



***Response to I-SEM DS3 System Services Auction Design
Consultation Paper
SEM-15-105***

22nd December 2015

**On behalf of
AES Kilroot Power Ltd and AES Ballylumford Ltd**

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DS3 Auction Design

Introduction

AES welcomes the publication of the DS3 System Services Auction Design consultation document (SEM-15-105) and the opportunity to provide comments on the issues raised. AES would like to submit the following response to Regulatory Authorities to their consultation.

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 and a Battery Energy Storage Array (BESA). 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.

GENERAL HIGH LEVEL COMMENTS

AES has participated fully in the DS3 program primarily aimed at facilitating the integration of renewable generation onto the all island power system and understands the risk to the security of the power system with high system non synchronous penetration levels (SNSP) and the requirement to introduce additional system services and incentivise improved capability to increase the SNSP levels further and to facilitate increased renewable generation levels. AES would make the following high level comments in response to the DS3 System Services Auction Design Consultation Paper.

The dot.econ proposals represent a significant increase in the complexity of the arrangements in the DS3 System Services procurement process and also in how system services interact with the other revenue markets of capacity and energy.

The proposed design results in unpredictable revenue caused by a process that transfers significant risk from the TSO to providers who are tasked with predicting availability and scheduling of their units to ensure sufficient revenue recovery which makes investment for enhanced or new capability extremely challenging.

The dot.econ paper suggests that the SEM Committee decision is not implementable in its current form and have proposed a number of changes to the auction process such as:

- removal of minimum annual revenue requirement,
- removal of a required volume for each service fixed in advance and
- removal of units to decide contract length

These represent a removal of any revenue certainty and thus present a significant barrier to investment.

If as stated the SEM Committee decision is not implementable, AES views that a review of the decision is required and supports an alternative approach based on the following points.

- An extension of the regulated tariff period for DS3 System Services during the transition to I-SEM and to be paid on “capability” basis rather than “availability” to allow some degree revenue certainty.
- Capability basis payment would remove the need for the “contingent commitment” requirement from participants and as dot.econ have proposed that a regulated tariff should cap the auction clearing prices, the auction process is subject to the same regulatory risk as a tariff system however the tariff would remove the need for the combinatorial auction and allow for more predictable revenue.
- The provision of regulated tariffs also removes the requirement to have winners and losers and therefore the need to pay less to losers as all service providers should be eligible for the same tariff for the services they provide.
- Regulated tariffs also removes one element of revenue uncertainty when bidding in the capacity auction (CRM) and the need (at least initially) to be successful in two auction processes to ensure sufficient revenue recovery. Once the I-SEM processes associated with energy trading and capacity are sufficiently established AES would support the introduction of competitive procurement for system services.

SPECIFIC QUESTION RESPONSES.

Question 1: What are your views on the proposals to try to ensure a level of consistency between CRM and DS3 System processes?

AES supports the view that for new and enhanced plant where significant investment is required it is possible, though not always necessary, that plant would need income from both revenue streams to obtain the desired return on their investment. To reduce the risk of being successful in one process but not the other AES would see value in aligning some aspects of the processes such as the qualification requirements and specific areas of the auction design such as contract duration and lead time. To be clear AES supports separate and distinct auction processes for the procurement of capacity and system services for I-SEM.

Question 2: Do you consider that the SEM Committee should consider facilitating a link (where participants require) to only proceed with participation in the DS3 System Services auction subject to a successful outcome in the CRM auction or (vice versa) i.e. create an interdependency that as much as possible mitigates the need for auction re-runs.

If progressing with the current proposal of auction design AES would see benefit in allowing the participant to specify the requirement for a need to be successful in both auctions or not be accepted in either even if successful in one. AES would view this as an option to be requested by the participant if required.

Question 3: What are your views on managing the interactions between the CRM and DS3 System Services auctions?

