



**DS3 SYSTEM SERVICES
PROCUREMENT DESIGN
SEM COMMITTEE CONSULTATION SEM-14-059
RESPONSE**

on behalf of

AES Kilroot Power Ltd and AES Ballylumford Ltd

5th September 2014

Introduction

AES Kilroot Power Limited (“AES Kilroot”) and AES Ballylumford Limited (“AES Ballylumford”) (collectively “AES”) welcomes the opportunity to comment on the DS3 Procurement Design SEM Committee Consultation paper SEM-14-059.

AES is a global energy company with assets in the all island market consisting of coal and gas fired conventional and CCGT plant with additional distillate fired peaking gas turbine plant. AES is a non-vertically integrated independent generator which owns and operates Kilroot and Ballylumford power stations in Northern Ireland with a combination of merchant and contracted base load, mid merit and peaking plant. The responses to this consultation are therefore conditioned by the nature of our current position and portfolio of assets operating in the SEM.

AES welcomes the publication of the DS3 System Services Procurement Design consultation document (SEM-14-059), the additional explanatory information contained in the TSO’s System Services Valuation Further Analysis paper, the IPA report on the Economic Appraisal of DS3 System Services and the DS3 System Services Procurement Design Clarifications to SEM-14-059 Information Paper. The contents of all of these documents have been considered in the drafting of this response.

1. Summary

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

AES has reviewed the latest DS3 System Services consultation and supporting documentation on the procurement options developed. AES welcomes the recognition by the Regulatory Authorities of the costs associated with investment to provide the system services and assigning a value to the benefit that the increased services levels will provide.

Previous DS3 consultations identified that there was broad support for a remuneration approach based on value to the system, with payments based on capability, dispatch and the reliability of the provision of system service. This approach provided some predictability of the revenue available from system services and would be useful in making investment decisions.

The SEM Committee’s (SEMC) proposed approach is focused on cost reduction, the procurement of the least cost minimum level of system services, the reduction of curtailment and promotion of RES development. The criteria used to assess the range of options is limited to supporting this approach and does not appear to consider the fundamentals of the DS3 program i.e. security and sustainability. The

result is a preferred option which provides unpredictable revenue and is strong on exit signals.

AES is broadly in support of a competitive arrangement for the procurement of system services but believes that the preferred option (Option 5 – Multiple Bid Auction) is overly complex and may [is unlikely to?] not provide a viable solution, a view which appears to be supported by the SEMC's inclusion of a fallback position of regulated tariffs.

Whilst AES has not expressed a preferred option, we consider that the qualitative comparison of each option is subjective and we do not agree that option 5 represents the best outcome for all relevant stakeholders. We would like to see further analysis and explanation of the other competitive options as these may provide less complex, less costly and more viable solutions.

With the continuing uncertainties in relation to the delivery of the second north south electrical interconnector and the associated system constraint costs we are surprised that the SEMC is not more willing to consider the need for locational [zonal?] pricing. AES would like to understand the process for ensuring there are sufficient system services procured and available in Northern Ireland.

AES considers the timeline for the introduction of a new system services procurement process to be overly ambitious and very challenging, especially as it is based on the assumption that RoCoF is resolved (which may not be the case considering the equally challenging timelines associated with that process). As a consequence and due to the almost simultaneous I-SEM restructuring process and in particular the potential overlap of system services with the Balancing Market, AES would suggest transitional arrangements are developed to delay the introduction of a new system services procurement process until the energy market arrangements have been adopted and proven to be working satisfactorily.

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.

Market Structure

AES has noted that the Demand and Supply side analyses have been carried out on the current SEM market structure to predict the value of system benefits for the existing arrangements. With the change to I-SEM in 2017 the level of benefit to the system has not been quantified and is not clear due to potential interactions between the system services and other revenue streams.

Supply side analysis – cost of system services

AES accepts that there is limited information available worldwide on the costs of providing enhancements to existing and new plant as was evidenced by the limited number industry submissions following the request from the RAs. AES welcomes the conclusion that there is a significant cost (€500m – €600m) incurred for the provision of new or modified plant although AES also has little information to contradict or support the RAs conclusions on providing generator enhancements.

In general AES would expect that there would be a higher incremental cost to retrofit existing plant than to include requirements in the design of new plant. For existing CCGTs, in addition to the capital cost of new burner technology, Steam Turbine LP blade upgrade etc., operating costs such as outage and lost opportunity costs, have not been included. Similar issues would affect the retrofit of existing thermal plant.

The consultation paper contains a detailed analysis of the costs and benefits of providing system services through the enhancement of existing and new generators. Accepting that there is limited information available worldwide on costs of the provision of network devices some analysis of the costs involved has been completed. However AES is disappointed that equally detailed analysis of the benefits that could be obtained from system devices has not been completed and their potential contribution appears to have been dismissed as part of the solution.

