation Month*, plus by a short period of one-three days to account for the 'spare' days at the end of the *RQM Calculation Month*), meaning that payment will be withdrawn for each period of non-compliance. Developers will be required to submit data for each of the periods in the relevant month in the monthly reporting process to ensure that the LCCC can monitor compliance with the criterion. This option received the most support and will allow developers to receive payment once they have taken remedial action and can demonstrate compliance.

125. Some respondents suggested that cases of non-compliance would be likely given the variable energy content of certain waste feedstocks and the innovative nature of the technology. The government considers that measuring compliance for each period, will ensure an accurate estimate of the conversion efficiency is taken and so addresses any variability of the energy and biogenic content of the feedstock which minimises the loss of payment.

Termination of CfD contracts for non-compliance

126. Some respondents argued against the termination of CfD contracts for cases of non-compliance. They suggested that such a penalty was severe and could adversely impact support from investors.

127. Having considered the responses received, for *Criterion 1* the government intends to proceed with LCCC having the option to terminate the contract of any developer with more than 26 periods of non-compliance in any consecutive 12 months, (although this rule will not apply in the first year of operation under the CfD). This should allow time for developers to rectify any issues preventing compliance in the early stages of the project, but the government considers that allowing non-compliance for any longer could present substantial administrative costs to the LCCC and limit the ability of the CfD scheme to deliver its objectives.

128. For *Criterion 3* the government intends to proceed with LCCC having the option to terminate the contract of any developer who fails to comply with the provisions

necessary to ensure the physical separation of the synthesis and combustion units during the life of the CfD within six months of receiving a non-compliance notice.

Policy response: The government intends to proceed with the option outlined in the consultation to suspend payments for periods of non-compliance with *Criterion 1*.

The government also intends to proceed with the option to terminate the contract of any developer with periods of non-compliance greater than 26 periods in any consecutive 12 months, with an exclusion for the first year of operation and a separate termination event for non-compliance with the physical separation requirements.

Proposed changes to the CfD contract

129. The government proposes to change the CfD contract to implement these proposals.
130. New drafting to confirm compliance (or proposed compliance) with the physical separation requirement can be found in the *Initial Conditions Precedent* and *Further Conditions Precedent*, with the substantive requirement and associated audit right in the new condition 32A.
131. To facilitate the efficiency requirements, the definitions of *FMS Purposes* and *FMS Data* in Annex 7 have been expanded to include the determination of the *ACT Efficiency Multiplier*, facilitating a requirement for developers to supply data on the conversion efficiency of the *Advanced Fuel* they have used in the monthly *FMS Report*.
132. A new Part G has been added to the standard terms at Annex 7 (*FMS Arrangements, Sustainability Criteria* and *RQM Calculation Month*) which will operate in a similar way, and in addition to, the RQM provisions in Part E of that Annex.
133. In respect of a week (*ACT Efficiency Period*) for which the LCCC consider the *Advanced Fuel* used did not meet the 60% efficiency standard, the removal of payment would take effect through amendments to the *Baseload Difference Amount* in Part 5A. This will involve the use of a multiplier for ACT where the amount for each *Settlement Unit* will be multiplied by 1 or zero in respect of the week depending on whether the efficiency standard was met.
134. The new *Termination Events* associated with both the physical separation requirement and efficiency requirements will be added to Part 12 of the standard terms at Condition 53.1 (G) and (H).

Consultation questions

6. The government welcomes views on the proposed changes to the CfD contract to implement this proposal (which have been published alongside this document).

Combined Heat and Power

The December 2017 consultation described the government's intention to clarify how CHP projects are treated under the CfD scheme in future allocation rounds. This includes that the *CHP Qualifying Multiplier (CHPQM)* will only apply to those technologies which must deploy with CHP in order to be eligible to take part in the CfD scheme (dedicated biomass with CHP, and energy from waste with CHP). This **Part B** document seeks views on various proposals to further simplify the treatment of CfD projects that have the option to deploy 'with' or 'without' CHP.

The December 2017 consultation also noted concerns that it was possible for projects which are subject to the *CHPQM* to qualify for substantial levels of CfD support whilst producing a low level of useful heat, consequently achieving low levels of overall efficiency – and proposed new, and more stringent, efficiency requirements be applied to new CfD contracts. **Part A** of the government response, published in June 2018¹², set out the government's response to its initial proposals for increasing CHP efficiency requirements (set out in the *CHPQA quality assurance standard* and accompanying *Guidance Note 44*). It also noted the government's intention to make a minor legislative amendment in connection with those new requirements. This **Part B** document seeks views on proposed new Issue 7 of the *CHPQA quality assurance standard* and accompanying *Guidance Note 44*, as well as on associated changes to the CfD contract.

Treatment of CfD-supported technologies with optional CHP

135. The December 2017 consultation stated the government's preferred position to only apply the *CHPQM* to those technologies that must deploy with CHP in order to be eligible for the CfD scheme, and not in respect of those technologies which are eligible to take part in the CfD scheme whether or not they deploy with CHP (currently advanced conversion technologies, anaerobic digestion, and geothermal technologies) (the 'optional CHP' projects).

Policy response: The contract terms applying to future CfD allocation rounds will not require developers of those technologies which have the option to deploy with CHP (currently advanced conversion technologies, anaerobic digestion, and geothermal technologies) to be subject to the *CHP Qualifying Multiplier (CHPQM)* or accredit under the *CHPQA quality assurance standard*.

136. The government is proposing to further simplify the treatment of 'optional CHP' projects that have the option to deploy either 'with' or 'without' CHP, on the grounds that in respect of those technologies the CfD only supports power generation.
137. The 5th Carbon Budget highlighted the potential for the use of CHP to decarbonise heat. Where demand for both heat and electricity exists, CHP offers a significant opportunity to reduce energy costs whilst reducing carbon emissions and air pollution.
138. The government considers that CfD terms should avoid provisions which would in practice disincentivise those developers from deploying CHP where that is a possibility.

¹² *Contracts for Difference for renewable electricity generation: proposed amendments to the scheme – government response (Part A)*, published June 2018 and available at gov.uk

139. Currently, if an ‘optional CHP’ project identifies as being ‘with CHP’ at the point of application, certain CHP specific CfD contract terms will apply. These include:
- A CHP specific *Post-Tax Real Discount Rate* (set out in the Standard Terms Notice);
 - Additional *Technology Specific Project Commitments* (in the CfD Agreement);
 - A CHP specific methodology for calculating greenhouse gas (GHG) emissions in respect of solid and gaseous biomass (in the CfD Standard Terms and Conditions).
140. In future CfD allocation rounds, the government will no longer require developers of ‘optional CHP’ projects to identify as being either ‘with CHP’ or ‘without CHP’ at the point of application for a CfD. Developers of ‘optional CHP’ projects should make their own commercial judgements on whether to deploy CHP during the project lifetime. The government proposes to make some changes to CfD contract terms, so that more similar contract terms would apply to developers of ‘optional CHP’ projects whether or not they deploy, or intend to deploy, using CHP.

A single discount rate for each of the ‘optional CHP’ technologies

141. In previous allocation rounds, a higher *Post Tax Real Discount Rate* has applied for ‘optional CHP’ projects that identify as ‘with CHP’ at the point of application, which is relevant to the calculation of compensation payable to developers under the CfD in certain Change in Law situations.
142. The government proposes to apply a single post-tax discount rate (equivalent to the ‘without CHP’ rate) for all ACT, AD and geothermal technologies; whether or not they in practice deploy or intend to deploy with CHP.

Removing some milestone requirements for ‘optional CHP’ projects

143. The CfD Agreement includes *Technology Specific Project Commitments*. These currently require all developers that identify as being ‘with CHP’ at the point of application for a CfD to demonstrate that they have either a contract with a heat customer by the *Milestone Delivery Date*, or (if the developer intends to use heat on-site) that they have completed a detailed feasibility study for the project.
144. The government proposes to remove the requirement for ‘optional CHP’ project developers to enter into a framework contract for the supply of heat (or, if they propose to use heat on-site, the requirement to complete a detailed feasibility study for the project) whether or not, in practice, they deploy or intend to deploy with CHP.

Calculation of GHG emissions for ‘optional CHP’ projects

145. Part B Sustainability Criteria of the Standard Terms and Conditions includes *Greenhouse Gas Emissions Criteria*. There are two separate formulae for calculating the GHG emissions associated with solid and gaseous biomass fuels: one that currently applies to projects that identify as being ‘with CHP’ at the point of application for a CfD; and one that applies to projects that do not. The CHP specific formula reduces the total GHG emissions to reflect the proportion of the energy content of the heat supplied (to any premises), rather than electricity, in the relevant period.
146. The government proposes that ‘optional CHP’ projects should retain the option to be subject to the CHP specific variant of the GHG emissions calculation formula so as not to disincentivise projects which do use CHP. This option would be retained

where evidence can be provided, to the satisfaction of the LCCC, of the energy content of the heat supplied during the relevant calculation period.

