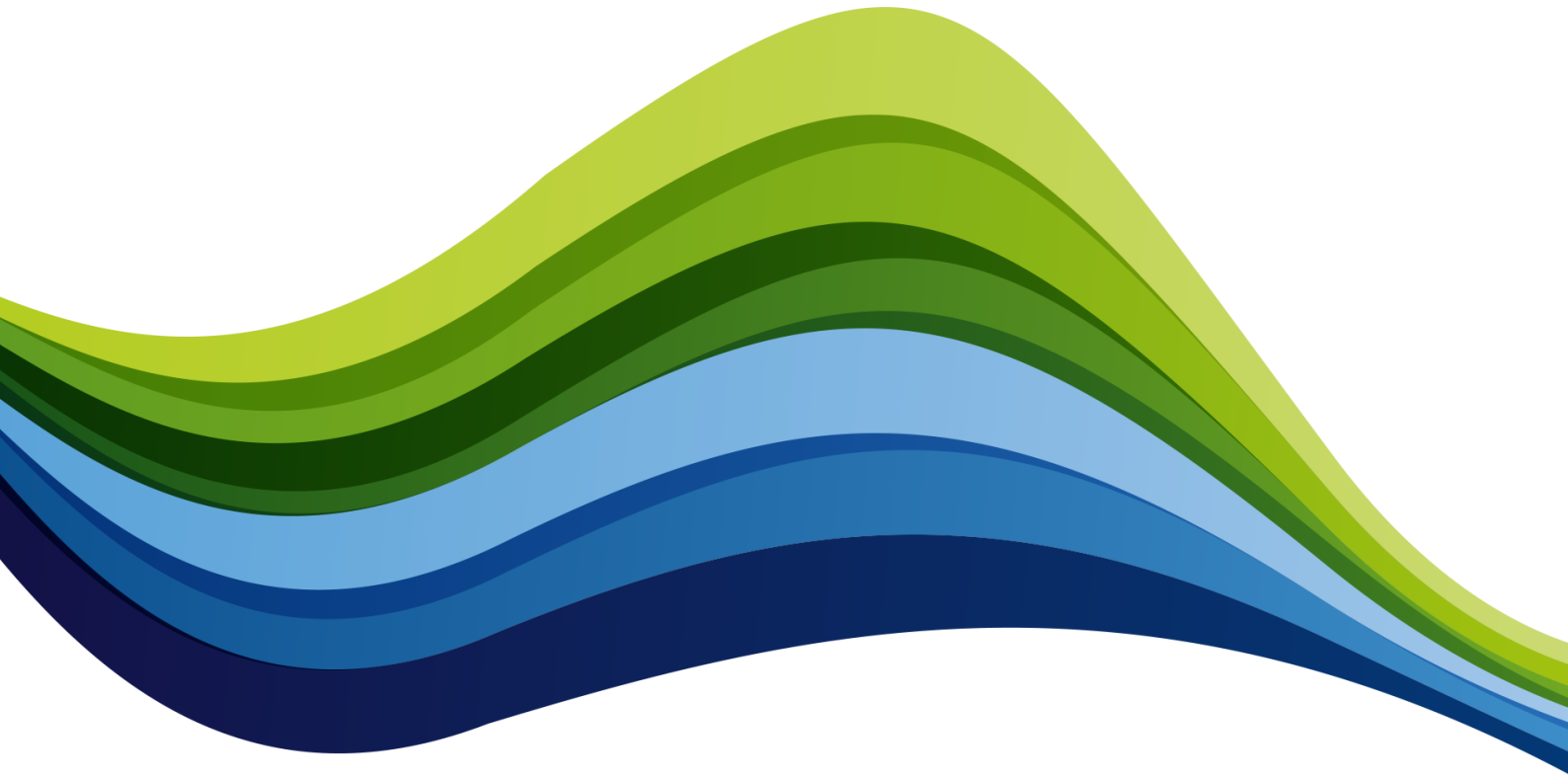
Response to I-SEM Market Power Mitigation Discussion Paper (SEM-15-031)



Introduction

SSE welcomes publication of the I-SEM Market Power Mitigation Discussion Paper prior to the formal commencement of the market power mitigation workstream, part of the ongoing detailed design of the new electricity wholesale trading arrangements on the island. In our view, it is always useful to set out the parameters of any significant subject area before proceeding to formal consultation; such an approach lends itself to procuring a much more robust consultation eventually. SSE looks forward to fully engaging with the workstream as it unfolds. In this paper, we provide our initial thoughts on the matters presented in the Discussion Paper.

