



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

**Market Power Mitigation Consultation Paper SEM-15-094**

**A Submission by EirGrid and SONI**

**18<sup>th</sup> January 2016**

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## 1 EXECUTIVE SUMMARY

EirGrid and SONI welcome the SEM Committee's consultation on the important issue of treatment of market power in the I-SEM.

Increased competition is at the heart of the internal market for electricity across the European Union and is an important condition for the efficiency and ultimate success of the I-SEM arrangements. It is critical that the implementation of I-SEM does not give rise to opportunities for market power abuse that could potentially undermine this competition and ultimately the effectiveness of the arrangements.

Great care needs to be taken when defining competitive behaviour and pricing to ensure on one hand that market power is sufficiently mitigated to prevent market power abuse and on the other that the appropriate degree of commercial risk is present to drive efficiency and innovation across the wholesale trading arrangements.

The change in the design of the market in moving from the relatively static SEM to the more dynamic I-SEM requires an increased focus on market power between markets, timeframes and arrangements across the electricity value chain. The SEM Committee's consultation sets out a comprehensive set of options to mitigate market power that build on the approach taken in the SEM but highlight new areas of concern and new approach to dealing with those concerns.

We emphasise in this response the importance of being able to identify and mitigate market power across all of the timeframes in the I-SEM and also to consider external arrangements that may give rise to market power. We agree that proposed structure conduct performance framework is a robust approach to identifying the exercise of market power.

We believe that considering FTRs under financial regulations would increase obligations and workload required of participants. We do not believe it is clear that FTRs are required to be regulated by anyone other than the energy regulators under REMIT, and consider that it would be more efficient if FTRs were regulated by the energy regulators only, assuming this is consistent with the legal interpretation of the final design of the products.

When considered together the modelling work in the consultation paper and the conclusions of the analysis previously commissioned by the RAs on the provision of system services highlight the potential for significant market power issues to arise in the I-SEM balancing market. This is the sole mechanism for the TSOs to dispatch market participants to manage power system constraints and deliver system services, and without market power mitigation measures it would leave the end users exposed to potentially higher costs than necessary.

Regarding the options proposed for balancing market power mitigation, any option which involves the TSOs switching from one curve to another could be perceived as the TSOs intervening in the bidding process, even with transparent methodologies, mechanistic or external non-subjective triggers, and the cost based curves being supplied by participants or regulators. The implications of a perception of a conflict of interest would need to be very

carefully considered before deciding on this approach. On this basis and considering the degree of concentration likely to be present in the Balancing Market, we believe Option 3 represents and appropriate option provided it was implemented in a less formulaic way, such as the current approach of maintaining a Bidding Code of Practice (BCOP).

The other options could also benefit from the use of a less prescriptive set of bidding controls. This would be a more flexible approach, allowing participants to make changes in prices which aren't related to exercising market power and allowing the MMU to make changes to the mitigation measures, while actively encouraging prices to be submitted in a way which prevents the exercise of market power.

Finally, EirGrid and SONI would like to reaffirm our commitment to working with both the industry and the Regulatory Authorities to assist in the development of effective and appropriate I-SEM arrangements and to support the delivery of the new market arrangements by Q4 2017.

## 2 INTRODUCTION

### 2.1 EIRGRID AND SONI

EirGrid holds licences as independent electricity Transmission System Operator (TSO) and Market Operator (MO) in the wholesale trading system in Ireland, and is the owner of the System Operator Northern Ireland (SONI Ltd), the licensed TSO and MO in Northern Ireland. The Single Electricity Market Operator (SEMO) is part of the EirGrid Group, and operates the Single Electricity Market on the island of Ireland.

Both EirGrid, and its subsidiary SONI, have been certified by the European Commission as independent TSOs, and are licenced as the transmission system and market operators, for Ireland and Northern Ireland respectively. EirGrid also owns and operates the East West Interconnector, while SONI acts as Interconnector Administrator for both of the interconnectors that connect the island of Ireland and GB.

EirGrid and SONI, both as TSOs and MOs, have roles defined within the draft EU regulations that the I-SEM is required to comply with. We are committed to delivering high quality services to all customers, including generators, suppliers and consumers across the high voltage electricity system and via the efficient operation of the wholesale power market. EirGrid and SONI therefore have a keen interest in ensuring that the market design is workable, will facilitate security of supply and compliance with the duties mandated to us and will provide the optimum outcome for customers.

As the transmission system operator in Ireland, EirGrid is required to “take into account the objective of minimising the overall costs of the generation, transmission, distribution and supply of electricity to final customers”<sup>1</sup>. SONI is required to facilitate competition in the supply and generation of electricity<sup>2</sup>. Therefore as TSOs we have an interest in the prevention of Market Power.