147. In circumstances in which a developer of an 'optional CHP' project applies without CHP or fails to provide evidence of the energy content of the heat supplied during the relevant calculation period, the CHP specific GHG emissions formula will not apply. This may result in higher calculated GHG emissions in such cases (in comparison to an equivalent project which does use CHP and can provide evidence, to the satisfaction of the LCCC).

Consultation question

7. The government welcomes views on the following:

- The proposal to apply a single discount rate for each of the 'optional CHP' technologies (equivalent to the 'without CHP' rate).
- The proposal to remove certain CHP-specific milestone requirements in respect of the 'optional CHP' technologies (and the associated contract changes in *Annex 5, Part B: Technology Specific Project Commitments* of the CfD Agreement).
- The proposed approaches to the calculation of GHG emissions for 'optional CHP' projects (and the associated contract changes in *Annex 7: FMS arrangements, Sustainability Criteria and RQM Calculation Methodology* of the Standard Terms and Conditions).
- What forms of evidence developers could potentially provide to LCCC regarding the supply of heat during the relevant calculation period, to enable LCCC to apply the 'with CHP' variant of the GHG emissions formula.

Proposals to implement increased CHP efficiency requirements

148. Part A of the response to the December 2017 consultation¹³ set out the government's intention to increase the efficiency reference values set out in the CHPQA Standard and related Guidance Note 44 by reference to which the *CHPQM* will be calculated for the purposes of future CfD contracts.
149. A proposed new issue of the *CHPQA quality assurance standard* and accompanying *Guidance Note 44* (Issue 7), has been published alongside this document.
150. The changes to the *CHPQA quality assurance standard* and accompanying *Guidance Note 44* were intended to ensure that future CfD projects which are subject to the *CHPQM* are required, in order to receive their full CfD entitlement, to demonstrate a minimum overall efficiency of 70% Net Calorific Value, primary energy saving of 10% Gross Calorific Value (GCV), and heat efficiency of 10% GCV.

Proposed issue 7 of the *CHPQA standard & Guidance Note 44*

151. In order to give effect to these requirements, Issue 7 of the *CHPQA quality assurance standard* and accompanying *Guidance Note 44* include updated 'X' values (at Table 2 of *Guidance Note 44*)¹⁴. These revised values will only apply in respect of new CfD contracts: projects which entered into a CfD prior to the publication of Issue 7 will continue to have their *CHPQM* calculated in accordance with the *CHPQA*

¹³ *Contracts for Difference for renewable electricity generation: proposed amendments to the scheme – government response (Part A)*, published in June 2018 and available at gov.uk

¹⁴ 'X' is a coefficient related to alternative power supply options and 'Y' is related to alternative heat generation options. Both 'X' and 'Y' coefficients are values used in the calculation of a CHP scheme's Quality Index depending on the size of the scheme and fuel(s) used.

quality assurance standard published at their agreement date and/or referred to in the specific contract.

Consultation questions

8. The government welcomes views on any aspects of the proposed new Issue 7 of the *CHPQA standard* and *Guidance Note 44*, which have been published alongside this document on the gov.uk website¹⁵. In particular, the government welcomes views on whether the changes have the effect to the requirements set out in Part A of the government response.

Proposed changes to the CfD contract

152. The government intends to amend the CfD contract to implement these proposals, specifically by making a change to the definition of *CHPQA* in the *Definitions and Interpretation* section.

Consultation questions

9. The government welcomes views on the proposed changes to the contract, that have been published alongside this document on the gov.uk website.

¹⁵ Available at www.gov.uk/government/consultations/contracts-for-difference-cfd-proposed-amendments-to-the-scheme

Greenhouse gas criteria for solid and gaseous biomass

Technologies using solid and gaseous biomass feedstocks are required to meet sustainability criteria to be eligible for support under the CfD scheme. The sustainability criteria include greenhouse gas (GHG) emission criteria, which are GHG emission limits on solid and gaseous biomass fuels within the CfD scheme.

CfD contracts need to deliver lower carbon electricity, and the government sought views on revised GHG criteria for new solid and gaseous biomass plants.

The GHG criteria are composed of both a *GHG Threshold* and a *GHG Ceiling*. These are both limits on GHG emissions from the use of biomass feedstocks (the latter is a specific limit on GHG emissions from individual consignments of biomass). The December 2017 consultation proposed a new (and lower) *GHG threshold*, but did not propose to change the *GHG Ceiling*.

It proposed to base this new *GHG threshold* on recent GHG emissions performance of existing solid and gaseous biomass plants. This would apply to projects from the next allocation round and would initially be set for commissioning years from 2021/22 to 2025/26. It would apply to the same biomass feedstocks as the ones to which the existing *GHG threshold* applies.

Responses received to the consultation

153. Twenty unique responses addressed this part of the consultation from trade associations, industry (including a mix of developers and energy suppliers), consultancies, innovative energy organisations, non-governmental organisations and non-profit organisations. In addition, the government received approximately 1,500 responses linked to a campaign by Biofuel Watch. These responses were broadly supportive of the government's proposal for a new and lower GHG threshold.
154. During the consultation, more detail was requested on some aspects of the proposals, including how the proposed GHG threshold values had been calculated; replies to questions were published in a Stakeholder Bulletin¹⁶.
155. It is important to note that the final outcome of the second Renewable Energy Directive (RED 2) negotiations is not yet confirmed. It is currently anticipated that changes made in RED 2 would not affect contracts signed in the next allocation round.

Proposal to set a new, and lower, GHG threshold

156. **Question 26(a)** sought views on the proposal to set a new and lower GHG threshold.
157. There was a general recognition that the previous GHG threshold value was appropriate for the context of the projects it supported (for example, in displacing coal plants with far higher emissions), but that it had become outdated.
158. Most respondents supported the proposal that new CfD projects should be required to meet a significantly lower GHG threshold. Arguments in favour of a new and lower threshold included that it seemed appropriate in the context of developments in the UK energy sector, declining grid average GHG emissions, and continued development of low carbon technologies. Some respondents noted that a new GHG

¹⁶ *Contracts for Difference: Stakeholder Bulletin*, published in March 2018 and available at gov.uk

threshold value should continue to drive significant GHG emission savings in the harvesting, processing and transportation of solid and gaseous biomass.

159. Some respondents argued that the GHG threshold should not change. Arguments against change included that the existing GHG threshold already delivers satisfactory GHG emission savings, that the proposed new GHG threshold value is a significant decrease compared to the existing one, and that it would not be achievable for most of the biomass supply chains in the UK. Concerns were expressed that the level of the proposed GHG threshold value could exclude projects or technologies that have the potential to provide low carbon electricity in a cost-effective way through the CfD scheme in the future.
160. The government recognises the concerns raised that the new GHG threshold value is a significant decrease compared to the existing one, and this proposed change could make it more challenging to deliver projects using some of the largest scale biomass generation options. However, revising the GHG threshold would be consistent with the aim of the CfD scheme to support low carbon electricity.
161. Having considered the responses received and noting that all of the existing solid and gaseous biomass plants (in scope) already meet the existing threshold by a reasonably comfortable margin, the government has concluded that the threshold does need to be reviewed (and lowered) for new CfD contracts.
162. Continuing to apply the existing GHG threshold would lead to GHG emissions significantly above the projected UK grid average for most of the lifetime of any new CfD projects (as UK grid carbon intensity has declined and projected to continue to decrease with time). As a result, biomass plants offered 15-year contracts from the early 2020s need to be subject to tightening emissions controls in order to meet the CfD scheme's objectives of supporting low carbon electricity.
163. The method used to determine the previous GHG threshold involved an 'EU fossil fuel comparator', but this has limited relevance when applied to new CfD projects as it includes the generation of electricity from unabated coal, which the Clean Growth Strategy¹⁷ confirms is set to be phased out of the UK electricity mix from 2025. The government will therefore take a different approach in setting the new GHG threshold.
164. Some respondents to the consultation argued the GHG threshold should be applied to a wider range of fuel types, notably waste used as feedstocks. Having considered this suggestion, the government does not intend to take this forward due to the typically relatively high GHG savings, and limited sustainability concerns, associated with waste feedstocks¹⁸.

Policy response: The government will set a new and lower GHG threshold value to apply to projects that are offered a contract from the next CfD allocation round. This will apply to the same fuel types as the existing GHG threshold.

