



**ESB Response to Proposals for the
Implementation of the European Target Model
for the SEM**

SEM-12-004



Executive Summary

ESB welcomes the opportunity to respond to the SEM-C proposals contained in the Consultation paper, Proposals for the Implementation of the European Target Model for the Single Electricity Market (SEM-12-004). The workshops and bilateral meetings with stakeholders have facilitated a greater understanding of the proposals and the extent of change required for compliance with the Target Model, and this is acknowledged.

The consultation paper examines a number of options for SEM implementation of the Target Model. These options range from “evolutionary” denoting incremental changes to SEM, to “revolutionary” or full scale market redesign. The consultation also draws heavily on the original SEM high level design assessment objectives as a means to evaluate the proposed options.

ESB believes the approach taken, (using the original SEM high level design objectives and incrementing CACM compliance) is unduly restrictive, fails to take account of the regional market context within which SEM participants will operate in the near future and risks depriving the island of Ireland of the promised benefits that will arise from market integration. ESB would espouse an approach that sets as an overall objective the realisation of the full benefits of integration, in addition to as a minimum reviewing the original design criteria for SEM and in particular the manner in which the design criteria are assessed to ensure they are reflective of the regional context of the future market.

The assumption by the TSOs of continuation of the central dispatch requirement that exists in SEM today underpins the evolutionary options proposed in the paper. However it is important to accept that within a central dispatch world both self and central commitment approaches are demonstrably viable. This acknowledgement, together with the assessment of these four options themselves, leads to the conclusion that the options, based on an assumption of central dispatch, are too limited in scope and potentially restrictive in terms of trading opportunities for SEM generators and suppliers when compared with players in other markets in the region. As such, ESB suggests that the next stage of the review process needs to more fully evaluate market design options based on self-commitment principles so as to achieve the full benefits of market integration under the Target Model. Furthermore ESB has serious misgivings regarding the potential commercial implications for generators and suppliers of the four incremental options, not least of which is the fact that they do not provide a level playing field for SEM participants vis-a-vis participants in other EU markets. In this regard we are unable to give support to any of the incremental options in their current format.

With regard to the revolutionary options, ESB questions the presumption that centrally traded (pool) markets are more efficient than bilateral trading. We provide evidence in the main body



of this response paper related to the price reductions evident in GB as a result of the move away from a centrally traded England and Wales pool to the bilateral arrangements of NETA. Furthermore we believe the expanding BETTA option has distinct merits, (primarily in terms of lower implementation costs), over and above any option to replace SEM in its entirety with a new set of market rules and systems. We would encourage the RAs to explore this option further in the next stages of this project.

Finally, while we welcome this consultation and engagement process, which represents a good first dialogue in what is likely to be a lengthy process, we would encourage the establishment of a formal project based approach. Such an approach would incorporate formal milestones, Regulatory Impact Assessments and adequate stakeholder engagement. Similarly for the next phase, it will be important that the Regulatory Authorities are seen to be leading this project and making all key decisions, with market participants, TSOs and other stakeholders provided equal opportunity to engage with and influence the eventual choice of market design.

We look forward to engaging further with the RAs in due course.



1. Introduction

ESB welcomes the opportunity to comment on the SEM Committee (SEMC) proposals for implementation of the European Target Model for the Single Electricity Market. The launch of the Market Integration project, culminating to date in the publication of these proposals, as well as the stakeholder engagement conducted by the SEMC (both before and after publication of the proposals) are a significant advancement in the implementation of the Target Model and subsequent network codes arising. More specifically the consultation paper has helped to focus market participants on the scale of the challenge and magnitude of change required over the coming years, particularly when compared with most other European electricity markets. In this regard the extension of the compliance date to 2016 for SEM is to be welcomed. ESB looks forward to further engagement with the SEMC and Regulatory Authorities (RAs) as the Market Integration project proceeds in the coming months.

This paper is ESB's response outlining our position in relation to market integration as a whole, as well as commenting on specific issues proposed within the SEMC consultation. ESB accepts that the proposals to date have not been analysed at a detailed level (or even as a high level design) and represent only a starting point, from which much more detailed work is required before a definitive solution can be determined. However this, coupled with the fact that the development of the Target Model for both Forward and Balancing time frames is still in an early stage of development, limits the ability of market participants to determine a preferred solution (or indeed portions of a solution) at this stage. We have therefore limited our response somewhat to dealing with overall outcome and what (primarily within the evolutionary options proposed) might/might not work in terms of achieving:

- i. optimal outcome for Irish consumers (protection of consumers)
- ii. non-discrimination of SEM market participants vis-a-vis market participants in other EU Member States
- iii. Target Model compliance as defined by achieving economically efficient interconnector flows



2. Market Integration: Project Objectives

Compliance with the Target Model at least cost appears to be a primary objective of the Market Integration Project (although this is not stated explicitly in the consultation) and in this context the paper relies heavily on the original design criteria for SEM as the driver of the Assessment Framework for decisions on implementing the Target Model. ESB does not disagree that many of the criteria that existed at the time of SEM high level design (2004/2005) still remain relevant in 2012 and will continue to remain so (however we do believe the manner of their evaluation needs to reflect a regional market context). Indeed, given the initial feedback from market participants as well as the timing constraints to conform with the derogation requirements of the CACM Framework Guideline and network code development process, it is understandable that the approach taken to date has relied heavily on retaining as much of SEM as possible.

ESB believes that continuing with such an approach could unwittingly deprive us from realising many of the benefits that market integration could bring to both consumers and market participants. Restricting the assessment criteria to those of SEM high level design with the inclusion of Internal Market integration (to achieve compliance with the Target Model) is unduly restrictive and will lead to an outcome where the primary objective of the project will be to minimise changes to SEM as opposed to the more important objective of maximising the benefits of market integration to consumers.

In the next phase of the project we would suggest that the SEMC set out to establish that market integration is good for Irish consumers and allow that fundamental to guide action towards realising those benefits (welfare maximisation) in the most cost efficient manner possible (quantifying these benefits will also have an impact). We believe that this broader view is consistent with good regulatory practice and must be the over-riding objective of the Market Integration Project. Any market design outcome arising from the project would then maximise the benefits of integration. This will then frame the next steps in the project in terms of choosing a market design. We firmly believe that without such an overriding objective it will prove extremely difficult to select any of the design options (out of those proposed or any others), given the level of detail that would be required to make such a decision, as well as the significant knowledge gap and range of possibilities that exist within even the four evolutionary options proposed.

ESB believes that Market Integration will deliver real benefits to consumers on the island of Ireland and as such those benefits will be maximised/optimised with greater levels of market integration (the ultimate level of integration being a single regional or all-islands market). These benefits will be in many areas including increased competition, reduction in market power concerns, security-of-supply, access to larger scale markets, central market



efficiencies (or reduced market administration costs), sector decarbonisation and harmonisation. ESB suggests that a medium to long-term perspective be taken on the opportunities to realise benefits right across the market and sector, rather than a short term view which might hinder longer term ambitions and targets. The ESRI paper on the internal electricity market¹ highlights some of the substantial benefits that participation in a single EU electricity market will likely bring:

- a) Electricity prices that are lower than they otherwise would be;
- b) Security of supply increases through access to greater fuel diversity;
- c) Lower reserve requirements.

We believe as a minimum the original design criteria for SEM needs to be reviewed and in particular the manner in which the design criteria are assessed reflect the regional context of the future markets. For example ensuring that the market design achieves equity for participants must also reflect the fact that there are participants outside of the SEM who may have an advantage over SEM participants as a consequence of different market designs vis-a-vis SEM.

¹ The Internal EU Electricity Market: Implications for Ireland, ESRI Research Series Number 23, Gorecki, October 2011



3. Evolutionary Options (Section 7)

There is a significant lack of detail in the options proposed, which coupled with the inclusion of “options within options” make it extremely difficult if not impossible to determine how each would operate in practice (if at all) and in particular the commercial implications of one design over another.