Although EirGrid owns the East West Interconnector, this response is limited to reflecting the views of SONI and EirGrid in their roles of TSO, MO and Interconnector Administrator.

### 2.2 STRUCTURE OF THE RESPONSE

This document sets out EirGrid and SONI’s response to the SEM Committee’s consultation on I-SEM Market Power Mitigation (SEM-15-094) published on the 20<sup>th</sup> Nov 2015.

Section 3 of the response provides an overview of the key points that EirGrid and SONI would like to emphasise as being of most importance.

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<sup>1</sup> SI 445/2000, Article 8 (3)

<sup>2</sup> The Electricity (Northern Ireland) Order 1992, Article 12 (2)

Section 4 of the response provides our detailed comments on the specific chapters and sections of the consultation paper, including responses to the questions posed in the paper, which underpin the key points in Section 3. It is structured under the same sections and questions as those used in the consultation paper.

### 3 KEY POINTS

This section sets out the key points that EirGrid and SONI wish to make with respect to the Market Power Mitigation Detailed Design consultation paper.

- The change in the structure of the market in moving from the SEM to the I-SEM requires an increased focus on market power between markets, timeframes, and arrangements across the value chain.
- In the balancing market, the geographic scope of the relevant market is not defined by binding transmission constraints alone. Non-energy requirements have an impact on the definition of the relevant market, and each requirement could have different geographic scopes: defined by any unit on the system, by a particular set of units at various points throughout the system, or by a particular set of units in a particular point of the system.
- Great care needs to be taken when defining competitive behaviour and pricing to ensure on one hand that market power is sufficiently mitigated to prevent market power abuse and on the other, that the appropriate degree of commercial risk is present to drive efficiency and innovation across the wholesale trading arrangements.
- Considering FTRs under financial regulations would increase obligations and workload required of participants. This can only be justified if there are sufficient additional benefits above those resulting from the reporting already required for FTRs under REMIT. We do not believe it is clear that FTRs are required to be regulated by anyone other than the energy regulators, and consider that it would be more efficient if FTRs were regulated by the energy regulators only, assuming this is consistent with the legal interpretation of the final design of the products.
- When considered together the modelling work in the consultation paper and the conclusions of the analysis previously commissioned by the RAs on the provision of system services highlight the potential for significant market power issues to arise in the I-SEM balancing market. This is the sole mechanism for the TSOs to dispatch market participants to manage power system constraints and deliver system services, and without market power mitigation measures it would leave the end users exposed to potentially higher costs than necessary.
- For the balancing market mitigation measures:
  - The format and source of any cost based curves for balancing market systems is important and will need to be carefully considered;
  - Any option which involves the TSOs switching from one curve to another could be perceived as the TSOs intervening in the bidding process, even with transparent methodologies, mechanistic or external non-subjective triggers, and the cost based curves being supplied by participants or regulators. The implications of a perception of a conflict of interest would need to be very carefully considered before deciding on this approach. The approach should only be considered further if the other options are shown to be unable to deliver the necessary protection for customers;

- Option 1: This option could have a positive impact, sanctioning and possibly discouraging an initial exercise of market power, depending on the perceived or proven effectiveness of monitoring, identification and the intervention mechanism;
- Option 2(a): This option by our initial assessment is highly complex. The development, consultation and approval process associated with a detailed methodology to implement this option as part of the current I-SEM project programme would mean that this option would not be achievable before a Q4 2017 market go-live;
- Option 2(b): This option while less complex than option 2a creates a disconnect between the prices used to make scheduling and dispatch decisions those used in settlement – prices reflecting the exercise of market power would still influence operational decisions. It would also not address potential exercise of market power for energy actions;
- Option 3: If this was implemented in a less formulaic way, such as the current approach of maintaining a Bidding Code of Practice (BCOP), we believe this would be an appropriate option. It would be flexible, allowing participants to make changes in prices which aren't related to exercising market power and allowing the MMU to make changes to the mitigation measures, while actively encouraging prices to be submitted in a way which prevents the exercise of market power. The other options could also benefit from the use of a less prescriptive set of bidding controls.



## 4 EIRGRID AND SONI VIEWS ON THE CONSULTATION TOPICS

In the following section, EirGrid and SONI provide their comments on the topics discussed in the consultation paper and put forward its views on the consultation paper proposals and questions.

### 4.1 CONTEXT FOR MARKET POWER POLICY DEVELOPMENT

#### 4.1.1 Q. DO YOU AGREE WITH THE POLICY DEVELOPMENTS AND TRENDS IDENTIFIED (ABOVE) AS POTENTIALLY IMPACTING ON AN I-SEM MARKET POWER MITIGATION STRATEGY?

