Future Arrangements for System Services

DS3 System Services Tariffs to FASS ('The Gap') Recommendations Paper

June 2025

Executive Summary

The DS3 System Services Regulated Arrangements are set to expire on 30th April 2026, while the planned go-live of the enduring FASS Arrangements[1] is not scheduled to take place until May 2027. As denoted in the DS3 System Services Tariffs to FASS Consultation paper[2], the period between the conclusion of the DS3 Regulated Arrangements and FASS Go-Live has been labelled as 'The Gap'. Procurement Arrangements for System Services are required for this period so that the system can be securely managed with a high level of renewables. At the request of the RAs, the TSOs were asked to consult on and submit a recommendations paper to the SEMC on the arrangements to be in place for this Gap period.

Following extensive analysis, the TSOs published our Consultation paper in February 2025 which described a summary of four shortlisted options to address The Gap period between the end of the current DS3 Regulated Arrangements and the go-live of the FASS (including the TSOs' recommended option). These four shortlisted options outlined in the Consultation paper comprised:

1. **Layered Procurement Framework[3]:** Introducing LPF arrangements to procure System Services via a monthly or quarterly auction.

2. **Market-based Volume Capped Contracts (without an availability requirement):** Establishing fixed-term contracts with no availability obligations.

3. **Market-based Volume Capped Contracts (with an availability requirement):** Establishing fixed-term contracts with availability obligations.

4. **Extension of the DS3 Regulated Arrangements:** to extend tariffs on all products under DS3 Regulated Arrangements.

In assessing the options and developing corresponding implementation timelines, the TSOs drew from our previous experience in relation to procurement of System Services. The TSOs assisted the RAs to build out the LPF quarterly auction design (as presented in SEM-23-043) until the SSFA Phase III decision (SEM-23-103) decided "*not to accelerate or prescribe parameters for the usage of the Layered Procurement Framework, as previously proposed, at this time*". The TSOs further conducted an Annual LPF Assessment in July 2024 at the request of the RAs[4]. The TSOs have also carried out System Services procurement using fixed term contracts as part of the DS3 System Services Volume Capped Arrangements and Low Carbon Inertia Services (LCIS).

The TSOs developed the critical path implementation timelines for each of the four options to assess whether the arrangements could be delivered ahead of April 2026. As outlined in the Consultation paper, the TSOs considered the implementation timelines to be the binding factor for delivery for 'The Gap' solution, i.e., that to be considered viable the option chosen must be deliverable prior to April 2026 with minimal diversion of critical resources ensuring delivery of FASS Go-Live in the shortest time possible. In addition to implementation timelines, the assessment criteria framework which was developed jointly by the TSOs and RAs as part of the Real Time Security Arrangements Workstream[5] was used to assess each of the four options.

[1] Day Ahead System Services Auction (DASSA) and the future arrangements to procure non-reserve services

[2] SONI - 2025 January - SOEF Markets - FASS - DS3 System Services Tariffs to FASS ('The Gap') Consultation Paper.pdf

[3] As outlined in the SEM 23-043, this comprises contracts with a term of more than one day and up to 12 months to facilitate competitive procurement.

[4] This is not published due to confidentiality requirements in relation to financial information

[5] Added as a new workstream under PIR V2.0.

Following a careful review of all options within the Consultation paper, the TSOs concluded that any alternative mechanism to an extension of tariff arrangements would require an effort similar to or larger than that of the LPF quarterly auctions envisaged under SEM-23-043[6] and could not be delivered without a material delay to the planned Go-Live date. A summary of these considerations can be found in the table below and were presented in the consultation paper, these are also discussed in further detail in section 4.4 of this paper.

No.	Option	Impact to DASSA Go-Live	Estimated Time to Implement	Additional IT Changes
1	Layered Procurement Framework	Yes	c. 21 Months	Yes
2	Market-based Volume Capped Contracts (without an availability requirement)	Yes	c. 26 Months	Yes
3	Market-based Volume Capped Contracts (with an availability requirement)	Yes	c. 28 Months	Yes
4	Extension of the DS3 Regulated Arrangements	No	c. 3 Months	No

The TSOs' recommended option within the Consultation paper was to extend the current DS3 Regulated Arrangements until such time that the DASSA and future non-reserve arrangements go live. The responses received from industry have indicated that there is broad support for the proposed approach, though concerns in relation to this have also been raised which we address in this Recommendation paper.

The TSOs' recommendation to extend the DS3 Arrangements for The Gap period is unchanged from that presented in the Consultation paper. In addition to the significant implementation timelines of the other options, the TSOs have the following considerations in reaching this determination:

- **Competitive Procurement:** It is recognised that extending the DS3 Regulated Arrangements would delay the competitive procurement of system services until such time DASSA goes live. However, it enables the fastest possible delivery of the enduring DASSA solution and thus the SEMC requirements, as set out in the SSFA High Level Design.
- **FASS Programme Funding Arrangements:** Alternative arrangements for The Gap would require separate funding arrangements, or an agreement with the RAs to reallocate existing programme funding. And in this case, it would necessitate a further funding application at a later stage to enable the delivery of FASS Day One commitments.
- **Resource Capacity:** Implementation of alternative arrangements would require new business processes and supporting systems, firstly for interim arrangements, and then later again for FASS arrangements by both the TSOs and industry participants. This would strain the already limited SME availability, compounding existing risks and issues across other market programmes (e.g., Scheduling & Dispatch, Strategic Market Programme).
- **Vendor Capacity:** The procurement of IT vendors is underway for multiple key market programmes. As part of this effort, there is a complex exercise in progress by the TSOs to schedule and choregraph changes across all IT vendors to meet the requirements of each of the market programmes. Furthermore, external resources are already fully committed, and with the TSOs coordinating system changes across a complex, interdependent roadmap, introducing

[6] SEM-23-043 System Services Future Arrangements – Phase III: Detailed Design and Implementation – Phased Implementation Roadmap for the System Services High Level Design – Consultation Paper (semcommittee.com)

alternative arrangements at this stage would require significant demobilisation and reprioritisation, severely impacting other in-flight implementations.

- **Continued Secure Operation of the System at High Levels of SNSP:** An expedited implementation of alternative arrangements risks losing existing system service capability, potentially compromising system security, particularly at current SNSP levels. Further, certain providers (e.g., DSU and wind units) cannot reliably meet the requirements of other arrangements, limiting the full participation of technologies.
- **Legislative Basis:** Legal advice has been received by the TSOs to confirm that it would be permissible to extend the current DS3 System Services Regulated Arrangements, subject to the counterparties to the contracts agreeing to the extension. By contrast, alternative arrangements would require a new System Services Code or Contractual Framework.
- **Investment Opportunities:** The extension of the DS3 Regulated Arrangements provides a clear path to FASS for investors in new technologies, allowing participants to develop long-term business cases and focus on preparation for FASS Go-Live, rather than diverting effort and resources towards participating in an interim solution. The TSOs could not commit to a FASS Go-live date until the design associated with any alternative arrangements to be delivered prior to FASS were known, introducing further uncertainty to investors' preparatory activities for FASS.
- **Operational Considerations:** The DS3 Regulated Arrangements would persist for a period post-Go-Live of the alternative arrangements to manage a series of close out activities such as resettlements and dispute resolution. The TSOs are not staffed for such activities and will need to hire for additional operational resources.
- **Operational Readiness:** A significant internal and external operational readiness effort would also be required to successfully deliver alternative arrangements. The TSOs would need to manage this effort — including the associated costs which were not incorporated in the original FASS Programme funding application — alongside the operation of the DS3 Regulated Arrangements and DASSA delivery.