While we welcome and have participated fully in the TSO and RAs workshops and bilateral engagements to fill in gaps and seek clarity on the evolutionary options, the over-arching message arising from these engagements has been one of very early stage development with nothing ruled in or out at this point in time. Again, while this process has helped engage market participants and focus minds on the issues at hand it has not provided enough information whereby we are in a position to support one or more of the options at this time.

Nevertheless, in an effort to move the debate forward we have commented on specific aspects of the evolutionary options, which are of concern to ESB as an entity with both generation and supply interests in the market and, we believe, introduce serious concerns over whether these options remain as viable future market designs. Specifically these concerns relate to:

- i) Central versus self dispatch;
- ii) Non-discriminatory participation in markets;
- iii) Commercial implications for market participants;
- iv) Implementation costs.

These issues are discussed in further detail below.

It will be important, in terms of achieving industry-wide acceptance of any revised market arrangements to achieve compliance with the Target Model / Network Codes, that the Market Integration project is visibly seen to be within the control of the Regulatory Authorities. While SEMO/TSOs contribution in terms of initiating consideration of the “evolutionary” options has been helpful, it will be important that from this stage on in the process, SEMO/TSOs are not seen to be leading or unduly influencing the enduring choice of market model. ESB believes that the overall process will be best served by the Regulatory Authorities, with adequate resourcing, taking the lead in terms of narrowing down the high-level design options and evaluating the most appropriate path forward. In this manner, all generators, suppliers and SEMO/TSOs can engage as equal stakeholders in the next steps in the process.

3.1 Central versus self dispatch



The assumption of a central dispatch requirement for the SEM as it exists today underpins the four evolutionary options presented in the consultation paper. However uncertainty over what is meant by “central dispatch” has the potential for significant misinterpretation of the advantages/disadvantages under any of the options, whether evolutionary or revolutionary. Coupled with clarity of “central dispatch” is the matter of generator self commitment /self scheduling and what that means in terms of certainty over generator revenues. ESB considers that a principle whereby TSO dispatch decisions cannot be allowed to effect the commercial positions of generators in already committed trades is necessary to underpin the effective operation of the enduring market.

The issues of central vs self commitment and central dispatch appear to be confused in the paper – and it is important to accept that within a central dispatch world (which everyone accepts is necessary) both self and central commitment approaches are demonstrably viable. Further, self commitment can operate in both a pool (eg the NEM) and bilateral regimes (eg BETTA). ESB welcomes SEM Committee’s challenge of the necessity for central dispatch by the TSOs and looks forward to industry-wide involvement in this assessment. Clarity on this issue is essential in advance of selection of an enduring market design and the final decision in this regard must be taken by the Regulatory Authorities.

If generators are kept financially whole for deviations from their preferred contracted positions by the TSOs, they will be largely neutral to some form of central dispatch. Likewise while TSOs have a key role in operation of the power system, provided the principle that they can issue dispatch instructions to all dispatchable generators is upheld, then they are likely to be neutral to the choice of market design.

The consultation paper is unclear with regard to the detailed operation of central dispatch as argued by the TSO under any of the four evolutionary options (whether it is as currently operated under SEM or a step change away from the existing position). However, ESB welcomes the clarifications by SEMO/TSOs, during discussions, that whatever market arrangements are put in place to comply with the CACM Network Codes will allow for self-commitment by generators with appropriate compensation to be provided where generators must be dispatched away from their contracted positions. Recognition of the self-commitment principle by SEMO/TSOs thereby allows for serious consideration of the “Revolutionary” options across the market. If our understanding of the SEMO/TSO clarifications is correct, and self commitment is a viable option in Ireland then the evolutionary options, based on an assumption of central commitment, are too limited in scope and the next stage of the review process needs to more fully evaluate options based on self-commitment principles – either in a pool or bilateral trading framework.

3.2 Non-discriminatory Participation in Markets

At a summary level, ESB has immediate reservations regarding the Evolutionary options. We believe they are potentially unduly discriminatory to generators physically located within the existing SEM. Under each of these options, ESB considers that market participants in today's SEM will be disadvantaged against those across Europe. This disadvantage arises through a number of the characteristics of each option:

- Option 1
 - By nature of the fact that bilateral trading in the forward timeframe is restricted to interconnector capacity holders, SEM generators' offerings into the Day-Ahead or Intra-Day markets will not have certainty over their synchronisation status and running level, unlike generators participating in bilateral contract markets, and as such significant commercial risk will reside with "SEM" generators.

- Options 2 and 3
 - Under these two options SEM generators will be in a position (as a result of the firm forwards pool) whereby synchronisation status and 'firm' running levels are known in advance of DA and ID markets. However firm ex-ante prices are still unknown (the consultation paper notes that "firm [ex-ante] price in the forward pool would be only the shadow price. It would not include uplift"). This leaves SEM generators once again at a disadvantage compared to its European peers, and may result in inefficient trades.

- Option 4,
 - This option will result in firm ex-ante prices being provided to "non-SEM" participants while "SEM" participants will be faced with uncertainty of corresponding price until ex-post. More specifically it is unclear within this option how generators participating in the CfD market could manage the risk of not being in the ex-post market schedule (and hence not getting access to the CfD reference price - SMP). This means that if an Irish generator enters into a contract on a day-ahead basis at a given strike price, but is subsequently excluded from the ex-post schedule for reasons outside of its control (e.g. change in total demand) then the generator has no means to protect its commercial position under the CfD, whereas the counterparty to the contract (in GB for arguments sake) is not exposed to any price risk.

ESB also has concerns with regard to the compliance of Option 4 under the Target Model. The CfD is akin to a form of volume coupling and therefore could

result in inefficient flows across the interconnector (i.e. power flowing from high price area to a low price areas).

3.3 Commercial Implications for Market Participants

The follow-up engagements by SEMO/TSOs and the RAs have helped to clarify some of the issues that were initially raised upon reading the consultation paper. Some of these issues have already been addressed in the preceding paragraphs. However there are still many gaps that give rise to uncertainties regarding the commercial implications of the various options for market participants:

- **Firm contracted positions in the forward, day ahead and intraday markets** – this issue has been addressed in the central dispatch Section 3.1 above.
- **Timing of balancing market gate closures** - It is suggested that gate closure for the balancing market could align with the gate closure for the bilateral trading arrangements i.e. at 09:00 D-1. This would lead to generators and presumably DSR units committing to commercial offers of up to 45 hours ahead of real time, when significant volume of trade could take place between balancing market gate closure and real time. Such a requirement leaves generators unable to manage risks or to re-bid balancing prices to allow for example changes in gas prices, wind forecasts or demand levels as real time approaches. ESB is not against regulated bidding into a balancing market to assist the TSO with dispatch decisions however we would seek to allow re-bidding to account for market changes closer to real time, i.e. shorter gate closures.
- **Compensation for TSO dispatch from contracted positions** – A key concern for market participants is the compensation to be paid if contracted positions are not reflected in the dispatch schedule. In principle, dispatch decisions that result in movement away from a contracted quantity, should result in the participant being no worse off than if it had been able to fully participate in the market as initially anticipated from contracted positions.
- **Generator starting positions** – this issue has been addressed in Section 3.2 above.
- **Liquidity under net-pool arrangements** – with regard to the firm forward pool proposed under both Options 2 and 3, ESB notes that participants will be able to submit purchase bids in respect of the demand side (which is a step change away from existing arrangements) as well as being able to act as price takers and submit nominations in respect of their own demand forecasts. It is not clear from the consultation what would happen in this voluntary pool, should there be insufficient generation to match these

demand nominations or indeed whether some form of market maker/liquidity provider would be mandated upon all generation market participants.

