Electric Ireland Response:

Integrated Single Electricity Market (I-SEM)

Capacity Remuneration Mechanism (CRM) State Aid Update, 2019/20 T-1 Capacity Auction Parameters, and Enduring Storage De-rating Methodology

SEM-18-009

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1. RESPONDENT'S DETAILS

Electric Ireland's contacts for any clarifications or questions are given in the table below.

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2. GENERAL COMMENTS

Electric Ireland welcomes the opportunity to respond to this Capacity Remuneration Mechanism (CRM) Consultation concerning further transitional T-1 and initial T-4 auctions. Consistent with our previous responses, Electric Ireland views these consultation proposals from the perspective of a standalone supplier and as a representative of the customer.

We note the revised auction timetable and minor refinements to the methodologies which Electric Ireland broadly supports. We also note the material impacts of the further State Aid compliance requirements. In particular we note, in principle, the direction from the European Commission (EC) that:

- any auction awards to satisfy locational constraints should be on a 'displacement' rather than an 'additional' basis;
- the interim arrangements (effectively) preventing DSUs from participating in the ex-ante markets should be changed to allow DSU aggregators to earn energy credits and so to facilitate full participation in energy and capacity markets; and
- given appropriate reciprocity, cross-border CRM participation should be facilitated.

We look forward to contributing to the indicated consultation next month where we can consider how these principles can be implemented. In particular we favour pragmatic solutions which avoid adding further complexity to the I-SEM. However we acknowledge that this may be very challenging in the case of cross-border participation given the stated intention also to hold combined ancillary services and capacity auctions.

We are particularly concerned about the proposals to simply / conveniently de-rate DSUs identically to 'Other Storage' when there are significant differences between the technologies and we set out our concerns in more detail in section 3.4 below.

While the thrust of the consultation has been to address further state aid requirements and to make some refinements to methodologies, the consultation is silent on any proposals to implement Secondary Trading of Reliability Options. Arguably the CRM arrangements are deficient without proper mechanisms to allow generators to offload obligations while on scheduled outages and to address early or late commissioning of new capacity. The interim go-live arrangements, where generators on scheduled outages don't make difference payments, further undermines the supplier hedge provided by the CRM. Given the consultation horizon going to the end of the transition period and beyond, Electric Ireland requests that the RA's set out when they propose to address this matter.

3. RESPONSE TO QUESTIONS

3.2 Section 3 – Auction Timings

3.2.1 1) Do you have any comments on the indicative auction timetable set out in this section?

Electric Ireland acknowledges the debate about whether or not all transitional auctions can be held before the first T-4 auction. The possibility that a generator may be awarded an RO in the T-4 auction but not in one of the intervening years (in a subsequent auction) is a serious concern especially given a 'sealed bid' auction format. The RA's appear to be willing to countenance this risk in order not to delay participation by new technologies which may well be necessary to address broader ancillary services requirements in the market.

3.3 Section 4 – CY2019/20 T-1 Parameters

3.3.1 1) Do you agree with the SEM Committee's minded to position to keep the parameters (excluding capacity requirement and de-rating factors) for the CY2019/20 capacity auction consistent with the CY2018/19 parameters?

Electric Ireland agrees with the proposed approach while emphasising that a full review must be undertaken in advance of the first T-4 auction.

3.4 Section 6 – De-Rating Factors

3.4.1 1) Do you agree with the proposed modification to the treatment of outages for small and embedded capacity in GB in the interconnector de-rating methodology?

Electric Ireland agrees that this is a sensible refinement to the methodology.

3.4.2 2) Do you agree with the use of a least-worst regrets approach to the choice of GB generation scenario used to set EMDF?

Electric Ireland agrees with the use of a 'least worst regrets' approach for EMDF purposes given this is consistent with the overall capacity requirement approach.

3.4.3 3) Do you agree with the approach that the EMDF need only be determined for the GB market for CY2019/20 in the absence of interconnection with other markets?

Electric Ireland agrees with this approach for the CY2019/20 auction.

3.4.4 4) Do you have any response to the storage related questions raised by the TSOs in their paper:

3.4.4.1 A. Do participants have any comments on the methodology for calculating DRFs for storage units as described in this paper?

Electric Ireland has some material general concerns regarding the validity of the LOLE modelling relating to both storage and DSUs:

- starkly differing DRFs are proposed down to granularities of half hour bands for other storage (and proposed also for DSUs) while the granularity of wind output (being applied as a load modifier) is only at the hourly level (and also understood to be averaged across several years and so smoothed)
- the impact of these differing granularities of inputs will be to have a much more smoothed net (load modified) demand curve than will be faced, given wind volatility, in reality
- LOLE values are calculated and aggregated at the *half hourly* level by comparing aggregate generation (net of probabilistic outages of fixed(?) duration) against this *smoothed* demand curve
- the methodology potentially understates the true level of LOLE and likely undervalues the capacity contribution of low duration storage / DSU units in addressing short term generation deficits

Electric Ireland believes that there are sufficient indications here that spurious accuracy is being extracted from a methodology that may be perfectly acceptable for conventional generation but which needs further review / amendment to deliver robust results down to half hourly granularities of duration for storage and DSUs.

