DS3 System Services Tariffs

Recommendations Paper

11 June 2024

EirGrid SONI

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2. Introduction and background

The DS3 System Service arrangements came into being, on an interim basis in 2016, and on a fully regulated basis in 2018. At the time, the decision was made not to place a cap on the volume for which payments would be made and to apply a Temporary Scarcity Scalar (TSS) of 4.7 at times where System Non-Synchronous Penetration (SNSP) > 60%, increasing to 6.3 at times of SNSP > 70%. This approach was deemed prudent in order to reach our 2020 renewable goals by incentivising renewable and battery technologies on to the grid. This has been very successful, with impressive growth in batteries, renewables, and DSUs and a power system that operates at 75% SNSP.

The current System Services procurement tariff mechanism has been based on price regulation, whereby service providers are tested to prove their service provision capability and are subsequently paid based on their real time availability to provide a given service in each trading period. In that regard, there is currently no competition for individual services or TSO specified volumes required and the remuneration volumes per trading period are based on real time availability volumes. While this tariff-based approach has been successful in providing a transparent and stable framework signalling future system requirements necessary for the renewable transition to 2020 and as stated above, has successfully delivered SNSP operational levels of 75%, the extension of the current arrangements to 30 April 2024 (and subsequently to April 2026 per PIR decision), has led to significant investment in certain services (in particular by fast acting technologies).

In line with the SEM Committee decisions, the TSOs have continually reviewed the appropriateness of the DS3 System Service tariff rates and scalars. In May 2021 the TSOs published an initial consultation[1] at the request of the RAs in which several options for mitigating expenditure risk were proposed. Subsequent to this consultation, the SEM Committee approved a rates reduction of 10% for FFR-TOR2[2] but with no additional measures approved to control future spend on DS3 System Services, should expenditure trend towards breaching the regulatory cap. In September 2022, a new consultation[3] was published by the TSOs where the TSOs provided DS3 expenditure forecast associated with future procurement gates under the Regulated (Volume Uncapped) arrangements and where the TSOs showed, in line with requirements under SEM-17-080, that without an increase in the cap for DS3 expenditure or introduction of control measures to reduce expenditure, a breach of the regulatory cap would take place in the 2022/2023 tariff year (even accounting for the additional €20M available in a high wind year). Following the consultation period and the comments received as part of the consultation process, the TSOs recommended that the tariff rates remain unchanged for the 22/23 tariff year (allowing DS3 expenditure to exceed the current cap) until there is sufficient time to implement a revised tariff mechanism prior to commencement of Future Arrangements.

Next, in 2023 the SEM Committee consulted on the Phased Implementation Roadmap (PIR) for System Services Future Arrangements, during 2023, and on the 8th December 2023 published its decision[4] where EirGrid and SONI were instructed in their respective capacities as Transmission System Operators (TSOs), to initiate a System Services Tariff review and consultation in Q1 2024 which is subject to the recommendations outlined in this document.

As part of the Consultation document, the TSOs provided a breakdown of the contracted volume growth in system services for each procured product. The analysis showed a significant increase in the fast acting reserve services from short duration batteries, DSUs and renewable technologies.

Given the contractual arrangements in place for DS3 System Services, limited options were available to reduce DS3 expenditure and taking this into consideration, the TSOs therefore proposed three options,

[1] DS3-System-Service-Tarrif-Review-Consultation_28-05-2021.pdf (eirgridgroup.com)
[2] DS3 System Services Fixed Contracts Recommendation (eirgridgroup.com)
[3] DS3-System-Services-Consultation-16-Sept-2022.pdf (eirgrid.ie)
[4] SEM-23-103 System Services Future Arrangements – Phase III: Detailed Design & Implementation – Phased Implementation Roadmap | The Single Electricity Market Committee (semcommittee.com)

noting that more than one option could be taken and that the SEM Committee may consider a combination of the proposed options. The options were:

- Option 1: Reduction in the Temporal Scarcity Scaler (TSS),
- Option 2: Reduction in tariffs for Reserve Services,
- Option 3: Cease procurement of certain system services from next procurement gate.

Further explanation of the proposed options accompanied by analysis relevant to the option was additionally provided.

The TSOs also took this opportunity to ask for information from stakeholders to assist us in determining if the increasing of the reactive power (SSRP) tariff would encourage more volumes of SSRP system services from low carbon providers.

