

Energy Trading Arrangements Detailed Design

“Markets” Workshop Topics

Power NI Comments

4 March 2015

Introduction

Power NI welcomes the opportunity to submit comments on the Energy Trading Arrangements (ETA) “Markets” as the Regulatory Authorities (RAs) consider feedback provided at the recent workshops and begin the formal consultation phase.

As the RAs are aware, Power NI is the largest electricity retailer in Northern Ireland. Power NI is part of the Viridian Group which has within in its portfolio, a retail position in Northern Ireland and the Republic of Ireland, as well as a significant thermal and renewable generation presence.

Power NI is however a separate business. Power NI’s legal, managerial and operational separation is mandated via licence condition and it is within the context of being a supplier without vertical integration; that Power NI has approached the ETA workshops, assessed the issues presented and now comments in advance of the Markets Consultation Paper.

General Comments

Clarification on the role of SEMO is important

During the ‘building blocks’ phase it became clear that the role of SEMO is crucial to the clarity of a number of the topics. Roles such as Central Counter Party, Clearing House, Single Point of Registration, NEMO and Shipper were all described. Likewise within the ‘markets’ discussion the role of SEMO in particular in relation to the nature of the relationship with the pricing coupling algorithm requires clarity from the RAs. Are SEMO to be the NEMO? Should they take full or associate membership? What are the implications on the I-SEM?

These important questions should be thoroughly assessed and discussed in order to ensure there is an open and transparent consideration of the governance and practical implications of the design. The proposed design relies heavily on the EUPHEMIA algorithm; therefore the market should resolve the questions of PCR membership, roles, responsibilities and governance as a matter of urgency.

Market Modelling

SEMO are naturally further advanced in their market modelling workstream than participants. Their access to current market information and interaction with EUPHEMIA should ensure that they are able to develop a robust I-SEM market model to assist in the design discussion and decision.

Power NI welcomes SEMO’s proposed engagement with market participants and would encourage SEMO to share as much data as it is able to. Power NI would

urge the RAs to utilise as much of this modelling work as possible in understanding the consequences of design decisions.

A detailed understanding of the likely EUPHEMIA outputs and Balancing Market operation is the only way the RAs can ensure that a robust energy market is designed. Power NI is concerned that due to the design timeframe the ETA will be concluded without such critical modelling input. This represents a major risk to the project and increases the likelihood of a sub-optimal design with significant unintended consequences.

As an industry, we must learn lessons from the current Intra-Day Trading implementation which, as an unintended consequence, encouraged trading operations to the detriment of consumers.

Workshop Topics

Day Ahead Market and EUPHEMIA

Power NI welcomes the provision of expert analysis on the operation of the Day Ahead and Intra Day Markets. The presentations by PMI, Baringa and Yellow Wood provided some much needed insight into the operation of the various markets in other jurisdictions.

Thibault Henri's presentation on the Day Ahead Market further highlighted the extent of market solving responsibility the High Level Design places on the PCR algorithm EUPHEMIA. A responsibility in excess of most other member states who use the algorithm for boarder optimisation rather than underlying scheduling.

The use of EUPHEMIA therefore is a critical component of the market design and Power NI welcomes the transparent approach SEMO have proposed with respect to testing. It is important that transparency prevails throughout the whole process from establishment of initial testing by SEMO in isolation scenarios, through to test plans and results from coupled market scenarios. Timely publication and full transparency of data prior to any workshops will allow market participants to complete their own analysis and feed back into the process prior to any re-run of tests.

Alongside facilitating efficient scheduling and pricing in the day-ahead market, prices from EUPHEMIA are also likely to become an important reference in the forwards market. Costs or benefits associated with the forwards market will ultimately be fed back to end customers, making it essential that EUPHEMIA is optimally implemented in the development of I-SEM.

The RAs should however remain cognisant of progress in relation to EUPHEMIA, request regular updates, insist on checkpoints in the project plan to review the

results of testing to ensure assumptions and decisions on the detailed design of the energy markets remain viable and sustainable.

As described above, the governance arrangements in relation to the Day Ahead Market requires clarity. The High Level Design abdicates local responsibility for solving the day ahead schedule and setting the key market reference price. It will be important therefore that the I-SEM is adequately represented and has influence in regard to the operation of the EUPHEMIA algorithm.

The importance of appropriate testing and governance cannot be overstated. Initial test result feedback has raised concerns. Will the complexity of the Irish market cause solving issues either in terms of quality, timeliness or both? If such a scenario prevails will the PCR algorithm owners impose a set of offer formats on I-SEM participants? What does that mean for the I-SEM design? What does it mean for pricing in the Day Ahead market? Will EUPHEMIA solve in a way that contradicts the High Level Design intention that it would form the basis for reaching a feasible dispatch? What implications might that have for how participants trade across the different markets? Does it prompt the TSOs to take significant balancing actions while the Intra Day Market is open?

