Consultation on Capacity Market Reforms
REA Members Meeting

16th February 2023

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  - Please note this session is being recorded for note taking purposes.

Agenda

- Welcome and Introduction to the Consultation
- Proposals on Emission Limits (Question 8 – 12)
- Decarbonising Existing CMUs (Q13 – 18)
- Proposals for Multi-year Agreements (Q19 – 21)
- Capital Expenditure Thresholds and Considering Long Build Times (Q22 – 28)
- Capacity Market to CfD Transfer Route (Q31 – 32)
- Strengthening Security of Supply (Q1 – 7)

Welcome and Introduction to the Consultation

The Government published a consultation on reforming the Capacity Market (CM) to better align the mechanism with the Government's Net Zero and energy security targets.

Consultation follows Call for Evidence (CfE) in July 2021. This consultation now makes firmer proposals for several reforms. These can be grouped together under the following:

- **Aligning the CM with net zero**
- **Strengthening security of supply**
- **Additional Improvements to the CM**

- The REA welcomed the consultation and the Government considering ways to incentivise greater investment in renewable energy and low carbon technologies.
- Consultation also being conducted in parallel with REMA, also considering these questions.
- The REA is keen to learn how our members react to these proposals as we develop our a response to this consultation.

Deadline: 3rd March

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Aligning the CM with Net Zero

Proposals on Emission Limits (Question 8 – 12)

Decarbonising Existing CMUs (Q13 – 18)

Proposals for Multi-year agreements (Q19 – 21)

Aligning the Capacity Market with Net Zero: *Proposals on Emission Limits*

Currently, from 2024 existing CMUs must meet either:

An emissions intensity limit 550gCO2/kWh

Or

A yearly emission limit of 350kgCO2/kWh

- New build must meet the emission intensity limit to secure multi-year agreements.
- Note methodology only counts stack emissions

Proposal:

From 1st October 2034, for new and refurbishing capacity which secures CM agreements after this rule change comes into force, CM intensity emission limits would decrease to 100gCO2/kWh.

Maintain the yearly Emission Limit and also apply to New Builds rom 1st October 2034

"incentivising unabated gas plants to either abate by 2035 or operate a limited peaking profile beyond 2035"

In addition, this will require:

- Amend the deadline for the Fossil Fuel Emission Deceleration (FFED) for new builds that do not meet intensity limit but meet yearly limit.
- Consider the frequency of declarations. Requiring an updated FFED to be submitted annually by all new build and Refurbishing CMUs.

Impact of Emissions Limits and Need for Transitional Pathways

The government is aware that transitional technologies, such as ***direct hydrogen blending*** into electricity generation technologies or unabated gas which ***later retrofits to CCUS***, may play a role in the journey towards a net-zero power system

Consultation recognises that blended generation could provide a 'Stepping Stone' for supporting expansion of the hydrogen economy.

Government want to balance this potential with wider commitments and therefore are keen to better understand the pipeline of blended generation projects to assess the impact this proposal could have on investment and deployment

Questions

Question 8: Do you agree with our proposal to introduce lower emissions limits for new and Refurbishing CMUs from 2035?

Question 9: Do you agree with our proposed changes to the emission limits regime?

Question 10: Are there any further required changes to the emissions limits regime which have not been identified?

Question 11: Do you have any views or evidence on the impact that the emissions limit proposal may have on investment in transitional pathways, such as hydrogen blending or CCUS retrofit?

Call for Evidence: Decarbonising Existing CMUs

The Government considers the main barriers for Capacity Providers to decarbonisation to be:

- CMUs already under long multi-year CM agreements no route to enable them to decarbonise their CMUs due to CM obligations

- The conversion from carbon intensive to low carbon generation can be Capex-intensive

- Most Capacity Providers can only exit their CM agreement early by a secondary trade their obligations. However, trading a large volume of capacity is challenging due to the lack of acceptable transferees able to take on a sizeable Capacity Obligation.

