FASS Programme

Day-Ahead System Services Auction (DASSA) Design Recommendations Paper V1.0

July 2024

SONI EirGrid

Preface

As Transmission System Operators (TSOs), SONI and EirGrid are separately bound by national and European legislation. Under the Climate Action and Low Carbon Development (Amendment) Act 2021[1] and the Climate Action Plan 2023[2] (CAP23) in Ireland, carbon budgets and the Climate Change Act (Northern Ireland) 2022[3] in Northern Ireland, the TSOs are each separately responsible for delivering low-carbon reserve services to support the 2030 decarbonisation targets in their respective jurisdictions.

At a European level, the Clean Energy Package (CEP)[4] has set the foundation for a new electricity market design with the objective of modernising Europe's electricity market, promoting enhanced flexibility and integrating renewable energy through market driven solutions. The CEP builds on the Electricity Balancing Guideline (EBGL)[5] Network Code, directing each TSO to procure system services in an efficient, economic and market-based manner for their jurisdiction. In particular, the legislation directs that balancing capacity (reserve services) should be procured on a short-term basis to the extent possible with a derogation required for contracting periods longer than one day.

To accommodate these regulatory adjustments, the SEM Committee (SEMC) published its High-Level Design (HLD) in SEM-22-012[6] in April 2022. The High-Level Design laid out a phased introduction of a range of market arrangements to facilitate the move to a competitive framework for the procurement of reserves, including delivery of the Day Ahead System Services Auction (DASSA).

In December 2023, the SEMC published their decision (SEM-23-103)[7] on the System Services Future Arrangements, which requested that the TSOs consult on the Day Ahead System Services Auction (DASSA) detailed design and submit associated recommendation papers to the SEMC in 2024.

System services are a crucial component of the overall secure operation of the power system and are a key element of the revenue stack for investors in the Irish and Northern Irish power systems. The DS3 System Services Regulated Arrangements have supported the Single Electricity Market in becoming a world leader in respect of the amount of variable renewable electricity it can accommodate. However, the current arrangements were designed for 2020 targets, i.e.: 40% on average of electrical demand coming from renewable sources and compensate providers for service availability based on fixed tariff rates.

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.

Role of TSOs

As TSOs, we are responsible for ensuring the availability of all necessary ancillary (system) services to maintain a secure, reliable, and efficient electricity system[8] in both respective jurisdictions. To achieve our respective 2030 targets, and to demonstrate leadership in the electricity sector in respect of sustainability and decarbonisation, we need to re-examine the services that we procure, the volume of services that we need and to support the Regulatory Authorities in providing the commercial incentives to provide the correct investment in service provision from low-carbon technologies.

[1] Climate Action and Low Carbon Development (Amendment) Bill 2021 (gov.ie)
[2] Climate Action Plan 2023 (gov.ie)
[3] Climate Change Act (Northern Ireland) 2022 (legislation.gov.uk)
[4] Regulation (EU) 2019/943 on the internal market for electricity (eur-lex.europa.eu), Directive (EU) 2019/944 on common rules for the internal market for electricity and amending Directive 2012/27/EU (eurlex.europa.eu)
[5] Regulation (EU) 2017/2195 establishing a guideline on electricity balancing (EGBL) (eur-lex.europa.eu)
[6] SEM-22-012 System Services Future Arrangements High Level Design Decision Paper.pdf (semcommittee.com)
[7] SEM-23-103 System Services Future Arrangements Phase III: Detailed Design & Implementation Decision Paper.pdf (semcommittee.com)
[8] Directive (EU) 2019/944, Article 40.

Further, under EU Legislation (the Clean Energy Package and Electricity Balancing Guideline), we are required to procure reserve services competitively close to real-time. To meet these requirements, and to deliver value to consumers in Ireland and Northern Ireland, the TSOs, together with our strategic partners, have developed recommendations for the DASSA detailed design which are detailed in this paper, following the consideration of stakeholder feedback submitted as part of the DASSA design consultation.

Previous work in this area

Before reading this recommendations paper, we recommend the following readings:

Table 1. Recommended Pre-Reading

Published by	Document Name	Document Reference	Link
SEM Committee	System Services Future Arrangements High Level Design Decision	SEM-22-012	link
SEM Committee	System Services Future Arrangements Phase III: Detailed Design & Implementation Phased Implementation Roadmap for the System Services High Level Design Decision Paper	SEM-23-103	link
DotEcon/ Afry	Future Arrangements for System Services (FASS) Proposals for enduring arrangements and transition	DotEcon Afry Recommendations Paper	EirGrid link, SONI link
TSOs	Supporting cover note from SONI and EirGrid on DotEcon proposal for enduring arrangements and transition	DotEcon Afry Recommendations Paper - Supporting Note	EirGrid link, SONI link
TSOs	FASS – Proposals for enduring arrangements and transition - DotEcon / Afry Industry Workshop presentation	DotEcon Afry Workshop Slides	EirGrid link, SONI link
TSOs	DotEcon/Afry Proposals for enduring arrangements and transition - Questions captured in the 20th September Industry Workshop and TSOs' responses	DotEcon Afry Workshop Q&A	EirGrid link, SONI link
TSOs	DASSA Design Consultation Paper	DASSA Consultation Paper	EirGrid link, SONI link
TSOs	DASSA Product Review & Locational Methodology Consultation Paper	DASSA Product Review & Locational Methodology Consultation Paper	EirGrid link, SONI link

This recommendations paper is the culmination of a comprehensive, collaborative development process for the DASSA involving the TSOs, the Regulatory Authorities, the TSOs' auction design partners DotEcon and Afry and industry stakeholders.

The TSOs' Phased Implementation Roadmap (PIR)[9] outlining the programme timeline, scope, and key dependencies (e.g.: programme funding, timely decision making etc.) for delivering the Future Arrangements for System Services is published on the SONI and EirGrid websites. The next iteration of the roadmap, providing further granularity on programme deliverables over the next 12 months, will be published in September 2024.

[9] FASS TSOs PIR March 2024 (cms.eirgrid.ie), FASS TSOs PIR March 2024 (soni.ltd.uk).

Executive Summary

In the SEM-23-103 Decision on the System Services Future Arrangements, the SEM Committee requested that the TSOs consult on the Day Ahead System Services Auction (DASSA) Detailed Design and submit associated recommendation papers to the SEM Committee.

The DASSA is one component of the wider Future Arrangements for System Services (FASS) programme. In summary, the FASS programme arrangements consist of the following components:

Table 2. Components of the FASS Programme

FASS Component	Description	Timeline
Day Ahead System Services Auction (DASSA) Arrangements	Daily auction and associated market arrangements. This is a requirement based on EU regulations and direction from the SEM Committee.	December 2026
Fixed Term Contracts	Procurement of fixed term contracts and development of future products (e.g.: Low Carbon Inertia Service (LCIS))	TBC, as required by product. LCIS Phase 1
Product Review, Volume Forecasting and Locational Methodology	Ensuring that the system services we procure and the volumes obtained enable the TSOs to operate the power system with higher levels of renewables.	2024 (reserve services) 2025 (non-reserve services)
Layered Procurement Framework	Procurement of services at timeframes greater than one day and less than one year	Pending outcome of annual assessment

This recommendations paper focuses on the first component and sets out SONI and EirGrid's recommendations for the design of the Day Ahead System Services Auction (DASSA).

On 15 March 2024, the TSOs published the DASSA Design Consultation Paper. Stakeholders were invited to provide feedback on our proposals, which were the outcome of a comprehensive development process. The consultation period closed on 24 May 2024, inclusive of an extension of two weeks to the consultation period, as requested by industry. The TSOs received 16 responses to the consultation.

In this paper, SONI and EirGrid recap the proposals and questions set out in the consultation paper, summarise the feedback received from industry stakeholders, address the comments made by respondents and outline the final recommendations for the DASSA design.

An overview of the DASSA design is presented in Figure 1 below.

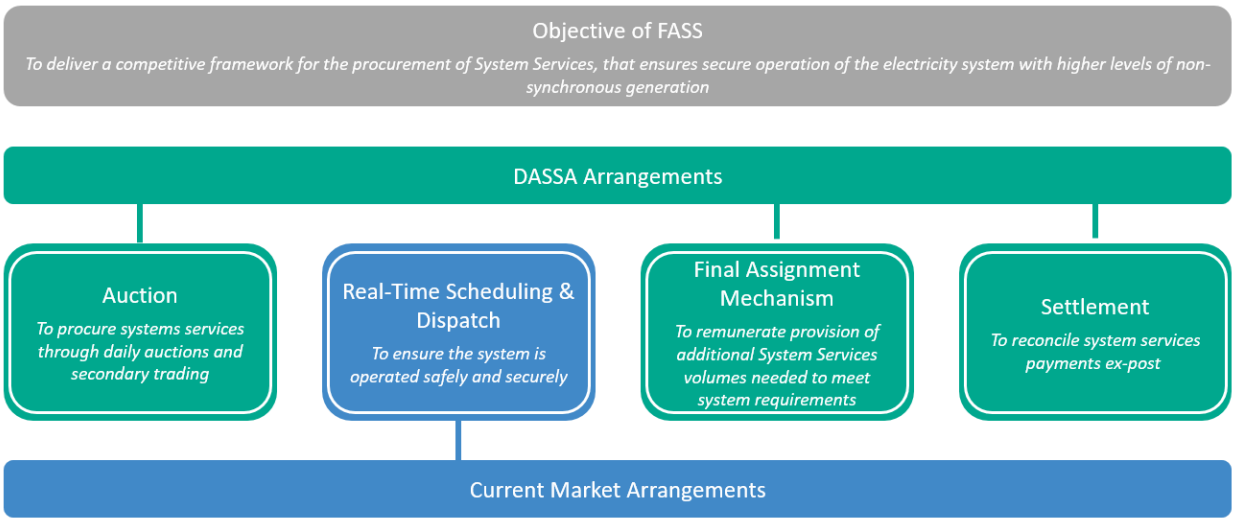

Figure 1. Overview of the DASSA Design

The key recommendations made in this paper are:

- The DASSA will initially procure reserve services on an all-island basis, while meeting both TSOs' jurisdictional reserve requirements, with sufficient flexibility in the auction design to allow for the procurement of other system services if required at a later stage. The definition of the reserve services to be procured in the DASSA will be subject to the outcome of the DASSA Product Review & Locational Methodology consultation.
- The DASSA gate closure time will take place at 15:30 with results to be published 30 minutes later. It will procure system services for a 24-hour Auction Timeframe starting at 23:00 day-ahead and ending at 23:00 the next day.
- Service providers will be able to submit 'simple' bids for each service with no interdependency between bids. Subject to the outcome of the DASSA Product Review & Locational Methodology consultation, the procurement of an explicit bundle of services as an individual product will be facilitated.
- The DASSA will be cleared on a pay-as-cleared basis per Trading Period (30-minute interval) for Ireland and Northern Ireland, subject to certain constraints.
- A DASSA Order, and associated commitment obligation, will be allocated to auction winners for each service for each Trading Period within the Auction Timeframe. Performance incentives will apply to DASSA Orders.
- Secondary trading will take place after the DASSA results are published and up to 60 minutes before the relevant Trading Period. Buy and Sell orders will be placed on an automated central trading platform, to be operational from the go-live of the DASSA arrangements. Bilateral trading will also be facilitated from go-live.
- Where service volume requirements are not fully met by DASSA Order Holders, an ex-post reconciliation mechanism, the Final Assignment Mechanism (FAM), will be used to remunerate service providers who made themselves available to meet these volume requirements, on a merit order basis.
- Service providers will be required to register with the TSOs and accede to the System Services Code in order to participate in the DASSA arrangements. The qualification process will leverage the established system services testing regime, adapted as required for new or amended services.
- Settlement for the DASSA arrangements will take place monthly in arrears.

- The Layered Procurement Framework, fixed term contracts and forwards markets will also be considered as part of the surrounding DASSA arrangements. The TSOs will assess how these procurement mechanisms can be used under separate workstreams.

Each of the TSOs' recommendations on the design of the DASSA are summarised further in Table 3 below. This table includes a summary and rationale for each of the recommendations, as well as coloured indicators for the alignment of industry feedback with the TSOs' original proposals, the complexity of implementing industry feedback and the alignment of the final recommendations with industry requirements.

These recommendations have been informed by the SEM Committee's decisions in this area, the SEM Committee's objective and assessment criteria in the design of competitive arrangements for system services, the TSOs' development process for the DASSA and the feedback received to the consultation.

This recommendations paper has been submitted to the SEM Committee to be considered ahead of the SEM Committee decision on the DASSA design.

Table 3. DASSA Recommendations Summary

#	Question	Industry Feedback on TSOs' Cons. Proposal	Complexity of Implementing Industry Feedback	Change to TSOs' Cons. Proposal	TSOs' Rec. meets Industry Requirements	TSOs' Recommendation	Rationale for Recommendation
1	*Do you have any comments on the services to be procured under the DASSA?*	Partial Support	Medium	No change, additional clarification provided	Medium	DASSA to initially procure reserve services, individually or as an explicit bundle; reserve service definitions will be subject to the outcome of the Product Review & Locational Methodology Consultation. DASSA to allow for the application of operational requirements to the procurement of services, and for the future procurement of non-reserve services.	Recommendation aligns with relevant decisions and legislation. Dependency on outcome of reserve services product review.
2	*Do you have any comments on the timing of the execution of the DASSA?*	Partial Support	High	Significant change	Medium	DASSA to be executed at 15:30 daily with results to be published 30 minutes later.	Recommended DASSA execution time allows more time for participants to consider their market positions compared to proposal, and reduces the risks associated with running DASSA during a congested period.
3	*Do you have any comments on the DASSA Auction Timeframe?*	Broad Support	Low	No change	High	DASSA to procure system services for a 24-hour Auction Timeframe starting at 23:00 day-ahead (D-1) and ending at 23:00 next day (D).	Recommended DASSA Auction Timeframe aligns with the European Day-Ahead Market and the DAM.
4	*Do you have any comments on the proposed Trading Period duration?*	Broad Support	Low	No change	High	DASSA Trading Period duration to be 30-minutes. DASSA design to be compatible with other Trading Period durations that may be introduced in future.	Recommended DASSA Trading Period aligns with settlement periods for the Balancing Market and existing DS3 Regulated System Services Arrangements.
5	*Do you have any comments on the publication of the volume requirements for the DASSA?*	Partial Support	Medium	No change, additional clarification provided	High	DASSA volume requirements for each system service/explicit bundle to be published on the day of the auction (D-1), providing a reasonable time period prior to the gate closure of the DASSA. The precise timing will be subject to a decision on the timing of DASSA gate closure and the outcome of the volumes forecasting consultation.	DASSA volume requirements to be published at a time that allows service providers sufficient time to consider bids in advance of DASSA gate closure.
6	*Do you have any comments on the proposed bidding format and process for the DASSA?*	Low Support	High	No change, additional clarification provided	Medium	Service providers to submit 'simple' bids for each service for each Trading Period, with no interdependency between bids. Bids may be updated up to the time of the DASSA gate closure only. Scarcity price caps to be allowed to address instances of volume insufficiency.	Recommended that 'simple bids' are implemented for initial delivery of DASSA due to additional complexity of delivering complex bids (which are noted as a Day 2 possibility). Procurement of explicit bundles of services examined further in Product Review to address industry concerns on the lack of interdependency between bids.
7	*Do you have any comments on zero-volume DASSA bids?*	Partial Support	Low	Significant change	High	Zero-volume DASSA bids to be facilitated through volume-cap bidding functionality.	Recommended volume-cap bids (Q8) facilitates this functionality, therefore not specifically required.
8	*Do you have any comments on volume-cap DASSA bids?*	Broad Support	Low	No change	High	Volume-Cap DASSA bids to be facilitated to allow for service providers to allocate a portion of their volume into the FAM only.	Recommendation allows variable availability service providers to participate in DASSA with less risk.
9	*Do you have any comments on the proposed approach for the divisibility of bids?*	Broad Support	Low	Minor change, additional	High	Service providers to be allowed to specify whether their DASSA bids are divisible or non-divisible; all DASSA bids be treated as divisible in the FAM.	Recommendation aligns with relevant legislation and allows for more flexibility for service providers. Indivisible bids are not needed for the FAM.

#	Question	Industry Feedback on TSOs' Cons. Proposal	Complexity of Implementing Industry Feedback	Change to TSOs' Cons. Proposal	TSOs' Rec. meets Industry Requirements	TSOs' Recommendation	Rationale for Recommendation
				clarification provided			
10	*Do you have any comments on the proposals for addressing volume insufficiency in the DASSA?*	Low Support	Low	Minor change, additional clarification provided	Medium	Design to allow for a scarcity price cap per service. DASSA volume insufficiency to be addressed by clearing the DASSA at the scarcity price cap and procuring volume deficit via secondary trading at the scarcity price cap.	Recommendation clarifies that the price cap will reflect scarcity. Addressing volume insufficiency in secondary trading at price cap means FAM proposal is no longer required.
11	*Do you have any comments on the DASSA clearing overview?*	Broad Support	Low	No change	High	DASSA auction to be cleared on a 'pay-as-clear' basis per Trading Period.	Recommended 'pay-as-clear' auction incentivises participants to bid according to their costs.
12	*Do you have any comments on the proposals for the design of the objective function defined for the DASSA clearing optimisation problem, including the value functions for operational requirements?*	Partial Support	Medium	No change, additional clarification provided	Medium	DASSA design to allow for the procurement of individual reserve services, explicit and implicit bundles of reserve services, and the application of operational requirements to procure different qualities or types of individual services	Recommended design seeks to minimise the cost of procuring system services, in alignment with EBGL. The objective function will allow for the application of operational requirements at lowest cost. Clarification provided on multiple elements of the recommendation.
13	*Do you have any comments on the constraints to be modelled in the DASSA clearing optimisation problem?*	Partial Support	Medium	No change, additional clarification provided	High	Long-run reserve constraints to be modelled in the DASSA clearing optimisation, as required for system security. Operational requirements to be included as constraints where they are not being included as value functions in the optimisation objective function.	Recommended DASSA design includes long run reserve constraints to provide long-term investment signals. Clarification of the recommendation provided.
14	*Do you have any comments on the proposed options for the clearing price of the daily auctions?*	N/A - Options proposed	N/A	No change	N/A	DASSA design allows for the auction to be cleared with either a uniform all-island clearing price or Zonal Pricing with binding locational constraints.	Recommendation allows for the SEM Committee to decide on the pricing of the DASSA.
15	*Do you have any comments on the proposal to implement a central trading platform from go-live of the DASSA arrangements?*	Broad Support	Low	No change	High	Secondary trading of DASSA Orders to take place via an automated central trading platform, to be operational from the go-live of the DASSA arrangements.	Recommendation is essential to facilitate participation of all technology types in the arrangements and ensure efficient secondary trading.
16	*Do you have any comments on the proposals for the timing of the secondary trading window?*	Partial Support	Low	Minor change	High	Secondary trading of DASSA Orders to take place after the DASSA results are published and up to 60 minutes before the relevant Trading Period.	Recommended secondary trading window now aligns with Balancing Market gate closure.
17	*Do you have any comments on the proposals for placing Buy and Sell Orders?*	Partial Support	Medium	No change, additional clarification provided	Medium	Simple Buy and Sell Orders to be placed on the secondary trading platform for a given service (including bundles of services) and Trading Period(s). Service providers to be able to specify conditions associated with a Buy or Sell Order	Recommendation clarifies that the integrity of bundles of services is to be maintained in order to meet operational requirements.
18	*Do you have any comments on the proposals for the*	Broad Support	Low	No change, additional	High	Buy and Sell Orders to be validated against service provider capabilities and other relevant validation	Recommendation clarifies that the validation process will be automated.