- **Application of imbalance prices** – the degree to which imbalance prices are penal raises questions about how wind and other price-taking generation and demand are treated. ESB recognises that there is a cost to imbalances and that those creating imbalances on the system should contribute to that cost. For wind generation, as well as other price takers and demand (that would now rely on their own demand forecasts to contract forward and in Day ahead timeframes), the introduction of continuous intraday trading can allow participants to balance positions much closer to real time and with a more accurate view of demand, wind availability etc. This would, to a large extent, counter any increased commercial risk that participants are exposed to as a result of imbalance pricing.
- **Single Reference Price** – given that Options 1, 2 and 3 will give rise to a different price from each of the market timeframes it is unclear from the consultation what REFIT contracts and other PPAs would use as the reference price against which contracts are honoured. The specified reference price would need to relate to a liquid market however.
- **Capacity payments** – as acknowledged in the consultation more work is required regarding the interaction of capacity payments with ex-ante markets and interconnector flows.
- **Firm ex-ante pricing** – see Section 3.2 above

3.4 Implementation Costs

The Paper provides preliminary cost estimates of the Evolutionary Options based on central system cost estimates provided by vendors in the region of €6-12 million. It is clear from the options proposed that the evolutionary options amount to more radical change than may have been initially expected at the outset. We would therefore raise serious question marks over the preliminary cost estimates provided, given that the costs for implementation of two additional gate closures in SEM to facilitate intraday trading is in the region of €20 million.

4. Replacing SEM (Section 8)

ESB proposes that the “revolutionary” option, in particular the “Expanding BETTA” option be given further consideration in the next stages of the Market Integration project for a number of reasons:

- i) Recognition of the self-commitment principle by SEMO/TSOs as discussed in Section 3 allows for serious consideration of the “Revolutionary” options across the market.
- ii) Many of the issues with BETTA as highlighted in the consultation paper are already being addressed. Specifically:
 - a. Liquidity – Liquidity is not an issue in BETTA within the Day-Ahead and intraday timeframes. However for time frames that are further out OFGEM are mandating a 25% Forward liquidity commitment from the Big 6;
 - b. Target Model compliance – changes are currently under consideration by OFGEM, although these are not expected to be significant and relate primarily to the creation of a GB hub to handle the two power exchanges that exist (although the introduction of pricing zones could have implications for interconnected markets);
- iii) ESB considers that the “Expanding BETTA” option could be beneficial in overall economic terms as well as implementation costs, degree of compliance already with the Target Model and since it is the electricity market with which SEM is physically interconnected. (ESB does not believe that the “BETTA equivalent” option (or indeed the application of a bilateral market design based on rules copied from another market i.e. a specific bilateral contract market for the SEM) would be prudent from a cost perspective – the cost of purchasing new SEM central systems versus adoption of existing systems would be significantly higher).
- iv) The relative efficiency of bilateral trading arrangements versus gross pool arrangements

The latter two factors are considered further below.

4.1 Implementation Costs of “Revolutionary Options”

In the consultation paper the RAs present figures for market change (SEM and NETA) as well as estimates of the cost of “incremental change” options. These incremental change costs utilise a systems : market operator costs : total costs ratio of 1:4:10 – these figures being broadly in line with the cost seen for NETA and the SEM.



We have assumed that the statement of total costs of NETA (page 70) of £580m includes the central set up costs (stated as being £100m) and we accept that these figures are within reasonable bounds. Whatever the actual costs, any translation of the NETA figures into a bilateral SEM market (something “BETTA like”) would also need to be adjusted for:

- Scale of market;
- Inflation; and
- Reduction in central systems costs over the last 10 years.

Furthermore ESB believes it is reasonable to assume that:

- An “off the shelf” bilateral pool design would be considerably less costly than the cost of implementing NETA;
- A NETA like market implemented on the island of Ireland would allow for the GB systems (centrally and for participants) to be used as a basis for the arrangements – and significantly reduce costs; and
- The costs of replacing the old England and Wales pool with NETA is *not* a reasonable basis (however adjusted) for assessing the cost of BETTA expanding to incorporate SEM participants, or a development of BETTA to meet the Target Model as part of an “all-islands” market.

NETA to BETTA costs as a basis for assuming the costs of expanding BETTA to include SEM

As discussed ESB believes that the evolution from NETA to BETTA is a more appropriate benchmark for estimating possible costs of BETTA expanding to incorporate SEM participants. As there were no system costs, the 1:4:10 ratios cannot be applied, although some estimate of total costs can be extrapolated from the MO/RA costs of BETTA implementation. NETA implementation costs are not the correct benchmark for radical change to the SEM. However, the (very low) costs of BETTA cannot be assumed to fully represent the costs of the SEM joining BETTA as there would be a number of factors (discussed below) that would scale the NETA – BETTA costs upwards when applied to the SEM. We estimate the central costs for the shift from NETA to BETTA to be:

Market Operator Costs	£8 m
Regulatory Authority Costs	£4 m
Total Costs	£12 m



This is much lower than the figures quoted in the consultation paper, which relate to the implementation of a *new* bilateral market from a pool. However in considering the extent to which these figures can translate to potentially expanding BETTA to incorporate SEM participants, then consideration should also be given to:

- **Legal/legislative costs** – Legislative differences between Scotland as part of the UK joining BETTA and SEM participants joining BETTA are we believe not incomparable, however given the extra-jurisdictional requirements with regard to the Republic of Ireland, there are likely to be some additional legal costs involved with expanding BETTA when compared with the NETA to BETTA equivalent. This would relate primarily to the adoption of an inter-governmental MOU with appropriate primary legislation amending the existing electricity market legislation.
- **Participant costs (systems)** – It is probably reasonable to assume that many participants in Scotland would already have been trading in NETA. Thus costs could have been low (however, we are unable to locate a figure for any participant costs). This low participant implementation cost of trading in BETTA would apply to some SEM participants, some of whom already trade in BETTA. However, we do not have specific information on the extent to which participants in the SEM have existing trading systems to participate fully in BETTA already. Regardless, BETTA is a mature market, and thus off the shelf solutions would be available to new entrants to the market.
- **System costs** – In the RA assessments of costs, the system costs drive other assumed costs. For BETTA, system costs would have been negligible (by this we are referring to NGC system costs as BETTA is only concerned with the Balancing and Settlement Code). If translating NETA-BETTA costs to the SEM-BETTA scenario, then there may be additional system costs that did not arise under BETTA. This would include changes to market rules and systems to integrate a market connected via DC interconnectors, not the AC interconnectors that linked E&W to Scotland.
- **Costs of BETTA compliance with the target model** – BETTA itself may well incur costs in changing to meet the target model. It would be reasonable to assume that if these changes were made by 2014, they would be met by existing BETTA participants. At worst, the SEM could be exposed to a proportion of any costs of BETTA change if an early decision was taken to join BETTA by 2016. On the basis of market size, these would be around 10% of the costs of any changes to BETTA.
- **Opex costs** – The MO opex cost for SEM is €15m pa. Elexon opex costs are £30m pa, although a significant percentage of these costs are associated with the profiling and



volume allocations associated with Full Retail Competition (profiling of suppliers non-half hourly volumes). Conservatively, if the SEM became part of the BETTA arrangements then there would be significant opex savings - based on market size, a 10% increase in Elexon costs to administer the additional participants from the SEM could produce a net saving of up to €12m pa.

- **Dual currency** – it is likely that the need for dual currency requirement in an expanded BETTA will have been dealt with from the point of view of CACM compliance, however it may warrant attention.

