



**Ofgem**  
Security of Supply Team  
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**RE: Statutory consultation on changes to the Capacity Market Rules 2014 (the “Rules”) pursuant to Regulation 79 of the Capacity Market Regulations 2014 (the “Regulations”)**

This response is submitted on behalf of innogy renewables UK Ltd and Belectric Storage.

Our main interest is in the barriers and opportunities for renewables and battery storage projects having fair access to participate in all subsets of the GB electricity market. Therefore, in this response we provide Ofgem with detailed feedback on Ofgem’s position on proposals that specifically target these technologies.

Many thanks in advance for taking the time to consider our feedback.

If you have any questions please contact me,

Kind Regards,

Fruzsina Kemenes  
Policy Manager

**Innogy Renewables UK Limited**

### **In general**

#### **We welcome Ofgem taking forward:**

Rule changes that reduce the administrative burden of prequalification e.g. CP288, CP307 and CP319

Rule changes that enable/ improve competition in Secondary Trading. E.g. CP343, CP247

Rule changes that limit the unintended consequences of the CM E.g. CP256

Rule changes that aim to ensure a level playing field regardless of the technology source of the capacity  
E.g. OF13

Rule changes that make participation more practical E.g. CP277/344 or CP329

We also support Ofgem rejecting:

CP 278.

#### **We are concerned with Ofgem's position on a couple of change proposals, namely:**

##### **CP349:**

This presents a disadvantage to distribution connected market applicants. In our view, the risk of unfirm connection is a commercial one, with the decision on whether to take on the risk left with market players. Provided that the penalty regime etc. are robust leaving the markets to weigh up the odds of unavailability and choose whether to apply or not is most efficient and should not cause any risk to security of supply.

##### **CP297**

We understand from Ofgem's justification that the Rules already cater for collocated sites in this matter. We agree that it is right to state it as less urgent but feel that it should be worthy of consideration in mid-term review alongside other questions on hybrid site treatment.

Finally, in relation to CP293- we are aware that there are mixed views amongst industry as to whether this may lead to gaming. We do not have an opinion on this but ask that Ofgem conducts the due analysis to ensure that this is not the case.

**Detailed Feedback Regarding Ofgem’s position on CP263, CP313, and CP314:**

We question Ofgem’s position to stall progress on this and put forward a two step solution for enabling renewables fair access to the Capacity Market:

**Problem to be solved:**

**It is clear<sup>1</sup> that intent of the GB Capacity Market (CM) is that renewable generators that are not in receipt of Low Carbon Support should be eligible to participate.** However, in practice this is not possible because the list of Technology Classes (the so called ‘Schedule 3’) of the CM Rules is too limited. It does not include some renewable technologies like wind and solar. Consequently, these technologies are also missing ‘de-rating factors’. De-rating factors determine the level of capacity agreement that can be secured in the Capacity Auction by a given resource.

*“...the notified measure is a market-wide, technology-neutral capacity mechanism where all eligible capacity providers compete in a single capacity auction to discover the lowest sustainable price at which the necessary capacity can be brought forward”.*  
(EU Commission (2014) 5084)

**Solution:**

This oversight needs to be corrected as soon as possible through Ofgem’s modification of the CM Rules. There is no need for legislative change and delay to resolving the issue is not justifiable.

**I) Add renewable technologies**

**Ofgem should take forward (E.ON’s) CP263 as part of the 2018 modifications.** Expand Schedule 3 of the Rules to include technology classes for renewable energy generators which are not in receipt of a Low Carbon Exclusion as defined under Regulation 16. The omission can be resolved if a Wind Generation Class and a Solar Generator class is added to the Schedule 3 list of Technology Classes section of the CM Rules. This should be open for Generating Units driven by wind or solar respectively. Other renewables such as biomass and hydro are already listed.

**II) Add derating methodology**

The methodology for assigning a value to wind needs to be fair and reflective of the technology’s capacity value to the system. It is important that the methodology recognises the cumulative impacts of wind.

Wind De-rating methodology can be established through an adoption of existing CM rules on de-rating and building on how wind is considered in the CM today (see below). The exact details of de-rating need to be established by the Delivery Body via consultation.

**Historic non-CM wind: Equivalent Firm Capacity already calculated**

Wind power is a well-established, mature generation technology with decades of track record for generating electricity. Indeed, the capacity offered by wind to the GB electricity system is taken into account already albeit it is not remunerated. There is an assumption in NGET calculations regarding how much wind capacity is expected to be on the system. This is used to calculate how much capacity needs to be targeted via CM procurement in each year. This so called wind **Equivalent Firm Capacity** is explained by National Grid as:

*What is a De-rating factor meant to do?*  
**De-rating factors** determine the level of capacity agreement that can be secured in the Capacity Auction by a given resource. Setting an expected level of contribution from participants both ensures energy is available when needed and the cost-effectiveness of the Capacity Market for consumers.  
(NGET, 2017 Winter Outlook).

