Brookfield

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Sorne Wind farm, County Donegal, Ireland

Brookfield Renewable Ireland

Response to
I-SEM Energy Trading Arrangements Detailed Design
Building Blocks Consultation

Submission Date: **25th March 2015**

Introduction

Brookfield Renewable Ireland Limited (Brookfield Renewable) is a wholly-owned subsidiary of Brookfield Renewable Energy Partners, one of the largest publicly-traded, pure-play renewable power platforms in the world. Our global portfolio consists of approximately 6,700 MW of installed capacity, primarily hydroelectric and wind power generation which is diversified across 72 river systems and 13 power markets in the United States, Canada, Brazil and in Ireland and Northern Ireland.

Brookfield Renewable completed the acquisition of the wind generation assets of Bord Gáis Éireann in June 2014 which included 320 MW of wind capacity across 17 wind projects in 8 counties in Ireland and Northern Ireland. Since then, Brookfield Renewable has brought 125 MW of wind generation to commercial operation and now have an operating portfolio of 445 MW. Additionally, Brookfield Renewable plans to expand its portfolio and has an extensive development pipeline of approximately 200 MW of wind across Ireland and Northern Ireland, including a tidal generation project off the coast of Northern Ireland.

Brookfield Renewable welcomes the opportunity to respond to the consultation on the Building Blocks of the Energy Trading Arrangements within the I-SEM Detailed Design Programme. The I-SEM Market redesign will represent a fundamental shift from Ireland's current energy market design and, as a recent entrant to this market, Brookfield Renewable are concerned about any changes to the existing market with particular regard to the treatment of wind generation. Given that wind generation will represent 40% of the all-island market in 2020, it must be central to the design of the I-SEM market arrangements. These arrangements must also recognise the conditions under which investment in a substantial share of the wind generation fleet took place, and the commercial and operational impact that significant changes will have on wind generators, such as introducing balance responsibility.

The topics addressed in this consultation are of the upmost importance to wind generators and Brookfield Renewable would like to underline the importance of continuity with regards to their treatment. The I-SEM High Level Design seeks to retain current arrangements where possible within the new market arrangements and this is key to retaining confidence in investments already made and for the substantial levels of investment required to meet ambitious renewable energy policy objectives.

Summary of Our Position

By 2020, wind generation will meet 40% of the island of Ireland's electricity needs through an indigenous, sustainable and renewable energy that protects consumers from exposure to volatile gas, coal and carbon markets. Wind will become the second largest generation class in the market and must remain central to the I-SEM market design for these benefits to be realised.

Any erosion of the commercial position of existing wind generators amounts to retrospective changes that would be extremely damaging to the I-SEM's attractiveness for investment. Such an approach will damage the regulatory and commercial certainty that investors need to enable delivery of renewable targets and must be avoided. Increased regulatory risk and volatility has a direct effect on the ability to finance wind projects. The SEM is competing with other jurisdictions to attract capital and a stable regulatory and market regime is essential for growth in renewables to continue. Recognising that changes are required, we urge the SEMC to ensure that I-SEM Detailed design and market arrangements protects the commercial position of existing generators while promoting the objectives of the European Target Model. To this end, market participation must be incentivized instead of merely introducing additional risks and costs which increase the investment risk profile for current and perspective market participants.

The decision to remove Compensation for Curtailment from 2018 must be reopened. Its removal not only discriminates against wind generation for what is another network balancing issue over which wind generators have no control, it also removes the commercial incentive for the TSO to deliver mitigating measures such as the delayed DS3 Programme. By removing the incentive to reduce curtailment actions it would have the perverse impact of removing signals for additional flexibility in the market.

Brookfield Renewable **strongly disagree with the SEMC's initial view regarding the Treatment of Firm Access**, which would cash non-firm generators out at the imbalance price thereby exposing them to a price risk which would disincentivise participation in the ex-ante markets by non-firm generators. This is contrary to the I-SEM High Level Design where the SEMCs stated aim is to encourage participation in ex-ante markets. Our view is that the value of firmness should be retained in the I-SEM. However, non-firm generators must not be dis-incentivised from participating in ex-ante markets and should be cashed out for constrained

down volumes at the weighted average price of their ex-ante trades (and the imbalance price for volumes additional to their ex-ante trades).

Absolute Priority Dispatch must be maintained in the I-SEM as provided by the RES Directive and transcribed into Irish law. The proposals put forward to realise this are accepted where a priority dispatch generator must register as a price taker in the ex-ante market. However, there should be no requirement for wind generators to submit Physical Notifications to avail of priority dispatch and their actual availability should be used subject to their level of firm access, as is currently the case.

