

I-SEM

Measures to promote liquidity in the I-SEM forward market

If you have any questions in relation to our response, please don't hesitate to contact Connor Powell (connor.powell@sse.com)

Executive Summary

Thank you for giving SSE the opportunity to comment on the I-SEM Balancing Market Principles Terms of Reference consultation. SSE has over 1700MW of generation capacity and 800,000 retail customers in the all-island market.

SSE welcomes the opportunity to comment on the RAs proposals for increasing liquidity across the I-SEM markets. Liquid, resilient and deep forward markets underpin competition across retail and wholesale markets. The transfer of risk to participants best able to bear or manage risk helps participants to finance projects, gain market share, offer competitive terms to customers and effectively plan for the future. SEM has not succeeded in delivering a successful forward market for a number of structural and functional reasons.

While the I-SEM market arrangements cannot solve some of the structural issues (Market Dominance, Market Size), they can solve some of the functional issues. Given the very low base from which the RAs are looking to improve (churn ratio of approx. 0.5); SSE believes that a gradual and incremental set of changes and interventions are most appropriate. A 0.1 increase in churn is a 20% improvement against that metric.

Therefore, targeting interventions properly is critical – radical interventions will inevitably create issues in other areas of the wholesale market and in other regulatory projects. We believe that the following interventions will lead to substantial improvements in liquidity without knock-on impacts in other areas of the wholesale and retail markets:

- **Moving to align disparate contracts, calendars and credit terms** will immediately increase the number of potential counterparties. Currently, most existing SEM parties do not have agreements in place with some of the largest potential counterparties. This simple step can be completed by **arranging for central clearing against standard forward contracts** using the approach taken for the I-SEM physical markets. Alternatively, this can be done by facilitating the entry of an exchange platform.
- Regulatory interventions should incrementally build on the existing, limited base of forward trading under SEM by creating a **liquidity floor** rather than by introducing a **liquidity cap**. Given that incentives to contract should change radically under I-SEM, it is worth observing whether that creates a catalyst for forward trading before proposing radical regulatory interventions. Given that I-SEM is new, the RAs should be selecting interventions that can be easily introduced and easily unwound.
- **Removing ring-fencing is a radical intervention that cannot be easily unwound.** The RAs should observe behaviour in the new market structure, introduce criteria for liquidity in both forward and physical markets against which ring-fencing could be removed and once those criteria are met, introduce a **self-supply restriction** on dominant participants when they reintegrate. Acting in the absence of any information on behaviour is **not prudent** and will create position limit issues in the very near future. Removing ring-fencing now will create a **liquidity cap** as participants will be unwilling to build exposures in a concentrated market.

- Both the MMO and the FSCO have a potential place in I-SEM but the RAs do not need to be overly prescriptive with regard to parameters in either. The RAs can work backwards from a desired **liquidity floor** and create trade-offs against which participants can choose to participate as either a market maker or as a party obliged to auction some forward volume. This creates a **wide and shallow** set of obligations that draws in multiple parties **without** imposing obligations that create entirely new operational activities or system requirements. **Deep and narrow** obligations will inevitably create winners and losers without necessarily drawing a large proportion of physical market participants into forward markets.

Our preferred option is a hybrid of **Option 2** set out below:

	Assumed Clearing House with Exchange Trading/Tullet Prebon Platform
Directed Contracts	<ul style="list-style-type: none"> • Directed Contracts volumes determined as per current arrangements. • Allocation aligned with other Forward Contracting Obligation windows. • Auction based approach with
Ring-fencing	<ul style="list-style-type: none"> • Ring-fencing of ESB retained until defined forward volume level reached. • Intervention removed and replaced with self-supply restriction until volume consistently maintained.
Forward Contracting Obligation	<ul style="list-style-type: none"> • Choice between equivalent MMO and FSCO on parties above de-minimis threshold. • Minimum condition of 3 market making participants applied. • Maximum of a weekly market making window to reduce operational risks and costs for obligated parties and to ensure smaller suppliers are available to participate.

The rest of our response covers each of the areas and questions raised in the consultation paper.

Does the Consultation Paper correctly set out the nature of the problem to be solved? Is it correct that the lack of liquidity characteristic of the SEM will not be satisfactorily rectified through incentives inherent in the I-SEM design?

