

Moyle Interconnector Ltd response

October 2015

INTRODUCTION

As an interconnector owner, the form of long term transmission rights are absolutely key to our business so we welcome the opportunity to provide our views on the subject. In addition to the fact that long term transmission rights underpin our business model, we are heavily engaged in development of this area at European level, primarily through ENTSO-E, so are particularly well placed to comment. The regulatory authorities (“RAs”) will be well aware of our views on this matter from previous communications and much of this response reiterates those opinions. Given the importance of this decision we have utilised consultants (Baringa Partners LLP) to undertake modelling of the GB-Ireland power markets¹ to provide both support and challenge of our views and add weight to our response. Since the obligation to develop proposals for design of long term transmission rights sits with Moyle as an interconnector TSO, we hope that this helps the RAs to take due cognisance of our views.

CONSULTATION QUESTIONS

1. Which offers the greater benefit to the I-SEM/GB market: FTR Options or FTR Obligations?

We strongly believe FTR Options should be preferred and discuss the merits of the respective products below.

Options v Obligations

In discussion of the advantages and disadvantages of FTR options and obligations it is important to note that there are no cross-zonal allocation rules available for FTR obligations so our assessment is based on assumptions of what those rules might be. In contrast, FTR options are more clearly understood as they would be subject to the “Harmonised Allocation Rules for Forward Capacity Allocation” (“HAR”) produced by ENTSO-E and expected to apply for FTR allocations in I-SEM in line with the Forwards Capacity Allocation network code. We discuss the advantages and disadvantages of both products below.

Providing suppliers with an effective hedge

From the perspective of suppliers on the island of Ireland both FTR options and obligations are able to be used to provide an effective hedge against the risk of a high day-ahead market (“DAM”) price in I-SEM by purchasing power in GB (and vice versa). On this key point there is no difference between the two alternatives in hedging downside risk of higher local prices.

Where there is a difference is that FTR obligations remove the potential for ‘upside’ to be earned by the supplier if the DAM price moves in their favour. Assuming that a supplier is purchasing energy in the DAM to supply their end customers and holds a GB-SEM FTR: if the I-SEM DAM price is high

¹ Extracts from Baringa’s report are referred to elsewhere in this response and included as an appendix.

relative to the GB price both products would result in a payout to the supplier thus hedging the risk of that high price. If the DAM price is low relative to the GB price FTR option payouts will be zero, resulting in the supplier benefitting from the low I-SEM price. With an FTR obligation, the supplier would pay out the ‘adverse’ market spread caused by the low-I-SEM DAM price and could only earn their forecast and hedged profit. We do accept that this property of FTR obligations means they are slightly easier for market participants to value. The consultation paper refers to FTR obligations being a ‘perfect’ hedge. While this is true in theory it is only relevant where the holders have offsetting positions on both sides of the interconnector. In reality there are a limited number of generators and suppliers who are active in both GB and SEM so this ‘perfect hedge’ benefit is solely academic unless the participant makeup of the two markets changes.

Effect on interconnector capacity revenue

In *theory*, we believe that both FTR options and obligations should result in the same level of capacity income for interconnectors (if you ignore that obligations will have a lower value due to additional collateral costs and payout risk to FTR holders). The two differ in the level of risk and timing attached to the interconnector revenue.

The simple numerical example below attempts to demonstrate this point. This example assumes that, at the time of a capacity auction, a trader forecasts that the total positive market spreads in the GB-SEM direction will be £6, and £10 in the SEM-GB direction. The value of an FTR option in each direction is thus £6 and £10, as shown in the left hand column, since this equates to the level of payout that an FTR option would entitle the holder to.