Within this Recommendations paper, we summarise the responses received to the Consultation, provide clarifications where required by respondents, and put forward our recommendation to extend the DS3 Regulated Arrangements for The Gap period.

Glossary of Terms

Acronym	Meaning
BESS	Battery Energy Storage Systems
DASSA	Day-Ahead System Services Auction
DPOR	Dynamic Primary Operating Reserve
DRR	Dynamic Reactive Response
DSO	Distribution System Operator
DSU	Demand Side Unit. One of more individual demand sites
DS3	Delivering a Secure, Sustainable Electricity System
FAM	Final Assignment Mechanism
FASS	Future Arrangements for System Services
FCR	Frequency Containment Reserves
FFR	Fast Frequency Response
FRR	Frequency Restoration Reserves
FRT	Fault Ride Through
HVDC	High Voltage Direct Current
LCIS	Low Carbon Inertia Service
LFCAA	Load Frequency Control Area Agreement
LFCBOA	Load Frequency Control Block Agreement
LEU	Large Energy User
LPF	Layered Procurement Framework
LSAT	Look-Ahead Security Assessment Tool
LSI	Largest Single Infeed
LSO	Largest Single Outfeed
MUON	Minimum Units Online
N-S Tie-line	North-South Tie-line
OSS	Operating Security Standards
PIR	Phased Implementation Roadmap
POR	Primary Operating Reserve
RA	Regulatory Authority
RAD	Residual Availability Determination

Acronym	Meaning
RES	Renewable Energy Sources
RI	Reference Incident
RoCoF	Rate of Change of Frequency
RR	Replacement Reserves
SAOA	Synchronous Area Operational Agreement
SEM	Single Electricity Market
SEMC	SEM Committee
SIR	Synchronous Inertia response
SNSP	System Non-Synchronous Penetration
SOEF	Shaping our Electricity Future
SOR	Secondary Operating Reserve
TOR	Tertiary Operating Reserve
TSO	Transmission System Operator. (SONI for Northern Ireland and EirGrid for Ireland)
TSS	Temporal Scarcity Scalar
VFM	Volume Forecasting Methodology

Table 1: Glossary of Terms

Contents

1. Introduction

1.1. Background

SONI ltd is the licensed TSO in Northern Ireland, and EirGrid plc is the licenced electricity Transmission System Operator (TSO) in Ireland. It is our job to manage the electricity supply and the flow of power from generators to consumers. Electricity is generated from gas, coal, and renewable sources (such as wind, solar and hydro power) at sites across the island. The high voltage transmission network then transports electricity to high demand centres, such as cities, towns, and industrial sites.

SONI and EirGrid have a responsibility to facilitate connections to the power system, including increased levels of renewable sources to generate on the power system, while continuing to ensure that the system operates securely and efficiently. The respective TSO licences include a requirement for the relevant TSO to contract for the provision of System Services.

The DS3 Regulated Arrangements were designed to facilitate new and existing technologies and participants to provide the System Services required to maintain a resilient power system up to 75% System Non-Synchronous Penetration (SNSP). As part of our Shaping Our Electricity Future Roadmap, the procurement of new system service capabilities from low carbon sources has been identified as an essential action to address the technical and operational challenges arising from the need to operate with SNSP levels up to 95% by 2030, which underpins achieving the renewable targets in Ireland and Northern Ireland.

1.2. System Services Future Arrangements

The DS3 System Services arrangements were designed to facilitate new and existing technologies and participants to provide the System Services required to maintain a resilient power system up to 75% SNSP. The next phase of the energy transition requires the implementation of new arrangements which are known as the Future Arrangements for System Services (FASS), which will include day ahead auction-based procurement of a subset of the System Services from 2027.

The System Services Future Arrangements (SSFA or commonly known as 'FASS') Programme was officially launched by the SEMC in July 2020 with the publication of a Scoping Paper (SEM-20-044)[7] for public consultation.

As set out in the SEMC's SSFA Decision Paper 1 (SEM-21-021)[8], the objective of the programme is:

> "*to deliver a competitive framework for the procurement of System Services, that ensures secure operation of the electricity system with higher levels of non-synchronous generation.*"

In April 2022, the SEMC published the SSFA High-Level Design (HLD) Decision (SEM-22-012). The HLD set out a framework for the competitive procurement of System Services, consisting of the following:

- **Daily Auction Framework** for the procurement of some of the System Services through a daily spot market.
- **Layered Procurement Framework (LPF)** comprising contracts with a term of more than a day and up to 12 months.

[7] SEM-20-044 System services future arrangements scoping paper.pdf
[8] SEM-21-021 System Services Future Arrangements - Decision Paper 1.pdf

- The existing **Fixed Contract Framework** to continue to be used to remove barriers to entry for new technologies with the use of more long-term contracts and ensure sufficient volumes of System Services, as required.

In December 2023, the SEMC published its SSFA Phase III: Detailed Design & Implementation Decision paper (SEM-23-103), in which it decided that the commercial arrangements as described in the HLD should be progressed by the TSOs.

1.3. Transition from DS3 System Services to FASS

The DS3 Regulated Arrangements comprise the procurement mechanisms, standard contractual provisions, system service schedules, and payments and incentives currently in place for 14 System Services (12 of which are currently procured), and is commonly understood by the RAs, TSOs and service providers.

The SEMC as part of its SSFA Phase III: Detailed Design & Implementation Decision paper (SEM-23-103) decided to extend the DS3 Regulated Arrangements by a period of 24 months. The TSOs implemented the SEMC decision, meaning the revised expiration date for these contracts is currently 30th April 2026. The DASSA and the future arrangements for the procurement of non-reserve services are planned to go live in May 2027. This means that there is a gap for a number of months between the end of the current arrangements and the go-live of the new arrangements. A solution is required to ensure that the correct volume and quality of System Services will continue to be procured during this period, to ensure that the system can be securely managed with a high level of renewables.

The Consultation paper presents the options investigated by the TSOs alongside the RAs for procuring System Services during 'The Gap' and the TSOs' recommendation in light of this work. The TSOs welcomed feedback from stakeholders on that recommendation.

The TSOs set out four shortlisted options to address the period between the end of the current DS3 Regulated Arrangements and the go-live of FASS (including the TSOs' recommended option) from the large number of options have been investigated to date:

- **Layered Procurement Framework:** Introducing LPF arrangements to procure System Services via a monthly or quarterly auction.
- **Market-based Volume Capped Contracts (without an availability requirement):** Establishing fixed-term contracts with no availability obligations.
- **Market-based Volume Capped Contracts (with an availability requirement):** Establishing fixed-term contracts with availability obligations.
- **Extension of the DS3 Regulated Arrangements:** to extend tariffs on all products under DS3 Regulated Arrangements.