EirGrid and SONI broadly agree with the policy developments and trends identified. The change from SEM to I-SEM, in terms of structure, opportunities etc., is significant in terms of impacting the market power mitigation strategy. It is important to understand how changes across the supply chain could diffuse or intensify market power in this context.

#### 4.1.2 Q. ARE THERE OTHER FACTORS NOT IDENTIFIED HERE WHICH YOU CONSIDER RELEVANT?

EirGrid and SONI believe an additional important factor to consider for the I-SEM market power mitigation strategy is the potential for value migration up and down the value chain, between wholesale, retail and gas markets. There is potential that large scale changes to the wholesale electricity market and the market power mitigation regime there could incentivise the exercise of market power by migrating value to an area with less supervision, resulting in regulatory arbitrage.

The move from the pool-based market to the NETA market in the UK is an example of where a change in market arrangements incentivised a shift in value between the wholesale market and retail market. Where this occurs it can benefit vertically integrated companies present in both markets more than smaller participants which are present in only one of the markets, and would need to be carefully monitored. Therefore value chain considerations including the retail markets, and gas markets, will be important.

### 4.2 RELEVANT GEOGRAPHIC MARKET(S) AND TRADING PERIOD(S)

#### 4.2.1 Q. DO YOU AGREE WITH THE PROPOSED APPROPRIATE MARKETS/TRADING PERIODS FOR ASSESSING MARKET POWER IN I-SEM'S ENERGY AND FINANCIAL MARKETS?

EirGrid and SONI agree that focusing on the relevant markets in each individual timeframe is important in terms of identifying practical approaches to mitigate market power. Nevertheless, a significant degree of market power may exist between the relevant markets identified, and between these markets and other arrangements such as the DS3 System Services and the CRM Reliability Options. Market power could be exercised by actions in one market resulting in outcomes in another market, for example actions taken in the intraday market influencing the outcomes in the balancing market or vice versa. Therefore, there needs to be a focus on the monitoring of market power between the relevant markets and between the markets and other arrangements.

#### 4.2.2 Q. DO YOU AGREE WITH THE PROPOSED GEOGRAPHIC SCOPE OF THE PROPOSED MARKETS/TRADING PERIODS?

In the balancing market, the geographic scope of the relevant market is not defined by binding transmission constraints alone. Non-energy requirements have an impact on the definition of the relevant market, and each requirement could have different geographic scopes: defined by any unit on the system, by a particular set of units at various points throughout the system, or by a particular set of units in a particular point of the system.

Also where interconnectors are considered as part of the geographic scope of the relevant market for the balancing market, there needs to be considerations of future developments driven by the Network Code on Electricity Balancing, such as having a common merit order between interconnected bidding zones.

### 4.3 I-SEM DESIGN, INTERACTIONS AND IMPLICATIONS

#### 4.3.1 Q. DO YOU AGREE WITH THE PROPOSED DEFINITION OF COMPETITIVE BEHAVIOUR AND PRICING IN I-SEM?

EirGrid and SONI do not have a strong view on what the exact definition of the competitive behaviour and pricing should be, but wishes to highlight that great care needs to be taken when making this definition as the measure forms the basis for all assessments of outcomes, which in turn influences behaviour. Regulations dealing with competitive behaviour, such as REMIT, should be referenced in making this definition to determine if any refinement to definitions stated there is needed. If refinements are needed, the refined definition needs to be consistent with that stated in regulations.

The definition in the consultation paper for competitive offers is based on Short Run Marginal Cost (SRMC), but without a definition of what is meant by SRMC. There is also no consideration of circumstances where participants may not be exercising market power through deviating from their SRMC. For example, there may be legitimate reasons where a participant may be bidding based on their long run marginal cost (LRMC) but not be exercising market power, if a

unit has their revenue streams restricted by being unsuccessful in other arrangements such as the CRM or DS3 system services, and rely on the energy markets to recover their capital costs.

While market power mitigation measures should be designed to ensure that units with this level of concentration cannot exercise market power in the prices they submit, they also need to be flexible enough to ensure that the appropriate level of commercial risk is present in the market arrangements to drive efficiency and innovation. This flexibility would need to be considered in how metrics are used in the assessment of market power, and if prescriptive or principled options of submitting cost based curves for bids and offers are implemented.

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4.3.2 Q. DO YOU THINK THAT THE SUGGESTED EXAMPLES IN WHICH MARKET POWER CAN BE EXERCISED IN I-SEM CAPTURES THE RELEVANT ISSUES?

EirGrid and SONI believe that the suggested examples capture some of the relevant issues, but because market power strategies can be highly sophisticated they could extend beyond the examples. The general structure, conduct and performance framework is a more comprehensive reference for capturing the issues relevant to market power strategies.

