



# **Integrated Single Electricity Market (I-SEM)**

## **Energy Trading Arrangements (ETA) Markets Consultation Paper**

### **Consultation Response Template**

**SEM-15-038**

**22 May 2015**

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## PURPOSE OF THIS DOCUMENT

### 1.1 PURPOSE AND STRUCTURE OF THIS DOCUMENT

- 1.1.1 This supplementary document provides a template for responses to the [ETA Markets Consultation Paper \(SEM-15-026\)](#). We request all responses to the consultation are submitted in this template, and in **Microsoft Word** format.
- 1.1.2 This template contains the questions presented in the consultation document.
- 1.1.3 Responses to the Consultation Paper are requested by 17:00 on 5 June 2015. Following a review of the responses to this paper the SEM Committee will publish its decision on the proposals set out in this paper in September 2015.
- 1.1.4 Responses should be sent to Kenny Dane ([kenny.dane@uregni.gov.uk](mailto:kenny.dane@uregni.gov.uk)) and Kevin Hagan ([khagan@cer.ie](mailto:khagan@cer.ie)). Please note that the SEM Committee intends to publish all responses unless marked confidential<sup>1</sup>.

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<sup>1</sup> While the SEM Committee does not intend to publish responses marked confidential please note that both Regulatory Authorities are subject to Freedom of Information legislation.

## 2 CONSULTATION QUESTIONS

### 2.1 RESPONDENT DETAILS

COMPANY	Electric Ireland
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MAIN INTEREST IN CONSULTATION	Suppliers and DSU Impacts

### 2.2 GENERAL COMMENTS

Electric Ireland welcomes the opportunity to respond to the Markets Consultation. Electric Ireland views these consultation proposals from the perspective of a standalone supplier and as a representative of the customer. We are keen that the proposed I-SEM design should operate effectively and achieve its aims, in particular to achieve effective market coupling with BETTA and the other European markets. This should allow Irish and Northern Irish customers, both business and residential, greater access to competitive sources of electricity. We also identify proposals which are likely to impose unnecessary costs on suppliers and hence customers. We have not offered comments on some aspects which do not directly concern suppliers.

The I-SEM represents a near total overhaul of the SEM rather than an incremental change. The Day-Ahead and Intraday markets will be determined in European fora and offer limited scope for tailoring to the needs of the All-Island Market. This requires that the Regulatory Authorities and the TSOs, as appropriate, are actively represented in the relevant fora, amongst other matters, to ensure a good deal for I-SEM customers and to align timings with the I-SEM implementation. The Balancing Market however can be designed with more of a free hand subject to the requirement to comply ultimately with the Network Code on Electricity Balancing. Consequently the majority of the Consultation paper is concerned with the Balancing Market.

Given the extensive range of options presented for different aspects of the Balancing Market, Electric Ireland believes that there are significant risks arising from adopting a "big bang" approach and assuming that we can select the best model. The GB Balancing Market has undergone several improvements since 2001 and the Significant Code Review in 2014 proposed further material changes to be phased in over 3 years. Furthermore, we can expect significant changes in participant and TSO behaviour from that exhibited today (due partly to the transfer of balance responsibility) although it is very difficult to predict ex-ante what those precisely might be.

Electric Ireland believes that there is much to be gained from a phased approach which allows time to learn from experience and enable appropriate evolution of the design given e.g. confidence of the ability to balance the system with fewer early energy actions. This reduces the risk of implementing a Balancing Market whose imbalance prices are too sharp and volatile than perhaps they need to be in order to initiate a balancing response and

which would impose unnecessary costs on participants and customers. In addition a phased approach is highly likely to be imposed for the Intraday Market given little confidence that XBID will be delivered in time for I-SEM Go-Live. This offers an opportunity to design an interim solution, in conjunction with GB, which may be more suited to the needs of the All-Island Market.

There is little within the Consultation Paper which specifically addresses how Demand Side Units and dispatchable demand will participate in the markets (other than to behave like a generator unit). Electric Ireland urges the Regulatory Authorities to consider how best to encourage demand side response in the I-SEM and enable further discussions with market participants that may feed into relevant sections of the Markets Decision.