The Government also considering the timeline to retrofit either CCUS or Hydrogen and the feasibility for plants to go offline for retrofitting

- Power CCUS and Hydrogen may have higher short run marginal costs through CO2 capture and storage costs, or potentially more expensive fuel costs for Hydrogen relative to natural gas.

Decarbonising Existing CMUs

Government is considering how a decarbonisation route for Capacity Market Units (CMUs) could be implemented.

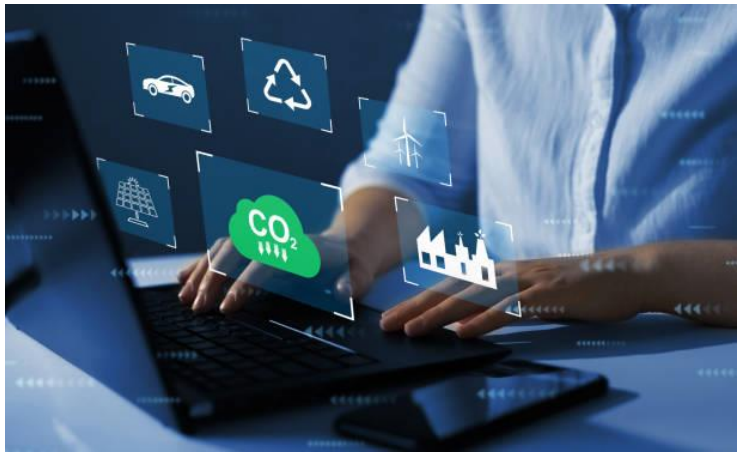
Options considered in the consultation:

- ***Strict Definition:*** only allowing a CMU to leave its CM agreement to decarbonise if the CMU would meet a decarbonisation definition once the retrofit is complete

- ***Secondary trading***. Enable CMUs requiring shorter outage periods for decarbonisation (i.e. less than a year), to decarbonise in the course of an existing CM agreement by trading the relevant period of their obligation.

- ***Reactively procuring capacity:*** procuring the replacement capacity each time a Capacity Provider announces their intent to decarbonise. Although seen as impractical given lead times needed.

- ***Over-procurement:*** pre-emptively procuring additional capacity through the earliest possible T-4 auction in advance of CMUs indicating their intent to withdraw from the CM



Questions

Question 13. From the perspective of a Capacity Provider, are there any additional barriers to decarbonisation than those mentioned above? Would it be necessary to terminate your CM agreement in order to decarbonise your CMU?

Question 14. How long would it take to retrofit your plant(s) to either CCUS or Hydrogen and when would it be feasible for your plant(s) to come offline to do so? Please provide a breakdown of this where possible.*

Question 15. Do you have any comments on our suggestions of how CMUs could decarbonise or suggestions of your own? If so, please provide details of this*

Question 16. Could secondary trading provide a pathway to the decarbonisation of an existing CMU? Please provide an explanation to your answer.

Question 17. Could reactively procuring capacity provide a pathway for CMUs to decarbonise whilst ensuring security of supply? Please provide an explanation for your answer.

Question 18. Could over-procurement of replacement capacity via the CM enable CMUs to decarbonise whilst ensuring security of supply? Please provide an explanation to your answer**.**

Proposals for Multi-year Agreements

Consultation recognises that for low carbon capacity with lower Capex costs, the requirement to satisfy **Capex thresholds** in order to secure multi-year agreements is a barrier.

Currently such CMUs can only access 1-year agreements, which provide only limited revenue certainty.

Proposal

Offer 3-year agreements with no capex thresholds to low carbon CMUs that satisfy the post-2034/35 Delivery Year emissions intensity limit.

- Longer multi-year agreements would still be Available for those that meet Capex thresholds.
- Only new-build and Unproven DSR (as defined in Regulation 5 of the Regulations) CMUs would be eligible for low-capex 3-year agreements
- Want to avoid CMUs switching to generation behind the meter that's uses fossil generation, such as behind the meter diesel generation. This type of capacity will not meet the lowered intensity or emission limits. However, it will still be able to access 1-year agreements through both the T-1 and T-4 auctions.