<sup>1</sup> State Aid, 23.7.2014 C (2014) 5083: recitals of particular relevance:15,16, 18, 130,145,149, 153

**“In effect, it is the level of 100% reliable (firm) plant that could replace the entire wind fleet and contribute the same to security of supply”.** (NGET, EMR Capacity Report 2017<sup>2</sup>)

“EFC is a statistical approach which takes account of the change in risk to security of supply due to the intermittent nature of wind output”. (Ofgem(2013) Capacity Assessment Report<sup>3</sup>). The wind EFC reflects the average capacity value of entire fleet. The wind EFC depends on many factors that affect the distribution of available wind generation. These include: the amount of wind capacity installed on the system; where it’s located around the country; and the amount of wind generation that might be expected at periods of high demand. It also depends on how tight the overall system is e.g. as the system gets tighter, the wind EFC increases for the same level of installed capacity as there are more periods when wind generation is needed to meet demand rather than displacing other types of generation in the merit order. (NGET EMR Capacity Report 2017). “A key use of the EFC is in the calculation of de-rated capacity margins, where the aim is to reflect the contribution of each generation type to capacity adequacy”. (Ofgem(2013) CAR)

#### **Need to adopt the incremental wind EFC for de-rating CM eligible renewables.**

In addition to calculating non eligible capacity provision (as a separate exercise), a de-rating factor needs to be established ahead of each coming auction to enable eligible renewables to participate as prescribed under the State Aid provisions of the CM. (The EFC principle can also be used for solar- there is also historical data on this technology and new sites can be sampled to provide input data).

EFC is part of the current CM Rules (introduced via the 2017 Amendment 4<sup>4</sup>). The Delivery Body can use the core EFC methodology for CM eligible wind. The Delivery Body need to review whether all its underlying assumptions are up to date as part of industry consultation. The non-eligible wind EFC is the average value of the historical fleet from 1979- and is based on random sampling.

The EFC approach is sophisticated and (a) would be in keeping with the economic principle of payment in a market being linked to the marginal contribution of supply to meeting demand at the point at which the market is expected to clear. Incremental EFC was also recently applied for storage technologies- to reflect annual changes in market penetration and system reliability. As wind penetration increases the capacity value of each additional MW of wind capacity is expected to diminish by NGET.

“(Diminishing capacity value) has been observed with wind power from previous experience, whereby the wind EFC, when expressed in percentage terms of the entire fleet capacity, has reduced over time as the amount of installed capacity on the system has increased”.

(NGET (2017) Duration Limited Storage De-rating Assessment<sup>5</sup>)

#### **Modification needed as part of 2018 Rule Changes to ensure fair electricity market competition**

The starting point is that all renewable generators that are not in receipt of Low Carbon Support should already be listed in the Rules as eligible to participate. Fulfilling this is urgent in itself.

<sup>2</sup> <https://www.emrdeliverybody.com/Lists/Latest%20News/Attachments/116/Electricity%20Capacity%20Report%202017.pdf>

<sup>3</sup> [https://www.ofgem.gov.uk/sites/default/files/docs/2013/06/electricity-capacity-assessment-report-2013\\_0.pdf](https://www.ofgem.gov.uk/sites/default/files/docs/2013/06/electricity-capacity-assessment-report-2013_0.pdf)

Note: the original methodology is explained in the Ofgem Electricity Capacity Assessment Report 2013 (Appendix 3).

<sup>4</sup> [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/670438/20171218\\_CM\\_Amendment\\_Rules\\_4\\_2017.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/670438/20171218_CM_Amendment_Rules_4_2017.pdf)

<sup>5</sup> <https://www.emrdeliverybody.com/Lists/Latest%20News/Attachments/150/Duration%20Limited%20Storage%20De-Rating%20Factor%20Assessment%20-%20Final.pdf>

There are further benefits from swift action in terms of furthering decarbonisation and ensuring bills are kept as low as possible. As new onshore wind and solar are no longer eligible for traditional subsidies- it is a pressing problem that they are prohibited capacity market access simply because of an oversight in the rules. It is critical that these technologies are no longer restricted from entering markets that competing forms of electricity generation access for revenues. Removing barriers will broaden the range and number of providers in each market, increase competition and ensure the lowest costs to consumers.

**Process?**

Adding new technology classes necessitates a Rule Change. Regarding derating, once instructed by Ofgem (or the Secretary of State) the Delivery Body can establish the details. The high level principles of the approach need to be reflected in the final Rules as they are for other Technology Classes (E.g. Schedule 3B for storage).

**Wider policy questions**

Any wider, potentially more complex policy questions around renewables and hybrids, the responding to recommendations of Dieter Helm etc. would be better suited to be part of the BEIS mid-term CM or EMR reviews. To be clear this request does not contradict the call for a market stabilisation CfD.