¹⁷ *The Clean Growth Strategy*, published in October 2017 and available at gov.uk

¹⁸ *Biomass Electricity & Combined Heat & Power plants – ensuring sustainability and affordability - Consultation on proposals to enhance the sustainability criteria and to ensure affordability for the use of biomass feedstocks under the Renewables Obligation*, published in September 2012 and available at gov.uk

Basis for defining the new criteria

165. **Question 26(b)** sought views on using recent performance of existing solid and gaseous biomass plants as the basis for defining a new GHG threshold. The December 2017 consultation proposed using the latest five years of available GHG emissions data from existing plants as a basis for setting the new GHG threshold value. Two options for a new GHG threshold were suggested – one based on a central value (mean), and one based on the lowest 30%, of the averages of the GHG emissions of existing plants.
166. A wide range of views were received in response to these proposals. Some respondents argued that such an approach could limit the development of larger scale, potentially more efficient, solid and gaseous biomass plants operating in the CfD scheme. Some concerns were expressed that the proposed basis for defining the GHG threshold overemphasised the emissions of small generators and understated those of larger generators, that this could favour plants that employed more local sourcing of biomass, and that the new criteria could incentivise undesirable practices such as burning of wood residues on site.
167. Before determining the GHG threshold, first the average GHG emissions of each of the existing solid and gaseous biomass plants had to be calculated. A few respondents suggested an alternative approach to calculate the GHG emissions of each of the existing plants by taking the average GHG emissions for each plant weighted by the tonnage of feedstock used, rather than using the unweighted averages of GHG emissions. As set out in the stakeholder bulletin document¹⁹, weighted averages of each plants' GHG emissions (by tonnage of feedstock used) would award a stronger weighting to large scale biomass plant designs with larger volumes of feedstock (or producing larger volumes of electricity). However, this could make it more challenging to ensure that newly supported CfD projects constitute low carbon electricity.

Updates made following the consultation

168. The analysis to determine the GHG threshold took the GHG emissions from the most recent five years of biomass sustainability data (reported to Ofgem) from existing solid and gaseous biomass plants eligible to compete in the scheme. Since the December 2017 consultation, new biomass sustainability data on the GHG performance of existing plants for the reporting year 2016/2017 has been published. The new GHG criteria proposed in the consultation (*options 1 and 2*) have been updated in line with this new data, using the most recent (latest five years) Biomass Sustainability Datasets from 2012/2013 to 2016/2017²⁰.
169. The scope of data used to calculate the new criteria includes GHG emission data from Anaerobic Digestion (AD) plants provided they are above 5MW. As AD generation below 5 MW is not eligible for support under the CfD scheme, data from such plants has been omitted.
170. Following the consultation process, the government now considers that in determining the central value for *option 1*, the 50th percentile (median) is a preferable measure to the mean (which had been suggested in the December consultation), on the grounds that the median is less sensitive to any potential skew of the distribution of GHG emissions due to 'outlier' plants.
171. The government recognises the concern about potentially limiting the uptake of large scale biomass generation under the CfD scheme. However, the scheme is designed

¹⁹ *Contracts for Difference: Stakeholder Bulletin*, published in March 2018 and available at gov.uk

²⁰ *Biomass Sustainability Dataset*, available at ofgem.gov.uk

to support renewable projects that constitute cost effective low carbon electricity generation. The GHG threshold value is projected to be in line with or below future grid average GHG emissions, which is important for contracts lasting up to the year 2041 when the economy should be approaching the 2050 carbon targets set out in the 2008 Climate Change Act²¹.

Policy response: The government intends to use recent performance of existing biomass plants under the existing criteria as the method for defining the new GHG threshold.

Having considered the views expressed on the merits of a weighted average approach, the government intends to continue with the proposed approach of not weighting GHG emissions by the tonnage of feedstocks used. This will enable the resulting GHG threshold to reflect the range of plant types that can feasibly be developed.

Duration of the new GHG threshold

172. **Question 26(c)** sought views on the proposal that a single GHG threshold should be set for the five commissioning years between 2021/22 and 2025/26; this question received relatively few responses.
173. Some respondents agreed with the proposal and indicated that the certainty provided because of a single GHG threshold value for the five commissioning years would help to plan new projects, as opposed to setting multiple criteria over different time periods. Suggestions made by those respondents who did not support this approach included that the GHG threshold should be tightened over time, including between these commissioning years.
174. **Question 26(d)** sought views on the proposal for the new GHG threshold to be set at a fixed level for the duration of a new 15-year CfD contract. Responses to this question were mixed. Responses supporting this approach (for the new GHG threshold to be set at a fixed level) believed this would provide more confidence and predictability for investors over the 15-year duration of the contract.
175. Some of the respondents who did not support the proposal suggested an alternative approach, that the GHG threshold should be reviewed and adjusted downwards at intervals during a CfD contract (in a manner that would be fixed from the beginning of the contract). Only a few respondents specified from which GHG threshold level the reducing trajectory should be applied. It was noted by a few respondents that this could give generators the opportunity to implement improvements, such as streamlining biomass supply chains. In addition, it was argued that such a reduced trajectory of the GHG criteria could allow larger GHG emission reductions over time compared to a constant 15-year GHG threshold value.
176. Considering that the new GHG threshold value is likely to be significantly lower than the existing one, the government considers there could be limited scope for further reduction of the threshold across the commissioning years. In addition, these commissioning years are likely to be some time in the future from the date of the next CfD auction and accurately setting a GHG threshold that decreases in stages (so far in advance) appears to be relatively challenging.

Policy response: The government, in line with the December 2017 consultation, is setting a single GHG threshold to apply across the five potential commissioning years (between 2021/22 and 2025/26). The government will also set the new GHG threshold to be fixed at the same level for the duration of a 15-year CfD contract.

21 *The Climate Change Act 2008*, available at legislation.gov.uk

Which option appears the most appropriate?

177. **Question 26(e)** sought views on the approach to calculate the new GHG threshold, suggesting two options, both based on GHG emissions from existing plants using solid and gaseous biomass feedstocks that have been reporting GHG emissions to Ofgem since 2011/2012.
178. Option 1 (a limit of 40 kg CO_{2e}/MWh) was the central value (mean) GHG emission of all solid and gaseous biomass plants, while option 2 (a limit of 25 kg CO_{2e}/MWh) was the 30th percentile (the lowest 30% of each plants GHG emissions, or 'top performing' plants).
179. These options were based on the most recent five years of data available at the time of consultation (monthly reporting of GHG emissions data for each year from 2011/2015 to 2015/2016). As mentioned previously, since the December 2017 consultation the latest five years of biomass sustainability datasets became available and the most recent 5 years of data have now been used, and the scope of biomass plants used in the calculation of the new GHG threshold was updated to exclude AD plants below 5MW. As a result, the central value (the median) and 30th percentiles of the GHG emissions of solid and gas biomass plants were updated to 29 kg CO_{2e} / MWh (*option 1b*) and 23 kg CO_{2e} / MWh (*option 2b*) respectively.
180. Of the respondents who supported introducing a new (and lower) GHG threshold, some supported either option, while many argued that the lower, more stringent option would be the best way to ensure the lowest GHG emitting solid and gaseous biomass plants are supported under the CfD scheme. These respondents felt the lower more stringent option was an appropriate level, for both CfD contracts in the immediate future and given average grid GHG emissions are expected to decrease further.
181. Some respondents argued that the GHG threshold should reflect the GHG emissions of other low carbon power technologies. The 2014 IPCC reports²² for various renewable technologies has a median Life Cycle Assessment GHG emissions value for offshore wind of 12 kg CO_{2e}/MWh, onshore wind of 11 kg CO_{2e}/MWh and utility scale solar PV of 48 kg CO_{2e}/MWh.

Policy response: Having considered the responses to the consultation, and the new data that has become available since the consultation period, the government intends to base a revised GHG threshold on a central value (the median - equivalent to the 50th percentile). This will mean a final criterion of **29 kg CO_{2e} / MWh**.

The value of the final criterion lies between the two GHG threshold options which the government consulted on in the December 2017 consultation, and should strike a suitable balance between ensuring new plants are demonstrably 'low carbon' and ensuring that developers are able to build plants that can comply with this new GHG criteria value (threshold).

For the final GHG threshold the government is using the central value (median), which is equivalent to the 50th percentile. This value supports solid and gaseous biomass plants that have low GHG emissions compared with currently operating plants.