## 2.3 SYSTEM OPERATION IN THE I-SEM (CHAPTER 2)

Question	Answer
<p>1. What are the impacts of early action by the TSOs on the Intraday Market?</p>	<p>The IDM will be very important for suppliers (as well as for other participants) to refine their traded positions in the light of updated demand forecasts and in the light of changing commodity prices and generation availability between Day-ahead and near real time.</p> <p>Early actions by the TSO reduce liquidity in the IDM so that appropriate measures to discourage unnecessary early TSO actions should help maintain liquidity in the IDM. . The cost implications of the early balancing actions should fall on the participants who were out of balance to the extent possible.</p> <p>How the TSO will manage the system under I-SEM needs to be clarified in advance of any further decisions on the ETA. This might be achieved by an industry seminar conducted by the TSOs.</p>
<p>2. What measures can be taken to minimise early actions by the TSOs?</p>	<p>We expect that the TSO will operate differently to currently in I-SEM given the transfer of balance responsibility to participants and we support a mix of measures to minimise early energy actions by the TSO. For Proposal 1 we agree with a set of defined principles and a time period for early TSO energy actions. However both TSO and participant behaviour is likely to evolve and so these principles should not be over prescriptive. The TSO may take early actions within the agreed timeframe in accordance with the stated balancing principles. Formal periodic reviews of these principles should take place and be reviewed by market participants and the (I-)SEM mods committee. Initially this should be quarterly to promote learning among market participants. We expect that such measures should be transitory and that they can be gradually phased out as experience and confidence about market balancing are gained.</p> <p>For Proposal 2, Defined Principles and Contingency Reserve Monitoring, we agree with setting a proposed timeframe outside of which the TSO does not take an action. Within this timeframe the TSO may take action if there is a tolerance breach in relation to the supply versus demand mix but only to the extent that there is insufficient contingency available at that time. No action if there is sufficient contingency. Once again, there should be periodic review of these principles with the ability to adjust with I-SEM experience e.g. shortening timeframes.</p> <p>The TSO should be obliged to frequently report on early energy actions that they have taken to allow for market transparency. Reports should be published every quarter for the previous quarter.</p>

## 2.4 EX-ANTE MARKETS (SECTION 3)

Question	Answer
<p>1. Which of the three options put forward for interim IDM arrangements is most appropriate?</p>	<p>I-SEM is being implemented in order to comply with EU target model. Is only appropriate therefore that the relevant mechanism to support this implementation are in place. If this is not the case then this may necessitate a delay to I-SEM go live or implementation without an IDM unless it can be shown that any interim proposal will not lead to stranded costs.</p> <p>There is a need to avoid excessive delivery costs of an interim solution. Also a need to avoid being left with stranded asset costs. Consequently, any interim solution should be integrated into a final full solution or should remain as an ongoing fallback solution for XBID. Avoid /minimise stranded costs of multiple implementations.</p> <p>We require urgent proactive RA engagement on XBID to protect customers' and participants' interests.</p>
<p>2. Should intraday auctions be implemented in I-SEM? Are there any advantages to those auctions not described in this paper?</p>	<p>EI see benefit in periodic auctions. This would build on the familiar auction approach of the current SEM. In the initial I-SEM IDM auctions would focus liquidity and could be compatible with continuous IDM trading after XBID Go-Live on an ongoing basis and as a fall-back.</p> <p>Furthermore it may assist with measures on TSO early actions in that there would be specific windows for TSO action between auctions and clearer reasons for the TSO to act or not act depending on the level of market response in the previous auction.</p> <p>EI believe that there is merit in considering placing an obligation on the TSO such that if early non-energy actions are taken between auctions, then the equivalent energy of such actions could be fed into next auction on a price taker basis.</p> <p>Auctions, if held during normal working hours, will allow the possibility for some participants to consider not having 24x7 operations, if they act to focus trading activity, and thus remove a potential barrier to entry in terms of cost for smaller or new players.</p> <p>We suggest that in order to limit costs that such auctions would take place in defined blocks on the same platform as continuous trading.</p>