For each of these options a detailed assessment was carried out using criteria used, developed jointly by the TSOs and RAs as part of the Real Time Security Arrangements Workstream[9]. The same framework has been applied in analysing these options for 'The Gap', ensuring that the evaluation is comprehensive and aligned with the overarching objectives for System Services.

1.4. Phased Implementation Roadmap

The TSOs acknowledge the necessity of providing clear timelines to industry to facilitate their own programme deliveries. In this regard, the FASS Programme workstreams and projected timelines are

[9] Added as a new workstream under PIR V2.0.

detailed in the Phased Implementation Roadmap (PIR), which is revised biannually to reflect changes to programme scope or schedule.

As per the TSOs' Phased Implementation Roadmap V3.0[10] published on the 5th of June 2025, included below and as agreed with the Regulatory Authorities, the TSOs are required to consult on and submit a recommendations paper to the SEMC on the arrangements to be in place for the period between the current DS3 System Services Regulated Arrangements end date (April 2026) and DASSA Go-Live.

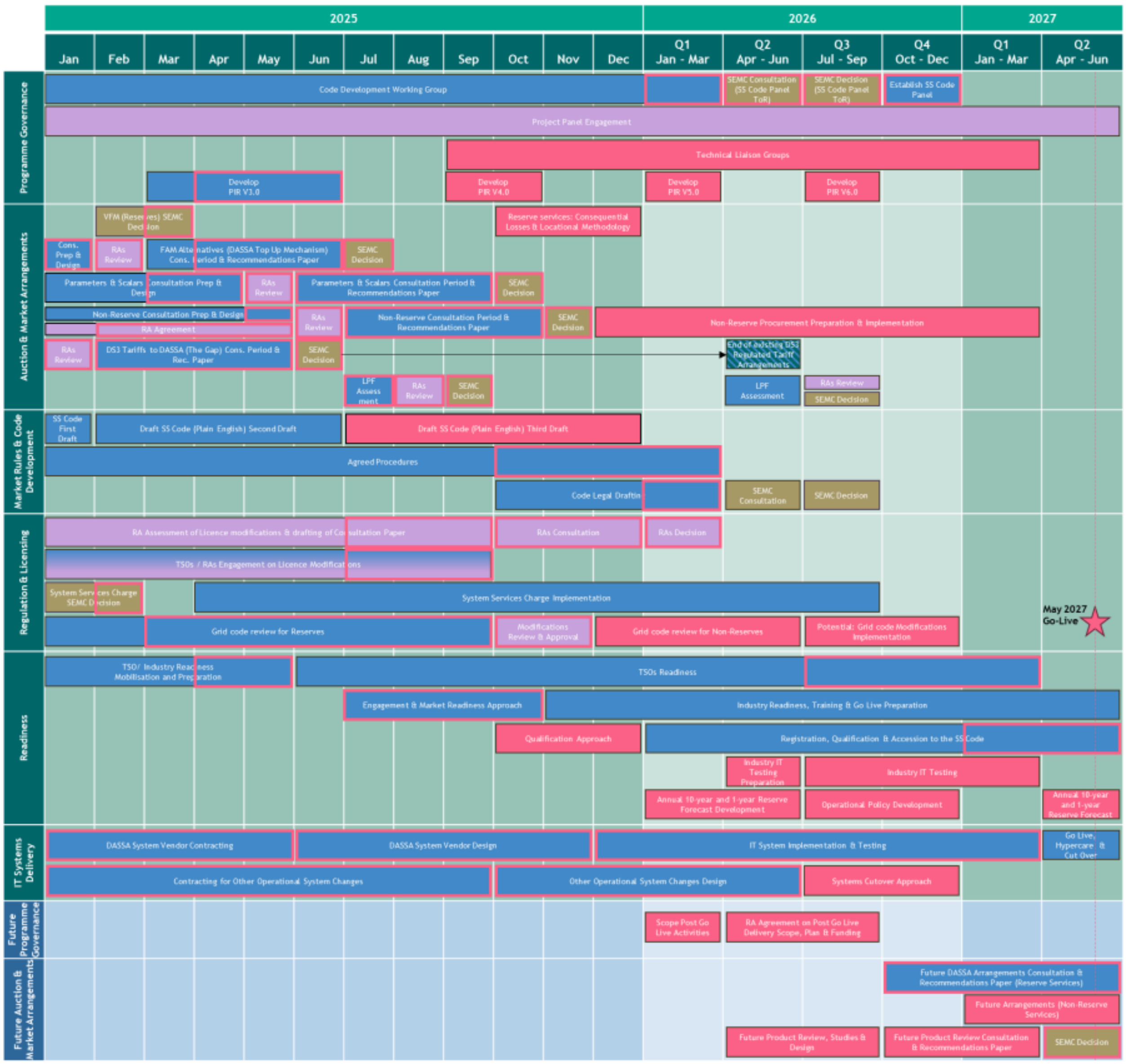

Figure 1: Phased Implementation Roadmap V3.0 - Level 1

1.5. Structure of his Paper

This paper sets out SONI and EirGrid's recommendations for DS3 SS Tariffs to FASS – The Gap. In the sections below, the Transmission System Operators (TSOs) recap the proposal and question set out in the Consultation Paper, summarise the feedback received from industry stakeholders, address the comments

[10] SONI - FASS Programme PIR V3.0 & EirGrid - FASS Programme PIR V3.0

made by respondents, and outline the final recommendations for the transition from DS3 SS Tariffs to FASS for The Gap period.

The recommendation presented in this paper is subject to approval by the SEMC. This recommendation is key for facilitating a seamless and timely transition from the existing DS3 Regulated Arrangements to FASS Go-live.

2. Consultation Overview

2.1. Responses to the Consultation

The DS3 SS Tariffs to FASS consultation was launched on Tuesday 11 February 2025 and closed on Friday 25 March 2025. A virtual industry workshop was held on Thursday 13 March 2025 to support the consultation process.

In total, 21 responses were received to the consultation including 1 marked confidential. The 20 non-confidential responses are as follows:

- Bord Gáis Energy
- Bord Na Mona
- Demand Response Association of Ireland (DRAI)
- Electricity Association or Ireland (EAI)
- Energia
- EP UK Investments
- ESB Generation
- Federation of Energy Response Aggregators (FERA)
- Fluence
- Gore street capital
- Hanwha Energy
- Ipower
- Irish Energy Storage Association (IESA)
- Lumcloon energy
- Moyle Interconnector
- RWE
- Shannonbridge power ltd
- SSE
- VPI
- Wind Energy Ireland (WEI), Energy Storage Ireland (ESI) & Renewable NI (RNI)

All non-confidential responses have been published together with this recommendations paper.

2.2. General Consultation Feedback

The responses received to the Consultation paper are quite detailed and the TSOs appreciate the time and effort industry participants have committed to reviewing the proposals and providing very helpful feedback. We have assessed the responses and have provided further information in this paper where possible to aid clarification on some issues.