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4.3.3 Q. DO YOU AGREE THAT THE POTENTIAL FOR MARKET POWER ABUSE IN I-SEM APPEARS TO BE WEAKER IN THE FORWARD FINANCIAL MARKET COMPARED TO THE PHYSICAL MARKETS?

EirGrid and SONI do not agree with the statement concerning the forward financial market coming under financial regulations if it is intended that this includes Financial Transmission Rights (FTRs). The regulation of FTRs should be undertaken in a manner that delivers appropriate oversight and protection while avoiding duplication of responsibilities or an unnecessary increase in workload. The energy regulators have an obligation to monitor FTRs under REMIT, and while FTRs could be considered financial instruments under financial legislation, TSOs should be exempt from the legislation for the primary allocation of transmission rights.

Considering FTRs under financial regulations would increase obligations and workload required of participants. This can only be justified if there are sufficient additional benefits above those resulting from the reporting already required for FTRs under REMIT. We do not believe it is clear that FTRs are required to be regulated by anyone other than the energy regulators, and consider that it would be more efficient if FTRs were regulated by the energy regulators only, assuming this is consistent with the legal interpretation of the final design of the products.

There would also be benefits of considering the forward financial markets, both FTRs and any internal contract for difference forwards markets, alongside the other market timelines and arrangements for reasons of being able to sufficiently assess market power in the interaction between relevant markets. Behaviour in financial markets is expected to affect behaviour in physical markets and vice versa, for example in the case of a contract for difference with

reference to prices in the physical markets. Even if enforcement for market power may come under the financial regulators for the internal contract for difference forwards market, it needs to be considered by the energy regulators to have a full view for monitoring market power. Therefore the interaction between the energy regulators and financial regulators needs to be considered.

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4.3.4 Q. DO YOU AGREE WITH THE IMPLICATIONS FOR MARKET POWER ARISING FROM INTERACTIONS BETWEEN THE PHYSICAL MARKETS, CRM, FTRS AND DS3 SYSTEM SERVICES AS SHOWN ABOVE?

EirGrid and SONI believe that the suggested examples capture some of the relevant interactions, but because market power strategies can be highly sophisticated they could extend beyond the examples. Also we believe that the implications for market power from the interaction between the physical markets and the other arrangements needs to be monitored. As market participants trading in the I-SEM energy arrangements may have market power arising from their participation in the other arrangements, it would be important to ensure that impact of these other arrangements on trade in the energy arrangements is fully considered in the structure, performance, conduct framework.

As previously expressed in our response to SEM-15-068 DS3 System Services Competition Metrics Consultation Paper, as DS3 system services will interact with I-SEM, we agree that it is important that DS3 system services market power mitigation be considered in the context of the I-SEM market power mitigation strategy, particularly in relation to the consideration of local market power in the balancing market timeframe. We hold the view that appropriate mitigation strategies for market power in DS3 system services can best be developed as the DS3 system services auction design becomes more defined and as such, the I-SEM market power mitigation strategy should remain cognisant of developments in this design process.

#### 4.4 RELEVANT I-SEM METRICS

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4.4.1 Q. DO YOU AGREE THAT THESE ARE THE APPROPRIATE METRICS TO IDENTIFY MARKET POWER EX-ANTE AND EX-POST IN I-SEM?

EirGrid and SONI have no strong view on this question.

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4.4.2 Q. ARE THERE OTHER METRICS THAT YOU CONSIDER SHOULD BE APPLIED?

The consideration of metrics needs to be broadened to include those will be used to assess market power in other aspects such as CRM, FTRs, internal financial forwards market, and DS3. Also metrics related to Physical Notifications (PN) need to be considered by the MMU as required by aspects of the Energy Trading Arrangements decisions, including:

- The link between Final Physical Notifications (FPNs) and the position of a unit due to their ex-ante trades;
- How PN submissions change over time to highlight whether a change to the information imbalance charge parameters is needed; and
- Where PN changes after a balancing market volume has been accepted by the TSOs increases this volume, i.e. a participant is trading in the opposite direction to the TSOs.

## 4.5 ESTIMATE OF I-SEM MARKET POWER

### 4.5.1 Q. DO YOU AGREE WITH THE APPROACH TAKEN BY THE RAS TO MODELLING MARKET POWER IN I-SEM? DO YOU AGREE WITH THE CONCLUSIONS FOR I-SEM MARKET POWER THAT HAVE BEEN DRAWN FROM THE MODELLING RESULTS?

EirGrid and SONI broadly agree with the approach and conclusions, considering them only as an indication of some aspects of market power. A full representation of the market rules would be necessary to effectively assess and monitor the market.