## 2.5 PHYSICAL NOTIFICATIONS (SECTION 4)

Question	Answer
1. What are your views on the timing of PN submissions to the TSO	Submission of physical notifications should occur initially after DAM gate closure and be updated if the view of FPN has changed as a result of IDM trades, but always a requirement to have FPNs which are physically feasible and reflecting, to within a reasonably small tolerance, the intended contracted position as a basis for BOAs.
2. What are your views on the removal of the requirement on wind generation and non-dispatchable demand to submit PNs	<p>El believe that the requirement to submit PN's for non-dispatchable demand and generation should be removed. Neither is likely to provide better information to the TSO to assist in managing the system and the requirement would impose burdensome procedures and costs on participants and ultimately customers.</p> <p>We welcome the extra demand forecast information that TSO will provide to assist suppliers in fulfilling balance responsibilities in the intraday market.</p> <p>For wind generators, it may well be the case that they are in a better position themselves to forecast their generation more accurately locally and so their requirement to submit PN's may be more beneficial than not submitting PN's. Regardless of how wind trade if a TSO forecast / FPN is used (regardless of the stage) that they should still be made to be balance responsible.</p>
3. What are your views on how PNs from participants should be linked to their ex-ante trades and what are your opinions on which of the three options outlined in this chapter is optimal for I-SEM.	El support Option 2: PN's linked to ex-ante trades at gate closure only i.e. partially de-linked physical notifications for generators reflecting the contractual position. This helps avoid depressing IDM liquidity. Not all physical notifications have to be feasible, only the final physical notification needs to be feasible and this should reflect the ex-ante contracted position to within a reasonably small tolerance (since it may not be possible or very expensive to trade to exactly match a feasible operational profile).
4. What are your views on the potential for the inclusion of an information imbalance charge. In addition, comment is sought as to whether this issue is best	<p>Electric Ireland would be in favour of an information imbalance charge but initially setting it to a value of zero.</p> <p>Design the capability to have an information imbalance charge and link it to the accuracy of the final physical notification. Charges should be implemented if continued inaccurate declarations of final physical notifications continue to be ongoing for participants.</p>



addressed under the generator performance incentives.	
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## 2.6 FORM OF OFFERS, BIDS AND ACCEPTANCES (SECTION 5)

Question	Answer
<p>1. Which of the proposed formats should be used for bids and offers for deviating from PNs?</p> <ul style="list-style-type: none"> <li>• Simple MWh</li> <li>• Relative MWh</li> <li>• Absolute MWh</li> </ul>	<p>Absolute MWh PN basis is favoured – being less onerous on participants given the fact that fewer revisions of prices are required.</p>
<p>2. How should fixed costs be represented within bids and offers?</p> <ul style="list-style-type: none"> <li>• Explicit start up contracts</li> <li>• Block bids</li> <li>• Explicit start-up (and no load) costs</li> </ul>	<p>Electric Ireland believes that it is important to have consistent offer structures in the IDM and BM. If for instance, explicit start up costs were available in the BM, then generators might have a strong desire to forego the IDM and spill into the BM which could have a serious negative impact on IDM liquidity. Furthermore, Given that generators will have to fit start up and no load costs into some form of block bids in XBID anyway, it is arguably operationally complex to maintain two different pricing structures for the same plant in two different markets simultaneously. Block bids are also more likely to be consistent with the standard balancing products envisaged in the Electricity Balancing Network Code. Block bids in the BM would be more complex for the TSO to compare but this is a lesser disbenefit than reduced IDM liquidity and greater spilling into the BM.</p>
<p>3. Should it be possible to rebid offer and bid prices following an acceptance? Three options are proposed:</p> <ul style="list-style-type: none"> <li>• Fixing prices of accepted bids and offers</li> <li>• Undo prices</li> <li>• Freezing all prices</li> </ul>	<p>EI is in favour of allowing rebidding following a BOA. We support fixing prices of offers and quantities that have been accepted by the TSO. This approach is consistent with the IDM. Participants would be able to revise the price of any remaining offer and bid quantities that are available for subsequent acceptance, up until the time that a further quantity is accepted.</p> <p>Support is also given for submission of undo prices as it would allow participants to recoup sunk costs.</p>
<p>4. Should open or closed instructions be used to move participants away from their PN?</p>	<p>Closed instructions are favoured. These can always be extended or shortened. Provides greater clarity for participants as to how they should trade within day.</p>

