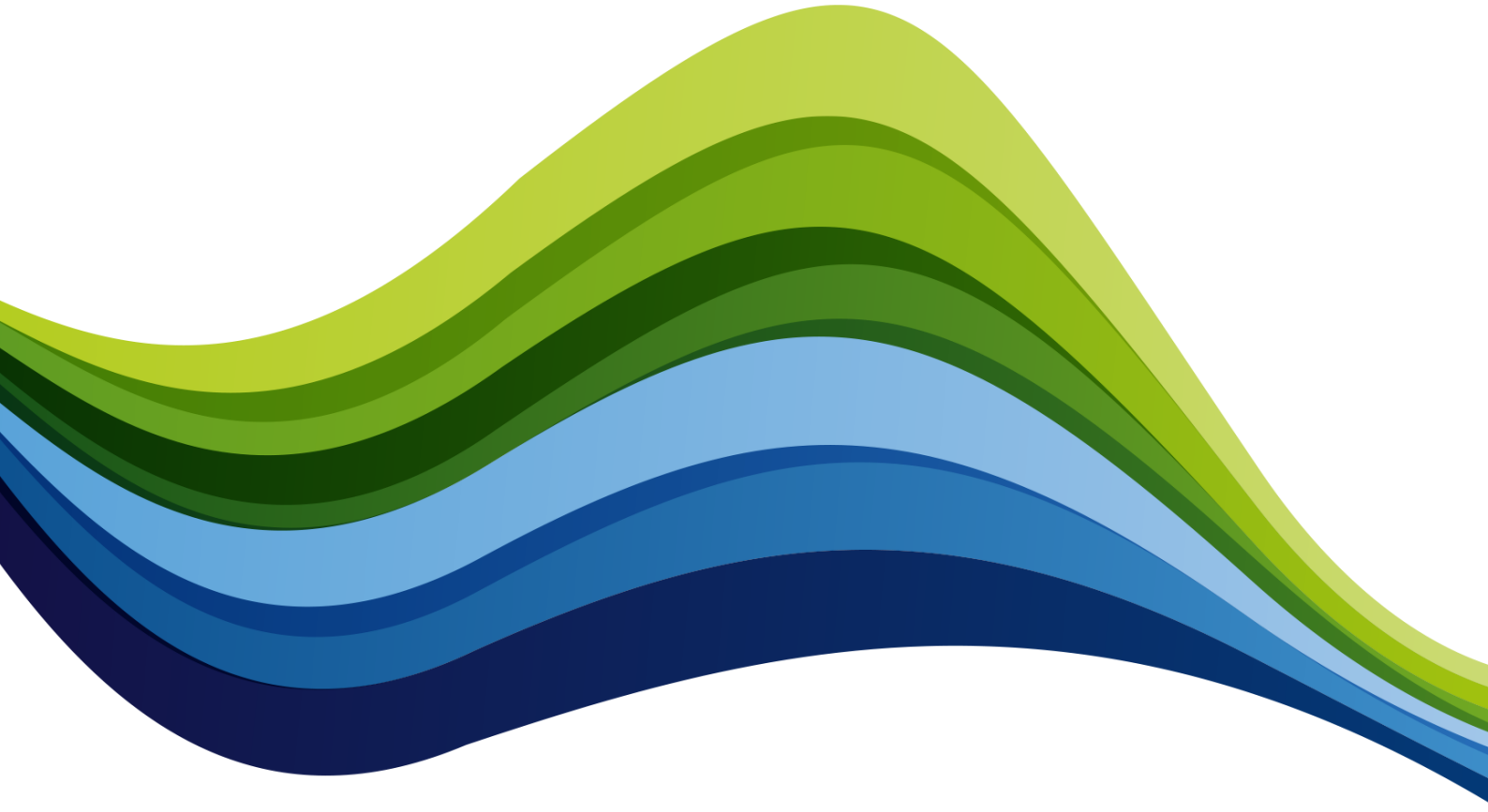
I-SEM

Forwards & Liquidity Discussion Paper

If you have any questions in relation to our response, please don't hesitate to contact me at connor.powell@sserenewables.com



I-SEM Project
Commission for Energy Regulation
The Exchange
Belgard Square North
Tallaght, Dublin 24

I-SEM Project
Utility Regulator
Queens House
14 Queen Street
Belfast, BT1 6ED

Executive Summary

Thank you for the opportunity to respond to the RAs discussion paper on Forwards & Liquidity – we would suggest that an industry workshop to discuss the issues raised in responses submitted to the discussion paper would be useful.