SSE is the third largest energy generator by capacity in the all-island Single Electricity Market with 1,800MW of generation capacity in operation, including 509MW of wind energy generation. This portfolio was recently enhanced by the Great Island plant which entered commercial operation on Friday 17 April. SSE estimates that Great Island will save Irish energy customers in excess of €50m per year as Ireland's most efficient power plant; in the context of market power and preserving consumer welfare, this is of material importance.

The company is also the second largest energy provider on the island, supplying electricity and gas to around 800,000 households and businesses in the Republic of Ireland and in Northern Ireland, under its SSE Airtricity brand. In the six years since SSE's 2008 acquisition of renewable energy developer, Airtricity, the FTSE Top-50 listed company has demonstrated sustained commitment to the Irish market – growing energy supply from a base of 35,000 accounts, and making further investments such as the 2012 acquisition of Endesa Ireland, including the then under construction Great Island CCGT, completion of which brings to over €2 billion the total investment made by SSE in Ireland since 2008.

In the context of market power mitigation, the scale of SSE's investment provides a useful backdrop; even with such significant commitment and investment, the SEM remains a market with significant market dominance. As demonstrated in Figures 1 through 4 in the Discussion Paper (pps.15&16), across every relevant market concentration parameter, the share of the incumbent ESB remains stubbornly high, approaching 50% in terms of both installed generation capacity and market share, and at 85% in terms of CfD sales. The Discussion Paper talks about capability and incentive to exercise market power; at the very least, these statistics clearly indicate obvious capability of ESB to do so.

However in our view it is not sufficient to just look at these broad market based metrics and reach conclusions. The trading arrangements being introduced in the I-SEM offer a much more sophisticated market in comparison to the SEM. In fact, what is being introduced is a bundle of distinct but interdependent micro-markets across various time periods. In addition the all-island system is a heavily constrained system and throws up many situations of local market power. It is essential that measurements of market dominance also take account of these sub-segments.

Consequently given the structural limitations in the all-island market and the electrical system, SSE regards this workstream crucial to the success of the overall I-SEM market

design. Developing metrics for identifying capabilities for market power, incentives to exercising such capabilities and deploying targeted mechanisms for mitigating such will go a long way to underpinning confidence in the I-SEM, as well as allowing it to develop organically. In addition, properly functioning market power mitigation mechanisms are likely to contribute in other ways, such as improving liquidity in the Forwards market and lessening risk perceptions.

As a result it is essential that significant attention is paid to the this aspect of the market design as failure to constrain market dominance will lead to a stymied market, an outcome that may then necessitate regulatory interventions, and thus leading to further drift away from the natural development of competitive market forces.

With those introductory thoughts in mind, SSE wishes to make the following comments.

Market Power Concepts and Measurements

Identifying the Relevant Markets

'Global' Market: In seeking to address market power, the first activity should always to be to identify the relevant market. In section 2.3, the Discussion Paper lays some markers to this in geographical terms, referencing the increased interconnection between the island and Great Britain. Given that fact of increased interconnection, as well as the overall objective of coupling markets, broader geographical considerations are quite in order. However in our view, there are a number of reasons why this is of significantly less material importance.

First, the HLD decision to implement only FTRs on the I-SEM interconnectors eliminates the ability of any one party from exercising control over the capacity represented by the interconnectors. Second, given that market coupling will be based on the European shared order book, trades across the interconnector cannot be matched directly, further reducing any potential for market power. With those provisions, it is highly conjectural that the relevant 'global' market in the context of market power in the I-SEM does not extend beyond the all-island market. Still this must be demonstrated by market modelling.