4.2 Relative Efficiency of Market Design

As noted in the consultation paper, the choice of a gross pool or bilateral market was considered in the context of the original SEM design. The gross pool was selected as “it was thought that the centralised model would be more advantageous in terms of liquidity, transparency, barriers to entry and dispatch efficiency and because it would ultimately provide lower prices and greater choice to customers. These conclusions stem from the different nature of the Irish market, principally its size and ownership structure.” Interestingly, in moving away from a gross pool to a bilateral market, Ofgem’s reasoning in rejecting the gross pool design in GB in favour of NETA (that the pool encouraged inefficient new entry, lacked contractual liquidity and led to higher prices and less choice for customers) was very similar.

It is also worthwhile to consider whether NETA actually did lead to lower prices for customers, and whether any evidence exists to support the case for one approach being more, or less efficient than the other. There are clearly similarities between the SEM and the old England and Wales Pool in terms of design - an unconstrained market schedule and explicit capacity payments. Whilst there are detailed design differences, they exist in the context of two designs that (when comparing market designs throughout the world) are very similar to each other. Thus, if it can be demonstrated that:

- (a) NETA did deliver price reductions, and
- (b) bilateral markets are not necessarily less efficient outcomes than gross pools,

then the residual question (as highlighted by the RAs) is whether there are sufficient differences (in structure and size) within the SEM to invalidate any assessment of bilateral trading benefits that accrued as a result of NETA. This in turn depends on the nature of any future market – for example the structure that would exist if BETTA expanded to incorporate SEM participants to be part of a new “all islands” market, compared to a “BETTA-like” market in Ireland.



Having reviewed a number of studies on the impact of NETA on prices in England and Wales (See Annex 2), we consider that it is more plausible than not that the reductions in price were, in part, a consequence of the change in trading arrangements. This view is in line with that of the Regulatory Authority in GB, the UK Government and the National Audit Office. Thus, in the case of the market with the greatest design similarity to the SEM, there is a strong case that bilateral trading was at least a contributory factor to wholesale electricity price reductions in England and Wales.

Notwithstanding the structural and market design differences between the SEM and the England and Wales Pool, suggestions that bilateral trading outcomes would be less efficient fail to take account of this evidence that suggests that the opposite is more likely.

We have also considered a number of academic papers on the impact of gross mandatory clearing auctions (uniform auctions) and bilateral trading arrangements (discriminatory auctions) on price outcomes and production costs. The most relevant explicitly consider these alternatives in electricity markets. Whilst the analysis of NETA referred to above is based on the analysis of actual market data (or took it as a starting point for subsequent modelling) other academic assessments on auction approaches are more based on theoretical modelling.

One paper that provides a useful insight into the impacts of uniform and discriminatory auctions is “Designing Electricity Auctions”² which both adopts a stylized modelling approach and then applies them to the NETA experience. Their conclusions suggested that where:

- Uniform auctions are conducted over short time horizons (essentially when demand is reasonably predictable and bids are over short timeframes) then uniform auctions give rise to higher average prices; and
- Demand is uncertain or bids cover longer time periods, prices are the same under either auction approach.

The authors also state that, whilst their results should not be overstated, the results indicate that, in relation to NETA, “the new market rules may have been responsible for at least part of the initial reduction in England and Wales electricity prices in 2001/02”.

² N Fabra, N-H von de Fehr and D Harbord (2004)



Thus, the more theoretical assessment, and the empirical studies of NETA, both suggest a cause and effect between the change in the trading arrangements from a gross pool to bilateral trading and reductions in wholesale prices.



5. Conclusion

ESB welcomes the opportunity to comment on the proposals for implementation of the Target Model for the SEM. We believe it represents a strong initial dialogue on the road to market integration.

While we have not given support to any of the incremental options, we believe they have assisted in moving the debate forward by highlighting the complexity of the issue and in particular permitting a more serious consideration of the “revolutionary” approach in particular the expand BETTA option.

In the next phase ESB suggests that the project be placed on a formal footing with appropriate milestones, regulatory impact assessments and stakeholder engagement. We look forward to engaging further with the RAs in this regard in due course.

Annex 1

Answers to Specific Questions in Consultation Paper

While sections 1 to 5 of this document reflect ESB's overarching views, we have in an effort to be constructive and move the project into the next phase, attempted to answer the specific questions contained in the consultation (based on the information contained in the consultation document and the accompanying report from the TSOs), despite the reservations we have expressed over the approach taken in developing some of the options.

1. Do you agree that the SEM has met its objectives to date?

The SEM has been successful in terms of providing a route to market for renewable and efficient conventional generators, establishing sufficient capacity margin for security of supply purposes and facilitating strong competition both in the wholesale and in the retail markets.

Reports of the Market Monitoring Unit and the Regulatory Authorities in general indicate that the market is working.

The SEM has also proven that an effective wholesale market across two jurisdictions can be established, proving that the level of physical interconnection between two markets is not an absolute barrier to full integration.

However with the commissioning of the EWIC resulting in circa 1000MW of interconnection between Ireland and Britain, and with continued EU developments towards the creation of Internal Electricity Market (IEM) the design objectives for SEM need to be revisited and their scope widened with a revised emphasis applied to various objectives within a regional perspective.

2. Do you think that any further work should be done on the above projects separate to or as part of the Market Integration Project?

The projects identified by the RAs are all important in their own rights. However, the advent of the Regional Electricity Market affords the opportunity to evaluate whether changes to the existing wholesale market design allows for the objectives of each of these individual projects to be further progressed and achieved in a holistic manner.

The economic environments, within which the wholesale market resides are significantly more constrained than those which existed during the period when SEM was under design. It is



therefore imperative that any revisions to existing market arrangements ensure that wholesale market prices for Ireland (north and south) remain competitive within the wider North-West Europe region (Energy costs will be a key factor in enticing industry to Ireland). Ensuring an appropriate balance between delivery of national renewable targets on the one hand and the greatest level of market integration with Great Britain and further afield on the other, so as to maintain energy price competitiveness, is critical.

3. What elements of the Target Model are most relevant for the island of Ireland and the FUI region?

The Target Model was developed as a means to removing barriers and setting fair rules for cross border exchanges in electricity, pursuant to forging competitive and transparent wholesale electricity markets with high security of supply levels that serve the interests of consumers and increasing welfare. These characteristics are very much in line with the high level objectives under which the SEM operates, and therefore it follows that the Target Model and market integration in general is good for Ireland inc. Whilst other models (market designs) may have value, the fact is that Europe is pursuing a single electricity market and ESB suggests that this becomes an objective of the RAs for the island of Ireland in order to realise the full benefits that market integration is expected to achieve.

ESB considers it important that the greatest degree of price convergence possible is achieved with neighbouring markets. To this extent, the establishment of firm ex-ante prices across all market timeframes and continuous intra-day trading arrangements to afford market participants maximum opportunities to trade out imbalances in their supply / demand positions and which as a result limit the exposure of the consumer on the island of Ireland to unnecessary energy costs, are essential.

The retention of SEM market architecture (systems and processes) and fitting of the new target model into those pre-existing systems and processes will inevitably lead to short comings in the operation of the regional market arrangements. It will be critical for customers, market participants and overall economic competitiveness on the island of Ireland that the full benefits of regional market integration, including at a minimum, price coupling are achieved.

Evidence from a number of continental European markets (including TLC and CWE) shows that wholesale price convergence with price reductions has occurred as the markets have become more integrated. It is critical that Ireland, north and south, are not isolated from the energy markets in Great Britain and North West Europe from the perspective of effective integration and price convergence. As such all elements of the target model must be implemented for the island of Ireland.



4. Are there other aspects of the European Internal Electricity Market that should form part of this consultation?

ESB considers that the matter of generator self-commitment versus TSO central commitment must be transparently evaluated and debated as part of this consultation and needs to take on board the issues addressed above.

The ability for generators to price their offerings to the energy market with certainty over the actual operational status of their plant for the relevant timeframe should be considered as a minimum requirement. This will allow SEM participants to trade on an equal basis to their peers in Europe and ensure efficient use of interconnectors with efficient price convergence. To ensure security of supply the TSOs would still retain control over central dispatch decisions and where for system security reasons the TSOs require a different operational regime to that proposed by the generator, appropriate compensation across the various market timeframes must be provided.