SSE is a utility with customers and assets in both Ireland and Great Britain – we have operated under a number of different electricity trading and transmission arrangements. We have tried to reflect this experience in our response.

There is one major structural challenge – much of the (potential) volume in the market is either supplied by, or required by one participant. We would stress that this is not so much a market power issue as a market structure issue. The consultation paper identifies this:

"ESB have a dominant market share with roughly equal generation and supply positions. Therefore there is less incentive for them to contract on a forward basis that there would be for a utility that has a long supply/short generation portfolio."

If the development of a forward platform is irrelevant to over 50% of the supply and demand of power in SEM and I-SEM, you will always have an issue with forward liquidity. **If incentives (or mandates) to 'go to market' fail, they will need to be supplemented by 'proxy' structural remedies.**

A functioning futures power market is not something that can easily be mandated or nudged into being. However, the removal of some of the SEM barriers to forward power trading, a solution to the structural issues and an appropriate catalyst might be enough to establish a platform for trading power beyond the DA and IDM timeframes.

We think that the goal of the RAs should be to aggressively reduce the scope of the workstream and focus on properly designing a couple of interventions. Ultimately, we believe that the primary output of this workstream should be simple: a centrally cleared marketplace over which a reasonable volume of standard front contracts are traded.

Within Zone Forward and Spot Market Liquidity

Moving from SEM to I-SEM

We have added commentary on the RAs table of issues in SEM and I-SEM, below. We have highlighted those issues that we feel to be a priority:

Possible Cause	Comment	Possible Solutions
Infrequency of trading opportunities	The SEM OTC forward market generally only provides participants with the opportunity to trade twice per calendar month supplemented by ad-hoc NDC auctions with timings and volumes determined by the sellers. The NDC auctions are effectively mandated. The OTC platform is the only medium that provides 'trading opportunities.'	Ensure that trade can be conducted as required by market participants. Exchanges typically operate 24/7 providing continual access to trading opportunities. Is there a balance to strike between frequency of trading opportunities and concentration of activity?
Collateral and credit levels and terms	Sellers of CfDs require 15% credit cover and separate lines of credit from the buyer for each contract. No netting of buy/sell positions is possible, increasing credit/collateral requirements further. In addition, because all forward trade is purely financial, buyers still have to buy physical power through the pool and require separate credit arrangements for this purchase. Consequently, transaction costs are increased. This is not just an issue with the level of credit cover. **Some of the terms imposed by sellers in the OTC auctions are not currently commercial.** The existing SEM falls at the first hurdle – parties cannot actually agree to trade bilaterally with each other, let alone agree a price/volume.	The introduction of an exchange/clearinghouse alongside I-SEM could reduce the credit requirements linked to forward trading by allowing collateral to be posted centrally rather than on a bilateral basis. We strongly agree – the introduction of a central exchange/clearinghouse alongside I-SEM is crucial to the development of a forward market. **Credit terms that are set centrally rather than bilaterally would remove one of the major stumbling blocks to effective forward trading.**
Scheduling risk	In a centrally dispatched market generators cannot determine their own schedule. This means a generator can be 'in the money' in the forward market but unable to	Appropriate constraint payment arrangements will help. Unclear otherwise, given no self-dispatch. It is important that make-whole arrangements are maintained in the