#	Question	Industry Feedback on TSOs' Cons. Proposal	Complexity of Implementing Industry Feedback	Change to TSOs' Cons. Proposal	TSOs' Rec. meets Industry Requirements	TSOs' Recommendation	Rationale for Recommendation
	validation of Buy and Sell Orders?			clarification provided		checks to ensure that all secondary trading of Orders is feasible.	
19	*Do you have any comments on the TSOs' preferred approach to match Orders on a first-come first-serve basis?*	Broad Support	Low	No change, additional clarification provided	High	Matching of Buy and Sell Orders in secondary trading to be done on a rolling first-come first served basis.	Recommended matching process is broadly supported by industry; additional rationale for recommendation provided.
20	*Do you have any comments on the proposals for placing bilateral trades?*	Partial Support	Low	No change, additional clarification provided	Medium	Bilateral secondary trading of DASSA Orders to be facilitated.	Recommendation aligns with SEMC Decision on this matter. TSOs' commentary addresses industry concerns.
21	*Do you have any comments on the TSOs' preferred approach to allow secondary trades between imperfect substitutes?*	Broad Support	Low	No change, additional clarification provided	High	Secondary trades to be allowed between imperfectly substitutable service providers.	Recommendation is broadly supported by industry.
22	*Do you have any comments on the assessment of market power in secondary trading?*	Partial Support	N/A	N/A	N/A	No recommendation.	No recommendation. Industry comments addressed.
23	*Do you have a view on the TSOs participating in secondary trading?*	Low Support	Low	No change, additional clarification provided	Medium	TSOs to participate in secondary trading in the event of volume insufficiency in the DASSA; DASSA scarcity price cap to be applied to DASSA Orders in such instances.	Recommendation clarifies that this action would only be undertaken in exceptional circumstances during times of scarcity.
24	*Do you have any comment on the proposed commitment obligation overview?*	Partial Support	Medium	No change, additional clarification provided	Medium	The evaluation of DASSA Order holders' commitment obligations to be as set out in Section 6.1 of the consultation paper.	Recommendation includes clarification and justification on elements of commitment obligation and incentive process.
25	*Do you have any comment on the proposed commitment obligation and incentive process?*	Partial Support	Medium	Minor change	Medium	The commitment and obligation process is as per Section 6.2 of the consultation with one small amendment.	Recommendation clarifies a step in the commitment obligation and incentive process, which was previously advised at the consultation workshop.
26	*Do you have any comments on the alternatives for the determination of the Compensation Payment?*	N/A - Options proposed	N/A	N/A	N/A	No recommendation.	No recommendation. The TSOs will engage further with industry on this matter which will be set out in the next iteration of PIR.
N/A	*Performance Scalars*	Low Support	N/A	N/A	N/A	No recommendation.	No recommendation. The TSOs will engage further with industry on this matter which will be set out in the next iteration of PIR.
27	*Do you have any comments on the proposal for determining the FAM volume requirement?*	Broad Support	Low	Minor change	High	FAM volume requirement to be calculated ex-post, based on the difference between the DASSA volume requirement and the actual total availability of DASSA Order holders in real time. Evaluation of balancing energy delivered has been removed from	Recommendation is broadly supported by industry; balancing energy delivery removed from the calculation due to potential delays in the availability of this data.

#	Question	Industry Feedback on TSOs' Cons. Proposal	Complexity of Implementing Industry Feedback	Change to TSOs' Cons. Proposal	TSOs' Rec. meets Industry Requirements	TSOs' Recommendation	Rationale for Recommendation
						calculation. The FAM volume requirement will not consider any system changes after the execution of the daily auction.	
28	*Do you have any comments on the proposed methods for establishing the Adjusted Supply Functions for FAM payments?*	Partial Support	High	No change, additional clarification provided	Medium	FAM adjusted supply functions established by TSOs based on the available data to be considered for FAM payments.	Recommendation aligns with EBGL with regard to the inability of service providers to update their DASSA bids for the FAM.
29	*Do you have any comments on the FAM clearing and FAM Assignments?*	Broad Support	Low	No change	High	Service providers who are in receipt of a FAM Assignment to be paid the FAM clearing price.	Recommendation is broadly supported by industry.
30	*Do you have any comments on the considerations for determining the default price?*	Partial Support	Low	No change, additional clarification provided	High	FAM default price to apply to service providers who do not submit a bid into the daily auction. The value of the FAM default price to be established by the Regulatory Authorities in conjunction with the TSOs.	Recommendation includes clarity on the rationale of a default price applying to services providers who did not bid in the DASSA.
31	*Do you have any comments on constraints in the FAM?*	Partial Support	Medium	Minor change	Medium	DASSA and Secondary Trading constraints to be met in the FAM. Temporary locational constraints not to be specifically modelled in the FAM, other than what may be captured in the calculation of service providers' availability.	Recommendation clarifies that a network model will not be used in the FAM.
32	*Do you have any comments on the obligation for service providers to declare availability irrespective of whether they hold a DASSA Order for the service volume?*	Partial Support	Low	No change, additional clarification provided	Medium	Service providers to be obligated to declare their availability to provide a service to the TSOs if they are technically capable of doing so, irrespective of whether they hold a DASSA Order for the service volume.	Recommendation reiterates the rationale for the service availability requirement; the TSOs will engage further with industry on this matter as part of the industry readiness workstream.
33	*Do you have any comments on the TSOs' approach to the inclusion of distinct locational constraints into the DASSA arrangements and on the requirement to implement Firm Access for system services?*	Partial Support	N/A	N/A	N/A	No recommendation.	No recommendation. Clarification that Firm Access design has to be consulted upon and functionality will not be included in initial implementation of DASSA.
34	*Do you have any comments on the proposals for registration in the DASSA arrangements?*	Broad Support	Low	No change	High	Service providers to register to participate in the DASSA arrangements on a rolling basis; process to be completed, including qualification, within 90 days. Registered service providers must accede to system services code.	Recommendation is broadly supported by industry.
35	*Do you have any comments on the proposals for qualification in the DASSA arrangements?*	Broad Support	Low	No change	High	TSOs to leverage the established system services testing regime for the DASSA qualification process and adapt it where required for new or amended services. Where possible, existing qualified DS3	Recommendation is broadly supported by industry.

#	Question	Industry Feedback on TSOs' Cons. Proposal	Complexity of Implementing Industry Feedback	Change to TSOs' Cons. Proposal	TSOs' Rec. meets Industry Requirements	TSOs' Recommendation	Rationale for Recommendation
						capability to be transferred to the DASSA arrangements during the registration process.	
36	*Do you have any comments on the proposals for the DASSA settlement period?*	Broad Support	Low	No change, additional clarification provided	High	Timing of the settlement of the DASSA arrangements to be monthly in arrears.	Recommendation is broadly supported by industry; aligns with existing settlement of system services under DS3.
37	*Do you have any comments on considerations for the introduction of forwards markets in the SSFA?*	Partial Support	N/A	N/A	N/A	No recommendation.	No recommendation. The TSOs will engage further with industry on this matter, which will be set out in the next iteration of PIR.
38	*Do you have any comments on the considerations for the migration to the DASSA Arrangements?*	Partial Support	N/A	N/A	N/A	No recommendation.	No recommendation. Industry comments acknowledged. The TSOs will engage further with industry on this matter via industry readiness workstream.
39	*Do you have any comments on the interaction of the DASSA with the SEM?*	Partial Support	N/A	N/A	N/A	No recommendation.	No recommendation. Comprehensive feedback given to consultation responses.
40	*Do you have any comments on the interaction of the DASSA with European markets following the completion of the Celtic interconnector?*	Partial Support	N/A	N/A	N/A	No recommendation.	No recommendation. Comprehensive feedback given to consultation responses.

Contents

Revision History		
Revision	**Date**	**Description**

1 Introduction

1.1 Purpose of Paper

This paper sets out SONI and EirGrid's recommendations for the design of the DASSA, which aims to establish a robust framework for the procurement of system services on a day-ahead basis.

In the sections below, the TSOs recap the proposals and questions set out in the DASSA Design Consultation Paper, summarise the feedback received from industry stakeholders, address the comments made by respondents and outline the final recommendations for the DASSA design. The proposed DASSA auction framework design reflects the collaborative engagement process that the TSOs have undertaken with the Regulatory Authorities, industry stakeholders and our strategic auction design partners DotEcon and Afry, incorporating their insights and perspectives.

The design recommendations presented in this paper are subject to approval by the SEM Committee and are intended to align with the broader objectives of the System Services Future Arrangements initiative.

1.2 EirGrid plc and SONI Ltd

EirGrid plc is the licenced electricity Transmission System Operator (TSO) in Ireland, and SONI Ltd is the licensed TSO in Northern Ireland. Both organisations hold Market Operator (MO) licences for their respective regions. Together, they operate as the Single Electricity Market Operator (SEMO), which operates the Single Electricity Market (SEM) on the island of Ireland.

1.3 Development of DASSA Recommendations

This recommendations paper has evolved through a structured process of collaboration and stakeholder engagement.

On 15 March 2024, the TSOs published our consultation paper on the design of the DASSA. The consultation paper contained 40 questions. The TSOs facilitated an industry workshop on 24 April 2024, to support the consultation process; worked examples of our proposals were presented. Originally scheduled to conclude on May 10th, the consultation period was extended to May 24th to facilitate comprehensive industry feedback. Sixteen responses were received, which have informed the development of the TSOs' final recommendations.

The consultation process was preceded by a period of extensive collaboration and engagement on the design of the DASSA, involving the Regulatory Authorities, our auction design partners DotEcon and Afry and industry stakeholders. A key output of this process was the publication of DotEcon and Afry's Future Arrangements for System Services (FASS) Proposals for Enduring Arrangements and Transition paper[10] on 7 September 2023, setting out our partners' initial recommendations for the design of the DASSA. The TSOs subsequently hosted an industry workshop and bilateral meetings with industry to facilitate discussion on the design.

The TSOs will be submitting this recommendations paper to the SEM Committee for consideration at its August 2024 session. The TSOs expect that the SEM Committee will publish its decision on the DASSA design shortly thereafter.

Figure 2 below illustrates the design process for the DASSA, including SEM Committee decisions and development by the TSOs and their partners.

[10] DotEcon/Afry Recommendations Paper September 2023.pdf (eirgridgroup.com), DotEcon/Afry Recommendations Paper September 2023.pdf (soni.ltd.uk)

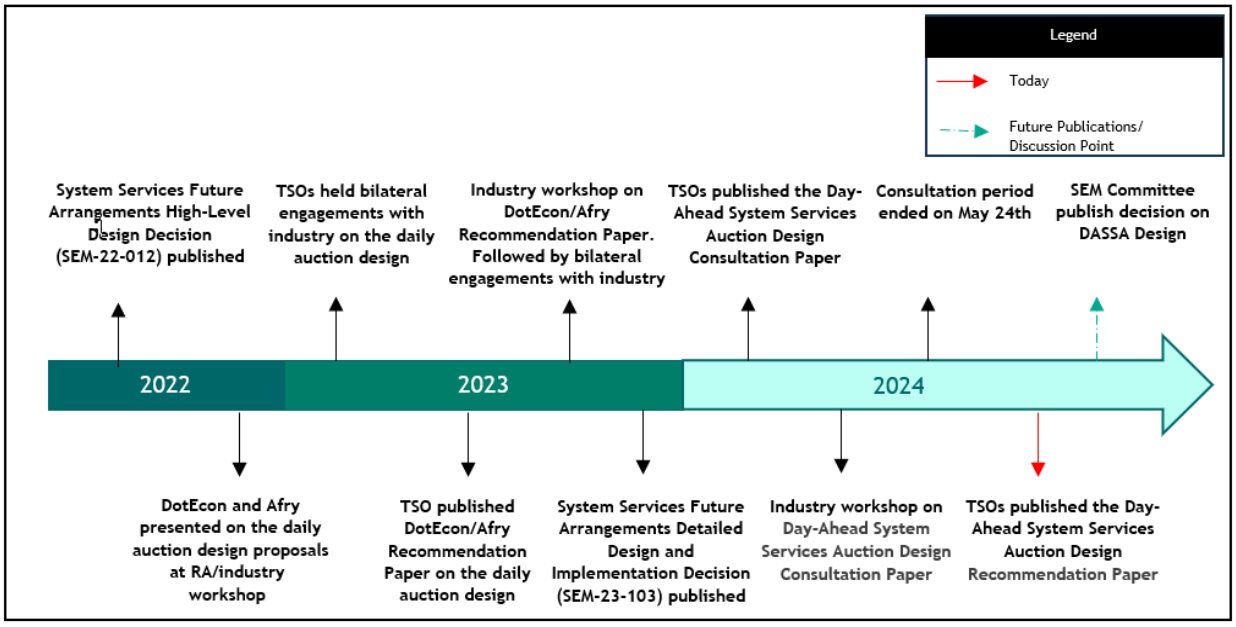

Figure 2. DASSA Design Recommendation Timeline

1.4 Phased Implementation Roadmap

The relevant workstreams and projected timelines within the FASS project are detailed in the Phased Implementation Roadmap (PIR) which was published on 13 March 2024 by the TSOs on the EirGrid[11] and SONI[12] websites. The PIR is shown in Figure 3 and Figure 4 below.

[11] FASS TSOs PIR March 2024 (cms.eirgrid.ie)
[12] FASS TSOs PIR March 2024 (soni.ltd.uk)

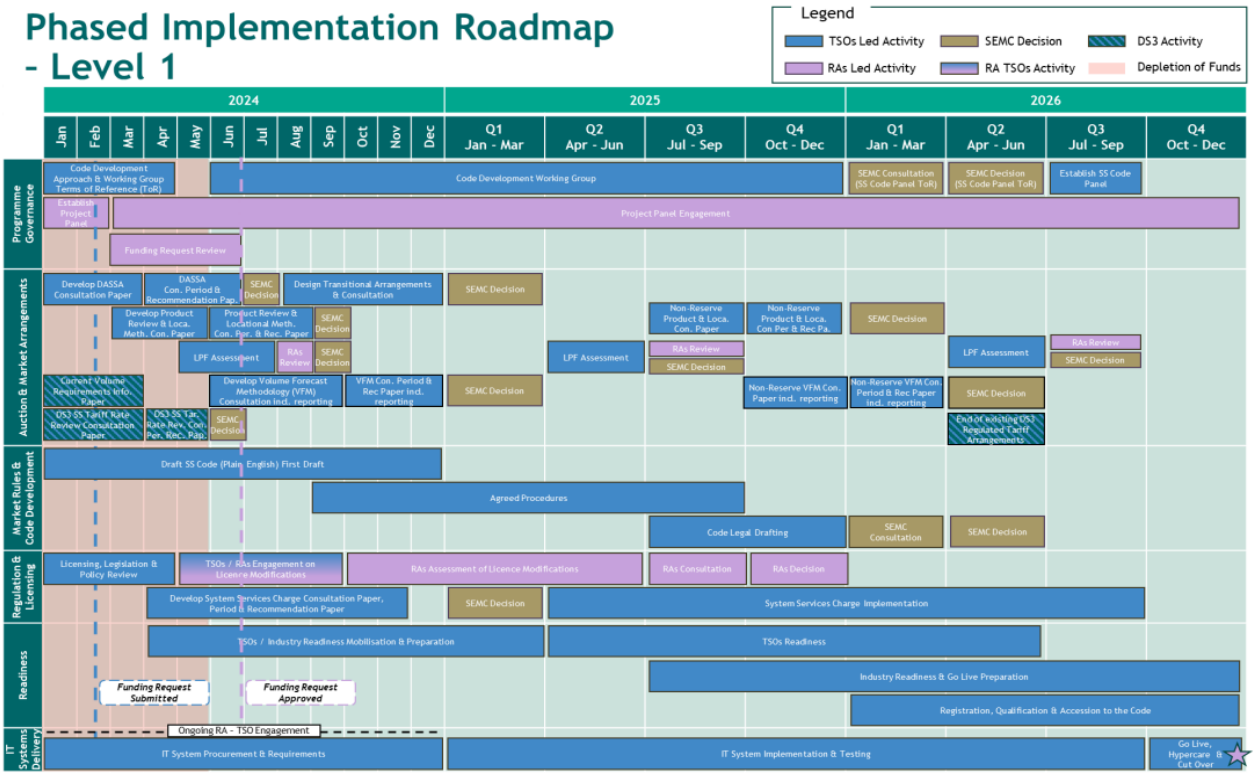

Figure 3. Phased Implementation Roadmap – Level 1

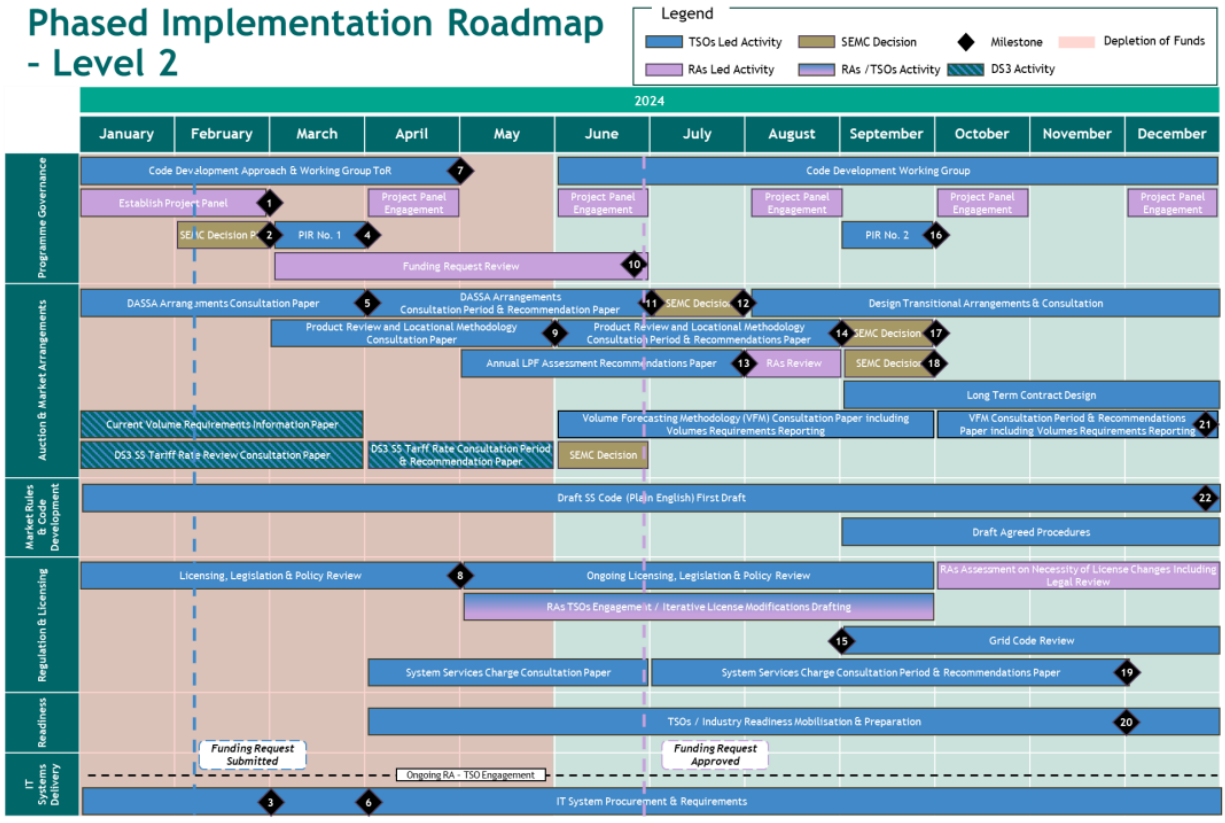

Figure 4. Phased Implementation Roadmap – Level 2

Based on the current timelines outlined in the PIR, the DASSA is scheduled to go-live in December 2026.

The next iteration of the PIR will be published in September 2024.

