



Energy for
generations



Generation & Wholesale Markets

Comments on:

I-SEM Energy Trading Arrangements Detailed Design

Markets

February March 4th 2015

Introduction

Following on from the recent series of Rules Liaison Group workshops, ESB Generation and Wholesale Markets (GWM) welcome the opportunity to submit early feedback on the “Markets” section of the Energy Trading Arrangements (ETA) for the I-SEM. However, the comments are limited due to the fact that many of the topics covered under the Markets heading have many interactions and interdependencies with other aspects of the ETA, and also other elements of the overall I-SEM market design, importantly the DS3 System Services. It is therefore difficult to consider the topics discretely. Nevertheless, we hope the comments are useful and we look forward to responding to the formal consultation later this year.

1. Overlap of the Ex-Ante Market and Balancing Mechanism Timeframes

The High Level Design (HLD) for I-SEM is such that the timeframes for the mandatory Balancing Mechanism (BM) and the ex-ante Intraday Market (IDM) will overlap entirely. The intention also seems to be to allow the TSO to take actions in terms of unit commitment decisions before Physical Notifications (PN) are submitted and the BM opens and even before the Day Ahead Market (DAM) timeframe. This “overlap” issue, whereby both the TSO and the generator are making parallel decisions around the scheduling and profile running of a unit, creates a lot of issues for the I-SEM. While recognising that the TSO may always require flexibility to issue Dispatch Instructions (DIs) before the one-hour Gate Closure time frame in order to be able to manage the system securely, the issues associated with this overlapping timeframe need to be carefully considered in the design to ensure there are no unintended consequences or mixed incentives as a result.

- Transition Period: The introduction of the I-SEM will be a steep learning curve for all market participants including the TSO. However, after a bedding in period a business as usual environment will be created, as market participant experience and confidence grows. In recognition of this, ESB GWM consider it appropriate that the timeframe in which the TSO take operational unit commitment decisions be reduced closer to real time after a transition period at the start of the I-SEM. The overlap between the IDM and the BM should be shortened with the ultimate aim of having clear delineation between both markets, with the BM remaining closed until Gate Closure of the IDM. This will also be consistent with the direction of travel of the European Network Codes.
- TSO Incentives: The incentive scheme under which the TSO is operating should be such so as not to interfere with the normal operation of the ex-ante energy markets. Otherwise there could be serious implications for liquidity, market certainty and transparency in general. ESB GWM considers it important that the incentive regime should be considered and consulted on as part of the ETA process and timelines.
- Interference with IDM: The scenarios in which the parallel operation of the BM and IDM impact the market are numerous. Some examples are below:

- A BM instruction by TSO to a generator can give that generator insight into whether the system is going to be long or short. This generator can use this information then within the IDM
- A BM instruction by the TSO to a generator to start up may mean that that since that generator already has its start costs covered, can bid differently in the IDM relative to had it not been started, and effectively jump position relative to the previous merit order of plant
- An early BM instruction by the TSO to a generator is cancelled despite the generator having perhaps incurred costs, leaving that generator at a disadvantage

It is important that all these situations, and others, are thought through and unintended consequences on the efficient working of the market are limited. ESB GWM consider that the following principles should be applied:

- The TSO should aim to minimise the movement away from the generator Physical Nominated positions
- The TSO should not take actions to correct perceived unconstrained energy imbalances in the market until such time as the market has had a chance to self correct. The TSO should publish its forecasts (demand, wind and total generation that has been physically nominated) at intervals over the IDM timeframe in order to guide participants as to whether the system is going to be short or long.
- The incentives in the DS3 System Services should be such that generators that would otherwise be constrained on, are duly incentivised sufficiently via DS3 payments to self position themselves to be on load at the relevant time. This should allow the market to function and reduce the actions the TSO would otherwise need to take.
- Generators should be able to submit undo prices / bids into the BM which would apply if the TSO cancelled an early instruction in the BM
- Analysis/ Modelling: More information is required from the TSO in order for participants to fully understand and quantify the impact of this issue. For example, what type of early actions the TSO think they will be taking, how frequent early actions will be, the reasons for early actions, etc. It would be useful if this type of information could be included as part of the formal consultation process.

2. Physical Notifications

ESB GWM consider that the most appropriate way to incentivise generators to match their generated and traded position is via the Imbalance Settlement arrangements. Imposing a requirement to have the Physical Notifications (PN) fully linked to the ex-ante traded position may have negative impacts. These may include:

- Since PNs must be technically feasible this may limit how a generator may offer into the DAM Euphemia algorithm. The generator would be limited to trading only what is

technically feasible, and yet Euphemia may not be able to facilitate such technically feasible restrictions

- One method to increase liquidity in the ex-ante markets is to allow for non physically backed traders to participate. By requiring that PNs are linked to ex-ante traded positions, and thereby always creating a link between the physical and financial, may limit the involvement of such traders.

