



Department for  
Business, Energy  
& Industrial Strategy

# PROPOSALS FOR FURTHER AMENDMENTS TO THE CAPACITY MARKET

Consultation

Closing date: 4 April 2019

March 2019



**OGL**

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# Executive summary

Since its introduction in 2014, the Capacity Market (CM) has been an important part of the GB energy market, ensuring that we maintain and bring forward sufficient capacity to ensure secure supplies of electricity. The 15 November 2018 judgment of the General Court<sup>1</sup> had the effect of annulling the European Commission's State aid approval for the GB CM scheme and introducing a 'standstill period', during which aid cannot be granted under the CM. The European Commission has appealed this judgement and in the meantime, is conducting a State aid investigation into the CM<sup>2</sup>.

The General Court judgment ruled on procedural grounds and did not challenge the fundamental nature of the CM. It does not change the Government's view that the CM is the right mechanism to deliver secure electricity supply at least cost.

Following consultation in December 2018, the Government introduced a first set of technical amendments to provide clarity on how the CM would operate during the current standstill period ahead of State aid approval being granted.

The Government is now publishing a second consultation on additional measures to make necessary changes to the CM, including running a three-year ahead "T-3" auction for the 2022/23 delivery year to replace the T-4 auction which had been scheduled for January 2019.

This consultation also covers a limited number of priority changes identified through the Call for Evidence issued last summer as part of the Capacity Market five Year Review<sup>3</sup>. It covers the participation of renewables in the Capacity Market and; making technical amendments to the methodology for calculating interconnector de-rating factors.

Following this consultation, the Government will be looking to amend the Electricity Capacity Regulations 2014 ("the Regulations"), the Electricity Capacity (Supplier Payment etc.) Regulations 2014 ("the Supplier Payment Regulations"), and the Capacity Market Rules ("the Rules") before the prequalification window for the next auction round opens.

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<sup>1</sup><http://curia.europa.eu/juris/document/document.jsf?text=&docid=207792&pageIndex=0&doclang=en&mode=req&dir=&occ=first&part=1&cid=1430154>

<sup>2</sup>The 'standstill period' began on 15 November 2018. On February 28 2019, the Government published legislation to provide legal clarity on whichever state aid outcome is reached. Detail of the consequences of state aid decisions is provided in the Government's Response to the Technical Amendments to the Capacity Market Consultation (Section 3.2.1) available at <https://www.gov.uk/government/consultations/capacity-market-technical-amendments>

<sup>3</sup> <https://www.gov.uk/government/consultations/capacity-market-and-emissions-performance-standard-review-call-for-evidence>

# 1. Introduction

The Capacity Market (CM) aims to procure the capacity required to meet peak demand in a range of scenarios through competitive auctions normally held four-years and one-year ahead of delivery.

Since the CM was introduced in Great Britain (GB) in 2014, a series of auctions have been held securing capacity out until 2021/22. This includes four T-4 auctions, one T-1 auction, one 'Transitional Arrangements' auction for Demand Side Response (DSR) and small-scale distribution-connected capacity providers, one 'Transitional Arrangements' auction for turn-down DSR and a one-year-ahead 'Early Auction'.

On 15 November, 2018 the General Court of the Court of Justice of the European Union handed down its judgment in a case relating to the European Commission's decision-making process for giving State aid approval for the GB CM scheme. The judgment annulled the State aid approval for the main GB CM scheme and the European Commission must now undertake a formal investigation before the scheme can be approved again. The Commission is appealing the General Court decision and the UK Government has confirmed that it intends to support the Commission in this appeal<sup>4</sup>.

We are working closely with the European Commission to ensure that State aid approval for the CM scheme is reinstated as quickly as possible. The Commission announced an Opening Decision on the issues to be investigated in its formal investigation on 21 February 2019<sup>5</sup>. This investigation covers the Capacity Market agreements already entered into including those for 2018/19 and 2019/20.

Immediately following the General Court judgment, the Secretary of State for BEIS directed the CM Delivery Body (National Grid) to postpone indefinitely the T-1 and T-4 auctions which were previously planned to be held in January/February 2019, and requested the Electricity Settlements Company to halt the making of capacity payments under existing agreements.

In December 2018, we consulted on a first set of technical amendments to provide clarity on how the CM would operate during the standstill period. Secondary legislation laid on 28 February 2019 following that consultation will, if approved by Parliament:

- allow the postponed T-1 auction which was due to be held in early 2019 to be rearranged, and to grant 'conditional capacity agreements';
- provide additional flexibility to enable existing capacity providers to continue to meet their obligations during the standstill period;
- enable deferred payments to be made to providers who meet their obligations during the standstill period; and

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<sup>4</sup> <https://www.parliament.uk/business/publications/written-questions-answers-statements/written-statement/Commons/2019-02-21/HCWS1351/>

<sup>5</sup> [http://europa.eu/rapid/press-release\\_IP-19-1348\\_en.htm](http://europa.eu/rapid/press-release_IP-19-1348_en.htm)

- make provision for the Settlement Body to collect and hold voluntary supplier payments and to offset these against liabilities due when the standstill period ends. Further details can be found in the Government's response to the consultation<sup>6</sup>.

The Government is now publishing a further consultation on additional measures to take effect during the standstill period and to progress with a limited number of priority changes identified through the Call for Evidence issued last summer as part of the Capacity Market 5 Year Review.

