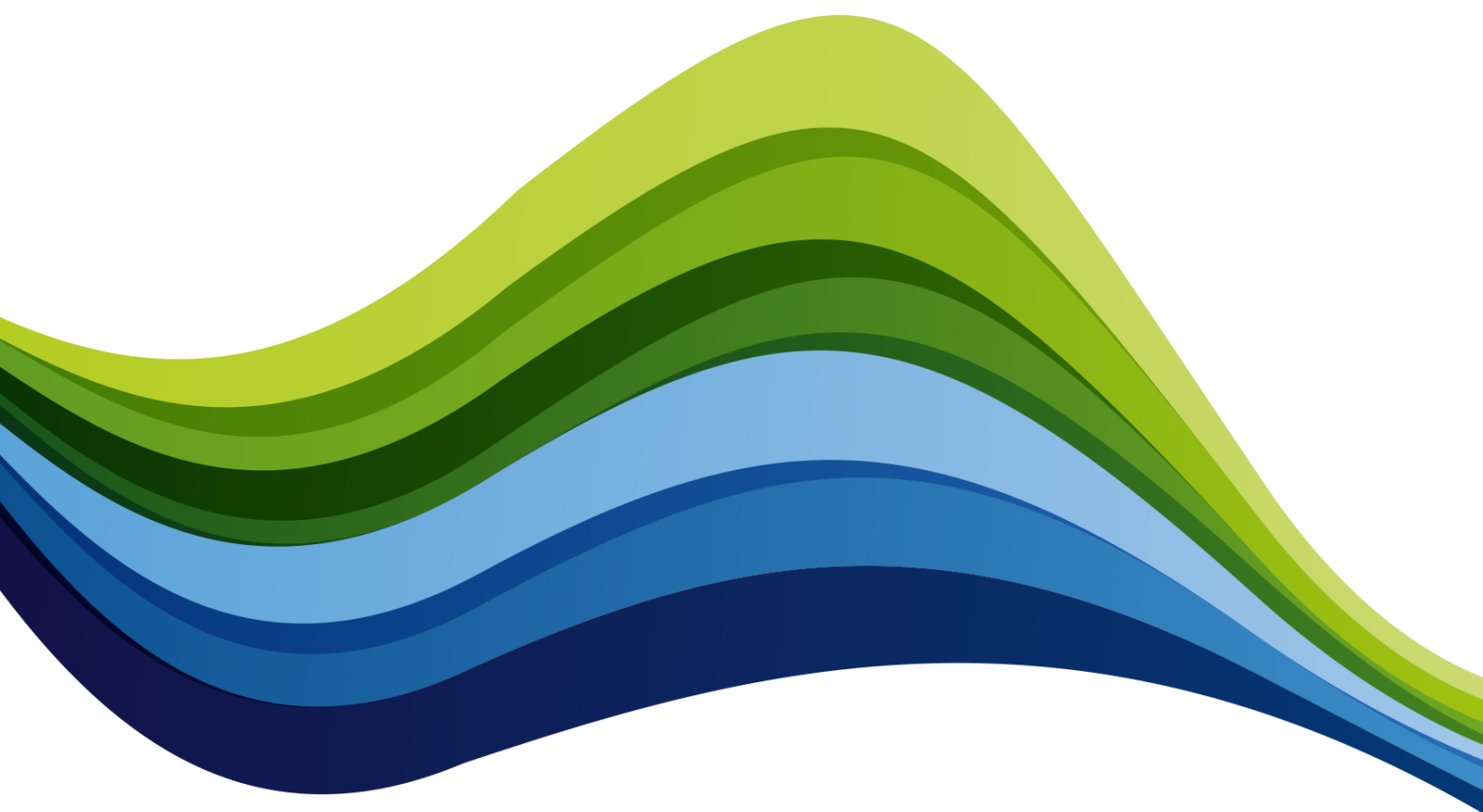


DS3

DS3 System Services Auction Design (SEM-15-105)

If you have any questions in relation to our response, please don't hesitate to contact me at connor.powell@sse.com



Executive Summary

Thank you for giving SSE the opportunity to comment on DS3 Qualification Process & Contract Design. Our long-term priority for the businesses in our Wholesale segment is delivering sustainable, flexible energy production through a diverse portfolio of assets. We have already enhanced stations in our existing thermal fleet in GB to meet system challenges. As a major producer of electricity in Ireland, SSE can enhance its existing fleet and bring forward innovative development projects if the TSOs and Regulatory Authorities create a stable, investable DS3 framework.