Electricity markets are long term, and all participants face multi-year exposures created through a number of different channels ranging from the sale of retail contracts to the signing of long-term service agreements with OEMs. Functioning forward markets should allow participants to manage these exposures prudently by offsetting opposing risks.

Unfortunately, SEM has not developed a functioning forward market. This absence has primarily impacted supply competition rather than generation competition, as the latter have been able to roughly manage long-term exposures through the CRM.

We would agree with most aspects of the analysis of SEM. We believe that the fundamental issues are those of:

- **Incentive:** Suppliers with net short positions have strong incentives to contract forward volumes of electricity because they are managing a portfolio of retail contracts to supply electricity at an agreed price for up to 3 years. Any exposure to volatile spot market prices cannot be easily recovered as tariffs are generally fixed, inflexible and costly to change. Generators would typically have a similar problem in an energy only market but the gently sculpted capacity payment in SEM allows them to afford spot market exposure.
- **Concentration:** Schedule and dispatch volumes in the market are heavily concentrated with one participant accounting for over 60% of dispatchable MSQ¹ in 2015. The risk appetite, hedging policy and credit terms of one participant have an outsize impact on the SEM forward market as a whole. Directed Contracts with regulated pricing act as a spot market power mitigation measure² but do not encourage active trading, just passive subscription.

The second issue is outside the scope of the I-SEM programme and will not change substantively over the 2016 to 2025 period, as shown in both the SEM Committee decision on market power and the TSOs Generation Capacity Statement. However, we do believe that the generator incentive to trade forward does increase in I-SEM. Capacity payments will not be:

- Universal
- Gently sculpted

Therefore, in order to effectively manage cash flow to support fixed costs, generators will want to trade some power products forward. The underlying physical market will also more directly reflect scarcity (or abundance) in some trading periods which will increase the risk of spot market exposure, particularly as renewable output increases.

In GB, CMA analysis³ shows that both independent and vertically integrated generators would typically hedge output up to 36 months ahead, although would more typically hedge flat volumes from 18 months⁴ with shape hedging taking place nearer to delivery.

The paper notes that:

“Obviously, the volumes of peaking product will be less due to the limited hours that they cover. However, even taking this into account, there are many periods when suppliers have not taken up their allocation of peaking products and, sometimes, mid-merit allocations are similarly not taken up”

¹ We do not necessarily agree that only dispatchable generators are able to sell forward volumes, although non-dispatchable generation does carry some basis risk. Scheduling risk is relatively low, given priority dispatch rules

² However, this is in addition to the more comprehensive Bidding Code of Practice which theoretically limits any exercise of spot market power

³ CMA, Appendix 7.1: Liquidity

<https://assets.publishing.service.gov.uk/media/576bcb4fe5274a0da30000d1/appendix-7-1-liquidity-fr.pdf>

⁴ There were some exceptions to the typical 18 month approach, including ESB, who had a median hedge of zero a week ahead of delivery reflecting the position of their plant in the GB merit order

This corresponds to the GB analysis, which shows that shape is typically better managed through near-term hedging.

So, **while incentives on generators to trade forward will more neatly match incentives for suppliers to trade forward in I-SEM, concentration does not change.** Given that ESB Generation do not typically trade forward electricity products in liquid markets such as GB, preferring near-term hedging; **it seems certain that some form of intervention will be needed if the RAs want to achieve improvements in forward market liquidity.**

Additional Comments

We would add some additional comments to a few of the statements set out in 3.6 and 3.7:

“A wind farm could therefore use CfDs to partly hedge its cash flows out of the physical market [...] All in all; the increase in wind penetration in the generation mix is likely to increase the demand for hedging products rather than the supply.”

This is not necessarily true – we agree that for supported wind there is no incentive to trade. However, for an unsupported wind portfolio, there could be some incentive to trade simple flat forward products at an assumed load factor and then subsequently buy back shape closer to delivery.

It is important to differentiate between product types and supply/demand – flat forward volumes are useful to suppliers and shape could be useful to both suppliers and wind. Therefore, wind may be able to supply a segment of hedging demand, if another segment of hedging supply exists to facilitate them. One of the most liquid forward electricity markets in Europe, Germany, has a very large proportion of variable generation. Volatile pricing has increased hedging requirements for traditional participants and encouraged new intermediaries to enter and trade volumes – wind has not acted a barrier but as a driver.