On the other hand, an FTR obligation in the GB-SEM direction would entitle the holder to receive £6 and pay out £10 meaning it has a negative intrinsic value so is not expected to be sold at auction. In this case, assuming this FTR is not allocated, the interconnector owner (“IO”) would be expected to retain £6 of congestion rent from the DAM. Continuing the example, an FTR obligation in the SEM-GB direction would entitle the holder to receive £10 and pay out £6 meaning it has an intrinsic value of £4 which it could be sold for at auction. In this case, the IO would expect to collect a further £6 from the FTR obligation holder in respect of the adverse DAM spread. As can be seen from the right hand column, the theoretical IO capacity revenue eventually ends up the same whether it allocates FTR options or obligations.

	Option revenue earned by IO (£)	Obligation auction value (£)	Adverse spread paid to IO (£)	Congestion rent retained by IO (£)	Obligation revenue earned by IO (£)
GB-SEM (£)	6	0	0	6	6
SEM-GB (£)	10	4	6	0	10

However this ignores additional considerations:

- As the Baringa slide “Historical GB-FR spreads and IFA YA capacity auction prices” (slide 46, Appendix A) demonstrates, purchasers of interconnector capacity generally pay less for capacity than the price spread i.e. the intrinsic value of the product. The shows risk averse behaviour and bids are clearly discounted relative to the forecast value. Because FTR obligations introduce additional risk of payouts by the holder due to adverse spreads, we can therefore expect to see heavier discounting of auction bids for FTR obligations. The overall effect will be reduced revenue to the IO and a greater proportion of the interconnector costs being recovered from TUoS customers.
- Because the adverse spread is being paid to the IO by FTR obligation holders there would be additional credit risk requiring additional collateral. A significant price event could result in an FTR obligation holder being unable to pay the (uncapped) adverse spread as required, potentially creating additional cost for consumers, and such events would need to be provided for in the level of credit cover provided. This cost of additional credit cover would put further downward pressure on the prices offered for FTR obligations.
- The theoretical revenue above looks at a forecast at a point in time. With FTR obligations, in reality the IO would only have clarity on its revenue as it collects congestion rents after the DAM each day. With FTR options the revenue is fixed in advance and congestion revenues simply pass through the IOs hands rather than being a direct income stream. IO income under FTR obligations would therefore be more volatile and unpredictable with knock on effects on consumer tariffs.

It seems that FTR obligations would be unattractive to arbitrage traders which would reduce the number of participants in I-SEM FTR auctions. In addition, it is our experience from SEM that doing things differently to the rest of Europe tends to be a barrier to market entry which will further reduce auction participation. Participants have more familiarity with FTR options, which resemble the PTRs with UIOSI used in nearly all of Europe at present. The learning barrier to participants is therefore lower than with FTR Obligations. From an academic point of view, an FTR has a calculated value at a point in time. From a real world perspective, different traders will place different values on FTRs depending on their view of the world and will always seek to minimise the price they pay. It is therefore beneficial to attract as many auction participants as possible to maximise the auction revenue and its contribution to interconnector costs. As the consultation paper notes, more auction participants will help price discovery for transmission rights so, while RAs may be less concerned with the interests of arbitrage traders, their presence can be of benefit to consumers.

How well understood at the two alternatives?

As stated above, understanding of FTR options is greatly assisted by the fact that, for the most part, we know the allocations rules that would apply to them. This is not the case for FTR obligations for which new rules would need to be drafted. In addition, FTR options closely resemble “PTRs with UIOSI” which are the main method of allocating cross-zonal capacity in Europe today (most notably on other interconnectors connected to GB) so are well understood. Further, it is our understanding that a number of borders in the CWE region plan to introduce FTR options in the near future so I-SEM would be in alignment with these borders and closely aligned with those utilising PTRs with

UIOSI, if it was to adopt FTR options. We are not aware of any European borders with plans to introduce FTR obligations.

Are there differing levels of implementation risk?

FTR obligations are clearly more difficult to implement given that allocation rules would need to be drafted for them and these would be markedly more complex than any existing allocation rules. By way of illustration, the project to develop the HAR took over 18 months to complete and that project drew on existing allocation rules.

