



Energy for
generations

Generation & Wholesale Markets

Response to:

Consultation Paper “DS3 System Services Procurement Design”

Reference: SEM-14-059

Introduction

ESB Generation and Wholesale Markets (GWM) welcome the opportunity to respond to the SEM Committee's Consultation Paper SEM-14-059, "*DS3 System Services Procurement Design*".

The main points of ESB GWM's response to this consultation are summarised below. Part 1 of the response then gives more detailed comments and analysis while responses to the specific questions asked in the consultation are outlined in Part 2.

Summary of ESB GWM's Fundamental Principles

As stated in our response to the I-SEM consultation ESB GWM urge caution in these times of regulatory change. Our concern is that we are moving from an energy and capacity market which is relatively static and bounded by regulation to one which will be dynamic and which will not lend itself to easy regulation. This concern is amplified by the lack of progress on the market regulation work stream and a concern that the dynamic behaviour which the market design fundamentally requires will make it difficult to determine ex ante or ex post proper behaviours. It is for these reasons that we urge caution when determining an appropriate market design for a small market such as SEM. While these concerns were previously raised in relation to I-SEM the principles equally apply to the design of DS3 due to its explicit interaction with the energy market as outlined in this consultation.

Having reviewed the procurement options proposed by the SEM Committee and in the absence of additional critical detail on items such as bidding rules and market power mitigation it is not possible for ESB GWM to fully assess the SEM Committee's preferred solution of Option 5 with a fall back of Option 1. Hence, ESB GWM would not support either Option 1 or Option 5 in their current form. However, ESB GWM is of the strong opinion that to allow a fully functioning and efficient System Services market the following components, some of which have been recognised in and supported by the SEM Committee's own analysis, are fundamental:

Market Signals

ESB GWM is of the strong opinion that for any market to function the market must be given the time and relative freedom to develop the clear signals for market entry and exit. As outlined in their criteria for evaluation the SEM Committee recognise the importance of such signals for investor certainty. ESB GWM support the SEM Committee in their belief that Option 5 will send such signals, however, such signals will be much stronger under a value based bidding approach. However, ESB GWM firmly believe that the SEM Committee's intention to set regulated tariffs, where they deem appropriate but not defining market failure, will undermine this dynamic and evolutionary approach and will impede the development of such signals and the associated customer gains. It is unclear how the appropriate market signals would be provided under Option 1 in the form currently proposed.

Value Based

As stated by the SEM Committee in its determination of their preferred option, Option 5 should result in prices reflecting the marginal value of each service thus sending appropriate market signals and allowing the customer to benefit. ESB GWM strongly support the SEM Committee opinion that value based bidding will provide the most appropriate market signals. Cost based bidding (or cost based tariffs), as proposed, will not reflect the value of service to the system and so will dilute any signals for entry and exit which will put risk on customer in the long term i.e. risk of non delivery. Also strict cost based bidding may restrict interactions with both the energy and capacity markets and reduces potential for consumer savings in these two markets something identified as a positive consequence by the SEM Committee throughout the consultation paper.

Certainty

As part of the criteria for assessment of the options the SEM Committee identified certainty for investors as an important criterion. In the case of a market based solution the most important certainty for investors is the certainty of the market itself. In such instances the most important role of the regulatory authorities is to guarantee the stability of the market through a transparent framework and a commitment to the market. Rather than providing certainty, regulatory intervention such as the ad hoc introduction of regulated tariffs, or the threat of it, will undermine the principles of the market and actually cause uncertainty for investors. This uncertainty was actually identified by the SEM Committee in their evaluation of the regulated options against the investment criterion. In the case of Option 1 there is significant uncertainty regarding the issuing of contracts for enhanced performance (i.e. beyond Grid Code). Rather than simply being at the discretion of the TSO on an annual basis predicted volumes and future requirements would be required to give generators foresight of gaps in service requirements and hence opportunities. A clear mechanism for the allocation of these contracts also needs to be developed.

Interaction with Energy and Capacity

As identified in the SEM Committees evaluation of the options, Option 5 potentially has the largest interaction between other sources of generator revenues. It is important to highlight not only the impact of the energy market on system services (for availability and dispatch based products) but also the impact of system services on the energy market (operating reserve bids limit a units offerings in the energy market). To facilitate these interactions and to maximise the potential associated savings to the consumer flexible bidding is required across all markets. None of the options as proposed permit such flexibility, and so ESB GWM would support the use of market tools (other than cost based bidding rules), such as value based bidding with a price cap per product, as an be effective alternative in achieving the appropriate level of flexibility. .

Market Power

As part of their preferred option the SEM Committee outlined three market power mitigation measures:

- Mandatory bidding of existing capability
- Cost based bidding rules
- Regulated tariffs following a “Failed Auction”

ESB GWM support the SEM Committee’s proposal that no existing capability should be withheld. However, long term contracts should be given where capabilities in excess of Grid Code requirements are achievable, rather than treating them as an existing capability. This aligns with the concept of “enhanced contracts” proposed under Option 1. Otherwise, investment to bring an existing non compliant plant up to Grid Code requirements would be rewarded with a long term contract which rewards under performance.

As already outlined cost based bidding rules will eliminate any signals for entry and exit while also restricting interactions with both the energy and capacity markets. These actions will reduce the potential for consumer savings in both the short term and the long term.