The paper also states that

“The Aggregator of Last Resort (AOLR) or any other wind farm aggregator may be more likely than an individual wind farm to trade forward”

The AOLR should not trade forward – given the automated nature of the function and its implementation through the Balancing Market Rules, it (and those participants using it) could be vulnerable to arbitrage (and could build up substantial value at risk in their individual and aggregate position).

Finally, the paper notes that:

“Recent developments in European financial regulation seem likely to increase barriers to small players because larger players will be reluctant to increase trading that may cause them to be treated as financial service providers with onerous reporting and margining requirements.”

Regardless of trading volume, most Irish participants will be captured by some of the STOR requirements in the Market Abuse Regulation that came into effect in July 2016. With regard to MiFID II, activity within the Irish market is unlikely to change a participants MiFID II designation under the current drafting for the Ancillary Activity exemption

So, in sum:

- Wind can offer to supply some hedging products (if facilitated by other dispatchable market participants offering shape) although the AOLR cannot. Variable generation has not prevented trading in other European markets.
- Financial Regulation will not necessarily change incentives for existing physical market participants to trade financial products linked to Irish power. Financial Intermediaries do not operate at scale in SEM currently.

Neither should act as major barriers to trade in I-SEM.

Does the scope of the Consultation Paper set out the full range of potential liquidity promotion measures that should be considered for implementation? If other regulatory interventions are considered appropriate, please set out the nature, rationale and parameters of such intervention

While there are other potential interventions that would increase liquidity, they could go beyond the scope of this workstream. Therefore, a considered forward market structure, Forward Contract Selling Obligations and Market Making Obligations cover most bases.

However, we would note that Ofgem had previously considered a '*self-supply restriction*' in GB – while this is not relevant if ring-fencing remains in place, it may be a valuable measure if ring-fencing is removed.

A *self-supply restriction* effectively sets out a commitment that a corporate group (as opposed to an individual licensee) would be required to trade a large percentage of their physical volumes with unrelated counterparties for a given calendar year. This could be a compromise solution that would:

- Remove any costs of retaining a ring-fence;
- Retain transparency created by ring-fencing by forcing volumes into public markets;
- Allow dominant participants to fill their liquidity obligations through market based mechanisms rather than regulatory mechanisms;

Self-supply restrictions were not pursued in GB because, as the CMA noted, all vertically integrated firms in GB externally trade multiples of their output and demand. However, in Ireland, where ESB Group trades a low ratio of its physical market share externally (i.e. with unrelated counterparties, rather than ESB GWM to Electric Ireland), we believe any change to ring-fencing arrangements should trigger a form of *self-supply restriction* for participants with dominant market share.

Respondents are asked to provide their views on the rationale, parameters and potential effectiveness of each of the regulatory interventions described and explained in the consultation paper

Removing Trading Barriers

We believe that *removing trading barriers* is one of the most important and one of the easiest issues to address in I-SEM. We broadly agree with the description of trading barriers. We would add the following points to the analysis in section 6:

- Credit cover levels – the cumulative cost of negotiating and then providing multiple credit lines is inefficient, particularly given that unique credit terms around any breach can be very inflexible.
- Credit terms – these are not explicitly identified in Chapter 2 but we would note that it is not just the absolute level of credit cover required that is causing issues in SEM. Bespoke requirements imposed by participants on others mean many trades that would otherwise be executed cannot be executed in SEM. Expectations⁵ between participants appear to be very different – in our experience, unique clauses and variations from standard industry agreements are common.
- Explicit exchange based trading isn't necessarily as important as a standard industry master agreement and central clearing – many of the advantages (central counterparties, centralised credit, transparent pricing) can be delivered without an exchange solution. However, a power exchange does deliver a full solution without any requirement to 'bolt-on' price reporting, best execution, brokering etc.
- Product availability and demand in SEM isn't necessarily a good guide to product availability and demand in I-SEM. Typically suppliers have a far greater incentive to hedge relative to generators and typically they would be looking to lock in baseload volumes with some demand for near-term shape. In I-SEM, this may change, but the market should be able to easily adapt to demand either through composites of simple products or the introduction of new products.
- There are European solutions available to reduce the transaction costs imposed by REMIT and EMIR, using EFET or similar. These shouldn't represent a substantial barrier to trade in SEM or I-SEM.