In addition to this recommendation we have reviewed Ofgem’s justifications in detail and have some detailed points in response to alleviate Ofgem’s concerns:

<b>What Ofgem write</b>	<b>Our view</b>
We believe that the Capacity Market should be a market-wide, technology neutral mechanism.	The State Aid terms and BEIS’s policy past papers specify that the CM should be a market-wide, technology neutral mechanism. We agree with Ofgem’s interpretation.
As the proposals note, the current exclusion of several technologies in Schedule 3 <i>could</i> form a barrier to entry to the market. Making these changes should help to facilitate innovation and, where it encourages new sites to compete, directly benefit consumers by increasing liquidity and competition in the auction.	The case of the entry of and the refusal to prequalify INON01 Glen Kyllachy Wind Farm is a clear demonstration that the exclusion of wind from Schedule 3 presents a block to entry to market.
However, we also recognise that some renewable providers have received subsidies as part of the Renewable Obligation and Contracts for Difference schemes. Once their subsidies have come to an end there is currently no Rule to prevent these generators from participating alongside new unsubsidised renewables.	The Rules should not prevent “these generators” (formerly in receipt of Low Carbon Support) from participating because the State Aid Clearance explicitly handles this question and states:  (18)...“Renewable generators receiving support through the Renewables Obligation (RO), unless they choose to forego receiving RO payments (they will be allowed to participate once their RO contracts expire)”.

<p>-----</p> <p>While this capacity would not be expected to affect the clearing price as it would otherwise be deducted from the target capacity, it would increase the total cost of the capacity mechanism for consumers as the total volume of capacity will increase. There is therefore a policy question of whether it is fair for consumers to pay for these generators.</p>	<p>It is quite clear that there should be no restriction on participating unless a unit receives both CM and another form of support and is thus overcompensated:  (145)... “The main reason for ineligibility is when capacity providers benefit from long-term support measures that would lead to cumulation and eventual overcompensation”.</p> <p>Under State Aid, the Rules allow any renewable generator not in receipt of Low Carbon Supported to compete. The precedent for schemes exiting Low Carbon Support to compete is already there- biomass, hydro etc.</p> <p>Regarding competition between new and old CMUs, new unsubsidised renewables are expected to be treated as New Build CMUs, while we would expect operational sites to be treated as Existing CMUs. Therefore, competition between them would be fair by virtue of the existing Rules.</p> <hr/> <p>We disagree that as a consequence of the change there would be a new need to procure more capacity, and that this would impact on consumer costs. It is a mistake if under current methodology Ofgem assume that end of subsidy sites will stay online to continue providing capacity for free in perpetuity.</p> <p>There is no guarantee that at the end of a subsidy scheme plant does not decommission.</p> <p>Indeed, existing wind farm life expectancy is around 20 years for old models, 25 years for newer sites. This would only be extended given the correct economic case for investment in repairs, refurbishment and operations.</p> <p>Therefore, the additional capacity needs to be covered via procurement anyway.</p>
<p>Adding new technologies to the Capacity Market is not simple. Currently the Rules do not contain a methodology to de-rate wind or solar technologies.</p>	<p>It was our understanding all along that NGET would of course have to consult on the de-rating methodology. It is unclear why this is impossible as part of the CM modification process.</p> <p>- The precedent for designing and</p>

<p>There may also be further consequential changes required to ensure these technologies are able to participate appropriately.</p>	<p>consulting on a more complex and novel approach to de-rating within a short time frame is provided by the storage derating consultation process.</p> <ul style="list-style-type: none"> <li>- A similar fast paced process could be run to correct for this.</li> </ul> <p>A wind de-rating factor can be establish based on existing methodologies that are in the Rules.</p> <p>E.on’s Modification is a carte blanche in terms of derating requests it is a simple request to add wind and solar to Schedule 3. While we accept that the CP313 recommendation of self-nominated derating would have necessitated consequential changes. We do not see the need for this with a centrally set existing derating methodology.</p>
<p>We are aware that some sites should be considered as “hybrid” as they may have multiple technologies which are co-located and interdependent. These sites would potentially need different de-rating factors to reflect this. We believe that before adding the technologies proposed there must be a comprehensive assessment of the appropriateness of de-rating methodologies and the existing framework of obligations.</p> <p>We therefore do not intend to take forward the proposed Rules changes in the current round. We intend to work with Government to assess the policy questions involved, to consider further the appropriate methodologies for de-rating wind, and to include co-located sites. To inform this further analysis, we request views on what technologies should be included in Schedule 3, for evidence on the likely level of participation by low carbon generators, and on the impact participation could have on existing pipelines of projects.</p>	<p>If complexities around hybrid scheme are a concern these questions can be deferred to the CM Mid-Term review.</p> <p>Separately, E.ON’s Modification is a simple solution to a simpler problem of omitted renewables only sites that are not in receipt of Low Carbon Support. This could be addressed in this year’s round of Mods.</p>