In addition, IT requirements would be more complex due to the two-way nature of the payouts and the fact that there are no existing European IT solutions. With FTR options, there are existing IT systems in use for HVDC interconnectors allocating PTRs with UIOSI (and imminently FTR options) so it is expected that the existence of these would ease the implementation process. As discussed later in this response, we are in the early stage of discussions with the “Joint Allocation Office” (“JAO”) to provide capacity allocation services. These early discussions have indicated that JAO would not expect to be able to deliver an FTR obligations solution in time for I-SEM go-live. A project to implement FTR obligations would carry a significant additional price to adapt the platform, which would ultimately be borne by consumers.

The consultation paper makes reference to the potential use of a clearing house to mitigate credit risk. As well as the additional complexity of procuring clearing house services, our understanding is that these are expensive so would increase the transaction costs relative to FTR options.

These factors combined raise significant doubts as to whether FTR obligations can be delivered in time for I-SEM go-live.

Does one form of FTR provide more benefits than the other?

From the discussion above it is clear that there are downsides to adoption of FTR obligations and the upsides are unclear and debatable at best. The consultation and previous regulatory papers (and the Booz&Co report from which the RAs appear to be taking their lead²) have discussed the benefit of being able to ‘super-impose’ or ‘net’ FTR obligation sales on each other i.e. if we sell 100MW in one direction this creates a further 100MW to be sold in the opposite direction, funded by the payouts received from the initial 100MW. This pre-supposes that FTR obligations will be sold for both directions and market participants will take on an FTR obligation that is forecast to lose money.

The modelling carried out by Baringa suggests there will be a clear dominant economic flow direction across all timeframes on the I-SEM/GB border so it is very unlikely that participant forecasts will vary to the degree that anyone would buy FTR obligations in the “wrong” direction. This theoretical benefit of FTR obligations is therefore not likely to materialise on the I-SEM/GB border in the short or medium term.

We note the RAs consideration of offering ‘time of day’ FTR obligations and make the following comments:

- Time of day FTR obligations still would not deliver netting. Netting can only occur where obligations are sold in both directions for the same hours. It is even less likely to occur with time of day obligations as the implication/rationale for these is that there is a forecast dominant flow direction in those particular hours.

² https://ec.europa.eu/energy/sites/ener/files/documents/2012_transmission.pdf

- This type of product may introduce difficulties for traders on mainland Europe as peaks do not happen at the same time as in I-SEM/GB due to the time difference.
- There is no European precedent for issuing long term transmission rights on a time of day basis. This would seem to be a backwards step in terms of aligning with the rest of Europe when our goal is integration.

The other mooted advantage of FTR Obligations (although not mentioned in the consultation paper) is that they can be chained to create rights connecting non-adjacent zones. This advantage obviously envisages FTR obligations being in place on all borders and would certainly be a positive if that was the case. However it does not appear to be the intention of any TSO in Europe to introduce FTR obligations in the near future so that advantage will not be realised by introducing FTR obligations on the I-SEM/GB border. The natural place to first introduce FTR obligations is central Europe where a single TSO with multiple borders could facilitate chaining from its Eastern neighbour to its Western neighbour. A relatively isolated island market on the periphery of Europe (the 'end of the line' as far as chaining FTR obligations would be concerned) is a far from obvious candidate to be the European first mover on FTR obligations.

Preferred approach

As will be clear from the above, we have a strong preference for FTR options and believe they will deliver more benefit to the I-SEM/GB market.

2. What arrangements would be preferred: one FTR between the I-SEM and GB or one FTR per interconnector?

We strongly believe that one FTR per interconnector is essential and welcome this minded-to decision. In our view the earlier regulatory decision to represent the interconnectors separately in Euphemia naturally leads to separate FTRs so we are pleased to see this consistency. Having one FTR per border would also be a significant change from the current market arrangements which would be unnecessary to bring I-SEM into effect so would not be consistent with the thrust of regulatory decisions to date.