Demand side analysis - the value of system services

The use of production cost savings in conjunction with the list of assumptions on demand and Interconnector efficiency as an indication of the value of system services appears to be a reasonable approach and AES welcomes that a value €301m (€241m + €60m – existing HAS valuation) has been determined.

However the assumption that the RoCoF requirement for generators has been resolved allowing a base SNSP limit of 60% is by no means certain considering that most generators have yet to conduct OEM studies on RoCoF compliance. This will impact on the level of wind generation utilisation, impact on SMP and therefore on the estimated savings.

As an exercise to establish that the benefits to the system outweigh the costs for the provision of the system services by predominantly the enhancement of existing generators, AES has no evidence to support or contradict the finding of the consultation paper but the conclusion seems to be reasonable.

3. Procurement Designs

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

AES views that the criteria developed to assess the options for the procurement of system services are primarily cost focused with an emphasis on reducing cost to consumer, guarding against the potential for overpayment and do not reflect the value to the system that these services provide. AES suggests that the assessment criteria should also reflect the objectives of the DS3 program and assess how each option provides for security of supply and sustainability.

Complexity

The IPA report states “approaches should not be unduly complex and have a high degree of consistency” particularly coming on top of the proposed I-SEM energy market and CRM complex arrangements, yet the RAs have selected the most complex of the options presented. Many issues remain to be clarified in the detailed design phase such as

- Interaction between system services and the balancing market, how reserve or ramping products overlap with system services
- The treatment of mandatory system services required under grid code should be rewarded by an appropriate system service payment- IPA report
- Quality of service provision variation and the proposed performance scalar, (90% - 50%)
- Product scalar - included in some options
- Locational Pricing was not considered but a proposed scarcity scalar – applied in areas of scarcity of a particular service – further detail is required on TSO defined boundaries and volumes.

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?

AES is broadly in favour of a competitive market based approach to the contracting for ancillary services with annual contracts for existing capability and longer term contracts to provide investment for enhanced and new capability.

Existing Capability - Grid Code Minimum Standard

All technologies are required to provide some levels of system services in order to be considered grid code compliant. Under the proposed preferred option (and others) it

is possible that plant will not be contracted to provide System Services but due to existing grid code compliance requirements will still have to provide these services. AES proposes that a grid code minimum standard requirement for the provision of system services should be defined with an entitlement to a basic system services contract for the provision of these minimum standard levels of service. Additional capability should then be contracted on an as needed basis according to TSO additional volume requirements through an enhanced system services process.

Volume Requirements

The TSO's methodology and process for determining the volumes of each Ancillary Services product required should be clear and transparent and should be determined in advance of any competitive process with forecasts published.

AES has significant concerns over the ability of the TSO to act impartially in the treatment of generators and TSO owned interconnectors during their participation in a TSO owned and operated competitive auction process for the allocation of system service contracts.

Bidding Zones

While the RAs have proposed that the TSOs procure system services on a system wide basis it would seem apparent that some form of jurisdictional allocation method is required to ensure that there are sufficient levels of services and capability available on both sides of the north/south transmission constraint. AES requests further information on how this issue is to be resolved.

TSO Incentives

In other markets, incentives are placed on the TSOs to manage system services efficiently by minimising procurement costs and optimising between price and volume considerations. In their paper IPA proposed a sliding scale incentive method on dispatched balancing costs with a proposed cap and collar. This proposal and the issue of TSO performance does not seem to have been mentioned in the DS3 consultation paper and further consideration of this aspect should be covered in the detailed design phase, particularly in relation to the transparency of any incentive scheme and associated monitoring.

b) Do you agree with the SEM Committee’s analysis of the procurement options?

AES has significant concerns over the level of complexity being introduced to all aspects of the market design and now into ancillary services with the proposed option 5. AES is concerned that this aspect has not been given due consideration in the analysis of all the options.

The consultation paper has produced a subjective, qualitative analysis against the identified criteria which is open to varied interpretation due to limited international experience.

Option 1 – Regulated Tariffs

This option would be the easiest to introduce and provide the least additional complexity to the changing market arrangements. However it does not provide price discovery or a competitive process for securing system services and is at risk of significant reduction due to applied scalars and regulatory intervention at each contract renewal period.

However due to the time scales involved with reforming the market and the overlap with the introduction of the new system services AES proposes that this option could be an intermediary step in the move towards a fully competitive process at a future stage.

Option 2 – Fixed Pot

No long term contracts available could lead to continually fluctuating prices and high uncertainty in revenue prediction.

Option 3 – Regulated Competition

It could be argued that having long term contracts is also a benefit for the consumer as it provides for greater security and sustainability of system services. This option facilitates having different competitive procurement mechanisms for each services group and could also reduce the cost of provision with a voluntary pay as bid tender process for some groups, longer term contracts of 5-10 years and voluntary pay as cleared auctions for ramping.

