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Contracts for Difference for Low Carbon Electricity Generation: Consultation on proposed amendments to the scheme

**Submission from the Energy Policy Group, University of Exeter
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Section 1: Overview

The Energy Policy Group (EPG) of the University of Exeter is pleased to give our comments on BEIS's consultation on the proposed amendments to the CfD. The energy system in the UK is undergoing a fundamental transformation with Net Zero as the intended goal.

The EPG would also like to thank the civil servants dedicating their time to ensuring that this consultation is able to continue, allowing the views of many to be heard despite the wider impacts of COVID-19.

Our responses are short and concise due to the added pressures that we are all currently facing. That said, We will be happy to facilitate a more in-depth discussion on the points made in the near future. Please email t.pownall@exeter.ac.uk.

Section 2: Specific questions

Many of the questions are technical in nature and intended for market participants. We applaud the engagement with these bodies, yet, as academics our answers will be in line with the higher-level themes that have emerged from this consultation.

Community support

1. How can the government better ensure that the local impacts and benefits of renewable energy developments are taken into account across the whole of GB?
2. What exemplifies 'best practice' when it comes to engaging with and supporting local communities on renewable energy developments? Examples of specific projects and/or developers would be welcomed.

We feel that it is important that community engagement be at the heart of energy developments, communities should be part of decision-making. Therefore the process of community engagement should begin at the stage of scoping out the project, well in advance of the bid into the CfD auction. Our IGov project studied how people should be far more engaged in our energy system, at every level¹.

We would also recommend the Centre for Sustainable Energy's Best Practice guidance for community engagement² which has been applied to future energy projects³.

3. How should the government update the existing community benefits and engagement guidance for onshore wind to reflect developments in best practice for engagement between developers and local communities?

4. Should the Government consider creating a register of renewable energy developments in England that lists available projects and associated community benefits?

We think that this would be a valuable resource.

Pot structure

5. The government welcomes views on whether, compared to maintaining the existing

¹ <http://projects.exeter.ac.uk/igov/new-thinking-local-energy-multi-level-change-and-governance/>

² <https://www.cse.org.uk/local-energy/download/best-practice-in-community-engagement-projects-378>

³ <https://www.cse.org.uk/projects/view/1315>

two pot structure, the proposed option of introducing a new Pot 3 for offshore wind is an effective means of ensuring value for money and achieving our decarbonisation and other objectives in the long term. We welcome the submission of supplementary evidence to support views on this.

Offshore wind can no longer be considered a 'less established technology'. We agree with the consultation that placing offshore wind into Pot 1 would reduce the scope of this technology receiving a CfD due to competition from cheaper technologies.

Therefore, placing offshore wind into a separate Pot would increase the diversity pool of technologies which receive a CfD and contribute to the Net Zero goals.

This diversity is required as it allows the UK's energy supply to be based on multiple technologies which are dependent on different environmental conditions. Without this diversity the UK energy supply may be heavily influenced by a single environmental condition e.g. wind.

Furthermore, sizeable reductions in the clearing price of offshore wind have been recognised as a product of competition within the CfD auctions. Therefore, to place this technology in a Pot by itself may further increase the competition between interested parties and lead to a continued decrease in their clearing price.

However, there needs to be caution over how liquid this new Pot will be and whether there will be sufficient competition to drive down the clearing price; especially as offshore wind would no longer be competing against other Pot 2 technologies. It would be wise to trial the individual Pot for offshore wind to ensure that competition results in a decreased clearing price.

We also agree that the removal of offshore wind from Pot 2 would provide a route to market for technologies which are currently less established, allowing them to reach market maturity without being undercut at auction from these offshore wind technologies. We believe that this in turn would provide a more diverse range of zero-carbon technologies to meet GB demand.

6. The government welcomes views on whether the proposed options are an effective means of bringing forward a greater diversity of low carbon electricity generation.

7. The government welcomes views on whether there are alternative approaches to be considered in light of net zero.

Within the GB energy system, location on the network should become an increasingly important consideration in the deployment of technologies and the CfDs should reflect this in their funding allocations.

A clear example of why measures need to be taken to reflect the geographical characteristics on the network are the large constraint payments within the UK. The cost of constraining generation due to insufficient grid capacity has risen significantly over the past decade and this trend is forecast to continue; Analysis by LCP predicts that the cost of constraints on the

England-Scotland border alone will surpass £1billion p.a. by 2026⁴, a cost which will ultimately be passed through to the end consumer.

This is neither fair to consumers, nor the environment. These constraint payments reflect 'wasted' green energy which often requires a gas turbine plant south of the constraint to turn up their output, placing unnecessary carbon into the energy system.

A suggestion to counter this may be that whilst technologies remain within their respective Pot, different regions on the network would be allocated different levels of funding. For example, an onshore wind turbine located in a relatively unconstrained part of the network would be able to receive a higher CfD than one based in Scotland due to the high level of constraint hours that this onshore windfarm would face when exporting.