The introduction of regulated tariffs where the auction has been deemed to have failed will introduce uncertainty for investors and also block the entry and exit signals associated with a fully functioning market which needs time to develop. What will be considered as a failure, and its timing, needs to be outlined to provide some shape to the expectations of participants.

The SEM Committee has also identified that further market mitigation measures will be implemented during the detail design phase. In this regard it is very difficult for ESB GWM to assess the preferred option other than to highlight the following:

- Any market power mitigation measures must be part of the market design and must apply to all market participants i.e. no asymmetric regulation of ESB GWM
- Market share does not guarantee market power as there can be technology or location specific issues which constrain particular plant on.
- Market power can and should be evaluated using competition law which is based on behavioural rather than structural assessments.

Part 1 - Detailed Comments and Analysis

While ESB has a natural preference for Market solutions over Regulated solutions, and this preference influences our comments on the questions posed in the consultation, we are mindful that unconstrained markets may not always work. These DS3 proposals in particular, given their ground breaking nature, and their interdependency with the i-SEM Energy and Capacity market need careful consideration and we urge caution in their design

This section details ESB GWM's comments and analysis on the TSO's revised modelling, the analysis carried out by the SEM Committee's independent consultant IPA and the SEM Committee's procurement analysis and proposals.

Supply Analysis

While IPA's analysis of the KEMA report supported the cost estimations proposed by KEMA for new builds IPA could not verify KEMA's costs for enhancements on existing plant as no comparable sources were available. Also neither party could provide detail on the typical incremental volumes of the services i.e. what the generator would get for their money if they decided to invest to make enhancements or the operational costs involved in providing these services. Furthermore, based on the fact that the majority of the services will be provided by existing plant already on the system, the costs of providing services under DS3 is a major unknown. The SEM Committee acknowledge this and state their preference for a design which provides price flexibility.

In their determination of the annual cost of required capital investment to provide the system services IPA base their calculations on an assumed WACC and asset lifetime. ESB GWM believe that it is difficult to make correct estimations on this basis as:

- The initial valuation of the capital investment could differ significantly
- The number of years over which the investment must be returned would differ depending on a plants remaining life
- The applicable interest rates are subject to change

On this basis, the figures estimated for the costs of providing the services may prove to be inaccurate.

While recognising their responsibility to protect consumer needs the SEM Committee also recognise the need to put in place appropriate economic signals to incentivise plant to enter (and stay in) the market. ESB GWM support the SEM Committee position on this and believe these economic signals are required to protect the long term interests of the consumer.

Demand Analysis

As part of the base case in the TSO's analysis it is assumed that the proposed RoCoF Grid Code modification has been fully approved and implemented i.e. there are a sufficient number of generators which can withstand RoCoF events of up to 1Hz/s. The implementation phase of the RoCoF project has only just commenced and it remains to be seen how many, if any, conventional generators can meet the proposed standard. As highlighted in the IPA review of industry feedback on the TSO's previous modelling, this issue was already raised by many market participants. However, still it would appear that neither the risk of RoCoF not being implemented nor the unfair financial burden it places on conventional generators are being addressed. In CER 14/081 the CER acknowledged the economic objections of generators were sound but recognised the increase in cost is necessary consequence of meeting government 2020 targets. The savings due to the 10% increase in SNSP associated with RoCoF should be calculated and compared to the increased costs to determine if there is real value for the system. If RoCoF is seen to provide net value to the system then the RoCoF product should be introduced and treated in a consistent manner with the other new services. On the basis that generators do not have a choice in investing in RoCoF the payment basis for the associated product should be based on a capability to ensure imposed costs are recovered.

IPA Report

A main conclusion of the IPA analysis was the recognition of the need for product volumes from the TSO. This need has also been recognised by the Regulatory Authorities at the recent DS3 System Services Workshop. ESB GWM would support these views and look to reemphasise the need for these volumes to allow for meaningful engagement with any proposed market based approach. In the immediate timeframe ESB GWM request that the volume data provided by the TSO to IPA and the full details of the IPA volume analysis be made available to industry.

ESB GWM are of the strong opinion that any market power mitigation measures must be part of the market design and must apply to all market participants. Market share in the energy market does not guarantee market power in the system services market. Finally, market power is based on behavioural assessment which can and should be evaluated using competition law.

As part of the IPA conclusions it is recommended that the TSO are incentivised to procure the system services in an efficient manner. ESB GWM would support this and also highlight the need for clarity and transparency with regard to the TSO's assessment of bids in any of the market based solutions. This clarity and transparency, along with required product volumes, is vital for all market participants to ensure confidence in the market outcome.

Procurement Analysis

The definition of Dispatch proposed by the SEM Committee makes it more difficult for generators to predict their system services income. This may reduce the anticipated interaction between the revenues in each of the three markets and the associated benefits. Also, the SEM Committee's proposed definition assumes that the TSO reserve requirements in the NCC work in a compatible manner. This proposal would require careful consideration by the TSO regarding its feasibility. This would give the industry reassurance of its feasibility.

The SEM Committee has stated their preference for a dynamic valuation of system services in the long term, but have cited a number of reasons why it is not desirable at the moment. Such statements create uncertainty in the market structure even prior to its conception. To maintain certainty in any market structure the indicators used to identify when a review of the market form would be required should be known. The SEM Committee should state what such indicators would be in the case of proposals for changing the market form to a dynamic market.