Questions

Question 19 Do you agree with the proposal to introduce 3-year agreements for low carbon, low capex CMUs? If not, do you have any suggestions for an alternative approach? *

Question 20 Are there any potential consequences or risks that you think the government should further consider?

Question 21 Specifically, which low carbon technologies do you expect might benefit from a 3-year agreement with no capex threshold? *

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Additional Improvements to the CM

Capital Expenditure Thresholds and Considering Long Build Times (Q22 – 28)

Capacity Market to CfD Transfer Route (Q31 – 32)

Capital Expenditure Thresholds

CM current recognises that projects with high-capex will struggle to get finance without multi-year agreements

Thresholds, following inflation, are now:

- 15 Year Agreement: £280/kW (originally based on new build cost of Open Cycle Gas Turbine)
- 3-year Agreement: £140/kW (originally based on fitting Selective Catalytic Reduction on Coal)

Proposals

- **Revise 3-year Capex threshold** at a third of the Capex cost of new-build OCGT. Proposed to be £135/kW

- **Maintain 15-Year Capex Threshold** having considered Capex costs of a range of low carbon technology. Including (hydrogen, CCUS conversion, new build batteries and new build pumped hydro), they look to maintain the current price.

- **Introduce a 9-year Capex threshold**, for those who do not meet 15-year threshold but higher then 3-year threshold. Likely to be set as a average of the other threshold (~£205/kW)

- **Amend the definition of Total Project Spend** in the Rules such that the window for Capex for Refurbishing CMUs is aligned with that of new build CMUs to cover a period of 77 months prior to the commencement of the first Delivery Year. Harmonising New Build and Refurbishment.

Questions

Question 22: Do you agree with the proposed changes to the reference cost levels underpinning the CM's 3-year and 15-year Capex Thresholds?*

Question 23: Do you have any concerns about the assumptions made regarding the calculation of the revised reference cost levels?

Question 24: Do you foresee any unintended consequences which could result from making this change to the approach for the 3-year and the 15-year Capex Thresholds? Conversely, do you foresee any unintended consequences which could result from not making substantial changes to the level of the 3-year and the 15-year Capex Thresholds?

Question 25: Do you agree with the proposed introduction of a 9-year Capex Threshold for low carbon CMUs? Do you foresee any unintended consequences?*

Question 26: Do you agree with the proposed reference cost level underpinning the new 9-year Capex Threshold for low-carbon CMUs? If not, do you have further evidence on alternative reference cost levels?*

Question 27: Do you agree with the proposed changes to the definition of Total Project Spend to extend the scope of the existing permitted period for Capex in respect of new build CMUs (i.e. in effect a 77-month period prior to the commencement of their first Delivery Year) to include Refurbishing CMUs? Do you foresee any unintended consequences which could arise from this change?

Long Build Times

The previous Call for Evidence considered whether CMUs that suitably evidence that they need more time for construction should be afforded the ability to declare this in their prequalification application for a T-4 auction. Called **a 'declared later Delivery Year'.**

Seen as potentially useful to Long Duration Energy Storage

Government have since committed to delivery of a LDES support mechanism by 2024 (likely a Cap and floor mechanism).

In further analysis government are also concerned that few would take advantage of a Later Delivery year and have concerns about implementation and operational issues.

As such the government will <u>not</u> currently progress this proposal for introduction in 2023 but will instead consider feedback and operational challenges further

Question 28: *The government remains open to considering proposals to address challenges faced by projects with long build times. Please provide further evidence or proposals that you feel would address such challenges*.

Capacity Market to CfD Transfer Route

Redefining the "CfD Transfer Notice" in the CM Regulations to enable Capacity Providers with relevant CMUs to use the CM to CfD transfer route in practice

- Redefined as a notice provided by the relevant Capacity Provider to the Delivery Body stating that the Capacity Provider intends to withdraw their CMU from the CM in order to become eligible to bid in a CfD Allocation Round

- Capacity Provider would be required to submit this notice no later than 16 months before the start of the delivery period.