1.5 Structure of Recommendation Paper

This paper sets out the TSOs' recommendations for the design of the DASSA. Where applicable, the paper makes reference to related workstreams, the schedule of which is summarised in the PIR.

This paper is broken down into the following sections:

- DASSA consultation overview
- DASSA mechanics (design of the daily auction).
- Secondary trading.
- Commitment obligations and incentives.
- The Final Assignment Mechanism.
- Locational considerations in the DASSA.
- Registration and qualification.
- Settlement and payment.
- Forwards markets.
- Migration to the DASSA arrangements.
- Interaction of the DASSA with other market arrangements.

1.6 Next Steps

The TSOs will be submitting this recommendations paper to the SEM Committee for consideration at its August 2024 session.

The TSOs expect that the SEM Committee will publish its decision on the DASSA design shortly thereafter.

The TSOs will consider the SEM Committee's decision with regard to the design and delivery of the DASSA by December 2026.

2 Consultation Overview

2.1 Responses to the Consultation

The DASSA design consultation was launched on 15 March 2024 and closed on 24 May 2024, inclusive of a two-week extension of the consultation period. A virtual industry workshop was held on 24 April 2024 to support the consultation process.

In total, 16 responses to the consultation were received. The 14 non-confidential responses were as follows:

- Bord Gáis Energy
- Bord Na Mona
- Demand Response Association of Ireland (DRAI)
- Electricity Association of Ireland (EAI)
- EDF Renewables
- Energia
- EP UK Investments
- ESB Generation
- Irish Energy Storage Association (IESA)
- Moyle Interconnector
- RWE
- SSE
- VPI
- Wind Energy Ireland (WEI), Energy Storage Ireland (ESI) & RenewableNI (RNI)

Note that all non-confidential responses are being published together with this recommendations paper.

2.2 General Consultation Topics

The consultation paper set out the TSOs' proposals for the design of the DASSA and invited feedback from interested stakeholders on the 40 questions posed.

Through the DASSA consultation process, general feedback and concerns which did not relate to any of the specific questions in the DASSA consultation were voiced by service providers. The main concerns are addressed below.

2.2.1 Multiple Interdependent Workstreams

Much of the feedback on this topic stated that the overall DASSA design requires more detail for it to be assessed and specific feedback be given. It was highlighted that multiple design aspects of the Phased Implementation Roadmap are yet to be consulted upon by the TSOs. Respondents noted that they did not yet know the specifics of the products that will be included in the initial implementation of the DASSA and lack information on product design and performance scalars. Industry feedback also highlighted concerns around not yet having visibility of the Volumes Methodology or the Locational Methodology for defining constraint zones, which appear to be a key element of the DASSA mechanics.

Respondents requested that the Regulatory Authorities and TSOs engage further with industry on how the proposed System Service Future Arrangements pillars (Fixed Term Contracts, Layered Procurement Framework, and DASSA) will interact with each other and how, if being considered, stacking of services from the TSO and DSO flexibility markets might be possible in the future.

The TSOs acknowledge this feedback from respondents and appreciate industry have been asked to provide feedback relating to a number of concurrent and consecutive workstreams. Due to the tight timelines required for delivery of the DASSA by December 2026, it has been necessary to run workstreams in parallel, which has resulted in aspects of design being developed simultaneously. The TSOs will continue to provide updates on the development of the relevant workstreams and engage with industry through the Future Power Markets monthly industry workshop and through the System Services Future Arrangements (SSFA) Project Panel which takes place every two months.

2.2.2 Transition Arrangements for Reserve Services

On the topic of the transition arrangements for reserve services, respondents commented that there is still uncertainty about the nature of the commercial arrangements that will be put in place for the interim period between the termination of the DS3 System Services Regulated Arrangements in April 2026 and the implementation of the daily auctions, scheduled for December 2026. Respondents highlighted that this uncertainty undermines confidence in investment. Some feedback suggested that the timeline in the PIR for a SEM Committee decision (Q1 2025) needs to be reviewed and a greater urgency applied to this area.

The TSOs acknowledge the concerns raised by industry on these issues. The TSOs are committed to working with the Regulatory Authorities and to provide certainty for service providers on the transition in a timely manner. Under the LPF Assessment, the TSOs have developed a recommendation relating to the transition from April 2026 to December 2026, which will be submitted to the Regulatory Authorities and will be subject to a SEM Committee decision as per the timelines set out in the PIR.

2.2.3 Procurement of Other System Services

Respondents asked for clarity on the future procurement of other system services that are not planned to be procured in the DASSA from the go-live date in December 2026, such as ramping margin, inertia and reactive power services.

The TSOs appreciate that that there is uncertainty for service providers surrounding the procurement of non-reserve services. The TSOs will commence the development of a proposal for the procurement of these services which will be consulted upon. The schedule for this workstream will be clarified in the next iteration of the PIR, due to be published in September 2024.

3 DASSA Mechanics

Section 4 of the consultation paper set out the TSOs' proposals for the design of the daily auction for system services, including the system services to be procured, the scheduling of the auction, the bidding process, and the clearing of the auction.

3.1 Services to be Procured in Initial DASSA

3.1.1 Question 1 – Consultation Proposal Summary

TSOs' Proposal:

The DASSA to initially procure reserve services, which will be subject to the outcome of a product review, with the auction design to allow for the procurement of other services in the future.

Services in scope to be procured individually in the initial implementation of the DASSA.

The auction design to allow for the TSOs to apply operational requirements to the procurement of services.

The TSOs noted that one or more of the procurement methods described in SEM-22-012 may be utilised by the TSOs in the future to procure system services, as appropriate and subject to industry consultation and approval by the Regulatory Authorities.

Question 1. Do you have any comments on the services to be procured under the DASSA?

3.1.2 Question 1 - Summary of Consultation Responses

14 of the 16 respondents shared their views on this proposal.

Many respondents commented they were not able to respond fully and in detail to the proposal as the TSOs were yet to consult on a product review of reserve services, the locational constraints / methodology to apply and service volume requirements. Respondents noted that a holistic view was required on the procurement of all system services across the various mechanisms, including the DASSA, layered procurement framework (LPF) and fixed contracts, to provide investor certainty to service providers. Clarity on the procurement of reserve services in the transition period between the end of the DS3 System Services Regulated Arrangements in April 2026 and the implementation of the DASSA (currently scheduled for December 2026) was also requested.

Some respondents sought clarity on the proposal's compliance with the EBGL and the extent to which the EBGL was a driver for which services should be procured through the DASSA.

Notwithstanding these points, most respondents were generally in favour of the TSOs' proposal for the DASSA to initially procure reserve services, subject to the outcome of the DASSA Product Review & Locational Methodology Consultation. Some respondents agreed with the two-phased approach proposed by the TSOs, whereby a product review of non-reserve services is scheduled to be undertaken in 2025.

One respondent commented that the procurement of reactive power would not be well suited to a centralised auction process.

3.1.3 Question 1 – TSOs' Commentary

In Section 2.2 of this paper, the TSOs address respondents' comments relating to the FASS programme's interdependent workstreams, the procurement of non-reserve services, the utilisation of non-DASSA procurement mechanisms and the transition arrangements between the termination of the DS3 System Services Regulated Arrangements on 30 April 2026 and the DASSA.

The TSOs acknowledge that the precise description of all the reserve services to be procured through the daily auction is yet to be defined. However, we consider that it was important to propose the category of system services to be procured in the initial implementation of the DASSA. Service providers had the opportunity to provide their views on the development of the reserve services by responding to the DASSA Product Review and Locational Methodology Consultation Paper[13], which was published on 6 June 2024; the consultation period closed on 18 July 2024. That consultation proposed the introduction of new negative (downward) reserve services, consideration of bundled reserve products, e.g. an explicit bundle of the POR, SOR and TOR1 services that would be procured as an individual service in the auction, and changes to the definition of FFR. For the avoidance of doubt, should explicit bundles of services be defined these will only apply to the procurement of these services and changes to downstream TSO systems will not be made.

There are several drivers for the TSOs' proposal to initially procure reserve services in the DASSA. In SEM-22-012, the SEM Committee decided that initially "the daily auction would apply to reserve products (POR, SOR, TOR1, TOR2, RRD and RRS), and possibly ramping products (RM1, RM3, RM8) and Fast Frequency Response (FFR)". From an operational point of view, it makes sense to procure FFR under the same arrangements as the other reserve services, particularly as its service provision timeframe overlaps with that of POR. This proposal complies with Article 32(2) of the EBGL[14] on the rules for the procurement for balancing capacity i.e. that such procurement should be market-based for at least the Frequency Regulation Reserve (FRR) and replacement reserve services and that it should be performed on a short-term basis where possible. While the proposed design of the DASSA allows for the daily auction of other services, the TSOs have yet to consider the most appropriate means for the procurement of non-reserve services – excluding distinct fixed-contract arrangements to address a specific system need, for example the procurement of inertia and reactive power from low carbon inertia sources (LCIS).

3.1.4 Recommendation - Services to be Procured in Initial DASSA

The TSOs recommend that the DASSA will initially procure reserve services, both on an individual service basis and for any explicit bundle of services that may be defined as an individual product in the auction. The specific reserve services to be procured will be confirmed following the outcome of the DASSA Product Review and Locational Methodology Consultation.

Additionally, the auction design will allow for the TSOs to apply operational requirements to the procurement of individual reserve services, such as minimum volumes of a quality or type of service provision or the continuous provision of services from a single service provider (which may be known as implicit bundles of services).

The design of the auction will allow for the procurement of non-reserve services in the future.

[13] DASSA Product Review & Locational Methodology Consultation Paper (cms.eirgrid.ie), DASSA Product Review & Locational Methodology Consultation Paper (soni.ltd.uk)
[14] (EU) 2017/2195, Article 32(2).

3.2 Timing of the DASSA

3.2.1 Question 2 – Consultation Proposal Summary

TSOs' Proposal:

DASSA to take place after the DAM and before the first day-ahead Long-Term Scheduler (LTS).

DASSA Gate Closure Time to be 13:20, with the DASSA results to be published at 13:50.

The TSOs requested feedback on the proposed timing of the execution of the daily auction as illustrated in Figure 5 below.

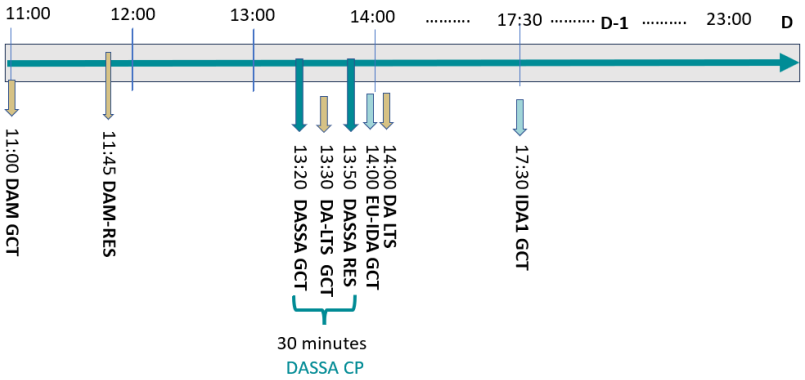

Figure 5. Proposed DASSA Timing

Question 2. Do you have any comments on the timing of the execution of the DASSA?

3.2.2 Question 2 - Summary of Consultation Responses

14 of the 16 respondents set out their views on the timing of the DASSA.

The majority of respondents were in favour of the DASSA taking place after the DAM and before the first day-ahead Long-Term Schedule (LTS).

However, several respondents suggested that the DASSA should be moved earlier. A primary concern held by respondents was that the TSOs' proposal for the DASSA is too close to the European Intraday Auction 1 (EUIDA1). This would mean that a provider may not have time to fully consider their DASSA results when optimising their bidding strategy for EUIDA1. Respondents noted that this would mean that participants could participate in the DASSA or EUIDA1, but not both.

One respondent stated that the proposed timing of the daily auction is too early and would provide limited opportunity for low-cost providers that have less predictability of their service availability to participate in the auction.

More generally, several respondents expressed concerns around how service providers are expected to participate in all available auctions under congested timeframes, even if the DASSA was to be moved earlier. Respondents also flagged the risk of an inadvertent breach of the Regulation on Wholesale Energy Market Integrity and Transparency (REMIT) requirements for capacity withholding. Respondents stated that if the

TSOs and RAs want to progress with the current timing proposal, there is a clear requirement for the RAs to undertake a full assessment of potential market participation risks and provide clear guidance on this.

Some respondents requested further information and consideration of the timing of the DASSA.

Other feedback stated that not allowing the results of the DASSA to feed into the LTS would increase the overall inefficiency of system service procurement.

3.2.3 Question 2 – TSOs' Commentary

The TSOs acknowledge the concerns raised by respondents regarding the proposal on the timing of the DASSA. In light of the feedback received, the TSOs set out three options below for the timing of the daily auction.

A) TSOs' original consultation proposal.

In the consultation paper, the TSOs proposed to run the DASSA after the Day-Ahead Market (DAM) and before the first day-ahead LTS and EUIDA1. This gap between the DASSA results at 13:50 and EUIDA1 gate closure at 14:00 is highlighted in orange in Figure 6 below. The TSOs acknowledge respondents' concerns that the 10-minute gap between the DASSA and EUIDA1 is not sufficient for the reasons summarised in Section 3.2.2 above.

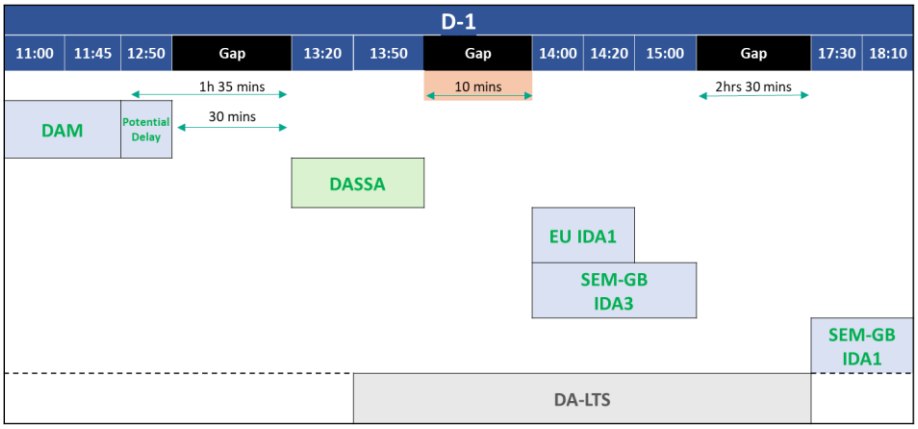

Figure 6. TSOs' Original Consultation Proposal on the Timing of the DASSA

B) Running the DASSA earlier.

A number of respondents suggested moving the DASSA to an earlier time. The implications of this option are considered in Figure 7 below, with a DASSA gate closure time of 13:00 and results to be published 30 minutes later.

While preliminary results for the DAM are published at 11:45, with results published at 11:55 under normal conditions, any issues with EUPHEMIA market coupling could delay the publication of DAM results up to their latest publication time of 12:50. Therefore, while running the DASSA at 13:00 would allow for 30 minutes in advance of EUIDA1, participants would potentially only have 10 minutes to consider the DAM outcomes before bidding into the DASSA, risking participation in the DASSA. This gap is highlighted in orange in Figure 7 below. The TSOs consider that the timing of the DASSA must allow for any potential maximum delay to the publication of the outcome of any preceding auction, even if such delays may be infrequent.

The TSOs acknowledge the concerns raised regarding the risk of congested timings despite moving the auction earlier. The TSOs also note the timing of the SEM-GB IDA3 auction at 14:00.

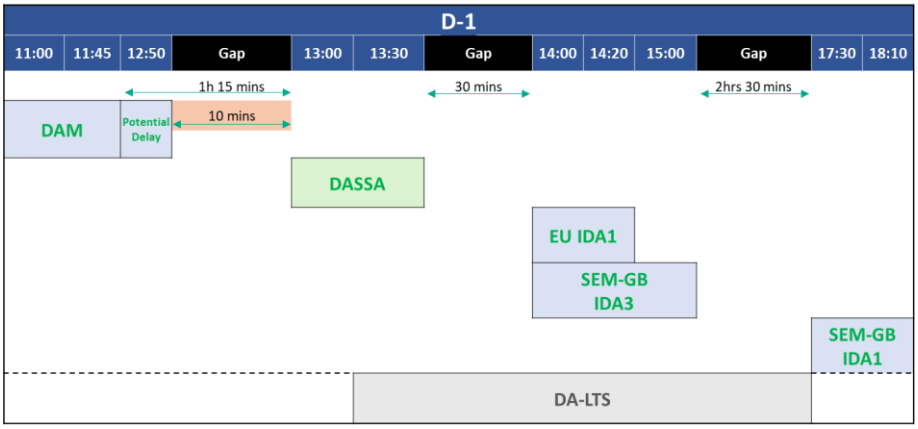

Figure 7. Running the DASSA Earlier

C) Running the DASSA after EU IDA1

As an alternative, the TSOs have considered running the DASSA at 15:30 with results to be published at 16:00. This would occur after the publication of the EUIDA1 outcomes, but before the publication of the day-ahead LTS results. This aligns with the rationale for our initial proposal, with service providers being able to factor in their ex-ante market position into their DASSA bidding strategy and would result in increased participation in the auction, as service providers would not need to account for system constraints and their energy position after the day-ahead LTS. This option is set out in Figure 8 below.

This option avoids running the DASSA in a more congested period and reduces the risks of non-participation in the auction. It would give service providers at least 1 hour and 3 minutes following the publication of the EUIDA1 results before the DASSA gate closure, with another 1 hour and 30 minutes between the publication of the DASSA results and the SEM-GB IDA1. This option may also facilitate increased participation of late availability units, as indicated by one respondent.

One potential concern with this approach is that running the DASSA after the EUIDA1 could increase the risk of not procuring sufficient balancing capacity as service providers may have offered their full capacity into the ex-ante markets. However, if this were the case, the TSOs would expect that prices in the DASSA would reflect any scarcity in the provision of balancing capacity and therefore incentivise participation in the DASSA.

While running the DASSA at 15:30 would mean service providers would have fewer opportunities to achieve a compatible Final Physical Notification (FPN) following the DASSA, they will have more certainty regarding their ex-ante position when submitting bids into the DASSA. In addition, secondary trading and Intraday Continuous Trading are mechanisms by which service providers can manage their DASSA and ex-ante positions throughout the trading day.

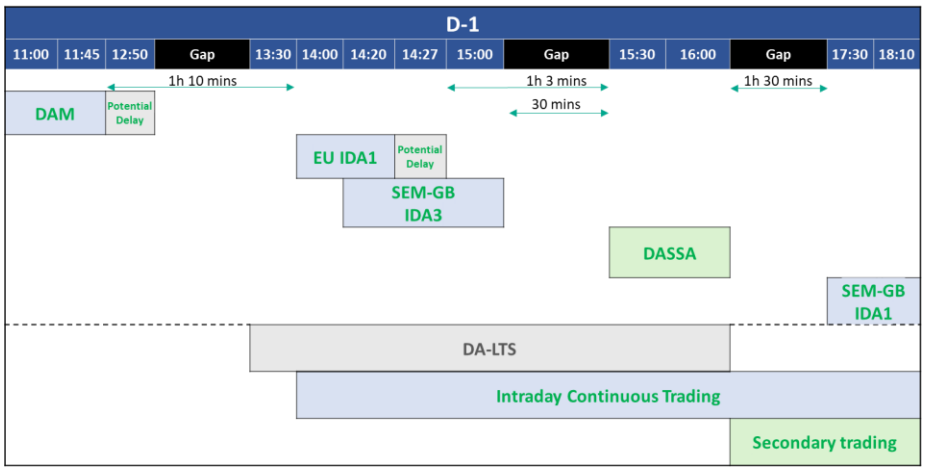

Figure 8. Running the DASSA After EU IDA1

3.2.3.1 Summary of DASSA timing options

A summary evaluation of the three options is presented in Table 4 below.