ESB believes that providing generation companies with control over the operation of their own plant will not result in inefficiency of dispatch. The trading departments of these market participants will not schedule their own plant to run when doing so would either remove access to ancillary service or other such payments, or would result in incurred costs greater than the level at which output from another party's plant could be purchased.

The treatment of losses across interconnectors for day ahead and intraday trading should also be addressed as part of the ongoing consultation.

5. Is continuous trading as applied in the Elbas market in Scandinavia an appropriate model for Ireland, given the levels of wind expected on the system by 2020? What elements of the emerging design of the NWE Intra Day project (e.g. congestion pricing) are most relevant for Ireland?

Given the high levels of wind expected on the Irish system by 2020, ESB believes that a continuously traded market will afford the best opportunity for wind generators to balance positions due to the intermittent nature of the resource. On this understanding and at a cursory level, the continuous trading as applied in the Elbas market could merit further attention.

6. What is your opinion on Financial Transmission Rights versus Physical Transmission Rights as the best approach for interconnectors on Ireland and Northern Ireland borders?

Other commentators³ have suggested that FTRs appear to have several advantages over PTRs for trading over interconnectors with no obvious disadvantages. The most relevant advantage of FTRs for interconnection to Ireland and Northern Ireland would appear to be the fact that FTR trades can be netted to release a potentially far larger market on either side of the interconnector. In this regard the physical limitation of interconnector capacity is less of an issue when considering the degree of price convergence between two markets.

We would also note that in an All-Islands Market scenario this requirement would not be a concern.

7. What elements of the SEM design are in your opinion not compatible with the Target Model?

The key elements of the SEM design that are not compatible with the Target Model are as follows:

- The requirement for mandatory participation in a gross pool market;
- The non-existence of physical forward, day-ahead and continuous intra-day trading markets;
- The lack of a firm ex-ante price and the ex-post timing (at D+4) of price setting;
- The central commitment rather than self-commitment nature of power system operation leading to long gate closures rendering continuous intraday trading impossible

8. What elements of the SEM design can and should be retained when implementing the Target Model in Ireland and Northern Ireland?

The target model is founded on the concept of efficient use of interconnection leading to convergence of energy prices across markets/regions. It is silent around capacity mechanisms and ancillary services. These elements have had merit to date and need to be carried forward for evaluation as a package with the new trading arrangements.

Retention of an MMU as currently exists in SEM or as provided for under REMIT is also useful to ensuring proper functioning of the market.

9. What point on the spectrum of market designs is most suited to Ireland and Northern Ireland?

³ http://ec.europa.eu/energy/gas_electricity/studies/doc/electricity/2012_transmission.pdf



Ireland's energy future lies in greater integration with our European peers. A market design that delivers the greatest level of integration, thereby realising the greatest level of benefits for consumers from integration, while ensuring security of supply would, ESB suggests, therefore be most suited (within the context of technical, financial and legal constraints).

The choice for most suitable market design should also recognise the necessity for market participants (in what will become the former SEM market footprint within the context of a regional electricity market) to compete on an equitable basis with those in Great Britain and further beyond in the North-West Europe regional market.

This matter is discussed more extensively in the main body of this response paper.

10. Do you agree with the SEM Committee assessment framework proposed in Section 6?

ESB suggests that the assessment framework be re-evaluated within the context of regional market integration and not considered solely from an isolated SEM perspective. As referred to previously, the economic environments, within which the wholesale market on the island of Ireland resides, has deteriorated significantly from that which existed during the SEM design.

Notwithstanding our comments in Section 2 regarding Project Objectives ESB considers that of the nine assessment criteria identified by the Regulatory Authorities, that these may be more appropriately grouped as follows:

Primary

- Internal Market (Compliance) - self explanatory since wholesale market arrangements must be fully compliant with the CACM guidelines;
- Protection of Consumers – the delivery of regulatory framework that ensures market participants are capable of managing wholesale market risks and costs in the best interests of their customers and competing with the major players in Great Britain and North West Europe is essential. ESB considers that the following criteria are integral within the scope of protection of customers:
 - Competition – as clarified in response to question 9, it is essential for the economies on the island of Ireland that energy prices are maintained at a level which is competitive in the wider regional market context and affords the best opportunity for economic growth;



- Security of Supply – this is also a necessity in terms of economic competitiveness; SoS needs to be considered in the context of the need for explicit capacity mechanisms and in the near real time processes such as central dispatch.

Secondary

- Environment / Renewables – the delivery of renewable targets must be balanced with the impact on Consumers in terms of energy costs and overall energy price competitiveness on the island;

Tertiary

- Equity – the opportunity exists for greater sharing of the costs and benefits of production and transportation of electricity over a wider market footprint, depending on the approach that is taken to market integration;
- Practicality – the definition of the future market footprint within which the former-SEM will reside in a regional context will remove any perceived barriers to entry. Depending on the outcomes of the consultation, the opportunity exists to adopt the systems and processes of an already functioning (and compliant to a significant degree) market and so reduce transaction and transformation costs;
- Adaptability & Stability – Regional market evolution will have a cost for SEM participants and customers. It is vital that the right decision is made in terms of choice of market design now so that the primary criteria are achieved and that the costs of transformation can be spread over the medium to long term. It would be doubly damaging if a desire to retain existing SEM machinery meant transformation to a sub-optimal market design in relative terms to Great Britain and North West Europe which requires replacement with an aligned design at a later date and for a second tranche of costs;
- Dispatch Efficiency – The trading arms of market participants require to have a very good appreciation of the costs of production of their own plant, the demand profile of their own customers together with a recognition of opportunities to replace their own production with cheaper power from other market sources. Generation companies will not run their own plant when it is inefficient to do so.

11. Is the ranking of criteria/objectives the right one? Is the application of weighting factor appropriate? What weighting would you give each one?

As highlighted in response to question 10, ESB considers the factors that are of most importance in determining the wholesale market design to be:

- Internal Market (Compliance);
- Protection of consumers incorporating competition and security of supply.

12. What other criteria, if any, should the SEM Committee apply when making its decision on implementing the Target Model?

ESB considers, although not explicitly stated in the consultation paper, that the “Competition” assessment criteria incorporates and requires:

- Competitiveness of wholesale energy prices on the island of Ireland relative to those prices in Great Britain and the continental regional electricity markets;
- The maintenance of a system of regulatory controls that enables all market participants in the SEM today to compete equally with those major participants in Great Britain and continental Europe.
- Where appropriate, amendments to existing regulatory controls that currently restrict market participants ability to best manage market risks and control retail price fluctuations on behalf of their customers; and
- Ex-post market monitoring and REMIT compliance;

A wholesale market that doesn’t result in competitive outcomes, whether it is in terms of energy prices for industry or households, must be considered as sub-optimal. The island of Ireland cannot afford to become isolated, as a consequence of energy market processes and systems employed, to the extent that opportunities for price harmonisation and trading across the wider regional market cannot be taken. Furthermore a focus on the secondary and tertiary assessment criteria could result in a situation where the chosen market results in isolation and reduced competitiveness with additional costs and time-lag necessary for a subsequent transformation.