The SEM Committee discuss the concept of locational pricing and gives the possibility that it could be a feature of the market design in the future. ESB GWM would question the need for locational pricing given the added complexity it would introduce. Lessons should be learned from previous unnecessary added complexities in such a small market e.g. MAE.

ESB GWM support the SEM Committee's proposal to allow longer contracts for services which require new investment. However, for existing providers with existing capabilities the possibility of obtaining a longer term contract may enable that provider to offer a lower price also and therefore should also be given the option to bid for this. ESB GWM would support the proposal in Option 1 whereby, if deemed required by the TSO, capabilities beyond Grid Code, referred to as "enhanced capabilities", would be eligible for long term contracts. Another consideration should be the volume associated with the offer – does a small volume from an enhancement provide better value to the grid than a large volume from an existing generator? This highlights the need for a clear discussion and publication of the methodology that the TSO will employ.

ESB GWM also support the SEM Committee's proposal that no existing capability should be withheld. However, the combination of these proposals would allow for an existing non compliant plant to receive a long term contract for a performance level which may still be below Grid Code requirements? ESB GWM propose that long term contracts are for capabilities in excess of Grid Code rather than in excess of existing capability whether or not they require additional investment. This would eliminate the possibility of rewarding non compliant plant for under performing and also reward plant which provide services in excess of its Grid Code obligations i.e. already providing added value to the system.

Regarding market power mitigation, market share does not necessarily reflect the existence of market power as there can be technology or location specific issues which can result in even the smallest generator being in a position of dominance over specific timeframes. Mitigation measures should be built into market design and market power should be evaluated using competition law.

The SEM Committee proposed to adopt the TSO proposed performance scalar for all options. ESB GWM considers that this approach is penal. All generators that provide services required for the system should be compensated. However, we do recognise the importance of reliability and so would be supportive of a reduced scalar for poor performance and should be discussed in the detailed design phase. It is unclear how the performance scalar will be applied for services that are event driven and infrequent in nature. It is important that the process does not lead to situations whereby generators are no longer incentivised to provide services as they may already have fallen below the payment threshold and know that within the timeframe they will be unable to reverse this. Services providers should have the ability to declare themselves unavailable for services when they know in advance that they will be unable to provide that service. Non-provision of services when declared unavailable should not be penalised or impact on performance.

Procurement Design Options

While ESB GWM are in agreement with the criteria selected by the SEM Committee, we believe there some important criteria missing and in particular we believe that the SEM Committee has focused too much on the risk of overpayment and not enough on the risk of non delivery. In relation to consumer interest ESB GWM support the criteria of protecting the consumer and ensuring net payments do not exceed the total value. Indeed, ESB GWM strongly support the SEM Committee's recognition that the value of the services should be the upper limit of the costs to the consumer.

ESB GWM strongly support the SEM Committee's criteria of certainty and also the requirements for the market to provide entry and exit signals. It is important to acknowledge that a market must be let develop to ensure these signals form. In a market based approach the certainty and stability of the market itself is paramount and this can only be guaranteed through a committed and transparent framework. Regulatory intervention can actually impede the development of the market and undermine its certainty and stability.

ESB GWM believe that there are two criteria omitted by the SEM Committee. Compatibility with ISEM is a vital part of DS3 System Services. As outlined in their Preferred Option the SEM Committee expect an interaction between the system services and both the energy and capacity markets. In recognition of this the level of interaction allowed by each option should be assessed. Another criterion which ESB GWM believe is missing is Transmission System

Security (Voltage & Frequency). As one of the fundamental objectives of the DS3 programme, the security of the power system, both in the long term and the short term, should also be assessed.

Role of Interconnector

On a technical basis the Interconnectors can and do provide valuable system services which will be important in achieving the targeted levels of renewable generation. However, on a commercial basis the Interconnectors are regulated assets upon which the return is limited to a pre defined amount. Rather than be allowed to participate in the system services market the technical capability of the Interconnectors should be determined in isolation leaving those in the competitive market to compete. These capabilities should then be netted off when calculating the system wide volume requirements with the Interconnectors capability provided as part of its regulated asset performance. TUoS fluctuations and the impact on the end user tariffs are smoothed while still allowing the customer to benefit from the technical capability of the Interconnectors. This issue is even more prevalent in the case where the interconnector is owned and operated by the TSO who will be running the procurement process.

Option 1: Regulated Tariff

ESB GWM believe that Option 1 may struggle to incentivise new entry into the system services market. The pricing methodology for Option 1 is unclear in the consultation. A cost plus regulated return approach is described, however, so too is a value based approach comparing the value of each service compared to the overall value of the system services. Further clarity on the proposed methodology is required. To improve Option1 tariffs should be based on value rather than cost to incentivise new entry with a performance scalar being utilised to ensure an exit signal is given. The value based approach still protects consumers in the short term (so long as tariffs are capped at the expected value to the system) but also reduces long term risk on consumers of non delivery by incentivising new entry.

To maximise the certainty for investors it is critical that TSO volumes are available (on an annual basis for 10+years) and that the TSO's assessment criteria and processes for allocation of enhanced contracts are clear and transparent. It is unclear in the consultation how new services, which have no Grid Code requirement, would be treated. Would these services have set tariffs or be at the discretion of the TSO? Also the setting of the TSO allowance and also the ad hoc approval to exceed this allowance both add further uncertainty for investors. This uncertainty would need to be minimised by publishing the allowance (and how it was calculated) and also the criteria for exceeding this allowance.