We welcome the pricing proposals made with regards to the Treatment of Constraints and believe that the current SEM policy that compensates (firm) generators for constraints on the basis of their availability must be retained. This includes generators who did not participate in the ex-ante markets in I-SEM, who should receive the imbalance price for constrained volumes based on the difference between their availability and their actual output.

In principle, we believe that **Transmission Losses for Generators should be uniform** across all generators as they are ineffective as locational signals in a market with a 40% renewable target where renewable generation sites are dictated through the Gate network connection process and the strength of the renewable resource. Notwithstanding this comment, we believe that in the interests of clarity the inclusion of losses in a participants market bids should be exclusively managed by the participant across all markets. The proposal to include separate losses for the both interconnectors is welcomed.

Brookfield Renewable **agree with the proposals put forward in the consultation to retain De-Minimis Levels of generation at up to 10MW**, given that barriers to entry from small generators must be minimised and they already face substantial change due to the additional requirement to forecast their output in I-SEM.

We also support the proposals for the **Treatment of Currency** which is to socialise the cost of operating a dual currency market through a supplier tariff set on an ex-ante basis with a reconciliation of any differences from one tariff year to the next.

Without prejudicing the outcome of the Market Power work stream, which we believe is relevant to the Treatment of Market Information, **we support the proposals in the consultation to retain the high levels of transparency with Market Information** in the current SEM. Furthermore, we believe that the availability of market information should be enhanced through publication of additional information in a more timely fashion. As well as helping to mitigate market power concerns it also reduces barriers to entry, aids price formation and is a requirement to enable market participants to make informed trading decisions necessary to hedge price, volume and balancing risk in I-SEM.

1. Treatment of Curtailment

The Curtailment of wind generation should be recognised as a network balancing action in I-SEM that is no different from other constraints over which generators have no control. Compensation for Curtailment must not be removed in the interests of fairness and to avoid removing the incentives for the flexible solutions needed to facilitate the requirements of a system with high levels of variable generation.

Curtailment of wind generation is a network constraint which is no different from any other network constraint such as transmission line outages for example. Consequentially, we believe that curtailment actions should be treated in precisely the same manner as network constraint actions where generators with firm access to the network are compensated for foregone market revenues. To do otherwise is discriminatory towards wind generators.

Furthermore, we believe that removing compensation removes the signals both for the TSO to deliver curtailment mitigation measures such as the DS3 program (which has incurred substantial delays) but also removes the signals for additional flexibility that would facilitate more wind and reduce the constraint costs that consumers pay for. As such, we believe that removing compensation for curtailment actions is incompatible with the market design of I-SEM.

Brookfield Renewable requests that the SEMC reopen the decision to remove compensation for curtailment from the beginning of 2018.

As compensation for curtailment will be in place when the market goes live, arrangements are needed to facilitate the compensation of curtailment. Curtailed wind generators should be compensated for foregone revenues through the balancing market in the same way constraint payments will be applied.

If compensation for curtailment is removed, wind generators would at a minimum have to be brought back to a revenue neutral position compared with their ex-ante market revenues. This treatment is discussed further below under the non-firm proposals put forward in the consultation which we strongly disagree with. To expose generators to an imbalance price due to a network balancing action over which they have neither the ability to control nor predict accurately is discriminatory, inefficient and will result in the benefits of the low marginal cost of wind generation being lost to consumers.

2. Treatment of Firm Access

The value of firmness should be retained in the I-SEM. However, non-firm generators must not be dis-incentivised from participating in ex-ante markets.

The principle of firmness relates to a generators physical access to the grid. Non-firm generators differ only from firm generators as the physical infrastructure required for reinforcement of the network resulting from their addition to it has not been completed. In the current SEM non-firm generators are dispatched away from their market position through constraint actions and do not receive compensation. We believe that this principle should be retained in the I-SEM Energy Trading Arrangements.

However, non-firm generators should not be disadvantaged with regards to participation in ex-ante markets. The I-SEM High Level Design decision states that "it is the expectation of the SEM Committee that commercial incentives and other aspects of the market rules will encourage a very high level of participation in the DAM"[1], participation that is needed to guarantee the liquidity, price discovery and competition that will deliver greatest value to consumers. In our view, the option put forward to cash out constrained non-firm volumes at the imbalance price is contrary to the I-SEM High Level Design's stated aims.

Brookfield Renewable welcomes the elimination of the option to limit generators ex-ante trades to its Firm Access Quantity (FAQ) as this option would have a clear negative outcome which by excluding non-firm generation from the Day Ahead market (primarily wind generation) would result in higher prices for consumers.

