Brookfield

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RE: I-SEM Capacity Remuneration Mechanism

Dear Mr. Quinn and Ms. Downey,

Thank you for the opportunity to engage and provide our feedback on the second I-SEM Capacity Remuneration Mechanism Consultation.

Brookfield Renewable Ireland is part of Brookfield Renewable Energy Group, one of the largest publicly-traded pure-play renewable power platforms globally with over 7,300 MW of hydroelectric and wind capacity across 14 power markets and in excess of 450 MW of operating wind capacity in Ireland. As a 100% renewable generation portfolio, Brookfield offer a different perspective on the consultation response than other market participants due to the unique challenges we with the implementation of the I-SEM market redesign.

The recent consultation recognises that capacity providers should not be exposed to excessive risk. Brookfield believe that the risk associated with the current design even with stop-loss limits in place will prove prohibitive to wind.

- The capacity market should aim to facilitate wind's participation to reflect its contribution to security of supply.
- Reconciling winds undelivered volumes against balancing market prices will introduce additional risks that could prove prohibitive to winds participation. The proposals to introduce administered scarcity pricing magnifies this risk. We believe that is in inappropriate to settle undelivered wind volumes against balancing market prices as wind is not able to respond to scarcity signals. Sharp balancing prices are appropriate to incentivise robust forecasting but cannot provide a signal for non-dispatchable generation to be available during periods of scarcity.
- Voluntary participation or stop loss limits, as proposed do not adequately address these risks for non-dispatchable generators that are exposed to balancing market prices (up to ASP) for any undelivered volumes.
- It is Brookfield's view that this capacity market design will preclude NIRO and merchant generators from an established revenue stream for the equivalent firm capacity that they provide in addition to subjecting them to penal balancing prices.

Above all it is paramount that the REFIT economics must be maintained. The REFIT floor net of all option fees, difference payments and for generators who opt out of the CRM must be upheld. Any erosion to the REFIT floor price effectively represents a retrospective change to the support tariff and damages Ireland's reputation as a location for inward investment.

Brookfield support the market integration of wind and introduction of balance responsibility to intermittent generation. We would welcome the opportunity to engage with the RAs to develop an appropriate set of incentives for wind consistent with maintaining REFIT economics. However, any reform must be introduced in a gradual way in line with the

development of a liquid intraday market that will allow balance risks to be managed. The requirement for a liquid intraday market is mandated by EU State Aid guidelines which state:

> *"beneficiaries are subject to standard balancing responsibilities; unless no liquid intra-day markets exist"*

I will be pleased to discuss these points or any more in relation to I-SEM in more detail. The remainder of this response answers the questions put forth in the consultation document.

Kind Regards,

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Interconnector and Cross Border Capacity

Which of the approaches to the treatment of cross border capacity do you prefer and why? (For the Provider Led and Interconnector Led approach, please specify whether you prefer the "Performance based" or "Availability Based" variant).

No comment.

Should the de-rating of interconnectors be based on historic performance, or include forward modelling to project how its performance could change in the future?

No comment.

If there is a preference for the "Interconnector led performance based" approach there will be a need to allocate total interconnector flows between specific interconnectors. Which of the specific approaches set out in 2.4.6 do you prefer? These approaches were:

- **Balance interconnector utilisation;**
- **Pro-rata to interconnector metered flow; and**
- **Complex power flow modelling**

No comment.

If there is a preference for the "FTR led" approach, which of the specific approaches set out in 2.4.15 (net or gross) do you prefer for the allocation of non-day-ahead flows?

No comment.

If there is a preference for the "Performance based Provider Led" approach, which of the specific approaches set out in 2.4.25 do you prefer for the allocation of intra-day and balancing market trades?

- **As traded**
- **Pro rata to Reliability Option (in which case – do you prefer "gross" or "net")**
- **Ignore – all in Balancing Market**

No comment.

If there is a preference for the "Hybrid" approach:

- **Should this be paired with the "Delivery Based" or "Availability Based" provider led approach?**
- **Should Interconnector participation be mandated or voluntary?**

No comment.

Secondary Trading

Do respondents agree that direct secondary trading of Reliability Options should be permitted?