²² IPCC Working Group III – Mitigation of Climate Change, Annex III: Technology - specific cost and performance parameters, published in 2014 and available at ippv.ch

Emissions limit for single consignments

182. In addition to the GHG threshold (a GHG emission performance across the year), the GHG criteria applying to CfD supported projects include a GHG ceiling, a maximum level of GHG emissions for individual consignments (shipments) of biomass.
183. The December 2017 consultation did not propose to update the GHG ceiling level, on the grounds that biomass plants may require the option of flexibility within the reporting year to meet a lower and more stringent GHG threshold. **Question 26(f)** sought views on this approach and received relatively few responses.
184. Some respondents suggested that the single consignment GHG ceiling limits should be reduced to be more in line with new and lower GHG threshold value. However, most supported the proposed approach, generally noting that flexibility to meet the lower GHG threshold within the reporting year would be helpful, and that with a significantly lower overall GHG threshold, emissions would be reduced significantly regardless of the GHG ceiling.

Policy response: The government, in line with the December 2017 consultation proposal, will not change the emissions limit for single biomass consignments (the GHG ceiling value).

Scope for unintended consequences

185. **Question 26(g)** asked about whether the proposals could lead to any unintended adverse consequences, which the government should properly consider before making any such changes. Potential unintended consequences suggested by individual respondents included:
- Adverse effects on the development of Bioenergy and Carbon Capture and Storage (BECCS).
 - Scope for introducing inconsistency between EU and UK biomass GHG criteria, by not maintaining similar standards.
 - Potential impacts of biomass generation on biodiversity, on the grounds that increased biomass generation could prompt increased use of plantations as a fuel source rather than natural forests, which could degrade habitats for wildlife and reduce biodiversity.
 - Reduced potential for wider carbon savings of using biomass as a source of energy and security of supply.

Policy response: The government welcomed the views on a range of potential unintended consequences suggested in the December 2017 consultation responses.

With regards to Bioenergy with Carbon Capture and Storage (BECCS), the Clean Growth Strategy highlighted that the government will consider the scope for removing barriers and strengthening incentives to support the deployment of Greenhouse Gas Reduction (GGR), and to position the UK at the leading edge of GGR development. BECCS has the potential to support the UK progress towards its climate change targets and the government are currently exploring how this technology could be best utilised for the future.

With regards to the possibility of introducing inconsistency between EU and UK biomass GHG criteria to biomass fuels from 2021, it is appropriate for the government to develop a new GHG criteria to ensure that this is in place in time for the next CfD allocation

round. The outcome from the RED 2 negotiations has yet to be confirmed, but it is anticipated that changes made in RED 2 would not affect contracts signed in the next allocation round.

A response to a previous consultation on proposals to enhance the sustainability criteria for the use of biomass feedstocks under the RO²³ noted that growth in bioenergy should demonstrate genuine carbon benefits whilst protecting biodiversity and preventing deforestation.

The UK Government's 2012 UK Bioenergy Strategy²⁴ acknowledges that policies supporting bioenergy should deliver genuine carbon reductions and help contribute to meeting the UK's decarbonisation targets. The Strategy also recognised that bioenergy (using sustainable forest management practices), has an important role to play to meet the UK's energy security and decarbonisation objectives.

Views on the method used to calculate GHG emissions

186. The methodology used to calculate the GHG emissions of solid and gaseous biomass plants (used for compliance with the GHG criteria) is based on the 2009 EU RED Life Cycle Assessment (LCA) Methodology²⁵. The December 2017 consultation noted that the government was not reviewing this methodology at this stage. Many respondents argued against the appropriateness of the RED LCA methodology and provided evidence of its limitations. For example, the methodology assumes GHG emissions at the smoke stack from biomass to be zero. Furthermore, it accounts for direct GHG emissions from direct land use change (where it has changed category since 2008), from the cultivation, harvesting, processing, and transportation of biomass, but not complex and uncertain indirect GHG emissions. The latter includes changes in the carbon stock of a forest, possible impacts on other biomass using industries, and foregone carbon sequestration of land.
187. A few respondents argued that the wider GHG emission savings of using biomass as a source of energy are not adequately captured by the current RED LCA methodology. The methodology does include some of the factors that result in GHG emission savings from the use of biomass. These are related to soil carbon accumulation via improved agricultural management practices.

Policy response: The government is aware of stakeholder views regarding potential limitations in the scope of the current LCA methodology. As stated in the December 2017 consultation, the UK position on the methodology may be re-examined once the position of RED 2 has been confirmed.

²³ *Government Response to the consultation on proposals to enhance the sustainability criteria for the use of biomass feedstocks under the Renewables Obligation*, published in August 2013, and available at gov.uk

²⁴ *UK Bioenergy Strategy*, published in April 2012, and available at gov.uk

²⁵ *Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC*, April 2009

Changes to improve the operation and clarity of the CfD

The December 2017 consultation proposed various changes to the standard terms and conditions of the CfD contract. Primarily these related to force majeure, to the handling of grid connection delays, to the definition of *Installed Capacity*, and to the definition of *Facility*²⁶ and were proposed to improve the operation and clarity of the CfD contract, and, in certain respects, ensure the contract is giving effect to the intended balance of risks between developers and consumers.

Force majeure: Clarification on when relief can be claimed

188. **Question 27** sought views on several proposed amendments to the contract to clarify that force majeure relief can only be claimed:

- Where a developer can demonstrate that the delivery of a contractual milestone has, or will, be affected;
- Where any failure or delay in performing a contractual obligation (including achieving a *Longstop Date*, *Milestone Delivery Date* or *Target Commissioning Window*) is caused by and directly attributable to a force majeure event;
- Where Condition 69 of the contract has been complied with, and
- Where the force majeure event or circumstance is a continuing one, is an event which remains beyond the reasonable control of the *FM Affected Party* or their *Representatives* and remains one which they could not easily have avoided or overcome.

189. Eighteen responses addressed this part of the consultation. A significant majority did not support the proposals. A small number of responses either supported or gave qualified support to the proposals. Several respondents noted that they would need to assess how the proposed amendments are to be implemented in the contract and their impacts before they could give a definitive response.

190. Several of those who did not support the government's proposal gave no reason for their answer, however, those who did express views, set out a wide range of points and concerns. Some were concerned that the proposed amendments would erode or materially narrow the scope of force majeure protection available under the CfD. Others said that it was unclear from the consultation document why the proposed changes were necessary. One respondent expressed the view that investors would normally consider that relief should be provided if a force majeure event affects the timetable for the delivery of the project. Another said that it was unclear whether the proposed wording is intended to convey that force majeure protection ends when the force majeure event stops, while several other respondents questioned the addition of the word "caused by" to the current requirement in the contract (at Condition 69.1) where failure or delay to perform any obligation under the contract is "directly attributable" to a force majeure event. In addition, many respondents sought clarification on the terminology used in the December 2017 consultation to describe "contractual milestones" and "non-contractual milestones".

²⁶ The consultation also proposed to amend the definition of 'waste' in CfD regulations to bring our national legislation into line with the new definition of 'waste' in the EU Renewable Energy Directive; the response to this proposal was included in Part A of the government response.

191. The CfD contract provides relief to developers from meeting their key contractual dates, including the *Milestone Delivery Date* and *Longstop Date*, and from any failure or delay in the performance of any of their obligations under the Contract for Difference to the extent that the failure or delay is directly attributable to that force majeure event or circumstance. The government's intention is that this force majeure protection should be available for events or circumstances outside a developer's control and which would cause them to breach their contract. It is not the government's intention that force majeure relief should be available to developers for project delays which would not cause a contract breach.
192. As the December 2017 consultation indicated, operational experience suggests that force majeure relief has been sought for delays that do not threaten a contract breach, and that developers have sought to claim protection in cases where a project would be delayed in any event for other reasons within a developer's control. The government believes that it is necessary to clarify the contract to put this matter beyond doubt. Developers will still be able to claim force majeure relief for events or circumstances that would lead to a breach of contract, subject to the introduction of a limit in respect of foreseeable events or circumstances as described in the section below setting out the government's proposals on that issue.

Policy response: The government intends to amend the CfD contract in line with the consultation proposals to clarify when force majeure relief can be claimed.

193. Many respondents welcomed the intention to consult on specific contract drafting and said that they would need to assess how the proposed amendments are to be implemented in the contract and their impacts before they could give a definitive response.
194. In summary, the government proposes to change the contract to implement the policy decisions by way of updates to the definition of *Force Majeure* and limb (B) of the definitions of *Longstop Date*, *Milestone Delivery Date* and *Target Commissioning Window* (in the 'Definitions and Interpretation' section of the contract: Part 1, Introduction, Condition 1.1) and to Condition 69.

Consultation question

10. The government welcomes views on the proposed changes to the CfD contract to implement this decision (which have been published alongside this document).