We firmly oppose the option put forward to cash out constrained non-firm volumes at the imbalance price. This option exposes generators to the financial risk of not being able to deliver on their non-firm power which, by settling at the imbalance price, exposes non-firm generators to the price differential between Day Ahead and imbalance prices. This exposure will not only disincentivise participation in the Day Ahead market but will also negatively impact on the financeability of projects with an initial non-firm connection due to the difficulty in quantifying the price risk that non-firm generators will face.

[1] I-SEM High Level Design Decision (SEM-14-084) p12 (Section 4.3.2)

With regards to the settlement of non-firm generators who have been constrained down, the consultation states that the SEMC's initial view is that it should be cashed out at the imbalance price with the TSO notifying the generator if its non-firm access quantity cannot be facilitated thereby affording the generator the opportunity to trade out of its position in the Intraday market. In our view involving the TSO in such a manner is impractical, overly complex undesirable and inefficient.

Brookfield Renewable disagrees strongly with the SEMCs initial view as we believe that it will prove detrimental to both non-firm generation projects and ultimately consumers by disincentivising non-firm generators from participating in ex-ante markets.

We believe that the settlement arrangements must ensure that non-firm generators are revenue neutral if dispatched away from their ex-ante market position as this is equivalent to the current treatment of non-firm generators in the SEM. This can be achieved by non-firm generators submitting Decremental bids that allow them to recover the cost of non-delivery of their ex-ante trade. It can also be achieved through central processing that returns non-firm generators to a revenue neutral position (access to ex-ante trades taken would be required with this solution). The central processing solution is preferred and we note that it has also been proposed in the consultation to facilitate the unwinding of ex-ante trades where wind generators output is curtailed in such a manner, indicating that it is technically possible.

3. Treatment of Priority Dispatch

Absolute priority dispatch must be applied in the I-SEM where the output of a generator with priority dispatch must be maximised and the generators availability should be used to set its full potential output.

The principles of priority dispatch and access are set out in the RES-E Directive (2009/28/EC) and transposed into Irish law. Brookfield Renewable welcome the clarification provided by the SEMC through the I-SEM High Level Design decision that absolute priority dispatch will be retained. We would also like to reiterate that priority dispatch, along with the other obligations listed in the RES Directive, is a legal requirement and not a policy decision.

Brookfield Renewable agrees with the proposals that priority dispatch will be applied at the balancing market stage and should not affect generators participation in the Day Ahead market provided generators with priority dispatch are registered as price takers.

The consultation also proposes that generators with priority dispatch would be required to submit a Physical Notification to the TSO of their expected output. It is our view that this proposal is an unnecessary additional requirement to provide information to the TSO that in any case will most likely will be replaced by the TSOs own forecast for wind generators.

A generators availability signal should be used in place of the proposal in the consultation to request Physical Notifications, subject to firm access limitations.

4. Treatment of Constraints

Generators (with a firm connection) should be fairly compensated for providing system constraint actions and we welcome the pricing proposals made.

Brookfield Renewable welcomes the proposals made in the consultation regarding the treatment of constraints. As is the stated intention of the I-SEM High Level Design decision, current policy should be retained where possible and we believe that the current policy that compensates (firm) generators for constraints on the basis of their availability must be retained.

The consultation proposes that constraint payments are paid if generators are dispatched away from their ex-ante market position. However, this does not account for wind's priority dispatch rights, where they can deliver additional power to the balancing market. Clarity is sought that current arrangements will be continued where (firm) wind generators continue to receive compensation for constraints where their output is less than their availability.

Brookfield Renewable welcomes the clarity provided on the issue of availability through the recently published proposed decision on the Treatment of Outturn Availability of generators during network outages. While we continue to believe that in all instances of network outages a generators technical availability should be used to set its outturn availability in the market, we welcome that the proposed decision recognises the need to incentivise the Transmission System Operator and Transmission Asset Owner as the only parties who can work together to reduce the size, cost and duration of network constraints. However, we also wish to highlight the on-going lack of clarity around the treatment in the market of constraints on the distribution network, particularly given that 63% of the wind generation fleet is currently connected through the distribution network. Formal rules are needed to ensure that

distribution connected generators are treated in the same manner as transmission connected generators.

Brookfield Renewable welcomes the pricing proposal put forward in the consultation regarding constraints payment to compensate generators for lost profits by paying the higher/lower of Incremental/Decremental bids and balancing prices as appropriate for constraining up/down actions.

Flagging and tagging of network balancing actions and energy balancing actions will be crucial to the out-turning balancing prices and a transparent methodology for identifying both must be published in consultation with stakeholders. We look forward to addressing this issue in more detail in the forthcoming Market Design consultations. Similarly, in a highly constrained system such as the SEM, local market power considerations for generators behind a constraint must be addressed and the Market Power work stream is the appropriate forum to address these issues.