## 2.7 INTERACTIONS BETWEEN THE BALANCING MARKET AND INTRADAY MARKET (SECTION 6)

Question	Answer
<p>1. Which of the options put forward should apply to participation in the IDM in the event that the TSOs take a balancing action pre-gate closure:</p> <ul style="list-style-type: none"> <li>• Freeze PNs</li> <li>• Additive PN Changes</li> <li>• Substitutive PN Changes</li> </ul>	<p>EI's initial preference is for additive physical notification changes.</p> <p>Substitutive approach is more complex, less clear for participants &amp; TSO, has no actual precedent anywhere and gives generators a free option to improve on their BOA price which may be detrimental to suppliers.</p>
<p>2. If the substitutive PN Changes option is taken, there are two further options for swapping out or netting IDM trades against bid-offer acceptances:</p> <ul style="list-style-type: none"> <li>• If the participant wishes to trade in the IDM and substitute the bid-offer acceptance they will need to achieve a more advantageous price in the IDM than the bid-offer acceptance price</li> <li>• Implement a methodology which sees the unit lock in the premium above or below the imbalance price through the bid-offer acceptance</li> </ul>	<p>If the participant wishes to trade in the IDM and substitute the bid-offer acceptance they will need to achieve a more advantageous price in the IDM than the bid-offer acceptance price. This is more straightforward than the premium-locking option which increases complexity for BM settlement.</p>
<p>3. Which of the three options put forward for dealing with "Trading in the Opposite Direction" should be implemented:</p> <ul style="list-style-type: none"> <li>• No specific consideration of this would be reflected in the market design</li> <li>• Implementing a rule</li> </ul>	<p>This is a serious concern, in the case of non-energy actions by the TSO, that needs to be specifically addressed in the market design. Should the TSO accept a generator's bid in order to create reserve on the system, the participant must not be permitted to undo that reserve position. Otherwise, system security would be prejudiced and the TSO is undermined in performing a primary duty. In other markets where e.g. reserve is procured by contract, the relevant capacity cannot be offered into the market - there are no reasons why it should be different in the I-SEM. Under I-SEM proposals, if circumstances change, the TSO can release the capacity by undoing the bid acceptance or by accepting an offer from the</p>

<p>that would prohibit PN changes that increase the quantity of any offer or bid acceptances</p> <ul style="list-style-type: none"> <li>• Permit PN changes in either direction but, in the settlement of the offer or bid acceptances, to limit the quantity on which the premium is payable, such that a change in PN cannot increase this quantity</li> </ul>	<p>generator. This may provide more flexibility than in other markets where reserve is contracted day-ahead.</p> <p>Consequently Option A is not supported.</p> <p>Option B (freezing PNs in one direction) would effectively discourage the participant from undoing the TSO's non-energy action. This would likely require a positive confirmation from the TSO that the PN was frozen given the context of possibly multiple bid-offer acceptances and trades.</p> <p>Option C (adjustment in settlement) would also provide a financial disincentive but increases the complexity of settlement (already pretty complex).</p> <p>Consequently Option B (freezing PNs in one direction) is preferred.</p> <p>There is a further possibility. A participant (partially) undoing an early TSO energy action would be less critical so that freezing PNs could be relaxed to only apply to non-energy actions and not to energy actions (as viewed by the TSO at the time of the action). This would be implemented by the TSO only confirming PN freezing for non-energy actions.</p> <p>It may be that different arrangements need to apply in relation to non-energy actions resolving e.g. transmission constraints and non-energy actions relating to reserve. This is discussed more in the section below.</p>
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## 2.8 TREATMENT OF SYSTEM SERVICES (SECTION 7)