Brookfield support the secondary trading of ROs above the de rated capacity of generation units to allow protection from forced and scheduled outages. Providing a mechanism to protect plants from these outages will also reduce auction clearing prices and will deliver more value for the consumer. Secondary trading close to the delivery window could allow the participation of intermittent generators with more confidence in their generation forecast.

Should secondary trading of Reliability Options be via an organised secondary platform? If so, which one of the options is preferred?

Brookfield believe that there should be an organised platform for secondary trading of ROs. This platform should be a centralised exclusive route to the secondary market in order to drive liquidity, present fewer barriers to entry, promote participation and allow smaller market participants ability to value the secondary ROs. A centralised platform will also allow participants with larger RO obligations to find multiple buyers needed to cover their obligation.

Do respondents believe that "back-to-back" trading to lay-off exposure to difference payments should be permitted?

Brookfield see no reason not to allow back-to-back trading of ROs should a third party want to manage the risk for the RO holder.

With respect to the creation of a centralised Reliability Option secondary market platform:

Is there likely to be sufficient demand for secondary trading to justify the cost of the development of a centrally organised platform;

Brookfield do not believe that the development of such a platform would be cost prohibitive. Also, given that it is central to the design of the RO mechanism and that there are significant market power issues associated with bi-lateral trades Brookfield believe that it would be inappropriate not to provide such a centralised system that would reduce barriers to entry for participants.

Do respondents think that capacity providers should be allowed to acquire Reliability Option volume in excess of their de-rated capacity (plus the tolerance margin), and if yes, how the limit on Reliability Option volume for the net primary and secondary volume should be structured?

Brookfield believe that market participants should be permitted to trade in the secondary market to 100% of their capacity (net primary and secondary volume). The de rated capacity takes into account the forced and planned outages of generation units and is computed annually. Secondary trading occurs across shorter timeframes with less lead time where generators could participate with confidence in their availability. This will also ensure that there are sufficient unsold volume in the market to allow an RO to be traded in a secondary market. For example, a 400 MW plant on outage would need at least 9 other similar sized plants (90% de rated) participating up 100% net volume to cover its 360MW RO fully.

What limits should be placed on secondary trading timeframes, including: the timing of secondary trade execution - how soon after the auction should they be allowed, and how late in relation to real time delivery should they be allowed; and the length of the Reliability Option contract which can be traded?

Brookfield believe that forcing the trading of secondary ROs into a short timeframe ahead of the delivery window will drive liquidity in the market. Lengthy timelines would result in ROs being offered at times when participants are not as certain of their availability.

Should the Capacity Market Delivery Body maintain the processes and capability to undertake pre-qualification throughout the year, and what service standards are required for processing new applications?

No comment

Should a secondary acquirer of a Reliability Option start from a zero position against each "stop-loss" limit, or should the loss transfer?

Brookfield believe that if the stop loss limits are transferred with the RO, the new holder might have little incentives to be available at scarcity. In order that incentive remains, stop losses should be re-zeroed.

Detailed Reliability Option Design

Principle of Longer Term Reliability Options:

Do respondents agree that plant requiring significant investment should be able to avail of longer term Reliability Options?

No comment.

Do respondents agree that existing plant should be restricted to reliability options with a term of 1 year? Do respondents believe that longer term Reliability Options should only be available to new-build plant, or should also be available to existing plant where significant investment is being made to enhance or maintain its capability to provide capacity?

No comment.

Classification of plant as new, upgrade or existing

Do respondents have a view on which approach should be used to classify capacity providers as "new", "upgrade" or "existing"?

No comment.

Do respondents prefer the approach of classifying providers as "new", "upgrade" or "existing", please indicate your view of the criteria, evidence and thresholds that should be used to inform this classification.

No comment.

Maximum available Reliability Option lengths

Do respondents have a view on the appropriate maximum Reliability Option lengths that should be available to new-build and upgraded plant?

No comment.

How do respondents view the Reliability Option lengths in relation to the five generic frameworks set out in this section.

No comment.