We do not believe that DS3 system services framework meets the following SEM Committee objectives:

- *Provide certainty for the renewables industry that the regulatory structures and regulatory decisions are in place to secure the procurement of the required volumes of system services;*
- *Provide certainty to new providers of system services that the procurement framework provides a mechanism against which significant investments can be financed;*
- *Provide clarity to existing providers of system services that they will receive appropriate remuneration for the services which they provide;*
- *Provide clarity to the Governments in Ireland and Northern Ireland (and indeed the European Commission) that appropriate structures are in place to assist in the delivery of the 2020 renewables targets;*
- *Provide assurance to consumers that savings in the cost of wholesale electricity which can be delivered through higher levels of wind on the electricity system, can be harnessed for the benefit of consumers;*

Many of the ideas outlined in SEM-15-105 actually dis-incentivise provider participation and engagement with the DS3 programme by transferring significant risk from the TSO to the provider. The SEM Committee must remember that these are ancillary products that will sometimes require incremental investment – **if they add additional unmanageable risk to providers, or constrain their operation in markets for their primary products (energy), capability (existing or new) will not be made available at an efficient price.**

As summarised in the report, a number of the DotEcon proposals make major changes to the SEM Committee decision in SEM-14-108 on the basis that SEM-14-108 is not implementable. We are particularly concerned by the changes to implementable I-SEM decisions required by the **DotEcon report** – the recommendations include fundamental alterations to the CRM structure and major changes to the I-SEM Balancing Market design, which would need to be implemented either through central systems or participant systems. Both of these are already in development. This either represents a fundamental lack of understanding or experience on the part of DotEcon or a lack of direction provided by the RAs.

We note the recent decision of the RAs not to allow an extension of the timeline for response to this consultation on the basis of meeting timelines. We believe the current consultation demonstrates that sufficient time is not being allowed to develop credible

proposals with respect to issues that will shape the future of the wholesale market in Ireland. This is not acceptable.

The RAs want to:

- Cap both costs and volumes
- Auction to determine price and allocation
- Allow the TSO to contract with all providers regardless

These objectives are in fundamental conflict. The RAs and their consultants need to resolve these by simplifying complex design requirements into practical, concrete proposals. **It entirely fails to do so: SEM-15-105 actually layers further complexity on an already challenging design and reallocates huge risk from the TSO to providers in attempt to smooth out these conflicts.** A rethink is required. Under the existing DS3 programme, an auction is due to take place in April 2017. We no longer believe that this is possible.

The I-SEM ETA and CRM prices and allocates simple primary products. The DS3 auctions are attempting to price and allocate complex secondary products, whose allocation (through availability) is already primarily going to be dictated through primary markets anyway. The value of any 'allocation function' in the DS3 auctions is very limited – given that 'losers' haven't actually missed out on allocation and will still be required to run and provide services during some periods.

The 'pricing function' is far more important because it places competitive pressure on providers to reveal the cost of any incremental investment required to meet the TSOs volume requirements. However, this function cannot be applied to both existing and new providers in a single auction without a transition period, as explained in the **DotEcon** report. A transition period or split auctions are not provided for in the SEM-14-108 decision, which makes the decision impossible to practically implement.

We believe that both SEM-14-108 and the DotEcon alternative are not viable. The RAs have strayed very far from their original simple, if conflicting objectives for no discernible benefit. **The result is a confused and complex layer of design decisions that attempt but fail to make the unworkable, work.** A simpler approach is needed. SSE would recommend its own series of changes to make DS3 system services work for customers and providers, keeping to most SEM-14-108 requirements. We recommend that:

- **Existing providers should simply be placed on regulated tariffs for the first years of operation with allocation determined by short-term market availability revealed by the I-SEM ETA and the long-term market availability revealed by the I-SEM CRM.** This maintains competitive pressure on providers because of the interactions between contracting to provide energy and being in a position to provide system services. Any surplus in regulated tariffs should be discounted in a competitive market through normal trading and operation. Any deficit in regulated tariffs – prices aren't enough to incentivise required deployment – can then be addressed through auctions for new provision. **Adopting this approach removes a huge layer of complexity from DS3 design and removes some pressure on timelines.**

