



Energia feedback to the Regulatory Authorities

***Comments on Detailed Design Process for I-SEM;
EUPHEMIA Testing; and RLG ETA Workshops 1.1, 1.2
and 1.3***

26 November 2014

1. Introduction

Energia welcomes this opportunity to provide feedback to the Regulatory Authorities (RAs) at this early stage of the I-SEM Detailed Design process. This submission follows publication of the RA's Project Plan for I-SEM on 10 October 2014 and the subsequent completion of three ETA workshops in which Energia participated, i.e. RLG 1.1 (15 October); RLG 1.2 (29 October); and RLG 1.3 (13 November).

In this submission we provide general comments on the detailed design process and our feedback on the approach to EUPHEMIA testing presented by SEMO at RLG workshop 1.1. The Electricity Association of Ireland (EAI) is also providing feedback to the RAs on these issues. We fully support the EAI submission and supplement our response with relevant extracts from it. In addition, we provide some preliminary views on the content presented at RLG workshops 1.1, 1.2 and 1.3 covering the "Building Blocks" policy issues, recognising that these issues will be subject to a full public consultation in early 2015.

2. General comments on detailed design process

As the Electricity Association of Ireland (EAI) has consistently stressed to the RAs, the preferred High Level Design (HLD) for I-SEM and the proposed plan for its detailed design and implementation (as published in October 2014) carries considerable risk and uncertainty that needs to be formally recognised, carefully managed and reflected in a revised I-SEM Project Plan.

Clearly Energia has a vested interest as a market participant in the successful delivery of I-SEM however defined to ensure a well-functioning, efficient, competitive and sustainable market across all timeframes (including the forward market). Our commitment to the Detailed Design process is therefore unquestionable. We trust the SEM Committee shares these objectives in line with its statutory remit and that we have a shared understanding of what success means. Key to this success is appropriate regulatory management of the market and the effective management of project and market design risks, including preventing, to the extent possible, the unintended consequences that can often materialise as a result of market re-design to meet administrative deadlines or to satisfy perceived compliance requirements.

The target go-live for I-SEM of Q4 2017 will be hugely challenging in light of what has to be done, the nature of the complex and interacting risks that have to be managed, and the finite collective resources available within the small all-island market. The intended unique use of EUPHEMIA and its uncertain performance in this regard from both a TSO and market participant perspective is just one example. Another is the delivery of a new capacity mechanism based on reliability options, to be developed in tandem (and interacting) with entirely new energy trading arrangements. All of which is further complicated by the parallel development of a revolutionary new system services regime under DS3 which has yet to be defined at a high level, and a new renewable support mechanism in Northern Ireland.

The above points resonate in the EAI feedback to the RAs and we would encourage this feedback to be fully considered, as re-produced below for completeness, which is supplemented by additional Energia feedback.

2.1 EAI feedback on detailed design process

1. An Iterative Design Process

The grouping of building block and market design topics into discrete workshops offers a limited opportunity for the discussion of possible solutions under each topic. We suggest that an iterative design process in advance of any formal consultation would be more effective and would encompass the following steps:

1. Identification of issues (scoping at workshops as provided for in 3 below),
2. Search for alternative solutions (discovery at workshops as provided for in 3 below),
3. Analysis to reduce the number of options and consider alternatives (post individual workshops and in advance of 'wash-up workshop),
4. A 'wash-up' of outstanding matters and final recommendation (final workshop to discuss analysis and alternatives from all previous workshops, as provided for in 3 below).

2. Tracking mechanisms

During the RLG workshops issues are raised, questions asked, tasks assigned, and the scope of consensus is explored. Whilst we understand that the objective of these meetings is to inform the various consultation papers, we feel that the process would benefit from a formal secretarial function in order to; document the discussions; create, maintain and disseminate logs of questions, issues, actions, decisions and to follow-up on those according to set and agreed upon timelines. All those outputs are useful for the workshop participants and the broader industry, but beyond that they provide an enduring record of a design/analysis process that can be referred back to and re-used in future design processes.