Localised Conditions: In addition to the broad geographic markets, the Discussion Paper rightly alludes to the potential for localised constraints giving rise to market power as a result of the heavily constrained electricity system on the island, most famously between North and South, but widespread across every region on the system. Analysis of EirGrid's operational constraints reports shows at least one condition each, North and South, where a single generator unit is available to address a constraint. For example, for load flow control in the Dublin area, when the Ireland System Demand is greater than 4,600MW, PBC unit is required to be on load. Under another condition which requires at least 2 large generators on-load at all times in the Dublin area, while 4 units are available, the cost spread between the cheapest and the most expensive is so great that the units in the middle have sufficient capability to exercise significant market power. Consequently, while broad market concentration needs to be considered, due attention must be paid to localised conditions giving rise to market power.

However two further aspects of electricity markets that in our view also have material relevance with respect to market power on an island system are temporal and product segmentations.

Temporal Segmentation: The Target Model which frames the I-SEM is essentially a bundle of interconnected electricity markets separated in time, across Forwards, Day-Ahead, Intra-Day and Balancing. This segmentation of the I-SEM across the dimension of time creates discrete, yet inter-dependent, relevant markets for market power considerations. Capabilities and incentives can differ across these time-bound discrete markets. This is one aspect that market power mitigation in the SEM did not have to take account. In the I-SEM, this is of critical importance to a market power strategy.

With linked markets spread across time, a party with a suitably diverse portfolio (capability) can create conditions in an earlier market which can feed into some desired outcome in later markets. For example withholding a low-cost plant at the Day-Ahead stage may contribute to higher prices in the Day-Ahead stage[1]. These higher prices may result in first, a high-cost plant within the party's portfolio being dispatched when it ordinarily would not have been, and second, less volumes clearing at the Day-Ahead stage, shunting more volumes into the Intra-Day market. Within the Intra-Day market, the previously withheld plant can re-enter the market and mop up excess volumes that are likely to be willing to pay a premium to avoid the Balancing Market.

While the illustration above is hypothetical, it demonstrates that a diversified generation portfolio, not just overall capacity share, is a relevant consideration for determining market power capability. Furthermore, on the basis of the ACER guidance quoted in the reference, it is arguable that to mitigate such exercise of market power, mandatory bidding is required at the Day-Ahead stage, at least for dispatchable plant.

Product Segmentation: In electricity trading, prices can be unbundled to account for various products – baseload, mid-merit, peak. The SEM, with a single spot market and single bid sets at the Day-Ahead stage, could again discount this, with very limited implication at the Forwards stage. However with the introduction of sophisticated bidding, and additional spot markets at Intra-Day and Balancing, these product segments start becoming binding. In our view, they again form relevant markets with respect to market power. A party could have a concentration in any given segment. This is particularly crucial at the higher (peaking) ends of the product chain. So again, a measurement of market shares across the product dimension will provide further information on concentration over and beyond what a simple broad based installed capacity share will provide.

In accounting for these segments however, care must be taken to craft market power mitigations such that they contain dominance and the exercise of market power while not deterring new and prospective market entry. While concentrations in markets are notionally damaging to consumer welfare, in the long-run they do serve as economic signals for the most rewarding market entry points. Thus market power mitigation in the I-SEM should be cognisant of this dual functionality and aim to put it to service, but at the very least should not throw up barriers to new entry.

[1] We note that such action is contrary to ACER REMIT Guidance, which in 6.4.2(d) states that, "Actions undertaken by persons that artificially cause prices to be at a level not justified by market forces of supply and demand, including actual availability of production, storage or transportation capacity, and demand ("physical withholding"): This is for example the practice where a market participant decides not to offer on the market all the available production, storage or transportation capacity, without justification and with the intention to shift the market price to higher levels, e.g. not offering on the market, without justification, a power plant whose marginal cost is lower than the spot prices, misusing infrastructure, transmission capacities, etc., that would result in abnormal high prices.

Implications for Market Concentration Measurements

The Discussion Paper outlines four measures of market concentration considered by the Regulatory Authorities in developing wholesale market power for the SEM, which could also be considered for the I-SEM – Market Share, Generation Price Setting, Residual Supplier Index (RSI) and Herfindahl-Hirschman Index (HHI). The Market Share metric could, given the discussion around market segmentation above, be applied to identified micro-markets to give indications of concentration, but bar the Generation Price Setting, these measures are broad market metrics, which indicate concentration at the company level, but which may skip over 'pockets' of concentration.

