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Our ref: CEN\_CER\_LTR\_229

**Re: Response to the "Integrated Single Electricity Market (I-SEM) High Level Design for Ireland and Northern Ireland from 2016 Draft Decision Paper", SEM-14-045**

Dear Jean Pierre and Philip,

Coillte welcomes the publication of the SEM Committee's Draft Decision on the High Level Principles of the I-SEM Design (SEM-14-045). Coillte, as a commercial semi-state company operating in, inter alia, land based businesses including renewable wind energy across approximately 445,000 hectares in Ireland, has and will be a significant contributor to Ireland in it reaching its renewable targets by 2020 and we welcome the opportunity to respond to the I-SEM High Level Design Draft Decision Paper.

We note that this is the most important consultation for the industry in recent times and will have a significant impact on the future of the electricity system in Ireland. As an industry we are in the process of an energy transition, which is set to continue into the future, to an energy system with increased levels of renewable generation. **It is essential that the market design is fit for purpose for a market which will have 40% of electricity produced from renewables (primarily wind) in 2020, and that the suitability of the market for the trading of electricity from wind energy is given appropriate consideration from day one.** A long-term stable market which encourages investment and appropriately reflects costs is needed.

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We support many of the proposals within the document such as:

- the exclusive trading on Interconnector coupled markets, combined with the forward time-frame financial transmission rights. This gives the best opportunity for efficient interconnector flows to reduce curtailment.
  - The fact that there will be non-physical rights on the Interconnectors needs to be coordinated with the GB authorities. We advise checking that there are no unintended consequences for renewable export over existing interconnectors, or engagement with other certificate-based mechanisms which require demonstration of physical flows to UK customers.
- Gross bidding of generation, with some support for Price Takers to aggregate into a portfolio. This allowance for Price Takers must include, at a minimum, any wind generator sharing a support scheme type.
- Mandatory participation of balancing service providers in the balance market. This is important to increase the liquidity of price formation of the true marginal cost of energy balancing.
- A single price for imbalance settlement. This is of vital importance for the wind industry and is greatly welcomed.
- Non-mandatory participation in the day-ahead market. We support this flexibility, allowing wind generation to find the natural balance between day-ahead market participation (and the advantages that confers) with forecast accuracy and trading capability.

We strongly urge the SEM Committee to maintain these aspects of the Draft Decision when reaching conclusions on the final market design.

However, Coillte wishes to emphasise two areas within the Draft Decision where we believe further consideration is warranted, namely,

- The Imbalance Mechanism and Settlement
- Reliability Options

Coillte does not believe that the long-term sustainable delivery of renewable energy to the consumer is best served through draft positions taken by the SEM Committee.

### **Issue Area 1: Imbalance Price Formation and Settlement**

While Coillte supports the formation of a single energy imbalance price formed by participant offers to increment or decrement their position in the market, we are concerned that the choice to settle the market on the last marginal MW of balancing action is premature. Indeed it seems to be a Draft Decision at a level of detail far in excess of any other aspect of the High Level Design. It should suffice at this stage to set out the principles of the offers and the principles of the price formation, e.g. a balance market price set by energy balancing actions taken by the TSO, formed in a fashion not subject to unreasonable volatility. Apart from the detailed nature of the draft decision, we do have specific concerns with the choice of the marginal MW.

- The size of individual generators in the all-island market relative to the demand served, including the high number of inflexible plant with large start-up costs and high minimum generation, drives a potential trend that higher-priced generators with low start up and high marginal cost will be called for relatively small volumes to drive balancing actions. Such operation of the system may be down to the predictive skill of the central dispatcher and the day-ahead market schedule as much as it is to do true cost of production. Without understanding whether such events are going to be an issue, it is pre-emptive to jump to the conclusion that the marginal MW is the appropriate signal to be sending to the market.
  - Even with an ex post optimised schedule like in the SEM and ignoring uplift effects, odd price events can occur due to marginal scheduling calls. A dual-fuel generator in the early days of the SEM was occasionally called by the Market Schedule Programme for very small amounts of power (<1MW), setting energy prices for all consumers in excess of €500/MWh. Similar events may be more likely when energy balancing actions are called by operators who do not have the benefit of perfect foresight.