We would note that the diagram provided by the RAs looks a great deal like existing solutions available so should be fairly straightforward to procure. There is also a direct clearing approach being made available for smaller companies that some I-SEM participants might avail of:

⁵ A normal GB participant would expect very few amendments to standard industry master agreement terms. This is not the case in SEM, with different requirements imposed between DC, PSO and NDC products.

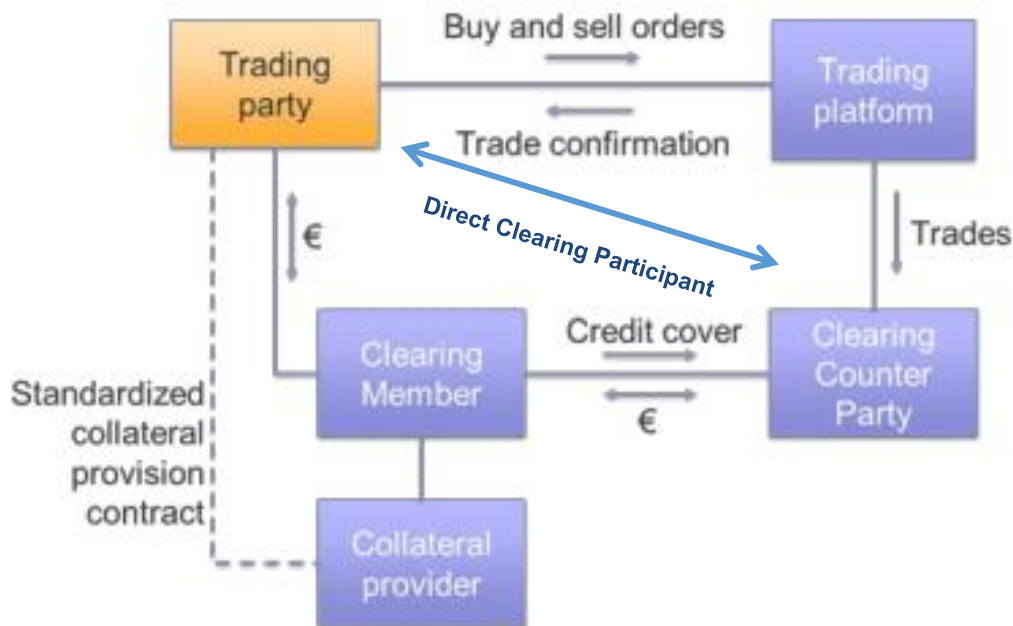


Figure 7: Trading and credit services in organised markets

However, the key word with solutions is procure – the RAs appear to have ruled out ‘*procurement or regulatory underwriting of any of the mentioned services*’. We think that some intervention may be required to secure a full combination of services in Ireland, and we also believe that one of the other interventions considered (Market Making Obligation) is not possible or efficient without a more centralised forward trading service in place. The RAs should focus on centralised clearing and credit arrangements if a full PX-like solution is not available.

If no service is available, the RAs should reconsider the remaining interventions to check for feasibility and practicality. A market making obligation without improvements in forward market structure would impose substantial systems and operations costs on obligated participants.

Forward Contract Sell Obligation

The way that the FCSO is set out in the consultation is unnecessarily restrictive:

- The proposed auctions take place monthly, rather than more frequently (i.e. weekly). Participants looking to hedge their positions value immediacy – underlying fuel input prices and demand numbers change frequently. **Even a small market like I-SEM can support a more frequent auction.**
- The generation companies obligated under the FSCO would be forced to provide products according to defined parameters like 2/1/1, rather than filling their volume obligation in the way that best reflects the characteristics of their plant. Given that many of the obligated parties will only have single units rather than portfolios, this makes the option impose substantial price risk. **One size doesn't fit all, so a volume target with discretion over product seems far more appropriate.** We don't agree

with the 2/1/1 ratio – if a generator is obliged to offer volumes, suppliers can determine where they need those volumes through the auctions.