As part of the consultation process, an online workshop organised by the TSOs took place where the options were further explained and live questions were addressed.

In this document, the TSOs summarise the responses received to the consultation, provide clarifications where necessary, and put forward our recommendations to the RAs for approval ahead of implementation.

3. Scope of Consultation

This consultation applies to the DS3 System Services Regulated (Volume Uncapped) Arrangements. For the avoidance of doubt, the DS3 System Services Fixed Contracts (Volume Capped) Arrangements are not in scope for this consultation.

4. TSO's Consultation Paper: Proposed Solutions

In the consultation paper, the TSOs presented a breakdown of the contracted volume growth in system services for each procured product. It was important to show this information as there is currently no competition for individual services and for certain services, there is no system requirement value available at a trading period level, rather there are a number of constraints that drive the need for these services.

Moreover, the consultation document also provided evidence-based information regarding the changes in contracted volumes of system service providers for all the products that are procured, highlighting certain aspects regarding the data availability and consideration on specific technology types that have led to significant growth in the fast acting reserve services.

Nevertheless, one area where the TSOs welcome increased volumes of services is in reactive power (SSRP) at times of low/zero renewables. Therefore, **responses from those renewable providers on what level of SSRP tariff would be needed to enable that capability were encouraged.**

Furthermore, and in order to address the main objective of the consultation, a DS3 Expenditure analysis was outlined where DS3 expenditure shows its growth year on year and the two key drivers for this, these being: a significant amount of Fast Acting Technologies successfully delivering DS3 system services as part of the Volume Uncapped Arrangements and, TSS applied at times of high System Non-Synchronous Penetration (SNSP).

Given the contractual arrangements for DS3, there were limited options available to reduce DS3 expenditure. As it is not possible to amend individual DS3 agreements[5], the only viable options are to adjust parameter values not defined within DS3 agreements.

Based on contractual arrangements, it is therefore only possible **to amend TSS values or tariff rates**. It is **also an option to close off procurement of system services to new entrants**.

It is also worth highlighting that adjusting tariff rates or TSS values for individual technologies was also not a feasible option, per the rules of a Qualification System (the system that is in place to enable interested parties to submit a Response and subsequently qualify for award of Contract for provision of DS3 System Services) which is in keeping with United Kingdom and wider European policies for meeting renewable energy targets, the TSOs adopt a technology neutral position.

Taking in to account the above, there were three primary options that could be used individually or in combination to reduce future DS3 Expenditure:

- Option 1: A reduction in Temporal Scarcity Scalar (TSS) values for all system services

Given that the power system now operates routinely at higher SNSP levels, the TSOs consider that the incentive to be available at high SNSP levels should be reduced (i.e. there should be a reduction in the TSS). Rather the incentive is to always be available. Reducing TSS values also has the benefit of reducing volatility associated with DS3 expenditure.

- Option 2: A reduction in tariffs

To reduce tariff rates for FFR – TOR2 services where it has been demonstrated as per consultation document - section 5 that contractual volumes exceed requirements.

- Option 3: Cease procurement of certain system services.

[5] The TSOs currently have over 250 individual DS3 agreements that would need mutual consent of contract holders for any individual changes.

As shown in the consultation document in the volume analysis section, the TSOs have an excess of system services in some areas. The TSOs consider that an option would be to stop the procurement of these services.

While each option was presented as a standalone option, the SEM Committee could consider a combination of the proposed options.

5. Consultation Feedback

5.1 Respondents

The consultation ran from 28 March 2024 to 3 May 2024. In total, 27 responses were received with five responses marked confidential. Non confidential responses were received from the following parties:

- Ørsted
- DRAI - Demand Response Association of Ireland
- Bord Na Mona
- EAI - Electricity Association of Ireland
- ESI, Renewables Ireland, Wind Energy Ireland
- Renewable Energy Ireland
- Bord Gáis Energy
- Eirgrid Interconnector DAC
- EDF Renewables
- Energia
- EPUKI - EP UK Investments
- ESB Generation and Trading
- FERA - Federation of Energy Response Aggregators
- GridBeyond
- IESA - Irish Energy Storage Association
- iPower
- VPI Holding
- Moyle Interconnector
- NZE - Net Zero Energy
- RWE
- SSE
- Gore Street Capital

5.2 Respondents Preferred Options

The dominant theme from respondents is to **not change the tariffs and instead continually increase the cap until the future arrangements are implemented.** The reasons for this are:

- The €235 million cap was designed for a 2020 system and is no longer fit for purpose and hence should increase to reflect where we are now. References were made with regard to the need of an increased cap budget on a glide path basis to €750m by 2030,

as estimated by EirGrid in the EU SysFlex project[6] and request to index-link a new budget to inflation.

