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Mr Andrew McCorrison  
Utility Regulator  
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Our Ref: EN01-005283

10 February 2016

Dear Andrew,

**Re: Consultation Response - DS3 System Services Auction Design**

Further to the SEM Committee's consultation paper SEM-15-105 of 22<sup>nd</sup> December 2015, RES is pleased to respond to this important consultation. This response is not confidential.

RES is the UK's largest independent renewable energy developer with interests in onshore wind, wave and tidal, offshore, solar, energy storage and demand-side response. A wholly owned UK company at the forefront of innovation and design around the world, RES now employs over 1000 people and has built over 1000MW of wind energy assets in the UK – around 10% of the UK's total installed capacity.

Since developing our first onshore wind farm in Northern Ireland in the early 1990s, RES has subsequently developed and/or constructed 16 wind farms in Northern Ireland totalling 229MW. This is more than 37% of Northern Ireland's wind capacity. RES currently operates over 83MW of wind capacity across Northern Ireland, has secured planning permission for a further 112MW awaiting construction and has 56MW in the planning system. In addition RES has a very strong wind pipeline of 177MW in Northern Ireland.

In Ireland, we have developed and constructed 50MW of wind farms, of which 35MW are operated by RES.

Based in Larne, County Antrim, RES' team comprises 25 staff covering environmental, planning, technical, legal, commercial, project management, construction, operations and administration disciplines.

RES is an active participant in the DS3 Advisory Council and supports the DS3 project objectives including the introduction of new system services to facilitate increasing the penetration of renewable energy so that national renewable energy targets can be achieved. In the context of this consultation we are responding as a stakeholder in the all island system.

**RES' comments on the proposed system services auction design are as follows:**

RES' overriding objective for the DS3 System Services arrangements is that they must deliver the necessary system services and any required investment for services to facilitate the minimisation of renewable energy curtailment. The delays in increasing the System Non-Synchronous Penetration (SNSP) on the electricity

system are of serious concern, and wind generators are likely to see increasing levels of curtailment if these system services are not introduced in a timely manner, thereby putting the 2020 renewable energy targets at risk. It should also be recognised that the market re-design currently underway, along with changes to the capacity remuneration mechanism, bring a lot of uncertainty for generators in relation to forecasting revenues in the coming years.

Early in 2009, EirGrid and SONI (EirGrid group) initiated a suite of studies - entitled the Facilitation of Renewables - designed to examine the technical challenges with integrating significant volumes of windfarms onto the power system of Ireland and Northern Ireland. Whilst progress has been made in understanding the problem we are still a considerable distance from investment in the system services which are required to operate the system at higher levels of SNSP. The wind industry will face financial exposure from curtailment from 2018. While the detailed information is currently not available in relation to the volumes of system services required, RES believes that the volume of system services necessary for the facilitation of higher levels of SNSP may not be achieved with the proposed DS3 arrangements. RES is concerned at the level of complexity associated with the DS3 System Services workstream, and in particular in relation to the auction design. The level of complexity gives rise to uncertainty in the revenue streams associated with the provision of services. In order to develop an investment case there needs to be a clear understanding of the investment case and the process which should be kept as simple as possible.

The proposals outlined in the current consultation paper will impose several undesirable features on the system services market. These include:

- A) A significant transfer of risk from TSO to providers – i.e. the proposals impose a largely fixed revenue and do not show an understanding of how costs vary, both unpredictably in relation to output ‘availability’ for system services and predictably in response to changes in output, such that variations in return for providers could be substantial.
- B) A significant increase in the complexity of the arrangements, not just in the DS3 process itself, but also in its interaction with energy and capacity markets – i.e. providers are faced with having to coordinate complex interactions between DS3, energy and capacity markets.
- C) Removal of any revenue certainty for new investors - i.e. the minimum revenue guarantee is now deemed not to be needed and actual revenues vary unpredictably. The proposed uniform pricing rules do not guarantee incentive compatibility.

Each of these features on their own would represent a barrier to investment, and we are therefore concerned that the combination of all three will deter delivery of the DS3 system services that the TSO requires to minimise wind energy curtailment.

Of particular concern is the lack of attention to risks and incentives within the proposals. This seems particularly obvious in the scenario of high levels of wind generation, when DS3 system service providers are most needed to support variations in renewable generation. At such times, at least some DS3 system services are likely to come from providers who are “constrained on” - i.e. dispatched out of merit above their expected “availability”. Under the proposals, however, such providers will have little or no economic incentive to provide system services, which seems perverse, and could undermine their delivery when most needed:

- At worst, providers could receive less than even their cost of generation and so lose money (if their BM offer price is capped at the market price – DotEcon, Box 2);
- At best, in the “more lenient” version, they are remunerated only for the cost of generating energy but are paid nothing for providing system services (DotEcon, Box 3, assuming that the contractual reserve payment fully offsets the deduction of reserve payments from BM revenues).