Table 4. Evaluation of DASSA Timing Options

Option	Pros	Cons
A) Original proposal	More time to consider DAM results before DASSA	Insufficient time to consider DASSA results before EUIDA1 Risks from running DASSA in a congested period
B) Earlier DASSA	More time to consider DASSA results before EUIDA1	Insufficient time to consider DAM results before DASSA Risks from running DASSA in a congested period
C) After EU IDA1	More time to consider market position before / after DASSA Reduced risks to DASSA participation	Fewer opportunities to achieve compatible FPN Risk of lack of balancing capacity after energy trading

3.2.3.2 Other commentary on this proposal

The TSOs note respondents' comments on whether the consultation proposal may result in a breach of service providers' REMIT obligations; this is addressed in Section 12. The interaction of the DASSA with the scheduling and dispatch process and ex-ante energy markets is discussed in Section 12.

3.2.4 Recommendation - Timing of the DASSA

Considering respondents' feedback and the TSOs' evaluation of the different options available, the TSOs recommend a DASSA gate closure time of 15:30 with results to be published 30 minutes later.

This option avoids running the DASSA in a more congested window and gives service providers sufficient time to consider their holistic bidding strategies into the energy and system services markets.

3.3 DASSA Auction Timeframe

3.3.1 Question 3 – Consultation Proposal Summary

TSOs' Proposal:

DASSA to procure system services for a 24-hour Auction Timeframe starting at 23:00 day-ahead (D-1) and ending at 23:00 next day (D).

The TSOs' proposal aligns with the European Day-Ahead energy market, and by extension the DAM auction timeframe.

Question 3. Do you have any comments on the DASSA Auction Timeframe?

3.3.2 Question 3 - Summary of Consultation Responses

12 of the 16 respondents set out their views on the DASSA Auction Timeframe.

Respondents were broadly in favour of the DASSA Auction timeframe and the aligning of the auction for system services with the European Day Ahead Market and by extension the Day Ahead Market in SEM.

Some respondents raised concerns that the timeframe proposed is too far ahead for service providers with unpredictable availability / capacity to participate in the DASSA auctions.

3.3.3 Question 3 – TSOs' Commentary

The TSOs appreciate that certain technology types with varying, less predictable availability day ahead such as wind, solar and demand response, or those that may be constrained by their market or licence obligations such as interconnectors, may experience challenges in participating in the day-ahead auction for system services.

For these reasons, the TSOs proposed measures to enable such service providers to participate in the DASSA arrangements:

- Secondary trading to be implemented at the beginning of the arrangements to enable service providers to trade volume that has been awarded in the DASSA.
- Zero volume bids, or bids that are limited by volume, to allow for service providers to be allocated volume in the ex-post Final Assignment Mechanism (FAM).

The TSOs consider that aligning the DASSA Auction Timeframe with the DAM trading day makes sense from the point of view of managing both markets and operating the transmission system securely. The TSOs' broader proposals for the daily auction account for the mechanisms of the Single Electricity Market (SEM), such as the evaluation of the compatibility of a service provider's FPN (where submitted) with its DASSA Order at balancing market gate closure.

3.3.4 Recommendation – DASSA Auction Timeframe

The TSOs recommend that the DASSA will procure services for an Auction Timeframe as per the original proposal: i.e. a 24-hour period commencing at 23:00 day-ahead (D-1) and ending at 23:00 next day (D).

3.4 DASSA Trading Period

3.4.1 Question 4 – Consultation Proposal Summary

TSOs' Proposal:

The DASSA Trading Period to be defined as a 30-minute interval.

The DASSA design to be compatible with other Trading Period durations.

For the initial implementation of the DASSA, the TSOs proposed that each Trading Period will be of 30 minutes duration, while noting that the auction design will be compatible with Trading Periods of different durations in the future, e.g. to align with a 15-minute imbalance settlement period.

Question 4. Do you have any comments on the proposed Trading Period duration?

3.4.2 Question 4 - Summary of Consultation Responses

11 of the 16 respondents provided feedback on the proposed DASSA Trading Period duration.

The majority of respondents were in favour of the DASSA Trading Period to be defined as a 30-minute interval, with respondents also highlighting the need for the design of the auction platform to be future proofed to enable the smooth transition to any potential move to a 15-minute Trading Period.

One respondent favoured a direct link between DASSA Trading Periods and Balancing Market settlement periods to minimise delivery risk for market participants.

One respondent suggested that it may be beneficial to replicate extant Balancing Market processes, whereby each imbalance settlement period has six (5-minute) imbalance pricing periods which are aggregated to 30 minutes.

3.4.3 Question 4 – TSOs' Commentary

The TSOs acknowledge the broad support for the proposal. A 30-minute DASSA Trading Period aligns with the existing Balancing Market settlement period and with the settlement period for payments for system services under the existing Regulated Tariff Arrangements.

The TSOs intend that the daily auction platform will be designed to be compatible with Trading Periods of different durations that may be introduced in the future.

3.4.4 Recommendation – DASSA Trading Period

The TSOs recommend that each DASSA Trading Period will be 30 minutes in duration. The auction design will be compatible with allowing Trading Periods of different durations to be implemented in the future.

3.5 DASSA Volume Requirements

3.5.1 Question 5 – Consultation Proposal Summary

TSOs' Proposal:

Volume requirement for each system service for each Trading Period in the Auction Timeframe to be published before the DASSA gate closure on the day of the auction (D-1).

The consultation paper noted that the TSOs' proposals for the methodology for calculating the volumes for the daily auctions, together with longer-term volume requirements, will be subject to industry consultation and approval by the Regulatory Authorities.

Question 5. Do you have any comments on the publication of the volume requirements for the DASSA?

3.5.2 Question 5 - Summary of Consultation Responses

12 of the 16 respondents provided feedback on this proposal.

Respondents expressed a general preference for the DASSA volume requirements to be published as early as possible ahead of the DASSA gate closure time to allow for sufficient time to inform service providers' bidding strategies for the auction. Some respondents suggested that the DASSA volume requirement should be published with, or close to, the DAM results, with another advocating that it be published before the DAM.

Many respondents commented on the methodology that will be used to determine the DASSA volumes. They highlighted the need for volume requirements for service providers to be reasonably transparent, predictable and forecastable. Several respondents noted that the TSOs should ensure that they procure sufficient volumes in the DASSA in order to minimise FAM volumes and related energy balancing costs and not to rely on the Grid Code or the proposed service availability requirement to procure services.

One respondent expressed concern that the TSOs would over-procure services in the DASSA, which would in turn reduce the volumes to be allocated in the FAM and prevent lower cost, less predictable providers participating in the arrangements.

One respondent stated their opposition to the procurement of services in the DASSA on an all-island basis as it would not account for locational constraints and limitations on the transmission system.

3.5.3 Question 5 – TSOs' Commentary

The TSOs acknowledge respondents' requests that the DASSA volume requirements be published as early as possible. The precise timing of the publication will be subject to the outcome of the Volume Forecasting Methodology (VFM) consultation, which is scheduled to be undertaken by the TSOs in Q4 of 2024 (as per the PIR).

The TSOs appreciate that the DASSA volume requirements need to be transparent, consistent and forecastable. In responding to the VFM consultation, service providers will have the opportunity to inform the development of the volume methodology.

Without pre-empting the precise proposals to be set out in the VFM consultation, as prudent system operators the TSOs will seek to procure service volumes in the DASSA that reflect operational needs taking into account the timing of the DASSA and associated uncertainties.

3.5.4 Recommendation – Publication of DASSA Volume Requirements

The TSOs recommend that the volume requirements for each system service, and any explicit bundle of services that may be defined as an individual product, for each Trading Period in the Auction Timeframe be published on the day of the auction (D-1), providing a reasonable time period prior to the gate closure of the DASSA. The precise timing of the publication will be subject to a decision on the timing of gate closure of the DASSA and the outcome of the VFM consultation.

3.6 DASSA Bidding Structure – Bidding Process & Format

3.6.1 Question 6 – Consultation Proposal Summary

TSOs' Proposal:

Service providers to be able to submit a bid for each individual service for each Trading Period within the Auction Timeframe.

DASSA bids to take the form of a stepwise linear supply function:

- Service providers may submit one or more price/quantity (P/Q) pairs, which must be increasing.
- A maximum number of price/quantity pairs will be implemented.
- Minimum acceptable values for quantity and price for each step may be implemented.
- Price caps may be implemented.
- Bids may be updated up to the time of the DASSA gate closure only.
- There will be no interdependency between bids.

The TSOs proposed a 'simple' bidding process and format for the initial implementation of the daily auction, noting that we remain open to considering complex bidding and combinatorial auctions in the future, subject to operational requirements and industry needs.

Question 6. Do you have any comments on the proposed bidding format and process for the DASSA?

3.6.2 Question 6 - Summary of Consultation Responses

13 of the 16 respondents set out their views on the proposed bidding format and process for the DASSA.

The majority of respondents raised concerns about the proposal for service providers to submit a bid for each individual service for each Trading Period within the Auction Timeframe ('simple' bids). Respondents noted that the lack of interdependency between bids could place a clearing risk on service providers that would need to be mitigated: given the possibility that service providers might not be awarded all services for which they had bid, the opportunity cost for the provision of services may be priced into bids for each individual service rather than spread over a number of sequential services, leading to higher auction prices. Respondents also noted that simple bids may lead to inefficient outcomes for service providers in not being contracted for consecutive reserve services. As such, most respondents favoured the implementation of complex bids and combinatorial auctions, whereby bids could be linked across services. Respondents argued that complex bids would also reduce the risk to the TSOs of an infeasible DASSA outcome.

Two respondents supported the TSOs' proposal for simple bids.

One respondent stated that the bidding process needs to consider different modes of operation of generating units, for which complex bids would allow.

Several respondents commented on the proposal that auction price caps may be implemented. Respondents argued that the rationale for price caps was not clear, given that there was deemed to be sufficient competition in the reserve services market, and that there was a risk that a cap could be below acceptable market conditions. One respondent noted that price caps had reduced competition in other markets. One respondent noted that price caps may not be compliant with EBGL.

Some respondents questioned the need for a Bidding Code of Practice (BCOP) in a competitive system services market and asserted that no rationale had been provided by the TSOs for same. Two respondents commented that the management of market power is the remit of the RAs and the SEMC Market Monitoring

Unit (MMU). One respondent stated that the market power of the TSOs as a monopsonist needs to be considered.

Some respondents voiced concern at the proposal that service providers' bids cannot be updated after the DASSA gate closure, i.e. that services providers would not be able to adjust their bids feeding into the FAM, noting that this restriction would not allow for real-time conditions to be reflected, therefore undervaluing services and sending negative investment signals. Two respondents questioned whether EBGL prohibits the updating of bids after DASSA gate closure. One respondent suggested that the rationale for this proposal may relate to IT implementation costs.

Several respondents commented that there was uncertainty around a number of unspecified variables, such as a maximum number of P/Q pairs per bid. One respondent questioned why a maximum number of P/Q pairs would be required in a competitive market.

One respondent commented that industry will need support in the rollout of the auction platform.

3.6.3 Question 6 – TSOs' Commentary

In this section, the TSOs address respondents' comments relating to simple bids, price caps and a BCOP, the inability to update bids for the FAM, and the implementation of the auction platform.

3.6.3.1 Simple versus complex bidding

The TSOs acknowledge the feedback received from most respondents to the consultation favouring the implementation of complex bidding for the DASSA, rather than a simple bidding process as proposed, and the rationale for same.

Prior to the publication of the consultation paper, and particularly during bilateral engagements that the TSOs conducted with industry in late 2023, service providers expressed a strong preference to the TSOs for simple bidding as it would reduce complexity in bidding into the DASSA. Simple bids also aligned with the SEM Committee's criteria for simplicity in the DASSA design, as set out in SEM-22-012, such that the auction "should be sufficiently simple and transparent to be readily understood and accessible to all stakeholders". It was on this basis that the TSOs proposed simple bids.

This proposal is also a key assumption for the implementation of the DASSA by December 2026, as set out in the PIR. A significant amount of additional design and delivery complexity and associated extended delivery timescales would be involved in implementing complex bidding for the DASSA. As such, the TSOs consider that it will not be possible to put complex bidding in place for the initial implementation of the DASSA in December 2026.

However, it is the TSOs' view that respondents' concerns relating to the the lack of interdependency between bids, whereby bids are not linked across services, may be addressed by the proposal set out in the DASSA Product Review and Locational Methodology consultation paper that consideration be given to the procurement of an explicit bundle of reserve services. An explicit bundle of services would be defined as an individual product in the auction. As noted above, should explicit bundles of services be defined these will only apply to the procurement of these services and changes to downstream TSO systems will not be made. In bidding for a bundle, service providers could price the opportunity cost of providing services over several sequential services. Successful service providers would also effectively be contracted for consecutive reserve services. The specific reserve services and bundles to be procured will be confirmed following the outcome of the product review consultation. Additional work was undertaken by the TSOs as part of the Product Review, specifically in relation to bundling, following the receipt of respondents' views on combinatorial bidding in this consultation.

3.6.3.2 Price caps and BCOP

The TSOs acknowledge respondents' comments on the proposal that price caps may be implemented for the DASSA. The TSOs wish to clarify that our primary concern in this regard is to potentially allow for scarcity pricing in the event of volume insufficiency. The requirement for price caps, and the determination of their value, will be a decision of the Regulatory Authorities; the TSOs will support this activity as required. Further considerations on price caps are set out in Section 3.10.

The TSOs remain of the view that the Regulatory Authorities should consider the development of a tailored Bidding Code of Practice (BCOP) for the DASSA arrangements that would facilitate the appropriate monitoring of the system services market.

3.6.3.3 Updating of bids for the FAM

Article 16.3 of the EBGL states that "*Each balancing service provider participating in the procurement process for balancing capacity shall submit and have the right to update its balancing capacity bids before the gate closure time of the procurement process.*". The TSOs' interpretation of this is that each service provider must submit its bids before DASSA gate closure and may update these bids up to DASSA gate closure. In this case, the procurement process for the services in question terminates at DASSA gate closure.

The TSOs would like to clarify that the FAM will be an ex-post mechanism to allocate payments on a merit basis to some service providers who were available to provide a service during the Auction Timeframe where the service volume needs of the system were not fully met by DASSA Order Holders. The FAM is not an auction and is therefore not deemed to be a procurement process for the purposes of compliance with EBGL.

3.6.3.4 Central Auction Platform

The TSOs wish to confirm that all proposals put forward in the consultation paper assume the implementation of a central auction platform for the DASSA at the go-live of the auction arrangements. The roll-out of this platform to service providers will be subject to separate industry engagement, as set out in the PIR under the Industry Readiness workstream.

3.6.4 Recommendation – DASSA Bidding Process and Format

The TSOs recommend that service providers be able to submit bids for each service for each Trading Period within the auction timeframe, with no interdependency between bids, as per the consultation proposal. Subject to the outcome of the product review, the procurement of an explicit bundle of services as an individual product will be facilitated, which would address service providers' concerns relating to costs and inefficient auction outcomes.

Bids may be updated up to the time of the DASSA gate closure only.

The TSOs recommend that price caps be allowed for in the design of the DASSA to account for scarcity pricing in the event of volume insufficiency.

3.7 DASSA Bidding Structure – Zero-Volume Bids

3.7.1 Question 7 – Consultation Proposal Summary

TSOs' Proposal:

Zero-volume DASSA bids to be facilitated to allow for service providers that only know their availability close to real time to be awarded volume in the FAM if they are in merit.

The TSOs requested feedback on our proposal to allow service providers to submit zero-volume bids into the DASSA so that they may specify a price for the FAM without bidding into the DASSA.

Question 7. Do you have any comments on zero-volume DASSA bids?

3.7.2 Question 7 - Summary of Consultation Responses

13 of the 16 respondents commented on zero-volume bids in the DASSA.

The majority of respondents were supportive of the proposal to include zero-volume DASSA bids. They viewed it as important functionality that will allow flexibility for service providers that only know their availability close to real time to participate in the auction.

However, respondents were uncertain as to why zero-volume DASSA bids can only facilitate one price step and in relation to the need for both zero-volume DASSA bids and volume-cap bids.

3.7.3 Question 7 – TSOs' Commentary

The TSOs acknowledge the need for bidding processes to accommodate units that are not aware of their availability until closer to real time, such as zero-volume bids or volume-cap bids.

As highlighted in responses to the consultation, the basic functionality of a zero-volume bid is allowed for in volume-cap bidding, whereby a volume cap can be set at zero MW. As the TSOs recommend that volume-cap bids be implemented for the DASSA, as described in Section 3.8 below, the TSOs accept that the separate delivery of zero-volume bids is not required.

The TSOs set out our recommendation for volume-cap bids and their ability to facilitate more than one price step in Section 3.8 below.

3.7.4 Recommendation – Zero-Volume DASSA Bids

The TSOs recommend that zero-volume DASSA bids be facilitated through volume-cap bidding functionality.

3.8 DASSA Bidding Structure - Volume-Cap Bids

3.8.1 Question 8 – Consultation Proposal Summary

TSOs' Proposal:

Volume-Cap DASSA bids to be facilitated to allow for service providers to allocate a portion of their volume into the FAM only.

The TSOs proposed that service providers may cap the volume of their submitted price/quantity pairs to be considered for the DASSA, with any volume for which they have service availability in excess of the cap to be allocated in the FAM.

Question 8. Do you have any comments on volume-cap DASSA bids?

3.8.2 Question 8 - Summary of Consultation Responses

13 of the 16 respondents commented on this proposal.

Most respondents were supportive of the proposal to implement volume-cap DASSA bids. The responses supported the flexibility it afforded service providers and that it allowed for the participation of units that may only know their total availability to provide services close to real time.

One respondent questioned the rationale for the proposal.

3.8.3 Question 8 – TSOs' Commentary

The TSOs acknowledge the general support for volume-cap bids.

Volume-cap bids allow service providers to submit a bid made up of a series of P/Q pairs with a cap placed along the bidding curve to restrict the volume to be considered in the DASSA. This allows for participants to limit their exposure to DASSA commitment obligations. The portion of the bid curve above the volume cap will be used as an input to the service provider's FAM Adjusted Supply Function, as set out in Section 6.3.

As noted in Section 3.7 above, volume-cap bids accommodate the functionality of zero-volume bids, whereby the volume cap can be set at zero MW. Multiple price steps above the volume cap are permitted, provided that the total number of steps does not exceed the maximum number of permitted steps.

3.8.4 Recommendation - Volume-Cap DASSA Bids

The TSOs recommend that volume-cap bids be facilitated to allow for service providers to allocate a portion of their volume to the FAM only.

3.9 DASSA Bidding Structure - Divisibility of Bids

3.9.1 Question 9 – Consultation Proposal Summary

TSOs' Proposal:

Service providers to be able to specify in their submitted bids whether DASSA bids will be divisible or non-divisible.

The TSOs sought feedback on the proposal that service providers may specify whether their DASSA bids are divisible or non-divisible, allowing for a fraction of the quantity of a submitted price/quantity pair to be awarded in the daily auction.

Question 9. Do you have any comments on the proposed approach for the divisibility of bids?

3.9.2 Question 9 - Summary of Consultation Responses

10 of the 16 respondents commented on the proposed approach for the divisibility of bids.

Respondents were overwhelmingly in favour of the proposal to allow service providers to specify whether bids are divisible or non-divisible, with all respondents that commented agreeing with the proposal. The proposal was seen to offer flexibility and optionality when bidding into the DASSA.

3.9.3 Question 9 – TSOs' Commentary

The TSOs note the support of respondents for this proposal.

The proposal also aligns with EBGL[15], which states that divisibility is a variable characteristic of a standard product that may be determined by balancing service providers.