	capture the implied margin because it is not guaranteed to be scheduled through the mandatory pool.	**Building Blocks** decision. The HLD of I-SEM gives a number of tools to generators to manage scheduling risk: • No explicit bidding controls • Multiple timeframes to commit/contract Also, while I-SEM is not self-dispatch, it could be perceived to be 'self-commit'.
Imbalance arrangements	As the SEM is centrally dispatched, parties face exposure to Uninstructed Imbalance Payments for deviations between the Dispatch Quantity (issued by the TSO) and the Actual Output. However, there is no concept of energy imbalance for deviations between contractual and physical positions. The absence of energy imbalance exposure reduces the incentive and the need to forward contract to manage imbalance risk. This is partially true, but given that SMP is an 'all-in' price covering both energy and balancing energy and suppliers are still entering into relatively fixed tariffs with end customers there is still a clear incentive for suppliers to hedge. For example, **SEM generators still choose to hedge fuel requirements forward, despite limited exposure to energy imbalance.**	Ensuring a liquid intraday market with sufficient variety of products will provide confidence to the market that participants will be able to reduce exposure to imbalance. Consequently this will support incentives for forward trading. **This is not a solution to forward contracting issues**. Also, a liquid intraday market is not a guarantee of the I-SEM HLD. **SSE would caution against relying on imbalance volatility to ensure participants contract forward –** this may exacerbate market structure and concentration issues.
Market concentration, Vertical integration	ESB have a dominant market share with roughly equal generation and supply positions. Therefore there is less incentive for them to contract on a forward basis than there would be for a utility who have a long supply/short generation portfolio. Both dominance and balance are issues – given that ESB's supplied and required market volumes are approximately equal, they have little to no incentive to 'go-to-	Linked to market power mitigation measures. Market power mitigation measures (i.e. directed contracts) are a very partial solution. **Suppliers passively subscribing to mandated volumes will not achieve the objectives of this workstream.** We think that a market making obligation for a set of standard products should be explored.

	market' to contract. **Regulation linked to a structural or proxy structural fallback will be required to provide adequate incentive to participate.**	
SRMC bidding	With regulated SRMC bidding in the SEM, where thermal generators need to reflect the opportunity cost of the fuel, there is a very close correlation between spot gas prices and SMP, especially baseload. Consequently, gas generators have less incentive to trade forward contracts as the electricity price is a natural hedge to their fuel costs. This is not a central issue – other thermal generation does contract forward in significant volume, despite limited correlation between electricity price and fuel costs.	n/a Correlation between spot gas and spot electricity should be removed from scope.
Capacity payments	In the current SEM, a significant proportion of a generator's fixed costs are covered by the capacity payment as long as the plant is available. This provides a reliable revenue stream – regardless of how much the plant runs – and reduces incentives to contract on a forward basis. This is not a central issue in the existing SEM – there is no clear correlation between capacity payments and volume of forward trading in comparable markets. Generators are still incentivised to lock in IMR in forward markets if possible. **However, it becomes a central issue in a capacity mechanism choice like reliability options.**	n/a The reference market for Reliability Options needs to be chosen with reference to this workstream. **Moving away from the original choice of a reference market (Day Ahead market) hamstrings effective forward trading – no forward contract will be referenced to the balancing market.**
Wind generation	An increasing volume of generation will come from wind and the uncertainty around generation output limits the opportunity of this generation to be sold in the forward	Better forecasting of wind output. Wind cannot be sold in forward standard contracts over typical time periods (front month, front quarter, season etc.). Even proxy hedging

	timeframe. Trading of forward power products doesn't necessarily have to be carried out by generators/suppliers.	products (gas, indices) offer greater certainty of price/volume.
Market size	SEM is a relatively small market.	n/a The Nordic market has CfD forward contracts actively traded for a number of smaller regions.

The areas of project scoping and the questions contained within them appear to focus on **contracts, credit** and **market concentration**. We'd agree that these are the priority issues – we've provided comments on each.

Specification

We don't think forward contract specification is particularly important. Once standard products and specifications have been defined[1] on an organised market place, the key is concentrating trading activity on those products. Any regulated offerings[2] should be specified to be compatible/interchangeable with the standard product offerings, even if the prices/volumes are set by RAs. I-SEM should try to avoid passive subscription to regulated products – they shouldn't be explicitly distinguished from standard products.

Nature of participation

SSE has some experience operating with the GB Power Market Making obligations introduced by Ofgem[3] known as *"Secure and Promote"*. However, the conditions imposed in GB were a package of measures, covering supplier market access rules, market making obligation and reporting requirements. These covered, respectively:

- Rules to ensure small suppliers could access wholesale market products they need **– not a specific issue in SEM or I-SEM.**
- Robust reference prices along the curve **– certainly an issue in SEM and likely to be an issue under I-SEM.**
- Effective near-term markets **– not an issue under SEM or I-SEM.**

These have been designed as a package of measures, so directly lifting one measure from *Secure and Promote* and implementing it in I-SEM will not work. They would need to be adjusted to account for the I-SEM market structure – **a large incumbent that controls 50% of volumes flowing through the market and a number of smaller participants. Smaller participants wouldn't be in a position to take on the risk associated with a 'one size fits all' market making obligation.** The Ofgem rationale for choosing licensees that face the market making obligation is quoted below:

"[T]he need for suppliers to trade in response to changes in customer numbers is reduced. Incumbents] will also have less need to compete to identify the optimal hedging strategy in order to provide the best possible price offer to their customers."