In seeking to address market power in the I-SEM, it is our contention that identifying 'pockets' of concentration and targeting mitigations as appropriate will be a much more effective approach to counteracting market power. Absence the power to achieve ownership restructuring, this approach will approximate it by considering concentration in micro-markets; physical restructuring could break up a monolith into multiple parties, while the proposed approach will address concentration of a monolith across multiple micro-markets.

Accordingly our recommendation is for this workstream to consider measurements that can capture concentration in the various market segments discussed above.

Market Power Mitigation Considerations

Regulatory Measures

The Discussion Paper outlines the range of market power mitigation measures applied in the SEM – Bidding Code of Practice, Market Monitoring, Directed Contracts, Vertical Ring-fencing and local measures where deemed necessary. This response will go into a detailed review of these measures in the appendix, but in broad strokes these measures are all regulatory measures. This is understandable given the limited competition operative during the SEM design and implementation. While the level of competition has increased in the SEM relative to the start, it is by no means at a level that will lead to regulatory measures being dispensed of. As a matter of necessity then, regulatory measures will still form the bulk of market power mitigation measures in the I-SEM.

Competitive Measures

However, even with regulatory measures still being required, attention should be paid to attracting even more competitive forces into the I-SEM. Measures should be taken to attract and upgrade trading sophistication given that it is an economically efficient means to mitigating the market power of dominant parties. In addition such measures are likely to improve liquidity, as well as discover and eliminate market efficiencies. Consequently these approaches should be proactively encouraged as means of mitigating market power.

The more dynamic trading arrangements under the I-SEM – sophisticated bid structures, greater trading frequencies, introduction of a Balancing market, trading period alignment and coupling to European markets – should all implicitly further encourage sophisticated trading in the all-island market. As the Discussion Paper notes, this may make it more challenging for market monitoring, to which we would counter that the requirement for market monitoring is only an indication of the presence of market failure, the remedy of which is not necessarily greater monitoring but correction of the failure. However so, market monitoring equally needs to become more sophisticated and targeted. What should be guarded against is the reactionary tendency to restrict dynamic trading on the pretext of ensuring easier monitoring. This will only restrict the potential of competitive market forces developing and expanding as organic mitigations to market dominance.

However over and beyond the specific measures in the I-SEM, competitive new entry requires a review of the overarching regulatory frameworks in the two jurisdictions to identify where barriers might exist. For instance, the connection policy for generation in Ireland does not provide a clear path for physically connecting to the system for prospective new plants. Hence, despite potentially viable commercial incentives that will be available under the DS3 System Services, prospective new entrants have no clear demonstrable paths to accessing them. Hence as part of the market power workstream, around a specific objective of ensuring that the market is both attractive to and capable of effecting new entry, a comprehensive review of the regulatory regimes may be necessary to pass them as ‘new entry friendly’.

Specific Market Dominance Measures

It is no secret that ESB maintains a significant dominant position in the SEM, and this is likely to continue well into the I-SEM. As a consequence then while considering the overall market power strategy that needs to be employed in the I-SEM, due attention must be given to this dominance. In the light of the particularities of the I-SEM design we propose the following measures be adopted:

- limit the share of Reliability Options available to the market that ESB can obtain;
- require ESB to make available a share of their surplus capacity to other market participants as backup/insurance measure to the Reliability Options;
- limit the share of FTRs that ESB is able to purchase.

Instructive in this regard is the MIBEL, which also features market dominance. MIBEL, similarly to I-SEM, auctions FTRs. And to mitigate market power, as the Discussion Paper highlights, dominant parties are prevented from acquiring interconnector capacity. In this manner, market dominance in MIBEL is not allowed to expand.

Similarly, the measures we propose above aim to serve a similar purpose of restraining market dominance from expanding even further, while underpinning competitive market forces and allowing them gain a foothold in the I-SEM.

Appendix: Responses to Detailed Questions

Q1 Are the market power concepts and examples provided appropriate and sufficient for I-SEM?

The paper outlines 3 market power concepts, namely:

1. **Financial Withholding**: bidding higher than ordinarily would in an effectively competitive market, with the knowledge that there would likely be little or no competition;

2. **Physical Withholding**: withholding infra-marginal plant from the market, thereby ensuring more expensive plant is run, driving up prices and revenue earned from balance of portfolio;

3. **Price suppression**: pricing actions which reduce market prices either to yield long run profits by damaging current and future competitors, or to achieve other non-profit-related goals, such as foreclosing competition.

