



RENEWABLE ENERGY SPECIALISTS

PROJECT DEVELOPMENT / PROJECT CONSULTING / POLICY ADVICE

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Submission on:

**Integrated Single Electricity Market (I-SEM)
High Level Design for Ireland and Northern Ireland from 2016
Draft Decision Paper
SEM-14-045
9 June 2014**

Deadline: 25th July 2014

24th July 2014

Dear Mr Newsome, Dear Mr Miura,

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

May we first outline some details about ourselves:

1. We are:

project owners project developers land owners

service providers consultants other

2. We have involvement in:

___ MW of projects in operation at _____
 ___100___ MW of projects in development at ___Galway_____

3. We have involvement in:

Pre-Gate project(s)	___	Gate 1 project(s)	___
Gate 2 project(s)	___	Gate 3 project(s)	__X__
AER contract(s)	___	REFIT contracts	___
Out-of-support project(s)	___	Intermediaries	___
De minimis project(s)	___	Supplier lite	___

Firstly, we wish to endorse the submission made to you by the Irish Wind Farmers Association (IWFA). Since that submission addresses all of the main issues, we won't enclose the same detail with this submission, to avoid unnecessary duplication.

While we are relying on the IWFA submission to guide and inform us, the views expressed in this submission are our own, and we would ask that they be considered as such. Where we provide alternative views or solutions, we state a preference, as does IWFA. We do not expect that to mean that our submission is treated as 'inconclusive', rather that we are trying to be constructive and helpful.

In that regard, we might express our strong dissatisfaction with the way you treated the last set submissions from the IWFA members, which led you to dismiss Option 4 out of hand.

Now that we have considered your draft decision, we are even more alarmed than before about several very discriminatory aspects of the proposed High Level Design. We get a full sense of your approach to the development of I-SEM, and the implications for the energy sector on this island and specifically the wind industry. We consider that your approach is unnecessarily over-compliant with the EU's market requirements, for reasons connected with economic theory and ideology, to the point where it contradicts other aspects of EU law.

While we appreciate that the SEMC must design a market that adequately complies with the EU Target Model, derived from the 3rd package, you must also do so in compliance with the Renewables Directive. You have partly recognised this by maintaining priority of dispatch as a tenet of the new market. However proper compliance with the latter Directive would require you to be more careful in your treatment of renewables, in order to enable the Republic and assist the UK in meeting their binding renewable energy targets, more of which will be coming down the track. You should also give effect to 'guaranteed transmission', which to date you have completely ignored, instead using the threat of curtailment in this debate as a lever to get the renewables sector to accept your potentially damaging proposal. That proposal may meet the target model, but the wind industry here is generally concerned that it will severely damage the sector and therefore prevent us meeting the binding targets, thus causing us to breach the Renewables Directive.

As we all know only too well, this island is currently very exposed to energy security risks by virtue of its lack of fossil fuel resources, and at the same time is hugely endowed with its own renewable energy resources, some of which can now produce at a lower cost than the cheapest gas derived electricity. We will inevitably be seeking to go well beyond a 40% contribution to electricity from renewable sources as we move on to 2030 and towards 2050, ideally seeking to have all of our energy (never mind electricity) come from renewables in a reliable and secure manner. Given our location on the very Western edge of Europe, it is unavoidable that we have weak links with the rest of the European electricity market. With all of this in mind, we need to find our own way to implement these new rules to suit our own needs, and not just emulate the implementation by others (like the UK) of rules which are in fact more designed for continental Europe and its fuel mix.

The EU has recognised our unique position by granting us more time to comply, and that is a signal that they will also be flexible in how we comply, and we should take that signal and find a workable compromise. What we have before us is not appropriate.

Furthermore, given the extraordinary developments in the last two decades in IT, it is inevitable that the future system for trading electricity is one where feedback to consumers leads to a smarter market, where consumers can to some extent follow variable generation - what I might term an 'active' market. Unfortunately, what we see on the table is more of the same - a backward-looking design that lacks feedback, that presupposes little knowledge on the part of consumers and therefore requires generation to sheepishly follow consumers blind and instantaneous demand requirements - the traditional 'passive' model. That model suits dispatchable fossil fuel plant, whereas the future-orientated 'active' model would enable markets and consumers to take full advantage of the security, climate and economic benefits of non-dispatchable plant, like wind, without seeing variability as a problem.