ESB GWM believe the proposal to base the tariff on a cost plus regulated return required by a BNE has a number of short comings. The assumptions made around WACC and number of years for return would vary significantly from one investment case to another and so would not be comparable. Also, given the range of ability across the different technologies to provide the different services a huge variance in costs from one technology to another would exist for providing the same service. The selection of the BNE would need to be based across all services and as a result the use of a generic BNE will not suffice.

Option 2: System Services Pot

The pricing methodology for Option 2 is based on the total estimated value of system services. ESB GWM strongly support a value based pricing methodology. The setting of the annual pot also limits the total spend on system services to within the overall estimated value.

However, given the difficulty in predicting income, ESB GWM would support the SEM Committee opinion that Option 2 would struggle to provide the level of certainty required for new investment. ESB GWM also believe that the interaction between system services and energy and capacity may be less than other options due to difficulty in predicting income. This would have the effect of minimising the reductions in SMP and CRM anticipated by these interactions. Based on the above ESB GWM would support the SEM Committee decision to rule out Option 2 as a possible solution.

Option 3 – Regulated Competition:

ESB GWM are of the strong opinion that the grouping of products as proposed does not work. Firstly it significantly disadvantages certain technologies which cannot provide certain services in a group as bidding/contract award is done on a group basis e.g. wind cannot provide inertia but can provide at least three of the other services in group 1. The grouping of the products will also severely dampen the entry and exit signals in the market as the prices will not reflect scarcity or surplus of individual products but only groups. Potential investments also become more complex as the investment in a single service must now be recovered through the price for providing a group of services.

As with all of the market based options clarity and transparency relating to the TSO's evaluation of offers and award of contracts is essential. Similar to the use of Plexos in the current energy market, the modelling tool of the TSO should be made available to allow participants to estimate as accurately as possible. Of equal importance in the market based options is the availability from the TSO of current and future required volumes for each service. The provision of such information by the TSO will help the development of a functional and efficient market. The ad hoc nature of awarding contracts causes further uncertainty and will also restrict efficient market signals.

ESB GWM would agree with the SEM Committee decision to rule out Option 3 based on lack of signals and no incentives.

Option 4 – Competitive Split Auction

Option 4 has a number of the same failings as Option 3 i.e. grouping of products and strict costs based bidding. ESB GWM would rule out Option 4 on the same grounds as Option 3.

Option 5 – Competitive Multiple Bid Auction

ESB GWM believe that Option 5 may struggle to incentivise new entry into the system services market. While ESB GWM do not support Option 5 in its current form we do believe that, of the market based options, an improved version of Option 5 is the proposal most likely to provide an efficient market. This is because Option 5 is the only market based option which uses a single price per product. This is essential to allow clear and useful market signals. These signals however, will only develop if allowed and given time to do so i.e. the market is not subject to regulatory intervention which stifles the market signals.

However the SEM Committee has outlined a cost based bidding structure, ESB GWM are of the opinion that value based bidding will provide clearer price signals and allows for better interaction with other markets thus enhancing the positive effect of this interaction. The SEM Committee has stated consumer protection as the main driver for cost based bidding but this is at odds with their recognition of the value that the services provide. An alternative proposal

would be a cap on bidding which could be used to ensure that the overall spend on the system services does not exceed the overall value thus protecting the consumer.

In Option 5 the SEM Committee have proposed a pay as cleared payment structure and have identified the associated benefits of such an approach. ESB GWM would fully support the thinking of the SEM Committee and their proposal in this regard.

As discussed previously long term contracts should be for capabilities in excess of Grid Code rather than in excess of existing capability. This would eliminate the possibility of rewarding non compliant plant for providing something they should already be providing and also reward plant which provide services in excess of its Grid Code obligations. Unlike other options, Option 5 does provide the flexibility required for investment in terms of contract length.

As with all of the market based options clarity and transparency relating to the TSO's evaluation of offers, modelling tools and award of contracts is essential. Of equal importance is the availability from the TSO of current and future required volumes for each service. The provision of such information by the TSO will help the development of a functional and efficient market.

Having reviewed the proposed auction design for Option 5 ESB GWM are satisfied that, although complex, the proposed auction is feasible for the non dispatch based products. This is based on the example provided in Information Paper SEM-14-075. This example, however, does not include the dispatch based products and ESB GWM believe that it is not feasible to include these in the annual auction given that the volume requirement will be set on a half hourly basis. Also, the lead time associated service provisions requiring investment has not been accounted for, in particular, the incorporation of these services into the annual volume requirements and also the impact such services have on the clearing price in the years prior to their physical provision. The SEM Committee should consider the implications of these issues in the detailed design should Option 5 be chosen.

Payment Basis for Services

ESB GWM believe the proposed dispatch based payment basis for the reserve and ramping products cannot work. As already discussed, this proposed basis will make prediction of revenues extremely difficult. In addition to this the fact that these products have mandatory Grid Code requirements (which the SEM Committee have stated will continue to exist) means that generators have no choice in whether or not to invest in these services. A capability based payment basis is best suited to the mandatory provision of these services.