Question	Answer
<p>1. What are your views on the proposal whereby a unit that is deployed for reserves should be constrained to the minimum extent possible in the IDM</p>	<p>The examples given of "being constrained to the minimum possible" include a generator's bid being accepted (output reduced) by the TSO to create reserve and then the generator selling more output in the IDM which (partially) undoes the reserve created. This essentially enables participants to ignore any TSO instructions if they see a better market opportunity. The example describes how the TSO could then accept another bid from the generator (with no guarantee of any better success) or a different generator if it were lower cost. This appears to be a mechanism for wealth transfer from customers to generators.</p> <p>Where the TSOs instructions are for non-energy reasons, as in this case, the participant should not be able to trade to undo these. Electric Ireland prefers the "freezing PNs in one direction" option for <i>non-energy actions</i> which only limits participant trading where it would undermine the TSO in performing its primary duties.</p> <p>There is also a concern that the generator might buy back all of its output in the IDM so that it wouldn't run and so couldn't provide reserve (this could occur both in the case of plant constrained down or a plant newly started up at minimum stable generation). Freezing PNs in one direction only doesn't appear to give the protection required, i.e. that the plant remains on the system in order to deliver reserve. This may be addressed via system services contracts or perhaps consideration of allowing subsequent PNs within a range bounded by the minimum stable generation and the instructed level (determined by the reserve requirement).</p>
<p>2. Are there any market power issues that need to be specifically addressed in relation to System Services?</p>	<p>Electric Ireland believes that any market power issues that arise should be addressed in the separate Market Power work-stream.</p>
<p>3. Which of the two approaches should be utilised where the TSOs have to schedule a plant before the opening of the Balancing Market:</p> <ul style="list-style-type: none"> <li>• A system services framework would be used to contract with</li> </ul>	<p>TSOs should use incremental offers and decremental bids from previous trading day to call a plant pre-BM.</p>

<p>those generators that need to be scheduled prior to the BM opening.</p> <ul style="list-style-type: none"><li>• The TSOs would use incremental offers and decremental bids from previous trading day to call a plant pre-BM.</li></ul>	
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## 2.9 IMBALANCE PRICING (SECTION 8)

Question	Answer
<p>1. What are your views on the Tagging and Flagging Approach. A “cause” based method for identifying energy and non-energy actions with the imbalance price being set only on energy actions.</p>	<p>Electric Ireland is concerned about the tagging and flagging methodology in that there is a risk that the majority of incremental offer and decremental bid acceptances in a settlement period are associated with non-energy actions, leaving a narrow subset of actions for imbalance price formation.</p>
<p>2. What are your views on the Simple Stack? With this approach there would be a simple stack of the available bids and offers and the price would be set based on the net imbalance volume.</p>	<p>We do not consider this to be a suitable approach. It doesn't take account of a units plant dynamics i.e. a price setting bid may not be able to deliver balancing energy as a result of its technical characteristics.</p>
<p>3. What are your views on the unconstrained stack with plant dynamics included. These are two additions that this option would have over the simple stack:</p> <ul style="list-style-type: none"> <li>• Plant Dynamics</li> <li>• An optimisation time horizon</li> </ul>	<p>This is Electric Irelands favoured option as there no need to identify what is an energy or non energy action. A complex algorithm is needed to run this option. It doesn't give non running plants a run, leading to cheaper prices and more predictable prices.</p>
<p>4. What are your views on the price based method – unconstrained unit from actual dispatch?</p>	<p>The benefit of this method is that price is based on actual plant running leading to optimum price, no technical offer data so flexibility not being paid for. Easier to implement than stacks. Price optimisation calculation may not be as transparent.</p>
<p>5. What are your views on the sharpness of the marginal imbalance price? Do any concerns relate to the transition between SEM and I-SEM or are there</p>	<p>Concern about the lack of a method for calculation of balancing price in the absence of energy actions by the TSO during the transitional period, and thus encourage the RAs to agree a method of calculation in such a event which is clear and predictable.</p> <p>Given the importance of the imbalance pricing methodology and the obvious concern about the choice of methodology, Electric Ireland believes that a phased and evolutionary approach should be adopted</p>

