Brookfield

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Sorne Wind farm, County Donegal, Ireland

Brookfield Renewable Ireland

Response to
Consultation on the Aggregator of Last Resort Framework

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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, most recently, 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 has an extensive development pipeline of approximately 200 MW of wind across Ireland and Northern Ireland, including a 200 MW tidal generation project off the coast of Northern Ireland.

Brookfield Renewable welcomes the opportunity to respond to the consultation on the Aggregator of Last Resort (AoLR) Framework as part of the Energy Trading Arrangements work stream of 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.

Our Position

We believe that it is appropriate at this stage of the I-SEM Market Design process that the Regulatory Authorities (RAs) consideration of an AoLR should focus on principles to be clearly agreed. Clarity on the principles and objectives of the AoLR will ensure that framework and solution can be put into place that meets those principles. It also allows for flexibility around the design of the AoLR solution, recognising that there are outstanding decisions on the I-SEM design that will impact on the operation of the AoLR..

Brookfield Renewable believe that an AoLR must provide an enduring viable route to market for wind generators that addresses the balancing risk and does not create a barrier to entry for commercial aggregators to enter the market. Commercial aggregators will provide innovation and efficiency to market interfacing arrangements for wind, which could otherwise be undermined by an overly prescriptive AoLR such as Option 1, the Portfolio Settlement Aggregator.

Brookfield Renewable believes that the options proposed to-date in this process do not fully meet this intent of establishing innovative and efficient aggregation options for Irish generators. In this sense we believe that an alternative solution would be optimal, using elements of the design of the UK Off-taker of Last Resort that provides a back-stop route to market whilst minimising set-up costs and does not provide a barrier to the entry of commercial aggregators. We also feel that the TSO is not well positioned to provide AoLR services given a significant potential for conflict of interest.

Finally, we feel that decisions on an AoLR framework should not be prejudicial to the on-going consultations on I-SEM. In particular, the broader principle must continue to be recognized that any erosion of the commercial position of wind generators amounts to a retrospective change that would be extremely damaging to Ireland's attractiveness for investment. While we support consideration of potential AoLR models at an early stage, we note that final decisions on these options may be premature in advance of key decisions on wind balancing responsibility and other arrangements in the I-SEM.

1. Principles of an Aggregator of Last Resort in I-SEM

An Aggregator of Last Resort should provide an enduring viable route to market for wind generators that addresses the balancing risk and does not create a barrier to entry for commercial aggregators to enter the market.

Brookfield Renewable firmly believes that for the AoLR to be a success, it must provide a viable route to market for all wind generators including merchant generators who may be out of support and also for prospective projects who will be seeking financing. In our view a backstop solution will only provide a genuine route to market if it addresses the balancing risk. Pass-through of balancing costs does not adequately address this risk and provide the certainty required from a viable route to market.

An Enduring Solution

The consultation and the I-SEM High Level Design propose a 'transitional' arrangement for an AoLR. Brookfield Renewable believes that the AoLR must be an enduring solution if it is to be of benefit to wind generators by providing certainty through. A viable route to market over the course of the lifetime of wind generation projects. Projects are financed over a lifetime of at least 15 years and if an Aggregator of Last Resort is only available for part of the project's financing lifetime it will have limited value as a route to market that will provide certainty to financial institutions to allow projects to secure financing.

An enduring solution also has the advantage of providing a floor-price or benchmark that should assist wind generators negotiating commercial off-take contracts. However, the delivery of an enduring solution should not undermine entry into the market of commercial aggregators and this can be achieved by structuring an AoLR solution that provides a route to market that is viable but not commercially optimal in terms of its price and services offered.

Eligibility and Volumes

The volume of wind generators that will use the AoLR is a key consideration in its design. If the volumes using the AoLR are very low it could mean that a different approach could be taken with its design to minimize set-up costs.

It is realistic to assume that wind generators that are currently contracted under Power Purchase Agreements (PPAs) to provide their output to suppliers are likely to use this

contractual framework as a route to market and will not need an AoLR while under these contracts. Wind generators in receipt of REFIT would most likely also be ruled out of using the AoLR as current REFIT rules do not allow for a change of PPA counterparty while the generator is supported. De-Minimus generators (<10MW) are currently treated in the SEM as negative demand which also excludes them from requiring the services of an AoLR. The remaining volume of wind generators is made up primarily of merchant wind generators who are out of support and operating as 'Supplier Lite'. Therefore, indications are that the volume requiring an AoLR is likely to be small and if the market for commercial aggregators develops the volume using an AoLR could be zero. Brookfield Renewable believes that the AoLR model chosen by the RAs must seek to minimise fixed costs.