3.4.4.2 B. In the absence of significant historical data, do participants consider it reasonable to apply system-wide outage statistics to new technologies (such as batteries)? If not, please provide alternative with justification.

Electric Ireland believes that it is reasonable to apply system-wide outage statistics until sufficient history is available.

3.4.4.3 C. Regarding Storage Units with Storage Volume sizes that are not a multiple of 30 minutes: Do participants have any comments on the TSO's preferred methodology for calculating DRFs for such storage units, i.e. interpolating between storage sizes? What other options do they believe may be more appropriate?

Given that the DRFs indicated are not linearly related to storage duration and that there are material differences between DRFs, the linear interpolation and rounding solutions proposed are not likely to be acceptable. Notwithstanding Electric Ireland's material concerns about the robustness of the methodology at half hourly granularities, a polynomial curve should be fitted to the discrete DRF values to derive the interpolated values.

3.4.4.4 D. Should storage units be allowed to apply a DECTOL to their De-rated Capacity? Please provide arguments to support your response.

Electric Ireland believes that where storage units have the system-wide outage statistics applied, these units should be allowed to apply a DECTOL to reflect the expected performance of their technology.

3.4.4.5 E. Should specific DRF values be published for units with energy storage volumes of 6.5 hours or greater? Are participants aware of potential projects that might make such a change appropriate?

Electric Ireland believes that publishing DRF values for a band covering "6.0 hours or greater" will be sufficient.

3.4.5 5) Do you have any response to the other energy and run-hour limited generation related questions raised by the TSOs in their paper:

3.4.5.1 F. Do participants consider that a unit's run-hour limitations (due to emission restrictions or otherwise) should be reflected in the Capacity Market Auction? If so, what mechanisms should be applied. If not, please provide rationale.

Electric Ireland notes the very different approach discussed for emission limited generation run hours (broad brush and approximate) to that proposed for other storage and DSUs (very detailed).

3.4.5.2 G. Do participants have any comments on the proposed approach for de-rating DSUs with limited Maximum Down Time?

Electric Ireland has material concerns about the proposal to use other storage DRFs to apply to DSUs:

- storage (discharge energy) hours are likely to be an intrinsic design feature of individual storage units and unlikely to change over a capacity year in contrast to DSU aggregators operating a portfolio of demand sites whose maximum down time could vary throughout the capacity year depending on:
    - the availability and operations of individual demand sites,
    - whether the source is pure demand reduction or back-up generation, and
    - whether there has been any turnover in the portfolio of demand sites – **these are totally different technologies and a copy / paste from 'other storage' to DSUs is not appropriate**
- given the rapid increase in wind penetration (and with future potential for solar) and the enablement of full participation in energy and capacity markets, DSUs can provide an important source of cost effective capacity including addressing short term deficits increasingly determined by wind volatility – as discussed in section 3.4.4.1, Electric Ireland has serious doubts about the validity of the methodology indicating rapidly falling DRFs with shorter run durations
- if System Non-Synchronous Penetration limits of 75% are to be reached, ancillary services will have to be increasingly sourced from the demand side so that in the medium term DSUs will be an important provider of both ancillary services and capacity – the market rules and capacity arrangements need to be developed appropriately to enable and facilitate this contribution
- Electric Ireland acknowledges the principle that DRFs reduce as unit size increases – in practice this means that capacity is more secure with five 20MW units than with a single 100MW unit which is either all on or all off – DSUs also provide a similar 'diversity benefit' by operating across a portfolio of demand sites but which is not recognised in the methodology

Without further analysis being provided and without the robustness of the LOLE methodology being validated down to half hour granularities, Electric Ireland believes that

DSU DRFs should not vary depending on Maximum Shutdown Time. In no outcome should DSU DRFs be further reduced until such times as DSUs are able to participate in both (ex-ante) energy and capacity markets on an even basis with conventional generation and storage units.

3.5 Section 7 – Long-Stop Date and Termination of New Capacity

3.5.1 1) Do you agree with our revised proposals for Long Stop Dates and Substantial Financial Completion dates as set out in the section, and summarised in Table 4.

Electric Ireland agrees with the proposed approach to Long Stop Dates and Significant Financial Completion for 1-year Reliability Options. It is necessary to address this loophole in the rules to avoid customers having to pay for capacity that is not delivered and to avoid exacerbating hole-in-the-hedge issues (latter also requires full DSU market participation to be enabled).