The formal recording and publication of the output from these meetings would also assist participants in understanding the interrelationships between each workstream.

The need for secretariat support in RLG workshops is also underlined by the need to track and document issues that arise with relevance to future workshops and workstreams. Thus tracking of issues should extend to capturing and ensuring inter-relationships are captured, tracked and addressed.

3. More intensive stakeholder engagement

EAI calls for more intensive stakeholder engagement in the remaining workstreams of the detailed design phase. The proposals for stakeholder engagement in the forthcoming "markets" workstream do not provide for sufficient time to discuss, debate and explore solutions around significant areas of the market design. As an

example, it is insufficient to allocate only one third of a one day workshop to the balancing market.

In our proposals below we request that that three additional workshops be added to the three proposed in the forthcoming “markets” workstream to allow greater time for consideration of fundamental design issues such as the balancing market;

Table 1: EAI proposals for "Markets" workstream

Workshop a	Day Ahead Market & EUPHEMIA
	Participant Nomination Process
Workshop b	Intraday Market
	Fallback Procedures
Workshop c	Reaching a Feasible Dispatch
	Tagging & Flagging
	Classes of non-energy actions
	Local market power considerations
	Reserves
Workshop d	Balancing Market
	Imbalance Settlement
Workshop e	Shipping (Physical)
	Units Under Test
	Metering
	Global Aggregation
	Instruction Profiling
Workshop f	Outstanding topics raised
	Review of Building Blocks in context of Markets workshop, particularly: <ul style="list-style-type: none"> • Treatment of Firm Access • Priority Dispatch • De-minimis level • Constraint & curtailment • <i>Consideration of building blocks topics in the context of future work streams incl but not limited to; market power, forward market, CRMs</i>
	RLG Review

4. Project Plan Checkpoints

As noted in our previous correspondence dated 6th of October 2014 there is a clear need to include within the project plan the key points at which a decision whether to progress, proceed to contingency arrangements or amend the high level design is considered. The staged progressions and conclusions of the EUPHEMIA testing are important examples of these checkpoints.

5. Renewable Support Mechanisms / REFIT Reference Market

A decision as to which market timeframe the REFIT and FIT with CfD support mechanisms are referenced has clear implications for the robustness of the price signal at the day ahead stage, the forwards market and the balancing mechanism. There is currently no clarity within the project plan regarding how or when such decisions will be taken on this important topic (presumably in conjunction with government departments). Due to the knock on implications of these decisions, the EAI calls for immediate clarity on the process to be employed and the timeframe in which the RAs expect to have these decisions and this should be cross-referenced in the RA's Project Plan for I-SEM.

2.2 Additional comments from Energia on detailed design process

- The current Project Plan for I-SEM provides for separate consultations on “Building Blocks” and “Markets” under the ETA workstream. However they are inextricably linked and cannot be viewed in isolation, either from a consultation or decision making perspective. Thus we see a need for these to be brought together in the process, either by deferring the “Building Blocks” consultation and incorporating this into a joint “Building Blocks” and “Markets” consultation later in the process or by seeking preliminary views on the “Building Blocks” to be further consulted upon during the “Markets” consultation.
- The need for joined-up thinking, consultation and decision making applies across all workstreams.
- It should also be stressed that the need for more intensive industry engagement also applies to other workstreams of the I-SEM detailed design process. For example the current I-SEM Project Plan seems to provide for only four workshops for discussion of CRM design issues. This is completely unrealistic and needs to be revisited.
- The forward liquidity workstream should be prioritised in the I-SEM Project Plan and concerted efforts should be made now to improve forward liquidity in the SEM.
- Consultation timelines should normally be at least 8 weeks (and longer if over a public holiday period) to facilitate meaningful, evidence-based and considered responses from all interested parties.
- Efforts should be made to facilitate bilateral meetings with interested parties to supplement formal consultation responses as this provides a constructive forum for two-way dialogue and the clarification of issues.
- It is important to provide clarification on the role of SEMO in I-SEM.