As mentioned above AES support a separate and distinct process for the procurement of capacity in the I-SEM CRM and would not support an absorption of a capacity product into the DS3 system services auction process. AES believes that the auction processes are for different products which although have correlation there are separate products for different requirements.

Question 4: Do you agree with the proposals for separate DS3 System Services long-term and short-term auctions as set out in the Dot.econ recommendation?

The Dot.econ paper identified in detail the problems associated with comparing bids from existing and new/enhanced capability plant including that fact that new and existing are not competing for products in the same time periods and are therefore not substitutable. Unless existing plant is also allowed to compete for long term contracts, the requirement for different contract lengths, lead times etc. would seem to preclude a combined auction process which is a different approach to the CRM where joint auctions are proposed.

Question 5: Do you think the treatment of long-term contracting for System Services should be aligned with the proposed framework in the CRM?

As mentioned in the response to question 1, AES sees some benefits in aligning the auction processes for capacity and system services as plant that is new or seeking investment to enhance its capability will want to avail of all revenues streams possible and maximise returns. AES views it would be reasonable to align elements of the system services auction process with the capacity auction process such as contract duration and lead time.

Question 6: What are your views on the proposals to calculate clearing volumes for the auction as set out by DotEcon?

AES understands the problems and complexity with procuring the right amount of system services and the associated risk of over procurement to meet a hypothetical worst case scenario. The complexity also comes from the fact that it is not just the total volume of services required but also the correct composition to cover different contingencies, in the right time frame and in the right locations.

AES has concerns regarding the simple approach taken and although the TSO should be able to define a total quantity of system services they seek to procure the split of the volume requirement between different providers in different locations and different technologies, in an additive manner should be achieved using a transparent process.

Question 7: Do you agree with the proposals for introducing granularity for the purposes of calculating auction clearing volumes?

AES agrees that some increase in the granularity of volume requirements is required to ensure an effective volume of procurement. However the introduction of granularity for time period, locations and/or for different technologies presents problems of differentiation of products with reduced competition and differentiated pricing. AES would like more detail on how the granularity required would be introduced e.g. by the amendment of the auction result.

- Introducing temporal granularity presents the TSO with additional risk of procuring sufficient volume to cover a worst case scenario and to account for seasonal outages etc. and providers with the risk of under recovery due to winning contracts for some period but not for other. AES views that this presents additional risk and complexity of bidding process and delivery with no significant benefit and is therefore not in favour of temporal granularity.
- Introducing locational granularity would assist the TSO in ensuring the existing reserve policy is implemented as it contains a minimum reserve requirement from both jurisdictions. Although this presents the issue of potential locational market power the primary concern would be to ensure that there is sufficient system services availability and procurement in both jurisdictions. AES support the options of setting separate volume requirements for each service in Northern Ireland and in Ireland as this would avoid inefficient outcomes and provide a closer matching of requirements.

- Introducing Technological granularity is analogous to the locational granularity issue but it is unclear to what extent some technologies will compete for system services contracts with the corresponding performance risks and penalties. If required the granularity should again be at a high level such as synchronous and non-synchronous to ensure that there is sufficient synchronous volume to meet requirements.

Question 8: What are your views on the proposal to introduce flexibility on the volumes to be procured?

In their paper dot.econ proposes a price dependent flexible volume requirement in the form of the procurement of a minimum volume for each service and the ability to procure more if this is cheaper than procuring any other quantity that satisfies the minimum requirement. This approach assumes that additional volume will be available from losers in the auction in exceptional circumstances. AES does not favour the procurement of a minimum volume amount as the prospect of additional volume being available from losers is at best uncertain if unsuccessful in the system services auction.

Question 9: What are your views on the proposals for package based bidding?

The introduction of the package bid structure represents a change in the design of the auction process from the SEMCo decision paper that envisaged the participant providing a quantity and price bid for each system service. The reason given was that requiring bidders to specify individual prices eliminated the benefits of a combinatorial bidding.