In economic literature, market power can be exercised under two broad methods described as 'power to control price' – the ability to raise one's own price, and 'power to exclude competitors' – the ability to raise competitors' costs. Both methods either reduce consumer welfare or extract a greater share of producer benefits, but ultimately result in greater profits for the firm in question.

The first two concepts outlined in the discussion paper neatly fit into the two methods described above. The third concept is a hybrid of the two methods, whereby by suppressing prices ('controlling price') a firm increases the relative costs of its competitors ('excluding competitors').

With that examination we would consider the concepts as appropriate and sufficient for the I-SEM.

Q2 Are the potential constraints on market power referred to in this section appropriate for I-SEM?

The potential constraints on market power discussed in the paper – existing competitors, potential competition and buyer power – are appropriate for the I-SEM.

However these are severely limited in light of the overbearing dominance in the market. Existing competitors to the dominant ESB, such as SSE, still have much less market share and portfolio diversity to have much appreciable counteractive impact on the incumbent's dominance. Potential competition, as represented by the scope for new market entry, is challenged by such constraints such as lack of a clear path to connecting to the system. And

buyer power is next to non-existent again given the dominance of the ESB group in the supplier sector.

Therefore it is crucial that these potential competitive constraints against market power are not over estimated in the I-SEM. While more efforts must be given to encouraging all three, prescriptive market power mitigation measures are still needed in the I-SEM.

Q3 Given the emerging I-SEM design, including closer integration to European electricity markets and a number of energy trading timeframes, what is the appropriate geographic market(s) and/or trading period(s) definition for the measurement of market power and determination of a mitigation strategy in I-SEM?

As we have discussed in our response, there are various segmentations that need to be examined for concentration in the I-SEM. This examination will help determine the appropriate relevant markets for a market power mitigation strategy. The obvious segmentations are:

- **Geographical**: local, zonal/jurisdictional, all-island, interconnected markets;
- **Time**: Forwards, Day-Ahead, Intra-Day, Balancing;
- **Product**: Baseload, mid-merit, peak.

Q4 Are the various (other) market design issues referred to above and their potential impacts on market power captured appropriately and fully?

Transient/local market power situations require a key focus in the I-SEM given the heavily constrained all-island system. Again it would be our view that the ACER REMIT Guidance, as captured in 6.4.2(d) REMIT, addresses these sorts of situations; it will be welcome to see the RAs guidance on the interpretation and likely application of those provisions in the I-SEM.

In addition, interactions with the other aspects of the I-SEM highlighted – forward financial liquidity, CPM, FTR, DS3 and jurisdictional retail markets – are all areas that need to be addressed with respect to market power impacts. Market power mitigation measures applied to these various areas must ensure they all work in tandem and not at cross-purposes.

Q5 What is the appropriate approach to measuring market power when developing a mitigation strategy for I-SEM?

Market power should be measured across the various dimensions we have previously highlighted – geographical, time, and product. 'Pockets' of concentration can thus be identified. Subsequently targeted measures should be developed and applied where

concentration has been indicated and such concentration can credibly be employed to exercise market power.

There will necessarily be different measures for different segments. For instance, HHI may be used to identify concentration at the level of the firm, Generator Price Setting for identifying concentration across time, and Market Share across products. This way concentration, and accordingly mitigation measures, can be targeted. This is the most appropriate approach in a market structure such as the I-SEM.

Q6 Should the measure be determined at a snapshot in time or based on historical or potential future trends in market share (or both or all three)?

Primarily, mitigation measures should be based on historical trends. However as one of the principles outlined for developing mitigation measures is flexibility to evolving conditions on the island, it will be necessary to introduce a regular, rolling review, managed by the market monitoring unit.

Snapshots and potential future trends can be useful in monitoring the development of the market, but in our view they cannot form bases for determining mitigation measures. In case of snapshots, there will be insufficient information content to inform such determinations, and the situation for potential future trends will involve significantly high subjectivities. Thus we would regard them as unreliable determinants for market power mitigation.

Q7 How effective have the SEM market power mitigation strategy and measures been?