In general, the consultation responses received agreed with the TSOs' proposal, i.e., Option 4, which proposes an extension of the current DS3 Regulated Arrangements until the go-live of the DASSA and the future arrangements for non-reserve services. This option was seen, by several respondents, as the most practical and least disruptive way to bridge The Gap between the end of the current DS3 arrangements and the FASS arrangements.

However, while there was support for an extension to DS3, service providers expressed concerns and sought clarification in several areas, as well as in some broader aspects of the FASS arrangements. This feedback is valuable to capture and we have addressed it in Chapter 4 of this paper.

3. TSOs' Proposal: Extension of DS3 Regulated Arrangements

Chapter 3 of the Consultation paper set out the TSOs' proposal to cover The Gap between the DS3 contracts' expiry date (30th April 2026) and the Go-Live of the DASSA Arrangements and the future arrangements for the procurement of non-reserve services. For this period, the TSOs proposed an extension of the DS3 Regulated Arrangements.

It is intended that the implementation of the DASSA and the execution of procurement mechanisms for non-reserve services would align, i.e., the TSOs are aiming for May 2027 for the commencement of future arrangements for both reserve and non-reserve services. However, it is prudent for the TSOs to allow for the possibility that diverse arrangements will have different effective commencement dates. Considering this, as part of the Consultation paper, the TSOs proposed that the termination of the DS3 Regulated Arrangements would be triggered by the earlier of (i) a new long-stop date or (ii) "FASS Go-Live".

Within the Consultation paper, it was stated that "FASS Go-Live" would be a contractual term which would be carefully defined over the course of legal drafting and would be triggered by certain pre-defined events applicable to each individual service (for both reserve and non-reserve services). This would be necessary to ensure that (i) the DASSA and (ii) the future commercial arrangements for non-reserve services, have been implemented successfully prior to termination of the DS3 Regulated Arrangements.

It was also stated that the triggers for termination would be clearly defined in the side letter to the agreements. The TSOs welcomed feedback from stakeholders on considerations for the triggers. The TSOs propose that settlement mechanisms would be implemented to ensure that payments under the DS3 Regulated Arrangements would not be made to service providers that have been procured for the same service volume under the future arrangements i.e. there would be no double payment.

TSOs' Proposal

It is the proposal of the TSOs to extend the DS3 System Services Regulated Arrangements to cover The Gap between the DS3 contracts' expiry date (30th April 2026) and the Go-Live of the DASSA

Arrangements and the future arrangements for the procurement of non-reserve services (planned for December 2026[11]).

The TSOs propose that the termination of the DS3 Regulated Arrangements would be triggered by the earlier of (i) a long stop date (September 2027 proposed) or (ii) the go-live date of new procurement arrangements for System Services (FASS go-live), which would be triggered by certain pre-defined events applicable to each individual service, for both reserve and non-reserve services). The TSOs will continue to submit quarterly expenditure reports to the RAs on the DS3 Regulated Arrangements to monitor ongoing expenditure. Further tariff reviews may be required prior to the commencement of the future arrangements for System Services.

Do you agree with the TSOs' proposal, to extend the DS3 System Services Regulated Arrangements until the earlier of (i) a long stop date (September 2027 proposed) or (ii) the go-live date of new procurement arrangements for System Services (FASS go-live), which would be triggered by certain pre-defined events applicable to each individual service, for both reserve and non-reserve services, as presented in this chapter? Please provide a detailed rationale if you consider alternative arrangements need to be considered.

3.1. Question 1 - Summary of Responses

All of the responses received agreed with the TSOs' proposal for The Gap, citing several key reasons including:

Most efficient delivery of FASS: Most respondents expressed a preference to commence the enduring solution of competitive procurement as soon as possible and that implementation of interim arrangements would divert resources away from this and delay delivery of FASS.

Increase Investor confidence: Many respondents consider that extension of the DS3 Arrangements provides most certainty and that a clear and predictable regulatory framework during the transition period while ensuring delivery of FASS in the most efficient time possible.

Increased System Stability: This is crucial for maintaining the reliability and security of the electricity grid, especially as we work towards achieving the 2030 Renewable Energy Source (RES) targets and higher values and occurrences of SNSP values.

While there was broad support for continuation of the current arrangements, clarity was sought on several key issues surrounding this, including a proposed a long stop date, and these concerns are captured in Section 4.

3.2. Question 1 – TSOs' Commentary

The TSOs welcome agreement from respondents that continuation of the existing arrangements is the most appropriate procurement mechanism during The Gap period. It is the TSO's priority to deliver FASS as soon as practicable.

3.2.1. Long Stop Date

The RAs have proposed that a 'long-stop' date would signal the end of the DS3 Arrangements. This would be a date after the planned FASS Go-Live date to ensure sufficient headroom should there be any unforeseen delay in FASS Go-Live. Aligned with initial discussions with the RAs, the TSOs consider

[11] Go-live has now been extended to May 2027

September 2027 to be an appropriate long stop date, aligning with the consultation of that tariff year. However, in the event of unforeseen delays and FASS Go-Live occurring after the long stop date, the TSOs consider that extension of the existing agreements would be legally permissible[12] subject to RA approval and service providers executing a Side Letter to this effect.

3.2.2. Ceasing Procurement of System Services

In parallel, the TSOs have considered the “pre-defined event” that would trigger the closure of any DS3 service prior to this long stop date. As referenced in the Consultation paper, this should be a settlement mechanism designed to prevent payments under the DS3 Regulated Arrangements to service providers who have already been procured for the same service volumes under the future arrangements.

The TSOs will recommend wording for this “pre-defined event”, which will trigger the closure of any reserve services initially included in the DASSA (FFR, POR, SOR, TOR1, TOR2, RRS, RRD). This trigger will be captured and clearly contractually defined in a side letter, amending existing applicable DS3 System Service Agreements Service providers will therefore have ample advance notice on the exact triggers for transition from the DS3 Regulated Arrangements to FASS Go-Live, whether via the “pre-defined event” or the long-stop date. For non-reserve services, the relevant trigger will be set out in the forthcoming non-reserves Consultation paper.

Any recommended wording regarding triggers for closure of reserve and non-reserve services will require careful legal consideration and will be shared with service providers following consultation with the RAs. Ultimately, the precise legal wording for the condition to cease procurement of any DS3 system service remains subject to RA approval.

3.2.3. Usage of System Supplier Charge

Lastly, the TSOs note that the All-Island System Services Charge will not be used to recover any DS3-related costs. For example, the costs of settling the final months of provision under the DS3 contracts and resettlement or reconciliation of DS3 costs that occur post go-live of the FASS arrangements will not be recovered through the All-Island System Services Charge, but through existing TUoS or System Support Services mechanisms. It will also not recover the costs of any System Services procured solely for the use of one TSO.

The All-Island System Services Charge will recover the costs of all arrangements under FASS (DASSA and non-reserves’ arrangements). It is intended this charge will come into effect at DASSA Go-Live in May 2027, per timelines set out in PIR V3.0.