In summary, the Government proposes:

- **A replacement T-3 auction to be held in early 2020, securing capacity for delivery year 2022/23** and replacing the T-4 auction previously scheduled for January 2019. Some technical changes would be needed to the Regulations and Rules to adapt them for a T-3 auction, with other changes necessary to accommodate the changed auction timing (such as amendments to delivery milestones in the lead up to the T-3 delivery year). Otherwise, its structure would be as similar as possible to the previously planned T-4 auction. We are proposing to run a full new pre-qualification exercise, and to retain the existing requirements for auction participants to demonstrate Transmission Entry Capacity ("TEC"). **Chapter 2** sets out the proposed changes required to run this auction.
- **The addition of generating technology classes for certain renewable technologies** and related changes to allow for the inclusion of these intermittent technologies in the CM. This follows the August 2018 Call for Evidence<sup>7</sup>, in which a strong majority of responses (85% of responses to that question) were in favour of allowing the participation of these technologies. The proposed changes would reflect the CM's technology neutrality and ensure that technologies are appropriately compensated for their contribution to security of supply (provided no cumulation of State aid occurs). Inclusion of these renewable technologies in the CM is discussed in **Chapter 3**.
- **Changes to the methodology for interconnector de-rating factors.** We propose to remove the requirement for historical data to provide a 'floor' for interconnector de-rating factors (but will consider options for an ongoing role for historical data) and retain an 'average' de-rating factor methodology for all interconnectors – new and existing. We also commit to working to provide increased transparency and opportunities for stakeholder engagement in the process of setting interconnector de-rating factors. Interconnector de-rating factors are discussed in **Chapter 4**.
- Additional amendments to make minor corrections and clarifications to the rules and regulations. These are detailed in **Chapter 5**.

Following the consultation, the Government intends to consider possible amendments to the Electricity Capacity Regulations 2014 ("the Principal Regulations"), the Electricity Capacity (Supplier Payment etc.) Regulations 2014 ("the Supplier Payment Regulations"), and the Capacity Market Rules ("the Rules") in time to allow the pre-qualification process for the T-3 2022/23, T-4 2023/24 and T-1 2020/21 to take place in Summer 2019. If necessary, legislation will be brought forward as soon as parliamentary time allows.

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<sup>6</sup> <https://www.gov.uk/government/consultations/capacity-market-technical-amendments>

<sup>7</sup> <https://www.gov.uk/government/consultations/capacity-market-and-emissions-performance-standard-review-call-for-evidence>

## How to respond

This consultation will be open from 7 Mar 2019 until 4 April 2019. Please submit your response to this consultation by 11:45pm 4 April 2019.

When responding, please state whether you are responding as an individual or representing the views of an organisation.

Your response will be most useful where it is framed in direct response to the questions posed, though further comments are also welcome.

**Email to:** [energy.security@beis.gov.uk](mailto:energy.security@beis.gov.uk)

## Write to:

Energy Security Team, Department for Business, Energy and Industrial Strategy

3rd Floor, 1 Victoria Street,

London, SW1H 0ET

## Confidentiality and data protection

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).

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.

We will process your personal data in accordance with all applicable UK and EU data protection laws. See our [privacy policy](#).

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

This consultation has been carried out in accordance with the government's [consultation principles](#).

If you have any complaints about the way this consultation has been conducted, please email: [beis.bru@beis.gov.uk](mailto:beis.bru@beis.gov.uk).

## 2. 2022/23 delivery year

The Government is proposing to run a T-3 auction to secure capacity for delivery year 2022/23. Following the General Court's judgment in November 2018, State aid approval for the Capacity Market was annulled, requiring the Government to postpone the regular auctions scheduled for early 2019; a T-1 auction to procure 'top-up' capacity for Delivery Year 2019/20 and a T-4 auction to procure capacity for delivery year 2022/23.

Following an earlier consultation, the Government has now laid legislation in Parliament allowing for the T-1 auction to be rescheduled for Summer 2019, in time for the 2019/20 Delivery Year. This current consultation explains the Government's proposals to run a T-3 auction in early 2020, replacing the planned T-4 auction.

### 2.1 Rationale for a T-3 auction

The Government is aware that some stakeholders have expressed a preference for the 2022/23 auction to be modelled on a similar basis to the replacement T-1 auction i.e. a contingent T-4 auction, rather than a T-3 auction, in the expectation that this would allow the auction to be run sooner and that it would reduce the administrative burden associated with pre-qualification.

The Government recognises stakeholders' concerns in this respect but is currently of the view that a T-3 auction is a better approach, as:

- it will provide greater certainty to investors than a delayed T-4 auction. A T-3 approach would enable the auction to be run at a time when the Commission is likely to have made a decision about State aid approval and for capacity agreements to be awarded through the auction (as opposed to 'conditional capacity agreements', as per the approach which was adopted for the deferred 2019/20 T-1 auction). The Government has also been clear in public communications to date that we are considering running a T-3 approach, providing companies with an opportunity to plan around this possibility; and
- existing prequalification results would, in any case, need to be revisited due to the extended period of time which would have elapsed between pre-qualification and the running of a deferred T-4 auction. If the Government proceeds with its proposal to allow certain renewable technologies to participate in the Capacity Market (see Section 3 below), the 2022/23 auction (whether run as a delayed T-4 or new T-3) would take place after the changes to allow for participation by those technologies have been made. The Government's view is that, in these circumstances, it would be appropriate for pre-qualification to be re-opened to allow those renewable technologies to participate in the 2022/23 auction. A T-4 approach is therefore unlikely to confer great benefits in terms of reduced timescales or administrative burdens due to the need to re-open the pre-qualification exercise, and the Government's view is that it would be preferable to run a T-3 with a fresh prequalification exercise.