Preferred Option

The SEM Committee has stated its belief that Option 5 is the most favourable in terms of consumer interest as an individual price is set for each service on a competitive basis, leading to prices reflecting the marginal value of each service. The SEM Committee believes this sends appropriate market signals and allows the customer to share in gains in efficiency. However, the prices will only reflect the value of the services if value based bidding is allowed. Strict cost based bidding will not lead to prices reflective of the value of the service and hence the market signals and customer gains that are anticipated will not materialise. ESB GWM would not support the SEM Committee's proposal for cost based bidding.

Regulatory intervention can create uncertainty for investors, as acknowledged by the SEM Committee in their assessment of Option 1 against investment, and will also undermine the development of the market signals mentioned above. ESB GWM supports the SEM Committee position on this and believe that the market must be left to determine the price to allow effective action by participants to be undertaken. However, the SEM Committee proposal to introduce a fixed tariff for a failed auction is an example of such regulatory intervention causing uncertainty, particularly, given the lack of clarity around what might constitute a failed auction. The introduction of any tariff would also impede any signals for entry and exit. Finally, in the case where the auction has failed to deliver the required volume, ESB GWM fail to see how the introduction of a regulated tariff would incentivise new entrants.

ESB GWM agrees with the SEM Committee opinion that Option 5 best caters for investment plans in terms of contract length as the fixed contract lengths in the other options may not align with individual market participants business cases. However, the dispatch based pricing proposed in Option 5 is the least predictable and hence most difficult to build an investment case on. Although not stated in the consultation paper, the SEM Committee have advised during the DS3 Workshop that lead times would be envisaged as part of Option Five. ESB GWM supports the SEMC's commitment on this.

In terms of market power mitigation ESB GWM supports the SEM Committee proposal that all existing capability must be offered. However, Option 5, as it currently stands, potentially awards non compliant generators and pays for their investment to become compliant – this should not be the case. To rectify this issue long term contracts should be for capabilities in excess of Grid Code rather than in excess of existing capability. As this reflects the value to the market and is akin to the additional investment.

The consultation paper states that additional market power mitigation measures will have to be taken but these would be part of the detailed design. It is unwise to decide on a high level design without such detail and ESB GWM does not conclude its preferences without knowledge of these details. ESB GWM believes that such measures should be part of the

overall market design and must apply to all market participants i.e. no asymmetric regulation. Also in addition, market power can and should be evaluated using competition law which is based on behavioural rather than structural market share assessments.

ESB GWM agrees with the SEM Committee proposal for an incentive mechanism for the TSO. As well as incentives, the operations and decisions of the TSO need to be clear and transparent to allow certainty and clarity for market participants. As highlighted already, the required annual volumes, both current and future, should also be provided to ensure a functional and efficient market.

As identified in the SEM Committee's evaluation of the options Option 5 potentially has the largest interaction with other generator revenue sources. It is important to highlight not only the impact of the energy market on system services (for availability and dispatch based products) but also the impact of system services on the energy market (operating reserve bids limit a units offerings in the energy market). To facilitate these interactions and the associated savings to the consumer flexible bidding is required across all markets. Market tools other than cost based bidding rules, such as a price cap per product, can be used to give this flexibility while still protecting the consumer.

ESB GWM Conclusions

As stated in our response to the I-SEM consultation ESB GWM urge caution in these times of regulatory change. Our concern is that we are moving from an energy and capacity market which is relatively static and bounded by regulation to one which will be dynamic and which will not lend itself to easy regulation. This concern is amplified by the lack of progress on the market regulation work stream and a concern that the dynamic behaviour which the market design fundamentally requires will make it difficult to determine ex ante or ex post proper behaviours. It is for these reasons that we urge caution when determining an appropriate market design for a small market such as SEM. While these concerns were previously raised in relation to I-SEM the principles equally apply to the design of DS3 due to its explicit interaction with the energy market as outlined in this consultation.

In the absence of critical detail on items such as bidding rules and market power mitigation it is extremely difficult for ESB GWM to fully assess the SEM Committee's preferred solution of Option 5 with Option 1 as a fall back. While ESB GWM support the SEMC decisions to rule out Options 2, 3 and 4 ESB GWM would not support either Option 1 or Option 5 in their current form. The main high level concerns are:

- Both Options are currently cost based which does not reflect the value the services will bring to the system and hence will not provide the required incentives for investment.
- Rather than cost based, a cap on what will be spent on the services, limited to the predicted value, would protect the short term interests of the consumer while also ensuring the long term objectives are met. This cap should be subject to an annual amendment.
- Clarity, certainty and transparency in relation to both market form and TSO assessment and contract award are essential.
- Any market power mitigation measures must be part of the market design and must apply to all market participants.
- Market power can and should be evaluated using competition law which is based on behavioural rather than structural assessments.

Part 2 - Response to Specific Consultation Questions

1. Summary

It is requested that respondents provide a summary of their position and any general comments on the system services review and the economic analysis

Summary of ESB GWM's Fundamental Principles

As stated in our response to the I-SEM consultation ESB GWM urge caution in these times of regulatory change. Our concern is that we are moving from an energy and capacity market which is relatively static and bounded by regulation to one which will be dynamic and which will not lend itself to easy regulation. This concern is amplified by the lack of progress on the market regulation work stream and a concern that the dynamic behaviour which the market design fundamentally requires will make it difficult to determine ex ante or ex post proper behaviours. It is for these reasons that we urge caution when determining an appropriate market design for a small market such as SEM. While these concerns were previously raised in relation to I-SEM the principles equally apply to the design of DS3 due to its explicit interaction with the energy market as outlined in this consultation.

