
Brookfield Renewable

Response to SEM-17-029: I-SEM Policy Parameters & Scheduling and Dispatch Parameters

Submission Date: 9 June 2017



Sheena Byrne
Commission for Energy Regulation
The Exchange
Belgard Square North
Tallaght
Dublin 24

Kenny Dane
Northern Ireland Utility Regulator
Queens House
14 Queen Street
Belfast
BT1 6ED

Date: 9 June 2017

RE: SEM-17-029: I-SEM Policy Parameters & Scheduling and Dispatch Parameters

Dear Sirs,

Brookfield Renewable welcome the opportunity to provide feedback on the I-SEM Policy Parameters and Scheduling and Dispatch Parameters consultation published by the SEM Committee, who comprise of both the Northern Ireland Utility Regulator and the Commissions for Energy Regulation (the RAs).

Brookfield Renewable is part of Brookfield Renewable Partners L.P., one of the largest publicly-traded renewable power platforms, operating across Europe, North America and South America, with over 10,000 MW of hydroelectric and wind capacity across 15 power markets. Brookfield Renewable's Irish portfolio consists of 350 MW of operating wind capacity across 19 wind projects in 9 counties and a 200 MW wind development pipeline. Our power operating platform employs over 2,200 people globally, including full operating, development, construction oversight, and wholesale power marketing capabilities. In addition to operating a wind portfolio in the Single Electricity Market, Brookfield Renewable also actively trade power across the interconnectors between SEM and BETTA.

Brookfield Renewable have concerns regarding the volatility of the balancing market prices in I-SEM given the current market design in a small island electricity system with significant renewable penetration and unknown market liquidity. We believe that the consequences of failing to adopt a prudent approach towards parameter setting for market go-live could include:

- Volatile balancing market prices with insufficient intraday liquidity to balance traded positions
- Excessive balancing costs on smaller market participants which could result in smaller suppliers and generators going out of business
- Increased market power for larger participants

With this in mind, Brookfield Renewable request that the RAs ensure that there is a sensible transition from the current market arrangements and that the Price Average Reference Quantity (QPAR) is set at a level that mitigates against extreme volatility in imbalance prices.

We strongly oppose the recommendation that a QPAR of 1MWh be implemented for I-SEM go-live. This is the most extreme setting which increases the risk of volatile pricing, particularly during the transition phase following I-SEM go live. Given concerns about liquidity in the intraday market and model uncertainties (as detailed further below), we believe it is incumbent on the RAs to adopt a conservative approach to the QPAR parameter in I-SEM, at least as an interim measure until a liquid intraday market is established and sufficient operational experience is available to ensure a smooth transition to I-SEM.

Need to Mitigate Against Volatility

Volatile pricing in the balancing market presents a significant risk to renewable generators during the transition from SEM to I-SEM. In the initial period after go-live, participants will be adjusting to the new market and developing internal trading strategies and external trading arrangements. During this period, the risk of volatile pricing is higher than would otherwise be the case.

As referenced in the consultation paper¹, Elexon in their commentary on the BETTA market, which is noted to be of relevance to the I-SEM context, stated that

“reducing PAR could have a more detrimental effect on parties who fail to manage their imbalance positions adequately” and

“smaller participants, which historically have had larger relative imbalance volumes, could be expected to be disadvantaged by sharper price signals to a greater extent than other Participant Types”.

Given that market participants will be adjusting to the new market following go-live and unlikely to be trading optimally, it stands to reason that adopting the most extreme QPAR setting from the outset increases the risk of detrimental effects on participants and particularly smaller participants. Furthermore, renewable generators are disproportionately affected by volatile pricing because, unlike thermal generators, they have no stop-loss protection to balancing market administered scarcity pricing.

Given concerns about market power in the Irish market, placing disproportionate risks on smaller market participants, and in particular renewable participants, presents a risk to the successful transition to I-SEM. Brookfield Renewable therefore believe it is incumbent on the RAs to transition towards marginal pricing rather than adopt the most extreme setting from the outset.