All of these questions have ramifications for the market design and can only be truly answered following the testing and modelling phase. It will therefore be important that the RAs continually review the appropriateness of design decisions in light of testing results. Power NI accepts this is not an ideal process but it is vital to ensure the integrity of the I-SEM.

It is also important to clearly recognise that the target model and the EUPHEMIA algorithm do not look to minimise production costs, both look to maximise social welfare at a European level (and even then it is only to the extent of the depth of trades offered into the market). This is not the same thing. The RAs may, due to European requirements, be implementing a wholesale market which will in fact increase the cost to the Irish consumer.

Intraday market

The Intra Day Market is dependent upon the European implementation of a shared order book. Similar to the day ahead implementation, responsibility and control of the solution has been relinquished. Consistent with the comments above, understanding the governance, the extent of I-SEM's influence, testing and modelling will all be critical components of understanding the Intra Day Market.

The RAs cannot simply rely on others to deliver an optimal implementation.

Fall Back Procedures

With such reliance placed upon EUPHEMIA, robust fall back procedures will be essential design components. While it is noted that full de-coupling is rare in the current live Day Ahead Market, the added complexity brought by new members such as the I-SEM will increase the risk of full or partial de-coupling occurring.

In any event, the likelihood of price decoupling occurring once the interconnectors have become filled is high.

The fall back procedures therefore must be transparent, well defined, tested and accessible. Participants will face substantial commercial risks under I-SEM and appropriate risk mitigation opportunities must be available under all potential scenarios.

Additionally, it is unclear what potential impact a Fall Back event would have on other commercial agreements such as CfDs and ROs.

Physical Notifications

It is unclear what the debate on physical notifications is trying to resolve. From a supplier perspective the linking or delinking of physical notifications appears to stem from some doubt that the Day Ahead Market will either not effectively solve or will lack significant liquidity i.e. the commercial outcomes from the Day Ahead Market will not substantially reflect the actual physical outturn in the Balancing Market. If this is the case it suggests a fundamental flaw in the design.

It is understandable that the TSOs wish to have as much realistic and useful information as possible. It will also be important in the context of tagging and flagging, that the granularity of the notification is sufficient.

Power NI agrees with the RAs assessment that supplier notifications should not be required. The TSOs currently forecast total system demand and will continue to do so in the I-SEM. It would be an unnecessary burden to place on suppliers a requirement to submit a forecast which is ultimately not used (as the TSOs have their own) and which the supplier cannot control.

Additionally, no supplier is realistically in a position to provide the information in any meaningful technical manner e.g. by load centre. Additionally, dependent upon the design in relation to the treatment of the error in the market, the apportionment adds complexity which the supplier has no visibility of and therefore cannot adequately reflect in a forecast.

Objective Function of the Balancing Market

The need for this topic within the detailed design discussion highlights a lack of clarity in the High Level Design. The High Level Design stated that the TSOs will minimise the cost of deviating from physical notifications.

It is clear from this HLD description that the SEMC had an assumption that the majority of volume would be traded through the Day Ahead Market, the market would determine an economic outcome, physical notifications would reflect this and the TSOs would then be required to make only minimal changes from such an economic schedule. This perhaps held true before the Day Ahead Market had its mandatory nature diluted and more details regarding the operation of EUPHEMIA have become known.

The question posed at the RLG workshop was “*what should the TSO seek to do?*” This is a question of fundamental principles. Should the TSO actively participate to manage the energy market in an attempt to minimise cost to consumers or should the market be left to solve in an economic manner and the TSOs should only act to ensure system balancing and security?

Only when this fundamental question is answered, can the design adequately follow, however it is a complex question.

Much of the debate centred on TSO actions taken while the Intra Day Market is open. Such actions will impact the operation of the market both at the intra day and balancing stages. Without however, a detailed modelling exercise to understand the consequences of actions while both markets are open, it will not be possible to fully understand the ramifications of the actions taken; nor will it answer the fundamental question.

When considering what proposals to put forward in the consultation paper, Power NI would welcome the RAs clearly addressing this area. If the TSOs need a longer window than other markets to ensure system security, then this must be clearly stated. Should this be accepted by the RAs, then again it should be clearly stated that the RAs expect and accept, that the Intra Day and Balancing Market will be impacted. The actions available to the TSOs under this option must be clearly defined; transparent, modelled and incentivisation must be included.

Reaching a Feasible Dispatch

Power NI fully accepts that the complexity of the all island network presents significant challenges to the TSOs in operating the system and reaching a feasible dispatch.