- The impact on investor confidence in regulatory stability in Ireland must be assessed in relation to meeting future targets. Some respondents ask for this consultation to be withdrawn.
- Focus should be on future arrangements and leave current arrangements unchanged. Concerns over resources and efforts put in "interim" solutions that might delay the implementation of future arrangements beyond December 2026.
- Concerns on unequal treatment of battery storage in the energy market as batteries currently rely almost exclusively on system services revenues due to restrictions over pending policy.
- The objective of FASS to create an efficient, competitive operating and investment environment can only be achieved if the counterfactual remains stable during the period.

Four respondents indicated changes to the TSS may be an option as this reduction would roughly affect each technology type equally, making it a "fair approach". However, consideration should be taken on the value of Ramping Margin given the energy transition and concerns to Security of Supply. Moreover, more analysis would be welcome but once again, strong preference remains in an adjustment to the DS3 expenditure cap itself.

The majority of respondents strongly oppose ceasing procurement, mainly stating the reason that projects take several months to crystalise given their development lead times for and therefore, ceasing procurement may jeopardise investment in the future services market. Moreover, one respondent stated that "if pausing procurement for new providers meant that signals remained more stable for committed investment, this would help to maintain investment confidence." However, the same respondent reiterated that in order to encourage increased providers over time, other new markets would be needed in the near term. In particular, a strong suggestion of opening up the balancing mechanism and the TSOs to set a date to achieve this.

However, three respondents stated that their preferred option was to stop procurement of additional system services on the grounds that there is no rationale to procure more than is needed. One more respondent added that this would be an option "if the excess is calculated based on 95% SNSP levels". They did not support the ESI response. Instead, they ask for a more coordinated approach among the procurement of services.

On the increase in the reactive power tariffs (SSRP), respondents indicated that due to the short period of time of the current scheme, it may not promote change before the move to future arrangements. Others mentioned they could consider but would require follow up with OEM.

5.3 Additional Feedback

Similar to previous consultations, respondents did cover other areas. These included:

- Any future consultation or determination to take a holistic quantitative impact assessment for i) developing projects, for ii) existing projects, for iii) new projects across all three revenue streams.
- Over 65% of respondents expressed concerns over period between April-December 2026. One respondent stated an interference to wider FASS arrangements and ongoing consultation into proposals for the DASSA, where clarification on the proposals for the

[6] EU-SysFlex

procurement of the required system services not yet scheduled (or potentially capable) of being procured on a day ahead basis was requested. An additional respondent maintained that "the smoothest possible transition to the FASS would be directly from the Regulated Arrangements to the DASSA, without diverting resources (risking DASSA delays) to the design of a complex set of interim arrangements between the two." Therefore, the request for extending current framework until implementation of Future Arrangements was a popular suggestion across all submissions received.

- More analysis and forecasting are requested.
    - Analysis of current FFR provision is said to be potentially useful in identifying if such fast acting ability can assist with 'ordinary' inertia.
- Respondents also believe that business cases for Long Duration Energy Storage (LDES) can be developed through minor amendments to existing markets. System Services is one such example of this, through both an amendment to the Regulated Arrangements expenditure cap, and in the long-term by the inclusion of appropriate scarcity pricing in the System Services Future Arrangements.
- Specific details on the transition from the DS3s to the SSFA have not been addressed in the consultation document. One of the respondents therefore has stated that "As the proposal for the DASSA is to only procure reserve services by 2026, there is an assumption that other services will require a tariff structure, to maintain investment certainty and ensure existing providers are able to continue delivering additional services".
- Request for a forecast of product volumes and imports that would potentially affect both the remaining years of the DS3 contracts and the transition to SSFA.
- One respondent strongly requests sufficient low carbon inertia projects to be procured, constructed and commissioned, considering the transition to Net Zero emissions and how this action will reduce fossil fuels plans substantially.

6. TSO's Recommendations and Next Steps

There are a number of considerations that guide the TSOs in our recommendations and next steps.