This is a rationale that only applies to the incumbent SEM suppliers.

---

[1] Front Month, Front Quarter, Front Seasons etc.
[2] Directed Contract equivalents for example.
[3] Wholesale power market liquidity: decision letter (2014), Ofgem

Some of the market making obligation licence conditions are listed below:

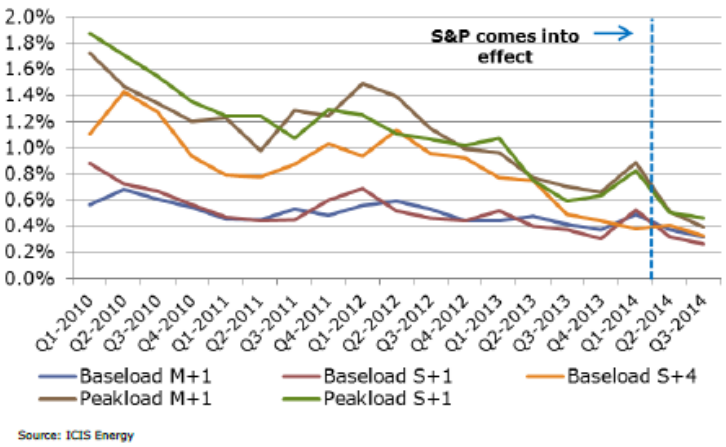
<table>
<tr><td>Time Periods</td><td>Baseload: Front M+1, M+2, Q+1, S+1, S+2, S+3, S+4

Peak: Front M+1, M+2, Q+1, S+1, S+2, S+3</td></tr>
<tr><td>Bid-offer Spread</td><td>
<table>
<tr><td colspan="2">Baseload</td><td colspan="2">Peak</td></tr>
<tr><td>M+1, M+2, Q+1, S+1, S+2</td><td>0.5%</td><td>M+1, M+2, Q+1, S+1, S+2</td><td>0.7%</td></tr>
<tr><td>S+3</td><td>0.6%</td><td>S+3</td><td>1%</td></tr>
</table>
</td></tr>
<tr><td>Availability</td><td>Licencees must market make for two hour-long windows each day.</td></tr>
<tr><td>Volume Cap</td><td>If a licensee trades a net volume of 30MW in a single window, it can stop posting a bid-offer spread for that particular product in that window.</td></tr>
</table>

Providing references prices along the curve wouldn't be feasible for generators/suppliers with far more limited market volumes. Central to the GB market making obligation is the idea of the bid-offer spread and a window for trading – this attempts to solve two central issues:

- **Pricing:** Instead of setting a regulated price for contracts (which can inhibit price discovery/trading) a bid-offer spread mandates participants to put forward prices of their own.
- **Participation:** Specifying trading windows focuses participation into certain time-periods across the market. Those time periods are likely to see buyers and sellers meet.

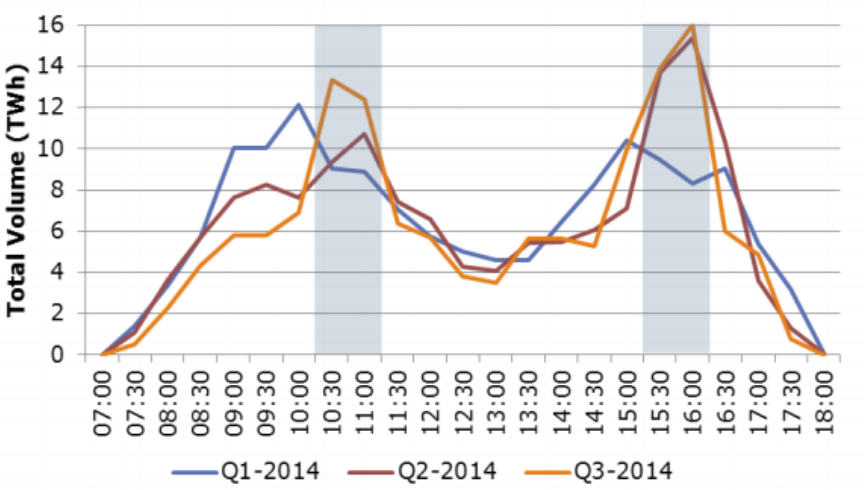
Ofgem has released an interim report with some indicators showing whether *secure and promote* has changed wholesale market dynamics. In terms of **pricing**:



It is clear that there are some positive impacts on bid offer spreads since the introduction of secure and promote, but this is an increase from a high baseline – most spreads have consistently been below 1.5%.

In terms of **participation:**

Figure 3 – OTC trading in market making contracts throughout the day

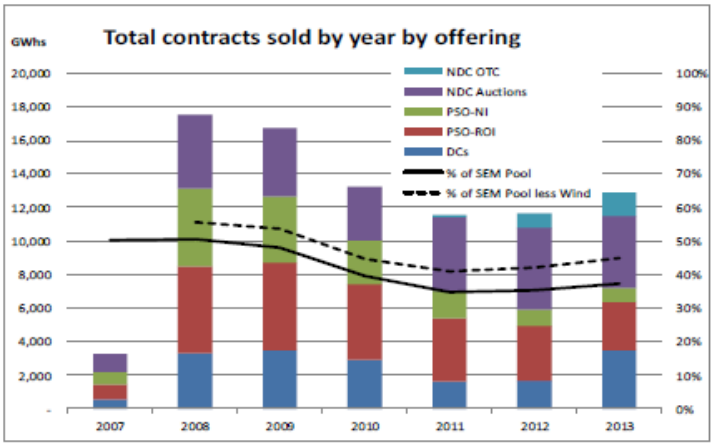


Source: Ofgem, Data only shows over-the-counter (OTC) Market Making mandated contracts. Periods in grey represent the market making windows.

Trading volumes appear to have risen within the defined windows and stayed broadly static or reduced outside the windows.

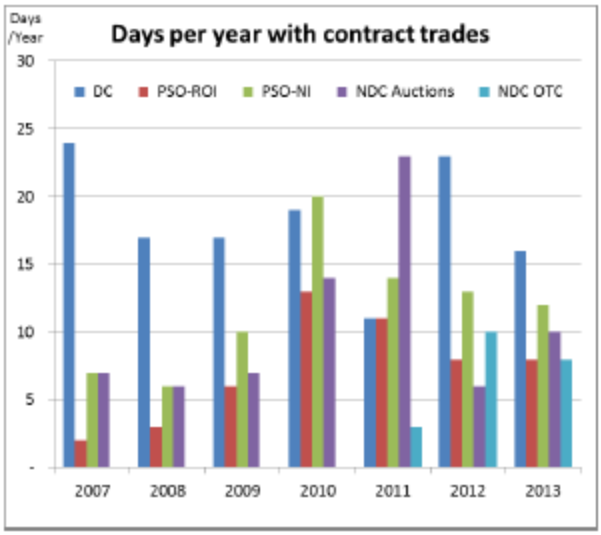
We'd suggest that these figures show that the market making obligation within *secure and promote* is an intervention for a well-developed and well-functioning wholesale market[4]. Contrast these two metrics against the SEM equivalents:

There are no figures available on bid-offer spreads because the concept of a traded position isn't really possible in SEM – forward contracting barely covers a portion of SEM volumes:



[4] Despite those high levels of churn, the GB market was still considered to require intervention from Ofgem.

In terms of participation we are assessing number of business days the platforms are actually active rather than trading volumes across a trading day – there is a clear lack of participation on platform for trading SEM forward products.



SEM has a very low baseline so the market making obligation introduced within *secure and promote* would have to be substantially modified in order to make it work in Ireland **– the time periods and volumes specified in GB licences simply couldn't apply here.** We have suggested a solution which we think should be scoped by the RAs:

- **An *organic* market making obligation on large incumbent participants, which are supplemented by *administered* contract offerings.**

A proper market making obligation on the incumbent could provide the catalyst I-SEM needs to develop a functioning forward market – if ESB start to offer some limited volumes along the curve, other generators and suppliers will be willing to post offers too. **SSE believes that the RAs should concentrate on this design feature in the Forwards & Liquidity workstream.**

Market Power Mitigation

Directed contracts are a different approach to solving the same problems – in the absence of traded volumes within forward markets you can mandate a dominant participant into offering contracts with regulated terms, characteristics and prices.