The AoLR should be made available to wind generators of any size as an enduring back-stop route to market given that all wind generators face the same forecasting and trading challenges under I-SEM and that it appears the volume of generators that will require the AoLR will be limited initially..

Functions of an AoLR

The four functions proposed for the AoLR in the consultation are:

1. Undertake trading in the Day Ahead, Intraday and Balancing Markets on behalf of eligible generators;
2. Pooling of (imbalance) risks across the portfolio of AoLR users;
3. Assuming market responsibilities for AoLR users (e.g. signing up to Trading and Settlement Code);
4. Submission of physical nominations to the TSO.

The functions set out above reflect the range of actions that an Aggregator of Last Resort should provide.

A natural extension to the functions provided is to offer an offtake agreement fully manage a wind generators output (similar to the Offtaker of Last Resort function in the UK market). While this goes beyond offering a route to market, we believe that an offtake agreement may ultimately be needed to provide a viable route to market that addresses the balancing risk. Merely passing through the balancing risk to users of the AoLR may not deliver a viable route to market and thus render the AoLR useless. We would suggest to the RAs that this solution should be explored as an option.

Detailed Design of the AoLR

Brookfield Renewable welcome the opportunity to comment on the options put forward for an AoLR Framework in this consultation. However, we would highlight that there is still significant uncertainty as to how many elements of the I-SEM Detailed Design will be resolved. Included in this are the design of the Balancing market and imbalance prices, which will directly impact on the Balancing exposure faced by wind generators and as such will be an important element in the Detailed Design of the AoLR. The treatment of physical nominations and of De-Minimus generators are among the other areas of uncertainty that will impact on the design and operation of an AoLR. Finally, clarity is still sought on the compatibility of the REFIT support mechanism with the I-SEM and in particular with balancing costs in the new market.

For these reasons we believe that the design of the AoLR cannot be completed until the elements of the I-SEM Detailed Design are finalised and we request that the AoLR Detailed Design is not consulted on until these uncertainties are resolved.

2. The Proposed Aggregator of Last Resort Models

Option 1: Portfolio Settlement Aggregator

Brookfield Renewable rejects Option 1, the Portfolio Settlement Aggregator as set out in the consultation as we believe that it would act as a barrier to commercial aggregators entering the market.

- The cost of delivering this option as set out in the consultation would include high fixed costs, particularly if the TSO was tasked with delivering this option by developing the operational capabilities ring-fenced from its existing capabilities and hence eliminating any opportunities for cost synergies.
- This option provides the most comprehensive range of services of all the options proposed and for this reason there is a concern that it could act as a barrier to commercial aggregators.

Option 2: Individual Settlement Aggregator

Brookfield Renewable also rejects Option 2, the Individual Settlement Aggregator as set out in the consultation. We believe that this option does not provide a straight-forward route to market for wind generators.

- Under this option users are still responsible for submitting forecast volumes and trading strategies for the Day Ahead and Intraday markets. This would require substantial operational capabilities on the part of the users and is in our view contrary to the objective of the AoLR, which is to provide a last resort route to market for wind generators.
- Users of the AoLR will also be financially responsible for imbalances due to their submitted trading strategies and forecast volumes. For this reason this option does not address the balancing risk that would provide the certainty needed for AoLR users.

Option 3: Passive Aggregator

Brookfield Renewable believes that there are elements of Option 3, the Passive Aggregator, that are attractive such as lower set-up costs and transparency around expected revenues but does not offer adequate services to provide a viable route to market.

- The Passive Aggregator option could be absorbed into I-SEM system implementation costs if built into the market system as a mechanistic function that settles wind generators using an agreed formula. If, however, the service is not used, it naturally creates sunk costs that would need to be recovered unnecessarily.
- This option also demands that the aggregated generators assume market responsibilities (required signatories of the T&SC), which, in our view, reduces its viability as a route to market. Most crucially, this option would not access to the continuous Intraday market to mitigate wind imbalance volumes. Without this functionality, outturn cost to users of the service would increase and further reduce the viability of this option as a route to market.