- When faced with potential unnecessarily extreme imbalance pricing, the imbalance arrangements move beyond an incentive to be balance responsible towards a pure penalty for variable generation. Irrespective of wind trader's procurement of best-in-class forecasting, some imbalances will be inevitable. It is reasonable for imbalanced parties to be charged for imbalance when those charges are reflective of the cost of imbalance. If 300MW of imbalanced generation must pay at a price set by 1MW of called OCGT ramping the price setting mechanism becomes a volatile, unpredictable and penal mechanism for rent allocation in the market. Such volatility can be argued to be good to promote investment to resolve the issue (volatility notwithstanding) but does beleaguer investment in market activities which are exposed to the volatility (e.g. renewables, independent supply). Careful consideration of the imbalance settlement can be a tool to protect the balance responsible parties, while protecting the market signals for investment in flexible services.

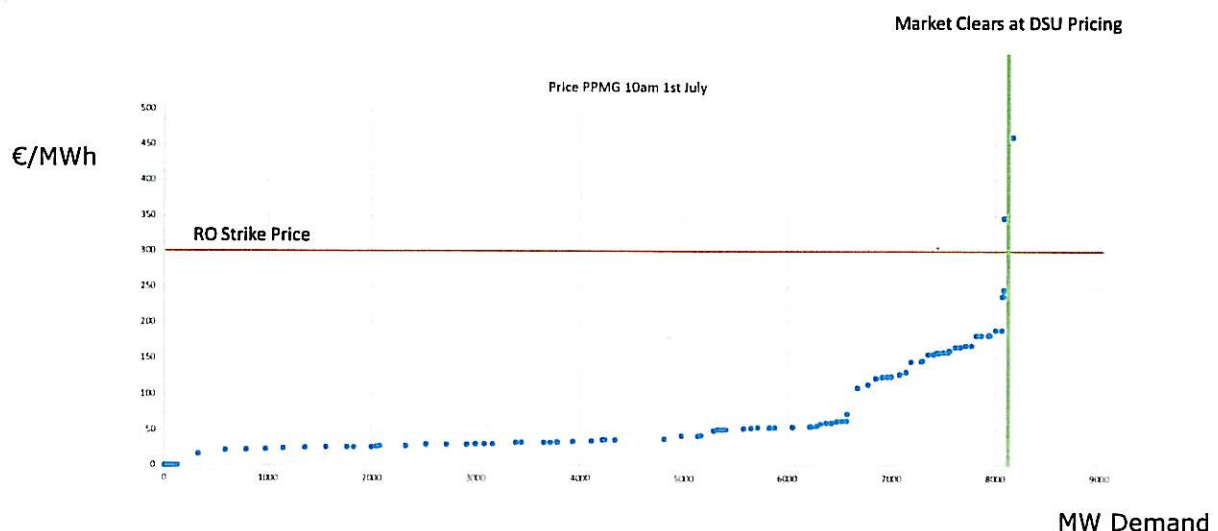
Therefore, we believe both the imbalance pricing and the imbalance settlement should be looked at in more detail. It should start from the principles of what these prices are intended to reflect, and what desired behaviours will emerge from the signals that should be sent.

### Issue Area 2: Reliability Options

IWEA have restated their preference for a long term price based capacity remuneration mechanism, and highlighted concerns around the proposed reliability options, noting that any design principle of a CRM needs to ensure that wind generation receives fair payment for its capacity credit contribution to system security.

We do believe that the reliability option impacts low marginal cost generation which has large impacts on market price through correlated changes in output.

By means of illustration, Figure 1 below represents the all-island predictable price maker merit order stack as seen at 10am of the 1<sup>st</sup> of July this year. It is assumed there is no wind providing low cost generation into the market. Demand is met by DSU reduction actions, setting the price in excess of €450/MWh. Assuming that the TSO set the CfD strike price at €300/MWh (i.e. representative of a strike price which demonstrates the system is under stress<sup>1</sup>), wind would be obliged to pay out on the CfD to the extent that it had cleared the Reliability Option.