other broader concerns?	<p>in order to build in time to learn from experience of the I-SEM. Electric Ireland believes that a mechanism to configure the sharpness of the imbalance price signal during the transition to, and early period of, the I-SEM would be highly desirable. A parameter equivalent to the Price Average Reference (PAR), which acts by averaging all prices from relevant trades across the next [x] MWhs, could be one such effective parameter. This could be used to reduce the risk of implementing inefficiently sharp prices which may be more extreme than that required to elicit a market response and impose unnecessary cost on participants and ultimately customers.</p> <p>Given e.g. a year's experience of the I-SEM, it would be possible to back test all the proposed methods against the historical data to provide an informed decision about the best imbalance pricing method and / or parameter values.</p> <p>Concerns not just limited to the transition. For example the predictability of the balancing price on an ongoing basis. Require modelling of the last 2 scenarios (3 and 4) for better evaluation.</p>
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## 2.10 IMBALANCE SETTLEMENT (SECTION 9)

Question	Answer
1. What are your views on the issues set out in the imbalance settlement section?	There is little within the Consultation Paper which specifically addresses how Demand Side Units and dispatchable demand will participate in the markets (other than to behave like a generator unit). Electric Ireland urges the Regulatory Authorities to consider how best to encourage demand side response in the I-SEM and enable further discussions with market participants that may feed into relevant sections of the Markets Decision.
2. What are your views on the refined proposal whereby the payment rule applies only to incremental offer acceptance volumes above the PN and to decremental bid acceptance volumes below the PN?	No comment this topic.
3. What are your views on the possible consequences of ex-ante trades based on trading periods of different duration to the Imbalance Settlement Period (ISP) and what are your views on the options put forward in the paper.	<p>It is essential that settlement periods in the IDM and in Imbalance are kept identical throughout and transitioned to shorter periods simultaneously as required. Otherwise unnecessary procedures for allocating contract quantities to smaller imbalance settlement periods are required and either create imbalance costs (despite zero imbalance volumes) for participants and ultimately customers or revenue shortfalls for the BM Operator. It is unacceptable to create, by design, imbalance costs that cannot be mitigated.</p> <p>There should be planned &amp; managed transitions in coordination with GB markets. Perhaps start with 30mins (but plan IT for 15mins) and transition to 15mins consistent with XBID and NC EB timelines.</p>



## 2.11 OTHER ISSUES (SECTION 10)

Question	Answer
<p>1. Global Aggregation – what are your views on the current policy and the three alternative options put forward in the paper for dealing with global aggregation</p>	<p>Electric Ireland support the idea of a Fixed cost (tariff) estimated for a year ex-ante and reconciled annually.</p> <p>Suppliers shouldn't bear the risk of errors arising from the whole market – needs to fixed in advance so suppliers can recover this in their retail prices.</p> <p>Individuals suppliers can't calculate / estimate the residual error realistically (information required from numerous parties) and so must be estimated centrally.</p> <p>Possibility of BMO tendering for supply of the residual error volume to achieve best price for consumers</p>
<p>2. Local Market Power – What are your views on whether there are any specific issues in relation to local market power which need to be considered at this stage.</p>	<p>Electric Ireland believes that any local market power issues that arise should be addressed in the separate Market Power work-stream.</p>
<p>3. Metering – What are your views on the proposal for metering put forward in the Consultation Paper.</p>	<p>There should be no change in current resolution.</p>
<p>4. Instruction Profiling – What are your views on the instruction profiling section. In particular, is it feasible to more accurately model the precise loading of units and whether more technical characteristics need to be accommodated in the technical offer</p>	<p>No comment.</p>

data.	
<p>5. Units Under Test –          What are your views on the two options put forward for units under test in I-SEM.</p>	<p>No comment.</p>