- **Risk Exposure has not been adequately dealt with** – many of the potential obligated parties do not have portfolios, only single power plants. In the event of extended outages, there should be clear criteria that remove or reduces the FCSO requirements – while the paper states in relation to outages that:

“In reality, this is only a critical exposure in an illiquid market because otherwise, the generator could seek to buy out of an exposed position as it arises, capping its losses on the CfD”

Generators can buy back volumes to cover forced outages but, with regard to long planned/unplanned outages they would retain an obligation to offer volumes at a future date under a **Sell Obligation**, regardless of whether they were able to physically back the contracts⁶.

- Any F&L decision that includes an FCSO also has to adequately address the issue of **Firm Access** – this could substantially constraint market quantities from certain generators. Forecasts for delivery of firm access could change post obligation setting and forward looking estimates for volumes at non-firm plant are less certain than for firm plant.
- There is no overlap between Directed Contracts and the FCSO outlined in the consultation – we believe that setting out a more coherent structure would be useful. Directed Contracts should be aligned more closely with any FCSO using a common auction timetable and a rethink to ensure that the issues identified in the paper:

“To the extent that the RAs determined price reflects the experience of the SEM, the Directed Contracts will not be subject to resell and purchase and will not therefore improve liquidity”

The competitive allocation mechanism set out in Section 4 touches on these issues, but a proper FCSO needs to set out the combined design of DCs and Forward Contracts in detail.

Market Maker Obligation

The market maker obligation is set out in more detail in the consultation paper, suggesting that this is a preferred option for the RAs. While we believe that the consultation does set out the general structure of an MMO in some markets, we would like to comment on some of the proposed framework:

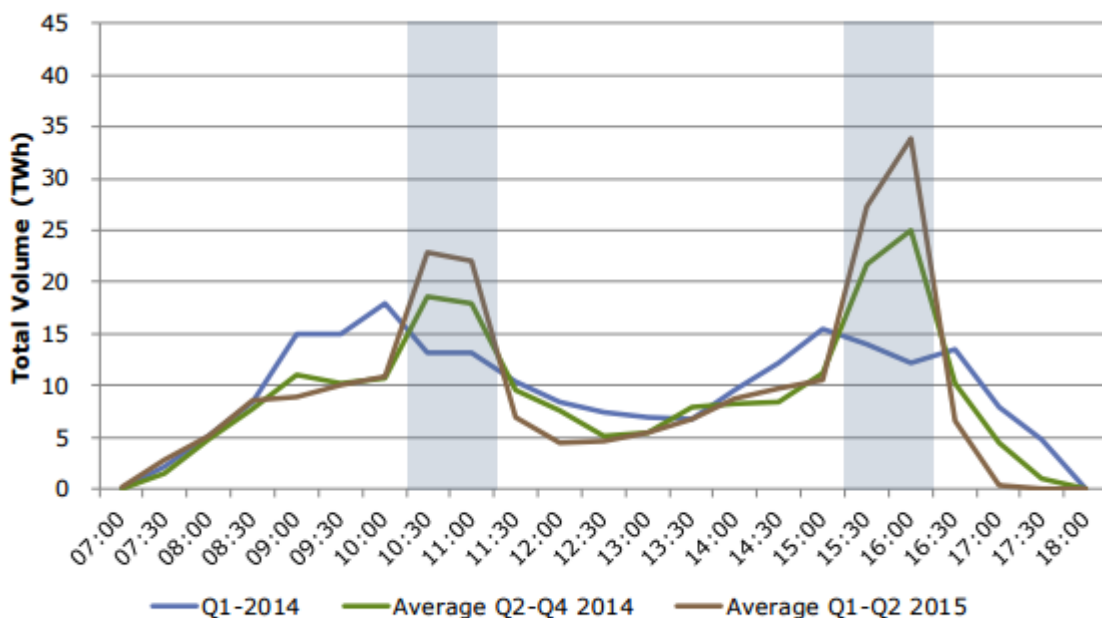
- The RAs note that:

⁶ This is compounded by SEM Committee decisions that constrain generators in physical markets such as Outturn Availability

“Given the two sided obligation (Buy and Sell) on market participants, the SEM Committee is of the view that this type of obligation would be a more proportionate intervention measure if applied to vertically integrated companies but acknowledge that, ultimately, it is the financial strength of the market maker that supports the activity and not their physical position in the market [...]Therefore, this measure would work more efficiently within a scenario where ESB is allowed to be vertically integrated.”