Option 4 – Split Auction

This option is not dissimilar to that proposed by Poyry and endorsed by IPA in their review of the system services proposals, favouring products gathered into 4 groups with separate short term and long term auctions for each group providing price discovery for each of the groups of services and benefiting consumers. Therefore, although rated as medium impact, AES would view consumer interest as high in this option and together with the allocation of a number of long term contracts providing strong investment signals, (rated as high but coloured amber), would reduce curtailment and enable the achievement of RES targets. This option could therefore be rated as high in all categories.

In addition this option requires a process for the calculation of required volumes addressing the security and sustainability issues and is less complex than the RAs preferred option as separate auctions are held for complimentary products with less complex bid structures.

Option 5 – Competitive Multi Bid Auction

The uncertainty over the feasibility of the outcome indicated by the inclusion of a fall back on regulated tariffs in expectation of failure suggests that the RAs have little confidence in the success of this option and therefore it is difficult to see how this option could have scored “med-high” on consumer interest.

The uncertainty around bid selection and payment mechanism i.e. availability and modified dispatch, would also make investment potential less certain which again has been rated as high. With less certain investment in system services it is feasible that curtailment would not be reduced which again is also rated as high.

c) Which option do you prefer?

AES does not believe any of the options proposed represent an ideal solution, but would reiterate that in general it favours a competitive process for the procurement of system services with price discovery as opposed to regulated tariffs. However due to the significant level of change and complexity being introduced by the transition to I-SEM, AES is in favour of a continuation of a regulated tariff structure with an appropriate transition to and enduring competitive process after the energy market transition has been completed and proved to be sustainable.

5. Option 5: Multiple Bid Auctions

- a) **Do you agree with 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?**

Although SEM-14-059 is presented as a consultation paper, the selection of option 5 as a preferred option indicates that this paper should have been presented as a minded to decision. Option 5 has been the only competitive option optimised in the consultation paper and given further clarification. AES would suggest that optimisation and further clarification of the other competitive options would be beneficial.

The objective of Option 5 appears to be driving down costs while procuring the minimum level of services needed to promote curtailment reduction and RES development. With the limited information available on the bid selection and auction process for Option 5, AES has concerns that this option will not provide a feasible outcome and will not address the equally important DS3 objectives of security and sustainability.

The process for the construction of a successful bid in Option 5 is unclear. Only variation in contract duration was considered in the clarification paper and it would appear by reference to the proposal to “fall back” on regulated tariffs that there is an expectation that this option will not provide a viable solution. AES believes that other competitive options such as Option 4 should be considered before reverting to regulated tariffs.

The introduction of availability and modified dispatch based payment mechanisms aim to reduce the payments to providers further, add to the uncertainty of generator revenues and could provide additional exit signals ultimately impacting on security and sustainability of the system.

In the absence of a TSO volume requirement calculation there is a danger that insufficient volumes will be secured to address the security and sustainability aspects of DS3 system services. Without a guarantee of a long term contract it is difficult to see how investment will be incentivised with the knock on effect on curtailment and RES targets it is therefore difficult to understand the justification for this option being the RAs preferred option.

- b) **Are there any specific issues the SEM Committee should consider regarding the auction design?**

The process for procuring system services should be fair and transparent. AES has concerns regarding the transparency of TSO led process for identifying the technically unviable potential outcomes for exclusion from the process, the comparison of different bid price structures and quantities with varying contract lengths and the operation of an algorithm for determining the least cost outcome.

As the TSO is involved as a service provider in this process of solving for multiple simultaneous bids for the selection of the lowest cost scenario, the process developed must be clear and understood by all participants. Bidding, selection rules and independent monitoring could be required.

c) Do you agree that market power mitigation measures are required

Due to the highly concentrated nature of the system services market the risk of market manipulation is increased. AES supports the view that some market power mitigation measures are required, such as:

- The proposed mandatory bidding of existing basic and enhanced capability and separate bidding of additional enhanced capability following investment
- A bidding code of practice to define bidding behavior, requiring value based bidding to encourage competition and liquidity

However AES would view the fall back position to Regulated tariffs as indicating the expected failure of the preferred option market design and not necessarily that an alternative competitive approach could not be developed.

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

Due to the limited interconnection between NI and ROI a process will be required to ensure that sufficient volumes of system services will be available in Northern Ireland. AES would like to understand how the RAs propose to address this jurisdictional issue and will there be, for example, separate jurisdictional auctions for system services due to the limited interconnection?

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

AES accepts that to ensure transparency, all available system service capability should be bid in and believes that Generators should be appropriately compensated for the provision of the required system services based on value to the system and not on the cost of provision. However the definition of existing capability requires further clarification.