The proposals therefore mean that the generator makes no margins whenever it is constrained on to provide ancillary services, and there is therefore no incentive to invest in plant and equipment for generators which are necessary to provide ancillary services.

The INC proposals indicate a lack of detailed consideration of the costs incurred to provide system services, in particular in relation to variable costs. Providers of system services in the electricity sector incur fixed costs to provide certain equipment, and variable costs to provide output from it. The proposals do not adequately recognise this variation in costs (which creates commercial risk for participants), or the associated incentive problems they create. While participants in theory could add a risk premium to auction bids to compensate for these risks, we observe that this approach results in an imperfect hedge for service providers, and an inefficient outcome for customers (i.e. will unnecessarily increase costs to consumers). It also does not solve the fundamental problem that the proposals do not create the appropriate economic incentives to provide system services.

The most efficient outcome for customers is to allocate risk to the party which is best placed to manage the same. The DotEcon report places a strong bias towards protecting the TSO from upward variations in its costs. However, we note that DotEcon proposals impose financial risk on providers, and create unnecessary uncertainty over their future DS3 revenues, which will severely damage the incentive to invest in providing system services, or for the providers to bid extremely high risk margins. We believe, in the context of needing to secure investment to deliver the required levels of DS3 system services, that the balance of risk implicit in the proposals is inappropriate.

There also needs to be careful consideration of the implications of having different prices for the same product – which would be the case for winners/losers of an auction under the proposals. There is a need for regulatory authorities to ensure that there is no perverse incentive on the TSO to use the system services from those not contracted resulting from the proposed lower payment, and as a consequence to contract for a lower volume of system services. Those potential providers that were not successful in the auction have higher costs, and it therefore does not seem appropriate that these providers, who might be required at times of system stress, would receive a lower payment for their services. In light of these concerns, there is a need to ensure that the correct volume of services is contracted.

If DotEcon is correct in its assertion that the current SEMC decision on DS3 is not implementable, then we agree that the SEMC decision must be amended. However, for the reasons set out above, the DotEcon proposals do not seem to be a viable alternative.

There must be a much better balance of risk between the TSO and providers, while delivering solutions to key concerns such as TSO cost management and revenue certainty for providers.

## **Consultation Questions**

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

RES believes it is important that the CRM and DS3 auction timelines should be aligned to ensure that projects and new investments can have sight of both revenue streams. RES believes that a combined auction would be the best outcome in relation to ensuring consistency between the two processes.

### **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.**

RES strongly supports this proposal. It is essential that there is a link (where participants require it) between CRM and DS3 auctions to only proceed with participation where an applicant has been successful in both auctions. This will facilitate projects which rely on both revenue streams to form an investment case.

In the above circumstances of interdependent auctions, it would be advantageous to all parties that the auctions are coordinated to minimise the time in which it is uncertain whether CRM and DS3 System Services could be delivered by a bidder who has been successful in the first auction.

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

See answers to Questions 1 and 2 above.

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

RES supports the proposal for separate auctions for long and short term contracts as this makes it easier to directly compare products. Further work will be required in determining the amounts of each service which should be allocated to each of the auctions.

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

RES strongly supports that the treatment of long term contracting for System Services should be aligned with the proposed framework in the CRM. This is particularly important in relation to the auction timelines as well as the Implementation Agreements and Commissioning Window. It does not make sense to have project timelines which are not aligned under the different processes.

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

The proposals as set out seem like the most appropriate way to determine the volumes.

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

This proposal seems sensible to ensure that services are being made available when and where they are needed.

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

It is essential to ensure that there is strong governance in relation to how the volumes are set. There should be no incentive to set the auction volumes lower than what is required based on the knowledge that other suppliers who are not successful in the auction may be able to provide the service at a price lower than the clearing price.

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

The package based bidding is the most appropriate way of running the auctions. The proposals in the DotEcon paper allow participants to bid a range of mutually exclusive packages which provides flexibility to generators. While there is concern in relation to the complexity associated with submitting bids, this process provides certainty to participants that, if they are successful, their bid price will be covered.

However RES would caution that the interaction with regulated tariffs needs to be carefully considered. If all products are not included in the auction, then the package bids may not include all the costs that would need to be covered for the service provider. A service provider may also need to be assured of the revenue stream from the regulated tariffs, which are subject to change on an annual basis. Therefore the package bidding approach does not remove the need for the Minimum Revenue Guarantee, which is considered to be a fundamental part of the High Level Decision, to be in place to ensure that the combination of revenues from both the auction and the regulated tariffs is sufficient. RES notes that the Minimum revenue Guarantee should be considered a fall back to ensure projects are investible.