The TSOs consider that allowing non-divisible bids in the FAM will introduce unnecessary complexity to the clearing mechanism, as well as leading to issues with lumpiness and potential over-procurement. Consequently, it is preferable that all DASSA bids will be treated as divisible bids in the FAM for the purpose of creating the adjusted supply functions and clearing the FAM.

3.9.4 Recommendation – Divisibility of DASSA Bids

The TSOs recommend that service providers be allowed to specify whether their DASSA bids are divisible or non-divisible and that all DASSA bids be treated as divisible in the FAM.

For clarity, the TSOs recommend that if an individual price-quantity step is accepted either partially or in full for a particular service provider, the previous price-quantity step(s) should have been accepted in full. This is called sequential filling guarantee (SFG). To be clear, the SFG does not apply across different service providers. This avoids accepting unnecessarily large volumes of non-divisible bids; however, over-procurement may occur subject to the optimality of the market clearing outcomes.

For example, in Figure 9 below P/Q pairs for a specific service are represented. The red line indicates the volume requirement. Suppose that it is more optimal to ignore the non-divisible bids (at step i^{th}) with a lower price and accept the next step (step $i+1^{th}$) at a slightly higher price. Then it should be assessed whether both steps i^{th} and $i+1^{th}$ have been offered by a single service provider. If they have, SFG should be met. In this case, as illustrated in Figure 10, step i^{th} is fully accepted and the TSOs will over procure. However, if step i^{th} and step $i+1^{th}$ are offered by different service providers, as illustrated in Figure 11, the

[15] EU 2017/2195, Article 25(5).

optimisation will overlook step i^{th} and the exact volume requirement will be procured at a slightly higher price.

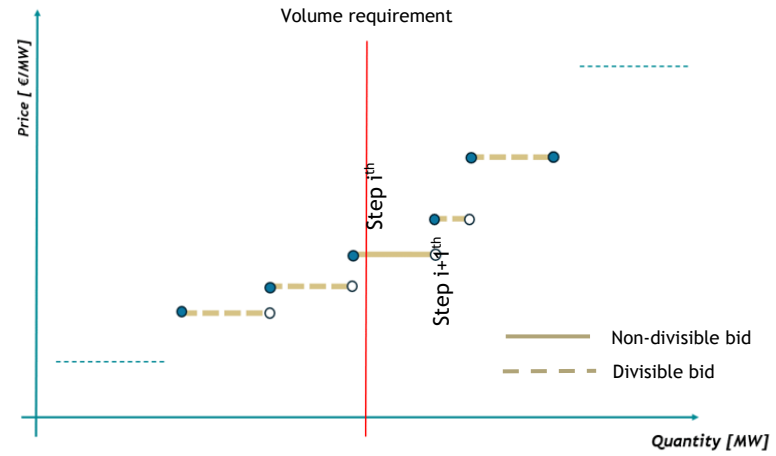

Figure 9. Divisible & Non-Divisible Bids

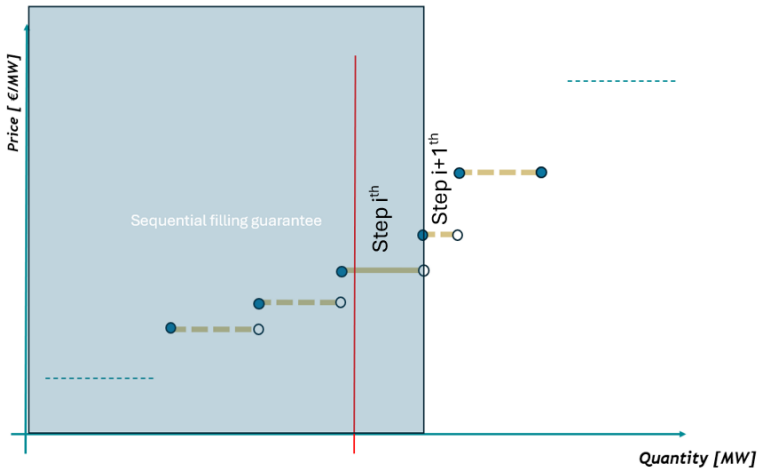

Figure 10. Sequential Filling Guarantee is Met (step i and step i+1 are submitted by a single provider)

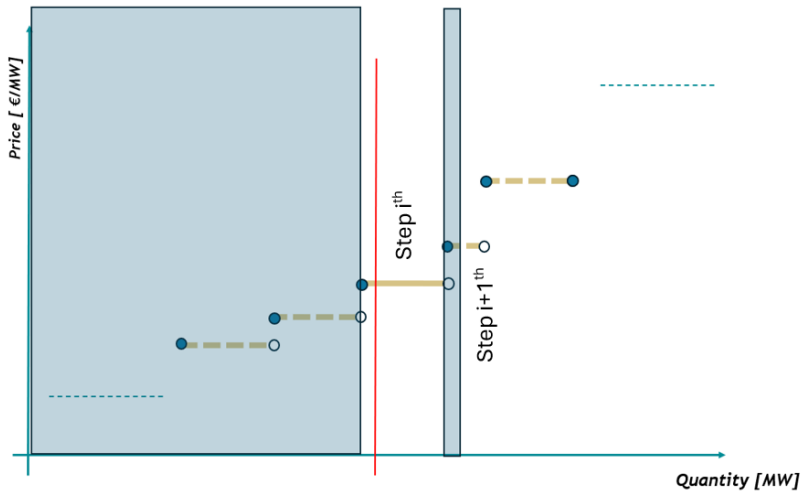

Figure 11. Sequential Filling Guarantee is Not Met (step i and step i+1 are not submitted by a single provider)

3.10 DASSA Volume Insufficiency

3.10.1 Question 10 – Consultation Proposal Summary

TSOs' Proposal:

Measures to address volume insufficiency to be activated, depending on whether the reason is capacity withholding or volume scarcity.

The TSOs proposed that measures to address volume insufficiency could include setting the DASSA clearing price at the auction price cap or meeting the volume requirement in either secondary trading or in the FAM, depending on the reason for the volume deficit.

Question 10. Do you have any comments on the proposals for addressing volume insufficiency in the DASSA?

3.10.2 Question 10 - Summary of Consultation Responses

14 of the 16 respondents commented on the proposal to address volume insufficiency in the DASSA.

The majority of respondents expressed concern regarding the concept of volume insufficiency in the DASSA and queried the efficacy of the proposed actions to address this potential issue.

Respondents commented that volume insufficiency was not adequately defined, noting that it was at odds with the apparent oversupply of services in the existing DS3 System Services Regulated Arrangements. Some respondents queried why the TSOs were proposing measures to address competition and regulatory matters, which are the remit of the Regulatory Authorities. Two respondents stated that allowing for volume insufficiency in the DASSA and thus failing to procure sufficient availability to provide system services may be a breach of TSO licences. One respondent opined that volume insufficiency posed a risk to the security of supply.

A number of respondents commented that prices in the DASSA should be set to provide sufficient incentive in the first instance for service providers to participate in the auction arrangements. One respondent noted that the only reason for a DASSA price cap would be due to market power, which there was no evidence of. One respondent queried how a price cap would be calculated, adding that it should reflect the value of scarcity.

With regard to the proposal that any volume deficit may be met in secondary trading at the DASSA clearing price, many respondents questioned how this would be effective if DASSA prices were not sufficient to procure the volume requirement in the first place. Two respondents noted that the TSOs' participation in secondary trading would dampen prices in FAM.

The TSOs also proposed that, in the event that the auction did not run due to the withholding of capacity, the volume requirement may be met in the FAM at the FAM default price. Two respondents commented that there was no information on what FAM default price will be. One respondent stated that the FAM is the only measure to address instances of volume insufficiency. One respondent expressed concern at the idea that the auction may be suspended and the risk that it placed on service providers.

A number of respondents asserted that the methodology to determine the volume requirement for services should be used to address volume insufficiency. One respondent stated that the absence of complex bidding in the procurement of particular services in the GB market led to volume insufficiency. One respondent suggested that the proposed timing of the daily auction may need to be addressed.

3.10.3 Question 10 – TSOs' Commentary

In this section the TSOs address respondents' feedback on the definition of volume insufficiency, clarify the TSOs' role in procuring sufficient balancing capacity services to meet system needs, consider how a DASSA price cap would reflect service provision scarcity and discuss respondents' feedback to the proposed measures to apply during instances of volume insufficiency.

3.10.3.1 Defining volume insufficiency

The TSOs acknowledge respondents' requests for greater detail regarding the definition of volume insufficiency. To clarify, if the total volume offered by service providers for a particular service for a particular Trading Period in the DASSA, considering jurisdictional requirements, is less than the volume requirement set and published by the TSOs, the DASSA is considered to have encountered a state of volume insufficiency for the service and Trading Period in question.

3.10.3.2 TSOs' role

The TSOs intend to design the competitive auction of reserve services such that it succeeds in procuring the required volume of services to operate the system securely. Our aim is that the DASSA will incorporate the correct incentives to ensure that our service volume requirements are always met by service providers. However, as prudent system operators, we have proposed measures to deal with instances of volume insufficiency, exceptional as they may be.

As set out in Section 3.5, the TSOs recommend that the volume requirements for each system service for each Trading Period in the Auction Timeframe be published on the day of the auction (D-1). The TSOs' detailed proposals for setting the volume requirement are subject to industry consultation and approval by the Regulatory Authorities. The Volume Forecasting Methodology (VFM) consultation is scheduled to be carried out later in 2024 as per the timelines in the PIR. In responding to the VFM consultation, service providers will have the opportunity to inform the development of the volume methodology.

3.10.3.3 Auction price cap

In the consultation paper, the TSOs proposed that a price cap may be implemented in the DASSA. It was our intention that such a measure would address service provision scarcity rather than as a means to limit costs in the DASSA. A scarcity price cap would be set for each service by the Regulatory Authorities that would reflect the scarcity of that service and would apply to all DASSA Orders in instances of volume insufficiency. The TSOs could utilise scarcity price caps on a zonal basis as required, should volume insufficiency be limited to a particular service in one zone (or jurisdiction) only. Consideration would need to be given to the application of scarcity prices in instances of volume insufficiency for one service within a bundle of services and volume insufficiency for a lower quality of a service.

Separate to the TSOs' proposals on volume insufficiency, the Regulatory Authorities may also wish to impose a price cap to manage and regulate the bidding behaviour of service providers within the DASSA.

It will be the responsibility of the Regulatory Authorities to determine the value of any DASSA price caps. The TSOs will support the Regulatory Authorities in determining the value of any price cap as required.

3.10.3.4 Measures to address volume insufficiency

The TSOs acknowledge respondents' feedback on the measures proposed to address volume insufficiency.

With regard to the proposal that any volume deficit may be met in secondary trading at the DASSA clearing price, the TSOs agree with respondents' views that this would not likely be an effective measure if DASSA prices were not sufficient to procure the volume requirement in the first place. As such, we recommend that a volume deficit may be met in secondary trading at the DASSA scarcity price cap.

In terms of the proposal to address volume insufficiency in the FAM at default prices, the TSOs do not consider this measure to be required if the scarcity price cap is to apply to all DASSA Orders. Service providers would have sufficient incentive not to withhold their capacity in the daily auction or secondary trading should there be an instance of volume insufficiency.

The TSOs acknowledge one respondent's concern regarding the suspension of the auction due to capacity withholding. Upon further consideration, we are of the view that the incentive for service providers to withhold capacity would be low, given that service providers would not have any guarantee of being awarded

volume in secondary trading or the FAM. Therefore, the TSOs no longer propose for the auction to be suspended due to capacity withholding.

3.10.4 Recommendation – DASSA Volume Insufficiency

The TSOs recommend that the design of the DASSA allows for the specification of a scarcity price cap per service to address volume insufficiency in the DASSA. The scarcity price cap will apply to all DASSA Orders in instances of volume insufficiency for a service.

The TSOs recommend that the measure to address instances of volume insufficiency will be to procure the volume deficit in secondary trading at the DASSA scarcity price cap.

In the event that the daily auction has not been run due to a technical difficulty, e.g. a technical issue with the auction platform, the volume requirement may be met in the FAM, with the price being set in the FAM.

3.11 DASSA Clearing Overview

3.11.1 Question 11 – Consultation Proposal Summary

TSOs' Proposal:

DASSA auction to be cleared on a pay-as cleared basis per Trading Period in the Auction Timeframe for the whole island of Ireland.

The objective function of the market clearing of the optimisation problem to be subject to a suite of constraints.

A DASSA Order, and associated commitment obligation, to be allocated to auction winners for each service for each Trading Period in the Auction Timeframe.

Section 4.9 of the consultation paper set out the TSOs' proposals for how the daily auction will function.

Question 11. Do you have any comments on the DASSA clearing overview?

3.11.2 Question 11 - Summary of Consultation Responses

Nine of the 16 respondents commented on the DASSA clearing overview proposal.

All respondents expressed their support for the proposal to clear the DASSA on a pay-as-clear basis. Respondents commented that this fosters transparent pricing and can reduce costs by encouraging service providers to bid closer to their actual costs.

Some respondents requested greater clarity on aspects of the DASSA clearing mechanism, including the objective function and the application of constraints.

One respondent questioned the effectiveness of an all-island auction if it leads to the procurement of system services that cannot be fully utilised efficiently and suggested that jurisdictional or constraint area-based procurement might be necessary until the transmission network can fully support an all-island approach.

One respondent expressed a preference for the facilitation of complex bids in the auction clearing to enable more efficient outcomes for service providers.

3.11.3 Question 11 – TSOs' Commentary

The TSOs acknowledge respondents' support for the clearing of the auction on a pay-as-clear basis. All-island and zonal pricing options are addressed in Section 3.14.

Noting one respondent's uncertainty as to the effectiveness of an all-island auction, the TSOs confirm that the meeting of locational / jurisdictional constraints will be a key component of the DASSA clearing process. Locational considerations are addressed in Section 7 of this paper. Service providers also had the opportunity to respond to the DASSA Product Review and Locational Methodology Consultation Paper, which was open until 18 July 2024.

Feedback on the objective function of the DASSA clearing optimisation is addressed below in Section 3.12.

As set out in Section 3.6, the TSOs recommend that a simple bidding process is initially implemented for the DASSA.

3.11.4 Recommendation – DASSA Clearing Overview

The TSOs recommend that the DASSA auction will be cleared on a pay-as-clear basis per Trading Period. The recommended high-level clearing process is as per the proposal set out in the consultation paper.

3.12 DASSA Clearing Optimisation – Objective Function

3.12.1 Question 12 – Consultation Proposal Summary

TSOs' Proposal:

The objective function of the DASSA clearing optimisation problem to:

- Minimise the cost of procuring services.
- Include value functions for addressing operational requirements related to the continuous provision of services and the quality of service, where those requirements are not set as auction constraints.

Question 12. Do you have any comments on the proposals for the design of the objective function defined for the DASSA clearing optimisation problem, including the value functions for operational requirements?

3.12.2 Question 12 - Summary of Consultation Responses

12 of the 16 respondents set out their views on the proposed design of the objective function.

The majority of respondents expressed concern that the consultation did not provide sufficient detail on the objective function and related value functions of the DASSA clearing optimisation process. Some respondents commented that further consultation with industry on these topics may be required.

A number of respondents stated that the TSOs were making the bidding process simple but the clearing too complex and non-transparent. Respondents noted that the detail of the value functions and clearing methodology should be shared with service providers.

One respondent was concerned over the focus of the auction's objective function on cost over system stability and security, arguing that the primary goal should be procuring sufficient service volumes, with cost considerations secondary.

Some respondents questioned the rationale for applying value functions to meet operational requirements rather than the procurement of specific services with a defined quality. One respondent commented that it would be preferable for service providers to submit explicit bundles into an auction (via complex bidding) rather than to have implicit bundles created in the clearing process. One respondent stated that the inability to trade implicit bundles in secondary trading was unfairly restrictive.

One respondent commented that it would seem impractical that the incentives encompassed in the product scalars under the existing DS3 System Services Regulated Arrangements could be transferred to the auction with the same level of granularity, meaning that certain service providers may no longer be incentivised to provide their existing quality of service.

One respondent expressed concern that that the objective function seeks to minimise the cost of procuring services and not securing sufficient services to operate the system securely, suggesting that this may be a potential breach of TSO licenses.

One respondent stated that the DASSA clearing IT solution needs to be single drop rather one that is developed iteratively over time.

3.12.3 Question 12 – TSOs' Commentary

The TSOs acknowledge respondents' requests for further detail concerning both the objective function and valuation functions; we provide clarity on this functionality, and the rationale for same, below. This section

also addresses respondents' specific comments relating to the bundling of services, with reference to the proposals set out in the DASSA Product Review and Locational Methodology Consultation Paper.

3.12.3.1 Purpose of objective function

The TSOs confirm that the objective function of the auction clearing optimisation problem will seek to minimise the cost of procuring system services. This objective aligns with the requirements set out in the EBGL, which mandate that TSOs strive to minimise the costs associated with providing reserve capacity. By applying key constraints in the auction clearing, the TSOs are seeking to ensure that the requirements of the power system are closely aligned with the outcome of the DASSA.

3.12.3.2 Procurement of services, bundles and operational requirements

Service providers have had the opportunity to respond to the DASSA Product Review and Locational Methodology Consultation, which closed on 18 July 2024. Subject to the outcome of this consultation, the DASSA design will allow for the procurement of the following:

- Individual reserve services.
- An explicit bundle of reserve services, which would be defined as a separate product in the auction.
- An implicit bundle of reserve services, which would be expressed by the TSOs as an operational requirement to procure the continuous provision of individual services from service providers.
- An operational requirement to procure different qualities or types of individual services.

Individual services and explicit bundles of reserves will be cleared in the auction on a price basis i.e. selecting the cheapest bids first, up to satisfying the volume requirement for a service or explicit bundle. Any operational requirements will be met as constraints in the market clearing optimisation problem i.e. the minimum specified requirement of implicit bundles of services (continuous provision) and qualities or types of service provision will be cleared.

3.12.3.3 Value function description

In the optimisation process, value functions will capture the TSOs' cost-sensitivity, or willingness to pay, in clearing implicit bundles of services and different qualities or types of service provision above the specified minimum operational requirements.

Consequently, any feasible split between an implicit bundle of services and individual services, or between higher quality service provision and lower quality services, that is economically efficient will meet the remaining requirements.

In the product review, an explicit bundle of services could be defined as the combination of individual existing DS3 system services. However, it's important to clarify that:

- The TSOs do not impose cost-sensitive operational requirements beyond the specified minimum for this explicit bundle of service for prioritising it over individual services within the explicit bundle.
- An explicit bundle of services is considered a single product within DASSA. As a result, service providers cannot submit P/Q pairs for the individual services that make up this explicit bundle. Instead, P/Q pairs should be submitted for the entire explicit bundle of services.

Value functions will be represented by numerical values. These values will denote the maximum additional cost at which the TSOs, beyond the specified minimum operational requirements, will procure:

- Higher-quality services rather than lower-quality ones.
- An implicit bundle of services instead of individual services.

The TSOs intend that these values will be publicly available as static auction parameters.

The objective function will calculate a net offered price, which is the difference between the offered prices submitted by service providers for individual services and the value functions.

3.12.3.4 Valuation functions in the clearing optimisation

The net offered price will be evaluated during the optimisation process to determine the optimal allocation between the services that are subject to operational requirements beyond the specified minimum requirements and other services.

As a result, the value functions will establish a more favourable merit order for implicit bundles of services or higher qualities or types of services.

This will enable the optimisation engine to achieve the most economically efficient split between the above-mentioned services and other services for the volumes beyond the minimum requirements specified for these services.

3.12.4 Recommendation – DASSA Clearing Optimisation – Objective Function

The TSOs recommend that the DASSA design will allow for the procurement of the following:

- Individual reserve services.
- An explicit bundle of reserve services, which would be defined as a separate product in the auction.
- An implicit bundle of reserve services, which would be expressed by the TSOs as an operational requirement to procure the continuous provision of individual services from service providers.
- An operational requirement to procure different qualities or types of individual services.