We note that the modelling exercise was based exclusively on consideration of the “energy” only aspects of the day-ahead and balancing markets and that market power issues associated with managing power system constraints and the provision of system services were not considered. EirGrid and SONI believe that the market power issues associated with these “non-energy” requirements are greater than that indicated by the energy only modelling (the IPA report referred to in Section 4.7.2 of the consultation paper notes the “high” level of market concentration for system services) and should be considered by the RAs in their decision of mitigation options.

The Ireland and Northern Ireland power system is highly constrained due to the physical characteristics of the power system. Local and regional transmission network bottlenecks drive reactive power support requirements and thermal import and export restrictions while requirements for system services such as operating reserve and inertia can drive system wide (non-geographic) constraints impacting on all generation. The I-SEM HLD and ETA Detailed Design have determined that the balancing market will be the exclusive route for the TSOs to dispatch market participants in order to manage system security. There will be no “out of market” arrangements in place between the TSOs and market participants (e.g. start-up or transmission support contracts) to either ensure that market participants position themselves in the ex-ante energy markets to align with system constraint requirements and/or submit commercial offer data within bounds agreed with the TSOs. The TSOs can only use the commercial offer data (incs, decs, start-up and no-load costs) submitted by market participants through the balancing market to dispatch market participants for system security requirements.

While the modelling indicated reduced levels of market power with increased wind levels it should be noted that this relates to an unconstrained, energy only market. At high wind levels

the conventional generation that is on is highly constrained to provide system services such as reactive power support, operating reserves and inertia. Also, while the analysis considered balancing energy requirements related to demand/wind forecast errors it should also be noted that up to 375 MW (75 % of 500 MW) of primary operating reserve must also be deliverable to cater for a contingency on the largest system infeed – this represents a significant additional requirement for fast acting balancing capability which is often a scarce resource on a small island system. Even if the volume of energy produced by the conventional generation under these high wind conditions is small, the requirement for specific generators in specific locations indicates high levels of market power for the provision of system services.

In summary, EirGrid and SONI believe that the modelling conducted as part of this consultation paper provides an indicator of some aspects of market power related to unconstrained, energy only markets but that the conclusions should also take into account the analysis previously commissioned by the RAs on the provision of system services (ref. IPA “Economic Appraisal of DS3 System Services”). Considering these two reports together highlights the potential for significant market power issues to arise in the I-SEM balancing market which is the sole mechanism for the TSOs to dispatch market participants to manage power system constraints and deliver system services.

#### 4.6 REVIEW OF CURRENT SEM MEASURES

##### 4.6.1 Q. DO YOU AGREE WITH THE SEM COMMITTEE’S VIEW ON THE EFFECTIVENESS OF EACH OF THE SEM MARKET POWER MITIGATION MEASURES?

EirGrid and SONI broadly agree with the views on effectiveness stated. It is also important to recognise that the design and structure of the SEM itself is an important tool for the mitigation of market power, and that these additional market power mitigation measures have worked well in that context.

The SEM’s gross mandatory pool design with complex bidding concentrates liquidity and allows for transparent assessment of market participants bidding behaviour. The presence of a capacity payment mechanism is necessary for a Bidding Code of Practice. The presence of a liquid spot market facilitates the Directed Contracts process.

The effectiveness of the SEM market power mitigation measures may not translate to a market with a different design and structure such as the I-SEM, and this should be taken into account in any assessment of the suitability of these measures in a strategy for the I-SEM.

##### 4.6.2 Q. ARE THERE ANY PARTICULAR ASPECTS OF THE SEM MARKET POWER MITIGATION STRATEGY THAT YOU THINK SHOULD BE APPLIED DIFFERENTLY, ESPECIALLY IN RELATION TO I-SEM?

Mitigation strategies relating to local market power, and market power arising from temporal impacts, need to be applied differently, in particular due to the new structure of the market in the I-SEM which will result in these aspects becoming more influential and important. Also as previously stated, value chain considerations including the retail markets, and gas markets, will be increasingly important and mitigation strategies will be need to applied differently in the I-SEM.

## 4.7 I-SEM MITIGATION STRATEGY AND MEASURES

### 4.7.1 Q. DO YOU AGREE WITH THE FIVE KEY PRINCIPLES FOR ASSESSING MARKET POWER MITIGATION POLICIES AS OUTLINED IN THIS SECTION 8.3?

EirGrid and SONI broadly agree with the five key principles as outlined. We also wish to highlight that starting with a particular approach to mitigating market power does not preclude the development other approaches in the future should the need be determined. The options proposed are not mutually exclusive and could potentially build on each other to follow the need determined through monitoring and assessment of competitive behaviour. Developments in market power mitigation approaches can also consider the impact on innovation and investment in generation.