Having reviewed the procurement options proposed by the SEM Committee and in the absence of additional critical detail on items such as bidding rules and market power mitigation it is not possible for ESB GWM to fully assess the SEM Committee's preferred solution of Option 5 with a fall back of Option 1. Hence, ESB GWM would not support either Option 1 or Option 5 in their current form. However, ESB GWM is of the strong opinion that to allow a fully functioning and efficient System Services market the following components, some of which have been recognised in and supported by the SEM Committee's own analysis, are fundamental:

Market Signals

ESB GWM is of the strong opinion that for any market to function the market must be given the time and relative freedom to develop the clear signals for market entry and exit. As outlined in their criteria for evaluation the SEM Committee recognise the importance of such signals for investor certainty. ESB GWM support the SEM Committee in their belief that Option 5 will send such signals, however, such signals will be much stronger under a value based bidding approach. However, ESB GWM firmly believe that the SEM Committee's intention to set regulated tariffs, where they deem appropriate but not defining market failure, will undermine this dynamic and evolutionary approach and will impede the development of such signals and the associated customer gains. It is unclear how the appropriate market signals would be provided under Option 1 in the form currently proposed.

Value Based

As stated by the SEM Committee in its determination of their preferred option, Option 5 should result in prices reflecting the marginal value of each service thus sending appropriate market signals and allowing the customer to benefit. ESB GWM strongly support the SEM Committee opinion that value based bidding will provide the most appropriate market signals. Cost based bidding (or cost based tariffs), as proposed, will not reflect the value of service to the system and so will dilute any signals for entry and exit which will put risk on customer in the long term i.e. risk of non delivery. Also strict cost based bidding may restrict interactions with both the energy and capacity markets and reduces potential for consumer savings in these two markets something identified as a positive consequence by the SEM Committee throughout the consultation paper.

Certainty

As part of the criteria for assessment of the options the SEM Committee identified certainty for investors as an important criterion. In the case of a market based solution the most important certainty for investors is the certainty of the market itself. In such instances the most important role of the regulatory authorities is to guarantee the stability of the market through a transparent framework and a commitment to the market. Rather than providing certainty, regulatory intervention such as the ad hoc introduction of regulated tariffs, or the threat of it, will undermine the principles of the market and actually cause uncertainty for investors. This uncertainty was actually identified by the SEM Committee in their evaluation of the regulated options against the investment criterion. In the case of Option 1 there is significant uncertainty regarding the issuing of contracts for enhanced performance (i.e. beyond Grid Code). Rather than simply being at the discretion of the TSO on an annual basis predicted volumes and future requirements would be required to give generators foresight of gaps in service requirements and hence opportunities. A clear mechanism for the allocation of these contracts also needs to be developed.

Interaction with Energy and Capacity

As identified in the SEM Committees evaluation of the options, Option 5 potentially has the largest interaction between other sources of generator revenues. It is important to highlight not only the impact of the energy market on system services (for availability and dispatch based products) but also the impact of system services on the energy market (operating reserve bids limit a units offerings in the energy market). To facilitate these interactions and to maximise the potential associated savings to the consumer flexible bidding is required across all markets. None of the options as proposed permit such flexibility, and so ESB GWM would support the use of market tools (other than cost based bidding rules), such as value based bidding with a price cap per product, as an be effective alternative in achieving the appropriate level of flexibility. .

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ESB GWM support the SEM Committee’s proposal that no existing capability should be withheld. However, long term contracts should be given where capabilities in excess of Grid Code requirements are achievable, rather than treating them as an existing capability. This aligns with the concept of “enhanced contracts” proposed under Option 1. Otherwise, investment to bring an existing non compliant plant up to Grid Code requirements would be rewarded with a long term contract which rewards under performance.

As already outlined cost based bidding rules will eliminate any signals for entry and exit while also restricting interactions with both the energy and capacity markets. These actions will reduce the potential for consumer savings in both the short term and the long term.

The introduction of regulated tariffs where the auction has been deemed to have failed will introduce uncertainty for investors and also block the entry and exit signals associated with a fully functioning market which needs time to develop. What will be considered as a failure, and its timing, needs to be outlined to provide some shape to the expectations of participants.

The SEM Committee has also identified that further market mitigation measures will be implemented during the detail design phase. In this regard it is very difficult for ESB GWM to assess the preferred option other than to highlight the following:

- Any market power mitigation measures must be part of the market design and must apply to all market participants i.e. no asymmetric regulation of ESB GWM
- Market share does not guarantee market power as there can be technology or location specific issues which constrain particular plant on.
- Market power can and should be evaluated using competition law which is based on behavioural rather than structural assessments.

2. Demand and Supply Side analysis

Respondents are asked to provide views on the approach to the demand and supply analysis, the results and the interpretation of those results

Supply Analysis

While IPA's analysis of the KEMA report supported the cost estimations proposed by KEMA for new builds IPA could not verify KEMA's costs for enhancements on existing plant as no comparable sources were available. Also neither party could provide detail on the typical incremental volumes of the services i.e. what the generator would get for their money if they decided to invest to make enhancements or the operational costs involved in providing these services. Based on the fact that the majority of the services will be provided by existing plant already on the system the costs of providing these services is a major unknown. The SEM Committee acknowledge this and state their preference for a design which provides price flexibility. ESB GWM support the SEM Committee preference for price flexibility.