While we agree with the minded-to decision we would emphasise that the case in support of a single FTR for the border is weak. We don't believe that there would necessarily be any fewer auctions with a single product so liquidity would not be 'concentrated in a single auction'. In any case fewer auctions are more likely to lead to market power issues as there would be less opportunity for price discovery and fewer opportunities to acquire FTRs. We also do not see that having the same price for FTRs on both interconnectors is a particular advantage of a single product. If an asset owner invests in their asset (whether that be maintenance of an existing asset or building a new one for example) they should be rewarded for that investment. A single price smeared across assets would dis-incentivise investment and asset performance.

If there was to be a single FTR per border it would be necessary to establish complex revenue and cost sharing agreements and accept exposure to the other interconnector's reliability and maintenance regime. These are significant issues and any revenue and cost sharing agreements would become material contracts requiring the approval of Moyle's financiers, requiring no little effort and incurring significant legal costs. They would also be a significant barrier to entry to any merchant interconnector investment.

Availability of FTRs by interconnector provides product diversity and when the interconnectors have different technical characteristics (losses, ramping, availability, etc.) sale by interconnector can more easily take account of such factors (whether in the FTR product characteristics or in the pricing of the product by market participants). Currently use of a single auction platform facilitates participants bidding for capacity on the two interconnectors and we do not observe that participants have any difficulty participating in auctions for two interconnectors.

In brief, we do not consider that any benefits from establishing a single FTR per border would outweigh the considerable administrative challenges and expense.

We can see that parties who do not want to see FTR payouts adjusted for losses and ramping may argue for a single product (as this would automatically lead to an unadjusted FTR product) but it is important to remember that these are separate issues and the various perceived advantages and disadvantages should not be conflated. Even if the RAs determine that FTRs should not be adjusted for losses or ramping we would still strongly favour separate products per interconnector.

3. Should any of the following be discounted from the FTR product payouts?

- **Interconnector transmission losses;**
- **Ramping constraints;**
- **Curtailement risks**

In simple terms, it is our view that FTR payouts should be aligned with the congestion rents received from the day ahead market (with the exception of curtailments where no congestion rents might be received but payouts would still be made). If the congestion rents reflect losses and ramping then so too should FTR payouts, otherwise the asset owner is selling a product that is potentially loss making for them. This logical view is aligned with the European Commission's September 2015 draft of the guideline on Forward Capacity Allocation which states: *"In case transmission losses and/or ramping rates on interconnections between bidding zones have been included in the day-ahead capacity allocation process, they shall be the only allocation constraints to be taken into account for the calculation of the remuneration of long-term transmission rights."* NB. To the best of our knowledge this version has not yet been published online

Interconnector Transmission Losses

We agree with the SEM Committees assessment that the FTR payout should be discounted for losses.

The interconnector owners have no control over losses as they are an unavoidable physical reality so it would be an unreasonable allocation of risk/cost to not adjust for them. This would be a particular issue were market prices to converge to the extent where the spread was >0 and $< \text{loss factor}$ as the interconnector would have zero congestion revenue to fund FTR payouts.

While we agree with the conclusion, we think the case to adjust for losses is more clear-cut than presented in the consultation paper. Taking the advantages of not adjusting for losses presented on page 30:

- To say this would attract more asset-less traders and secondary liquidity is unsupported conjecture. There is no apparent reason why asset-less traders would be more concerned with loss adjustments than asset-backed traders. Indeed, around half of traders active on the SEM interconnectors are asset-less and that is in the context of a product incorporating

losses, ramping and all the bespoke complexity of SEM. Adjustments for the issues like losses do not seem to be an issue for asset-less traders and some may welcome complexity.

- The rationale for the statement “FTR purchasers not responsible for losses so should not have payout discounted for being incurred” lacks clarity. Losses can easily be modelled by market participants so they can factor their effect into auction bids so as to avoid overpaying.

Slides 38, 40 and 42 of the Baringa modelling (see Appendix A) quantify the financial effect of losses in the reference, downside and upside cases.