- It is imperative that clarity is urgently provided in relation to the interaction of REFIT and, as soon as possible, EMR CfDs, with I-SEM. We recognise that this may be an issue for government departments but it should at least be cross-referenced in the I-SEM Project Plan.
- The options which are being presented and considered under each of the workstreams must be accompanied by robust analysis to support informed evaluation and decision making.

3. EUPHEMIA Commercial Testing

Energia welcomes the RA's commitment to rigorous and robust EUPHEMIA testing. We have contributed to and fully support the detailed feedback on commercial testing of EUPHEMIA submitted by EAI, which is re-produced below for completeness. We also provide additional and supplementary Energia feedback.

3.1 EAI feedback on EUPHEMIA testing

This section provides EAI feedback on the approach to EUPHEMIA testing presented by SEMO at RLG workshop 1.1.

Requirement for EUPHEMIA testing

The focus on financial trading, efficient day-ahead market coupling and the proposed implementation of reliability option contracts combined with a market integrated dispatch process (whereby DAM schedules are the starting point for dispatch) means that the integrity of the ISEM HLD is conditional upon the quality of the outcomes produced by the EUPHEMIA algorithm.

Over the course of the HLD process a strong consensus has emerged across industry (including market participants and market operators) and regulators that testing of EUPHEMIA is essential. The strength of the consensus reflects the broad recognition of the potential risks inherent in the ISEM HLD. To ensure that these risks are adequately managed the EAI reiterates its recommendation in its letter to the RAs of 6th October 2014 that formal review check points are introduced into the ISEM project plan at key milestones in the EUPHEMIA testing process to ensure that the direction of the detailed design remains feasible.

Objective of EUPHEMIA Testing

The core aim of EUPHEMIA testing should be to establish that the proposed use of EUPHEMIA under the ISEM HLD will produce efficient and stable DAM outcomes to provide a strong reference price and efficient initial schedule for dispatch, recognising the uniqueness of EUPHEMIA's application in ISEM. This can be achieved by ensuring that the HLD does not:

- Undermine the integrity of the EUPHEMIA algorithm – i.e. will not break the EUPHEMIA algorithm;
- Undermine the stability of the EUPHEMIA algorithm – i.e. will not regularly de-couple from the rest of Europe having failed to find a solution;
- Result in erratic, unpredictable and inefficient generator scheduling – i.e. scheduling risk;

- Result in inefficient interconnector scheduling; or
- Result in unnecessarily volatile and inefficient pricing.

These potential issues can only be conclusively tested through full commercial testing under ISEM operating conditions. This is because the HLD requires generators to formulate EUPHEMIA order types to achieve efficient scheduling of their units by anticipating underlying market dynamics, such as the level of wind generation and the volume of demand that will participate in the DAM on any given day. The complexity of the problem presented to EUPHEMIA and the overall efficiency of the market solution will therefore depend upon the interactions of order formats and these underlying assumptions across all participants. The EAI therefore proposes a three phase approach to EUPHEMIA testing to ensure all potential risks are properly assessed. These are:

1. Proof of Concept Testing;
2. Regression Testing; and
3. Commercial Testing

Time Period for Historical Testing

To build market confidence in the ISEM HLD the testing of EUPHEMIA needs to be robust and extensive. The EAI therefore proposes that EUPHEMIA testing is conducted on at least a year's worth of SEM historical market data. This is in line with the testing regimes carried out in other markets – e.g. the Iberian market. The EAI furthermore recommend that scenario stress testing is carried out to ensure the integrity of the ISEM DAM under unusual / exceptional events if such events are not captured in the historical data – e.g. low system availability, extremely high / low wind, IC outages, combination of these.

Use of an extensive historical data set and scenario stress testing will:

- Provide a wide range of results across seasons and with different wind and availability profiles;
- Build market confidence in the ISEM HLD;
- Improve market participants' understanding of the EUPHEMIA algorithm;
- Improve market participants' understanding of EUPHEMIA order formats;
- Allow regulators to assess the potential outcomes of the new proposed Energy Trading Arrangements for customers;
- Inform the debate on forward liquidity (in particular, the balance between effective forward liquidity and the need to provide appropriate flexibility to facilitate adequate risk management);

Benchmarking

The results of testing should be benchmarked against the SEM market outcomes for historical test periods. In interpreting the results Eirgrid should take into account any relevant factors that may affect schedules and prices – e.g. changes in IC flows etc.