4. Considerations Raised by Industry

4.1. DS3 Expenditure Cap

DS3 System Services expenditure has a cap[13] of €235M as set by the RAs through SEM 17- 080[2] (with an additional €20M in a high-wind year). While the tariff-based approach associated with DS3 Regulated Arrangements has been successful in providing a transparent and stable framework, necessary for the renewable transition to meet 2020 targets (successfully facilitating SNSP operational levels of 75%), the extensions of the DS3 Regulated Arrangements to 30 April 2026, have led to significant investment in certain services (in particular by fast acting technologies). Temporal Scarcity Scalars (TSS) which are

[12] Clause 2.1.2 within existing DS3 Agreements can be utilised to extend the contracts by a further period should FASS Go-live occur after the longstop date.
[13] The term cap is in the context of SEM-17-080.

applied to DS3 payments at times of high SNSP have caused a significant increase in DS3 expenditure. This is especially true for fast acting technologies that have high availability and benefit from increased occurrences of high SNSP levels. In its most recent decision[14] on DS3 expenditure, the SEMC calls on the TSOs to "*continue to monitor the effectiveness and costs of the tariff arrangements and report quarterly to the RAs, as per SEM-23-103 and, if appropriate, recommend revisions to current tariff rates and/or associated scalars*".

While all respondents were in favour of further extending the DS3 Arrangements, the majority expressed concerns regarding the current expenditure cap and the possibility of future reviews of TSS and tariff rates. Almost all respondents called for a review of the current cap, arguing that it should be updated to reflect a more accurate value of System Services in a high-SNSP system as we move towards 2030. One respondent, for instance, noted that a *'Review of €235m expenditure cap is needed: The €235m was calculated for a 2020 world where SNSP was 75% and RES-E only 40% per annum.'*

Additionally, six responses highlighted concerns about the DS3 expenditure cap not being adjusted for inflation or increases in costs, e.g., *'There is a misalignment between the DS3 budget and costs associated with delivery of the services, especially after a number of years of high inflation.'*

TSOs' Response

To date the RAs have directed the TSOs to use two control measures in order to manage DS3 expenditure. This included a 10% reduction in tariffs for reserve services based on a SEMC decision in November 2021[15] and a reduction in TSS per the most recent SEMC decision in relation to expenditure (SEM 24-065). Expenditure for the 23/24 tariff year was approximately €311M, fast acting technologies make up a significant portion of this with a total spend of €122M (39% of total expenditure).

The TSOs' expenditure reports in Q4 2024 and Q1 2025 have highlighted that the expenditure on services procured is much higher than that which is required to maintain the system at 75% SNSP. In the SEM Committee Decision Paper, System Services Tariffs and Scalars (SEM-17-080) one of the conditions where a tariff review should be initiated is when "the quantity of service which is procured exceeds that which the TSO requires to operate the system at 75% SNSP". The TSOs are currently reviewing next steps in initiating another tariff review. The DS3 procurement budgetary guideline of €235 million is set by the SEMC (rather than the TSOs); the SEMC will determine if there will be any adjustments to this value.

4.2. Procurement Gates and Frequency

All respondents have advocated for continuation of DS3 procurement gates throughout The Gap period, arguing that the removal of access to DS3 arrangements during The Gap would have a detrimental impact on investor confidence. However, multiple respondents raised concerns or sought clarification on various details of procurement during the proposed extension of the DS3 Regulated Arrangements. One respondent requested clarity on the sequencing of gates leading up to FASS Go-Live, and beyond in the event of delays: '*Should the DASSA Go-Live date extend further than December 2026, what is the timeline of procurement gates that can be expected past this date*.'

Several respondents queried how new units would be accommodated in the event of delays, stressing the need for qualification processes to remain open or be adjusted to accommodate new units and capacity during the transition from DS3 tariffs to FASS, e.g., *'confirmation that there will be additional Procurement Gates to allow new providers to contract for System Services. Procurement gates are important not to strand assets currently under construction.'*

[14] SEM-24-065 DS3 System Services Tariff Review Decision Paper.pdf

[15] SONI-DS3-SS-Statement-of-Payments-2021-22.pdf

One respondent highlighted concern regarding the decision not to close procurement gates for FFR-TOR2, noting that *'[It] will impact future concerns regarding increased expenditure for the Regulated Arrangements, which might then require additional reduction in either tariffs... or a reduction in the volume of services procured in subsequent Gates.'*

<u>TSOs' Response</u>

The TSOs acknowledge the concerns raised by respondents and would like to confirm that it is our intention to continue the DS3 procurement gates throughout The Gap period. The date of the final procurement gate is dependent on the FASS Go-Live date and will be communicated to industry several months in advance. Given that the target go live date for FASS is now May 2027, it is envisaged that the final DS3 Procurement Gate would likely take place in October 2026. In the case of further delays, the TSOs will consider running an additional Gate in April 2027, subject to the length of the delay and agreement with the RAs.

The TSOs highlight that any delays to FASS go-live would be communicated well in advance to all stakeholders. In relation to new providers, the TSOs highlight that if delays occur, stakeholders will be notified in advance and the accommodation of new units will be addressed. The TSOs are committed to avoiding the stranding of assets and ensuring continuity of opportunity for entry into the arrangements.

With respect to impacts on expenditure with the addition of new units, the distribution of expenditure and any reductions to tariffs will be directed by the SEMC.

4.3. Clarity on Non-Reserve Services

Several respondents requested further clarification regarding the future procurement of non-reserve services, noting that there was insufficient information regarding the design, consultation timeline and implementation plan for the enduring non-reserve arrangements. For instance, one response queried *'How the remaining non-reserve DS3 services will be procured, given the time-lines for the introduction of the DASSA for reserve services and the current lack of detail on non-reserve services.'*

Other respondents expressed concern that the future arrangements for non-reserve services may be significantly delayed compared to the reserve services, potentially creating a period where only reserve services have a defined procurement mechanism. One response highlighted *'concerns around increasing divergence between reserve and non-reserve products and advocates for all arrangements to be delivered collectively, if possible, as the current approach seems to be leaving non-reserve products trailing behind, leading to unnecessary fragmentation in the market.'*

Respondents also raised concerns over the value and remuneration framework for non-reserve services. Particularly, responses queried how the original €235M expenditure cap will be split between reserves and non-reserves, given the divergence in the procurement methods used to obtain these services, e.g., *'it is not clear how the value of non-reserve services would be disaggregated from the €235m pot and how tariffs and scalars for these services would be determined.'*

TSOs' Response

The TSOs acknowledge the concerns raised by industry regarding the future procurement of non-reserve services and the perceived divergence from the approach taken for reserve products. However, the TSOs do recognise the need to progress arrangements for non-reserve services. And to that end, details of the TSOs' approach for non-reserve services will be set out in an upcoming consultation, with the publication timeline to be outlined in the forthcoming PIR v3.0.