As mentioned above, ESB GWM think the most logical and suitable arrangements to incentivise generators to generate as per their traded position is via the Imbalance Settlement arrangements. Therefore it is not clear that any other incentive schemes for generators would be required or indeed appropriate. It is important that if further arrangements, such as continuation of the current uninstructed imbalance arrangements, are planned for the I-SEM, that this should be consulted on as part of the ETA. Without the full picture it will be very difficult to understand the interplay of different incentives at work.

3. Imbalance Pricing & Settlement

ESB GWM support the HLD decision to have a single imbalance price based on the marginal price for energy balancing actions. Moving away from a marginal to an average price will have negative impacts. It will dis-incentivise market participants to trade and forecast ex-ante. It will reduce liquidity in the ex-ante markets and lead to inefficient price formation. ESB GWM consider that the single marginal imbalance price is a key component of the overall design. It will help to incentivise fast acting flexible generation in the market. It is also consistent with the direction of travel of the GB BM, which will allow the introduction of regional balancing, as per the Electricity Balancing Network Code, to be more straightforward.

An imbalance price based on an average of actions rather than a marginal action, will create an issue in that the amounts paid in for being out of balance, will never equal the amounts paid out to generators. If these amounts are significant then the rules on how they are redistributed will be very important. This will add to the complexity of the design.

4. Recovery of Start Up Costs

At the RLG three options for the recovery of start up costs, for actions taken by the TSO, were discussed. This issue is interlinked with the more general overlap issue discussed in point 1. above. In terms of compatibility and consistency with the DAM and IDM, the Block Bids option would seem to have a distinct advantage. However, it would be useful if some analysis could be presented on the impact of each of the three options. For example, it was suggested that the Block Bids option (where the generator internalises the start up costs and includes them explicitly in the BM bids) may not give the TSO enough flexibility. The materiality and impact of this could be assessed. Also it was indicated that the Explicit Start Up Costs option put forward would require an algorithm to optimise the starts. More detail

would be required on this option, such as the optimisation horizon of the algorithm etc. before it could be fully assessed.

5. Format of Bids and Offers

Three formats for the bids and offers into the BM were presented. From initial review, it seems that the “MW Relative to PN” would be the most suitable for I-SEM. The “Simple MWh” format would limit the generators ability to submit accurate bids, since costs incurred by a generator are not limited to the volume generated, but also the level at which the volume was output at.

Undo prices will be an important feature of bids and offers into the BM, as they will give a generator protection in the situation where the TSO gives an early instruction to the generator and then subsequently cancels the action. The generator may have incurred costs on receipt of the first instruction, such as buying gas or gas capacity, or beginning the start-up process. It is therefore important that there is a mechanism available to a generator to recoup these costs. It is not clear that the “Absolute MW” format of bids and offers will facilitate undo prices.

6. Local Market Power Mitigation

The issue of market power has a dedicated workstream within the I-SEM project. ESB GWM consider that this is the most appropriate manner to deal with this topic in order to include all aspects of both the Energy and Capacity market arrangements. The dedicated workstream should therefore cover the issue of potential local market power mitigation in the BM. However, ESB GWM would like to make the following comments:

- Given the size and nature of the I-SEM system, the level of re-dispatch the TSO undertake and the level of operational constraints on the system (as indicated in the TSO reports), the potential for local market power at any time spans the entire all-island generation fleet.
- Putting in place bilateral contracts with some generators will reduce the amount of generation then operating freely in the energy markets. This will have a negative impact on the liquidity and efficiency of the remaining market, especially taking into account the size of the market.
- A decision by the TSO ahead of the market dictating the behaviour of a generator may also have a significant impact on the market price.
- As in GB we would expect ex-post market monitoring of bids would play a significant policing role along with ACER’s REMIT mandate.