The provision of a single bid price for the total package reflecting the revenue that the bidder requires in annual or hourly amounts combined is intended to provide revenue certainty for providers. AES views that the process of combinatorial bidding combined with the difficulty of an availability prediction for each system service increases the complexity and uncertainty of the process and the revenue to be gained.

Question 10: Do you consider that a provider will be able to predict its expected availability accurately on an annual basis?

The bid revenue requirement depends on the prediction of availability which is derived from the scheduling a unit would receive in the energy market and any potential constrained running. As I-SEM will be a central dispatch market the ability to predict scheduling and actual dispatch is difficult due to uncertainty of market access through the DAM and the level and treatment of constraints on the I-SEM. A potential option to increase availability through scheduling is to modify the energy offer price however with uncertainty in system services revenue and capacity revenue predicting availability for participants becomes increasingly difficult.

Question 11: Do you agree with DotEcon's proposals in relation to quantity units for the services outlined above?

The quantity units were defined by the Technical Definitions decision paper SEM-13-098 and as such are established. The "expected quantity" to be provided is defined as the product of quantity and availability and the introduction of availability creates significant uncertainty as mentioned above.

Question 12: What are your views on a suggested cap or clawback on expected availability per plant to manage DS3 System Service expenditure?

AES understands that €235m allocated for DS3 system services procurement represents a cap on system services payments. In addition the structure of the bidding process with the uncertainty of availability prediction and the proposed use of performance and volume

scalars there is significant downside risk to participants revenue from system services already and no further clawback measures or revenue caps are required.

Question 13: Do you consider the DotEcon Report to have accurately captured the considerations for availability the TSO should use for different DS3 System Service products? If not, please explain your reasons why.

Issue of unpredictability of scheduling in the DAM, BM and actual dispatch based on modelled information of scheduling

Availability of services different for each service synchronised/desynchronised

Ability of unit to position itself in the market by adjusting energy price limited due to uncertainty of other revenue streams.

The technically realisable based on a contingent commitment model issue exposure to penalties?

Question 14: Do you agree with the proposals to ensure lower payments are received by System Service providers who are not successful in the DS3 auctions but who are dispatched by the TSO to provide System services, than those providers who are successful in the Auctions?

AES understand the requirement to have a material difference between winners and losers in the DS3 System Services Auction process. By its nature losers in the auction are already materially disadvantaged by the fact that they are not entitled to receive the auction fees that are payable to winners removing a substantial revenue stream from providers. If able to continue in operation without a system services contract this plant will still be grid code obligated to provide a degree of system services. AES supports a position that remunerates losing providers at the higher of the participant's Incremental offer price or market rate for the availability of the system services they provide.

Question 15: Do you agree with the proposals for determining the winner/price as set out in the DotEcon recommendation?

The approach to determine the least cost outcome proposed by the SEMCo decision stated that some optimisation of the services may be required to determine the optimal outcome. The dot.econ approach ignores all the individual outcomes and evaluates the bids holistically and if using this approach, the 2 stage determination of winning bids followed by determination of individual prices seems appropriate. The key concern for the TSO will be the determination of sufficient volume to meet the required scenario though it is not clear how, with a combinatorial bid, the optimal volumes for each service can be procured which could lead to over and under procurement in some services.

The process for price determination takes place after the volume requirement has identified a set of winning providers based on overall revenue requirement. The proposed use of hypothetical clearing prices to provide inferred preferences for selection of a bid and the minimising of excursions (unhappiness) provides a very complex process for price formation. AES would like to see more clarity on the process of price determination for each service with a more detailed worked example with more services and bids submitted to illustrate how the price is formed with increased services and offers.

Question 16: Do you agree with the proposed treatment of interconnectors? Should this apply equally to all interconnectors?