The Government is therefore proposing to amend Regulation 10 of the Principal Regulations to allow the Secretary of State to decide that a T-3 auction is to be held. The Principal

Regulations, the Supplier Payment Regulations and the Rules would also need to be amended to enable, where possible, the T-3 to operate in the same way as a normal T-4 auction. These proposed amendments are set out in more detail below.

## 2.2 Auction Timing

The proposed T-3 auction would take place in early 2020. The T-3 process would follow the standard timeframe, with pre-qualification, appeals windows and the auction itself running alongside those of the 'business as usual' T-4 and T-1 auctions also expected to be held in the next auction round in early 2020. The Government is aware that stakeholders are eager to see this auction run swiftly and is seeking to schedule it as soon as possible, but the timeframes for passing the necessary legislation in Parliament and for running the prequalification exercise mean it is likely to be held at a similar time to the T-1 and T-4. The Government would seek to schedule the T-3 as the first of these three auctions, in recognition of the importance of running this delayed auction as soon as possible.

Stakeholders have expressed concern that incorporating an extra prequalification exercise and auction into the usual T-1 and T-4 timetable would create significant resource burdens on prospective bidders and delivery bodies. We have been working closely with delivery partners to understand how this additional workload would be managed as smoothly as possible, and welcome further views from stakeholders as part of this consultation on the feasibility of implementing these proposals and on potential operational challenges.

We are also considering whether it is necessary to make changes to Schedule 1 of the Supplier Payment regulations, and Schedule 1 of the Principal regulations to accommodate the revised timeframes for the T-3 auction. At present we expect that any changes would be minor technical amendments.

## 2.3 Eligibility and Prequalification

A number of respondents to the consultation exercise earlier this year noted that Government should consider how to reduce the administrative burden of the T-3 pre-qualification process on participants. Suggestions included either: 1) re-using the pre-qualification results from last year for the T-3 auction; or 2) carrying over the information provided by those who pre-qualified last year into the new T-3 pre-qualification round.

The Government recognises that the requirement to pre-qualify for three auctions in the next auction round will increase the administrative burden on participants and on the Delivery Body. However, as discussed above, we are of the view that it is appropriate to treat the T-3 as a new auction, for which participants will need to complete a new pre-qualification exercise in order to participate. We are also conscious that it will have been over a year between the original pre-qualification process for the T-4 2022/23 auction and pre-qualification for the new T-3 auction, such that information from that previous pre-qualification exercise may now need to be supplemented and significantly revised. In the circumstances, we consider it would be preferable to ensure the information provided for the 2022/23 auction is accurate and current by carrying out a new pre-qualification exercise.

For simplicity, we are proposing to conduct the new T-3 pre-qualification exercise in parallel to the equivalent processes for the T-1 and T-4 auctions. Should these proposals be taken forward, the Delivery Body would engage with stakeholders in advance of the prequalification

window on how the process would operate in practice, with the aim of easing resource spikes at critical points in the pre-qualification and pre-auction processes.

### 2.3.1 Transmission Entry Capacity requirements

Capacity Market Rules require applicants for pre-qualification to have entered into one or more Grid Connection Agreements that secure Transmission Entry Capacity (TEC) for the relevant Delivery Year, if connecting direct to the National Grid Transmission network.

We are aware that the shortened timeframe of the T-3 auction could expose some providers to higher potential TEC cancellation charges<sup>8</sup> (the ‘wider cancellation liability’) following the auction, than would have been the case in a T-4 format. These charges are codified into ESO rules and following discussion with delivery partners we understand that it would not be possible to amend these rules in time for the one-off T-3 auction. There is therefore a risk that some capacity providers choose to relinquish their TEC ahead of the T-3 auction to reduce the risk of being exposed to these charges, impacting on liquidity of the auction.

Removing the requirement to hold TEC before the auction would reduce the risk of participants being exposed to higher charges discussed above. However, previous work with stakeholders and delivery partners has indicated that once TEC is relinquished, there is no guarantee it can be reacquired at short notice. If the Government were to remove the requirement to hold TEC ahead of the auction there would be a significant risk that successful bidders who do not hold a Grid Connection Agreement could subsequently fail to deliver the capacity they acquire at auction.

We therefore propose no changes to Regulations or Rules regarding Transmission Entry Requirements for the T-3 Auction.

## 2.4 Target capacity

In order to accurately set the parameters for a T-3 auction, National Grid would need to provide an updated assessment of the capacity that needs to be secured for 2022/23 in their 2019 Electricity Capacity Report and the Secretary of State would need to be given powers to set parameters for the auction. To enable this, the Government considers that amendments would be required to Regulation 7 and Regulation 12 of the Principal Regulations.

The Government has also worked with Delivery Partners to consider how the T-3 auction would impact on parameter setting for a T-4 which will be run shortly afterwards. The target for a T-4 auction would ordinarily be adjusted to take account of the volume of multi-year agreements covering that delivery year which had already been awarded through auctions in previous years. We currently believe it is still possible to do so in this case, although within a much reduced timescale.

While we would in principle want the gap between the T-3 auction and the T-4 2023/24 auction to be as brief as possible (to minimise any unnecessary delays to the process), our preferred solution in this case is to allow sufficient time between the auctions and amend the Regulations as necessary to enable a swift parameter-adjustment process to be carried out. We anticipate

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<sup>8</sup> National Grid have produced guidance on methodology used for calculating user commitments, available here: <https://www.nationalgrid.com/sites/default/files/documents/5638-CMP192%20Updated%20Guidance%20Document.pdf>

that there will need to be a gap of at least 4 weeks between the T-3 and T-4 2023/24 auctions to accommodate this.