1. Proof of Concept Testing (Single Order Format)

Proof of concept testing should seek to confirm that the proposed use of the EUPHEMIA algorithm to schedule the ISEM DAM at a unit based level is feasible. This could be achieved by using actual SEM data for a typical year – e.g. Feb 2014-Feb 2015. The TSO would create a data map to translate the actual generator offers submitted to SEM into a compliant EUPHEMIA order type. An assumption around how this translation is carried out for each order format would have to be made for example applying perfect foresight. The process would then be repeated for each EUPHEMIA order type. For the purposes of this stage of testing all generators would be assumed to use the same order type for each cycle of testing.

Responsibility: Eirgrid

Objective:

- Obtain an understanding of the potential impacts of EUPHEMIA order formats on the functioning of the ISEM DAM. Improve participant understanding of EUPHEMIA order formats and ISEM DAM dynamics. Analyse market results and identify potential issues.

Assumptions:

- All non de-minimis wind generation participates in DAM with perfect foresight
- All market demand participates in DAM with perfect foresight
- DAM demand is assumed to be the sum of all MSQs – IC flows and pumped storage operation should be scheduled through the EUPHEMIA algorithm (netted from demand)
- Wind and demand enter DAM as price takers

Inputs:

- 2014-15 SEM generator bids translated to a EUPHEMIA order format.
- Wind generation is offered as price taking orders based on actual MSQs
- Market demand is represented as pricing taking bids from suppliers

Outputs:

- All Input data
- Data map used by TSO for each order type
- Hourly market schedules (EUPHEMIA contract positions) for each unit
- Hourly market prices (this should include price and uplift if MIC orders are used)
- Any other data deemed useful for participants to improve their understanding of the operation of EUPHEMIA.

Full Regression Test (Multiple Order Formats)

Eirgrid in consultation with market participants would create a test plan designed to stress test combinations of order formats. This could be achieved by using the same actual SEM data as for the proof of concept testing. The test plan could be informed by the results of the proof of concept testing. For set time intervals individual

generators or sub sets of generators would be allocated a certain EUPHEMIA order format. To comprehensively test the enduring capability of EUPHEMIA (i.e. for the situation where wind penetration has substantially increased and generation profiles become more unpredictable) to produce a feasible despatch within the solution time limits, such mapping should provide that a large proportion of generating units submit a substantial number of exclusive, complex bids such that their underlying complex costs can be replicated in EUPHEMIA such that they would not operate at a loss whatever their outturn schedule (i.e. that units do not operate at a loss regardless of whether they operate for 1 or 24 hours or at mingen or full). This would entail rigorous extremity testing of the capabilities of the algorithm and may help identify what impact such an approach by generators impacts the performance of the EUPHEMIA algorithm, either in terms of runtime or in terms of the solution it can derive in the time available and hence may provide some indication as to whether bidding restrictions could be imposed to ensure EUPHEMIA can reach a viable solution. Actual historic generator order formats would then be translated using the data maps created during proof of concept testing. The focus of the testing would be to analyse the interaction of EUPHEMIA order types and their effect on DAM outcomes.

Responsible: Eirgrid

Objective:

- Obtain an understanding of the potential impacts of EUPHEMIA order formats on the functioning of the ISEM DAM. In particular, how the interaction of different types of order formats by market participants affects market outcomes. Improve participant understanding of EUPHEMIA order formats and ISEM DAM dynamics. Analyse market results and identify potential issues and risks to EUPHEMIA performance and/or risks to the imposition of limits on bids.