The treatment of the interconnectors was largely determined by the SEMCo decision paper which states that EWIC will be a price taker in the auction and will not participate by bidding

directly in the auction. AES agrees that the technical realisability of system services provided by interconnectors is a function of the flows across the interconnector at a given time which impacts on the ability to provide the required services in line with a contingent commitment approach. Therefore AES agrees that it is impracticable for the interconnector to participate in the auction, be subject to the same contractual obligations and be remunerated as other providers.

AES views that Interconnectors should be paid for availability for the services it can provide only when it is capable of providing those services in a similar fashion to our proposed approach to the payment of losers in the auction.

Question 17: Do you agree with DotEcon's proposed preferred model of Contingent Commitment in DS3 System service Auction procurement?

The proposed contingent commitment presented identified issues surrounding the definition of being "available" to provide a service and the availability being "technically realisable" which requires further clarification due to the scheduling and dispatch risk inherent as a result for central dispatch. The potential requirement to take up a market position is only realisable by the reduction of an energy bid price but even this may not ensure adequate dispatch. If contingent commitment is adopted it must ensure that the submission of an INC or DEC into the BM removes the requirement to take up a market position and the onus is on the TSO to act in a technically realisable time frame to ensure the correct level of system service is available. In principle AES favours the no commitment option

Question 18: Do you agree with the position proposed by DotEcon that successful winners in the DS3 Auction should bid in the BM only at DEC prices set to a proxy of the energy price (section 7.2 above)?

AES agrees in principle with the avoidance of double payment but that participation in the BM for system service providers should not be prevented as it is envisaged that the proposed energy trading arrangements, currently in development, could allow for substitutive bidding that allows participants avail of the better of the contracted system services payment or the balancing market price. Therefore AES supports the position that auction winners should submit a dec price such that they are not disadvantaged by having that dec accepted to provide system services. AES would be concerned that the term "proxy of the energy" price could result in a loss of opportunity in the balancing market.

Question 19: Do you agree with the position proposed by DotEcon that successful winners in the DS3 Auction should bid in the BM only at INC prices set to a proxy of the energy price, or on a costs minus System Services income basis (section 7.2 above)?

AES agrees in principle with the avoidance of double payment and that system services providers should be able to participate in the balancing market and avail of the better of the system services or balancing market price. In an accepted incremental offer scenario i.e. to start up or increase load to provide reserve or other system services the winning participant needs to be able to recover its start-up and no load costs which would have to be reflected in its incremental offer.

Question 20: Do you support the application of an alternative contingent commitment model that avoids direct commercial interaction and obligation within the Balancing Market (section 7.3 above)?

AES views the RAs Alternative contingent commitment proposal as a marginal improvement on the contingent commitment model in that although market participants are not required to

submit bids in the balancing market to reflect their contractual positions, they are still required to submit a volume and predict an annual level of availability to submit to the auction and which would form their contracted commitment. The uncertainty involved with predicting an annual level of availability means that the revenues uncertainty remains in this option as with the contingent commitment.

Question 21: Do you agree with the proposed treatment of plant that does not require it to be in the schedule or on for provision of System Services?

Providers that are available to provide DS3 system services when not exporting for example AES Advancion 4 Energy Storage – battery storage technology is available to provide all of the system services at any time as it is continually synchronised and would not be scheduled in the market to provide energy. Therefore AES agrees that these technologies should be remunerated at the auction clearing price.

Question 22: Do you believe that either the Full Commitment model or the No Commitment model offers a better option for DS3 System Service providers? Please explain your reasons for your view.

As mentioned previously the definition of availability would be different for the different system services products and AES views that the ambiguity associated with the combination of availability, technical realisability and the contingent commitment results in significant uncertainty around bid construction, commitment obligations and predictable remuneration. AES supports the no commitment model. AES supports a less stringent commitment requirement for providers based on regulated tariffs, TSO determined volume requirements for worst case scenario and no commercial commitment other than to have the capability to provide the service. This leaves the