Stop Loss Limits

Do respondents favour the I-SEM Capacity Year running from October to September, with annual stop loss limits applying over that I-SEM Capacity Year?

Brookfield support the proposed capacity year as it ensures that the period in which scarcity is likely to occur does not happen at the end of the capacity year when limits could have been breached.

Do respondents believe that "per event/day" and "per month" limits are required in addition to the annual stop loss limit?

Brookfield support the inclusion of per event and per month stop loss limits to allow intermittent generators to manage the risks of participation in the CRM. Having both monthly and event limits will also ensure that dispatchable generation has incentive to be available post event and in all calendar month, for the duration of the RO contract.

Which approach do respondents favour for the definition of the Per Day/event limit?

Brookfield support the 'single event' option as the definition of an event for a stop loss based on the rationale outlined in the consultation i.e. a series of events might "have a common cause, such as a cold spell of a week or two". Brookfield also believe that wind on the system at less than its defined capacity credit should be classed as an event for the purposes of stop loss limits. This would ensure equitable treatment of technologies as conventional plant are protected from unplanned outages through stop loss definition.

Brookfield believe that further consultation on the definition of an event is warranted.

Please provide views on the appropriate levels for the each of the proposed stop loss limits.

Brookfield support stop loss limits at the lowest end of the scale proposed and suggest that it is appropriate for wind to have different stop loss limits to conventional generation. Wind cannot react to scarcity pricing when the system is scarce. Stop loss limits in excess of the annual option fee could prove prohibitive to wind.

Implementation Agreement

Is a period of four years from the Auction Date to the start of the first Delivery Year appropriate?

Does setting the Long Stop Date at 18 months after the start of the first Delivery Year strike the correct balance between the costs incurred by the market and the ability for delayed or longer-running capacity projects to be completed?

No comment.

Are the proposed milestones reasonable?

No comment.

Are there any other milestones, especially prior to Substantial Financial Commitment, which could be used to add security to the delivery of new capacity?

No comment.

What proportion of the contracted capacity is appropriate to use to identify Substantial Completion?

No comment.

Is six-monthly reporting appropriate?

No comment.

Do any (or all) of the reports need to be independently verified?

No comment.

Does 18 months provide sufficient time after the Auction Date to achieve Substantial Financial Commitment?

No comment.

Is it appropriate to terminate a Reliability Option for failure to achieve Substantial Financial Commitment?

No comment.

Should failure to achieve any other milestones (within a suitable window) trigger termination of the Reliability Option?

No comment.

Is it appropriate to partially terminate a Reliability Option if it can achieve 'Minimum Completion? What level should be set for Minimum Completion?

No comment.

If a Reliability Option is terminated under the terms of the Implementation Agreement, should this project be 'sterilised' for a period of time following the termination and be unable to participate in capacity auctions?

No comment.

Should the I-SEM consider terminating Reliability Options if the information submitted as part of the qualification process is discovered to be false or misleading?

No comment.

Do respondents agree that the level of the performance bond should be based on a pre-estimate of the cost to the market of non-delivery of contracted capacity?

No comment.

Do respondents agree with the principle that the level of performance bond should rise over time, reflecting increased costs to the market? If not, what alternative principle should be used and why?

No comment.

At what level in €/MW does the performance bond create a serious barrier to entry? Does this differ for small vs large plant or for different technologies?

No comment.

Do respondents agree with the principle that use of a fixed €/MW level for all participants, regardless of size, to set the size of the performance bond does not fully capture the costs and risks to the I-SEM and that a more complex approach is needed? Do participants have an alternative preferred method for handling the greater risks to the I-SEM created by larger new capacity projects?

No comment.

How should the level of the performance bond change over time? Should this have any link to the milestones?

No comment.

Do you consider that the Time To First Delivery (/Time to LSD) proposed here for the CRM should also apply equally to the delivery of System Services under the DS3 arrangements? If you consider that the time (s) should be different, on what basis / what rationale should they differ?

No comment.

Level of Administered Scarcity Price

Which of the options do respondents prefer (and why) for the enduring level of the Full Administered Scarcity Price (FASP)?