We recognise that this proposal requires increased attention and we will be happy to facilitate a conversation in due course. However, it is key that the characteristics of the network are taken into account when deciding where a new build should be located.

We also urge government to consider the creation of an additional Pot dedicated to the variable renewable technologies which are less than 5MWs in capacity. Decentralised technologies have already played a paramount role in the move towards Net Zero. By the end of 2019, there were over 1.01 million small scale installations (less than 5MW) representing 14% of the total renewable capacity⁵. However, governmental and regulatory support for these decentralised technologies has diminished in recent years leaving a policy gap for the deployment of these technologies.

The removal of the FiTs and the embedded benefits through Ofgem's TCR are both examples of the benefits of investing in smaller scale technologies being removed. Therefore, there is need for a mechanism to provide increased security for investors to continue the deployment of decentralized technologies which will be required to facilitate Net Zero in an increasingly democratised fashion.

Floating offshore wind

8. The government welcomes views on whether the proposed approach is an effective means of supporting floating offshore wind.

9. The government welcomes views on whether the proposed definition is a suitable definition of floating offshore wind projects, which should be distinguished from fixed

⁴ <https://www.lcp.uk.com/energy/publications/addressing-constraint-management-to-facilitate-future-energy-systems/>

⁵

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/875410/Renewables_Q4_2019.pdf

bottom offshore wind, and what evidence prospective generators should be asked to supply in order to demonstrate that they have the required characteristics.

10. The government welcomes views and evidence on any potential wider benefits or disadvantages that floating offshore wind may bring to the UK, in particular in respect of wider system impacts.

11. The government welcomes views on the need to deploy floating offshore wind at scale through the 2030s to meet net zero, and what trajectories for deployment and cost reduction are realistic and feasible, both globally and in the UK.

12. What further amendments to the CfD allocation process could be necessary to facilitate floating offshore wind technologies?

13. Are there additional measures to support for pre-commercial deployment and cost reduction which would be more effective than the CfD, or which could enhance the effectiveness of the measures under the CfD?

Extending delivery years

14. Should the government amend the Contracts for Difference (Allocation) Regulations 2014 in order to extend the delivery years specified in those regulations to the 31st March 2030?

Supply chain plans

15. The government welcomes views on whether the Supply Chain Plan process for all technologies should be more closely aligned with the Industrial Strategy, for example with criteria headings to reflect a focus on competition, innovation, people and skills, infrastructure, and regional growth, and within this what other measures the government could adopt and consider to support its objectives, for example, in offshore

wind, the Offshore Wind Sector Deal.

16. The government welcomes views on strengthening the powers to fail SCPs on the basis that the Applicant has not demonstrated compliance with a past SCP.

17. The government welcomes views on whether requiring an updated SCP at a later stage after a CfD is awarded, for example at FID or after MDD, when major contracts would have been awarded would deliver more focused and deliverable commitments.

18. The government welcomes views on the current compliance process for SCPs for failure to implement an approved SCP. Is it sufficient and if not, what other potential compliance options could be considered, for example by linking non-compliance to CfD payments?

19. The government welcomes views on any impact of reducing the threshold limit for the submission of a Supply Chain Plan to capture offshore wind extension projects (which were not envisaged when the policy was first drafted) and to reflect that projects below 300MW will also have a material impact on supply chains and if so, what the limit should be.

20. The government is committed to achieving net zero by 2050 and how it could encourage the growth of sustainable, efficient supply chains through consideration of the carbon footprint of supply chains. We welcome views on how the industry takes account of the carbon footprint of their supply chains. What methodologies are being used or could be developed to take greater account of the carbon intensity of supply chains when considering Supply Chain Plans.

Coal-to-biomass conversions

21. Views are welcomed on the proposal to exclude new biomass conversions from future CfD allocation rounds, on the likely impact of this approach, and on any alternative approaches.

Support the rationale that emission from biomass should be considered in light of the carbon intensity of the electricity on the grid, as opposed to the emissions sourced from coal use. We also support the exclusion of new coal to biomass conversions from future CfD allocation rounds.

Decommissioning plans

22. The government welcomes views on how best to link the OREI decommissioning regime with the CfD scheme to ensure that offshore renewable projects that are party to a CfD fully comply with their obligations under the Energy Act 2004.

Administrative strike prices

23. The government welcomes views on how we might change our approach to administrative strike prices to ensure value for money in future.

Non-delivery disincentive

24. The government welcomes views on extending the exclusion period for sites excluded under the Non-Delivery Disincentive, including on whether 36 months is a suitable period, or a longer period is needed.

25. The government welcomes views on whether different forms of disincentive are needed for technologies at different levels of development and on what basis such differentiation might work most effectively.

26. The government welcomes views on the advantages and disadvantages of introducing a new requirement for a bid bond where applicants provide a deposit, either by cash payment, bank guarantee or letter of credit.