Unit commitment requirements, constraints, reserves, SNSP etc. raise the question over the sheer volume of actions the TSOs will be taking independent of market outcomes. The consequences for the market and pricing specifically cannot be known without detailed modelling and analysis. As a supplier, Power NI is concerned that early actions will result in an illiquid Intra Day Market and a punitive, volatile Balancing Market.

Acknowledging the need to operate the system securely, the RAs must act to ensure that the consequences of facilitating early TSO action do not adversely

impact suppliers and ultimately customers. The trade off for facilitating the TSO requirements should be a design which avoids disproportionate unintended consequences and risk placed upon suppliers.

Forms of Bids and Offers

While a traditional supplier who has non responsive demand will not need to bid into the Balancing Market, it is important to understand the requirements placed on generation.

Power NI welcomed the debate on the form of bids and offers and such is its importance it was also covered in the wrap up workshop. It is unclear however if any conclusions were reached.

The RAs should be mindful that the requirement on generators in the Balancing Market will influence their behaviour in the Intra Day Market, especially as they run concurrently. This adds complexity, risk and inevitably a risk premium is likely.

Following the modelling work discussed above, checkpoints, further consideration and debate will be required in this area.

Start Up Contracts

Power NI notes that consideration is being given to the concept of start up contracts. This is an area worthy of detailed consideration. Instinctively costs should appear in the normal operation of the market to ensure consistency and avoid arbitrage etc.

It is of concern to suppliers how substantial start up costs will appear in the market and therefore there may be merit in a separate contractual arrangement between the unit and the TSOs.

Further details are required however on how this would be facilitated, how it would be paid and what incentives to be responsive it provides. The RAs should also be mindful of unintended consequences of proposals in this area.

Tagging, Flagging and Imbalance Pricing

The key issues in relation to the flagging and tagging discussion relate not to the process but rather the actions to be identified. At a principle level, Power NI believes that actions as a result of policy or system constraint should not appear in the pricing of the Balancing Market. Consistent with the SEM, these issues are clearly constraints and should appear as imperfections.

Power NI would welcome detailed analysis of schedules to attempt to quantify the extent of the actions likely to be tagged. While a large number of tagged

actions may result in a dampening of the Balancing Market price, it may also create significant volatility. All aspects of this issue need to be fully understood before the design decision is concluded.

It is in this context that questions over potential PAR values were raised. While Power NI understands the goal of a PAR value to be a reduction in balancing price volatility this could also be achieved via broadening of tagging rules or de-minimis levels etc.

In defining the actions and rules of imbalance pricing, detailed modelling will be required and the methodology and expected outcomes, including the impacts on pricing and volatility, well understood.

A highly volatile and punitive balancing market is not in the interests of participants or ultimately customers. The RAs should ensure this is not the I-SEM outcome. To support this, the RAs may wish to consider some transitional flagging and tagging rules to ensure the Balancing Market is not punitive as participants begin to engage in the I-SEM. This is consistent with GB's approach.

Imbalance Settlement

Power NI welcomes the provision of detailed numerical examples by the RAs. The additional examples including for supplier units, was most helpful in increasing understanding.

Metering

Power NI agrees with the presentation given, that the requirements of each meter data provider should be considered and discussed in an appropriate workshop when detailed design information is known.

At a principle level the provision of timely and accurate meter data is a key market requirement.

Global Aggregation

Power NI would welcome the RAs including a third option within their consultation paper.

The concept of aggregation, including the application of DLAFs and TLAFs are well founded industry standard calculations. There will always be an error level where demand and generation calculated to a notional trading point do not entirely balance and generators should be paid for power which they generate. It is however, the allocation or cost of this error which raises concern for suppliers.

Since its introduction, the error in the SEM has fluctuated wildly. While in the SEM this is all charged at SMP in the I-SEM context to add this to a suppliers

Balancing Market volume represents a significant risk and drives much of a suppliers Balancing Market anxiety.

The error level is a value which a supplier is not responsible for; nor can they control or forecast the volume. Error in the market occurs due to inaccuracies in the TSO's determination of TLAFs, the DSO's determination of DLAFs, the accuracy of industry profiles, unmetered supplies, theft, and the MDP's estimation. None of these components are under the control of suppliers yet the options put forward require a supplier to estimate how wrong everyone else's estimate is and bear the financial burden.

Power NI strongly believes that a supplier should not be exposed to such an uncontrollable and potentially punitive risk. The design proposed would only encourage a risk premium to be added and ultimately paid by consumers.

As an alternative solution, Power NI would welcome the error being assigned to the NEMO and recovered via a tariff. This principle is consistent with how constraints are currently recovered.

Suppliers would still pay for their customers demand adjusted to trading point, however would not be exposed to an unknown volume showing up in the Balancing Market. They could therefore more accurately forecast their own volumes and seek to manage their own exposure in a balance responsible manner.