Alternative Option

Brookfield Renewable believes that an alternative solution would be optimal and must be considered. We suggest that elements of the design of the UK Off-taker of Last Resort that provides a back-stop route to market whilst minimising set-up costs and does not provide a barrier to the entry of commercial aggregators.

- Another option could address the objective to provide a last resort route to market for wind generators and would not incur large set-up costs through its design. Such an option is based on the UK Off-taker of Last Resort model. The U.K. approach offers a penal discount to market prices and assumes balance responsibility for its users in exchange.

The penal charge for the Off-taker of Last Resort has meant that it has never been used by any market participants. However, its mere existence provides wind generators with certainty around an available viable route to market and it's floor price is used both in securing financing and in negotiating a commercial PPA agreements that address the balancing risk for wind generators.

- A similar approach could be used with the I-SEM AoLR where a discount from market prices of a fixed fee or a percentage could provide a viable last resort route to market that reflected the expected costs and revenues of wind generators in the I-SEM. This discount should be established through further consultation and through economic analysis that demonstrates its viability.
- The framework around the provision of such a service could address concerns around costs and conflict of interest. The AER Programme directed the ESB, who at the time had a monopoly on the supply of electricity in Ireland, to contract with successful AER applicants. This framework could be extended to direct other suppliers beyond an agreed threshold to submit a response to a tender for the management of an AoLR. This approach has the advantage of reducing costs by leveraging on the capabilities that large suppliers will require under I-SEM. Other commercial aggregators should not be prevented from responding to the AoLR tender.

U.K. Off-taker of Last Resort: Additional Information [1]

Contract lengths for a minimum of 6 months, maximum 1 year with capability to continue rolling over the contract if necessary and no commercial off-taker agreement has been secured.

Prospective users of the Off-taker service must notify the RAs which initiates a tender for the provision of AoLR services amongst suppliers (who are obliged to participate if above a certain market share) and any other potential aggregators in the market. If there is no requirement for an AoLR, the tender doesn't take place. Set up costs for an Off-taker of Last Resort are minimised by ensuring a tender for service provision only takes place if there is demand for the service and also that existing "aggregators" participate in the tender for service provision, minimising the need for investment in additional systems and capabilities to deliver the service. The generator pays a fixed discount on market revenues for which imbalance risks are assumed by the AoLR.

[1] Supporting Independent Renewable Investment: Offtaker of Last Resort (DECC Response, June 2014)

3. Governance of the Aggregator of Last Resort

Despite the possible requirement of additional legislation to enable the RAs to put the regulatory framework in place, we believe that the RAs are best placed to procure the services of and AoLR and to regulate their performance.

We have concerns that if the TSO was appointed as the service provider of the AoLR that conflicts of interest may emerge where the TSOs decisions to take energy and network balancing actions to alleviate constraints and curtailment could influence the treatment of an AoLR portfolio.

There are also a number of other areas of concern with regards to appointing the TSO as service provider including; The TSO's commercial incentive to maximise EWIC revenues, the duplication of cost of set-up if an AoLR function is ring-fenced within the TSO, the risk of cross-subsidisation creating a barrier to entry for commercial aggregators, the possible distortive impact on other TSO incentives such as minimising constraint costs.

4. Cost Allocation

The Allocation and levels of Costs will depend on the model chosen for the AoLR and the service provider. Brookfield Renewable urge the RAs to consider leveraging the capabilities of "aggregators" in the market through competitive tenders for the provision of the AoLR service which should reduce costs. Users of the service should bear its costs, subject to the principle that a viable route to market is provided.

- Under Options 1 & 2, if the TSO is chosen as service provider, the development of ring-fenced systems and capabilities would have a high fixed cost with the risk that the costs become sunk if there is no demand for an AoLR service. However, if these options were procured through a competitive tender from existing "aggregators", the cost of service provision would be far lower.
- Under Option 3 the costs of building a passive aggregator could be included as part of overall system costs for the I-SEM, thus reducing user costs when compared with developing a stand-alone AoLR. However, if there is no demand for an AoLR service, these costs would be sunk and would have to be recovered through some other means.
- Under the alternative option proposed, the user costs could be set through further consultation to set it at a viable level (as described above). Provider costs could be set

through a competitive tender where potential service providers would bid their required cost to serve.