The Discussion Paper outlines that Step 4 of Phase 1 of the market power workstream would include a scenario involving structural changes to ESB Generation to provide context for proposed market mitigation measures. In our view, the question around the effectiveness of the market mitigation strategy in the SEM should be put to the same test – given the abundance of market data, what would have been the outturn of prices and schedules had ESB being physically restructured?

In qualitatively assessing such a scenario however, given the **Bidding Code of Practice (BCoP)** in the SEM which mandates short-run marginal cost bidding, ownership considerations should not matter in the SEM. As the SEM is unit-based, a hypothetical alternative owner of ESB units should have bid them into the market using similar cost structures. To that extent we would be of the opinion that the BCoP has been an effective market power mitigation measure in the SEM. However this efficacy has possibly only being achieved because the SEM is a gross, mandatory pool. It is unlikely to have the same efficacy under the I-SEM, unless mandatory Day-Ahead bidding is required under the short-run marginal cost principle.[2]

[2] It is instructive to note here Ofgem's expectations in its submission to the current CMA investigation in GB that the outcome of competitive processes is that wholesale prices reflect the short-run marginal cost of the

Regarding **market monitoring**, SSE has strongly being of the opinion that the activity should be conducted independent of the RAs. There are potentially conflicting incentives between the functions of a true market monitor and a regulatory authority that has mandates to explicitly protect one side of the market. Consequently in our view marketing monitoring has not been as effective as it could have been in the SEM.

Directed Contracts (DCs) in our view have had mixed success. To the extent that it has taken market volumes off ESB and offered them at regulated prices to the market, it has been beneficial. The challenge however is around the pricing, which is modelled by the RAs. The market is likely to self-fulfil the outturn of such modelling. Figure 7 in the Discussion Paper seems to show that the accuracy of this modelling has improved in the last few years as it has more closely tracked the SMP, but this is only at an aggregate level. That said however, it probably has been the most effective of all the measures in dealing specifically with the dominance of ESB. To this end, it is our view that it should be reviewed to make it more effective, but a form of it should be retained in the I-SEM.

Vertical ring-fencing is useful in theory, but when benefits accrue to an overall group, it probably does not achieve as much as desired. However without physical restructuring, and with the high levels of dominance still in existence, this measure should still be retained.

Q8 To what extent is the strategy and measures applicable to I-SEM?

I-SEM is sufficiently different from the SEM, both structurally and in terms of market participation, that the strategy and measures cannot be directly applied to the I-SEM. The measures were entirely regulatory-based. In the I-SEM, more effort should be given to encouraging competitive forces. Whatever, the strategy and measures to be applied to the I-SEM need to be determined from thorough examination of the I-SEM in its own rights.

Q9 Are there other market power mitigation measures worth considering in the context of I-SEM? (See Appendix 2 for a review of a number of other European markets).

In general terms, market power mitigation strategies in other markets are always worth considering. However until the exercise of measuring and delineating concentration in specific terms is carried out, there will be little use in ruling in or out any of the potential mitigation measures applied in other markets.

However in addressing overall market dominance earlier in our response we have proposed three measures to be applied to ESB. These are to:

- limit the share of Reliability Options available to the market that ESB can obtain;

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marginal generator, except in cases of scarcity. See https://www.ofgem.gov.uk/ofgem-publications/91951/assessingthewholesalemarket.pdf.

- require ESB to make available a share of their surplus capacity to other market participants as backup/insurance measure to the Reliability Options;

- limit the share of FTRs that ESB is able to purchase.

Q10 What are the barriers to entry for non-asset backed traders in the SEM financial forwards market?

As the paper notes, there are significantly less barriers to entry for non-asset backed traders. Credit terms may be the one obvious area to examine for barriers. Aside that, it is hard to pinpoint any significant barriers to non-asset backed traders in the SEM.

Q11 Are the principles of market power mitigation outlined appropriate?

The nine principles outlined are appropriate.

Q12 How should these or other principles be applied in I-SEM?

These principles can serve as a checklist matrix to assess the suitability of market power mitigation measure proposals in the I-SEM and to rank competing/alternative proposals. To achieve the ranking, a prioritisation/ranking of the principles may need to be conducted in the first place.

If you have any questions in relation to this response, please contact me at emeka.chukwureh@sserenewables.com.