Unfortunately, the experience of DCs within SEM would suggest that the volumes offered through regulatory mandate are sorely lacking – **they have consistently covered perhaps 10% of the actual requirement for price hedging – a fraction of suppliers actual requirement.**

The paper suggests that:

"There is the potential that Directed Contracts might be applied to wider circumstances, including, perhaps targeting specific 'markets' (which might relate to peaks, flexible generation, specific locations, etc)."

Without an adjustment to the methodology used to calculate volumes Directed Contracts can only ever be a very partial solution to the fundamental market structure issue – one participant holds 50% of supply/demand volume within a well balanced portfolio. **SSE doesn't believe that Directed Contracts can be a full solution for the RAs – they are a supplementary measure at best.**

Mediums for Trade

The paper discusses the development of the existing bilateral market for CfDs within SEM – it notes that credit cover requirements impose transaction costs and barriers for participants. We **think that this analysis overlooks credit terms imposed** – many (if any) participants are unable to sign the bilateral credit terms imposed by the largest seller on the OTC platform. This has been one of the biggest barriers to activity on the Tullet Prebon Platform.

A centralised exchange based platform for trading could:

- Standardise credit terms;
- Pool credit;
- Concentrate trading activity.

We think the first is the biggest existing issue on the SEM platform – while transaction costs for bilateral CfDs are an issue, they are not an outright barrier to trading. Irish volumes will be needed to support any exchange regardless of whether it is I-SEM specific or supported on an existing exchange – moving to an exchange is one part of a solution, rather than a solution in itself.

Near Term Markets

We've added some notes to the table within the consultation paper and added a question on REMIT:

Area	Requirement
Energy imbalance arrangements	Imbalance (or cashout) prices need to provide appropriate signals for parties to balance their contractual and metered physical positions. If signals are appropriate, parties will have commercial incentives to fine-tune contractual positions in IDM, stimulating trading activity in this timeframe. The proposal for marginal cashout prices will help to. **SSE would caution against relying on marginal pricing/volatility to ensure participants contract forward –** this may exacerbate market structure and concentration issues. Dual imbalance pricing is the most effective way to force participants to trade in ex-ante timeframes, but it isn't necessarily desirable for other reasons.
Gate Closure	Setting Gate Closure to be as close to real-time as possible allows improved forecasts of likely wind, solar, demand outturn to be backed out by trading activity in the latter stages of IDM. **Near-term gate closure is only helpful if energy balance responsibility primarily sits with parties, rather than the TSO.**
Scheduling risk	Need IDM products to match granularity of settlement timeframes, so that parties are able to buy/sell power to manage contracted energy positions at the settlement period granularity. Yes.
Demand side participation	The demand-side of the market must be actively involved in DAM and IDM. Without this, the market is one-sided and transaction

	opportunities are reduced. Variations in demand forecasts will be a trigger for re-trading as real-time approaches. Suppliers should actively participate in both DAM and IDM, seeking to balance their expected physical positions with contractual positions. If they are sheltered from the market or imbalance, the incentives to trade in these timeframes are reduced. Covered under balance responsibility – if suppliers are balance responsible they will contract forward.
Variable generation participation	Variations in variable generation forecasts are another trigger for re-trading in the run-up to real-time. Parties responsible for variable generators should also actively participate in both DAM and IDM, seeking to balance their expected physical positions with contractual positions. If they are sheltered from the market or imbalance, the incentives to trade in these timeframes are reduced. Covered under balance responsibility – **however, this is not within the scope of the I-SEM project for generators that receive out of market support.** These constitute a large percentage of the market.
Aggregation	Smaller scale generation can be aggregated and represented in the market by an aggregator. This allows such generation to interface with the market still, albeit, via an intermediary. Aggregation/intermediaries should be seen as a positive for liquidity. It is important that any **last resort** function does not reduce opportunities for commercial aggregation.
Capacity payments	Allowing non-physical players to trade in the markets increases the pool of participants and introduces parties with different risk appetites. This may support trading opportunities. We agree. The choice Unit based bidding and FTRs has reduced opportunities for asset-less traders. **They need active consideration in Energy Trading Arrangements workstream.**
REMIT	We would ask the RAs whether they consider that REMIT definitions (particularly the price positioning definition) have implications on near-term participation in I-SEM? The I-SEM HLD envisages a market in which participants must offer their physical capacity in either the DA or ID timeframe. Do the RAs consider that REMIT definitions require that capacity is made available at the DA stage unless it is technically unavailable?
Transparency and reporting	Having access to information on traded prices / volumes and bid-offer spreads improves transparency of near-term markets and reliability of reference prices. This improves confidence in the market and willingness to trade. Not necessarily correlated – see SEM.