We do not see why ESB vertical integration is a precondition for an MMO – the RAs should be mindful that the physical backing for every other participants ‘sell’ obligation would be a single power station, which may, or may not be in the market. Ultimately, the preconditions for an MMO are financial strength, absolute (rather than bi-directional) volumes and trading capability. The largest generator in I-SEM has these characteristics both as a standalone or integrated entity.

- The RAs have immediately jumped to daily obligations on parties – we don’t think this is necessarily appropriate in a small market. One of the largest risks (and costs) carried by participants with a market making obligation is operational risk. Windows on every business day immediately increases the operational cost and risk associated with the activity. While liquid, continuous trading is an end goal, it should not be a starting point, especially given that much larger more liquid markets are still working to improve volumes across the day.



Source: Ofgem, Data only shows over-the-counter (OTC) market-making mandated contracts. Periods in grey represent the market-making windows.

- As with the FCSO, **risk management** is important. The RAs have identified a price change limit and a net position limit as the most appropriate measures. We would agree with these, assuming that the central trading platform handles credit risk through central clearing.

- The RAs have also focused heavily on the idea of driving volumes under the MMO. We do not believe that this is what an MMO is structured to do – market makers will be posting quotes which may, or may not be executed. This stands in contrast to a clearing price auction under an FCSO in which the auction clears and all eligible orders are executed. **The first may, or may not deliver volumes but does secure a robust buy and sell price, whereas the second secures volumes but may or may not deliver robust buy and sell prices.** The solution to manage risk proposed – a cap on net position is not appropriate. Obligating participants to continue to offer volumes when they have an open position of around +/-40% of their total retail volumes⁷ is not really a practical limit on exposure.
- We agree that any MMO has to be **wide and shallow** (multiple market makers to create a robust reference price) rather than **narrow and deep** (substantial depth to quotes but less robust pricing). A minimum of 3 participants is required – we can't think of comparable markets with fewer.
- Power will always be a **secondary market** to markets for primary commodities like gas. The RAs should always be aware of this when selecting a window for market making – picking a period with higher volatility in the primary market (i.e. end of day NBP gas) is not helpful for obligated parties or small suppliers trying to secure a simple volumetric hedge.

What are the important issues to be considered in each of the options? In what way might the options be made more effective? Please set out your views on the rationale for, and value of the parameters employed to determine, the quantity of the obligation in each option

The RAs have set out a menu of potential solutions but we believe that the choice has been limited by the inclusion of ring-fencing in only Option 1 and 2. Given the low base on which the RAs have to improve and the many interventions available, we think that incremental rather than radical changes are more appropriate in I-SEM. The removal of ring-fencing is a radical rather than incremental change and the linking of MMOs to ring-fencing unnecessarily precludes the selection of three options. In turn:

- **Option 1** will likely deliver a great deal of the liquidity required under I-SEM. Given that under the existing SEM arrangements, only a few participants have negotiated bilateral agreements and credit lines any centralised platform for trading and credit immediately multiples opportunities and probability of execution. As noted earlier – this is not just about the absolute level of collateral – we do not believe that many companies outside of the ESB Group have arrangements to trade with ESB GWM.
- **Option 2** appears to be a viable solution if barriers to trade are not removed and the existing forward market structure remains in place. However, we would note that the RAs have to properly address risk exposure (i.e. conditions relating to the operation

⁷ This is the applicable calculation for SSE – other participants would face similar exposures.

of the physical assets backing the FSCO like availability of generation, transmission and firm access). Under **Option 2** the RAs should seek to properly align the Directed Contract structure with the FSCO to ensure that allocated volumes can be retraded⁸.