- **If still required, enduring auctions for existing providers can be resolved as a ‘Day 2’ issue** – we believe that existing providers should be able to calculate and reveal prices more frequently, as availability becomes better known – i.e. monthly. This removes the unnecessary risk premium faced by providers and consumers, who have to commit to prices formulated and discounted under significant uncertainty.
- The auctions for new provision can then be structured to better interact with the near finalised CRM design. **The CRM should be the primary vehicle for selecting plant, given that it is allocating and pricing a primary product.** Given that a smaller number of providers will be offering additional capacity in the auction, TSO expenditure will be more manageable, given that they will have access to both the ‘baseload’ existing capability within a regulated tariff framework, topped up by ‘peak’ incremental investment priced through auctions.

This represents a simple, controllable, investable framework. The existing proposals are too complex for a marginal revenue stream, and the changes proposed by **DotEcon** to resolve any contradictions do not make the System Services framework simple, controllable or investable. **The SEM Committee must realise that their current proposals are not workable, strip back what is unnecessary and retain the core functions that are** – competitive pricing and allocation for incremental and new investment, controllable and predictable expenditure on existing providers and compatibility with the finalised I-SEM decisions.

Our response very briefly deals with the questions in the SEM-15-105 paper in turn, referenced back to the DotEcon report. However, we would stress that the approach taken by the RAs is:

- Unnecessarily complex;
- Not practical for providers;
- Not practical for the TSO;
- Incompatible with the Government 2020 targets;
- Likely to cause significant harm to consumers.

We would urge the SEM Committee to revisit SEM-14-108 and make the changes necessary to deliver both incremental and new investment. If you have any questions regarding the points in our response, please don’t hesitate to contact me.

High Level Auction Design

Different products and cost structures cannot be combined

The papers are correct in noting that energy and capacity revenues will tend to make up a larger proportion of the investment case for new plant. These are more predictable – as a generator I know my heat rate and cost of gas for a short period of time into the future, and I understand where my heat rate places my generator relative to competitors¹. Similarly, I

¹ My competitors include variable zero marginal cost generation like wind, which makes things somewhat more difficult but not impossible, given that I am looking at average load factors

understand the structure of my fixed costs² and the requirement for capacity within the bidding zone. These are primary revenue streams, which I do not need to heavily discount to capture uncertainty.

Revenue from DS3 system services will be far more variable – while I can broadly expect a load factor range, translating that into actual running profiles will be far more difficult. Likewise, while my heat rate gives me some indication of the cost of providing some frequency services to the TSO, I am lacking a lot of information about my competitors and their cost structures when delivering new services. These are further complicated by the scalars decided on in SEM-14-108 – only *performance* is somewhat predictable, to the extent that it is within my control. With an availability definition, DS3 system services are riskier, ancillary revenue streams which will need to be heavily discounted to capture future uncertainty.

There is a fundamental difference between the RO and DS3 products which limits their compatibility – in one, a provider is entering into an obligation to deliver in exchange for a guaranteed option fee. In the other, a provider is entering into an agreement with the TSO that gives them the option to contract with them at a price (which will subsequently be modified by a number of scalars).

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

We believe that there is value in trying to ensure some consistency between CRM and DS3 system processes, although we would stress that the underlying products are very different. We think this limits the merit of a combined CRM and System Services auction. An RO is an obligation to deliver energy during scarcity periods for a guaranteed price, whereas DS3 System Services are merely an agreement that the TSO *may* contract with me for a service subject to my market running at a price determined by my offer modified by a number of scalars.

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 interdependency that as much as possible mitigates the need for auction reruns?

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

We don't think that a link is required, or helpful. The payment basis for system services means that providers face significant uncertainty over their future system services earnings, which will be reflected through risk premia in bids. The payment basis for the CRM means that providers should reflect their costs plus a risk premium that reflects their view of reliability. The two products are very different in terms of payment basis.

Running a combinatorial auction would mean that system service providers with the most optimistic view of future running and lack of penalties applied through scalars would be most likely to receive contracts. Combining a highly variable revenue stream and cost

² The risk associated with the Reliability Option is more difficult to price, but for a typical, reliable, generator, this isn't my primary cost.

structure (SS) with a relatively stable revenue stream + cost structure (CRM) in a single auction compounds the *winner's curse*. Those who lose in the auction will receive a clear exit signal, whereas those who win in the auction will find that their assumptions weren't realistic either leading to failure to commit in the case of new investment, or offers revised significantly upwards in the next auction. This proposal has not been properly thought through.