Ramping Constraints

The technical ramping capability of the Moyle Interconnector is up to 199 MW/min. Therefore the ramping constraints that apply on interconnectors in SEM (10 MW/min combined or 5MW/min per interconnector currently) are based on network rather than interconnector issues. The interconnector owner does not have control of this ramping rate, which is imposed by the ‘onshore’ TSO. This is highly relevant to the decision on treatment of ramping constraints vis-à-vis FTR payouts. Like losses, the interconnector owner has no control over them so should not bear the risk/cost that they create.

If a flow on an interconnector is subject to a ramping constraint, the interconnector owner will collect reduced or negative congestion rent on one hand, which is not balanced with its potential FTR payout on the other hand. Negative congestion rent would result from flows against the price spread which may well happen as the current ramp rate is so restrictive. As stated above, ignoring ramping for FTR payouts means the FTR issuer is exposing themselves by issuing a potentially loss-making product – this is not a position we want to be in.

We consider that there are a number of options for dealing with this issue:

1. The current minded to decision
2. Adjust FTR payouts for ramping so that payouts are not greater than congestion rents
3. Remove ramping restrictions from the day ahead market coupling algorithm. This would produce an unconstrained day ahead interconnector schedule. The TSO could then make a judgement as to whether this schedule is feasible and take whatever actions are necessary to manage the system
4. Combine the current minded to decision with a direction that the onshore TSO should bear the cost that the ramping restriction imposes on the interconnector owner. The TSO could then determine whether the current ramping restriction is actually efficient or overly conservative. Minimising this cost could be part of their licence incentive to minimise dispatch balancing costs and deliver a more efficient outcome than the current situation. We recognise that exactly calculating the impact of ramping on congestion rents would be difficult but are confident that a fair approach could be developed.

We consider that options 3 and 4 would be most efficient from both a market participant and end consumer perspective. There is currently no incentive for the TSO to optimise the interconnector ramp rate which restricts the benefits of interconnection and provides a free (from the TSO perspective) tool with which to manage the system. Both of these options would resolve that issue and be of benefit to the market as a whole.

The Baringa modelling suggests that the financial impact of ramping may not be the ‘red line’ issue that we intuitively believed it to be (see Baringa slide 25 in Appendix A, showing gross margin,

including the cost of ramping). This is because the projected flow direction is dominant across most scenarios so ramping does not occur so often. We remain of the view that this is potentially a high impact issue (e.g. Baringa slides 34 and 35 in Appendix A, showing the cost of ramping in the downside case and slide 32 showing the incidence of ramping in the early days of I-SEM) and would prefer to see it dealt with more efficiently than simply being obliged to bear the associated cost and risk. The risk will not be fully understood until after market coupling matures so we are keen to avoid it at go-live. Option 2 would be the easiest way to do this and, should our concerns be unfounded, the interconnector access rules are reviewed annually so could be updated. This would be an imperfect but reasonable distribution of risk as FTR bidders could reflect the ramping impact in their auction bids to limit any exposure.

Curtailment Risks

The impact of curtailment on FTR products should be in line with the final version of the FCA guideline. In line with Article 54 (Definition of caps), the calculation of capped compensation should be dissociated for each interconnector. To do otherwise forces different asset owners to accept the outage risk and costs associated with another asset over which they have no control. This would not be reasonable and such a regime is likely to discourage new investment as well as unsettling existing investors.

Page 35 of the paper highlights the principle in the current draft network code/guidelines that *“firmness costs [i.e. physical firmness costs after day ahead firmness deadline] are however eligible to be included in the transmission tariffs or through other compensation mechanisms, subject to approval by Regulatory Authorities provided they are reasonable, efficient and proportionate”*. Moyle is restricted in its ability to trade energy and hedge these firmness risks under its licence so it is difficult to see that the firmness costs would be efficient as Moyle is likely to be exposed to unmitigated imbalance pricing. The RAs should consider where these physical firmness costs are allocated as the party best placed to manage them is likely to be the onshore TSO.

