



RENEWABLE ENERGY SPECIALISTS

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Submission on:

Integrated Single Electricity Market (I-SEM)

High Level Design for Ireland and Northern Ireland from 2016

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Dear Mr Newsome, Dear Mr Miura,

We are renewable energy specialists, involved in project development and consulting, as well as energy policy advice. We are in the process of arranging finance and EPC contracting for wind farm projects. You will find further details of our activities and publications, as well as the bio of the undersigned, on our website.

We welcome the opportunity to respond to the recent consultation on the High Level Design of the I-SEM.

Firstly, we wish to endorse the submission made to you by the Irish Wind Farmers Association (IWFA). Since that submission addresses all of the questions you have posed, we won't enclose those replies with this submission, to avoid unnecessary duplication.

We also wish to express our disappointment that you excluded the IWFA from the I-SEM High Level Design Group. However, we very much hope that the responses to this consultation by the small wind sector, as represented by the IWFA, will form the basis for much closer engagement with us on the design and implementation of the

new trading arrangements, and that the concerns and interests of independent wind generators will be taken much more fully into account than has been the case to date.

Independent wind generation is fundamental to the future development of the power system on the island of Ireland. We will be central both to the de-carbonization of the sector and to ensuring that there is a genuine and thriving competitive element in the market, as a counter-weight to the large portfolio generators. Wind is also the island's best source of security of supply, at a point in time when we have been reminded of the vulnerability of gas supplies due to the emerging conflicts in Eastern Europe.

The design of the I-SEM will determine whether we, and future independent wind generators, will be able to participate. We are deeply concerned that several of the options under consideration would place wind generators in general, and small independent wind generators in particular, at a significant competitive disadvantage – to the extent that we believe many such projects would be forced out of business and no new independent wind generators would enter the market in future. If this were to happen, it would be to the long-term detriment of all electricity consumers on the island – competition would reduce and prices would rise as a result.

As presented in the Consultation Document, Option 4 is the only option in which we believe such projects could survive.

The Consultation Document is very frank that Option 1 has several features which "... advantage portfolio generators..." and that the ex-post imbalance price would be "... less attractive for wind..." than an ex-post pool price. The very fact that Option 1 is being considered when it is so openly acknowledged to tilt the playing field against independent wind generators is extremely worrying. This option would destroy our businesses and lead to a less competitive, less decarbonized sector to the detriment of all consumers. We can think of no modifications that would make it acceptable. It should, in our view, be rejected and taken no further.

Option 2 would, we fear, operate in practice in a very similar way to Option 1. It would be in the portfolio generators' interest to minimize the volume settled in the ex-post imbalance process. As a result, the ex-post imbalance price to which we will inevitably be exposed, will again be "... less advantageous for wind ..." than in a full ex-post pool. We know of no other market/country in which Option 2 operates. IWFA has set out the minimum modifications that would be required for us to be able to survive in such a model.

Option 3 is the worst of all four options for small wind projects. It has all the disadvantages of Option 1 and, in addition, such projects would be forced to trade in a day-ahead market at a time that will only add risk to our business. Markets should be created to enable us to manage our risks, not create additional ones. Forcing us to trade at the day-ahead stage, when we do not yet know whether the wind will blow, creates a potentially catastrophic risk for our projects. Being told that we can then manage that risk by active trading in Intra Day markets is of no comfort – we have neither the skills nor resources to do so, and in any case we would, at best, be trying to manage down an exposure that we should not have incurred in the first place! We (or our contract counter-parties) would inevitably still be exposed to the ex-post imbalance price – which, as the Consultation Document again acknowledges in respect of Option 3, would be "... less attractive for wind..." than a full ex-post pool.

Since publication of the Consultation Document, there has been informal talk of exemptions and modifications under Option 3. We have two major concerns however. First, the modifications and exemptions that are being considered must, in our view,

retain a single market somewhere in the new trading arrangements in which everyone participates. This is of fundamental importance to a small generator. We must be able to rely on the diversity of the entire system - if not the portfolio utilities will be at a huge competitive advantage. Secondly, in our view the interests of consumers on the island of Ireland will be best served by a set of trading arrangements in which small independent wind generators can participate fully and on an equal footing with all other market participants - rather than relying on exemptions and special rules to enable us to survive within trading arrangements that are ill suited to such a key segment of the market.

Option 4 is the only option that offers independent wind generators that level playing field. We strongly support the development of a full suite of forward and future markets, and would support 'market maker' obligations on portfolio generators to ensure a minimum volume of trading in those markets. It is essential, however, that these are underpinned by an ex-post imbalance mechanism that reflects the full underlying power system. It is inevitable that independent wind generators (or our counter-parties under contract) will be exposed to the imbalance price - every hour of every day. This price must pay us the full value of our energy on the system (no more, no less). Option 4 is the only option that provides a fully liquid, transparent market for setting that price on a timescale in which independent wind generators can participate. It will give the correct price signals to deliver an optimal plant mix over time, and can be coupled with appropriate ancillary service payments to secure sufficient flexible plant for system operation consistent with the 40% wind target. It also gives a clear and unambiguous REFIT reference price, unlike every other option.

We do not believe that possible concerns over demand side participation and efficient interconnector scheduling, hinted at in the Consultation Document in relation to Option 4, are valid. Quite the contrary, Option 4 is the option that will best incentivize optimal demand side management and interconnector flows. The best way to ensure that interconnector flows and demand decisions are correct when wind volumes are uncertain is to ensure that we have a single market price that accurately reflects the actual outturn characteristics on the entire power system (as in Option 4), and to give all participants the flexibility in the forward markets, particularly IDM (because it is nearer to live) to trade in order to drive export trades across the interconnector or to facilitate DSM. Everyone (i.e. not just wind generators) will try to improve their wind forecasts, and those who do best will make money. The danger of all other options is that these decisions will be made using imperfect day-ahead and intra-day prices (because (i) they derive from markets in which not everyone participates, and (ii) wind volumes are unknown), which will lead to more (not less) wind curtailment.