It is therefore very unfortunate that the EU Target Model has core elements which hark backwards to the passive model, favouring fossil fuel and nuclear plant. The requirement for the Day Ahead Market to be 24 hours before live allows slow start fossil fuel plant sufficient time to react to the draft run schedule. With modern IT and greater use of flexible plant and storage to match variable energy sources, there is no longer any absolute need for the key market to be a somewhat arbitrary 24 hours ahead. The related requirement of 'balance responsibility', while understandable to some degree, also harks back to a passive model, requiring dispatchable plant to actually do what they said they would do. Where the reference point was not 24 hours ahead, but say 1-2 hours ahead, all plant could reasonably be asked to be balance responsible. But the combination of a 24 hour period and balance responsibility is unworkable for non-dispatchable and variable plant, simply because of the inherent nature of that generation, especially as we face the rather unpredictable Atlantic weather system, and not because such plant are unwilling or somehow ill-informed or incompetent, or lack resources.

In any case, the market has another significant problem with balance responsibility arising from the consumer demand side where, unlike with wind, forecasting doesn't really improve much as we approach live, given the nature of demand. This issue will remain significant where we have not designed the market to take full advantage of information feedback, in order to move towards an 'active' model where such issues would be less critical.

To be clear, a full implementation of balance responsibility over 24 hours is totally unworkable and contrary to the interests of non-dispatchable and variable plant, and is the underlying reason why the SEMC is now faced with significant issues in pursuing its preferred Option 3. A fully mandatory Day Ahead Market cannot function well,

because variable sources will make up a rapidly increasing share of the market but will also have a significant error, so that signals for interconnector scheduling will inevitably be wrong. At the same time, an incomplete DAM is also a problem in terms of liquidity. Option 3 cannot solve this problem, since you are effectively trying to defy gravity.

However, we have to work with the fact that the Target Model and the whole EU system requires us to plan 24 hours ahead, and feed our schedule into the Euphemia system. Recognising that there will inevitably be significant errors in that schedule, we need to plan our system to ensure that we correctly adjust that schedule in the Intra Day Market (IDM), without penalising variable projects that simply cannot avoid the error in question. Here we will be relying on demand in the IDM to enable adjustments to the DAM positions, and we can't yet assume sufficient demand will show for that purpose.

Variable sources could also be accommodated in the implementation of balance responsibility. It seems unreasonable and is indeed unworkable, even discriminatory, to ask variable sources to be balance responsible over a 24 hour period, but reasonable to do so over say a 1 or 2 hour period. If our 24 hour forecast volumes were bid into the Day Ahead (by the TSO for example), but we only had to cover imbalance against the 1 hour-ahead forecast (ie: at the start of the balancing operations), that would be a reasonable compromise. And it should be within the spirit if not the letter of the Target Model.

In such a scenario, the imbalance market would be of less concern to variable generators, since they would most likely engage in the forward markets to minimize imbalance. However, where you continue on the path of 24 hour balance responsibility, then projects will seek to avoid the forward markets and rely instead on imbalance. The highly volatile market you are proposing, by relying on the last MW of power to set the price, based on a 'inc/dec' bid, is no place for a renewable generator, whether in or out of support. The former implies a much high PSO, which is bad for everyone, the latter decommissioning, which is contrary to achieving national targets. In these circumstances, we see no particular reason, other than economic ideology, for you to avoid implementing a SEM-type pool to set the imbalance prices. Contrary to what you suggest, such an imbalance mechanism would reduce balancing risk for variable generators and encourage them to enter the DAM and IDM.

Your draft decision is proposing that the DAM price be used as the reference for renewable supports. First of all, this should be decided by the relevant government departments, as they operate the support mechanisms. If there is any delinking of the reference used from the payments actually received from the market, the support scheme in the Republic will be completely undermined and you will again be severely compromising both existing and proposed renewable energy projects. While the use of some market reference price is required for the ex-ante payment of supports in the Republic, probably some blend of DAM, IDM and BM prices, under no circumstances should any proxy be used for settlement. That must instead be based on actual revenue received as is currently required by the relevant legislation (and CER decisions currently reflect that). So there needs to be active engagement now with the government departments North and South on the support mechanisms, to make sure you don't put in place a market which makes the existing and proposed support mechanisms unworkable.