If it is not possible to adjust the parameters of the T-4 2023/24 auction in light of the results of the T-3 auction, an alternative would be to pre-emptively decrease capacity for the T-4 2023/24 auction and increase the capacity which is 'set-aside' for the T-1 2023/24 auction. This would provide the Secretary of State with additional flexibility to account for multi-year agreements awarded through the T-3 auction by reducing the T-1 2023/24 target, but would be less precise than making adjustments based on the T-3 auction results, and could therefore result in a smaller T-4 2023/24 auction than necessary. We hope that this option can be avoided and are not currently aware of any reason why it would not be possible to achieve our preferred option outlined above.

## 2.5 Milestones

The Government is aware that the timing of a T-3 auction, and the condensed time period between the auction and the delivery year would require the adjustment of certain delivery assurance milestones contained in the Regulations and Rules. In particular, the Government is minded to:

- Bring forward the Financial Commitment Milestone to 12 months after Auction Results Day in order to provide the same level of confidence that developers have committed to financing their projects as under a regular T-4 auction. Achieving the Financial Commitment Milestone, as set out in Rule 6.6.1, requires that a provider of a prospective CMU submits a report from an independent technical expert (ITE) and a Funding Declaration by at least two Directors of the Capacity Provider. The current date, 16 months after Auction Results Day, means that the meeting of this milestone would not be tested until the latter half of the construction phase leading up to the start of the delivery year.
- Bring forward the requirement to post additional credit cover under regulation 59(4) of the Principal Regulations to nine months after Auction Results Day. There is currently a need to provide additional credit cover should a provider of a new build capacity market unit (CMU) not submit the ITE report referred to above when 12 months have elapsed after Auction Results Day. Bringing forward this requirement would avoid a conflict with the revised Financial Commitment Milestone. This requirement would be subject to the reinstatement of credit cover requirements after the end of the standstill period (see Section 2.6 below).
- Delay the deadline for submitting a Metering Assessment for existing CMUs and Proven DSR. Under the rules that govern a T-4 auction this requirement needs to be met three years before the start of the delivery year. As this will no longer be practical, we propose to move this deadline to two years before the start of the delivery year.

We currently propose to preserve the timing of all other milestones. Some stakeholders have expressed concerns that the shorter construction phase of the T-3 auction will make it more difficult for larger projects to participate in the auction. One option to address this concern would be to move back the Long Stop Date for this auction (e.g. to either 18 or 24 months after the start of the delivery year) to maintain a similar construction period to a normal T-4 auction. However, we are not minded to make this change as it would result in the convergence of the Long Stop Dates for both the T-3 and T-4. This would provide less of a clear investment signal to developers, and create additional complexity. At present we consider that any developers of

large projects that have doubts about their ability to commission those projects within a three-year construction phase should instead opt to enter the T-4 auction for delivery year 2023/24.

## 2.6 Credit cover

In November 2018, we advised that those CMUs with credit cover lodged with the Electricity Settlements Company (ESC) could request this be returned i.e. the requirement to maintain credit cover would be waived during the standstill period. The Government response to the 'Technical Amendments to the Capacity Market' consultation confirmed this position, and stated that, following the deferred capacity payment trigger event<sup>9</sup>, the Delivery Body will notify CMUs of any need to resubmit credit cover. The response also concluded that it would be reasonable to request credit cover be re-posted within 40 working days of receiving notice from the Delivery Body and stated that the arrangements for resubmitting credit cover will be modelled upon those in place with respect to prequalification.

In keeping with the provisions we are introducing for existing capacity agreements, we are proposing that the requirement to post credit cover for the T-3 auction (as well as the T-1 2020/21 and T-4 2023/24 auctions) would be suspended until such time as the deferred capacity payment trigger event takes place. After that trigger, the Delivery Body would then notify CMUs if there is then a need for them to post credit cover, at which point capacity providers would have a window of 40 working days in which to do so.

<b>Question 1</b>
Do you agree with the proposal to run a T-3 auction for delivery year 2022/23?

<b>Question 2</b>
Do you agree that the amendments to the usual T-4 auction design/process proposed above are appropriate for this T-3 auction?

<b>Question 3</b>
Are there any further issues that the Government should consider in implementing the T-3 auction?

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<sup>9</sup> When the Secretary of State gives notification following a decision by a relevant authority (e.g. the European Commission) to grant State Aid approval to the Capacity Market as a result of which deferred capacity payments can be made.

### 3. Allowing certain renewable technologies to participate in the CM

The CM's eligibility framework does not currently allow renewable technologies such as wind and solar capacity to participate in the auctions. It was originally assumed that such technologies would already benefit from low-carbon support schemes such as Contracts for Difference (CfD) or the Renewables Obligation (RO), and the CM excludes projects in receipt of funding under those schemes from participating, thus avoiding the unlawful cumulation of State aid. Until recent evidence to the contrary, it was also considered that solar was not capable of providing a meaningful contribution to security of supply.

It was always anticipated that the CM framework would be amended to allow wind to participate at some point in the future. The first RO projects will begin to see their subsidy end in 2027 and the existing regulations are clear that they will be allowed to participate in the CM once their RO contracts expire (i.e. in the four year-ahead auctions in 2023 onwards), if they do not hold a CfD. However, the costs of new wind and solar have fallen more quickly than anticipated, and we understand that a limited number of projects may already be reaching the point where they are viable without subsidy.