### 4.7.2 FORWARD CONTRACTING OBLIGATION QUESTIONS

**Q. What should be the measure and threshold that results in a market participant being included or excluded in the FCO, i.e. what is its applicability?**

**Q. For the Forward Contracting Obligation: What should be the volume and product definition of forward contracting required from a market participant who falls under the FCO?**

**Q. For the Forward Contracting Obligation: How should the price be set for the volume contracted under the FCO?**

**Q. For the Forward Contracting Obligation: What type of access should buyers have to FCO volumes?**

EirGrid and SONI do not have strong views on the exact details of the design of a Forward Contracting Obligation. This is on the assumption that FCOs are only considering contracts for differences for an internal forwards market, and do not apply to FTRs.

We believe that care should be taken in the application of FCOs, as their application influences behaviour in other markets which can have an impact on efficiency and other market incentives. For example FCOs on conventional generators would encourage them to submit orders in the physical markets in a way which means they can guarantee attaining a position to physically deliver on that obligation. In the absence of this obligation that conventional generator could have submitted orders in a different way, for example reflecting costs or desired mark-up where

possible, where they may not have been the economic choice and would not have been scheduled. This is particularly the case when increasing levels of variable RES reduce the possibility of a conventional unit economically guaranteeing its running as a baseload plant. FCOs may need to consider something, for example more dynamic capacity factors of conventional units, to allow for efficient market signals while also effectively enacting their market power mitigation goals.

Interactions with other aspects, such as the CRM, need to be considered in determining some of the detailed aspects of the FCO such as the price.

4.7.3 Q. WHICH OF THE BALANCING MARKET MITIGATION OPTIONS DO YOU CONSIDER MOST APPROPRIATE, I.E. MMU-TRIGGERED INTERVENTION, AUTOMATED INTERVENTION VIA A PST OR VIA THE “FLAGGING AND TAGGING” APPROACH, OR PRESCRIPTIVE BIDDING CONTROLS?

EirGrid and SONI would caution against approaches which require the TSOs to replace bid and offer curves without first fully considering the implications of a perceived conflict of interest. The approach should only be considered further if the other options are shown to be unable to deliver the necessary protection for customers. Considering the levels of concentration in the Balancing Market, we believe that Option 3 implemented through a Bidding Code of Practice approach rather than a strict formulaic approach would represent an appropriate option. In addition, we believe that the other options would potentially benefit from a less prescriptive approach to bidding controls.

EirGrid and SONI consider the following factors to be important in determining a preferred balancing market mitigation option.

For all options, how the cost based curve is expressed, and the source of this information to feed into the balancing market systems, needs to be clear and carefully considered. It will also need to consider not just providers of generation but also providers of demand reduction, where that demand reduction extends beyond the use of standby generation. For approaches where there is an intention to switch, according to some trigger, between price based curves and cost based curves, these curves are expected to be supplied from an outside source to the systems: either participants themselves submitting price based and cost based curves, or participants submitting price based curves and cost based curves being provided by the regulators. Similarly for approaches where only one set of cost based curves are intended to be used, these curves are expected to be supplied by participants or regulators as deemed appropriate.

There may be a perceived conflict in requiring participants to submit both price and cost based curves. Since market monitoring could determine instances of market power based on the differences between the SRMC of a unit and prices submitted for that unit, requiring a participant to provide both price and cost based curves could influence how these are



determined to minimise the difference: creating an incentive to adjust the price curves towards the cost curves or vice versa. On the other hand, participants are better placed to accurately represent their actual costs than potential approaches to determining administered cost curves based on technology, etc.

The format of the cost based curve would need to be carefully considered. For the approaches where it is intended that the prices would be switched between curves ex-post in settlement, the format would need to minimise the complexity in swapping prices. One example of this would be to have the same quantity breakpoints for the cost based curve as the price based curve. The quantities of bid offer acceptances (BOAs) procured in the balancing market are originally calculated based on the price based curve, with separate values for each quantity band of the curve in order to apply the relevant price. This would mean that the price for a quantity of a BOA calculated for a band could be cleanly swapped if the quantity bands were the same between the price and cost based curves. If the quantity bands were different between the price and cost based curves some other complex means of switching the prices would be needed, for example the quantity of the BOA may need to be recalculated. This problem does not arise for approaches where switching of prices is not required, where it is intended that either only cost based or price based curves are submitted and used, for example Option 3.

The need to submit both a price based curve and a cost based curve has the potential for large overhead on the party required to supply them. From the ETA Markets decision, participants may submit a set of simple commercial data, consisting of an inc and a dec curve, which could vary over the market day from period to period, and may be resubmitted at any time before gate closure for the period. The decision also requires that complex three-part commercial data be submitted, consisting of explicit start costs, no-load costs and variable inc and dec curves in order to be used for TSOs scheduling in the redispatch timeframe, which could be resubmitted at any time before gate closure for the period. Requiring the additional submission of cost based curves alongside each of these submissions could have a large overhead on the party required.