It is incredible that you are proposing a Capacity Remuneration Mechanism that a very large and growing slice of the electricity market effectively cannot participate in. To be fair, it would send very helpful signals for the entry and exit of conventional plant, and lead to a fleet more complimentary to wind. But since wind reduces

market prices, the proposed mechanism is counter-cyclical to wind, in that it is more likely to be off when price spikes occur. This particular proposal seems to be the extreme of your ideological approach to the design of the I-SEM, and is the clearest aspect in terms of blatant discrimination against renewable energy sources. While it was claimed by your advisers that renewables would be no worse off by not participating in your proposed CRM, this has since been refuted. Wind currently relies on capacity payments in SEM to reduce the PSO or remunerate out-of-support projects, so it is by no means irrelevant to us that this is expected to end abruptly with the new market. The wind industry is totally and utterly opposed to the highly discriminatory Responsibility Option.

It is therefore necessary for the SEMC to find a better overall compromise between the requirement to adequately comply with the Target Model, meet the various obligations of the Renewable Directive (and not just priority of dispatch) and protect the interests of this island, without engaging in economic ideology which will otherwise prevent us meeting the latter two for no really good reason. Economics must serve the objective, and not become the objective itself.

Summary on specific issues:

1. We fully agree with SEMC's proposal to make the Day Ahead Market (DAM) and Intra-Day Market (IDM) exclusive. Any notion that it should be mandatory for wind to participate in either market, even on a 'best endeavours' basis, is adding unnecessary and unwarranted risk to wind projects, and the wind sector would totally oppose any reversion to that approach. The incentives under consideration will encourage wind to participate in the DAM, to the extent that it is judged to be in their best interests, and indeed further measures, as discussed below, are likely to reinforce that tendency.

2. The imbalance market proposed is simply discriminatory against wind, and must be reviewed without delay. There is no obvious reason why a SEM-like pool could not be used instead. The lower unpredictability and volatility in such a pool would reduce to the risk to wind of DAM and IDM participation, and would therefore assist SEMC in what it is trying to do - get wind (which will be 40%+ of the future market) to participate in the DAM. The highly volatile mechanism proposed will entail far too much risk for wind, and would tend to discourage DAM and IDM participation, contrary to what SEMC seems to believe.

3. In proposing the DAM price as a reference for the support schemes, SEMC is entering into a policy area it is neither responsible for nor competent in, as shown by the uncertainty created by the mere suggestion of such an approach. If the outcome was settlement of support on this basis, the inevitable result would be project revenue uncertainty, thus undermining the support schemes, closure of at least some of the existing projects and widespread failure to finance future projects. A blended reference price could be considered for the estimation and payment of supports ex-ante. However, the settlement of supports must continue to be based on actual revenue received. That is what is required by the relevant legislation in the Republic and recognised by CER in its R-factor decisions.

4. We continue to support the inclusion of a Capacity Remuneration Mechanism (CRM), and still 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. While the proposed Reliability Option (RO) may provide some signals for the exit of redundant conventional plant and the entry of new flexible plant, suitable for complementing wind, it is one of the most discriminatory aspects of the SEMC's proposed decision as far as wind is concerned. Market prices are reduced when wind generates, so that price spikes would tend to happen when wind is NOT generating.

Wind is therefore out of cycle with price spikes and therefore largely estopped from participating in the RO as a result. Capacity factor adjustments are unlikely to alter the impact of this fundamental fact. The RO must not be taken any further and the approach needs to be reviewed without delay.

5. Given that by virtue of its inherent design, the I-SEM is inevitably less suitable for small renewable generators, an 'aggregator of last resort' is proposed by SEMC, and this is to be welcomed. Such a service needs to be enduring, provided at a cost to small generators that doesn't affect their viability, and ideally that cost should be allowed for in calculating any support top-ups.

6. Features of the SEM such as intermediaries, *de minimis*, negative demand and 'supplier lite' need to continue without interruption into the I-SEM, in such a way that existing projects and support schemes are unaffected. These features provide a vital *de facto* floor for PPA negotiations, almost like a buyer of last resort. They are particularly vital to the survival of the growing number of out-of-support projects. Access to revenue from a CRM, which is present today in SEM, is also of vital importance to these projects. The authorities in general and SEMC in particular need to take seriously the idea that out-of-support projects can survive in the I-SEM, otherwise their expectation that wind will move towards open market integration will be completely undermined by their own actions.

7. Once again, 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. Indeed, SEMC seems to be using the threat of curtailment as a way to get the sector to agree to these discriminatory proposals. We would now insist, again, that the SEMC gives full effect to the legal obligation of 'guaranteed transmission' enshrined in the Renewables Directive and Irish law, in addition to the welcome respect for priority dispatch, once having first accepted that these are non-optional requirements, not some sort of policy option (like firm access). To really address the curtailment 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.

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

Yours sincerely,

Grattan C. Healy BEMech MBA, Director