The precise nature of the services to be procured will be subject to the outcome of the DASSA Product Review and Locational Methodology Consultation.

The TSOs recommend that value functions in the objective function will allow for the TSOs to capture the TSOs' cost-sensitivity or willingness to pay in clearing implicit bundles of services and different qualities or types of service provision above and beyond the specified minimum operational requirements for an implicit bundle or quality of service.

3.13 DASSA Clearing Optimisation - Constraints

3.13.1 Question 13 – Consultation Proposal Summary

TSOs' Proposal:

Log-run reserve constraints to be modelled in the daily auction clearing optimisation, as required for system security.

Operational requirements to be included as constraints, where they are not being included as value functions in the optimisation objective function.

The TSOs proposed that a limited number of constraints will be included in the clearing of the daily auction, with their value to be informed by the outcomes of consultations relating to reserve products, reserve volumes and locational methodologies for reserve services that the TSOs will conduct in 2024.

Question 13. Do you have any comments on the constraints to be modelled in the DASSA clearing optimisation problem?

3.13.2 Question 13 - Summary of Consultation Responses

13 of the 16 respondents set out their views on the constraints to be modelled in the DASSA clearing optimisation problem.

Several respondents acknowledged the requirement for constraints to be applied in the daily auction to ensure the secure operation of the transmission system. However, respondents expressed concerns on a number of topics: the lack of clarity surrounding the constraints to be modelled in the DASSA clearing optimisation and the fact that this detail would only become clear following the outcomes of other workstreams i.e. the DASSA Product Review and Locational Methodology Consultation and the Volume Forecast Methodology Consultation; the impact of constraints on potential revenue, investor certainty and auction participation; and the potential for market power issues in meeting certain constraints on a jurisdictional basis.

Some respondents asserted that minimum volumes of higher-quality service provision or bundles of services should not be modelled as constraints in the DASSA as they would add to the complexity of the clearing process. Respondents noted that if there is an operational requirement for different qualities of service, they should be defined as distinct services.

Many respondents also emphasised the need for early visibility of constraints, transparency in the process, and that the reporting of constraints needs to frequent and dynamic.

One respondent stated that jurisdictional North-South requirements should be the only grid related constraint.

3.13.3 Question 13 – TSOs' Commentary

The TSOs acknowledge respondents' commentary that the precise details of what constraints are to be modelled in the DASSA would only become clear following the outcomes of other workstreams. In Section 2.2 of this paper, the TSOs address respondents' comments relating to the FASS programme's interdependent workstreams. Service providers had the opportunity to inform the development of the locational methodology for reserve services by responding to the DASSA Product Review and Locational Methodology Consultation Paper[16], which was published on 6 June 2024; the consultation period closed on

[16] DASSA Product Review & Locational Methodology Consultation Paper (cms.eirgrid.ie), DASSA Product Review & Locational Methodology Consultation Paper (soni.ltd.uk)

18 July 2024. In addition, the TSOs will engage with industry on service volumes later in 2024 through the VFM consultation.

The TSOs wish to affirm that locational constraints are currently defined, and will be in the future, to ensure the secure operation of the transmission system in Ireland and Northern Ireland. The design of any market arrangements must support this objective. As noted in the reserve services product review consultation, of primary concern for the TSOs is a system separation event and maintaining sufficient reserve services in each jurisdiction should this contingency arise.

The TSOs may define additional zones as required for the procurement of other services (such as voltage control services).

Acknowledging that there is a dependency on other workstreams for the determination of the precise parameters and values of locational constraints, the TSOs' proposal was developed to allow for the procurement of reserve services to meet such constraints.

The TSOs would also like to reiterate that it is not proposed to model temporary locational constraints, such as transmission line constraints, in the DASSA. Such constraints may not be known at the time of publishing the DASSA volume requirement; including short-run constraints could also obscure DASSA price signals for entry into the market. Although the TSOs originally proposed that temporary locational constraints, such as transmission line restrictions, would be modelled in the FAM, the TSOs have updated the recommendation in this regard; please see Section 6.6.

3.13.4 Recommendation – DASSA Clearing Optimisation – Constraints

The TSOs recommend that long-run locational constraints, the parameters and values for which are to be determined, will be modelled in the daily auction clearing optimisation, as required for system security.

3.14 DASSA Clearing Prices

3.14.1 Question 14 – Consultation Proposal Summary

TSOs' Proposal:

The daily auction to be cleared with either:

- A uniform all-island clearing price per service per Trading Period.
- Zonal pricing where there are binding locational constraints.

Section 4.11 of the consultation paper described the TSOs' proposed options for the setting of the clearing prices in the daily auction, noting that the SEM Committee, as expressed in SEM-22-012, considers the implementation of zonal incentives to be an important element of the future arrangements for system services.

Question 14. Do you have any comments on the proposed options for the clearing price of the daily auctions?

3.14.2 Question 14 - Summary of Consultation Responses

14 of the 16 respondents set out their views on the proposals for how the clearing price for the daily auction may be determined.

Nine respondents were firmly in favour of uniform pricing of the daily auction. Respondents commented that a single all-island clearing price would be less complex than zonal pricing and would allow for ease of participation in the market. It was noted that uniform pricing aligns with the energy market. Respondents stated that the consultation did not provide sufficient rationale for zonal pricing and argued that it may result in reduced liquidity in a small market as well as dispatch inefficiencies. Some respondents questioned how zonal pricing aligned with the SEMC position set out in SEM-22-012, which suggested that the auction should consider volume requirements for each zone but made no specific reference to the application of divergent clearing prices. It was opined that consumers may pay more in one zone if prices accounted for locational constraints.

Some respondents questioned how zonal pricing would function in the exchange of balancing capacity with mainland Europe once the Celtic interconnector goes live. In the event that hedging contracts around the DASSA price are introduced, it was queried who the counter parties involved would be and would they be seeing the same price if there was zonal pricing.

Of the two responses that were supportive of zonal pricing, its potential to offer more targeted economic signals for new plant locations, particularly in areas with binding locational constraints, was highlighted.

One respondent commented that service providers that are needed to meet a locational constraint (and are priced higher than the unconstrained all-island auction clearing price) should receive the higher clearing price.

Broadly, respondents sought further clarity on the methodology for zonal prices and highlighted the need for thorough analysis and transparent communication from regulatory bodies to ensure informed decision-making and successful implementation of the chosen clearing price mechanism.

3.14.3 Question 14 – TSOs' Commentary

The TSO's welcome the comprehensive and varied feedback received to this consultation question.

In the consultation paper, the TSOs did not state a preference for either uniform or zonal DASSA clearing prices and sought stakeholders' views on both options. In including zonal pricing for consideration by industry, the TSOs reiterate that this was informed by the SEMC's position as stated in SEM-12-022, as follows: *"The SSFA design should send the right locational signals to investors to situate capability in the appropriate locations, and reward those who do so."* The TSOs are of the view that zonal pricing in the DASSA is one means by which this requirement may be dealt with.

The TSOs consider that there are advantages and disadvantages to both proposed options. A uniform all-island pricing mechanism would be simpler to implement; however, it may fail to generate the correct locational signals for investment where services are most required. Whereas zonal pricing may be more complex to deliver, this mechanism would potentially send more economically efficient price signals.

Regarding how zonal pricing would impact the exchange of balancing capacity with mainland Europe, the TSOs do not consider this to be an issue as such transactions would be between the TSOs on the island of Ireland and TSOs in Europe, with prices established bilaterally between system operators. Please refer to Article 33(2) of the EBGL[17].

3.14.4 Recommendation – DASSA Clearing Prices

The TSOs recommend that the design of the DASSA will be capable of clearing the auction with either a uniform all-island clearing price per service per Trading Period or zonal pricing where there are binding locational constraints, noting that the Regulatory Authorities will specify the pricing mechanism to apply.

In terms of how zonal pricing would be implemented in the DASSA:

- The all-island uniform price for a service will be applied to all zones with non-binding locational constraints for that service.
- In zones with binding locational requirements for a service, a zonal price will only apply if it exceeds the all-island uniform price for that service; otherwise, the all-island uniform price for that service will still apply.

[17] EU (2017/2195), Article 33(2).

4 Secondary Trading

Section 5 of the consultation paper set out the TSOs' proposals for the secondary trading of DASSA Orders, including bilateral trading.

4.1 Central Secondary Trading Platform

4.1.1 Question 15 - Consultation Proposal Summary

TSOs' Proposal:

Secondary trading to take place via a central trading platform, to be operational from the go-live of the DASSA arrangements.

Buy and Sell orders will be placed on the central trading platform and bilateral secondary trading will also be permitted, provided that the TSOs are notified of trades via the central trading platform.

Question 15. Do you have any comments on the proposal to implement a central trading platform from go-live of the DASSA arrangements?

4.1.2 Question 15 - Summary of Consultation Responses

13 of the 16 respondents set out their views on the proposed central trading platform.

Respondents were in favour of secondary trading taking place via a central trading platform to be operational from the go-live of the DASSA arrangements. Respondents emphasised that such a platform is critical for the efficient facilitation of secondary trading and that its development should be prioritised. Many respondents stressed that the platform should be fully automated without the need for any manual processing of secondary trades.

A number of respondents also highlighted the need for clarity on the requirements for EMIR reporting relating to secondary trades, noting that this could add complexity for service providers and undermine the benefit of secondary trading.

One respondent expressed concern about the need for parties to a secondary trade to settle the transaction between themselves, the risk of credit exposure to multiple parties and the likelihood of a concentration of secondary trading activity amongst "preferred partners".

4.1.3 Question 15 – TSOs' Commentary

The TSOs wish to clarify that the central trading platform will be fully automated from the go-live date of the DASSA arrangements such that no manual intervention will be required for the validation, matching and notification of secondary trades. This is considered essential to ensure the secondary trading platform will facilitate the efficient transfer of DASSA Orders during the secondary trading window.

The TSOs welcome respondents' feedback relating to EMIR reporting and secondary trading. The TSOs address this feedback in Section 12.3 of this paper.

The TSOs note the feedback regarding the settlement of secondary trading, which the TSOs propose be carried out directly between the parties to the secondary trades. The TSOs consider that any related credit risk is to be borne by the service providers and that it will be up to service providers to establish processes to settle with trading parties.

4.1.4 Recommendation - Central Secondary Trading Platform

The TSOs recommend that a fully automated central secondary trading platform be implemented from the go-live of the DASSA arrangements.

4.2 Secondary Trading Window

4.2.1 Question 16 – Consultation Proposal Summary

TSOs' Proposal:

Secondary trading to take place after the DASSA results are published and up to 90 minutes before the relevant Trading Period.

Figure 12 below illustrates the original consultation proposal: the secondary trading window opening after the results of the DASSA have been published day ahead (D-1) and closing 90 minutes (t-1.5) before the start of the relevant Trading Period (t) within the delivery day (D).

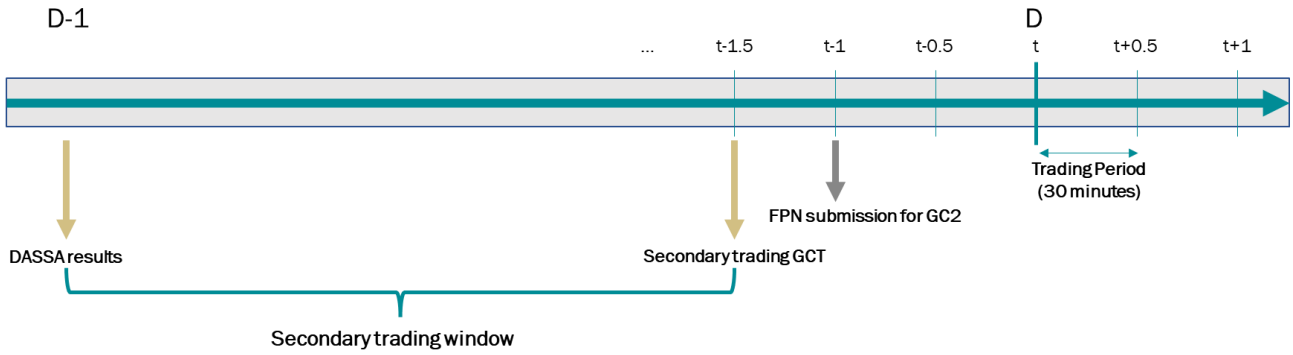

Figure 12. Secondary Trading Window Original Proposal

Question 16. Do you have any comments on the proposals for the timing of the secondary trading window?

4.2.2 Question 16 - Summary of Consultation Responses

11 of the 16 respondents set out their views on the proposed timing of the secondary trading window.

While there was some support for the proposal, most respondents were in favour of the secondary trading gate closure being moved closer to real time, with a majority favouring that the secondary trading window align with the Balancing Market gate closure 60 minutes ahead of the relevant Trading Period. It was suggested that this timing would help avoid confusion and allow service providers greater flexibility to update both their DASSA and ex-ante position as close to real time as possible.

Some respondents understood that the proposed 90-minute gap ahead of real time was required to enable the manual processing of secondary trades and stressed that the platform should be fully automated.

Some respondents were uncertain as to why secondary trading could not be allowed after Balancing Market gate closure. One respondent proposed that the secondary trading window should close 5 minutes before real time to facilitate the participation of service providers who have less predictability about the availability of their resources.

A few respondents commented that the secondary trading platform should also be capable of accommodating secondary trading of longer-term contracts.

4.2.3 Question 16 – TSOs' Commentary

The TSOs acknowledge respondents' feedback regarding the timing of the secondary trading window and the broad preference for the window to close 60 minutes ahead of real time, rather than 90 minutes. The

original proposal was made in order to give service providers 30 minutes to adjust their position in the ex-ante markets following the end of secondary trading of DASSA orders. Based on the feedback received, we appreciate that this additional 30 minutes is not required.

We reiterate that it is our intention to develop the secondary trading platform to be fully automated from the go-live date of the DASSA arrangements such that no manual intervention is required for any functionality during the course of normal operations.

The TSOs will consider the feasibility of utilising the DASSA secondary trading platform for the trading of any longer-term contracts, if the terms and conditions of those contracts allow secondary trading, as we develop such procurement mechanisms.

4.2.4 Recommendation - Secondary Trading Window

The TSOs recommend that secondary trading will take place after the DASSA results are published and up to 60 minutes before the relevant Trading Period.

Figure 13 below illustrates this recommendation: the secondary trading window opens after the results of the DASSA have been published day ahead (D-1) and closes 60 minutes (t-1) before the start of the relevant Trading Period (t) within the delivery day (D).

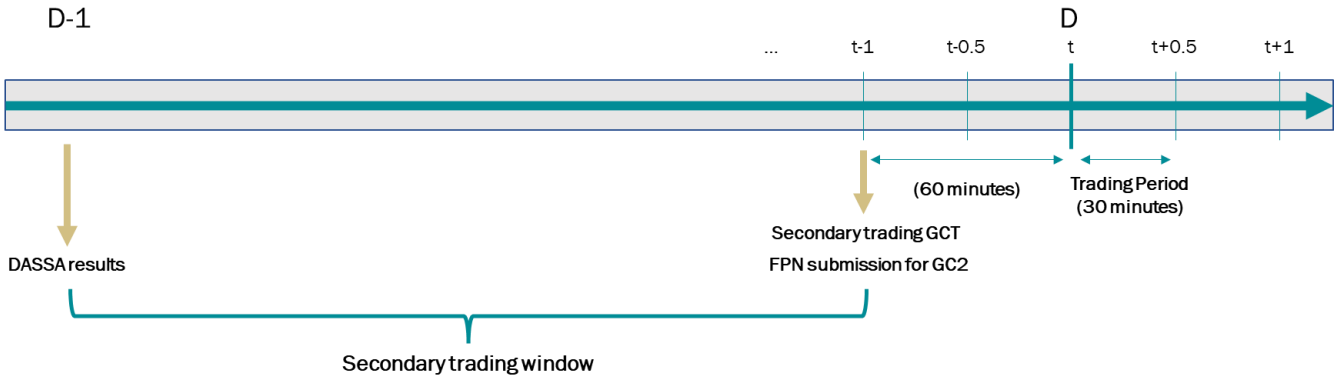

Figure 13. Secondary Trading Window Recommendation

4.3 Secondary Trading – Placing Buy & Sell Orders

4.3.1 Question 17 – Consultation Proposal Summary

TSOs' Proposal:

Simple Buy and Sell Orders to be placed on the central trading platform for a given service and Trading Period(s). Service providers will be able to specify relevant conditions associated with a Buy or Sell Order.

Question 17. Do you have any comments on the proposals for placing Buy and Sell Orders?

4.3.2 Question 17 - Summary of Consultation Responses

10 of the 16 respondents set out their views on the proposal for placing Buy and Sell Orders.

Overall, the feedback was varied for this question. Respondents were mostly supportive of the proposal for placing Buy and Sell orders but had queries about how this would work in practice.

Several respondents supported the proposal to allow Simple Buy and Sell Orders to be placed on the central trading platform, and the ability to trade bilaterally. However, respondents stated that service providers should not be restricted to trade bundles of services in the secondary market, with concern over the liquidity of the secondary market if bundles could not be separated and services traded individually.

Several respondents supported the proposal to include conditions such as Fill or Kill, Immediate or Cancel and Good Till, which would provide additional flexibility and support the ability for service providers to develop economic bids. One respondent queried whether the Good Till order type would have a maximum time for which it would remain valid. Additionally, one respondent asked if it will be possible to enter negative bids, as this may need to be considered for those DASSA order holders who may be willing to pay another service provider to take on the DASSA obligation and prevent them from being exposed to a Compensation Payment.

One respondent suggested that the TSOs consider block orders for combinations of products or links between Trading Periods. The respondent noted that this would be difficult for the initial implementation of the DASSA, given the additional complexity that the block orders would add.

4.3.3 Question 17 – TSOs' Commentary

The TSOs appreciate industry feedback on the proposal for placing Buy and Sell Orders. Most respondents were in favour of the TSOs' proposal, but requested more information on how Buy and Sell orders would work in practice.

With regard to bundles, the TSOs may procure an explicit bundle of reserve services, which would be defined as a separate product in the auction, or an implicit bundle of reserve services, which would be expressed by the TSOs as an operational requirement to procure the continuous provision of individual services from service providers. The precise nature of the services to be procured will be subject to the outcome of the DASSA Product Review and Locational Methodology Consultation. Regardless of whether bundles of services are procured as an implicit bundle of separate products or as a single explicitly bundled product, the TSOs will need to maintain the integrity of the bundle in secondary trading in order to fulfil the operational requirements for bundled services in the first instance. Furthermore, in the case of an implicit bundle, the price of the overall bundle may have a premium attached to it, which would not apply to the procurement of the individual services; this would make it impractical to separate an implicit bundle into individual services. While respondents noted that separating bundles may increase liquidity in secondary trading, the TSOs consider that taking on a bundle may be more appealing to some service providers, therefore supporting liquidity in the secondary trading market.

The TSOs clarify that a Good Till order type would have a maximum time for which it would remain valid and is defined as an order which will be cancelled and removed from the order book after a specified date and time.

The TSOs highlight that it will be possible to enter negative secondary trade prices to encourage another provider to take on a DASSA obligation.

The TSOs reiterate that there will be no block orders across Trading Periods per the current DASSA design.

4.3.4 Recommendation - Secondary Trading – Placing Buy and Sell Orders

The TSOs recommend that simple Buy and Sell Orders be placed on the central trading platform for a given service – including explicit and implicit bundles of services – and Trading Period(s). Service providers will be able to specify relevant conditions associated with a Buy and Sell Order.

The TSOs recommend that the integrity of explicit and implicit bundles be maintained in secondary trading when placing Buy and Sell Orders.