**Figure 1:** Low Wind Day, Market Price and Reliability Option Formation

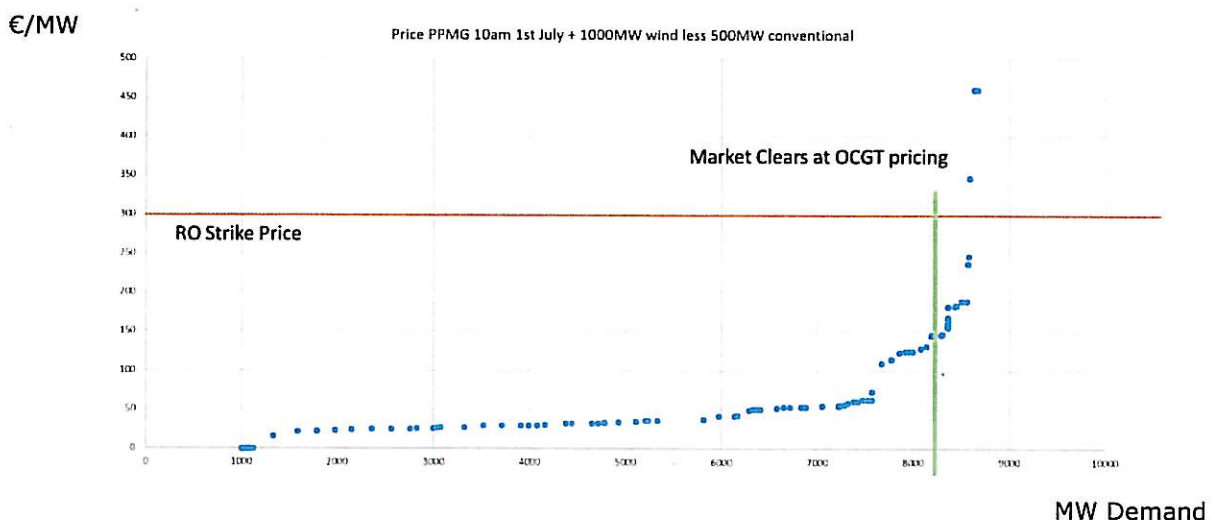
<sup>1</sup> Coillte in no way suggests this is an appropriate figure, as it would exclude Demand Side Participation from the market – it is done purely to demonstrate where the scarcity price originates in our examples.

This day-ahead price is based on the forecast wind output. If the actual out-turn availability of wind actually was 100MW higher and was traded in that fashion, prices would be set below €200/MWh and the Reliability Option would not be called. This creates a number of issues:

- Low cost wind generation, because of the “hockey stick” nature of the all-island merit order is uniquely susceptible to small forecasting errors resulting in triggered RO CfD payments, where no stress events might actually occur.
- Unlike other forms of penalty mechanism (which can be regulated and controlled) this is subject to market price manipulation. The all-island market has no view on BETTA participation in local day-ahead price formation, the majority of BETTA generators carrying no Reliability Option exposure.

Given the likely level of installed wind in Ireland, however, it is known that when it acts to deliver demand it protects all other unreliable generators from appropriate incentives to be available. Figure 2 sets out a scenario similar to Figure 1 with identical demand and an identical merit order, except 500MW of expensive generation is unavailable and there is now 1000MW of wind generation present. The unreliable conventional generation might not be available many such periods of equal demand to be served, but would never receive a penalty.

Finally, implicit above with the regulatory desire for efficient interconnector flows, is the implication that the reference market price will be the interconnector coupled day-ahead market. (It would be contrary to the choice of the variant Option 3 to drive liquidity into the imbalance arrangements). This means that generators which trip and drive security of supply events post Day-Ahead Market gate closure will not be required to pay out on the Reliability Option CfD, nor face a potential explicit penalty. (They would face the imbalance price for their non-met day-ahead trade). The Reliability Option will therefore fail to set an internally consistent penalty for failing to deliver reliable physical supply.



**Figure 2:** High Wind Day (1000MW), 500MW unavailable Conventional Generation

In summary, while giving wind no credit for its contribution to security of supply, the penalty mechanism based on market prices will result in wind (given its de facto market penetration) protecting otherwise unreliable generation. The penalty, based more than likely on day-ahead market signals, will also protect the unreliable generator that trips after gate closure. Overall, while the Reliability Options have a certain theoretical elegance, they are unsuited to Ireland known generation portfolio and historic issues of a relatively unreliable conventional generation fleet.