The RO, as proposed, provides a hedge for consumers, suppliers and conventional generation against ASP. The risks to wind generators participation in the RO are recognised by the RAs who have made their participation discretionary, contrary to the mandatory participation of other market participants. Wind is not protected from the ASP and is also the only one of the aforementioned participants that cannot modify their behaviour in the market to react to scarcity signals. The design of the RO does not exclude penalising wind generators even when delivering above their Generation Adequacy Statement assigned capacity credit. Furthermore, for wind generators who opt out of the RO and for volumes above the de rated capacity assigned, this exposure is uncapped, unlike RO holders who are protected from loss of revenue by stop loss limits. Brookfield believe that it is not appropriate to expose winds out of balance volumes to administered scarcity price especially those that have opted out of the CRM, as ASP is introduced in the CRM as an incentive.

Brookfield also believe that ASP will also disincentivise day-ahead participation for intermittent generation due to the risk of exposure to balancing market prices for unrealised volumes. There are significant concerns regarding the delivery of a liquid intraday market. Without this tool to mitigate exposure to balancing, wind will be further disincentived from day ahead participation. Stop loss limits have been proposed so as not to expose generators to excessive risk. Non-dispatchable generators who opt of the CRM have an uncapped exposure to such price events for undelivered volumes at delivery time. Brookfield believe that the level of administered scarcity pricing should be minimised and therefore propose that the existing SEM PCAP is retained.

Do respondents agree with the definition of full load shedding (when Full ASP applies) as set out. If not please explain why, and your proposed alternative definition.

Brookfield do not see the need for additional complexity to the definition of load shedding. FASP should only be applied at the point of load shedding. There are no market signals for the other events that trigger an Eirgrid red alert. Frequency and voltage deviations should be managed through the DS3 and system services, not the capacity mechanism.

Do respondents agree that virtual bidding removes any incentives on capacity providers to withhold power from the DAM or the IDM to sell in the BM? Do you agree that this applies regardless of what market power controls are placed on DAM, IDM and BM bids? Do you agree that this applies regardless of the level of the Full ASP? If you do not agree, please explain why.

No comment.

If stakeholders consider that it is appropriate to set the Full ASP at a lower level for an introductory period they should also set out, how long that introductory period should be and why, or alternatively the principles that the SEM Committee should employ in deciding when to move from the introductory full ASP to the higher rate full ASP.

No comment.

If you favour a different level of Full ASP, either for an introductory period, or after any introductory period, please indicate the level and justify your response.

No comment.

Do respondents agree with the proposed approach of using a static approach to setting the piece-wise linear ASP function at the inception of the I-SEM, and if not why not? If yes, do you agree with the proposed approach of setting the piece wise linear equation as a function of the remaining MW of available operating reserve?

Brookfield agree with the simple piece wise linear function proposed. Although we would like to re-iterate that we believe that ASP as proposed is too penal for wind.

What should the value of X in Figure 12 be?

Brookfield believe that this figure cannot be consulted on without knowing the value of ASP and that this figure will need to be referenced to the strike price as well as FASP.

How far in advance of the start of the Capacity Delivery Year should the piece-wise linear function be set. Does this need to be before the T-1 auctions?

No comment.

Do respondents think that any changes need to be made to the governance of the target operating reserve policy. If yes, what are these changes?

No comment.

Transitional Arrangements

Which of the suggested options (annual auction, block auction, do nothing) do you prefer?

The magnitude of the ASP exposure coupled with the loss in capacity revenues and the implementation costs of participation in I-SEM will result in substantial risks and costs to wind generators. The impact of the stepped transition caused by a drastic change in the capacity payment mechanism could be softened by the re-introduction of the glide path option for the transitional arrangement capacity payments. Brookfield understand that the option was removed by the SEM committee for fear that it would not comply with EU State Aid requirements. However, Brookfield feel that it would be suitable as a mechanism to wind down the SEM capacity payment mechanism before the introduction of the enduring capacity remuneration mechanism. Brookfield support the inclusion of the glide path option and favour that option for the transitional period.

If you prefer the do-nothing auction, do you believe this should be accompanied by relatively low levels of Administered Scarcity Price?

Brookfield do not support the do-nothing option.