A system service grid code minimum standard should be determined to set the requirements for compliance by all relevant technologies that can reliably respond and be contracted for by the TSO. Additional capability provided should be rewarded via the competitive process via enhanced system services contract thus avoiding the free riding by the TSO of system services which are mandated by grid code but not contracted for.

If bidding is required on a SRMC basis, the inclusion of a reasonable risk premium to cover the likelihood of increased O&M costs, the value of which would be based upon the number of times the service is called upon, should be allowed.

To ensure transparency in the bid selection process the TSO's product volume calculation and determination process should be defined in the bidding code of practice or similar document. Any BCoP should also include a right of appeal process on TSO determination of accepted bids and the award of long term contracts.

6. Payment Basis for the Services

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

AES is broadly in favour of the procurement of system services on a competitive basis however if successful in securing a system services contract AES believes the potential revenue should be predictable. The addition of an RA defined "availability" and the modification of the "dispatch" methods of payments considerably reduce the certainty of any income associated with system services and introduces unnecessary risks.

In particular the availability payment category creates confusion as the definition of availability can be different for each of the system services. Capability payments are less complex to determine and should be used for all short time frame services.

As balancing and ramping system services are likely to be market based under the Balancing Network Code it seems appropriate that market based services should be paid for on dispatch basis but under the original definition of dispatch.

AES sees a potential conflict with Balancing network code requirements and TSO non energy balancing actions and would like to understand what processes will be in place to ensure that generators are not disadvantaged in the market by TSOs use of a system service.

7. Interaction with I-SEM

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

The three market revenue streams have been structured such that participants will be incentivised to adjust their energy bids to secure their energy market position (running) and to capitalise on CRM and system service revenue. As system service pricing occurs in advance of DAM nominations system service providers will include the opportunity costs in their energy bids.

Participants need some certainty around revenue streams. The interaction with the energy market is increased if availability and dispatch based payments are selected as the payment options as a participant's market position affects their ability to deliver system services and thus reduces the predictability of income.

Generators responding to deviation from market nominations due to TSO non energy dispatching of providers of system services should be held neutral at least. Dispatch based services should receive appropriate system service revenue but also be compensated for loss of market opportunity in the balancing market.

Also as the system services auction will occur before the capacity auction the interaction with capacity payments is increased if availability and dispatch based payments are selected as the payment options. The expectation that participants may reduce R.O. (CRM) bids due to missing money coming from system services payments is optimistic due to the uncertainty of system services income given the payment mechanisms proposed.

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

With reducing load factors and market opportunity for marginal plant, this plant has to be able to predict its income from the revenue sources as accurately as possible. The proposed option 5 arrangements present insecurity for both the marginal generators involved and for the TSOs depending on this marginal plant for occasional system service provision.

The proposed introduction of availability and the modified dispatch based payments add to the insecurity and unsustainability of the arrangements which could lead to increased plant exits. This seems at odds with the purpose of DS3 in providing a secure and sustainable system.

AES is of the view that it is inevitable that there will be some overlap between the three revenue streams and that the focus should not only be on the least cost

provision of minimum requirements but also on the provision of system services to provide for security and sustainability.

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

Selection of Option 5

From the supporting documentation it is clear that both consultants commissioned to review the system services arrangements (IPA and Poyry) favoured grouped products into 4 groups similar to option 4 with separate mandatory auctions for each group (sealed bid pay as cleared design). It is not detailed in the paper why the SEM Committee decided to opt for a more complex and potentially less viable option.

Jurisdictional Impact

Given the RAs preference for a competitive selection process of Multiple Bid Auctions for the allocation of system services contracts and the uncertain timelines surrounding the completion of the second south-north electrical interconnector, the paper is silent on how the present south-north system constraint will be accommodated in both the calculation of locational volumes of system services required and the allocation of system services contracts. Clarification on this aspect would be welcomed.

Transitional Arrangements

The introduction of the new system services arrangements now scheduled for October 2016 and the commencement of the I-SEM scheduled for January 2017 represents a substantial change to trading arrangements for market participants in a very tight time frame. AES is of the view that the RAs should consider transitional arrangements for the introduction of both the system services arrangements and the capacity remuneration mechanism to allow the day ahead market to be established.

AES proposes the initial introduction of the system services products based on a regulated tariff structure as in option 1 with a later move to a competitive auction similar to Option 4 at a later stage when energy trading arrangements have been embedded.

AES also proposes that the existing capacity remuneration mechanism is extended beyond 2017 to facilitate an efficient transition to a competitive CRM process. Given the length of time required to design and implement auction processes and procure the required software for both system services and capacity with appropriate lead times for capacity delivery.

AES believes that the Regulatory Authorities should revisit the proposed time scales for implementation of both I-SEM and system services in light of the potential and likely overlap of implementation.