13. Do you support any of the evolutionary options for the SEM in Section 7?

At this point ESB cannot give support for any of the evolutionary options. This is due to limited information available as to their operation and the subsequent lack of ability to assess the commercial implications of each option as outlined in Section 3. Furthermore:



- i. While ESB does not expect the TSOs, at this stage, to have worked up the fine detail of how each option would work, the express intention of the TSOs that central dispatch (an undefined term which may or may not include central commitment) of generation be sacrosanct in all options appears to ESB to limit the potential effectiveness of all of these options. Furthermore of particular interest to ESB and not clarified in the consultation document or the accompanying TSO paper is the matter of generator “firmness”. In order for a generator to make commercially accurate offers in one market timeframe, it needs to understand the status of its generation plant in the previous market, i.e. for a generator to accurately price its generation in the day-ahead market, it needs to have certainty regarding the firmness and status of its plant within the forward market, otherwise it may price at a commercially disadvantageous level or indeed avoid trading at all. TSO freedom to dispatch plant away from market nominations will have consequential impacts in those markets where pricing decisions have been based on assumptions of plant status from previous markets. While compensation as a principle is suggested, it is unclear as to how this compensation will be determined.
- ii. It would appear the intention to retain the existing SEM machinery (processes and central systems) and to utilise these to give effect to the target model could have a number of drawbacks for market participants. For example:
 - The stability of SEMO systems to support SEM market wide processes has been a concern to market participants, as expressed at MOUG meeting for some time. Under the target model, there is unlikely to be an allowance - materialising in delayed operation of the European-wide market coupling or shared order book functionality - to participants on the island of Ireland, should SEM machinery not “clear” within the timeframes required for onward data submission.
 - Put simply, any delay caused by SEM “feasibility assessment” processing, or bid transformation by the TSOs has the potential for market participants on the island of Ireland to be excluded from internal market trading.
 - Recognition was given during SEM design to the timeframe required, for data collection and validation by the TSOs, to facilitate ex-post pricing. A known shortcoming of the D+4 timeline is the impact that this price uncertainty has on Moyle interconnector trading today.
- iii. The desire to utilise existing SEM systems and processes is likely to introduce arbitrary timeframes for market gate closures in the implementation of the target model, which will limit the opportunities for market participants to trade over interconnectors and balance (trade out) their positions. All such limitations will have the effect of reducing price

convergence opportunities between the island of Ireland and Great Britain / North West Europe.

- iv. As discussed in Section 3, the evolutionary options disadvantage participants in the SEM from a commercial perspective by:
 - a. Preventing the ability to gain certainty over synchronisation status and running levels when offering into Day Ahead and Intraday markets
 - b. Not providing for firm ex-ante pricing in the forward pool
 - c. Requiring participants to speculate on an ex-post derived SMP, while at the same time being advantageous to participants in Great Britain by providing a firm ex-ante price.
- v. By nature of the fact that the systems and processes supporting the evolutionary options were designed for a different market place is potentially leading to an overly complex set of arrangements. In other words the evolutionary options are leading to more radical change than the terminology would allude.

14. Are there any other options that you think would better meet the objectives?

Evolutionary Option 3, “Bilateral and Forwards Pool” by nature of its trying to incorporate the trading arrangements covered by Options 1 and 2 appears to offer the closest compliance to the CACM Framework Guidelines, of all the “evolutionary” options proposed. Even so, this has significant limitations that would need to be removed, in particular:

- The need for inclusion of all generators and suppliers (and not just Interconnector Users) in bilateral trading in the forward market;
- Bringing gate closure timeframe for bilateral trades in the forward markets significantly closer to the day-ahead gate closure and limiting the commercial exposure brought about by duration until gas market gate closure;
- Lack of firm ex-ante pricing;
- Central commitment with accompanying lack of certainty on generator status impacting on bidding strategy;
- Role of SEMO in Day-Ahead and Intra-day trading from a feasibility perspective;
- Unclear balancing market and timeframes;

However, even under the assumption that all of these market design matters can be dealt with such that no market participants on the island of Ireland are disadvantaged in terms of trading within the region, when compared with market participants outside the island of Ireland, the fact that the systems and processes supporting these arrangements will have

been designed for an altogether different market place, casts doubt on the wisdom of following such an approach.

15. Are the options in Section 7, in your opinion, consistent with the Target Model?

Options 1-3 are possibly consistent with the Target Model, in that they permit day-ahead market coupling and intraday trading across interconnectors. However questions remain in the minds of the TSOs over the compliance of the evolutionary options regarding the operation of intraday trading whilst TSOs retain control over central dispatch decisions and reserve the right to screen generator offers for feasibility. ESB believes that with appropriate imbalance charging such feasibility screening by TSOs is an unnecessary feature of the design, and if removed could lead to these options meeting the compliance requirements of the Target Model. However, there are other concerns regarding the evolutionary options as laid out in Section 2 and 3 above. Furthermore as previously noted ESB considers that making a decision for future SEM design based on basic compliance with the Target Model would result in a sub-optimal outcome.

However we believe that Option 4 could lead to inefficient trades across the interconnectors and is therefore not consistent with the Target Model.

16. Are these options presented in sufficient detail for a high level design decision to be made?

As highlighted in previous answers above, ESB does not consider that sufficient detail is provided under any of the four evolutionary options for a high level design decision to be made.

Many areas require greater clarity including:

- Firmness of Generation;
- Compensation mechanisms;
- Gate closure timeframes;
- Ex-ante pricing and firmness of same;
- Central dispatch gate closure and self commitment;
- Balancing methodologies and settlement timeframes;
- Necessity for involvement by SEMO in day-ahead and intra-day processes;
- Drawbacks of constraining Target Model processes through utilisation of existing SEM systems and processes.



In any case, ESB considers that it is essential that the high level design decision for implementation of the Target Model considers not just the four “evolutionary” options presented but also the “revolutionary” options.

17. Do you agree with the assessment made by SEMO in Section 7? [and how do the above options measure up against the assessment criteria set out in Section 6?]

ESB does not agree with the assessments by SEMO/TSO of each of the “evolutionary” options against the SEMO/TSO defined criteria.

Transparency: ESB considers that the level of transparency of the Day-Ahead and Intra-Day markets should be equivalent across options 1, 2 and 3. For the Balancing Market to be transparent, ESB considers that it will be necessary for the rationale for all dispatch decisions to be shared with the market on a timely basis.

Risk Management: ESB agrees with SEMO/TSOs that the closer the market design becomes to a centralised model, in particular with ex-post pricing, that Supplier risk increases. A full bilateral contract based market enables market participants to manage their imbalance risk.

ESB considers that for each of options 1 through 3, that SEM-based parties will be disadvantaged when bidding into the Day-Ahead and Intra-Day markets in that they will not have certainty regarding their generator status, whereas all European generators operating in self-commitment/bilateral-contracts markets will be in a position to construct their offers based on their control over their own status for that trading period. ESB considers Option 4 to be disadvantageous to SEM based parties in that external parties will secure a firm ex-ante price for all CfDs whereas SEM-based parties will not have certainty of a reference price until ex-post.

Overall, ESB considers that each of the “evolutionary” options as described increase the risk faced by participants in the SEM today. ESB believes that all market participants should be permitted to engage in bilateral contracts to manage physical imbalance risk and permitted the flexibility to integrate their generation and supply businesses and procure CfDs so as to manage other market risks.

Price formation and liquidity: ESB considers that the Forward-Pool elements of Options 2 and 3 will have limited benefit in terms of price formation. The Forward-Pool will enable a shadow-price to be determined however, the uplift component of the wholesale price will not be calculated until ex-post. The benefits of price formation under the limited bilateral market



in either Option 1 or 3 appears itself to be of limited or questionable value owing to the fact that it is only applicable to a small cross section of the market. ESB concurs with the overall sentiment of SEMO/TSO regarding the value of price formation throughout Option 4 and considers that there to be significant risk to SEM-based parties under this option.

Overall, price formation will be a by-product of generator bids and Supplier (Demand) offers. As highlighted earlier in this response, the inability of SEM-based generators to structure their offers with certainty on their generator status within each of the Forward, Day-Ahead or Intraday markets could lead to errors in commercial offers with a consequential “error” in the price and will ultimately undermine the primary objective of the target model which is to ensure efficient use of interconnectors. Generators outside of the SEM who will be competing in the Day-Ahead and Intraday markets do not face this same risk.