Ofgem received three formal requests from industry to change the CM framework to allow participation of wind in future auctions. Ofgem consulted on these proposals from 22 March - 3 May 2018, and concluded in its 5 July 2018 decision that *"allowing renewable technology not in receipt of other forms of State Aid would be consistent with the European Commission's Capacity Market State Aid clearance,"* and that these issues were most appropriately addressed as part of BEIS' and Ofgem's 5-year reviews of the Capacity Market.

A Call for Evidence (CfE), as part of BEIS' 5-year review, closed 1 October 2018. The CfE noted the above points and put to stakeholders the questions:

- Should wind and solar be allowed to participate in the Capacity Market?
- What factors need to be considered to enable renewables to participate in the Capacity Market whilst ensuring security of supply?
- What factors need to be considered to enable the participation of hybrid projects in the Capacity Market?
- What factors need to be considered when developing the de-rating methodology for wind and solar? What approach could be taken to de-rating hybrid CMUs?

Of the 63 responses to the first CfE question noted above, the large majority were strongly in favour of allowing the participation of these technologies. Those opposed to the change argued that the participation of non-dispatchable capacity would be contrary to the CM's objective of ensuring security of supply. However, those in favour frequently argued that the CM's technology-neutral design made their participation a matter of both fairness and law. Most responses considered it important to establish an appropriate de-rating factor to ensure risks to security of supply are mitigated, with some specifically noting the Equivalent Firm Capacity (EFC) methodology. Many responses considered that an effective secondary trading market and effective penalty regime would mitigate any non-delivery risks, and ensure non-dispatchable generators could effectively cover their positions

### 3.1 Contribution to Security of Supply

Although wind and solar are inherently intermittent, both contribute to security of supply. As part of the CM's auction target setting process, the Delivery Body's analysis, reviewed by the Capacity Market's independent Panel of Technical Experts, already factors in the estimated contribution wind and solar make to security of supply. Allowing appropriately de-rated renewable technologies to participate in the CM does not increase security of supply risks, it simply alters where and how their contribution to security of supply is accounted for.

The Delivery Body (DB) has consulted on the de-rating methodology for wind and solar in the CM, in accordance with the process outlined in the CM rules (2.3.8, 2.3.9, 2.3.9A, 2.3.10, 2.3.10A). Their analysis shows that renewables make a minor contribution to security of supply with derating factors ranging from 1-15% (detail in Table 1).

*Table 1 - Delivery Body de-rating factors, 8 January 2019 consultation*

Base Cases	De-Rating Factors (%)		
	Onshore Wind	Offshore Wind	Solar PV
T-1 2020/21	8.98%	14.65%	1.17%
T-3 2022/23	8.40%	12.89%	1.76%
T-4 2023/24	8.20%	12.11%	1.56%

The Delivery Body's consultation closed on 31 January 2019 and their response was published 25 February 2019<sup>10</sup>. Their consultation response indicated that wind and solar technologies participating in CM auctions are most appropriately de-rated using the incremental EFC methodology, and that most of respondents to the Delivery Body consultation supported this approach. This methodology is currently used to de-rate Duration Limited Storage Generating Technology Classes (GTCs). Incremental de-rating is a way to measure the contribution of additional capacity of a particular technology to the overall system, rather than the average performance of the existing fleet, and is used in the case of resources whose fleet performance varies depending on the total level of deployment of plant of that technology type. This is especially relevant for intermittent resources such as wind and solar, whose output is subject to the same weather factors. We propose to create new Generating Technology Classes for offshore wind, onshore wind and photovoltaic solar and to amend Rules 2.3.4 and 2.3.5B to allow the Delivery Body to use the EFC methodology for wind and solar technologies.

Consideration will also need to be given in the future to projects whose current RO is expiring, ahead of their expected bidding into CM auctions starting in 2023, to determine the appropriate methodology for such existing projects. The Delivery Body may choose to consult on and use a methodology based on the average performance of the fleet (or other methodology) in future. Delivery Body analysis indicates that the incremental EFC methodology will be effective for the

<sup>10</sup> <https://www.emrdeliverybody.com/Prequalification/EMR%20DB%20Consultation%20response%20-%20De-rating%20Factor%20Methodology%20for%20Renewables%20Participation%20in%20the%20CM.pdf>

small numbers of projects whose RO obligations will expire to 2030, but that reconsideration of this may be required as a greater proportion of the ex-RO and ex-CfD fleet retires or bids into the CM.

### 3.2 Additional features of the CM

In addition to de-rating factors as noted above, the CM contains the additional features of a secondary trading regime and penalty regime that manage the risk of non-availability of capacity during stress events.

Ofgem is considering changes to the secondary trading regime as part of its 5-year review of the CM and will take such steps as it considers necessary. Many respondents to BEIS' CfE noted the importance of changes to the secondary trading regime and argued in favour of removing the 5-day notice period for secondary trades.

The CfE asked the questions, "Should penalties be adjusted to strengthen incentives for delivery during stress events? If so, how should penalties be adjusted? Please provide a view on the methodology and factors to consider when setting penalties." Of 44 responses, the majority were in favour of strengthening the penalty regime, in order to ensure delivery during stress events, incentivize appropriate behaviour during prequalification, and incentivize secondary trading. Some responses noted that each of these considerations would apply especially to non-dispatchable technologies.

The Government will continue to consider the appropriateness of the current penalty regime as part of the CM review, and may come forward with concrete proposals for amendments in due course. Consideration of the effect the penalty regime on the participation and behaviour of renewable resources will help inform any such proposals.