The error volume would be assigned to a central body and paid for by a tariff levied on suppliers actual volumes.

Such a proposal would also bring some much needed transparency to the issue of error. At present it is an unseen cost borne by suppliers and passed to consumers. By including it in the Dispatch Balancing Cost submission, the RAs will publish and consult upon volumes and prices. This exposure will undoubtedly prompt analysis and action to address the underlying issues.

The implementation of such a solution could be implemented globally, jurisdictionally, by metering type or sculpted as deemed necessary.

Local Market Power

The issue of market power, whether that be locally behind a constraint or through portfolio size is a complex multi-faceted issue.

The market power workstream cannot consider the issues in isolation. There are aspects of the forwards market, Energy Trading Arrangements, CPM and DS3 which are all impacted by market power considerations.

Power NI believes that market power mitigation was not effectively considered in the design of the SEM with Directed Contracts being mandated relatively late in

the process and no real consideration given to the forwards market and whether it would operate effectively. To fail to consider this issue in the design phase of the I-SEM repeats a fundamental SEM design flaw which has pushed scarcity premiums to end consumers.

The other main mitigation aspect was the Bidding Code of Practice which provides transparency and confidence in the out turned market prices. Relaxation of such principles as suggested in the Draft Decision is instinctively of concern to suppliers as transparency will be reduced.

Given both the size of the Irish market and the players within it, along with the chunky nature (in terms of relative size) of the generation units and the interconnection available, to fail to consider market power mitigation fully could represent a fundamental failure by the RAs, result in a sub-optimal design and be contrary to the RAs statutory duty to protect consumers.

Power NI would therefore welcome the RAs dealing with the issue of market power in a holistic manner feeding in decisions and adjustments to the relevant design workstreams were appropriate. The issue cannot however be left to the Market Power workstream in isolation. Co-ordination is required across the whole market design. The individual workstreams also need to identify where Market Power could be exercised and identify how this might be addressed in that particular work area and then take those considerations back to the Market Power workstream to see if there is a more general cross market measure that might assist or whether it is a more specific design feature needed in a particular area.

Carried forward topics

Power NI notes that the ETA Detailed Design Building Blocks Consultation Paper identified a number of topic areas which, while discussed during the building blocks workshops, were better placed within the Markets phase.

In the interests of completion and to ensure that participant comments are reflected through this change; Power NI has included previously submitted comments regarding these topics.

Participant Registration

As discussed at Workshop 1.3 there appeared to be market consensus that the ideal registration process should be as simple, straight forward, flexible and expedient as possible.

To achieve such a desired outcome it is difficult to envisage anything other than a single point of registration. This point is linked to the earlier discussion and the role of SEMO in the ISEM.

The concept of intermediary registration should also be maintained.

Clearing & Settlement

To a certain extent the settlement of the Day Ahead and Intra-Day markets will be driven by coupling arrangements. In general terms however, Suppliers strong preference is for longer payment terms. This assists in managing the significant working capital requirements the wholesale market creates. The resultant reduction in credit exposure from any shortened payment terms is not a like for like balance.

In determining the settlement processes, one central clearing body operating across all markets (including forwards & capacity) would facilitate the necessary netting arrangements which must be retained. The current SEM affords a settlement reallocation process which acts to reduce unnecessary working capital and credit exposure. This reduces participation costs and therefore ultimately cost to consumers. While the current settlement reallocation process may not naturally be able to transfer the principle should endure. A contractual arrangement to reallocate a percentage for example, may be a workable alternative.

Credit Risk Requirements

The current SEM principle in relation to credit cover is that the market should be fully collateralised. While this is a principle that participants supported, the implementation has resulted in a significantly over collateralised market. Power NI urges the RAs to consider all options to reduce the burden of collateral which is placed upon participants. This should include consideration of the forward market collateral requirements. A holistic approach to exposure, including provisions for netting or general reduction should be considered wherever possible. The RAs should also consider collateral options such as Parent Company Guarantees and insurances as alternatives to the cash or Letter of Credit approaches. Such options may provide a lower cost alternative while still providing the desired cover.

VAT

As discussed at Workshop 1.3 Power NI would strongly advise the RAs to begin discussions with the relevant VAT authorities as soon as possible. The equivalent discussions in advance of SEM go-live were left until relatively late in the process and resulted in a workaround solution being implemented and subsequent changes made.

All participants are cognisant of the absolute requirement to be VAT compliant. Achieving such compliance can only be achieved through the RAs engaging with

the VAT authorities, securing clarity on requirements and ratification of implementation decisions.

Shipper (financial)

Further detail will be required in relation to this concept however the role of SEMO and ultimately the Central Counterparty will clarify if this is a requirement.