Force majeure: Foreseeable events or circumstances

195. **Question 28** sought views on the proposal to change the CfD contract to stipulate that a force majeure event must not be the result of pre-existing factors of which the developer was aware, or could reasonably be expected to be aware, on or prior to the *Agreement Date*.
196. Twenty-one responses addressed this part of the consultation. A significant majority of respondents did not support the proposal on pre-existing force majeure factors. A small number supported this proposal. Several respondents, while not supporting this proposal, also said that they could not give a definitive response until they saw specific contract drafting.

197. Many concerns were raised about the term “pre-existing factors” with some respondents worried that developers might be precluded from claiming force majeure protection because they should have predicted potential or possible events and carry the risk of those events occurring. Concerns were also expressed that the proposals were too subjective and potentially created wide categories of risk for developers to anticipate, which in turn would create material legal uncertainty on the availability of force majeure protection and on how such a provision would or could be interpreted in the courts. Other respondents believed that this uncertainty could adversely affect the risk profile, and potentially bankability, of projects and reduce the scope to secure future cost reductions.
198. An additional concern expressed by some respondents was that an event could arise which might impact on projects between submitting a CfD application and contract allocation. This is a stage in the allocation process during which a developer cannot alter a bid and may be unable to take mitigating action without significantly altering the project to reflect changing circumstances. It was suggested that a project might be prevented by the *Non-Delivery Disincentive* from participating in a future CfD allocation round if in light of this the developer either failed to sign a CfD contract, or having done so, failed to satisfy its milestone delivery requirements because of that event because they were not entitled to force majeure protection.
199. Several remote island wind stakeholders noted that successful island projects would be dependent on transmission links to their islands being built and that they are aware that there is a risk that such transmission links would not be built if insufficient remote island wind projects are awarded CfDs. They took the view that the non-provision of grid assets should be treated as a force majeure, and were concerned (given their current awareness) that they might not be able to rely on force majeure protection if the construction of the transmission links were not approved and if the government’s proposal on foreseeable force majeure was implemented.
200. The government acknowledges that force majeure is an important safeguard within the CfD contract and wants to ensure that developers can continue to access an appropriate level of force majeure protection for their projects. The government nevertheless believes that the extent of force majeure protection currently afforded by the CfD contract does not reflect a fair balance of risk between developers and consumers. This is particularly the case for events that have arisen prior to the developer committing to enter into a CfD and which the developer is therefore best placed to assess and avoid, manage and mitigate before committing to entering into a CfD contract.
201. The government has therefore decided to limit force majeure protection in relation to foreseeable events or circumstances. The government does not consider it appropriate for a developer to enter into a contract knowing at that time that there is an event or circumstance which could lead to project delays or even termination and therefore could impact government’s budget. However, having reflected on the range of concerns raised, the government has refined its proposal and the drafting to clarify that a force majeure projection will not be provided where it is the result of an event or circumstance which has occurred on or before the *FIT CfD Application Date* which would, or may, impact the developer’s ability to meet their obligations under the CfD contract and:
- The developer was aware of the event or circumstance;
 - The developer could be expected to have been aware of the event or circumstance if it had made all due and careful enquires and acted to a *Reasonable and Prudent Standard*.

202. This refined proposal clarifies that a foreseeable event or circumstance must have occurred, and moves the cut-off point at which an event or circumstance would be regarded as foreseeable from the *Agreement Date*, as proposed in the December 2017 consultation, to the CfD application deadline or the deadline of the sealed bidding window, in the event of an auction. This is designed to give developers the opportunity before entering into a binding commitment either (a) to adjust their proposal/strike price to reflect the perceived level of risk, (b) not to make an adjustment or mitigate the event or circumstances and proceed at their own risk or (c) to decide not to apply or withdraw their application before the deadline, i.e. the point at which a developer would be committed to signing a CfD contract if offered one at the end of an allocation round.

Policy response: The government intends to change the CfD contract to limit the extent of force majeure protection so that protection is not provided where an event or circumstance has occurred prior to the *FiT CfD Application Date* which the developer (generator) was aware of or, having made all due and careful enquiries and acting to a *Reasonable and Prudent Standard*, could be expected to have been aware of, and which impacts the developer's ability to meet their obligations under the CfD contract.

With regard to island wind transmission links, the government notes that there are provisions to deal with grid connection delays which impact the *Longstop Date*, *Milestone Delivery Date* and *Target Commissioning Window* which may be applicable in certain circumstances.

203. The government proposes to change the definition of *Force Majeure* in the 'Definitions and Interpretation' section of the contract (Part 1, Introduction, Condition 1.1) to implement the proposal to limit the extent of force majeure protection for foreseeable events described above.

Consultation question

11. The government welcomes views on the proposed changes to the CfD contract to implement this proposal (which have been published alongside this document).

Prompt notification of potential force majeure event or circumstance

204. **Question 28** also invited views on the proposal to change Condition 69.3(A) of the contract to clarify that, in addition to notifying the LCCC of the nature and extent of the force majeure causing its failure or delay in performance, an *FM Affected Party* should also provide notice of any force majeure as soon as that *FM Affected Party* is or could reasonably be expected to be aware that a force majeure is likely to cause it to fail to perform its obligations under the CfD.

205. A few respondents expressed concerns that requiring developers to notify "as soon as" they were aware of a force majeure event was particularly onerous in circumstances where a developer only "could reasonably be expected to be aware..." of such an event. Clarification of the test that will apply in relation to the wording of "could reasonably be expected to be aware..." was requested and the suggestion was made that any such new notice obligation under Condition 69.3(A) should be qualified by a requirement to give notice "as soon as reasonably practicable", rather than simply as soon as possible.

Policy response: The government intends to change Condition 69.3(A) of the contract to require an *FM Affected Party* to give notice as soon as reasonably practicable to the LCCC of any force majeure or potential force majeure which it considers will or is likely to cause its failure or delay in performance. However, the test is a subjective one, i.e. the developer (generator) has to have actual knowledge of the force majeure or potential force majeure, the test is not whether they ought to have known.

Consultation question

12. The government welcomes views on the proposed changes to the CfD contract to implement this proposal (which have been published alongside this document).

Grid connection delay

206. **Question 29** sought views on the proposal to change the definitions of *Longstop Date*, *Milestone Delivery Date* and *Target Commissioning Window* to place an obligation on developers to use reasonable endeavours to avoid delays to grid connection and grid works agreements occurring and where delays occur, to use reasonable endeavours to mitigate the effects of delay on the performance of their obligations under the contract. In addition, this question invited views on the proposal to change these same definitions to clarify that any grid delay must actually cause a delay to an obligation under the relevant contractual milestone in order to qualify for grid delay relief.
207. Sixteen responses addressed this part of the consultation, a slim majority of which supported, or gave qualified support to, the proposals. Several respondents noted that they needed to see contract drafting before they could give a definitive response.
208. A range of comments and concerns were raised about these proposals. Several respondents suggested that the government should clarify what is meant by *reasonable endeavours* and provide examples of how developers might go about mitigating the effects of grid delays. The government notes, however, that the term *reasonable endeavours* is used extensively throughout the CfD contract and as such, believes that the concept should be well understood.
209. A few respondents were concerned that developers might be unable to provide evidence of a grid delay in circumstances where an original grid agreement is superseded by a revised agreement which no longer contained details of the delayed grid works. They felt that it should be made clear in the contract that the grid connection delay relief would remain available for a relevant failure in respect of works that were specified in the previous grid agreement. The government believes that such issues can be resolved through suitable engagement between the developer and the LCCC. The government expects that the LCCC would want to review all the evidence, including any previous grid agreement, when deciding whether grid delay relief is justified in specific cases. A further suggestion that any time properly spent in agreeing the alternative grid connection agreement should not affect the amount of relief that is granted would, in the government's view, also be an operational matter for discussion between the developer and the LCCC.
210. Several respondents were concerned that the proposal to require developers to ensure that grid agreement and grid works are agreed in a timely manner could have the unintended consequence of developers having to sign up to unfavourable terms to avoid missing a contract obligation. The government notes that the negotiation of

any construction agreement should have been carried out prior to the point of bidding and therefore proposes to require the timely enforcement and compliance with any relevant obligations within that agreement.