It is important to note, however, that the current non-reserve product definitions — namely SIR, SSRP and Ramping Margins — reflect fundamentally different service characteristics relative to reserves. These characteristics have significant implications for procurement and as such, the appropriate mechanism for FASS Go-Live will be subject to consultation, as described above, and a subsequent SEMC decision. The TSOs will consider the range of technologies capable of delivering these services, including synchronous condensers for inertia and reactive power, as well as the appropriate contract structures and payment arrangements for the same. Until such time the future arrangements Go-Live, the non-reserve services will continue to be remunerated based on availability under the current DS3 Arrangements, subject to tariff rate reviews and SEMC decision.

4.4. Implementation Timelines Associated with Alternative Interim Arrangements

Multiple respondents requested further clarification regarding the implementation timelines associated with options one, two and three (included below), e.g., '*The consultation paper deems three of the four options non-implementable due to their delivery timelines... However, the paper lacks a detailed assessment of how EirGrid determined these timeframes.'*

- **Option 1:** Other LPF Mechanism (i.e.: monthly / quarterly auction)
- **Option 2:** Market-based Volume Capped Contracts (without an availability requirement)
- **Option 3:** Market-based Volume Capped Contracts (with an availability requirement)

TSOs' Response

The TSOs note that the timelines outlined for each option in the consultation paper represent a high-level overview of programme critical path activities only. The critical path is the sequence of activities that must be completed during implementation and represents the longest path from start to finish. It is not a holistic detailed programme plan and does not highlight the numerous parallel activities required to deliver any programme. Further details on the specific critical path activities for each option are provided in the subsequent sections, however, the TSOs also have the following considerations in concluding that alternative arrangements are not a viable options to address The Gap:

- **Competitive Procurement:** It is recognised that extending the DS3 Regulated Arrangements would delay the competitive procurement of system services until such time DASSA goes live. However, it enables the fastest possible delivery of the enduring DASSA solution and thus the SEMC requirements, as set out in the SSFA High Level Design.
- **FASS Programme Funding Arrangements:** Alternative arrangements for The Gap would require separate funding arrangements, or an agreement with the RAs to reallocate existing programme funding. And in this case, it would necessitate a further funding application at a later stage to enable the delivery of FASS Day One commitments.
- **Resource Capacity:** Implementation of alternative arrangements would require new business processes and supporting systems, firstly for interim arrangements, and then later again for FASS arrangements by both the TSOs and industry participants. This would strain the already limited SME availability, compounding existing risks and issues across other market programmes (e.g., Scheduling & Dispatch, Strategic Market Programme
- **Vendor Capacity:** The procurement of IT vendors is underway for multiple key market programmes. As part of this effort, there is a complex exercise already underway at present by the TSOs to schedule and choregraph changes across all IT vendors to meet the requirements of each of the market programmes. Furthermore, external resources are already fully committed, and with the TSOs coordinating system changes across a complex, interdependent roadmap, introducing alternative arrangements at this stage would require significant demobilisation and reprioritisation, severely impacting other in-flight implementations.
- **Continued Secure Operation of the System at High Levels of SNSP:** An expedited implementation of alternative arrangements risks losing existing system service capability, potentially compromising system security, particularly at current SNSP levels. Further, certain providers (e.g., DSU and wind units) cannot reliably meet the requirements of other arrangements, limiting the full participation of technologies.
- **Legislative Basis:** Legal advice has been received by the TSOs to confirm that it would be permissible to extend the current DS3 System Services Regulated Arrangements, subject to the counterparties to the contracts agreeing to the extension. By contrast, alternative arrangements would require a new System Services Code or Contractual Framework.
- **Investment Opportunities:** The extension of the DS3 Regulated Arrangements provides a clear path to FASS for investors in new technologies, allowing participants to develop long-term business cases and focus on preparation for FASS Go-Live, rather than diverting effort and resources towards participating in an interim solution. , The TSOs could not commit to a FASS Go-live date until the design associated with any alternative arrangements delivered prior to FASS were known, introducing further uncertainty to investors' preparatory activities for FASS.
- **Operational Considerations:** The DS3 Regulated Arrangements would persist for a period post-Go-Live of the alternative arrangements to manage a series of close out activities such as resettlements and dispute resolution. The TSOs are not staffed for such activities and will need to hire for additional operational resources.

- **Operational Readiness:** A significant internal and external operational readiness effort would also be required to successfully deliver alternative arrangements. The TSOs would need to manage this effort — including the associated costs which were not incorporated in the original FASS Programme funding application — alongside the operation of the DS3 arrangements and DASSA delivery.

4.4.1. Other LPF Mechanism

As discussed in the consultation, the TSOs have engaged extensively with the RAs on the use of LPF throughout 2023 and through the delivery of our Annual LPF Assessment in 2024. Drawing on this experience, the TSOs estimate that implementing transitional LPF arrangements would require a minimum of 21 months from the point that the design is agreed via a SEMC Decision Paper and subsequent industry consultation, and would require significant effort from the TSOs, RAs and industry alike. Additionally, timelines assume that programme resources would be 100% dedicated to the implementation of transitional arrangements and not DASSA delivery in parallel, ultimately having a material impact on the current scheduled DASSA Go-Live date. The introduction of LPF Arrangements would also place an additional draw on key SMEs across all parties, and may put other large market programs (e.g., Scheduling & Dispatch, Strategic Market Programme) at risk.

As part of the 2024 Annual LPF Assessment, detailed rationale for extending the current DS3 System Services Regulated Arrangements, in place of an interim LPF solution, was set out. In addition, a project plan was drafted detailing relevant workstreams and key activities for the introduction of transitional LPF arrangements, and the plan presented as part of this assessment (including dates) is available Figure 2 below. In this example, the 21-month timeframe is from September 2023, upon receipt of a decision from the SEMC, to the LPF arrangements go-live date in June 2025.