A price based mechanism is preferred by Coillte, but if a volume-based mechanism is chosen, then the penalties must be regulated and extra-market, to ensure wind gets paid its fair contribution to

security of supply and the other issues (free-riding on windy days, trips, BETTA pricing influence) are mitigated.

### **Discussion Point: REFIT and Balancing Payment**

Coillte wish to conclude with some important remarks in relation to the concepts of the market design's interaction with REFIT. While we recognise that such decisions and topics are outside of the vires of the SEM Committee, we are aware that the SEM Committee must be aware of the potential impact and interaction of such subsidies with the market design. We have a concern that such considerations may lead to assumed interactions which are premature of full industry discussion in this area involving the DCENR, and potentially may undermine the existing notifications made to Europe of the intent and design of the REFIT scheme.

A key critical issue for the renewable industry in Ireland is the interaction of REFIT with the market design. Two elements are vital. Intermediary arrangements must continue, and the opportunity cost payment must operate as currently.

This latter items requires some careful consideration. Too often, commentary regarding "a reference price for REFIT" has come to the fore from all sectors of the industry. Indeed, it is referenced in paragraph 5.4.74 of Page 48 of the SEM Impact Assessment: *"The emphasis in Option 3 on trading in the DAM will also help to provide a clear reference price for the renewable support arrangements in terms of REFIT and CfDs"*. It is important before choosing such a price what the intent of the REFIT scheme's protections to suppliers is:

- A opportunity cost payment (the REFIT floor), bringing a supplier's revenues from the onward sale (or utilisation for supply) of the power up to a reference value. At the moment there are different ways of calculating this value, based on two different reference prices in the Single Electricity Market: an above de minimis price and a below de minimis price (CER/08/236). In effect, a 5MW generator which chose to sell into the market as a generator would get a higher level of REFIT compensation than an identical 5MW generator that chose to sell into the market as negative demand. This is not a hypothetical construct; this has happened in the current SEM. Trading choices have driven the level of REFIT compensation against the opportunity cost payment.
- Secondly, it should be noted that neither in the SEM (as a consequence of the market design) or in the previous bilateral market has any supplier ever been exposed to the difficulty in forecasting renewable generation. Both in the SEM and the old transitional trading arrangements, REFIT compensation worked against an ex post balancing price where volumes were entirely predictable. It was never intended under REFIT that suppliers were exposed to the risk of matching ex ante trades with ex post outcomes. We will refer to this as "forecast imbalance risk". REFIT implicitly compensated suppliers for all forecast imbalance risk through the choice of difference ex post reference market (two differently priced markets in the case of the SEM) values.
- Finally, the "Balancing Payment" is designed to compensate a REFIT counterparty from risk that variable wind generation does not match a supplier's demand. This is a "portfolio balancing risk". In theory, a supplier could avoid such risk by contracting with a perfectly controllable generator at the same unit rate, and the balancing payment is designed to compensate REFIT suppliers from the lost opportunity of contracting with that hypothetical alternative generator.

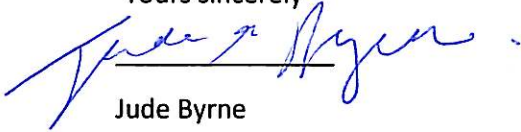
Transparency of revenue is important for REFIT generation. Clear, strong, liquid reference markets are an element of this. Choosing a single reference price, particularly one which exposes wind generators to forecast imbalance risk, however, would be contrary to the REFIT notification to Europe.

We provide this analysis of REFIT for the SEM Committee's own consideration, for further context when examining the potential for different incentives for wind generation to trade. REFIT wind generation – for the avoidance of doubt – will have many incentives to trade in the Day-Ahead Market. Superior pricing with the potential for upside, minimisation of cash-flow reconciliation under the R-Factor process, and indeed, dependent on market design, receiving potential compensation from being "DEC"ed from an earlier market trade. REFIT is not necessary to provide such incentives

to wind generators to trade day-ahead, nor would it be appropriate within the context of REFIT to do so.

In conclusion we would like to thank the SEM Committee for the opportunity to engage on this issue and to highlight the particular importance of this consultation given the significant implications it has for the viability of the wind sector.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'Jude Byrne', written over a horizontal line.

Jude Byrne

Director of Wind Energy