In their determination of the annual cost of required capital investment to provide the system services IPA base their calculations on an assumed WACC. ESB GWM believe that it is difficult to make correct estimations on this basis as:

- The initial valuation of the capital investment could differ significantly
- The number of years over which the investment must be returned would differ depending on a plants remaining life
- The applicable interest rates are subject to change

While recognising their responsibility to protect consumer needs the SEM Committee also recognise the need to put in place appropriate economic signals to incentivise plant to enter (and stay in) the market. ESB GWM support the SEM Committee position on this and believe these economic signals are required to protect the long term interests of the consumer.

Demand Analysis

As part of the base case in the TSO's analysis it is assumed that the proposed RoCoF Grid Code modification has been fully approved and implemented i.e. there are a sufficient number of generators which can withstand RoCoF events of up to 1Hz/s. The implementation phase of the RoCoF project has only just commenced and it remains to be seen how many, if any, conventional generators can meet the proposed standard. As highlighted in the IPA review of industry feedback on the TSO's previous modelling, this issue was already raised by many members of industry. However, still it would appear that neither the risk of RoCoF not being implemented nor the unfair financial burden it places on conventional generators are being addressed. In CER 14/081 the CER acknowledged the economic objections of generators were sound but recognised the increase in cost is necessary consequence of meeting

government 2020 targets. The savings due to the 10% increase in SNSP associated with RoCoF should be calculated and compared to the increased costs to determine if there is real value for the system. If RoCoF is seen to provide net value to the system then the RoCoF product should be introduced and treated in a consistent manner with the other new services. On the basis that generators do not have a choice in investing in RoCoF the payment basis for the associated product should be based on a capability to ensure imposed costs are recovered.

IPA Report

A main conclusion of the IPA analysis was the recognition of the need for product volumes from the TSO. This need has also been recognised by the Regulatory Authorities at the recent DS3 System Services Workshop. ESB GWM would support these views and look to reemphasise the need for these volumes to allow for meaningful engagement with any proposed market based approach. In the immediate timeframe ESB GWM request that the volume data provided by the TSO to IPA and the full details of the IPA volume analysis be made available to industry.

As part of the IPA analysis on market power it is suggested that structural changes on specific market participants would help to mitigate market power. ESB GWM are of the strong opinion that any market power mitigation measures must be part of the market design and must apply to all market participants. Market share in the energy market does not guarantee market power in the system services market as there can be technology or location specific issues which constrain particular plant on. Finally, market power is based on behavioural assessment which can and should be evaluated using competition law.

As part of the IPA conclusions it is recommended that the TSO are incentivised to procure the system services in an efficient manner. ESB GWM would support this and also highlight the need for clarify and transparency with regard to the TSO's assessment of bids in any of the market based solutions. This clarify and transparency, along with required product volumes, is vital for all market participants to ensure confidence in the market outcome.

3. Procurement Designs

Do you agree with the criteria and analysis used by the SEM Committee to evaluate the options?

Procurement Design Criteria

While ESB GWM are in agreement with the criteria selected by the SEM Committee, we believe there some important criteria missing and in particular we believe that the SEM Committee has focused too much on the risk of overpayment and not enough on the risk of non delivery. In relation to consumer interest ESB GWM support the criteria of protecting the consumer and ensuring net payments do not exceed the total value. Indeed, ESB GWM strongly support the SEM Committee's recognition that the value of the services should be the upper limit of the costs to the consumer.

ESB GWM strongly support the SEM Committee's criteria of certainty and also the requirements for the market to provide entry and exit signals. It is important to acknowledge that a market must be let develop to ensure these signals come. In a market based approach the certainty and stability of the market itself is paramount and this is only be guaranteed through a committed and transparent framework. Regulatory intervention can actually impede the development of the market and undermine its certainty and stability.

ESB GWM believe that there are two criteria omitted by the SEM Committee. Compatibility with ISEM is a vital part of DS3 System Services. As outlined in their Preferred Option the SEM Committee expect an interaction between the system services and both the energy and capacity markets. In recognition of this the level of interaction allowed by each option should be assessed. Another criterion which ESB GWM believe is missing is Transmission System Security (Voltage & Frequency). As one of the fundamental objectives of the DS3 programme, the security of the power system, both in the long term and the short term, should also be assessed.

4. Procurement Options

a. Do you agree with the design of the procurement options? Are there any different design elements or procurement options that the SEM Committee should consider?

There are a number of elements which the SEM Committee need to consider further. All options, as currently proposed, are based on cost based bidding or cost based tariffs. This will not reflect the value of service to the system and so will dilute any signals for entry and exit which will put risk on customer in the long term i.e. the risk of non delivery.

In the case of a market based solution the most important certainty for investors is the certainty of the market itself. In such instances the most important role of the regulatory authorities is to guarantee the stability of the market through a transparent framework and a commitment to the market. Rather than providing certainty, regulatory intervention such as the ad hoc introduction of regulated tariffs, or the threat of it, will undermine the principles of the market and actually cause uncertainty for investors. This uncertainty was actually identified by the SEM Committee in their evaluation of the regulated options against the investment criterion.