Assumptions:

- EUPHEMIA order formats used by each market participant determined by a test plan (including scenarios to extremity test the algorithm)
- Data maps developed for proof of concept testing used to generate EUPHEMIA order submissions for participants as per the test plan (including the generation of exclusive orders)
- All non de-minimis wind generation participates in DAM with perfect foresight and then scenarios developed to replicate wind forecasting errors to facilitate stress testing
- All market demand participates in DAM with perfect foresight and then scenarios developed to replicate demand forecasting errors
- DAM demand is assumed to be the sum of all MSQs – IC flows and pumped storage operation should be scheduled through the EUPHEMIA algorithm (netted from demand)
- Wind and demand enter DAM as price takers

Inputs:

- Test Plan devised by Eirgrid determining how each market participant's data will be submitted to EUPHEMIA.
- 2013 SEM generator bids translated to a EUPHEMIA order format as per the test plan.
- Wind generation is offered as price taking orders based on actual MSQs
- Market demand is represented as pricing taking bids from suppliers

Outputs:

- All Input data
- Data map used by TSO for each order type
- Hourly market schedules (EUPHEMIA contract positions) for each unit
- Hourly market prices (this should include price and uplift if MIC orders are used)
- Any other data deemed useful for participants to improve their understanding of the operation of EUPHEMIA.

Full Commercial Testing

Market participants are provided with an opportunity to submit orders into EUPHEMIA using any EUPHEMIA order format. These are carried out for sample periods – e.g. a week at a time. There are no restrictions applied to bidding however Eirgrid will be required to complete some sort of sense checking to ensure the end market scenario is reasonable. Participants must seek to behave how they would have behaved during the historic period in question if the ISEM ETA had been in place. They bid based on actual wind and demand levels but the TSO run additional scenarios with different demand and wind assumptions to introduce the element of forecast error. This approach is limited as under real ISEM conditions each participant may have a different forecast of wind or demand.

Responsibility: Eirgrid and Market Participants

Objective:

- Obtain an understanding of the potential impacts of EUPHEMIA order formats and forecasting errors on the functioning of the ISEM DAM. In particular, how the interaction of different types of order formats in conjunction with participant forecasting errors affects market outcomes. Improve participant understanding of EUPHEMIA order formats and ISEM DAM dynamics. Analyse market results and identify potential issues.

Assumptions:

- EUPHEMIA order formats determined by market participants for the time periods identified in the test plan
- All non de-minimis wind generation participates in DAM with perfect foresight and then scenarios developed to replicate wind forecasting errors to facilitate stress testing

- All market demand participates in DAM with perfect foresight and then scenarios developed to replicate demand forecasting errors
- Base DAM demand is assumed to be the sum of all MSQs – IC flows and pumped storage operation should be scheduled through the EUPHEMIA algorithm (netted from demand)
- Wind and demand enter DAM as price takers

Inputs:

- Test Plan devised by Eirgrid.
- EUPHEMIA orders received from participants for the periods identified in the test plan. Orders should reflect how participants would have behaved under the ISEM ETA during the historical period.
- Wind generation is offered as price taking orders based on actual MSQs
- Market demand is represented as pricing taking bids from suppliers

Outputs:

- Wind and demand scenarios used by Eirgrid to simulate forecasting error
- Hourly market schedules (EUPHEMIA contract positions) for each unit
- Hourly market prices (this should include price and uplift if MIC orders are used)

Demand Side Price Setting Bids

- The commercial testing should be developed to determine the impact from price setting demand side bids into Euphemia. In this regard scenarios should be developed whereby demand participates in the DAM in proportion to varying levels of unhedged volume (for example 85% hedged /price taking and 15% unhedged / price setting bids) under different wind and demand forecasts. Suppliers could then submit commercial demand side bids in proportion to their unhedged volume

Further Testing:

- The commercial testing could be further developed to replicate differing views of wind and demand forecast for the DAM. This could be achieved by Eirgrid centrally issuing wind and demand scenarios to participants prior to submission of EUPHEMIA order formats.