One additional issue noted in the CfE in relation to the participation of subsidy-free renewables in the CM is how to enable participation of hybrid capacity (e.g. renewables linked to storage). Most responses to the CfE question on hybrid CMUs noted that the existing approach of de-rating component technologies separately is effective for now and the immediate future. Again, the Government may consult on this at a later date, once additional evidence about the performance of these co-located technologies is available.

### 3.3 Low-Carbon Supports and avoiding duplication of State aid

Wind and solar technologies frequently benefit from support schemes such as the RO, CfD, or Feed-in Tariff (FiT). CMUs in receipt of these low carbon supports are excluded from participation in the CM auctions, as outlined in Regulation 16 of the Electricity Capacity Regulations 2014. Changes introduced in Autumn 2016 accounted for additional forms of State aid, to ensure that there is no cumulation of aid or overcompensation through the CM mechanism. All Capacity Providers of Prospective CMUs must include a declaration ("funding declaration") indicating whether the Prospective CMU has received or expects to receive investment under a risk finance scheme (defined as a "relevant investment" in the Regulations), as well as any required updates on the final spend of the relevant investment. Any funding received is deducted from capacity payments by the Energy Settlements Company (ESC) until the total investment has been accounted for, after which time capacity payments resume. If the information provided in the funding declaration is suspected to be false or misleading, Ofgem may investigate the matter and take enforcement action under its

existing enforcement powers. A termination event also exists for providing false or incorrect information with associated repayment of any capacity payments made to date.

If wind and solar technologies are added to the CM, we consider that the definition of "relevant investment" should be expanded to account for additional forms of low-carbon support which constitute State aid that needs to be deducted from capacity payments, but does not reach a level that would justify excluding a Prospective CMU from participating in the auctions. All provisions currently applying to relevant investments, including the treatment of over- and under-delivery balances, and the ability to undertake secondary trading, would apply to wind and solar technologies.

### 3.4 Impact of the Proposed Changes

We are proposing changes to further strengthen a technology-neutral framework for Capacity Market payments to ensure a level playing field for renewables moving forward. It is right that, where they are unsubsidised, our world-leading low-carbon technologies are able to participate in this scheme, which the Government believes is an appropriate mechanism for ensuring security of supply.

We do not believe CM revenues in themselves will have a material impact on the amount of new renewable projects coming forward. The CM is expected to be a relatively minor revenue source when compared to wholesale revenues. According to BEIS internal modelling, CM revenues (up to clearing prices of £25/kW) would be no more than 2% of total developer revenues for these renewable projects. A small number of stakeholders have also indicated these revenues will not alter their decision about whether projects proceed. The CM represents a source of predictable revenue that would add to their 'stack' as appropriate compensation for their observed contribution to Security of Supply; however, other factors, such as construction costs or gas and carbon prices, may be far more material to future deployment rates<sup>11</sup>.

The amount of existing renewable capacity that may choose to participate in the CM can be estimated using the number of RO accredited from Ofgem's Renewables and CHP register. On a de-rated basis<sup>12</sup> there could be 360MW of existing renewable capacity able to participate in the 2029-2030 delivery year. This is a maximum because the methodology may overestimate the capacity coming out of support at a particular date<sup>13</sup>; and it assumes that all eligible renewables choose to participate in the CM.

Using an illustrative clearing price of £14/kW<sup>14</sup>, the cost of existing renewables participating in the CM is likely to be relatively small (£5m in 2030). For context, the CM overall has been

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<sup>11</sup> For illustration, using high and low fossil price scenarios (in line with BEIS's published fossil fuel price assumptions) increases/ decreases expected annual wholesale income for onshore wind by up to 20%. <https://www.gov.uk/government/publications/fossil-fuel-price-assumptions-2018>

<sup>12</sup> De-rating factors provided by the Delivery Body for delivery year 2022/23, see Table 1

<sup>13</sup> The assumed date for the end of support for each station is calculated on the basis of the maximum length of support possible from the accreditation date for each station. However, a station that added capacity after it was accredited will receive support on that additional capacity from the date that the additional capacity was commissioned and not from the date of the original accreditation.

<sup>14</sup> Based on the average of the maximum and minimum CM auction clearing prices that have been seen to date. Rounded to the nearest £. Excluding the Transitional Auctions: Maximum - £22.50/kW (2016 T-4 auction) and Minimum - 6.00/kW (2017 T-1 auction)

projected to cost between around £1bn for each year from 2018/19 to 2023/24<sup>15</sup>. If the cost of the CM remained at a similar level in 2030, the additional cost of existing unsubsidised renewables would be about 0.5% of total costs.

Due to the level of uncertainty in our analysis, it is unclear whether the potential benefits of lower clearing prices from new build renewables displacing more expensive generators would exceed the cost of allowing renewables who would have operated in the absence of CM payments, but the analysis suggests that any impact is likely to be small.

### Question 4

4a. Do you agree with the addition of generating technology classes for these renewable technologies to Schedule 3 of the CM rules?

4b. Are you in agreement that the Equivalent Firm Capacity methodology should be applicable to wind and solar technologies, if and when it is deemed appropriate by the Delivery Body? If not why not and what alternatives would you propose, if any?

4c. Are you aware of any additional Low-Carbon Supports or funding programs that need to be accounted for or monitored to ensure that wind and solar technologies participating in the CM are not receiving State aid from other sources?

4d. Do you agree that the existing approach of separately de-rating the component technologies included in a hybrid CMU containing renewable technologies is appropriate to use until reliable data on their observed performance is available? If not, what alternative methodology would you propose?