4.4 Secondary Trading - Validation of Buy & Sell Orders

4.4.1 Question 18 – Consultation Proposal Summary

TSOs' Proposal:

Buy and Sell Orders to be validated against service provider capabilities and other relevant validation checks to ensure all Orders are feasible.

Question 18. Do you have any comments on the proposals for the validation of Buy and Sell Orders?

4.4.2 Question 18 - Summary of Consultation Responses

11 out of 16 respondents commented on the proposals for the validation of Buy and Sell Orders.

Respondents demonstrated an understanding of the need to validate all trades on the secondary trading platform, but disagreed with adding additional validation requirements beyond those already included in the DASSA.

Several respondents commented that additional validations in secondary trading, for continuous provision or the bundling of system services, would limit the number of potential purchasing service providers and the density of service provision. Respondents highlighted that introducing additional validation may reduce potential trading opportunities and could disincentivise participation in the DASSA by limiting the ability to trade out of an energy position. Respondents also noted that if service providers are restricted to secondary trading only a bundle of system services, providers should have the capability to bid for a bundle of system services in the DASSA.

Clarity was requested on the length of time it would take to perform the validation checks in secondary trading with many respondents suggesting that this validation process should be automated as part of the secondary trading platform solution design.

4.4.3 Question 18 – TSOs' Commentary

As stated in other sections, the secondary trading platform will be developed to be fully automated from the go-live date of the DASSA arrangements such that no manual intervention is required on any functionality, including validation, in the course of normal operations.

Validation is a crucial aspect of the auction design. The TSOs consider that any validation of secondary trades, such as to ensure the integrity of bundles of services is maintained, as noted above in Section 4.3, will be limited to what is required to ensure operational security.

4.4.4 Recommendation - Secondary Trading – Validation of Buy and Sell Orders

The TSOs recommend that Buy and Sell Orders will be validated against service provider capabilities and other relevant validation checks to ensure that all Orders are feasible. The integrity of bundles will be maintained as part of the validation of Buy and Sell Orders.

4.5 Secondary Trading - Matching of Buy & Sell Orders

4.5.1 Question 19 – Consultation Proposal Summary

TSOs' Proposal:

Matching of Orders in secondary trading to be done on a first-come first-serve basis (Option 1).

The TSOs considered two options for how secondary trades will be matched: Option 1 – First-come-first served rolling matching, and Option 2 – Batch matching, with Option 1 being the TSOs' preferred approach.

Question 19. Do you have any comments on the TSOs' preferred approach to match Orders on a first-come first-serve basis?

4.5.2 Question 19 - Summary of Consultation Responses

10 out of 16 respondents commented on the proposed approach to match Orders on a first-come first-serve basis.

The majority of respondents supported the TSO's preferred approach of matching orders on a first-come-first-served basis. Many respondents noted that this approach provided quicker results and greater certainty for service providers, especially DASSA Order sellers. However, respondents emphasised the importance of this process being executed using data provided by service providers and checked instantaneously via the central secondary trading platform, rather than being manually validated by the TSOs.

A preference for a series of regular periodic batching of orders was stated by a few respondents; their concern was that first-come first-served matching could result in most trading occurring earlier in the trading window, which could prevent service providers that only know their availability closer to real time from participating in secondary trading due to reduced liquidity towards the end of the window.

One respondent commented that first-come-first-served matching would not allow service providers to have any control over who they matched with in secondary trading; service providers may be risk averse for fear of matching with someone with poor credit worthiness, thus reducing liquidity in the secondary trading market.

4.5.3 Question 19 – TSOs' Commentary

The TSOs note the majority preference for the use of first-come-first-served rolling matching, which was the TSOs' preferred option. This process will give service providers more time to adjust their position in advance of real time and should encourage offers to be posted even if the secondary market is not liquid.

Under this approach, service providers will promptly receive the results of the validation process after submitting secondary trades. If a trade is rejected during validation, both parties will have further opportunities to submit an alternative trade that may successfully pass the validation process. With a batch matching process, there would be restrictions on such opportunities due to the limited time windows for batch matching.

The TSOs acknowledge that service providers who only know their availability closer to real time may be subject to lower liquidity in the secondary trading market. However, the TSOs consider that there should still be incentives for other service providers to engage in real-time trading with them, as demonstrated in the example below.

Figure 14 below illustrates the cost structure of a service provider holding a profitable DASSA Order. If the DASSA Order holder places a Sell order at a secondary trading price equal to its DASSA profit (such that it retains its profit on the transaction), service providers whose combined costs plus the cost of buying the

order (i.e. the secondary trading price, which is equal to the seller's DASSA profit) are below the DASSA clearing price would still profit from buying the DASSA Order.

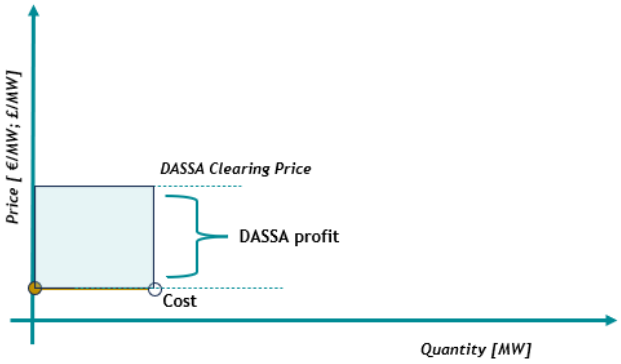

Figure 14. DASSA Order Holder Cost Structure for Secondary Trading

The above scenario would represent a worst-case situation for a potential buyer. However, should the DASSA Order holder foresee issues with meeting its commitment obligation and the potential of having to pay a compensation payment to the TSOs, it may elect to pay up to the value of the compensation payment (reflected in the secondary trading price) to a potential buyer to take on the Order and its associated commitment obligation. In this case, the costs associated with taking on this Order on the buyer side should be lower than the absolute value of the sell price submitted in the secondary trading platform (which would be a negative secondary trading price) plus the DASSA clearing price.

The TSOs consider that a spectrum of situations between the above two scenarios would facilitate the participation of low-cost service providers throughout the secondary trading window.

The TSOs also reiterate that order matching will be an automated process and will not require manual validation.

4.5.4 Recommendation - Secondary Trading – Matching of Buy and Sell Orders

The TSOs recommend that the matching of Orders in secondary trading be done on a rolling first-come first served basis.

4.6 Secondary Trading - Bilateral Trading of DASSA Orders

4.6.1 Question 20 – Consultation Proposal Summary

TSOs' Proposal:

Bilateral secondary trading of DASSA Orders to be facilitated, with all orders to be recorded, validated, and confirmed on the central secondary trading platform.

Question 20. Do you have any comments on the proposals for placing bilateral trades?

4.6.2 Question 20 - Summary of Consultation Responses

8 out of 16 respondents commented on the proposed approach to facilitate bilateral trading of DASSA Orders.

Several respondents supported the idea, highlighting that it would provide flexibility and allow for better risk management across portfolios, thereby encouraging greater participation in the DASSA. Bilateral trading was viewed as a natural extension of existing market practices that could enhance overall market efficiency.

However, some respondents argued that bilateral trading could decrease liquidity in the secondary market and give undue advantages to larger players, thus disadvantaging smaller service providers. They were concerned that this could undermine price discovery and create an unbalanced competitive environment and recommended that all trading should be centralised for transparency.

Some respondents acknowledged the potential benefits of bilateral trading but raised issues related to the potential development of preferred partner networks among larger entities. They stressed the need for more detailed analysis and safeguards against market power abuses. These respondents commented that while bilateral trading could be valuable, it would require careful monitoring to prevent negative impacts on the market.

Several respondents called for greater clarity on various operational aspects of the proposal. They asked for more information about the validation process for trades, the responsibilities for recording and confirming transactions, and the management of financial transfers between units. Respondents also expressed concerns about whether standardised financial contracts would be developed and if individual service providers would need to handle these complexities, which could pose significant challenges, especially for smaller providers.

4.6.3 Question 20 – TSOs' Commentary

The TSOs' proposal to allow for the bilateral trading of DASSA Orders aligns with the SEM Committee's decision on this matter as set out in Section 4.10 of SEM-23-103.

With regard to bilateral trading impacting liquidity in secondary trading, the TSOs consider that lower-cost service providers would be attractive to all service providers, including those companies with portfolios of assets, i.e. that there would be sufficient incentives for a company with a portfolio of assets to consider trading with other service providers outside of its portfolio. Please refer to Section 4.5 for further discussion on liquidity in the secondary trading market.

Regarding concerns about potential market power abuse and the development of preferred partner networks among larger entities, the TSOs address these in Section 4.8.

The TSOs clarify that all secondary trades, including those arranged bilaterally, will be settled directly between service providers. Any credit risk associated with secondary trading will be borne by the service providers. The validation process for bilateral trades is dealt with in Section 4.6.

4.6.4 Recommendation - Secondary Trading – Bilateral Trading of DASSA Orders

The TSOs recommend that the design of the DASSA arrangements will facilitate bilateral secondary trading.

4.7 Validation of Matched Trades and Bilateral Trades

4.7.1 Question 21 – Consultation Proposal Summary

TSOs' Proposal:

Secondary trading to be permitted between imperfectly substitutable service providers (Option 2).

The TSOs proposed two options for how matched and bilateral secondary trades would be validated to ensure that DASSA constraints are satisfied: Option 1 – Permit secondary trading between identical service providers only and Option 2 – Permit secondary trading between imperfectly substitutable service providers, with Option 2 being the TSOs' preferred approach.

Question 21. Do you have any comments on the TSOs' preferred approach to allow secondary trades between imperfect substitutes?

4.7.2 Question 21 - Summary of Consultation Responses

10 of 16 respondents commented on this proposal.

The majority of respondents were broadly in support of the TSOs' preferred approach to allow secondary trades between imperfectly substitutable service providers (Option 2). It was noted that this flexibility would avoid restrictions that could limit the volume and frequency of trades, thereby enhancing secondary trading market liquidity.

Some respondents expressed concerns about the implementation of this approach and requested additional information regarding how locational constraints would be managed. One respondent queried whether up-to-date details of network constraints would be available to inform secondary trades.

Several respondents questioned the timeliness of the validation process and emphasised the need for automated systems to handle trade validation and provide updates on trade outcomes to providers.

Respondents also stressed the importance of transparency in the validation process.

4.7.3 Question 21 – TSOs' Commentary

The TSOs acknowledge the broad support for our preferred option to permit secondary trades between imperfectly substitutable service providers.

Noting respondents' queries on locational constraints, Section 8.1 of the consultation paper summarised the TSOs' proposals regarding the application of constraints. It was proposed that only those long-run constraints that were applied in the daily auction, as published in the daily service volume requirement, would be met in secondary trading. The TSOs originally proposed that temporary locational constraints, such as transmission line restrictions, would apply only in the FAM; the TSOs have updated the recommendation on the inclusion of these constraints as set out in Section 6.6.

With regard to concerns raised by respondents on the execution of the validation process, the TSOs wish to make it clear that it is our intention to develop the secondary trading platform to be fully automated from the go-live date of the DASSA arrangements such that no manual intervention is required on any functionality in the course of normal operations.

4.7.4 Recommendation – Validation of Matched and Bilateral Trades

The TSOs recommend that secondary trades be allowed between imperfectly substitutable service providers. This approach will be supported by fully automated validation functionality within the secondary trading platform.

4.8 Potential Market Power in Secondary Trading

4.8.1 Question 22 – Consultation Summary

In the consultation paper, the TSOs noted that our auction design partners DotEcon/Afry are not currently concerned about market power in secondary trading and bilateral trading given the incentives to trade DASSA Orders.

Question 22. Do you have any comments on the assessment of market power in secondary trading?

4.8.2 Question 22 - Summary of Consultation Responses

15 of 16 respondents commented on the assessment of market power in secondary trading.

Several respondents stated that they require more information to be able to assess market power, or that evidence of lack of market power had not been presented to them. A few respondents commented that it was important for there to be oversight to ensure that there was no abuse of market power.

Some respondents commented that it was the role of the Regulatory Authorities to assess the risk of market power and to make suitable judgements on market measures to address this, and that it should not be the place of the TSOs to assess or mitigate market power.

A few respondents expressed concern for market power in secondary trading, where the combination of providers with large portfolios and the existence of bilateral trading could result in lower liquidity in the secondary market.

One respondent suggested that all secondary trading should be done via the Secondary Trading Platform.

4.8.3 Question 22 – TSOs' Commentary

The TSOs acknowledge that a full analysis of market power in secondary trading was not provided in the consultation paper. The TSOs are of the view that a full evaluation of the potential for the exertion of market power in the DASSA arrangements should be undertaken by the Regulatory Authorities. The TSOs are willing to support the RAs in carrying out this assessment.

The consultation paper noted the rationale of our auction design partners DotEcon and Afry not being concerned about the exertion of market power in secondary trading. Noting service providers' concern that some large portfolio providers might exploit market power by acquiring large volume of orders in the DASSA and then refusing to trade it in the secondary market, DotEcon consider that, if faced with such behaviour, service providers with late availability could acquire DASSA Orders themselves in the DASSA, looking to sell these in the secondary market if they expected to not be available. Therefore, it would also be necessary to have a lack of such counterparties to buy orders for such a strategy to be successful.

4.9 TSOs' Participation in Secondary Trading

4.9.1 Question 23 – Consultation Proposal Summary

TSOs' Proposal:

The TSOs may participate in secondary trading in the event of volume insufficiency in the DASSA due to capacity withholding by meeting unmatched Buy Orders or submitting Sell Orders at a Secondary Trading Price of zero. This would assign the DASSA clearing price to the additional volumes sold in secondary trading. Service providers would not be able to update their bids for the FAM in this event.

Question 23. Do you have a view on the TSOs participating in secondary trading?

4.9.2 Question 23 - Summary of Consultation Responses

13 of 16 respondents commented on the TSOs' participation in secondary trading.

Of these 13 respondents, 7 were not in favour of the TSOs' participation in secondary trading.

Several respondents sought further clarity to understand the limited and exceptional circumstances in which the TSOs would need to be involved in secondary trading and why the FAM could not be utilised instead. Some respondents suggested that the TSOs' participation in secondary trading is a potential breach of EirGrid and SONI's licences, as well as European Union unbundling requirements.

There were some general queries about how the TSOs' involvement in secondary trading could affect the FAM and the potential for it to lead to no participating volume in the FAM.

One respondent commented that if TSO participation in secondary trading is to be contemplated, then consideration should also be given to the TSOs matching Sell Orders and submitting Buy Orders in the event where the volumes procured in the DASSA exceed requirements, which would allow service providers to relinquish DASSA Orders which they cannot fulfil.

4.9.3 Question 23 – TSOs' Commentary

The TSOs wish to emphasise that this proposed measure is only intended to be utilised in the exceptional circumstances of volume insufficiency. Given the critical need for system services during times of scarcity, the TSOs consider that it will be necessary to meet any required service volume in secondary trading instead of relying on any volume insufficiency to be addressed ex-post in the FAM.

The TSOs do not consider that there will be instances of over-procurement requiring the TSOs to submit Buy Orders in secondary trading: the DASSA volume requirement may include some contingency that is required for prudent operation of the transmission system.

As recommended in Section 3.10, this measure aims to minimise uncertainty if the TSOs are unable to procure the required volume in the DASSA. This is achieved by assigning the DASSA scarcity price, not the DASSA clearing price as originally proposed, to the required additional volumes in secondary trading, which are expected to be relatively small. Ensuring the additional TSO volumes procured in the secondary market are assigned the DASSA scarcity price will incentivise providers to offer capacity into the DASSA to maximise their prospect of being accepted, as a better price will not be secured by withholding volume for the FAM.

In conjunction with our legal partners, the TSOs have evaluated whether our participation in secondary trading aligns with the principles of the EBGL. The TSOs consider that this measure is justifiable once the secondary trading price of the TSOs' sell orders is set to zero.

With regard to EU unbundling requirements – the separation of energy supply / generation from the operation of transmission networks – the Regulatory Authorities have previously directed the TSOs in this regard.

4.9.4 Recommendation – TSOs' Participation in Secondary Trading

The TSOs recommend that we may participate in secondary trading in the event of volume insufficiency in the DASSA by meeting unmatched Buy Orders or submitting Sell Orders at a Secondary Trading Price of zero and assigning the DASSA scarcity price cap to the additional volumes procured in secondary trading.

Service providers will not be able to update their bids for the FAM in this event.

5 Commitment Obligations and Incentives

Section 6 of the consultation paper set out the TSOs' proposals for the Commitment Obligation associated with a DASSA Order, the scenarios where a Compensation Payment to the TSOs will apply and the application of performance scalars to payments.

5.1 Commitment Obligation Overview

5.1.1 Question 24 - Consultation Proposal Summary

Question 24. Do you have any comment on the proposed commitment obligation overview?

5.1.2 Question 24 - Summary of Consultation Responses

12 of the 16 respondents set out their views on the proposed commitment obligations overview.

A number of respondents supported the need for compensation payments as a means of incentivising the delivery of a service, provided these are proportionate and transparent.

One respondent queried why the TSOs were proposing to automatically confirm trades without FPNs as this appears to allow a priority dispatch asset to trade the same volume in both the ex-ante market and the DASSA.

Several respondents disagreed with the TSOs' proposals regarding the consequences of pre-gate closure TSO actions. Respondents stated that if a DASSA Order Holder is unable to meet its commitment obligations due to an action by the TSOs before Balancing Market gate closure, impacting a unit's ability to be available to provide services, the unit should receive a full DASSA Payment. Respondents also argued that the TSOs should bear the cost of all TSO actions and procure any resulting volume deficit in the FAM and that the DASSA Order Holder should not be placed at risk.

Respondents were largely in favour of a Grace Period for energy storage units, with the exception of one respondent who considered it a technology bias that would give competitive advantage to such technologies. However, several respondents were not in favour of how the Grace Period was proposed to be implemented. Respondents disagreed with the DASSA payment being scaled according to the remaining duration of the Grace Period, arguing that trading out of the position may not be possible and that TSOs actions are out of service providers' control. Some respondents disagreed with the proposed Grace Period duration of 8 hours, commenting that it may not allow for the full recharging of some batteries. Respondents requested further detail on how the Grace Period would apply, particularly regarding the scaling of payments where multiple dispatches or recharges may have occurred. One respondent proposed that the Grace Period should apply to all energy limited assets.

Respondents were mostly in favour of the ability of a service provider to self-lapse all or a part of a DASSA Order. However more clarity was requested on the conditions that would apply to self-lapsing and on the mechanism behind it. Conversely, some providers asked whether providers needed to implement another signal (between the service provider and the TSOs to notify of a self-lapse) and questioned what incentive service providers have to self-lapse.

It was also remarked that there were no checks or penalties to ensure best practice from the TSOs and no procedures in place to protect service providers from unnecessary penalties by the TSOs.

A number of respondents gave feedback on the proposed inclusion of performance scalars, considering that they were a duplication of the Compensation Payment, and noting that they would potentially increase costs for service providers and discourage participation in the DASSA.

5.1.3 Question 24 – TSOs' Commentary

5.1.3.1 Gate closure status - Confirmed DASSA Orders

The TSOs note the concerns of some respondents regarding technological bias in the assessment of a unit's commitment obligation at gate closure. The TSOs are committed to delivering equitable DASSA arrangements that allow all qualified units to participate in the DASSA. Alternative arrangements are therefore required for those technology types that do not submit Physical Notifications (PNs) as a matter of course. For those service providers that will have their DASSA Order automatically confirmed at gate closure, any contracted balancing capacity must be excluded from their ex-ante trading position. The performance scalar regime may be developed to ensure that these units do not unduly benefit from not being subject to an evaluation of the compatibility of an FPN with a DASSA Order.