¹ Section 3.2, SEM-17-029a Recommended Values for I-SEM Pricing Parameters, EirGrid, 10 May 2017

Concerns About Intraday Market Liquidity

A lack of liquidity in the intraday market will present significant risks to wind generators in I-SEM. Wind power is variable and unpredictable by nature and imbalances between day-ahead forecasts and metered generation will need to be offset. A liquid intraday market is therefore essential as it represents the only avenue for wind generators to trade their imbalance positions arising from forecasting error at the day-ahead stage. Otherwise they will be forced into the balancing market where they will be exposed to imbalance prices set by externalities such as other participant trading strategies.

Brookfield Renewable believe that market concerns regarding liquidity in the intraday market in I-SEM are well founded given a number of contributory factors such as;

- The original I-SEM design relied upon XBID, a cross-European continuous intraday market, to provide market participants with a tool to trade and mitigate exposures to imbalances. However, now the XBID market will not be delivered to I-SEM until at least 2019 and the interim intraday market design is still not finalised, despite I-SEM go-live being less than 1 year away.
- The Irish market is still dominated by a small number of large participants whose trading strategies can significantly impact intraday liquidity. The single cash out price might create incentives for portfolio participants, particularly those with thermal and renewable plant, not to trade in the intraday market as long and short positions net financially.
- In a new market, participants may not have developed the external trading relationships necessary to provide sufficient intraday liquidity at the time of go-live.

Concern about intraday liquidity is in fact noted by the RAs themselves in in the consultation paper² which states that the success of the transition from SEM to I-SEM

“is dependent on externalities such as the success of the ex-ante trading arrangements, particularly the liquidity of the intraday market”.

Given concerns regarding intraday liquidity and its importance for renewable generators, we believe it is essential that the RAs adopt a conservative approach to QPAR and average a sufficient volume to mitigate against volatile pricing in the balancing market, at least as an interim measure, until a liquid intraday market is established.

² Section 2.4, SEM-17-029b Recommended Values for I-SEM Scheduling and Dispatch Parameters, EirGrid, 10 May 2017

Concerns About Modelling Results

Brookfield Renewable have a number of concerns regarding the modelling approach used to determine the pricing parameter value. We believe that the modelling approach lacks robustness and suggest that the results obtained should not be used to inform decisions that could impact the commercial standing of market participants. We have commissioned a third party consultant; Baringa Partners LLP (Baringa) to review the modelling approach and the key findings are outlined below:

- Great Britain's electricity market, BETTA, has very different characteristics to I-SEM meaning any direct comparisons cannot be assumed to be representative of or applicable to I-SEM. Some relevant differences are;
 - BETTA is a mature market with experienced market participants, well-established trading arrangements and a liquid market. I-SEM by comparison will be a new market with inexperienced market participants, under-developed trading arrangements and untested liquidity, at least during the initial period of operation.
 - The physical reality of I-SEM differs to BETTA; I-SEM is a smaller market with a higher penetration of renewables relative to total installed capacity, potentially a steeper bid/offer curve in the balancing market and an expected higher proportion of constraint actions.
 - Aggregation is facilitated in BETTA while unit-by-unit mapping is used in I-SEM. This places a much larger risk on smaller participants and in particular intermittent generators in I-SEM compared to aggregated portfolios in BETTA and will impact on price volatility in the balancing market as units close out traded positions.
 - In BETTA, the imbalance pricing period is 30 minutes whereas in I-SEM, an average price for 5 minute periods within a given half hour are averaged to derive the imbalance settlement price. Over a 30 minute imbalance period, as implemented in BETTA, incremental and decremental bids used in the Net Imbalance Volume calculation are "netted off" each other which generally results in a less volatile price. In I-SEM by comparison, the shorter 5 minute Imbalance Pricing Period provides less opportunity for both incremental and decremental offers/bids to be accepted, and is therefore likely to result in more extreme prices in each 5 minute period, which in turn will lead to a more extreme price in the 30 minute average Imbalance Settlement Price.
- Short Run Marginal Cost bidding is assumed in the model. This is a serious limitation of the analysis in our view, as the 'simple' bids / offers used to price energy balancing actions, are not in principle limited to SRMC levels. Baringa's analysis of the neighbouring GB balancing market shows that significant mark-ups above SRMC levels are frequently observed in the pricing of bids / offers – particularly during periods of market tightness where pricing responds to system scarcity. Should pricing above SRMC levels emerge