- **Options 3 to 5** all remove ring-fencing with very limited justification. As noted by the RAs, integration can (but does not necessarily) reduce incentives to trade with third parties. More importantly, the **proposed integration of a market participant with individual buy and sell positions larger than the combined volume of its nearest competitor**⁹ will radically impact confidence in pricing across the market. Regardless of whether the small increase in volume (approx. 3TWh) is being made available as quotes through an MMO or directly through a FSCO auction it is difficult to see why any other participants would agree to trade outside of the regulatory interventions. ESB Group would consistently have a combined physical market volume greater than 45%¹⁰, which would be a very high position limit in a typical market for a commodity derivative. Any other participant would face a very real risk that positions could get ‘squeezed’. At the very least, we would have expected the RAs to offer a **‘self supply restriction’** of some form on ESB Group if ring-fencing arrangements were relaxed to ensure that participants are protected from the combined order flow of ESB GWM/Electric Ireland.

Therefore, while we would characterise Options 1 to 2 as offering a **volume ‘floor’** for I-SEM forward products, in the absence of ring-fencing you could more accurately characterise Options 3 to 5 as introducing a **volume ‘cap’**. There is no incentive on participants to trade beyond their obligations with a full removal of ring-fencing with no interim controls to ensure transparency and market integrity.

What is the preferred option and why do you consider it preferable?

Our preferred solution would be incremental, conservative and focus heavily on making marginal improvements in liquidity. **We believe that there are a lot of low hanging fruit available to the RAs in the transition from SEM to I-SEM** and that these should be taken in advance of more radical interventions. Our preferred option would therefore be a hybrid of Option 2:

	Assumed Clearing House with Exchange Trading/Tullet Prebon Platform
Directed Contracts	<ul style="list-style-type: none"> • Directed Contracts volumes determined as per current arrangements. • Allocation aligned with other Forward Contracting Obligation windows. • Auction based approach with

⁸ We do not think that this a risk premium issue, more alignment and widening the scope of potential counterparties

⁹ Electric Ireland has market volumes (or throughput) 20% greater than the combined volumes of SSE and more than 100% greater than the combined volumes of Energia or Bord Gais Energy. ESB GWM is even larger.

¹⁰ Higher in some products

Ring-fencing	<ul style="list-style-type: none"> • Ring-fencing of ESB retained until defined forward volume level reached. • Intervention removed and replaced with self-supply restriction until volume consistently maintained.
Forward Contracting Obligation	<ul style="list-style-type: none"> • Choice between equivalent MMO and FSCO on parties above de-minimis threshold. • Minimum condition of 3 market making participants applied. • Maximum of a weekly market making window to reduce operational risks and costs for obligated parties and to ensure smaller suppliers are available to participate.

We believe that our proposed option much better reflects the characteristics of I-SEM:

- It allows the RAs to observe whether the major changes introduced through I-SEM alter asymmetry of forward trading incentives before introducing major interventions in forward markets.
- It gives participants the freedom to select an appropriate obligation – a party without trading capability or single directional volumes might choose to deliver any obligated volume under the FSCO whereas a party with trading capability could opt for the MMO.
- It reduces the operational costs and risks associated with daily MMO windows – the RAs should remember that the MMO entails substantial people and systems costs (this is also true for the RAs Market Monitoring Unit). If the obligation is aimed at securing a robust reference price and allowing smaller participants to trade, continuous trading isn't important as an initial objective. Weekly windows might be enough.
- It relies on incremental organic improvements to be demonstrated prior to the removal of ring-fencing rather than removing ring-fencing and relying entirely on regulatory intervention to unlock volumes. The RAs should bear in mind that it is much easier to unwind ring-fencing than to reapply it.
- It builds on a volume floor, rather than securing volumes at a cap above which participants have limited scope to justify additional trading activity, especially considering potential exposures in a concentrated market.

What parameters of the regulatory intervention option should be determined by the Regulatory Authorities and which should be left to market participants to determine?

There are a number of parameters and 'trade-offs' that the RAs should consider when setting parameters. As noted in our answer to the previous question, we believe that the MMO should be directly linked to the FSCO with required volumes in one offsetting required volumes in the other.

The RAs should also consider:

- Allowing participants to allocate their own volumes against products based on their expected running for both FSCO and MMO. Setting a standard ratio for baseload, mid-merit and peaking volumes will create 'winners' and 'losers' unnecessarily.

- There should be a direct trade-off between offering to make markets at a high/low spread. If a party is more conservative they can make markets at a higher spread but with a greater quote depth. If a party offers to make volumes available at a tighter spread, their volume obligation should drop proportionately.