7. Constrained Balancing Mechanism

From discussion at the RLG workshops it seems that inherent in the HLD is the presumption that the BM is constrained. For example if the system is short and the TSO needs to dispatch more generation, they will dispatch the generator that is next in merit that can physically

increase its generation. This would mean then that a generator, that may be next in the merit order, but is behind a constraint, would not be dispatched. The Balancing Price (BP) will be set based on the price of the dispatched generator. The impact of having a constrained BM may then be that:

- A generator behind a constraint (as in the above example) could lose out from participating in the BM.
- Conversely other generators may “win” and get dispatched in the BM. There may be knock on implications in relation to this because of the overlap between the BM and IDM timelines
- The BP may be higher than it would otherwise be if unconstrained BM actions are included in the BP price formation (even if these actions were not actually taken)

While an unconstrained BM may solve these issues, it is not clear

- How material this issue could be, both in terms of the impacts on generators (since generators can participate unconstrained in the IDM up to an hour before real time), or the impact on the BP
- How an unconstrained BM could be designed, how complex it would be and what residual mechanisms would be required to address feasible physical dispatch vs the unconstrained equivalent etc.

ESB GWM would welcome the inclusion of further analysis on this area in the consultation document.

8. Interaction with DS3 System Services

The design of the ex-ante energy markets, the BM and the DS3 System Service procurement arrangements need to be consistent to ensure that the incentives in each market (for both generators and TSO) complement each other and there are no unintended consequences as a result of dis-joint between the markets. Some scenarios and comments are given below to highlight this interaction issue

- Will a generator that has been awarded a DS3 contract for the provision of a particular service take precedent over another generator, which may be able to provide this service, (and indeed is prohibited or unable from withholding it), but was not awarded a DS3 contract, when the TSO is taking unit commitment or dispatch decisions?
- What is the mechanism for compensation for lost DS3 payments in the event the TSO dispatches a generator in such a way that it will not be able to provide a service?
 - Will the compensation be through the bids / offers submitted into the BM by the generator?
 - Or will the compensation be through the DS3 mechanism itself? The DS3 Decision Paper (SEM-14-108) says that the payment will be based on the available volume from the “higher of a units market position or physical dispatch”. This seems to indicate the if a generator positions

themselves via the ex-ante energy market and PNs to be dispatched to such a level to be eligible for DS3 payments, will then earn these payments regardless of how the TSO might dispatch them

It would be useful if further detail on the interaction of the DS3 System Services with the energy markets could be provided.

9. Tagging and Flagging

A robust and transparent process will be required for the tagging and flagging of dispatch instructions by the TSO. At the RLG it was discussed how there may be no pure energy actions, but that all actions may be tagged as non-energy. It would be useful if it could be assessed to see how likely this may be.

ESB GWM understand that it will be a compromise in terms of how fast the BP can be issued, versus how complex the tagging and flagging process can be. Options on this should be included in the consultation.

10. Day Ahead Market and Euphemia

Any decisions in relation to the DAM should be postponed until such time as the Euphemia testing has been completed. For example, no decision should be taken to restrict bid types into Euphemia at this stage.

11. Intraday Market

It was discussed at the RLG workshop how the inclusion of auctions in the IDM may help concentrate liquidity for I-SEM. Without this it was discussed how the IDM may be very “thinly” traded. While it seems that auctions will not be a feature of version one of the XBID Shared Order Book Function, the possibility of auctions being included at a later date, perhaps by the time of I-SEM go-live, seems to exist. If auctions can play a part in helping with liquidity in I-SEM, then it is important that this flexibility is sought within XBID.

Trading in the IDM will be a new 24-7 operational process for generators, as they try to trade to manage imbalance positions. For generators it may be useful to have the facility to aggregate gross long and short unit positions and trade as such. The long and short unit positions would not be netted, rather they would be accumulated separately to a single large short (buy) trade and a single large long (sell) trade, rather than numerous smaller buy and sell trades. Imbalance settlement could still be carried out on a unit basis. Allowing this may also help promote liquidity in the IDM, as well as reducing IT system and operational costs.

12. Testing

Currently in the SEM there are a lot of inflexibilities associated with the testing processes. For example the notice time required for testing, the requirement to be in test mode for a full day, the limitations of the size of within day testing etc. It seems from the RLG workshop

discussion and presentation, that there will be more flexibility for generators in I-SEM. In order to ensure the most beneficial testing process, both for the TSO and for generators, ESB GWM would suggest that a further workshop dedicated to testing is held after the detail of the energy trading arrangements are known. This would ensure that all testing scenarios are considered before deciding the rules.

ESB GWM also think it would be appropriate that the testing tariff arrangements are reviewed to coincide with the introduction of I-SEM.

13. Metering

The possibility of relaxing the metering timescales for I-SEM was proposed since they will not be the critical path for trade settlement as they are currently. However, there will still be merit for generators in knowing their imbalance position as soon as possible in order to correct strategies etc. if issues arise. Without the information being provided in a timely way, generators will be unable to adjust behaviour. Therefore the savings that may be made in reducing metering timescales need to be balanced against the inefficiencies this might create for generators.