4. What are the important issues to be considered in deciding on the development of an auction platform?

Any auction platform should:

- Be capable of allocating capacity and undertaking associated tasks in compliance with the FCA guideline.
- Be readily accessible to market participants, with a low barrier to entry, to ensure market liquidity.
- Cost should always be an important consideration. We should seek to avoid sunk costs by ensuring that the platform solution will be in use for the foreseeable future.
- Be available in sufficient time for FTR auctions to be held ahead of I-SEM go-live.
- Cater for any I-SEM/GB specific requirements, although we should seek to minimise these.

5. What is the preferred approach in relation to the establishment of the I-SEM FTR auctioning platform?

As the RAs will be aware, Moyle and EWIC have been considering this issue for some time. The local platform option was not considered particularly attractive as it would be a bespoke solution, at high cost, that could only be in use until the FCA mandated single allocation platform (“SAP”) comes into effect. An alternative approach we considered was for the FUIN³ interconnectors to develop their own platform. This would have been an alternative to the Joint Allocation Office (JAO) which is considered by many to be the ‘SAP elect’. Since there is no legal basis for JAO to automatically become the SAP, a FUIN platform would have a better chance than a local solution of being enduring. On balance it was concluded that the level of support for JAO across Europe meant the lifespan of an alternative allocation platform was likely to be limited.

We have recently engaged with JAO to investigate implementation in time for I-SEM go-live, compatibility of the platform with potential I-SEM decisions and options for joining JAO. Initial discussions have been positive and JAO expect that an FTR options solution could be in place ahead of I-SEM go-live, since JAO already has functionality for FTR Options on other borders. An FTR obligations solution would be more problematic as there are no Access Rules for these and they would a pre-requisite for scoping a solution – it is unlikely that JAO would be able to implement an FTR obligations solution for auctions ahead of I-SEM go-live. In any case it would be a much more significant project to implement FTR Obligations and would come at additional cost.

JAO is a joint service company of twenty Transmission System Operators from seventeen countries and will perform auctions of transmission rights on 27 borders in Europe. Therefore we anticipate that JAO will be an attractive platform for market participants and that one effect of using JAO will be to increase the number of players participating in FTR auctions on the GB/I-SEM border, thus increasing market liquidity. Another benefit will be that a single collateral amount (and registration process) can be used to secure capacity on all borders that JAO operates. This means that market participants are less likely to have ‘unused’ collateral sitting with an interconnector owner to whom they don’t owe significant amounts.

CONCLUSIONS

It is our clear preference that FTR options are introduced for I-SEM. There are robust arguments for this which we have presented when the matter of options versus obligations has been raised in various consultations and discussion papers. In our view the balance of advantages and disadvantages clearly favours FTR options and a minded to decision in this regard should be easily reached. Given that both the I-SEM/GB interconnector owners and several external consultants support the introduction of FTR options we would expect to see a compelling case if the RAs eventual decision is to introduce FTR obligations.

FTRs should be issued on a ‘per interconnector’ basis. To do otherwise would result in an unjustified complex administrative burden to ensure fair treatment (of NI and ROI consumers who underwrite the assets) with regards to sharing revenues and costs.

³ France, UK, Ireland, Netherlands comprising Moyle, EWIC, IFA and BritNed

FTR payouts should reflect congestion income receipts to the extent possible. Where it is possible to reduce the burden of allocation constraints (i.e. with ramping) there should be an appropriate allocation of risk and reward to the party with the ability to do this.

The interconnector owners have identified a suitable allocation platform solution that we believe can be delivered for I-SEM and represent value for money in the short and medium term. We would hope decisions arising from this consultation do not significantly deviate from common European practices as these may create additional cost and potentially jeopardise timely delivery of an allocation platform.

APPENDIX A: MODELLING

This appendix includes commercially sensitive information and is supplied in a separate document to the NRAs.