- The proposed amendment would involve a Capacity Provider withdrawing from the CM without any certainty of being successful in the relevant CfD Allocation Round.

Considering whether the transfer route should continue to be available to new CM agreements in the future or restricted to existing CMUs

- Government consider this should only be available to CMUs with existing CM agreements and should not be an option for new CMUs going forward

- CM Regulations could be amended such that the transfer route does not apply to future agreements taken under the CM.

Questions

Question 31. Do you agree with the proposed change to the CM Regulations to enable Capacity Providers with relevant CMUs to use the CM to CfD transfer route in practice? Do you foresee any unintended consequences of making this change

Question 32. Do you think that the amended transfer route should continue to be available to new CM agreements in the future, or should it be restricted to existing agreements?

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Strengthening security of supply (Q1 – 7)

Call for Evidence on the Extended Performance Test

The EPT aims to provide assurance that CMUs in a Storage Generating Technology Class (and CMUs containing at least one Demand Side Response (DSR) component which contains a Storage Facility) can deliver capacity for the relevant duration (for example, 2 hours).

Capacity Providers have begun to raise a few concerns about the ability of battery CMUs to continue to meet the EPT over the course of multi-year agreements. Particularly in relation to how best to account for the degradation of batteries over the course of multi-year CM agreements.

The government is therefore seeking evidence on any challenges faced by storage CMUs during a CM agreement, particularly regarding performance testing, and welcomes views on whether and how the CM could be reformed to address such challenges.

Question 2: Are there any barriers faced by storage CMUs in meeting the CM's performance and duration testing requirements, and if so, can you suggest any potential solutions? Please provide evidence to support your response.

Further considerations: Strengthening Security of Supply

- Reorganise the **Satisfactory Performance Days** (SPD) process around three distinct pass windows over the course of the winter of the Delivery Year. This is to ensure regular checks on the availability and capability of Capacity Market Units (CMUs). For storage CMUs, the Extended Performance Test (EPT) could be demonstrated at any one of the three SPD pass windows.

- Looking at ways of **reforming the way that connection capacity is assessed** in the CM, to ensure a higher degree of accuracy in assessing connection capacity across the CM.

- Considering enabling greater **flexibility for Capacity Providers in selecting their connection capacity** to account for site-specific risks.

- Changing rules relating to providing evidence of Previous Settlement Performance of existing CMUs. This is to **help remove barriers to mothball plants** from prequalifying.

- **Strengthen the non-delivery penalty regime** by changing the figure used in calculating the penalty rate to send a clear signal to Capacity Providers about the importance of delivery during a System Stress Event.

Questions

Question 1. Do you agree with the proposed changes to the SPD process? Are the proposed changes likely to cause any unintended consequences?

Question 2. Are there any barriers faced by storage CMUs in meeting the CM's performance and duration testing requirements, and if so, can you suggest any potential solutions? Please provide evidence to support your response.

Question 3. Do you agree with the proposed changes to enable Capacity Providers to determine a CMU's connection capacity solely on the basis of TEC, MEC or Average Output? Are there any unintended consequences of taking this approach?

Question 4. Should Capacity Providers be allowed to self-nominate their CMU's connection capacity, provided the nominated figure is not higher than TEC, MEC or Average Output?

Question 5. Do you agree with the proposed changes to enable mothballed plants which are existing Generating CMUs to return to the CM? Would these changes result in any unintended consequences?

Question 6. Do you agree with the proposed changes to the CM's penalty rate? Are any unintended consequences likely to result from this change?

Question 7. Do you agree with the proposed changes to the timelines for calculating non-delivery penalties**?**

Next Steps

REA will be drafting a response next week and welcoming feedback.

Any additional points should be sent to power@r-e-a.net

Happy also to arrange bilateral discussions.

Other REA Activities

Award Nominations Open – Please Nominate your company or project, https://www.r-e-a.net/events/british-renewable-energy-awards-2023/

Sponsorship Opportunities also available.

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