4e. Do you have any evidence of the impact the addition of technologies noted in 4a will have on your business, or are you aware of any impacts we have not considered above?

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<sup>15</sup> CM costs are projected using auction results. Where actual clearing prices are not available we use an average of the observed market clearing prices. These costs are published by the OBR under Environmental Levies in their supplementary fiscal tables <https://obr.uk/download/october-2018-economic-and-fiscal-outlook-supplementary-fiscal-tables-receipts-and-other/>

## 4. Interconnector de-rating factors

In the CfE the Government also requested views from stakeholders on the existing methodology for de-rating interconnectors. Common themes emerging from the responses we received were; concerns regarding a lack of predictability of future de-rating factors and a resulting desire for greater transparency in the annual process of setting interconnector de-rating factors; calls for a new approach to using historical data; and concerns about the robustness of National Grid's current modelling approach. Some stakeholders wished to see more substantive changes to the de-rating methodology, such as introducing 'incremental' de-rating factors for new interconnectors or de-rating interconnectors on the basis of their technical reliability alone.

The Government remains confident that interconnectors offer important and cost-effective contributions to GB security of supply, as well as other benefits to the GB system. Nevertheless, we are committed to considering whether to make changes to the de-rating methodology for interconnectors in order to ensure they receive de-rating factors which appropriately reflect their contribution to security of supply.

Following the Call for Evidence, the Government has carried out extensive engagement on this issue with the Panel of Technical Experts and National Grid. We have also had further meetings with a number of interested stakeholders, seeking to understand their concerns in more detail. As a result of this exercise, the Government is now proposing:

- To remove the requirement for historical data to provide a 'floor' for interconnector de-rating factors.
- To retain an 'average' de-rating factor methodology for all interconnectors – new and existing; and
- To encourage increased transparency and greater opportunities for stakeholder engagement in the process of modelling interconnector de-rating ranges by National Grid and the making of recommendations by the Panel of Technical Experts.

We outline our rationale in more detail below.

We are also considering alternate ways in which historical data could play a part in the de-rating methodology and are seeking further views as part of this consultation.

### 4.1 Historical data

Schedule 3A of the Capacity Market Rules for interconnector de-rating factors, put in place before interconnectors started to participate, specify that historical data creates a 'floor' above which the de-rating factor must necessarily be set. In the light of recent experience the Government believes this is too rigid. Removing this constraint will increase the flexibility of the de-rating methodology for interconnectors. Retaining the historical data floor risks artificially constraining final interconnector de-rating factors to a higher level than may be justified by the

wider evidence<sup>16</sup>. There are a number of reasons to expect that interconnector de-rating factors may reduce over time, and that there may therefore be a justification for setting de-rating factors that fall below the level of the historical data: the growing number of GB interconnectors connecting to the continent; the expected reduction in capacity margin across Europe due to mothballing and decommissioning of gas, coal and/or nuclear generation; and the increased demands on spare capacity abroad as capacity markets are established. Whilst we accept that the current use of the historical data floor provides greater clarity for interconnector owners on likely future de-rating factors in comparison to our proposed approach, we consider that its ongoing use would be likely to lead to inappropriate de-rating factors being set.

The Government remains of the opinion that historical data can have an important part to play in contributing to the accurate assessment of interconnector de-rating factors, alongside stochastic / probabilistic modelling but not (as the current rules might risk) displacing it. We are considering, alongside other possible options, an option whereby historical performance data of an interconnector could be used by BEIS (based on recommendations by the Panel of Technical Experts) to inform where the de-rating factor should be set within National Grid's recommended range. For example, should historical data show performance was typically at the bottom or below the range, then the derating factor could be set at the bottom end of the range. However, there would no longer be a firm legal rule that the final de-rating could not go below a historic 'floor' (if that floor was above the bottom of the range). Should historical performance be above National Grid's recommended range then the derating factor would be likely to be set near or at the top of the range.

We are open to considering different options for how best to make use of historical data and have not made any firm conclusions. We intend to ask the Panel of Technical Experts, who already play a key role in helping the Secretary of State to set derating factors, to help examine whether a specific methodology can be established for identifying and calculating the historic evidence, and for assessing how and how far such evidence should be used alongside future-focused stochastic / probabilistic modelling. Any such methodology could then be set out in the legal CM rules for future auction years – if it was felt to be sufficiently certain and invariable – or at least set out publicly and transparently each year as the basis on which de-rating was being conducted that year.

We recognise that the removal of the historical data floor will impact the level of future de-rating factors for interconnector projects. To help mitigate this effect we intend to improve the transparency of future modelling / de-rating processes, as set out in Section 4.3 below.

## 4.2 'Average' De-rating Factors

National Grid currently provide a single de-rating range for each country, which is applied to all interconnectors from that country, including new and existing interconnectors (although adjustments for availability are subsequently applied by BEIS to each individual interconnector). In line with feedback from stakeholders we have considered whether to move to a system where de-rating factors for new interconnectors are based on the incremental

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<sup>16</sup> This is based on advice in 'National Grid Electricity capacity report 2018: independent report by the Panel of Technical Experts'. Pages 16 to 24 set out the Panel's advice on de-rating factors. Paragraph 89 sets out the Panel's view that the historical data floor 'no longer remains relevant' for 2022/23. (<https://www.gov.uk/government/publications/national-grid-electricity-capacity-report-2018-findings-of-the-panel-of-technical-experts>)

equivalent firm capacity (the level of 100% firm capacity that would be required to produce the same improvement in security of supply).