As per SEM Committee Decision SEM-17-080[7], the TSOs have an ongoing obligation to review tariffs, including but not limited to identified risks such as under or over procurement of service levels to maintain stability of the system at 75% SNSP. However, the first consideration is that we believe it is important that certainty is provided to system service providers as we transition to future arrangements.

This is the third tariff review and having a clear direction on tariffs for the next few years is needed so that all stakeholders can focus on implementing the future arrangements.

The second consideration is that the analysis shows we have ample contractual volumes of system services in the fast-acting services across all time periods across the island. A signal needs to be sent to reflect this situation. The current tariffs and scalers are attractive to new providers who continue to plan building assets solely for delivery of the fast acting services.

The third consideration is the system service providers should not financially benefit from increasing interconnector imports which are driven by market prices in GB.

The TSO recommendations are:

- The TSS scalers should be reduced as the TSOs analysis has shown that expenditure is being driven by increasing imports from GB. No response has disputed this analysis in the consultation. We would propose reducing TSS from 1st October 2024. Appendix A highlights forecast expenditure change.
    - From October 2024 the TSS to 4 (as opposed to 6.3) and 2.25 (as opposed to 4.7)
    - From October 2025 we would propose further reductions in TSS subject to review of impact from first reduction in relation to service availability
- Contracting for the fast-acting services (FFR – TOR2) should pause after Gate 11. The intention is to send a signal to new providers to start to build new business models which are not based around existing tariff rates.
    - It is recognised that there may be projects that are in middle of construction and hence should have a route to market. TSOs would propose to develop a ruleset that would provide clarity while being compliant with Procurement rules.

In relation to reactive power tariff (SSRP), we propose no changes at this time or to any of the other tariff rates.

[7] SEM-17-080 DS3 SS SEMC Decision Paper Regulated Arrangements Tariffs and Scalars Final version.pdf (semcommittee.com)

7. Appendix A: Forecast Expenditure Impact of changes in TSS (by technology type)

This Appendix (which is taken from the consultation document[8]) highlights the change in expenditure if TSS scalers are reduced based the following assumptions:

- Conventional includes Turlough Hill pumped storage and Synchronous Compensators.
- 2022/23 expenditure is used as a starting point i.e. a historic reference point.
- The TSOs then have included an estimate of connection of future fast acting technologies in future gates.
- Future changes in DSUs, Wind & Solar and Interconnector are not forecasted and based on 2022/23.

[8] DS3-System-Services-Tariffs-Consultation-27-March-2024.pdf (eirgrid.ie)

A base year forecast in expenditure is then established as shown below in Table 1.

	2024		2025		
	Q3 2024	Q4 2024	Q1 2025	Q2 2025	Totals
Conventional	€32,948,659	€37,052,928	€30,886,735	€24,133,236	€125,021,557
DSU	€3,120,064	€3,903,115	€3,044,928	€2,123,837	€12,191,944
Interconnector	€7,445,190	€9,532,617	€7,723,642	€4,702,929	€29,404,379
Fast Acting Technologies	€33,069,940	€54,443,362	€43,841,447	€28,982,317	€160,337,067
Wind & Solar	€6,619,818	€8,866,696	€6,619,466	€3,444,597	€25,550,577
					€352,505,522

Table 1: Expenditure forecast by technology type with no changes in Tariffs or TSS

The above shows that in with no changes in Tariffs or TSS then expenditure would be just over €350m based on the assumptions highlighted.

If the same analysis is run, keeping tariffs unchanged, but reducing the TSS to 4 (as opposed to 6.3) and 2.25 (as opposed to 4.7), then expenditure reduces to around €231m as shown below in Table 2.

	Q3 2024	Q4 2024	Q1 2025	Q2 2025	Totals	% Change
Conventional	€21,208,775	€21,172,742	€16,789,913	€23,717,860	€82,889,291	-34%
DSU	€2,008,359	€2,230,313	€1,655,211	€2,087,282	€7,981,166	-35%
Interconnector	€4,792,406	€5,447,117	€4,198,543	€4,621,984	€19,060,050	-35%
Fast Acting Technologies	€21,286,843	€31,109,965	€23,832,046	€28,483,480	€104,712,335	-35%
Wind & Solar	€4,261,121	€5,066,598	€3,598,317	€3,385,309	€16,311,345	-36%
					€230,954,186	

Table 2: Expenditure Forecast by technology type with TSS reductions

It can be observed that a reduction in TSS roughly affects all technology types equally as shown by the % Change column which compares the base year in Table 1.