At the point at which the combinatorial auction is rerun, the TSO will be left with a diminished range of options and higher prices. The DotEcon paper notes another approach where providers express a success condition for both auctions, but states that:

"If the provider was successful in the SS auction but then failed to win in the CRM, it could be replaced by an alternative provider (a losing bidder in the SS auction). However, this approach is inherently complex and carries significant implementation and litigation risk due to the need to revisit auction results and re-determine winners in some cases."

We'd agree that this isn't a practical approach to implementation. We think that this is potentially better resolved by a fundamental change to pricing for new and existing, which is covered in the next question.

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

The issue that gives rise to the requirement for two auctions is stated as:

"A combined auction that evaluates existing and new capability bids together (e.g. by simply totalling volumes) appears conceptually flawed, given that their contract periods do not overlap and therefore the bids are not substitutable. New capability can only provide system services with some lag, so it cannot contribute to short-run volume requirements, whereas existing capability only meets short-run requirements, as it is prevented from bidding for long-term contracts."

This is correct – unlike the CRM design there is no 'transition' for new capability. SEM-14-108 as written cannot be implemented. Given the time to auction is now less than 11 months, rather than splitting out new and existing providers into two separate auctions, we would recommend that existing providers are given access to regulated tariffs (which are either linked to SRMC or cost plus and therefore insufficient to incentivise new investment). New providers can then participate in an auction which will clear at the price required to deliver any new investment required.

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

Yes, however, the CRM is allocating an obligation to deliver a primary product rather than an option for the TSO to contract for a secondary product. **The CRM remains the primary vehicle for selecting plant.**

Volume Considerations

An unnecessary exercise

The idea that volumes would be fixed rather than flexible is clearly unworkable. Given that the both DotEcon and the SEM Committee acknowledge that volumes will be required from losing providers, the requirement to calculate clearing volumes for System Services seems to

be an arbitrary and unnecessary exercise. The proposals should instead be trying to calculate a price dependent volume requirement for any incremental or new investment requirement.

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

The idea that the auction should both act as an allocation and pricing mechanism for system services volumes is fundamentally flawed and demonstrates a lack of understanding on the part of DotEcon and the RAs. Availability will be dictated by primary markets for energy and capacity.

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

This just adds further unnecessary complexity. If volumes are required from all providers (not just those successful in the auction), why is the auction determining allocation?

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

Again – the desire to fix volumes in order to fix costs was flawed. Flexibility is required, but we do not agree with the DotEcon proposals to fix this flaw.

Bidding Parameters

Shifting unmanageable risks onto providers

In attempting to cap expenditure, the DotEcon proposals shift unmanageable risks onto providers. Under the DotEcon proposals, the TSO will be able to control and cap their volumes and prices, whereas providers will be left with both unknown price and unknown volume, even after contract allocation.

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

Package based bidding is the correct approach for new investment – a unit cannot be partially accepted for secondary products. They need to be able to have a firm price across their available services. A situation in which a provider would have only a couple of firm prices and unknown volumes, as under SEM-14-108 is not investable.

However, we do not agree that the ‘package’ should include capacity. As outlined earlier, this attempts to combine two very different products with very different cost structures.

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

The idea that providers can predict their expected availability on an annual basis is flawed. No provider would be willing to take on entirely unmanageable risks – in primary markets for energy where prices can be fixed, a power plant would still be unwilling to firmly contract for its nameplate capacity minus EFOR rate unless there was a liquid underlying market to recontract.

In markets for these secondary products, where there is no opportunity to recontract, costs are variable and prices are unknown (subject to auctions and scalars) and availability for many products is largely determined by day-to-day running profiles, a prudent provider

should never contract for a firm volume (availability) on an annual basis. Under the DotEcon proposals, auctions will be won by those who are least prudent.

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

We would require further detail on how these interact with availability as defined in I-SEM.

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

This adds additional, unnecessary complexity and places unacceptable risk on providers – their downside risks are substantial and any upside benefit is removed. If spending control is the primary objective of the RAs, they should simply place existing providers on regulated tariffs.