IDM trading platform	This needs to offer reliable service at an appropriate cost. Intraday auctions can pool IDM liquidity, but introduce complexity given requirement for continuous intraday trading. We don't think ID auctions should be prioritised. They are a SEM specific solution – key is access to neighbouring markets.
Interaction with RES support	Supported generators should have an interest in the DAM and IDM and have an incentive to ensure that the markets produce a 'genuine' price that they can then capture. This is consistent with the State Aid guidelines which require that supported renewable generators sell directly into the market and are subject to market obligations. Where market price premium support schemes are developed, the choice of market for setting the reference price will stimulate trade in the associated market. If a DAM price is used as the reference, this is expected to concentrate trade of supported generation into this timeframe in order to mitigate basis risk. Outside of I-SEM project scope.
Interaction with Reliability Options	Similar to above, the basis for the RO reference price will have a bearing on trading behaviour in the near-term markets. It is unclear why anything other than the DA market is being considered as a reference market for the reliability options. This was the solution originally proposed in the HLD consultation – **to choose any other reference market would significantly distort participation in near-term markets.**

Cross Border Financial Instruments

Options or Obligations

We have no views on the advantages or disadvantages of FTR Options and Obligations – both are unfamiliar.

Financial Regulation

The Markets in Financial Instruments Directive[5] is still being developed, so it is difficult to assess what impact financial regulation will have on the cross border products. The different cross border options should be assessed against the MIFID II definitions adopted.

Allocation Platform

TSO ownership of the EWIC interconnector and TSO/MO interest in I-SEM outcomes should be carefully considered in the development of allocation arrangements.

The choice of FTRs and the likelihood that any allocation platform will be I-SEM specific rather than the common European solution imposes some impediment to trade. Any participant wishing to buy these products will have to interface with the EWIC/Moyle allocation platform rather than the CASC-CAO platform. PTRs avoid this problem.

Firmness

[5] MIFID II

TSO ownership of the EWIC interconnector and the TSO role in I-SEM needs to be carefully considered in the treatment of firmness issues. ACER has consistently been clear[6] on provisions related to the firmness regime, stating in their FCA recommendation that:

"The Agency still has major concerns on some aspects of this Network Code, especially on the deadlines set to implement the target model and the provisions related to the firmness regime."

It is important that firmness provisions are not diluted by the TSO or RAs in the development of I-SEM.

Revenue Adequacy

Again, ACER has consistently been clear on provisions related to the firmness regime, stating in their FCA recommendation that:

"The Agency still has major concerns on some aspects of this Network Code, especially on the deadlines set to implement the target model and the provisions related to the firmness regime."

It is important that firmness provisions are not diluted by the TSO or RAs in the development of I-SEM. **FTRs, by definition, should not be constrained.** Revenue Adequacy is resolved separately through regulatory decisions in both Northern Ireland[7] and the Republic of Ireland[8]. The HLD objective is that FTR arrangements should provide *adequate returns* for existing interconnector assets and *appropriate signals* for future investment, not *additional underwriting.*

Market Power

We don't think holding FTRs is a relevant market power consideration.

Interactions with CfDs and Reliability Options

We can't see any adverse interactions between FTRs and CfDs or Reliability Options.

Transitional Arrangements

Transitional arrangements will have to be carefully considered – any early move to FTRs doesn't resolve the overlap. The interconnector owners will have to make shorter term products available as annual capacity allocations roll off.

[6] Recommendation of ACER on the Network Code for Forward Capacity Allocation (2014), ACER
[7] This is covered by the Collection Agency Income Requirement (CAIRt) through licensing and regulatory direction.
[8] EWICs revenue adequacy arrangements are explained in CER/12/149.