Detailed Testing Plan

To enable resource planning, a detailed testing project plan should be developed and published for comment. This will ensure that market participants can organise resourcing to ensure engagement and allow the testing to deliver upon its aims. The plan should ensure that there is sufficient interval between test stages to allow participants to analyse outputs of previous stages and amend inputs to the following stages. The latter phases of the plan should also be adaptable in order to allow for any changes that may be required as a result of the outcomes of earlier stages.

3.2 Additional comments from Energia on EUPHEMIA testing

Energia advocates full transparency of EUPHEMIA testing, including publication of all input data (including generator bids) in commercial testing along with any other data deemed useful for participants to improve their understanding of the operation of EUPHEMIA.

4. Comments on the content of RLG 1.1, 1.2 and 1.3

RLG Discussion Paper 1.1

Topics covered

- Treatment of Transmission System Losses
- Treatment of Firm Access

Treatment of Transmission System Losses

The treatment of transmission system losses has been extensively debated and reviewed in recent years and a final policy decision in this area (SEM-12-049) has been made following several rounds of consultation and proposed decisions.

As outlined in our response to SEM-12-024, the arguments that have been forwarded in opposition to the current TLAF approach in the SEM are considered to be lacking principled objections and in many cases are substantially flawed. These same arguments (listed and critically evaluated in our response to SEM-12-024) were rehearsed by some participants at RLG meeting 1.1 and will no doubt be re-iterated in written submissions to the RAs.

To re-open this policy decision now would be an unhelpful and contentious distraction when the debate should focus on the efficient and pragmatic implementation of locational loss factors in I-SEM, which should also include distribution losses. A system solution is needed and should be developed in conjunction with the TSOs, generators, suppliers and interconnector owners. It is clear from proposals presented in RLG paper 1.1 that further work in this area is needed.

With regards to the treatment of the interconnectors, Energia is of the view that treating the interconnectors separately provides a more realistic representation and is likely to be more efficient.

Treatment of Firm Access

Energia strongly supports the principle of firm financial access rights for transmission and distribution connected generators (irrespective of where on the network an outage occurs). We cannot comment further than this until the Balancing Market design is further understood.

4.1 RLG discussion paper 1.2

Topics covered

- Constraints
- Priority Dispatch
- Curtailment
- De Minimis Level

Constraints

The principle that a generator in merit should not be financially disadvantaged by constraints should be firmly upheld in I-SEM. However without an understanding of the Balancing Market design it is difficult to provide an opinion on how this should be implemented in I-SEM. We would caution against underestimating the complexity and significance of flagging and tagging which appears to be overly simplified in the discussion of constraints in RLG paper 1.2. Constraint actions and associated costs must be accurately tagged and socialised across the market and clearly separated from the balancing market price. This is not a trivial issue.

The treatment of constraints should be the same in NI and ROI. Furthermore a policy decision on outturn availability in the SEM is overdue and is essential when designing the detailed design of the I-SEM. Distribution connected generators and transmission generation assets must be treated in the same manner recognising the material contribution of distributed generation to the overall generation mix. It is inappropriate for generation, connected either at transmission or distribution level, to realise zero outturn availability for network issues.

Priority Dispatch

Priority dispatch for renewables is a European legal requirement. We broadly agree with the proposal that Priority Dispatch would most likely be implemented in the Balancing timeframe. Priority Dispatch generation should be able to forego its price taking status to become a price maker. The price floor for price taking generation of -€500/MWh is considered to be a risk, and another definition for priority dispatch for the balancing timeframe may be more appropriate.

Curtailment

Curtailment of wind is inefficient and should be minimised through delivery of DS3 system services and appropriate market signals. Removing market compensation for curtailment by artificially distinguishing this phenomenon from constraints does not solve the problem; this is a policy decision that should be re-visited. It is also imperative that the procurement process for system services, which increase SNSP is expedited. The RAs must consider a number of parallel tracks, for procurement of system services, which will ensure the SNSP level can be increased as soon as reasonably practicable. The delay in the implementation of measures, which facilitate the increase in SNSP from 50% to 75%, demonstrates the need to ensure the correct financial/market signals are designed to deliver the necessary investment in DS3 and renewable generation. The introduction of I-SEM must be used as an opportunity to ensure the market / financial signals result in a reduction in the level of curtailment in the market to a figure which is tending towards zero.