#### **Option 1 MMU-triggered intervention:**

This would be a less complex option of implement and operate than Options 2(a) and 2(b). However any option which involves the TSOs switching from one curve to another could be perceived as the TSOs intervening in the bidding process, even with transparent methodologies, mechanistic or external non-subjective triggers and the cost based curves being supplied by participants or regulators. The ability for the TSOs to switch between curves would also need to be taken into account in any considerations of changes to licences. This would not be the case if the implementation of this option was instead for the MMU to direct a participant to submit (or resubmit) cost based curves.

In terms of influencing the exercise of market power, this option could have a positive impact. On first view it would appear to not prevent an initial exercise of market power, but would instead prevent any further exercise of market power. However this may discourage the initial

exercise of market power if a signal is clear that the intervention would either leave the participant in the same position, or in a worse position, than if they had exercised market power. This would depend on the perceived or proven effectiveness of monitoring, identification and the intervention mechanism. In this regard, it is important that the activities of the MMU are highly visible to the market.

**Option 2(a) Automated intervention via a PST:**

This approach is theoretically elegant, in that it prevents the potential exercise of market power through tests related directly to market power metrics. However the implementation of this option would be particularly complex, and cannot be implemented successfully for the I-SEM go-live date. This is not to say the solution is infeasible or impractical, nor does the technology solution limit the viability of this option in the future. This option remains viable for future market developments, when more time is available for performing detailed market methodology and systems design.

This solution would require the development of additional system functionality for the balancing market with major, as yet undefined, additions to the functional scope. The level of specification available for this solution, including formulae, example cases, special handling, and any additional design artefacts, is insufficient at this stage to fully understand the scope of the desired implementation. The concept of a pivotal supplier test is understood; however the detailed design of a pivotal supplier test is not a trivial exercise and would require significant time and resource commitment. The development, consultation and approval process associated with a detailed methodology to implement this option as part of the current I-SEM project programme would mean that this option would not be achievable before a Q4 2017 market go-live.

Any option which involves the TSOs switching from one curve to another could be perceived as the TSOs intervening in the bidding process, even with transparent methodologies, mechanistic or external non-subjective triggers, and the cost based curves being supplied by participants or regulators. This is particularly the case where the process for triggering the switch is one undertaken by TSO systems. The ability for the TSOs to switch between curves would also need to be taken into account in any considerations of changes to licences.

**Option 2(b) Automated intervention via Flagging and Tagging:**

Any option which involves the TSOs switching from one curve to another could be perceived as the TSOs intervening in the bidding process, even with transparent methodologies, mechanistic or external non-subjective triggers, and the cost based curves being supplied by participants or regulators. This is particularly the case where the process for triggering the switch is one undertaken by TSO systems. The ability for the TSOs to switch between curves would also need to be taken into account in any considerations of changes to licences. The flagging and tagging process would already need care and scrutiny as it is used in price setting, however its use for implementing market power considerations would require a larger degree scrutiny on the

process. Flagging and Tagging at the moment as a methodology only determines which bid offer acceptances (BOAs) can set the imbalance price, but participants would generally still be settled on the better of the imbalance price or the price of their BOA. This would propose to expand its scope to also determining which BOAs should have their prices replaced with a cost curve.

Flagging and Tagging is an ex-post process, and therefore in the scheduling systems which inform the balancing market actions taken by the TSOs the prices are not changed to the cost based curve. While we understand that the process of switching from one offer curve to another would occur after the pricing stage and before settlement, this means the non-energy actions taken, and price calculation, can be affected by the potential exercise of market power.

This could arise where decisions are made in scheduling and dispatch on the basis of the original offers, which would feed through to the pricing methodology. However, these may not have been the decisions made if the scheduling was on the basis of the cost based curve. For non-energy actions there may be a number of units suitable to use to meet the requirement, and therefore the decision as to which to use would be made on an economic basis. The decision of which unit(s) to use could be different depending on whether the prices governing the schedule are the original or cost based. Also, the use of certain units for non-energy reasons reduces the pool of units available for being used for energy actions. Therefore the different decisions taken for non-energy actions could have a knock on effect to decisions taken for energy actions taken.

### **Option 3 Prescriptive Bidding Controls:**

This could be a very heavy-handed approach depending on how it is implemented. If it is implemented through a strict formulaic SRMC approach, this could lead to either the formula being too simple and restrictive to allow participants to represent legitimate costs, or could lead to the need to develop very complex formulae to allow this flexibility. There would be particular complexity in developing formulae for the cost based simple inc and dec curves, as it is intended that participants would implicitly incorporate their fixed costs into their prices in these curves. In order to do this participants would need to make assumptions around expected running times and output levels. The assumptions used for these in the formulae for developing the cost based curves would place a restriction on what participants can do, influencing participants risks in terms of cost recovery and scheduling in the balancing market. It would also be extremely complex to build in sufficient flexibility into such formulae to allow participants to incorporate cost savings due to innovation, potentially reducing incentives to innovate and reduce costs.