In the case of Option 1 there is significant uncertainty regarding the allocation of contracts for enhanced performance (i.e. beyond Grid Code). Rather than simply being at the discretion of the TSO on an annual basis predicted volumes and future requirements would be required to give generators foresight of gaps in service requirements and hence opportunities for investment.

Neither the risk of RoCoF not being implemented nor the unfair financial burden it places on conventional generators are being addressed. The savings due to RoCoF should be calculated and if RoCoF is seen to provide net value to the system then the RoCoF product should be introduced and treated in a consistent manner with the other new services. Given that RoCoF would be a mandatory Grid Code requirement the payment basis for the associated product should be based on a capability to ensure imposed costs are recovered.

b. Do you agree with the SEM Committee's analysis of the procurement options?

ESB GWM agree with the SEMC decisions to rule out Options 2, 3 and 4 but ESB GWM would not support either Option 1 or Option 5 in their current form. The main high level concerns are:

- Both Options are currently cost based which does not reflect the value the services will bring to the system and hence will not provide the required incentives for investment.

- Rather than cost based, a cap on what will be spent on the services, limited to the predicted value, would protect the short term interests of the consumer while also ensuring the long term objectives are met. This cap should be subject to an annual amendment.
- Clarity, certainty and transparency in relation to both market form and TSO assessment and contract award are essential but are not present in either Option 1 or 5 as currently proposed.

c. Which option do you prefer?

As stated above ESB GWM are of the opinion that Options 2, 3 & 4 fundamentally cannot work. Both Options 1 and 5 do not work in their current proposed state but may be feasible if the concerns outlined above were addressed.

5. Option 5: Multiple Bid Auctions

a. Do you agree which the SEM Committee's proposal to adopt this option and only to fall back on Option 1 (Regulated Tariffs) where the auction fails to deliver the required volume of services?

No – ESB GWM are of the opinion that Option 5 as it is currently proposed will not work. Regarding the idea of introducing a regulated tariff where the auction fails to produce the required volumes, ESB GWM believes that this will create further uncertainty in the market. Also, ESB GWM do not think that the introduction of a regulated tariff, on the basis of cost plus, will incentivise the provision of further volumes.

b. Are there any specific issues the SEM Committee should consider regarding the auction design?

The SEM Committee should consider the implications of the lead time required to provide services which require investment. In particular the SEM Committee should consider how such services are incorporated into the annual volume requirements and also the impact such services have on the clearing price in the years prior to their physical provision.

The SEM Committee should also consider the suitability of the dispatch payment basis for the annual auction. ESB GWM are of the opinion that the dispatch based services are not suitable for a annual auction as the volume requirement changes half hourly. The SEM Committee should also consider how Grid Code requirements fit into the annual auction. Given their mandatory nature, Grid Code related services should be paid on a capability basis.

c. Do you agree that market power mitigation measures are required?

No – the design of the market should be sufficient to ensure appropriate behaviour.

d. Are the SEM Committee's proposals regarding market power sufficient? Should alternative or additional measures be considered?

Any market power mitigation measures must be part of the market design and must apply to all market participants. Also, market power can and should be evaluated using competition law which is based on behavioural rather than structural assessments.

e. Are there any specific requirements that the SEM Committee should include in the bidding rules?

The SEM Committee should be cognisant of the fact that cost based bidding rules will dilute any signals for entry and exit and will also restrict interactions with both the energy and capacity markets. These actions will reduce the potential for consumer savings in both the short term and the long term.

6. Payment basis for the services

Do you agree with the proposed payment basis for each service/option?

ESB GWM believe the proposed dispatch based payment basis for the reserve and ramping products cannot work. As already discussed, this proposed basis will make prediction of revenues extremely difficult. ESB GWM are of the opinion that the dispatch based services are not suitable for an annual auction as the volume requirement changes half hourly. In addition to this the fact that these products have mandatory Grid Code requirements (which the SEM Committee have stated will continue to exist) means that generators have no choice in whether or not to invest in these services. A capability based payment basis is best suited to the mandatory provision of these services.

7. Interaction with I-SEM

a. Do you agree with the SEM Committee's views on the interaction with the energy market?

ESB GWM would agree with the SEM Committee's thinking regarding energy bidding strategies being influenced by availability and dispatched based service payments. However, as outlined in our response to the I-SEM consultation ESB GWM urge caution in these times of regulatory change. Our concern is that we are moving from an energy and capacity market which is relatively static and bounded by regulation to one which will be dynamic and which will not lend itself to easy regulation. This concern is amplified by the lack of progress on the market regulation work stream and a concern that the dynamic behaviour which the market design fundamentally requires will make it difficult to determine ex ante or ex post proper behaviours. It is for these reasons that we urge caution when determining an appropriate market design for a small market such as SEM. While these concerns were previously raised in relation to I-SEM the principles equally apply to the design of DS3 due to its explicit interaction with the energy market as outlined in this consultation

b. Do you have any views on the potential interactions and the appropriate measures to address these interactions?

It is important to highlight not only the impact of the energy market on system services (for availability and dispatch based products) but also the impact of system services on the energy market (operating reserve bids limit a units offerings in the energy market). To

facilitate these interactions and to maximise the potential associated savings to the consumer flexible bidding is required across all markets.

8. Other Issues

Are there any other issues not raised in this paper the SEM Committee should consider?