In terms of implementation of current policy it is difficult to comment without a better understanding of the balancing market design but the solutions proposed in RLG discussion paper 1.2 appear overly complicated.

De Minimis Level

The current de minimis level of 10MW is appropriate and the current treatment of de minimis generation should continue in I-SEM. It was suggested at RLG workshop 1.2 that Aggregators should be able to treat de minimis generation as negative demand. This does not make sense when Aggregators have no demand.

4.2 RLG Discussion Paper 1.3

Topics covered

- Currency
- Participant Registration
- Clearing and Settlement
- Credit Risk Requirements
- Treatment of VAT
- Shipping (Financial)
- Market Information

Currency

The current approach with dual currencies in the market should remain however an annual tariff approach would be the preferred option for the recovery of currency costs. This will ensure that currency costs are predictable on an annual basis. The risk presented due to differences between the GB and ISEM FX rate will need to be explored. The RAs should not restrict their currency analysis to day-ahead, intra-day and balancing markets. Consideration of Capacity, Ancillary Service and Forwards markets should also be included in the review. Forward Market trading in one or two currencies may have knock on implications on the volume of trade in the day ahead market.

Participant Registration

Registration should be as simple and straightforward as possible with the current timelines reduced. Registering for all markets (DA, ID & BM) with one central body would be the preferred option.

The timelines for participant registration must be improved in the I-SEM (at least a reduction from 60BD to 40BD).

Energia would favour a single point of contact for the registration process. A review of the additional obligations under the Network Codes should be undertaken to ensure there is not duplication of registration obligations. Automation of the registration process must be considered for the implementation of I-SEM.

System operators face increasing challenges in managing a system with an increasing range of technologies, sizes and locations of generation. It is therefore

imperative that processes are optimised so generation which is capable of generating is not restricted from doing so because of a sub-optimal market process.

A change of ownership should not require a participant to de-register however there should be an obligation on the new participant to prove it can satisfy credit tests etc.

The process relating to the submission of technical offer data should also be improved from the current process. The current process limits the ability of a generator to offer flexibility to the TSO.

The process of changing from a price taker to a price maker also needs to be optimised.

Clearing and Settlement

One clearing body across all markets would be the preferred option. Forward trading and Capacity markets also need to be considered alongside physical Energy. Netting across markets, participants and entities should be retained. Working capital and credit requirements should be kept to a minimum.

Credit Risk Requirements

Collateral needs to be reduced as the SEM is currently over collateralised - collateral requirements for forward market (CfDs) and the CRM should also be considered. All options for collateral should be considered such as PCGs and insurance products with nothing being ruled out at this stage. Additional detail is required on the accuracy of the current historical assessment period for predicting future exposures and the accuracy of meter reads and settlement. Collateral should be combined for all markets (DA, ID & BM) and some form of settlement reallocations or netting available.

It is imperative that the SEM Committee considers the total cost of credit for participants in the I-SEM. The credit requirements associated with all elements of the I-SEM must be reviewed in a holistic manner in order to design a market which has optimised the credit arrangements. The Reliability Options capacity mechanism and Forwards Markets will have credit requirements which must be considered alongside the obligations which are being considered for the physical energy markets.

European Financial legislation, such as EMIR, is increasing obligations on energy companies trading in financial derivatives. The SEM Committee should also consider the potential financial obligations associated with trading financial instruments for interconnector capacity; forwards markets; and reliability options.

Treatment of VAT

The relevant revenue authorities need to be engaged as soon as possible.

Shipping (Financial)

It is important to clarify who would perform such a role, and it would appear that SEMO may be best placed to do so.

Market Information

Systems should be designed for the publication of as much information/detail as possible. What is actually published can then be restricted if required. A high level of transparency is required and REMIT requirements should also be taken into consideration. This topic needs to be re-visited in the context of the market power mitigation workstream and as more information becomes available on any restrictions that might apply to the publication of cross border market offers and bids.