Following a request for advice on this issue by BEIS, the Panel of Technical Experts gave clear advice in favour of the continuation of average de-rating factors. The Panel considered that applying the marginal de-rating factor to all interconnectors would be fundamentally problematic. As each additional interconnector would be subject to a stricter derating factor, this would increasingly under-represent the overall physical capacity value of each additional interconnector. It would likely overstate the amount of GB generation capacity required from the Capacity Market to meet our Security Standard, adding unnecessary costs. The Panel also noted that an average de-rating factor approach would not be material in practice, given the restriction to 1-year contracts for interconnectors. In line with these recommendations we are proposing to retain the current 'average' de-rating factor approach. We consider that it is appropriate for all interconnectors in a country to be affected equally by expected decreases in future de-rating factors.

## 4.3 Transparency

Stakeholders have provided clear feedback that they would like greater transparency in the process of setting de-rating factors, and an opportunity to feed in any evidence or views they may have at an appropriate point. We also note that input into these processes involves tight timescales to fit into the annual auction cycles and it is important that, where studies or evidence are available that may be relevant to National Grid's or the PTE's consideration, it is clear when and to whom they should be submitted.

National Grid has committed to making their modelling associated with the interconnector derating ranges more transparent to stakeholders. We do not consider there is sufficient time to introduce substantial further transparency methods for the upcoming auction round, but we are committed to a clearer and more open process next year. The Government and National Grid proposes that they will, after the conclusion of each year's de-rating process and in time to feed into the analytic work that will inform the following year's de-rating decision, hold a workshop at which they set out, and invite views on the methodology and evidence to be used the following year. We are also keen to ensure that timelines for submitting information / feedback into the modelling processes of National Grid and the Panel of Technical Experts is made clear upfront.

Question 5
5a. Do you agree that the historical 'floor' should be removed from the legal interconnector de-rating methodology? What are your views on how historical data should be used in future to inform the setting of interconnector de-ratings?
5b. Do you have any further comments or suggestions on the proposed interconnector de-rating methodology?

## 5. Miscellaneous additions and corrections to the Principal Regulations and Rules

Upon conducting a review of the Rules and Principal Regulations we have identified some minor and technical drafting issues, which we propose are immediately corrected so that the Rules are clear and properly operate as intended. We propose making the following amendments to the Principal Regulations and the Rules:

- Rule 6.10.3A does not explicitly describe a link to a repayment period for cases where a Capacity Agreement is terminated for either of the termination events set out in Rules 6.10.1(r) and (s) which arise when a CMU has failed to demonstrate:
  - the three additional Satisfactory Performance Days required by Rule 13.4.1ZA; or
  - the extended performance required by Rule 13.4A.7 of the Capacity Market Rules.

We consider that TP1, TP2 and TP3, as described in Regulation 43B of the Principal Regulations are not appropriate repayment periods for termination on either of the grounds in Rule 6.10.1(r) and (s) so in order to address this omission, we propose to introduce a new period, 'TP4', into Regulation 43B to run from the start of the relevant Delivery Year until 30 April. We propose that in conjunction, the Rules are amended so that ), the proposed amendment to Regulation 43B is cross-referenced and upon termination for either of the grounds in Rules 6.10.1(r) and (s), TP4 is the repayment period for which capacity payments are repayable.

- The termination event in Rule 6.10.1(d) is potentially unclear when read with the definition of 'general eligibility criteria' in the Principal Regulations. We propose amending the Rules so that it is clearer that the termination event will apply to any CMU that:
  - fails to comply with the General Eligibility Requirements as specified in Regulation 15(3) or 15(4) of the Principal Regulations; or
  - is now subject to any of the circumstances referred to in Regulations 16 to 18, which would prevent the Delivery Body from prequalifying the CMU if the CMU were now to apply for pre-qualification.
- In Rule 9.2.6, the sub-paragraphs (i) – (ix) are misplaced, and potentially appear to only apply as sub-paragraphs of Rule 9.2.6(d). This should not be the case, so we propose amending the numbering of the sub-paragraphs in Rule 9.2.6 to make it clear that all of the provisions currently contained in sub-paragraphs (i) to (ix) apply to each of Rules 9.2.6 (a) to (d) respectively, in order for a person to be considered an Acceptable Transferee.

- We recently consulted on deferring milestone deadlines for agreements awarded in the replacement T-1 auction<sup>17</sup>, and these changes are planned to come into force with the Capacity Market (Amendment) (No. 2) Rules 2019. This includes deferring the deadlines for metering assessments (which usually falls at least four months before the delivery year) to the start of the delivery year for all CMU types. Due to the compressed timelines for delivery of milestone obligations ahead of the 2019 delivery year, a capacity provider awarded an agreement in the replacement T-1 auction could receive capacity payments before being terminated for failing to provide the metering assessment, under Rule 6.10.1(ha). Unlike other termination events (for instance, those relating to the metering test and DSR test) the existing Rules (6.10.3A) do not require repayment of capacity payments when an agreement has been terminated for failing to complete the metering assessment in time. We therefore propose to amend the Rules, so that CMUs awarded agreements in the replacement T-1 auction who are terminated on the ground in Rule 6.10.1(ha) will be required to repay any capacity payments received under that agreement, period TP3 in Regulation 43B of the Principal Regulations. This approach is in line with termination events for other milestone obligations that are being deferred to the delivery year readiness deadline.

### Question 6

Do you agree with these proposed corrections and additions?

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<sup>17</sup> <https://www.gov.uk/government/consultations/capacity-market-technical-amendments>

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This consultation is available from: <https://www.gov.uk/government/consultations/capacity-market-further-technical-amendments>

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