Due to the voluntary participation nature of the Forward, Day-Ahead and Intraday markets under options 1 through 3, liquidity will be dependent on participation. ESB is of the view that over time these markets will self-regulate in terms of encouraging participation. However, price-formation will be a key determinant for participation also and concerns in this area have already been highlighted.

Dispatch Efficiency: ESB considers that generators are well positioned to make dispatch decisions regarding their individual plant portfolio, which should not lead to significant inefficiencies. Where generators are incentivised towards trading efficiency, cheaper purchases of power will take precedence over dispatch of own plant when this is more expensive.

Recognition by SEMO/TSOs that self-commitment will apply under the “evolutionary” options is positive. However, where generator contracts are “market” firm but dispatch levels can be determined by the TSOs, a series of compensation payments will need to apply. These arrangements are anticipated to be complicated and will make dispatch efficiency less transparent. ESB considers that since self-commitment has been accepted by the TSOs, that overall dispatch efficiency may be achieved through full bilateral contract arrangements with appropriate imbalance payments / rebates being enforced.

New entrants: Experience from BETTA clearly indicates that even in a bilateral contracts market, not all participants are integrated generation and supply companies. In BETTA circa 35% of generation capacity is not provided by the Big 6 utilities. What is clear though, is that for risk management reasons, suppliers tend to be integrated with generators (which is primarily the case in the SEM also).



In Ireland, both North and South, the harmonisation of systems and processes is removing barriers to entry in the retail markets. The advent of EWIC will also give a boost to competition. ESB believes that new entry whether by generators or suppliers will not be impacted provided the choice of market arrangements implemented does not disadvantage any new entrant choosing to locate in the SEM footprint. As such it will be critical that choice of market arrangements enable equal opportunities for trading to all generators and suppliers located in today's SEM footprint to that available under the market arrangements in the other jurisdictions within the Regional Electricity Market.

Renewables: While the Target Model is silent on the harmonisation of renewable support schemes across Europe, ESB believes that the model will be of benefit to renewable generation. Better forecasting models and the ability to trade out un-balanced positions in a continuously traded Intraday market connected to larger interconnected markets will all be to the benefit of renewable generators. As per comments made under the New Entrants assessment criterion, it is critical that Renewable Generators in today's SEM footprint are not disadvantaged in terms of opportunities to trade within the wider Regional Electricity Market as will be afforded to renewables in other jurisdictions. If there are imbalance costs resulting from intermittency, it is important that these costs get highlighted. However, at an energy policy level, the subsidies provided by REFIT may need revisiting in light of the change in market design to ensure that the 2020 targets are met.

Compliance: The fact that all evolutionary options have been assessed as "To Be Determined" with regards to compliance with the Target Model is a major shortcoming of the proposals. While this may be due to the fluid nature of developments at a European level we suggest that only compliant options, based on the CACM information available to date, are put forward for consideration.

How do the above ["evolutionary"] options measure up against the assessment criteria set out in Section 6?

It is unclear why a different set of criteria have been used by the TSOs from those proposed by the RAs in Section 6 of the consultation, given that both have been drawn from SEM high level design. We refer to our assessment of the evolutionary options under Section 3 for our views.

18. Should a pilot project be set up to explore the possibility of Option 4 (CFD) by end 2012?



ESB does not believe that there is merit in establishing a pilot project to explore Option 4 (CFD). ESB considers that there are a number of risks and drawbacks of this option, as previously outlined, and as such a pilot project would not have any significant benefit.

19. Should the SEM be replaced by a completely new set of electricity trading arrangements in 2016?

We refer to Section 2 and 4 above, noting that the RAs could start with a clean slate with an objective of realising the best outcome from market integration and identifying the means by which it that can be achieved. ESB does not believe that replacing SEM with a completely new set of trading arrangements for Ireland and Northern Ireland in isolation would be cost effective.

Rather, ESB considers that there is real potential for efficiencies and benefits for customers through wider integration via an all-islands electricity market. These efficiencies will go beyond the obvious efficient power flows over the Moyle and East-West interconnectors.

The experiences of SEM have shown that a market (SEM) can be established between two separate jurisdictional markets in RoI and NI. Despite an absence of significant physical interconnection, a single market has been created and the benefits are being shared across customers in each of the jurisdictions. The existence of two regulators and two transmission system operators has not been a barrier to the development of the SEM with workable market operation and market governance arrangements established.

While it is recognised that 1000 MW of Interconnection between Ireland and Great Britain, although relatively large (at around 15%)⁴ may not facilitate equal prices between both markets (SEM and BETTA) at all times, nevertheless significant price coupling will occur.

However, with sufficient regulatory backing, an All-Islands market could be established irrespective of the limitations of physical interconnection.

The benefits of the wider market for all customers would include the ability to purchase power from any supplier located within the wider All-Islands market. Increased competition would be expected to lead to downward pressure on end user tariffs. For suppliers, a wider market footprint will enable increased access to contract market liquidity, thereby improving market risk management on behalf of their customers. The costs of congestion arising from physical interconnection limits could be socialised across the wider All-Islands market footprint in the

⁴ SEM-12-004, page 29

same manner that those costs arising from transmission constraints today are currently dealt with.

It is recognised that while BETTA design supports many of the features of the Target Model, it is not at this stage fully compliant and some relatively minor changes will be necessary by 2014. However, over the period between 2014 and 2016 the “new-BETTA” will have ironed out issues with any new features that may be required to ensure compliance.

Integration with the “new-BETTA” notwithstanding the intergovernmental/legal implications is a more straight forward exercise than creating a new set of electricity trading arrangements to apply within the SEM footprint. It would be much less costly for example in that business processes and system interfaces across “new-BETTA” will have been established and will not have to be designed from first principles.

While an All-Islands (GB & Ireland) market will have three regulatory authorities, CER, NIAUR and Ofgem, the experience of the SEM has shown that a regulatory committee can work. As such a committee comprising the three existing regulators could similarly be established. Furthermore ACER will have a significant role in terms of markets governance across Europe. Establishing an All-Islands market will require backing of the respective governments and government departments. The British Irish Council (BIC), which is an established and respected mechanism aiming to reach agreement on co-operation on matters of mutual interest between Ireland, Northern Ireland and Great Britain could play a key role. The BIC is already considering a number of energy themes related to renewables integration and market mechanisms and is ideally suited to consider broader All-Islands market integration.

Establishment of the All-Islands Market would also allow for a streamlining of the market operation responsibilities between the existing market operators and the power exchanges. Administration efficiencies could be gained through removal of duplicative activities and standardisation of practices, where appropriate across the wider market.

20. What are the advantages and disadvantages of the revolution approach discussed in Section 8?

The clean slate approach has a number of obvious advantages over the evolution approach. In particular, the revolution approach allows for a holistic evaluation of the benefits of wider market integration to be considered. This evaluation could consider matters including efficiency, contract market liquidity and regulatory governance.

21. What are your views on the BETTA options discussed in Section 8?



ESB considers that the “Expanded BETTA” option is worthy of significant consideration by the Regulatory Authorities. While BETTA will require some change for complete compliance with the Target Model by 2014, and may undergo other changes over time to benefit the overall market (and indeed is already undergoing change to address some of the issues highlighted by the RAs in the consultation paper), there are practical as well as other economic advantages of progressing an “Expanded BETTA” over the “BETTA equivalent” option.

As discussed in Section 4, when considering the potential costs of implementing a new market, the consultation paper references the costs of NETA establishment. However ESB considers that a more appropriate cost for comparison purposes is the cost of expanding NETA to BETTA. ESB understands that this cost was approximately GBP £12m excluding participant costs. When one considers that the central market cost of modifying SEM to facilitate intra-day trading is projected to be €20m then the value of retention of SEM systems and processes as the foundation for a Target Model compliant and effective electricity market must be questionable.