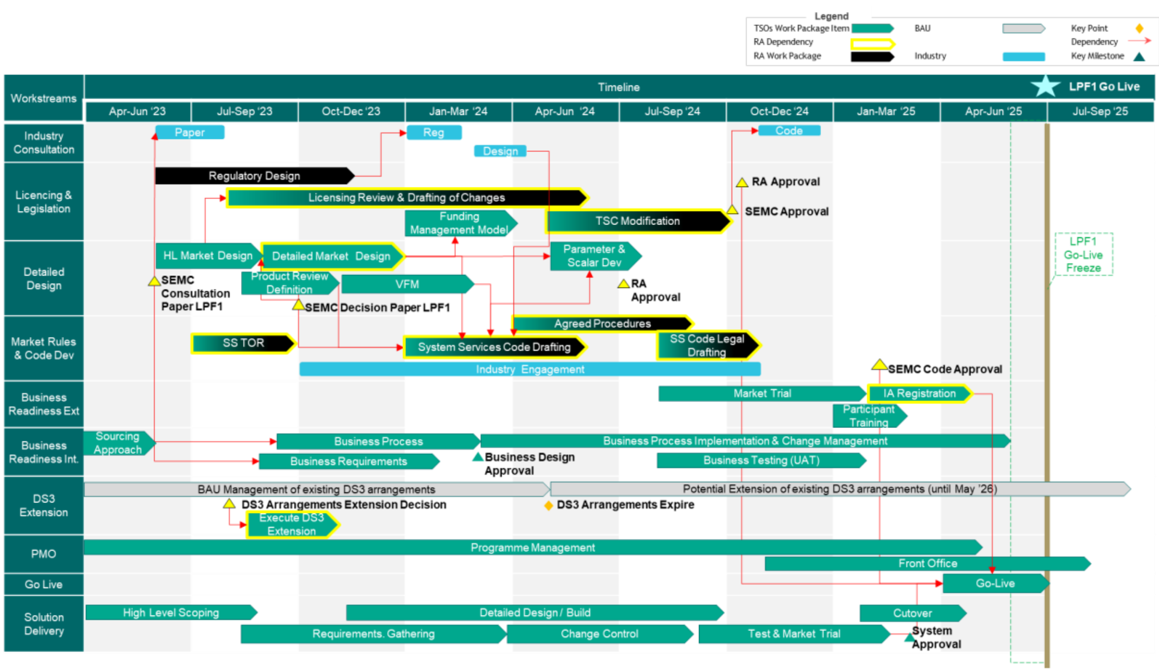

Figure 2: Proposed Project Plan for delivery of Transitional LPF Arrangements (quarterly auction)

4.4.2. Market-based Volume Capped Contracts

In this section, the TSOs will provide additional clarification to address any outstanding queries that would arise regarding the implementation of Fixed Term Contracts. In addition to the specific activities discussed below, the TSOs consider it important to highlight that the implementation of DS3 Volume Capped Arrangements and LCIS involved a significantly lower number of participants. There were only 3 contracts awarded as part of DS3 Volume Capped Arrangements and 4 as part of LCIS phase 1. Given that there are at present more than 280 contract holders associated with DS3 Regulated Arrangements, the effort and scale of work involved would be much greater than previous procurement under Fixed Term Contracts.

An indicative timeline is provided in Figure 4, below. It highlights the critical path activities for Fixed Term Contracts, the overarching FASS Programme plan, and the inherent challenges in progressing both concurrently. Further detail on each of the critical path tasks is included in subsequent sections, including an overview of the numerous parallel activities that must also be undertaken to deliver such an implementation. All timelines assume that resources are readily available by the TSOs to commence work immediately per schedule outlined.

Importantly, as illustrated, Market-based Volume Capped Contracts (with or without an availability requirement) cannot be implemented by April 2026 when the DS3 Regulated Arrangements are due to expire. Such contracts would necessitate delays to the DASSA Go-Live as key SMEs would need to be reassigned to work on this implementation, resulting in a further impact on schedule driven by delays to programme deliverables, i.e., FASS consultations. While parallel delivery in so far as possible alongside the DASSA implementation period has been assumed, material delays to the planned Go Live are nonetheless expected.

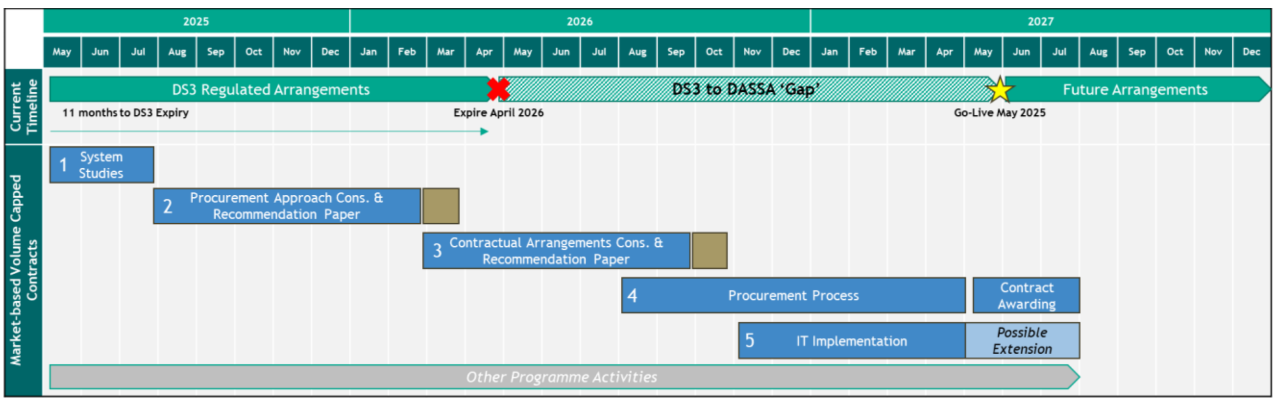

Figure 3: Indicative Timeline for Fixed Term Contracts

1. Required Studies (~3 Months)

- **Study Approach & Design: 1 Month**
  The initial phase focuses on developing a comprehensive methodology for the system studies and identifying and securing time from the correct Subject Matter Experts. This involves defining the approach for evaluating and determining the volumes of system services to be procured to allow for safe and secure operation of the power system.
- **Technical Needs Assessment: 1.5 Months**
  The technical assessment will identify the volumes required ensuring that the continued correct volume and quantity of services are procured such that system security is maintained. For Option 2, while there would be no availability requirement (the key objective being to minimise energy market distortions), studies would be required to determine the appropriate volume of each service to procure above what is required under the Grid Code. An important consideration is that there would be no change to Scheduling and Dispatch processes, meaning that units who are not awarded a fixed term contract would have no means to be remunerated for any System Services they may provide. For Option 3 that does include an availability

requirement, analysis of volumes is also the focus. Like Option 2, the issue of Scheduling and Dispatch remaining unchanged would also require careful consideration.

- **Reporting & Recommendations: 0.5 Month**

  A final report summarising the results of the system studies, including the appropriate volumes to be procured and addressing issues regarding remuneration of units as detailed above.

2. Procurement Approach (~8 Months)

- **Design and Agreed 'Minded to Position' with RAs: 3 Months**

  RA-TSO tasks involved in developing a secure and robust procurement approach, including a thorough evaluation of procurement processes, drafting of summary documentation, RA collaboration and refinement of the TSOs' proposals following feedback, and finally RA agreement. The output from the technical needs assessment is a key input to this activity.

- **Consultation Period: 2.5 Months**

  Drafting and release of the first consultation, which will outline the proposed approach, the service volumes required, and any considerations based on system study results.

- **Recommendation Paper: 1.5 Months**

  Summarising stakeholder feedback and providing the TSOs' recommendation paper to the SEMC, including any adjustments to the initial proposals based on the consultation.

- **SEMC Decision: 1 Month**

  Time allocated for the SEMC to release its decision based on the TSOs' recommendation. In total, the TSOs' expect the entire process to take approximately 8-months, and while some learnings can be drawn from the implementation of similar contracts (e.g., LCIS), the expected number of contract holders is significantly higher, introducing additional complexity that directly affects the timeline. The TSOs also draw on experience in delivering end-to-end consultations, and note, even under optimal conditions (timely design activities, minimal delays in RA-TSO agreements and SEMC decisions), the full process required 10 to 12 months. Although the scope for this the consultation is arguably narrower than previous cases, the procedure is nonetheless complex.