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

No generator will be in a position to predict its availability based on the market schedule/TSO dispatch accurately on an annual basis (please note this differs significantly from technical availability). The idea that units would be penalised for failing to accurately predict the effects of meteorological changes (how big of an effect should El Nino have on average wind and rainfall) and shifts in underlying commodity markets (i.e. dramatic coal to gas shifting in GB this year) does not stand up to reason. This risk is best managed by those in a position to manage it, i.e. the system operators.

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

The TSOs are the best placed to comment on the quantity units.

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

Please see response to Question 10. RES does not believe that a clawback is appropriate.

**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.**

Yes. DotEcon has also highlighted a number of issues and ambiguities in the SEM Committee's Decision Paper.

**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?**

RES does not support these proposals. As outlined in the introduction, there must be careful consideration of the implications of having different prices for the same product – which would be the case for winners/losers of an auction under the proposals. There is a need to ensure that there is no perverse incentive on the TSO

(resulting from the proposed lower payment) to use the system services from those not contracted, and as a consequence to contract for a lower volume of system services. This would be an abuse of market power by the TSO which the regulatory authorities must prevent.

In light of these concerns, the optimal solution is to ensure that the correct volume of services is contracted.

RES does recognise the need to incentivise participation in the auction as this certainty of service provision is of critical importance to the TSOs in operation of the system and to provide confidence in the ability to increase the SNSP, but we do not believe the proposals outlined are appropriate. We support the proposals that there would be payments to providers of system services who were not successful in the auction but have the ability to provide services when required, however there must be regulatory protection from TSO market power abuse which might be exercised by deliberately fixing the volume requirement lower than necessary so that unsuccessful bidders can then be called upon at lower than the clearing price.

If a provider is unsuccessful in auction then the volume which they could be called upon to provide (in the event of a shortfall) will be uncertain and this should be sufficient incentive to participate in the auction in good faith.

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

Yes, RES supports the proposals outlined in the paper as this appears to be the approach most likely to produce a reasonable result.

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

RES has no concerns in relation to the proposed treatment of interconnectors.

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

RES believes that some level of commitment is required, therefore we do not support the No Commitment option outlined. It is essential that the TSO has confidence that the system services will be available for secure operation of the system. The Contingent Commitment proposal would seem most suitable provided that it recognises the variable availability of primary energy sources for renewable generators and the duration availability limits of energy storage devices.

Clarification is required in relation to the interaction of the DS3 system services with Generator Performance Incentives, and how this is expected to work going forward.

**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)?**

RES has concerns with this proposal arising from the fact that bidding controls are being proposed for providers of system services. We are concerned that this will act as a disincentive to providers of system services arising from limitations in how they are able to participate in the Balancing Market. Balancing Market offers should reflect the cost of deviating from a physical position, and we are concerned that these proposals will have an undue influence on the design of the I-SEM balancing market.



RES understands that this proposal is arising out of concerns in relation to potential market power issues resulting from being a provider of system services. RES believes that this, along with all other market power considerations, should be dealt with together in the Market Power workstream.

**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)?**

The proposal that successful winners in the DS3 Auction should bid in the BM on a costs minus System Services income basis is the least bad of the options considered by DotEcon. However it provides no incentive for investment in new plant and equipment for generators which may be constrained on to provide ancillary services.

**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)?**

No comment.

**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?**

Yes.

**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.**

Neither of these is suitable, as explained in the DotEcon report.

## **Conclusion**

In conclusion we would like to restate that RES' overriding objective with the DS3 arrangements is that they must deliver the necessary system services and any required investment for services to facilitate the minimisation of curtailment of, and facilitate further investment in, non-synchronous renewable generators and energy storage.

With some reservations as noted above, we welcome the progress now being made in relation to this workstream and note the importance of ensuring that the proposals outlined will deliver the services required.

We have raised some concerns in relation to the complexity of the auction design and potential perverse incentives that may arise in relation to different prices for services. In particular we are concerned that the removal of the Minimum Revenue Guarantee will remove the investor certainty that is required to ensure system services are delivered and curtailment of wind generation can be reduced. While we do not want to see any further delays to this workstream, it is critically important to ensure that the proposals outlined will deliver the services required.

The above responses are offered in a spirit of positive cooperation towards minimising constraints on non synchronous generation and energy storage which arise from the present SNSP limits and we will be happy to clarify any of the points raised in this letter.

Yours sincerely,

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