27. The government welcomes views on whether a bid bond would be practical for smaller projects. If difficulties are foreseen, what are they, what mitigation might apply and in respect of what size of project?

28. The government welcomes views on what a suitable level for a bid bond would be: would £10,000 per MW be effective and practical?

29. The government welcomes views on alternative approaches to the Non-Delivery Disincentive and how they might work in practice.

Technical changes to future rounds

The government welcomes views on:

30. Whether you agree the government should introduce the flexibility to apply any capacity cap, maxima and minima as either a soft or hard constraint, set on a round by round basis?

31. The type of soft constraint (including those proposed) that could be deployed in future allocation rounds;

32. And any further evidence on benefits and disadvantages of a soft capacity cap constraint.

Storage

33. What storage solutions could generators wish to co-locate with CfD projects over the lifetime of the CfD contract?

34. What, if any, barriers are there to co-location of electricity storage with CfD projects?

35. What, if anything, could be changed in the CfD scheme to facilitate the co-location of storage with CfD projects?

Allow the storage unit to access and arbitrage on the wholesale market price, not just from the excess generation of the co-located technology. Such a move would provide additional routes, and security, of revenue to the asset owner.

This can be demonstrated with two examples:

Firstly, depending upon construction deadlines if this storage unit was ready to operate before the co-located generating technology there would be scope to earn a revenue through arbitrage on the market prior to the co-located generation coming online.

Secondly, allowing this storage unit to interact with the electricity market would provide security of revenues as this asset could still operate during planned and unplanned maintenance of the co-located generator.

To be excluded from accessing the electricity market reduces the project security and in turn reduces how often this storage unit would be required to operate. This results in an asset which could provide additional grid services being limited to storing excess generation from the co-located technology and not contributing to the additional flexibility required under a Net Zero energy system.

Furthermore, this additional route to market would provide evidence to debt lenders that this project has more scope to return on investment compared to only storing excess generation from the co-located technology

Negative pricing

36. Do you have any views on the proposal to extend the negative pricing rule? Please include in your response any specific evidence in relation to the incidence and impact of negative pricing.

Overall, we support the rule extension on the basis that previous recommendations to accommodate flexible technologies onto the grid are also pursued.

Firstly, there are associated benefits of having negative prices on the GB electricity market as these can provide a valuable signal for flexible technologies, such as storage and DSR, who, with the right routes to market in place can capitalize on these negative prices through arbitrage measures. Recent negative pricing events have highlighted this, with Octopus's Agile Tariff rewarding consumers who are able to utilise their storage units and EVs⁶. This has the added benefit of having the end consumer engaging with the energy system, a goal which has to date been met with limited success.

The concern over this proposal is that the reduction in negative priced hours would deaden this signal for flexible technologies. However, flexible technologies may also be incentivized through alternative means, such as the deployment of co-location as also discussed within this consultation (Question 35).

However, the practise of these technologies under receipt of a CfD, increasing their output at times when the system does not require this generation in order to receive a constraint payment needs to be removed. These constraint payments are expensive and wasteful as zero-carbon generation is being curtailed. This excess generation should be stored and brought back at times when the output from these variable technologies receiving the CfD is

⁶ <https://octopus.energy/agile/>

low. We would expect this practise through the proposed co-located changes discussed in Question 35.

In conclusion, we support the measures proposed within this consultation. Yet, this support comes under the pretence that alternative measures are being taken either in the CfD, or through other funding mechanisms, to bring forward increased flexibility. The alternative measures are required as the proposed change would likely lead to less volatility in market prices and therefore providing less of a signal for flexible technologies which can make a profit based on these differences.

Phasing

37. The government welcomes views on the preferred approach to maintain the cap on phased projects at 1500MW.

38. The government welcomes views on whether there are any barriers to developing a phased offshore wind project on a part-merchant basis.

Milestone delivery date

39. The government welcomes views on the benefits, such as successful delivery of projects or reduced costs for consumers, that would result from extending the Milestone Delivery Date for: (i) the project commitments route only, or also (ii) the 10% spend route.

40. The government welcomes views on whether an extension should apply to all projects or only to particular technologies or sizes of projects.

41. The government welcomes views on the length of an effective extension and the implications. Would an extension to a 15-month deadline be effective and if not, why?

Miscellaneous Allocation Regulation Changes

42. Do you agree with the government's proposal to remove all references to "end date of the allocation round"?

43. Do you agree with the government's proposal to add more detail on when key dates can be varied using a round variation notice?

44. Do you agree with the government's proposal to remove the requirement to publish certain dates in the allocation framework?

45. Do you agree with the government's proposal to provide an extra scenario under which the allocation process must commence?

46. Do you agree with the government's proposal to make explicit the ability to amend the overall budget before the commencement of an allocation round?

47. We would welcome views on adding additional powers to allow revision of a capacity cap before an allocation round commences.

48. We would welcome views on adding additional powers to pause an allocation round between the commencement of the round and the issuance of CfD notifications.