211. A small number of respondents pointed out that issues can arise which delay the agreement of grid works in parts of the country that are subject to grid constraints, and that it would be unfair to penalise developers affected in this way. The government notes that the contract changes which it has proposed do not change the fact that all claims for grid delay relief should be considered on their merits by the LCCC, regardless of where they occur. The inclusion of a new “reasonable endeavours” obligation should enable developers to demonstrate to the LCCC that they are acting reasonably to avoid such delays, and to mitigate their effects, where they occur.
212. Some respondents argued that the potential for essential transmissions links enabling the connection of Remote Island Wind projects to the grid not to be built should be treated as a force majeure. As indicated in the response to the foreseeable force majeure proposal, pursuant to limb (B) of each of the following definitions, the *Longstop Date*, *Milestone Delivery Date* and *Target Commissioning Window* may be extended in certain circumstances where there is a delay caused by required system reinforcement or connection works not being carried out in a timely manner.
213. The government’s policy intent in proposing these changes to the grid connection delay provisions reflects operational experience that some developers have been seeking to utilise this protection where delays have occurred which are within the developer’s control or where the developer may have contributed to the delay. Having reflected on the consultation responses to these proposals, the government maintains that it is appropriate to make the clarifications that had been proposed.

Policy response: The government intends to change the definitions of *Longstop Date*, *Milestone Delivery Date* and *Target Commissioning Window* in the CfD contract to place an obligation on the developer (generator) to provide notice of the failure occurring and to use reasonable endeavours to (a) act in a timely manner, enforce, and comply with the obligations in the relevant construction agreement, (b) avoid such failure and (c) to continue to mitigate the effects of such failure.

214. The government proposes to change limb (B) of the definitions of *Longstop Date*, *Milestone Delivery Date* and *Target Commissioning Window* and has inserted two new sub-clauses to give effect to these clarifications.

Consultation question

13. The government welcomes views on the proposed changes to the CfD contract to implement this decision (which have been published alongside this document).

Installed capacity

215. **Question 30** sought views on the proposal to clarify the definition of *Installed Capacity* and introduce new defined terms for *parasitic electrical load* and *electrical losses* in order to clarify in the contract the government’s original intention that CfD difference payments should be calculated on electrical output net of parasitic electrical loads and electrical losses as measured at the boundary meter.

216. This question also invited views on any practical issues that government should consider in relation to determining the level of parasitic electrical loads and electrical losses for the purposes of determining net capacity.
217. Eighteen responses addressed this part of the consultation. Most respondents broadly supported the proposal to clarify the definition of *Installed Capacity*. These included several who supported the proposal unequivocally as well as a number whose support was conditional on reviewing contract drafting.
218. A small number of specific suggestions were received, including that the government's aims could be more easily achieved through using a single definition of *Export Capacity* rather than trying to define three separate elements, and that it may be helpful if the contract cross-referred to definitions in the Grid Code, such as *Rated MW* (for the gross installed capacity) and *Registered Capacity* (for the export capacity). The government appreciates these suggestions but believes that replacing the current definition of *Installed Capacity* or cross-referring to definitions in other documents would require significant change to the contract and may give rise to a number of wider risks. The government has therefore decided not to adopt these suggestions.
219. A concern was expressed that the proposed definition of *Installed Capacity* departs from the way this term is currently interpreted within the wind industry and that it could add complexity in bidding for CfDs and in the CfD mechanism.
220. A few respondents commented that the terms "boundary meter point", "boundary point meter" and "export meter" used in the consultation are not defined terms in the CfD contract, arguing that this could cause issues for complex facilities which will need a clear definition of boundary meter point to ensure that they can successfully meter and report the required value without a Balancing and Settlement Code (BSC) derogation.
221. For the avoidance of doubt, the government wishes to confirm that it used these terms interchangeably and in a colloquial and contextual sense as a reference to the term *Boundary Point*, which is used in the CfD Standard Terms and Conditions and has the meaning given to that term in the BSC. The government did not propose, and does not intend, to put forward any new or alternative definition of *Boundary Point* or a variation on this term.

Policy response: For the avoidance of doubt, and to reduce the risk of potential uncertainty and dispute between generators and the LCCC, the government intends to amend the definition of *Installed Capacity* in the CfD Standard Terms in line with its proposal in the consultation to clarify that the *Installed Capacity* is the capacity of the *Facility* were it to be operated at optimal operating conditions at the *Facility* on a continual basis for a sustained period, at the maximum capacity possible without causing damage to it and net of (a) all electrical loads required to operate the *Facility* and/or deliver electricity, and (b) all electrical losses that would be incurred from the *Generating Unit(s)* to the *Metering Equipment* at the *Boundary Point* in so operating the *Facility* and/or delivering electricity.

With respect to projects that must or choose to operate with combined heat and power, the government intends to clarify that *Installed Capacity* should be a measurement of the capacity of the *Facility* such that any reduction in heat generation would not result in any increase in electrical generation.

222. The government proposes to amend the definition of *Installed Capacity* in the 'Definitions and Interpretation' section of the Standard Terms and Conditions (Part 1, Introduction, Condition 1.1) to implement this clarification.

Consultation question

14. The government welcomes views on the proposed changes to the CfD contract to implement this decision (which have been published alongside this document).

223. Most of the respondents who commented on the suggestion to insert definitions of *parasitic electrical load* and *electrical losses* into the contract supported the proposal. Some noted the need to align with good industry practice.
224. The government recognises the benefits of defining these terms, however, after consideration the government has concluded that it would be challenging to draft suitably comprehensive and enduring definitions that would keep pace with technical changes over time.
225. However, the government notes that the LCCC may choose to continue to provide guidance to developers on the interpretation of these provisions, which may assist developers to confirm how their specific technologies and any sectoral developments would be treated pursuant to the contract terms.
226. It is open to the LCCC to review their current guidance on determining *Installed Capacity* in light of the outcome of this consultation process.

Policy response: The government has decided not to insert new definitions of *parasitic electrical load* and *electrical losses* into the contract which will now refer to *electrical loads* and *electrical losses*.

Facility description

227. **Question 31** sought views on the proposal to amend the definition of *Facility* in the CfD generic Agreement to clarify that the assets that fall within the generating facility are those identified in the description of the *Facility* provided in accordance with Schedule 1 of the Standard Terms and Conditions (Conditions Precedent).
228. The consultation also sought views on the proposal to make consequential amendments to allow the definition of *Facility* to incorporate any updated description of the assets which generators provide in accordance with conditions 5, 6 or 7 (i.e. where there is an adjustment to the *Installed Capacity Estimate* for a *Relevant Construction Event*, a *Permitted Reduction* to the *Installed Capacity Estimate* or agreement of the *Final Installed Capacity*) providing that the description has been agreed by the LCCC.
229. Fourteen responses addressed this part of the consultation. Most supported the proposal or gave qualified support subject to the detailed contract drafting.
230. A few respondents were concerned that the proposed amendments would create uncertainty over generators' flexibility to maximise contract efficiencies. The consultation proposals are not intended to limit reasonable flexibility in the generation station, as currently permitted under the contract, but to ensure that there is engagement with the LCCC and to ensure that they are kept aware of any appropriate changes to the *Facility* and its assets.

231. Some respondents suggested that one unintended consequence of these changes could be increased demands for notification provisions and the potential for delays in securing the LCCC's agreement to the assets which comprise the *Facility*, especially when assets change during the contract period. The proposed drafting does not add any new notification requirements but clarifies what information informs the definition of *Facility*. The government considers this will result in greater clarity over the assets comprising the *Facility* at any point in time and should help to minimise the risk of disagreements between the parties and speed up operational decisions.
232. A few respondents commented that the CfD contract currently does not require an adjustment to the *Installed Capacity Estimate* submitted by the Generator under condition 6 to be approved by the LCCC. The government agrees that this is the case and the drafting reflects this.
233. It was suggested that the revised definition of *Facility* should not hinder the co-location of renewables and storage or a combination of renewable electricity technologies. The government notes that the contract does not currently permit two different technologies to be part of the same CfD *Facility* as defined within a CfD contract and that the proposed changes and associated contract drafting does not alter the treatment of co-located storage facilities. The government position on co-located storage facilities was set out in the government's response to contract changes implemented for the second CfD allocation round, published in February 2017²⁷.

Policy response: The government intends to amend the definition of *Facility* in the CfD generic Agreement to clarify that the assets that fall within the generating facility are those identified in the description of the *Facility* provided in accordance with Schedule 1 of the Standard Terms and Conditions, as it may be amended in light of proposed changes pursuant to conditions 5 and 6.

234. The government proposes to amend the definition of *Facility* in the 'Definitions and Interpretation' section of the Standard Terms and Conditions (Part 1, Introduction, Condition 1.1) to implement this clarification and to make consequential amendments to conditions 5, 6 and 7.

Consultation question

15. The government welcomes views on the proposed changes to the CfD contract to implement this decision (which have been published alongside this document).