This option could also be implemented in a less formulaic way, such as the current approach of maintaining a Bidding Code of Practice (BCOP) outlining the approach which should be taken by participants in formulating their bids and offers. This would have more flexibility than a formulaic approach, allowing changes in prices which aren't related to the exercise of market power to be reflected in bid offer submissions and allowing for changes to the mitigation measures to follow the need determined through monitoring and assessment of competitive behaviour. This would also provide the flexibility necessary for providers of demand reduction to

reflect their costs, where that demand reduction extends beyond the use of standby generation. The BCOP approach would actively encourage prices to be submitted in a way which prevents the exercise of market power, providing a benchmark for assessing whether this is the case, and where breaches are found, allowing intervention. If this approach were implemented, EirGrid and SONI believe it would represent an appropriate option.

Developing this approach, whether formulaic or through BCOP, would need careful consideration to allow for efficient market signals in terms of dynamics between the balancing market and the ex-ante markets, and between the I-SEM and interconnected markets in the balancing timeframe. Imbalance prices should signal balance responsibility and accurately represent the value of energy in the balancing timeframe, while allowing mitigation against the influence of exercising market power.

The level of prescribed controls placed on prices in the I-SEM balancing market versus those present in the ex-ante markets and in interconnected balancing markets could influence these signals, but equally the fundamentals of the I-SEM balancing market may be such that these controls do not adversely impact efficient signals and incentives. For example it may be the case that the costs for actions in the balancing market are systemically different to those in the ex-ante markets and interconnected markets because of the real-time nature of balancing and the characteristics of the local system, which could be the primary driver for the dynamics between markets regardless of the market power mitigation strategy used. On the other hand it may be the case that the market power mitigation strategy used adversely impacts on the dynamics which should exist due to these fundamentals.

The interactions between the market fundamentals, the influence of the market power mitigation strategy, and the market signals and dynamics need to be carefully considered in the development of the prescriptive bidding controls.

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4.7.4 Q. WHICH EX-ANTE BIDDING/OFFER MARKET POWER MITIGATION OPTIONS FOR THE DA AND ID MARKETS DO YOU FAVOUR – BIDDING PRINCIPLES AND EX-POST ASSESSMENT, OR EX-POST ASSESSMENT ONLY?

EirGrid and SONI are of the view that REMIT could provide the MMU with sufficient powers to enforce measures due to the exercise of market power by participants in the ex-ante markets, and therefore Option 3: Ex-Post Enforcement Only would be an appropriate option. The market abuse condition may not be necessary as REMIT should provide sufficient requirements not to manipulate the markets, and sufficient enforcement powers should the case arise. The enforcement of ex-ante guidelines could be difficult since participants can elect to trade with any NEMO operating in the I-SEM. Similar to the points made on prescriptive bidding controls in the balancing market, Option 1 could potentially be heavy handed depending on how it was implemented, with the effect on the dynamics and market signals being potentially greater than that in the balancing market due to the likelihood of systematic differences in prices between I-SEM participants and those participants outside of I-SEM. There would also be large complexity

in developing the formulae to represent the cost curves, considering fixed costs must be implicitly incorporated into the prices in ex-ante markets.

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4.7.5 Q. IF EX-ANTE BIDDING PRINCIPLES WERE TO BE ADOPTED, HOW FLEXIBLE SHOULD THEY BE AND HOW WOULD THIS BE FACILITATED/ENSHRINED IN THEIR WORDING?

It is not clear at this stage how ex-ante bidding principles could be given effect in the ex-ante trading arrangements.

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4.7.6 Q. UNDER WHAT STRUCTURAL CONDITIONS OR IN COMBINATION WITH OTHER MARKET POWER MITIGATION MEASURES SHOULD VERTICAL RING-FENCING OF THE INCUMBENTS BE RELAXED?

EirGrid and SONI have no strong view about the details of these conditions, but reiterate that an additional important factor to consider for the I-SEM market power mitigation strategy is the potential for value migration up and down the value chain, for example between the wholesale and retail electricity markets, and the gas markets.

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4.7.7 Q. UNDER WHAT CIRCUMSTANCES AND CRITERIA (OR METRICS) SHOULD THE APPLICATION OF RING-FENCING TO OTHER MARKET PARTICIPANTS BE CONSIDERED?

EirGrid and SONI have no strong view about the details of these conditions, but reiterate that an additional important factor to consider for the I-SEM market power mitigation strategy is the potential for value migration up and down the value chain, for example between the wholesale and retail electricity markets, and the gas markets.