under I-SEM, this could result in significantly higher imbalance price volatility for wind generators, than those captured in the model. We would expect the impact of this to be higher for lower QPAR values.

- Bid / Offer Pairs are not considered in the model thereby assuming that each market participant prices its entire bid / offer volume at a single price. Given this and that QPAR60 is low relative to the size of generators at the margin (typically 100MW to 400MW), it is unsurprising that the model shows a minimal differential between the results for QPAR values of 1 MWh and 60 MWh as the same generator is setting the price in both scenarios. We believe that this simplification is likely to mute the imbalance price and cost outcomes in the model.

We note that the RAs appear to express a lack of confidence in the modelling results for other parameters considered in this consultation paper, namely LNAF and SIFF, resulting in a recommendation to adopt a conservative and cautious approach for setting values for these parameters. This consultation paper³ states that:

“while every effort has been taken in the modelling work carried out, this cannot be a substitute to the actual market and system operation experience that will be gained after go-live.”“Given the large number of unknowns, we believe the application of the LNAF needs to be considered in this light”.

Brookfield Renewable are of the opinion that these modelling uncertainties and concerns also apply to QPAR and that a similarly cautious and conservative approach should be adopted with regard to the implementation of QPAR in I-SEM. We consider that a prudent approach would be to transition towards marginal pricing when the market is established and sufficient operational data are available to suitably inform a decision to change the QPAR value as required.

Experience from other European Markets

Imbalance pricing based on an average cost of balancing actions remains the norm in major European markets with examples including Germany, France, Spain and Austria. In Germany the imbalance price is based on the average cost of **all** of the energy balancing actions taken within each settlement period.

We note that in Great Britain, the market is gradually transitioning towards marginal pricing. While the stated intention is to move to a marginal QPAR in 2018, recent market outcomes have raised some concerns for the regulator, OFGEM, around the potential impact of marginal pricing on some market participants. These concerns in particular relate to the potential for volatile pricing which could push small independent players out of business.

Given the range of experience across wider European markets in which an average cost of balancing actions remains the norm, and the precedent of a gradual transition from average to marginal imbalance pricing in the

³ Section 2.4, SEM-17-029b Recommended Values for I-SEM Scheduling and Dispatch Parameters, EirGrid, 10 May 2017

neighbouring GB market, we believe the most conventional and prudent approach would be for the RAs to follow a similar transition towards marginal pricing in I-SEM.

Summary

Brookfield Renewable believe a cautious approach should be adopted with regard to the implementation of QPAR in I-SEM in a similar manner to the cautious approach adopted by the SEM Committee in relation to the LNAF and SNIF parameters. This would prevent extreme volatility in imbalance pricing and protect market participants following go-live, at least as an interim measure until a liquid intraday market is established and sufficient operational experience is available to ensure a smooth transition to I-SEM.

Should you require any further information in relation to the points raised above please don't hesitate to get in touch.

Kind regards,

David O'Sullivan
Regulatory Manager, Ireland

Brookfield Renewable
5th Floor, City Quarter, Lapps Quay, Cork, Ireland, T12 A2XD
T +353 21 422 3609 M +353 86 363 0101
david.osullivan@brookfieldrenewable.com

[By Email]