Indirect Land Use Change amendments

235. The December 2017 consultation signalled the government's intention to transpose the requirements of EU Directive 2015/1513 into the CfD contract to ensure that future contracts awarded under the scheme comply with the requirements of the Directive. The Directive requires that where bioliquids are used in CfD generating stations, they comply with the new sustainability requirements.
236. The LCCC has already transposed the necessary amendments into relevant existing CfD and investment contracts. The government has decided to implement the same changes into the CfD contract documents with one minor adjustment. The *Bioliquid Relevant Percentage* sets the greenhouse gas emission savings that bioliquids must achieve for the generation to be eligible for support and count towards the UK's

²⁷ Government Response to the consultation on changes to the CFD contract and CFD regulations, published in February 2017, and available at gov.uk

emission savings under the Renewable Energy Directive. These levels vary depending on when generating stations using bioliquids started operation. The standards in the existing CfD contract extend to bioliquids used to generate electricity before 1 January 2018. As this will not be relevant to contracts awarded from the next allocation round onwards, the government proposes to remove this requirement for future contracts.

Policy response: The government has decided to amend the CfD contract to incorporate the requirements of EU Directive 2015/1513, and to adjust the *Bioliquid Relevant Percentage* as indicated above.

237. Proposed changes that implement the requirements of the Directive are set out in Annex 7 of the CfD Standard Terms and Conditions. The proposed amendments to the *Bioliquid Relevant Percentage* are made to that definition in section 2.1 (Definitions) of that Annex.

Consultation question

16. The government welcomes views on the proposed changes to the CfD contract to implement this decision (which have been published alongside this document).

Amending the definition of *Waste*

238. The December 2017 consultation also signalled the government's intention to consult on proposed drafting amendments to bring the CfD contract into line with the new definition of "waste" in the EU Renewable Energy Directive as amended by Directive 2015/1513. This amendment will make it clear that the term *waste* used in the CfD contract excludes any substance that has been intentionally modified or contaminated in order to fall within the existing definition of the term, thereby potentially avoiding the application of certain sustainability criteria that would otherwise apply.

239. In June 2018, the government laid amendment regulations before Parliament to update the definition of *waste* in *The Contract for Difference Definition of Eligible Generator) Regulations 2014*, which were subsequently made in July 2018²⁸. Details were set out in the government's Part A response to the consultation on proposed changes to the CfD scheme, also published in June 2018²⁹. The LCCC has also updated existing CfD contracts with the amended definition.

Policy response: The government has decided to amend the CfD contract to bring it into line with the new definition of "waste" in Directive 2009/28/EC (the Renewable Energy Directive) as amended by Directive 2015/1513.

²⁸ The Contracts for Difference (Miscellaneous Amendments) Regulations 2018, 2018 No. 895, available at www.legislation.gov.uk

²⁹ *Contracts for Difference for renewable electricity generation: proposed amendments to the scheme - government response (Part A)*, published in June 2018 and available at gov.uk

240. The definition of *Waste* in paragraph 1.1 (Definitions and Interpretation) of Annex 4 (Fuelling Criteria) of the CfD Agreement has been amended to reflect the new EU definition and a consequential amendment has been made to the *Waste* definition in section 2.1 of Annex 7 of the CfD Standard Terms and Conditions.

Consultation question

17. The government welcomes views on the proposed changes to the CfD contract to implement this decision (which have been published alongside this document).

Brexit-related changes to the CfD contract

The UK is expected to leave the European Union on 29 March 2019 (“exit day”). To facilitate this, the European Union (Withdrawal) Act 2018 has now received Royal Assent. The UK is currently negotiating a Withdrawal Agreement which, provided it is agreed) is expected to be implemented through an Implementation Bill to be laid before the House later this year. It is therefore anticipated that there will be further implementation period (“the Implementation Period”), ending 31 December 2020 during which, the UK would not be part of the European Union (EU) but would continue to align itself with European legislation.

The government has therefore considered what clarifications are required to the CfD contract, to ensure it continues to function as originally intended. This chapter described those proposed amendments, which are illustrated in the draft CfD contract published alongside this document.

A position subject to change

241. This chapter sets out the government’s proposed clarifications based on the current state of negotiations and legislation. However, the detailed drafting will remain under review in light of ongoing developments, particularly in relation to the Implementation Period and the contracts may be subject to further clarificatory amendments to ensure that the drafting reflects the position, as it may be negotiated, in advance of contract signature.

Proposed changes to the CfD contract

242. The government proposes to amend **the definition of Law** to include “retained EU law”. That is the defined term in the *European Union (Withdrawal) Act 2018* (“the Withdrawal Act”) which refers to all EU law which has been incorporated into domestic law to date or which will be incorporated into domestic law as a result of the Act.
243. The government proposes to amend **State aid provisions** to refer to decisions by the European Commission or the Competition and Markets Authority (CMA). The Government has concluded that at the point an independent UK State aid authority is required the CMA would be best placed to take on the role of State aid regulator. This reflects its experience and understanding of markets as the UK’s competition regulator and the independence of its decision-making from Government.
244. Consequentially, the government also proposes to amend **references to the State Aid Interest Rate**, which is the interest rate which may be applied to money repayable in the event of overcompensation, resulting in aid being clawed back. The current definition refers to the EU Commission’s methodology. The methodology is expected to be adopted and issued by the CMA and therefore drafting has been proposed to reflect this.
245. **A Foreseeable Change in Law** includes a change in law arising from European legislation which was in final or draft form before the *Agreement Date*. Developers do not get change in law protection where there is a *Foreseeable Change in Law*. Due to the timings of this round, the government considers it appropriate to maintain that a draft Directive or any European law which has not yet come into effect prior to the *Agreement Date* is foreseeable, particularly given the proposed Implementation Period. The government intends to clarify that a proposal remains foreseeable even if it is put in place in a different form (i.e. in domestic law rather than European law).

246. A developer currently gets protection for a **Qualifying Shutdown Event** (i.e. being made to shut down their facility), except if that event has occurred because of EU law. The government proposes to clarify that EU law includes retained EU law as it was made on exit day or the end of the Implementation Period.
247. There are a number of references to the Renewable Energy Directive (RED) in the CfD Standard Terms and Conditions. As Directives will not constitute 'Retained EU law', which are incorporated into domestic legislation through the Withdrawal Act the government proposes to refer to the RED as it may have been amended from time to time before the exit day (or the last day of the Implementation Date, whichever is the later - defined in the contract as the 'Reference Date').

Consultation question

18. The government welcomes views on these proposals, and the proposed changes to the CfD contract which have been published alongside this document.

Proposed minor and technical changes to the CfD contract

The government has identified several minor and technical changes that it considers will improve the operation of the CfD.

Change proposed	Description
<p><i>CfD Standard Terms and Conditions</i></p> <p>Definitions and Interpretation</p> <p>Condition 1.1 - definition of TLM(D)</p>	<p>The government proposes to change the definition of TLM(D) to bring it into line with new rules on locational TLM charges introduced by the P350 Balancing and Settlement Code Modification.</p> <p>That Modification implemented an Order by the Competition and Markets Authority which introduced different locational transmission loss multiplier values by calculating transmission loss factors for different locational zones.</p> <p>The contractual amendment therefore continues to ensure that generators remain compensated for changes to the national average generator cost incurred by means of the annual Strike Price Adjustment. There is no adjustment for the locational element of the charges.</p>
<p><i>CfD Standard Terms and Conditions</i></p> <p>Removal of redundant drafting at several locations in the Standard Terms and Conditions relating to state aid for biomass conversion projects.</p>	<p>The government proposes to remove drafting from the Standard Terms and Conditions which was relevant and necessary when biomass conversion projects were within a 'Pot 3'.</p> <p>Pot 3 expired in line with the time limited state aid approval. This means that subject to further modifications of the current CfD scheme, any new biomass conversion projects would compete with solar, onshore wind and other technologies in pot 1.</p> <p>This does not indicate or influence any future decisions on the future of biomass conversion in the CfD scheme, or future plans for Pot 1 auctions.</p>
<p><i>CfD Standard Terms and Conditions</i></p> <p>Condition 3.21 - Notification of Start Date</p>	<p>The government proposes to change the contract at 3.21(E) to clarify that generators cannot backdate the start date in their <i>Start Date Notice</i> and therefore claim retrospective generation payments.</p> <p>This amendment is intended to reduce the risk of uncertainty for generators and disagreement between the counterparties on this matter.</p>