The processes and systems that support BETTA are well established today. By 2014, changes to BETTA will have been implemented to provide compliance with the Target Model. Market participants joining an “Expanded BETTA” will have until 2016 to implement those already proven “Expanded BETTA” interfaces and processes to facilitate trading in that market. Overtime as an “Expanded BETTA” is modified under any new trilateral governance arrangements, the processes and systems where appropriate will be amended in line with the good industry practices that have been proven to work.

There are some issues with the current BETTA design, primarily concerns regarding level of liquidity, but Ofgem has proposals in place to significantly improve this situation mandating the Big 6 to sell 25% of output into the market on a forwards basis. By 2016, ESB does not believe that the liquidity concern will remain.

22. What are your views on implementing a Nord Pool or MIBEL-style market in Ireland and Northern Ireland?

MIBEL is an unnecessarily complex design, with significant interventions, and is typically poorly received outside of the MIBEL area. Nordpool is considered a well working market, however its applicability may be suited to the fact that large volumes of hydro generation in the Norwegian market act as a natural balance to significant wind volumes in Denmark. We would also note that Nordpool has significant issues to address in the forwards timeframe with regard to PTRs and FTRs.



23. Do you agree with the summary assessments in Table 4 [Table 6] of each of the 7 options against the listed criteria?

ESB considers that the primary assessment criteria for a decision on future market design to be (Target Model) Compliance, Competition and Security of Supply.

Compliance

The TSOs themselves recognise that Options 1, 2 and 3 may not be compliant with the Target Model, particularly with the retention of central dispatch and bid feasibility screening. ESB considers Option 4 to have significant drawbacks for SEM participants and doesn't consider it to be compliant with the Target Model.

ESB agrees with the TSOs assessment that the MIBEL-style market may not be compliant with intraday and continuous trading requirements. ESB similarly agrees that a Bilateral Contracts Market in particular an expanded-BETTA will with minor alterations be compliant with Target Model. Similarly Nord Pool will require some changes to ensure compliance with Target Model by 2014.

Competition

ESB considers that each of Options 1 through 4 disadvantage market participants in today's SEM footprint as against competitors within the wider regional market. The desire for central dispatch if leading to different gate closure regimes, when compared with other EU markets, creates uncertainty for both generators and suppliers when making commercial bids/offers in the various market timeframes and unfairly restricts SEM players in participating in the wider EU electricity market. Similarly the non-existence of a firm ex-ante price, restrictions on who can trade in bilateral markets and time lag until price setting will also disadvantage market participants and by association disadvantage their customers.

ESB agrees with the TSOs that vertical integration is a powerful means of risk diversification. However, vertical integration under a Bilateral Market e.g. "Expanded BETTA" would enable all Suppliers compete on a level playing field and manage market risks in the best possible manner for their customers. A Bilateral Market would still provide opportunities for stand-alone generators to trade in the market and Ofgem's current liquidity proposals will support this.

Security of Supply

ESB believes that Security of Supply will be ensured irrespective of the eventual market design chosen. The TSOs will ultimately retain central dispatch, albeit that the gate closure



window after which market positions must be respected, may be shortened significantly from what exists in SEM today, for example to one hour ahead of real time. New or revised ancillary service contracts may be necessary to reward generators for retaining capacity for reserve and security of supply purposes, rather than trading full capacity entitlements in the market.

In this regard, Security of Supply must be considered in terms of how participants (including demand side participants) will be remunerated for the provision of this service. This could be done (inversely) through the energy market by penalising generators for failing to meet their commitments through the balancing regime and/or through payments for provision of services outside the energy market.

24. Which option, if any, do you think best meets the criteria?

Overall, given the concerns expressed by the TSOs as to the potential compliance of specific options, along with other concerns that ESB has, coupled with the potential benefits of wider integration which could be advanced through the “Expanding BETTA” option, favours in ESB’s opinion detailed consideration of that option by the industry.

Annex 2

Impact of NETA on electricity prices – claims and evidence

After the Review of Electricity Trading arrangements led by Ofgem, the decision was taken to replace the Electricity Pool of England and Wales with a bilaterally traded market and imbalance mechanism – the arrangements that became NETA on its introduction on 27th March 2001.

In replacing the Pool, Ofgem⁵ was aiming to make radical changes to the market that it believed could not be delivered through changes to the Pool itself⁶. In changing the trading arrangements Ofgem sought to make the trading of electricity “more like a market” – i.e. multiply priced, voluntary and two-sided. Prior to NETA’s introduction the Secretary of State stated that NETA would reduce wholesale electricity prices by 10%⁷. As prices in the Pool began to fall prior to the introduction of NETA, this price reduction is taken to include both the price falls post NETA’s introduction and the price reductions in the pool that occurred in anticipation of NETA. While prices demonstrably fell in the Pool pre-NETA, and wholesale prices continued to fall after the new arrangements went live, the extent to which the trading arrangements themselves led to price decreases, is central to ascertaining whether bilateral markets conducted through discriminatory auctions can in practice be as efficient, or more efficient, than gross pool designs. Whether NETA (specifically a change in the fundamental nature of the trading arrangements) delivered this reduction in prices has been subject to comment by Ofgem, the National Audit Office in the UK, and academic studies. This consideration includes both the impact of NETA itself, and the more complex question of whether price falls pre-NETA occurred in anticipation of the change in market arrangements.

Ofgem⁸ (2002) stated that the “NETA reforms – alongside other factors such as falling fuel prices.....have resulted in a 40% reduction in costs since 1998 when NETA reforms were first proposed by the Government”. Further, price reductions over the first year of NETA (March 2001- March 2002) fell by 20%⁹. The National Audit Office¹⁰ (May 2003) agreed with

⁵ For ease the term Ofgem is used, although for some of the period prior to NETA’s introduction, electricity regulation was the responsibility of Offer.

⁶ The Pool governance arrangements struck a balance between generator and supplier voting rights that required significant agreement between parties to make changes to the arrangements.

⁷ Sourcing this in a document has proved difficult – although this figure was widely quoted at the time of the NETA reforms.

⁸ “NETA – One year Review” www.ofgem.gov.uk/Media/.../1109-factsheet1102_24july.pdf

⁹ *ibid*

¹⁰ http://www.nao.org.uk/publications/0203/the_new_electricity_trading_ar.aspx



these figures and, also commented directly on the impact of NETA on the changes in price stating “ Although it is clear that NETA has facilitated that fall in wholesale prices, it is not possible to establish what proportion of this fall was as a direct result of the NETA reforms.....”

Initial academic assessments were inclined to the view that other factors drove reductions in price – including but not limited to the removal of the explicit capacity payment mechanism at a time of over-capacity. However, this conclusion varies from that of Bower¹¹ that had suggested that falls in fuel prices, reduced market concentration, the level of demand, and regulatory interventions primarily accounted for falls in price. Newbery also took this view, that the NETA design itself was not a driver of price outcomes. Other studies took the opposite view. Evans and Green¹² considered two alternative hypotheses for the reductions in price. The first hypothesis (the static view) was that increases in capacity margin and greater competition through diversity of generation asset ownership caused the reduction in prices. The second hypothesis was that, had generators colluded within the Pool, a change in this behaviour in the run up to NETA would explain the fall in prices, as generator bids moved to a new equilibrium that would be sustainable under NETA. The second hypothesis, the “dynamic” interpretation, under which behavioural changes drove different price outcomes is the explanation that Evans and Green conclude is the one supported by econometric analysis.

¹¹ “Why did electricity prices fall in England & Wales: Market mechanism or market structure?” (2002)
Working Paper EL02, Oxford Institute for Energy Studies

¹² “Why did electricity Prices fall after 1998?” (2003)