We note that concerns have been raised that we have recently seen simultaneous wind curtailment and imports in some overnight periods. We do not believe that this should occur in an I-SEM with a properly designed ex-post settlement price (that reflects strict merit order dispatch based on complex bids and generating plant technical characteristics, but takes no account of any system stability or constraint issues), flexibility in the IDM to enable trading to relieve curtailment and correct incentives on the TSO to minimize the cost of meeting system stability, transmission and other technical system requirements. Specifically:

- If wind is curtailed in both real time and the ex post unconstrained settlement schedule, settlement prices in the I-SEM under Option 4 will be very low and every participant will be incentivized to forecast those prices and export energy if GB prices are higher;

- If wind is not curtailed in the ex post unconstrained schedule, then the cost of curtailment (to pay the generator that is run out of merit and compensate the in-merit generator that is unable to run) must be borne by the TSO. The TSO will then be incentivised to keep wind generating and export the power if it is technically possible to do so.

It is essential, under any of the Options under consideration, that the TSO faces this incentive in respect of out-of-merit operation, so that it makes the economically optimal decisions on relieving those constraints for the long-term benefit of consumers. Import/export decisions that arise due to technical system requirements on the Irish system must, in any option, be to the account of the TSO. (We note that if the TSO were not incentivized to do this, and issues related to out-of-merit operation were left to market participants, some level of correct interconnector flows could still be achieved under Option 4. Any trader would see the opportunity to purchase energy from wind generators that were receiving no payment by being made idle due to system stability issues and would sell that energy to GB at a profit. Participant trading could, under Option 4, therefore achieve interconnectors flows, but would remove the incentive that should sit with the TSO to resolve those system issues).

If anomalous outcomes are occurring under the current SEM arrangements, these should be addressed (we note, for example, that a SEM paper of 2011 (SEM-11-072) identified issues related to frequency of access to interconnector capacity that may be hampering efficient price arbitrage on the interconnectors). Assessment of Option 4 should not be done on the assumption that those problems would be carried into the I-SEM. A properly designed ex-post imbalance price, flexibility to trade in the IDM and TSO incentives with respect to system issues should stimulate efficient interconnector flows. No other option under consideration will do so.

We are strongly supportive of the development of day ahead and intra markets, and would support the introduction of market maker obligations on the portfolio generators, within Option 4, to ensure that these markets are established with some agreed level of liquidity.

To further limit unnecessary cost burden on small generators, we propose an increase in the de-minimis level to 20MW in the new I-SEM arrangements. To minimize delay and disruption, we would wish to see all other SEM/CER directions (e.g. Tie Break arrangements) to remain unchanged, with one exception. SEMC's proposed removal of compensation for curtailment is discriminatory, contrary to the EU Target Model, causes a perverse incentive to curtail virtually free energy, and fails to incentivize the TSO and SEMC to develop the system to meet its obligations to renewables, and this proposal should not carry through to I-SEM under any Option.

We support the inclusion of a Capacity Remuneration Mechanism (CRM). We believe that the only option that solves the 'missing money' problem, and in which wind generators can participate, is a long-term price-based mechanism.

A short-term price based mechanism would be little better than a pure energy market. Capacity-based options impose penalties for non-availability that would (wrongly) prevent wind generators from participating. We suggest focusing capacity payments only on a 'reasonable margin' of plant on the system (so as not to keep old uneconomic plant on the system) and to periods of highest system load (so as not to pay capacity payments, for example, to imports overnight at the expense of curtailing wind).

In summary,

1. A fully liquid and transparent ex post imbalance settlement mechanism, voluntary day-ahead and intra-day markets, primed by market maker obligations on the portfolio generators, accompanied by a long-term price based CRM, will provide an entirely level playing field on which generators of all sizes and technologies can participate effectively. It would also provide the best reference price for the various renewable support schemes, while minimizing cost to the consumer (via the PSO). It is the only market model in which small independent wind generators have any real prospect of survival, in particular where they are out of support. And we must remember that all projects end up in that position after roughly a 15-year period.
2. Assuming the known existing anomalies and inefficiencies in the rules for the inter-connectors are resolved, the forward markets in such a market design could to some extent assist inter-connector flows and facilitate DSM, in order to relieve curtailment, even though no market can actually fix the root causes of curtailment. To really address that issue, there is a need for the TSO to be subject to at least some of the curtailment costs (which should be restored by SEMC) and constraining-on costs, arising from schedule adjustments caused by the under-development of the island's system, so as to incentivize the necessary and urgent improvements, which are the TSO's duty in any case (DS3, flexible plant, exit signal for redundant plant, mitigation of market power, etc). In the meantime, there is a continuing role of the TSO to trade out some of the excess power, in order to keep wind generators operating at or near their availability, while respecting the SEMC's 'tie-breaks' decision.
3. The result will be a thriving competitive market, which will drive efficiency and lower prices to the long-term benefit of all consumers. This is by far the biggest prize that the new trading arrangements should seek to secure.
4. All other options, as presented in the Consultation Document, would tilt the playing field so badly against wind generators, especially small independent wind generators, that even with a de minimis increase to 20MW (as we propose), many such projects could not survive. Competition would be severely weakened and consumers would suffer.

We thank you for your attention and consideration of this submission,

Yours sincerely,

Grattan C. Healy BEMech MBA, Director