<p><i>CfD Standard Terms and Conditions</i></p> <p>Condition 7 - Final Installed Capacity; Maximum Contract Capacity</p>	<p>The government proposes to amend the contract at 7.4 and 7.5 to enable the CfD Counterparty to respond to a <i>Final Installed Capacity Notice</i> by stating that it disagrees with the content of the notice, providing it gives reasons as to why. The Generator would then have an opportunity to respond, in the same way as it can currently be asked for, and respond to, a request for additional information where the contents of the Notice it has provided are insufficient.</p> <p>Where a Generator fails to provide sufficient information to allow the CfD Counterparty to determine the <i>Final Installed Capacity</i> from its <i>Final Installed Capacity Notice</i> and any response to a <i>Final Installed Capacity Response Notice</i> and further <i>Final Installed Capacity Response Notice</i>, the government proposes an amendment at 7.8 permitting the CfD Counterparty to deem the <i>Final Installed Capacity</i> of the <i>Facility</i> to be 80% until such time as:</p> <ul style="list-style-type: none"> (i) the Generator provides sufficient additional or revised Supporting Information for the CfD Counterparty to determine the <i>Final Installed Capacity</i> of the <i>Facility</i>, or (ii) otherwise demonstrates the determination of the <i>Final Installed Capacity</i> to the CfD Counterparty's satisfaction. <p>This is to incentivise the timely resolution of the <i>Final Installed Capacity</i> and government considers this approach provides ample opportunity for the Generator to submit the correct information.</p>
<p><i>CfD Standard Terms and Conditions</i></p> <p>Part 5A Payment Calculations: Baseload Technologies, Strike Price Adjustments</p> <p>Condition 14 – Strike Price Adjustments</p> <p>Part 5B Payment Calculations: Intermittent Technologies,</p> <p>Condition 20- Strike Price Adjustments</p>	<p>The contract provides for generators' strike prices to be adjusted annually in line with inflation using CPI. Under Conditions 46 and 47 respectively, the strike price adjustments due to the actual annual <i>Balancing System Charges</i> and <i>Transmission Loss Multiplier</i> are calculated taking into account CPI indexation.</p> <p>However, these strike price adjustments then feed into the annual strike price adjustment methodology, in which CPI indexation is applied again. This gives rise to the possibility of overcompensation of Generators connected to the transmission system.</p> <p>To avoid this outcome, the government proposes to amend the annual strike price indexation methodology so that CPI is not re-applied to the actual annual <i>Balancing System Charges</i> and the <i>Transmission Loss Multiplier</i> strike price adjustments.</p>
<p><i>CfD Standard Terms and Conditions</i></p> <p>Condition 24 – Default interest</p>	<p>The government proposes two minor changes to the contract:</p> <ul style="list-style-type: none"> • A typographical correction to the formula in Condition 24.1; and, • A clarification that Condition 24.5 is subject to Condition 24.4 (which states that the CfD Counterparty shall only pay <i>Default Interest</i> when the CfD Counterparty is in breach of Conditions 71.2, 71.3 or 71.4).

<p><i>CfD Standard Terms and Conditions</i></p> <p>Generator Representations and Warranties</p> <p>Condition 28.1 - Generator “no litigation” representation</p>	<p>Condition 28.1(G) requires the Generator to represent and warrant at the <i>Agreement Date</i> that there is no litigation “against the Generator” that could have a <i>Material Adverse Effect</i> on the Project. The government proposes a small change at 28.1(G) to extend the litigation warranty to include litigation which might directly relate to the Project. This would protect a Project from litigation to which it is not a party but the outcome of which could directly affect the Project.</p>
<p><i>CfD Standard Terms and Conditions</i></p> <p>Generator Undertakings – Provision of Information to the CfD Counterparty</p> <p>Condition 32.1(K)</p>	<p>The government proposes to change the contract:</p> <ul style="list-style-type: none"> • to require generators to keep project records to a <i>Reasonable and Prudent Standard</i>, including programmes that accurately represent the status of the Project and reflect any changes to the Project and, • to enable the LCCC to request this information at any time to ascertain the status of a project or when analysing requests from generators, for example, in relation to relief from force majeure or a grid connection delay.
<p><i>CfD Standard Terms and Conditions</i></p> <p>Condition 72 - Confidentiality</p>	<p>The government proposes to change the contract by inserting a new requirement at 72.4(M) to permit the LCCC to share generator confidential information relating to Part C of Annex 7 (SC Reporting Obligations) with government in cases where it is necessary to enable government (i.e. <i>Government Entity</i> or <i>Secretary of State</i>) to fulfil (a) a legal obligation for example sustainability reporting under Article 22 of the Renewable Energy Directive (or any other similar legal obligation) or (b) facilitate transparent public reporting.</p>
<p><i>CfD Standard Terms and Conditions</i></p> <p>Annex 3 - Form of Direct Agreement</p>	<p>The government proposes changes to the Direct Agreement to ensure that the Direct Agreement will terminate if the beneficiary, pursuant to 79.6 of the Conditions, ceases to be an entitled person.</p> <p>The changes therefore include a requirement to notify LCCC if the beneficiary ceases to be an entitled person. It also sets out the way that a funder to demonstrate their eligibility to take over the project and exercise their ‘step in’ rights if the generator cannot continue.</p>

<p><i>CfD Standard Terms and Conditions</i> Annex 4 - BMRP Condition 2.1:</p> <ul style="list-style-type: none"> • Definition of '<i>BMRP Inclusion Criteria</i>', & • Definition of '<i>Reference Price Sample Period</i>'. 	<p>The government proposes to make the following changes to the Baseload Market Reference Price (BMRP) provisions:</p> <ul style="list-style-type: none"> • A change to the definition of '<i>BMRP Inclusion Criteria</i>' - limb (C) - to avoid market indices being inadvertently excluded as acceptable price sources for the purposes of this definition because they do not have 'registered participants'. The proposal includes replacing the term 'registered participants' with the new term 'Active Market Participants', for which a new definition is proposed. • A small adjustment to clarify the definition of 'Reference Price Sample Period' to remove the potential for confused meaning of Trading Days when this definition is used in conjunction with the definition of 'Baseload Market Reference Price' in Condition 15.2.
<p><i>CfD Standard Terms and Conditions, Annex 7</i> & <i>CfD Agreement, Annex 4</i></p>	<p>The government proposes to make minor changes to the definitions of <i>Permitted Ancillary Activities</i> and <i>Advanced Fuels</i> to ensure the contract remains operable in light of the ACT changes.</p>

Consultation question:

19. The government welcome any views on these proposed minor and technical changes to the CfD contract which have been published alongside this document.

Annex: GDPR Privacy notice – Personal data

The following is to explain your rights and give you the information you are entitled to under the Data Protection Act 2018. Note that this section only refers to your **personal data** (your name, address, and anything that could be used to identify you personally), not the content of your response to the consultation.

1. The identity of the data controller & contact details of our Data Protection Officer

The Department of Business, Energy and Industrial Strategy (BEIS) is the data controller. The Data Protection Officer can be contacted at dataprotection@beis.gov.uk.

2. The identity of the data processor

Any personal information you submit as part of your response to this consultation will be processed by BEIS. In this scenario, BEIS is the data processor for the purposes of data protection legislation.

3. What data we need

The personal data we collect from you will include an email address or other contact address, and a given name. The legal basis for processing this data is to perform a task in the public interest.

4. Why we are collecting your personal data

Your personal data is being collected as an essential part of the consultation process, so that we can contact you regarding your response and for statistical purposes. We may also use it to contact you about related matters.

5. Our legal basis for processing your personal data

The Data Protection Act 2018 states that, as a government department, BEIS may process personal data as necessary for the effective performance of a task carried out in the public interest. i.e. a consultation.

6. With whom we will be sharing your personal data

Low Carbon Contracts Company (LCCC) who are a private limited company owned by the Secretary of State for Business, Energy and Industrial Strategy (BEIS) and were established to play key roles in the delivery of Electricity Market Reform (EMR), including the administration of the Contract for Difference Scheme. Data will only be shared with LCCC and no other third parties.

7. How long we will keep your personal data, or criteria used to determine the retention period.

We will only retain your personal data for as long as:

- it is needed for the purposes set out in this document
- the law requires us to

In general, this means that we will only hold your personal data for a minimum of 1 year and a maximum of 7 years.

8. Your rights, e.g. access, rectification, erasure

The data we are collecting includes your personal data, and you have considerable say over what happens to it. You have the right:

- a. to see what data we have about you
- b. to ask us to stop using your data, but keep it on record
- c. to have all or some of your data deleted or corrected
- d. to lodge a complaint with the independent Information Commissioner (ICO) if you think we are not handling your data fairly or in accordance with the law. You can contact the ICO at <https://ico.org.uk/>, or telephone 0303 123 1113.

9. Your personal data will not be sent overseas

10. Your personal data will not be used for any automated decision making.

11. Your personal data will be stored in a secure government IT system.



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