5. Treatment of Transmission Losses (TLAFs)

TLAFs are ineffective as locational signals and uniform TLAFs should be applied across all market participants in I-SEM.

The principle behind the inclusion of locational signals in the SEM is that they will influence the decision on where to locate generation. However, with the advent of renewable generation, this choice is often unavailable as generation should locate where the renewable resource is most abundant, which is often not close to centres of demand. Furthermore, the constant fluctuation of TLAFs from year to year further render their use as a signal for a long term investment redundant.

Brookfield Renewable are concerned that as losses are excluded in many other European markets, I-SEM participants would be effectively disadvantaged compared to other participants of coupled markets by accounting for transmission losses in their bids. This concern would be mitigated to a large degree by the adaptation of uniform losses across all generators.

Notwithstanding our view that transmission losses should be uniform, the consultation includes proposals around the inclusion of TLAFs in ex-ante and balancing market bids from

generators where ex ante market bids would account for TLAFs while balancing market bids (or physical notifications) would not account for TLAFs. Brookfield Renewable believe that, to the greatest degree possible, there should be consistency of treatment across all participants. This raises the issue for portfolios of wind generators where all sites have different TLAFs and how this would be managed in the balancing market. Brookfield Renewable support a pragmatic solution that is consistent and minimises unnecessary complexity and with this in mind we would support participants including TLAFs in their bids in all instances.

With regards to losses on the Moyle and EWIC interconnectors, we welcome the proposals to treat them separately (i.e. different loss factors for EWIC and Moyle). This will ensure that the most efficient asset is used and therefore the most efficient market outcome is achieved.

6. De-Minimis Levels

A De-Minimis level of 10 MW should be retained as the rationale for De-Minimis levels remains relevant in the I-SEM.

Brookfield Renewable support the proposal to maintain the De-Minimis threshold at 10MW as we believe that the logic still applies behind the introduction of a De-Minimis level below which market participation is not required.

In I-SEM, below De-Minimis generators will be required to submit volume forecasts, an additional requirement from current SEM arrangements. I-SEM arrangements must allow De-Minimis generators to be included as an element of a portfolio both for demand and wind portfolios. Requirements for unit forecasts for De-Minimis generation creates additional barriers to entry for small generation and must be avoided.

7. Treatment of Currency

The dual currency approach should continue with the (small) costs of currency exposures recovered through an ex-ante supplier tariff.

The current approach to operating with dual currencies results in a currency risk between when bids are submitted (D-1) and the market settled (D+4). The currency risk time periods in the I-SEM should decrease as the ex-ante markets become firm (Day Ahead, Intraday) thereby reducing the likely currency imbalance. Currency imbalances are currently socialised and considered immaterial relative to the size of the energy market. Moving to I-SEM's

financially firm ex-ante markets should result in lower currency imbalances. For this reason and for the need for clarity, Brookfield Renewable supports the proposal to project currency costs ex-ante and include an additional charge to suppliers.

8. Market Information

The transparent publication of market information in the current SEM should be continued and enhanced through publication of additional information in a more timely fashion as it helps to mitigate market power concerns, reduces barriers to entry, aids price formation and is a requirement to enable market participants to make informed trading decisions.

Brookfield Renewable believes that the high levels of transparency in the current SEM has been an important element in addressing market power, reducing barriers to entry and attracting investment and to this end we support the publication of market information that will retain this high level of transparency.

Market information additional to that provided in the current SEM will be required as the structure of the market changes and timely publication will be an essential requirement to ensure that market participants are adequately informed to make the commercial trading decisions needed to address price, volume and balancing risks. For example publication of forecast and actual Net Imbalance Volumes in the Balancing Market and Imbalance prices will be required to allow participants to optimally manage their balancing exposure. In the BETTA market, balancing prices are published as little as 15 minutes after real time, giving market participants close to real time information as to the cost of their imbalance exposures and enabling them to make commercial decisions to mitigate that exposure.

Without prejudicing the outcome of the market power work stream, it would be prudent to take the approach of replicating existing market data publication at this stage and where possible within the structure of the new market.

For example, bids should continue to be published but as there is no longer a requirement for Commercial Offer Data in the Day Ahead and Intraday markets this could be excluded. Technical offer data from the Balancing market should also be published as it is in the current SEM.

With an ex-ante market there will be a responsibility on participants to inform the market of issues at their facilities under REMIT and other compliance requirements. The manner in which this information is posted to/shared with the market should be as straightforward as possible. A centralised process through SEMO is favoured by Brookfield Renewable as it would remove the need for every market participant to separately post information and could also provide a central location to view all relevant market information, assisting transparency in the market.