Auction Pricing

Answering the wrong question

The proposals attempt to make the SEM-14-108 decision workable. However, they attempt to make it workable by adding additional complexity to resolve a fundamental issue. The RAs want to:

- Cap both costs and volumes
- Auction to determine price and allocation
- Allow the TSO to contract with all providers regardless

These objectives are in fundamental conflict. DotEcon have attempted to smooth out some of the conflicts by allocating even more risk to existing investments and further complexity to the design proposals, but they have not attempted to resolve them. The simple way to resolve them is to use auctions for determining prices for new investment only and regulated tariffs for existing units.

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.

DotEcon does add clarity to an uncertain SEM-14-108 definition of availability.

Do you agree with the proposals to ensure lower payments are received by System Services 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?

The allocation function in the auction for existing providers is flawed. The TSO will, at points, inevitably need to contract with providers who they didn't contract with through the auction. Some providers may want to price services at a level that reflects their costs in delivering them³. The DotEcon proposals reflect a lack of understanding of the variable cost nature of many services and place unacceptable risk on existing providers. In extreme cases,

³ One theoretical example could be that, a power plant with issues impacting its pipework may want to avoid contracting for some frequency services because if the TSO activates them, they will either incur large maintenance costs or future unavailability.

they may actually incentivise marginal providers to actually reduce (or declare down) their capability.

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

While the SEM-14-108 decision is flawed, as outlined in the DotEcon paper, their alternative is not substantially better. It still attempts to allocate volumes to existing units, even though their availability will (and should) actually be based on primary markets for energy and capacity. This is not acceptable.

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

No. The interconnector is an existing provider and should be paid the regulated tariff for services based on its real-time availability (subject to the volume cap applied to a single provider)

Auction Commitment

Unpicking the final I-SEM design

The paper unpicks the finalised I-SEM design in order to make a fundamentally flawed approach to procurement of system services work. The RAs and their consultants seem to ignore that procurement of central and participant systems has already begun, and that their proposals may have major implications for I-SEM implementation programmes. Their proposals confuse primary and secondary markets and ignore the clear and simple solution already available – fixing regulated prices for existing provision and using auctions to price for new investment.

The proposals are also in clear breach of the current EU Network Balancing Code – imposing regulated tariffs in the I-SEM balancing market. This represents an unacceptable outcome for market participants.

Do you agree with DotEcon's proposed preferred model of Contingent Commitment in DS3 System Service Auction Procurement?

No. DotEcon show a fundamental misunderstanding of markets with an underlying variable cost structure. We are surprised that the RAs approved publication of their proposals for consideration given their clear flaws. Their approach makes the tail wag the dog – prices⁴ for secondary services will determine prices for primary products.

DotEcon effectively seem to want to penalise DS3 System Service providers – constraining their participation in markets for their primary product. It is difficult to see why any provider would offer competitive pricing with this constraint imposed?

Do you agree with the position proposed by DotEcon that successful winners in the DS3 auction should bid in the BM only at the DEC prices set to a proxy of the energy price?

No – this shows a fundamental misunderstanding of different cost structures within the electricity industry. To take one example – why should a gas plant that has committed at

⁴ These prices are unknown too – scalars will apply!

max load using an expensive daily gas transmission product be forced to part-load at the same price as a stable baseload plant which has bought an annual gas transmission product?

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?

No – this proposal demonstrates a clear misunderstanding of cost structures in the energy industry. Again – it penalises providers by capping any benefits in the balancing market and confiscating any reward for providing the system service in the first place? We are not sure why the RAs have approved publication of this proposal.

Both this and the previous proposal also require changes to central market systems and algebra, or alternatively require changes to participant market systems in order to ensure compliance with a regulated bidding model. This is unacceptable, given the stage reached by both the Central I-SEM programme and individual participant I-SEM programmes.

Do you support the application of an alternative contingent commitment model that avoids direct commercial interaction and obligation within the Balancing Market?

No. No commitment is required – existing providers should be paid at the regulated tariff rate, with balancing markets operating normally. Dogs should wag tails.

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?

We do not agree with the commitment approach.

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.

No. No commitment is required – existing providers should be paid at the regulated tariff rate, with balancing markets operating normally. Dogs should wag tails. Any full or partial commitment model is in breach of the EU Balancing Network Code and distorts real-time pricing in favour of inevitably incorrect assumptions and forecasts made one year prior to real-time.

The commitment proposals based on the incorrect decision that auctions should both price and allocate system services availability based system services contracts.