3. Contractual Arrangements (~8 Months)

- **Design and Agreed 'Minded to Position' with RAs: 3 Months**

  Following SEMC direction on procurement approach and volume requirements, a second round of engagement with the RAs is required to develop and design the contractual arrangements, considering the added complexity of designing contracts to accommodate the multiple technologies from different service providers. An approved procurement approach is needed as input to undertake this activity.

- **Consultation Period: 2.5 Months**

  Drafting and release of the second consultation, will translate the agreed procurement process and volume requirements into a detailed, implementable protocol that aligns with regulatory obligations and stakeholder expectations.

- **Recommendation Paper: 1.5 Months**

  Summarising stakeholder feedback and providing the TSOs' recommendation paper, which outlines the TSOs' proposals for Grid Code modifications, qualification processes, and performance obligations under the Market-based Volume Capped contracts.

- **SEMC Decision: 1 Month**
  Time allocated for SEMC decision. Note that as the definition of the contractual arrangements depends on the outcome of the initial consultation, the two end-to-end processes must be done sequentially — there is no scope to run them in parallel.

4. Procurement & Vendor Award (~12 Months)

- **Implement Procurement Approach: 5 Months**

  Following the completion of the two consultations and subsequent SEMC decisions, the procurement process could commence. Based on the TSOs' experience with current DS3 Gates and LCIS, this process entails preparation of pre-qualification questionnaires, as well as preparation of additional procurement forms for up to 280 service providers.

- **Procurement Period: 2 Months**

  A defined period for service providers to review the procurement documentation, seek clarification (provided the alternative arrangements require significant changes to business processes and supporting systems), and submit their tenders.

- **Tender Evaluation: 2 Months**

  A detailed evaluation of submitted tenders by the TSOs, involving testing of technical capability and validation that submissions meet all regulatory requirements.

- **Publish Results & Contract Award: 3 Months**

  Preparation and award of legal contracts, as well as publication of results and period for service providers to respond. At present a DS3 Gate lasts six months (from publication of the procurement notice to contract execution), so the TSOs would estimate at the very least 12 months for the procurement process for fixed term contracts given the number of additional tenderers relative to a typical DS3 Procurement Gate and the development of procurement documentation associated with new arrangements.

5. IT Implementation (~5 - 8 Months)

- **Vendor Contracting: 1.5 Months**

  Drawing from past implementations, effective IT mobilisation, encompassing contracting negotiations, vendor award and onboarding, requires considerable effort and often extends timelines. Timelines assume that the delivery of alternative arrangements could be developed as part of extension to existing vendor arrangements.

- **Requirements & Detailed Design: 1.5 Months**

  Implementing new IT systems represents a very significant commitment of both time and resources. In this case, for marked-based volume capped contracts, requirements for two IT systems are required. First, a new auction capability, and then either a new or substantially amended settlement system. Beyond this, additional IT infrastructure such as software licensing and hardware provisioning must also be addressed — all of which require a significant resourcing uplift from multiple teams across the TSOs, with material implications for other large market programmes.

- **System Delivery & Testing: 2 - 5 Months**

  Following this, system updates and rigorous functional, security and performance testing must be carried out to ensure system security and reliability. In total, The TSOs anticipate that such an implementation would require, at the very minimum, five to 8 months but could be longer in event of quality issues with IT systems delivered. This estimate is extended in the case of an availability requirement, given the contracting uplift required. However, the TSOs highlight that these timeframes represent a best-case scenario and it should also be noted from the outset that no firm commitment can be provided on IT timelines until the design of procurement activity is known at the end of step 2 and an IT vendor has committed to working to programme schedule. Drawing from past implementations, each of these steps above adds to the complexity, and typically, the duration of an IT implementation, highlighting the substantial effort required to ensure IT readiness.

4.5. Implementation Requirements associated with an Extension of Current Arrangements

Several participants sought clarification on the proposed 3-month implementation timeline associated with the extension of the DS3 Regulated Arrangements. For example, one response noted that the '*three-month timeframe for option 4 lacks a clear rationale*.'

Some responses also requested clarity on the use of side letters. For instance, one respondent queried what would happen in the event that the DASSA arrangements Go-live date occurred at a different time to non-reserve services.

TSOs' Response

Within the Consultation paper the TSOs provided a timeline of 3 months for implementation of an extension to the current DS3 Arrangements. Given that the contractual end date of the DS3 Regulated Arrangements is defined within individual contracts, it can only be amended by mutual consent of contract holders and the relevant TSO. Extension of the arrangements therefore requires that a 'side letter' (a legal tool to enable amendment to an existing contract) to this effect be issued for each agreement and be signed electronically by both the relevant TSO and individual contract holder.

The extension required for The Gap period would be implemented as per previous extensions following previous SEMC decisions to extend DS3 arrangements[16]. It was the TSOs experience based on these previous extensions that a period of 3 months is required to ensure all side letters are signed by appropriate parties associated with more than 280 contracts. While a significant proportion of side letters were completed in a shorter timeframe, due to exceptions relating to appropriate signees being on extended leave or having moved to different positions, there was additional time required to complete this process.

With regard to the possibility of different go-live dates for reserve and non-reserve services, as per existing arrangements, all or a subset of services may be amended as part of a side letter to an existing contract. The side letter would also incorporate the specific triggers relating to reserve and non-reserve services in the event that the Go-live dates for reserve and non-reserve services are different.

As per previous extensions to DS3 arrangements, the execution of the required side letter could be incorporated within a side letter arising due to a contract amendment due to participation in a DS3 procurement Gate to minimise administrative overhead.

[16] SEM Decision Paper SEM-21-021 published on 30 March 2021 stated that the SEMC had decided to extend the Regulated Arrangements, and associated contracts, for a period of 12 months, to 30 April 2024. The SEMC as part of its SSFA Phase III: Detailed Design & Implementation Decision paper (SEM-23-103) decided to extend the DS3 Regulated Arrangements by a period of 24 months. The TSOs implemented the SEMC decision, meaning the revised expiration date for these contracts is currently 30th April 2026

4.6. Market Physical Ruleset

A number of participants referred to the recent Market Physical Ruleset Consultation[17] for which the TSOs' were minded to not implement a change to this ruleset. A number of participants stated that they had supported the TSO proposed option for no change to this ruleset on the basis that FASS would Go-Live by December 2026 and that given there is now a delay that their views have changed. For instance, one respondent noted, *'The System Services ruleset was consulted on recently and industry was clear that we wanted to progress to FASS and not focus overly on the ruleset, so long as the DS3 arrangements were not extended again.'*

TSOs' Response

The TSOs acknowledge these concerns and advise that these will be addressed as part of the consultation process for the Market Physical Ruleset.

5. TSOs' Recommendation and Next Steps

Following the consultation period and the contributions received as part of the consultation process, it is the recommendation of the TSOs that the current DS3 Arrangements be extended to ensure procurement of System Services during The Gap as presented in section 3 of this recommendations paper.

We make ourselves available to the RAs to discuss any aspects of this recommendation, including the comments received during the consultation process, should such discussion prove useful during the decision-making process.

[17] DS3 System Services Market Ruleset Consultation | SONI Consultation Portal & DS3 System Services Market Ruleset Consultation.pdf