5.1.3.2 Pre-gate closure instructions / events and partial payments

The TSOs acknowledge respondents' feedback regarding pre-gate closure TSO actions. These actions include a TSO instruction or system event before Balancing Market gate closure that impacts the ability of a service provider to meet the commitment obligations associated with their DASSA Order. The TSOs wish to clarify that service providers will not be required to pay a Compensation Payment in such circumstances. The waiving of a Compensation payment will also apply to energy storage assets that self-lapse their DASSA Order for the duration of any Grace Period.

Under EBGL Article 16.7[18] the TSOs are not permitted to discriminate between balancing energy bids or integrated process scheduling bids for balancing capacity and balancing energy; as such, the TSOs are not permitted to intentionally avoid frustrating service providers who hold DASSA Orders, as dispatching them away would affect their ability to provide balancing energy.

As part of the initial migration period into the DASSA, service providers eligible for a dispensation from the Compensation Payment will also receive a partial DASSA payment: the TSOs clarify that this partial payment will be scaled depending on how long service providers have had to trade out of their DASSA Order in secondary trading or to adjust their energy market position. Pre-gate closure TSO actions or events that occur closer to the gate closure for the Trading Period in question might warrant a full payment, but over time (e.g. across an 8-hour window), the payment would decrease and eventually would be zero. The aim of a partial DASSA payment, while acknowledging that a service provider will not be at fault for not being able to meet its DASSA Order commitment obligation following the instruction or event, is to incentivise the trading of such Orders during the secondary trading window to avoid the procurement of additional volumes through the FAM. The TSOs therefore consider a partial payment to be appropriate as part of the initial implementation of the DASSA, to be phased out over time, accounting for the fact that the liquidity of the secondary trading market should improve as the arrangements mature.

For the avoidance of doubt, the assessment of whether a service provider has met its commitment obligation will be carried out one hour before the relevant Trading Period. Therefore, if a service provider is subject to a post-gate closure TSO action it will be eligible to receive a DASSA payment, subject to the application of performance scalars, and will not be required to pay the TSOs a Compensation Payment.

5.1.3.3 Self-lapsing of DASSA Orders

Service providers can self-lapse their DASSA Order up to Balancing Market gate closure if they are aware that they will be unable to meet their DASSA Order. This can be beneficial for energy storage units (who may receive a scaled DASSA payment in this instance) but can also benefit other types of units that may have cause to be unable to meet the commitment obligation associated with their DASSA Order even though their submitted FPN may be compatible. In this case, service providers would have to pay the TSOs a compensation payment, assuming no dispensation applies, but would avoid any performance scalar implications that might apply. Hence, self-lapsing allows service providers to manage their risk further ahead of real time, rather than lapsing their Order by submitting an incompatible FPN at gate closure. Self-lapsing is also the means by which those service providers that do not submit an FPN may lapse their Order. In addition, service providers self-lapsing their DASSA Order ahead of the Balancing Market gate closure provides the TSOs with valuable information that may be used in the operation of the transmission system.

[18] EU (2017/2195).

The means by which a service provider will advise the TSOs of a self-lapse will be developed as part of the implementation process and advised to service providers as part of the readiness workstream.

The TSOs clarify that for non-energy storage units the outcome of a self-lapse is equivalent to the service provider not submitting a compatible FPN and the Order then being lapsed.

5.1.3.4 Grace Period

The Grace Period applies to energy storage units and takes effect when a service provider is impacted by a previous TSO instruction or event that frustrates the service provider from fulfilling its commitment obligation.

The TSOs note the feedback from some respondents that the Grace Period duration of eight hours would not be sufficient time for some storage assets to charge fully. The duration of the Grace Period must balance the need to ensure energy limited assets are not disadvantaged by previous instructions or events with the need to procure the required volumes of services in a cost-effective manner. The TSOs also note that previous instructions or events may not necessarily result in the full depletion of charge of a storage asset. The TSOs remain open to reviewing the duration of the Grace Period in the future.

The TSOs note the concerns raised regarding the potential technological bias towards storage by allowing for a Grace Period when the service provider self-lapses. The TSOs wish to clarify that all technology types will receive dispensation if they are subject to pre gate closure instructions or events, as discussed above.

5.1.3.5 Performance Scalars

For clarity, the TSOs would like to make the distinction between the Compensation Payment, which is assessed based on the status of the DASSA Order at Gate Closure, and the application of Performance Scalars, which are determined based on a service provider's performance during the Trading Period itself.

The TSOs would like to address respondents' commentary that inclusion of both the Compensation Payment and the Availability Performance Scalar is a form of duplication. The purpose of the Compensation Payment is to incentivise service providers to confirm their DASSA Orders by gate closure, whereas the Availability Performance Scalar incentivises good performance by holders of Confirmed DASSA Orders in meeting their obligations. Thus, there is no duplication: the holder of a lapsed DASSA Order may be subject to a Compensation Payment but not the Performance Scalar regime (assuming they do not redeclare their availability in real time).

A full TSOs' commentary on Performance Scalars is provided in Section 5.4.

5.1.4 Recommendation – Commitment Obligation Overview

The TSOs recommend that the evaluation of DASSA Order holders' commitment obligations will be as set out in Section 6.1 of the consultation paper.

5.2 Commitment Obligation and Incentive Process

5.2.1 Question 25 – Consultation Proposal Summary

Question 25. Do you have any comment on the proposed commitment obligation and incentive process?

5.2.2 Question 25 - Summary of Consultation Responses

10 of the 16 respondents set out their views on the proposed commitment obligation and incentive process.

A significant number of respondents reiterated that they should not face a penalty due to a TSO action that frustrates their ability to fulfil their DASSA Order commitment, whether that be a reduced payment, a Compensation Payment or a need to trade out of their position. A few respondents opined that the current proposal was out of step with provisions under the Capacity Market Code.

Several responses highlighted that there would be issues for service providers who do not know their availability until closer to real time, that the risk of Compensation Payments would disincentivise them from bidding in the DASSA. For instance, interconnectors could face Compensation Payments in the case of a lapsed DASSA Order due to market schedules not being within their control. One respondent suggested that net payments for interconnectors be capped at zero, and that they be treated similarly to energy storage units.

One respondent stated that it is not appropriate for the TSOs to be setting incentive design for the market, and that this should be done by an independent party, such as the Regulatory Authorities. A few respondents said that it was necessary for the TSOs' wider balancing actions to be assessed by the Regulatory Authorities.

5.2.3 Question 25 – TSOs' Commentary

5.2.3.1 Clarification on Commitment Obligation and Incentive process map

Firstly, the TSOs would like to note a small modification to the Commitment Obligation and Incentive process map as set out in the consultation paper, and which was previously advised at the consultation workshop. The process map now includes a 'Compatible/Incompatible FPN' branch in the case of a service provider receiving a pre-gate closure instruction or event which is incompatible with their DASSA Order. The updated process map is shown below in Figure 15, with the additional evaluation steps captured with a red border.

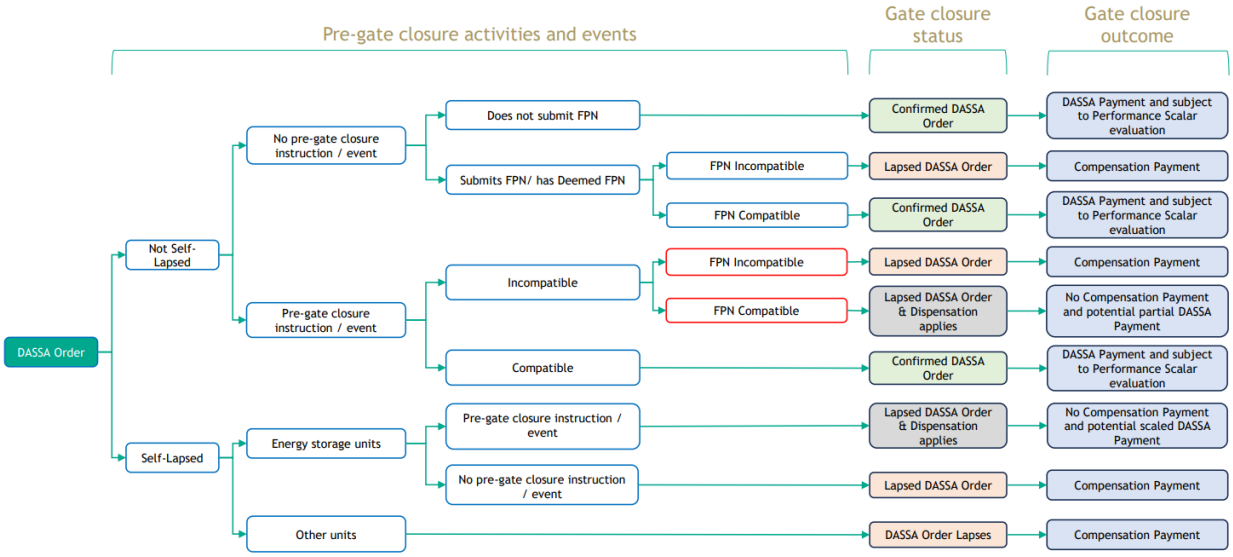

Figure 15. Commitment Obligation and Incentive Process Map

5.2.3.2 TSO action and response to events

The TSOs address respondents' commentary regarding DASSA Order Holders being frustrated by TSO actions or events in Section 5.1 above. Regarding comparisons of the DASSA with the Capacity Market, the TSOs do not consider the two to be comparable in this respect.

5.2.3.3 Providers with late knowledge of availability

The TSOs appreciate that some service providers will not be able to know their availability in time for the DASSA auction. Although this is to a certain extent unavoidable due to the nature of the technologies involved and the need for the TSOs to procure balancing capacity at the day-ahead stage, it is intended that the design of the DASSA will enable these providers to participate in the arrangements via volume-cap bids in the DASSA, secondary trading and by receiving in-merit payments in the FAM.

5.2.3.4 Role of the TSOs

The role of the TSOs in this instance, as prudent system operators, is to design a framework to incentivise good service provision to ensure system security post the DS3 System Services Regulated Arrangements. All recommended design decisions are subject to approval by the Regulatory Authorities.

5.2.4 Recommendation - Commitment Obligation and Incentive Process

The TSOs recommend that the Commitment Obligation and Incentive Process as set out in Figure 15 above be implemented, noting the amendment to the process proposed in the consultation paper.

5.3 Value of Compensation Payment

5.3.1 Question 26 – Consultation Summary

Question 26. Do you have any comments on the alternatives for the determination of the Compensation Payment?

5.3.2 Question 26 - Summary of Consultation Responses

11 of the 16 respondents set out their views on the alternatives for the determination of the Compensation Payment.

Of the proposed alternatives, there is a strong preference for linking the Compensation Payment to the FAM clearing price as this best represents the cost of replacing services from lapsed Orders. However, a few respondents caveated that the Compensation Payment must be known ahead of secondary trading and the Balancing Market and thus it would have to be based on past FAM prices and not the FAM price for the related settlement period.

Linking the Compensation Payment to the Imbalance Settlement price, the constrained-on payment rate in the Balancing Market or SNSP was broadly considered by respondents not to be cost reflective, to be complex and a design which might have unintended consequences.

Some respondents suggested linking the Compensation Payment to the DASSA price. One respondent acknowledged this to be less reflective of the cost of replacing volumes from lapsed orders but added that it would help providers understand their risk during the secondary trading window.

A significant number of respondents said that more detail was needed on the proposals and asked for more engagement on the determination of the Compensation Payment.

5.3.3 Question 26 – TSOs' Commentary

The TSOs note the strong preference for linking the Compensation Payment to the FAM clearing price. It is understood that this option was seen to be most reflective of the cost borne by the TSO to secure a replacement service provider. The TSOs acknowledge the preference for the value of the Compensation Payment to be known in advance and also note the requests for further engagement.

The value of the compensation payment will be developed as part of a future workstream with further industry engagement. Stakeholder feedback received as part of this consultation will be used as an input to this process. The timeline for this workstream will be set out in the next iteration of the PIR which is due to be published in September 2024.

5.3.4 Recommendation – Value of Compensation Payment

The TSOs will carry over the feedback received on the determination of the value of the Compensation Payment to a future workstream and associated industry consultation, the timelines for which will be set out in the next iteration of the PIR to be published in September 2024.

5.4 Performance Scalar Design

The TSOs did not make a specific proposal relating to the finalised design of the performance scalar regime for the DASSA in the consultation paper, noting that this would be addressed in a separate workstream and be subject to industry consultation. The schedule for this workstream will be set out in the next iteration of the PIR to be published in September 2024. In this section, the TSOs address respondents' comments on performance scalars.

5.4.1 Summary of Consultation Responses Regarding Performance Scalars

Several respondents requested more information on the Event and Availability Performance Scalars before being able to comment fully. A number of respondents objected to the inclusion of performance scalars within the DASSA, commenting that they would increase costs, reduce transparency of bids and potentially reduce participation due to the added risk. Some respondents also saw the Availability Performance Scalar as a duplication of the Compensation Payment. Regarding the Event Performance Scalar, a few respondents did not consider it fair that units that were not being remunerated in the DASSA or FAM could be penalised for not meeting Grid Code Requirements. Some respondents objected to performance scalars being applied to the market design of an auction, arguing that performance monitoring should be reserved as a regulatory tool.

5.4.2 TSOs' Commentary Regarding Performance Scalars

The TSOs welcome the feedback submitted by respondents regarding performance scalars. The TSOs consider that the basis for incentivising performance through appropriate scalars remains valid. Once a unit has a DASSA Order and has made itself available at gate closure, scalars incentivise the unit to maintain their availability and respond to an event if required. As noted above, performance scalars are not a duplicate of the Compensation Payment incentive. For units that may be paid when available in the FAM, an appropriate financial incentive is needed to ensure a unit responds to an event when required.

The detailed design of the performance scalars will be subject to a future workstream which is to be set out in the next iteration of the PIR to be published in September 2024. This process will consider the industry feedback received to date, as well as allowing industry to engage and respond to proposals.

6 Final Assignment Mechanism

Section 7 of the consultation paper set out the TSOs' proposals for the DASSA Final Assignment Mechanism (FAM).

6.1 FAM Overview

Section 7.1 of the consultation paper set out an overview of the proposed FAM. The FAM addresses any real time shortfalls in system services that were procured through the DASSA. As per SEM-22-012, the SEM Committee mandates that a daily ex-ante market auction followed by an ex-post physical top-up auction be implemented. The FAM fills the role of the top-up auction, ensuring service volume needs are met when DASSA Order holders fall short. The FAM is an ex-post reconciliation mechanism.

The FAM allocates payments based on merit order to service providers available during the Auction Timeframe who did not hold a DASSA Order or had additional capacity above their DASSA Order volume. The FAM incentivises all service providers to be available, bridging the gap between auction outcomes and real-time service needs.

Importantly, the FAM allows for service providers that do not know their certain availability until very close to real time to participate in the DASSA arrangements.

The FAM addresses volume deficits caused by:

- The TSOs repositioning DASSA Order Holders (through real time dispatch), who are then no longer able to fulfil the commitment obligation associated with their DASSA Order.
- DASSA Order Holders failing to meet their commitment obligations and lapsing their Order, or choosing to self-lapse their Order.
- The unavailability of DASSA Order holders in real time due to actions under the control of service providers.

The FAM process includes:

- Determining the FAM volume to meet any deficit in the DASSA volume.
- Creating Adjusted Supply Functions for all available service providers.
- Clearing the FAM & Issuing FAM Assignments

For more details on constraints in the FAM clearing, please refer to Section 6.6 below.

6.2 Calculating the FAM Volume Requirement

6.2.1 Question 27 - Consultation Proposal Summary

TSOs' Proposal:

The FAM volume requirement to be calculated ex-post based on the difference between the DASSA volume requirement and actual total compatibility and availability of DASSA Order holders in real time.

The FAM volume requirement for a service to be met by any available eligible service provider, subject to it being capable of providing the service and its price being in the merit order.

Question 27. Do you have any comments on the proposal for determining the FAM volume requirement?

6.2.2 Question 27 - Summary of Consultation Responses

Respondents were generally supportive of the proposal for the FAM volume requirement, but further details and transparency on how the FAM volume will be calculated and when it will be published was requested.

Several respondents stated that FAM volumes should be published as early as possible, and that these should be predictable, replicable and transparent.

A few respondents suggested that frequency response data should not be included in the FAM volumes as this would delay the publication. The FAM volume requirement should be adjusted to account for this lack of provision with additional contingency.

One respondent noted that FAM volumes would preferably be known daily.

More clarity was requested on whether the FAM volume requirement would account for any forecast error/change in circumstances from the DASSA stage, rather than rely on grid code obligations in this event (e.g. increase in the LSI after ex-ante market results). It was noted that this should only be exceptional so as not to distort DASSA prices.

One respondent was unsure why there would be any FAM volume other than technical issues preventing DASSA orders from not being met.

One respondent highlighted the need for transparency in the FAM volume requirements and system service values included in the LTS, RTC and RTD. They stated that participants should be able to shadow forecast the FAM volume requirement easily without hidden volume adjustments made by the TSOs.

6.2.3 Question 27 – TSOs' Commentary

The TSOs acknowledge the general support received from respondents for the proposal on calculating the FAM volume requirements. Respondents appreciated the methodology but emphasised the need for greater detail and transparency in the calculation and timing of the FAM volume publication.

This section aims to clarify how the FAM volume requirement is recommended to be calculated and on what basis. Transparency will be maintained in terms of the principles used to determine the FAM volume, its timing and data sources, ensuring that service providers understand the underlying methodology and adjustments.

Firstly, the TSOs wish to reiterate that the FAM may serve as the sole avenue for certain service providers to receive payment for providing reserve capacity. These providers may be unable to participate in the DASSA or secondary trading due to the uncertainty of their availability before the Balancing Market gate closure and their ability to meet the commitment obligations associated with a DASSA Order. For this reason,

the TSOs consider that it is important that all deficits in the DASSA volume requirement should be captured in the FAM volume requirement, where feasible.

6.2.3.1 Calculating the FAM volume requirements

The TSOs reiterate that the FAM is an ex-post reconciliation mechanism necessary to ensure available system service providers are appropriately compensated for their role in maintaining grid stability. The FAM volume requirement addresses deficits in the volume of system service provision. The FAM volume requirement will be calculated ex-post based on the difference between the DASSA volume requirement and the actual total compatibility and availability of DASSA Order holders in real time. The FAM volume requirements for a service will be met by eligible service providers, subject to them being available to provide the service and being in merit.

The inputs to the FAM volume calculation will include:

- The volume of DASSA Orders that do not meet the commitment obligations (as described in Section 5) required of the service provider – due to the submission of an incompatible FPN or by self-lapsing their Order.
- The volume of DASSA Orders that could not be fulfilled due to the holders being moved away from a compatible position by the TSOs for system reasons.
- The volume of Confirmed DASSA Orders which is not available in real time, and is deemed to be the result of service providers' actions

The TSOs emphasise that the FAM volume calculation addresses system needs by bridging any gap between the DASSA volume requirement, which is determined day-ahead, and the real-time service availability of DASSA Order holders. The TSOs consider that the DASSA system service volume requirements must be fulfilled for reasons of system security; it is therefore crucial that these deficits are addressed, and that eligible service providers are compensated accordingly.

As explained in Section 5, if a service provider is moved away due to a pre-gate closure action by the TSOs, it may be eligible for a partial DASSA payment for the Trading Period in question. However, this results in a deficit in the volume requirement for that period. To address this, the TSOs will augment the FAM volume requirement by the value of the volume deficit, ensuring that the overall volume requirement is met. Importantly, irrespective of any payments made to the DASSA Order holder that was moved away from a compatible energy position, the TSOs will allocate payments to another service provider based on the FAM merit order.

6.2.3.2 Frequency response data and FAM volume requirements

The TSOs acknowledge respondents' concerns regarding the inclusion of frequency response data in the determination of the FAM volume due to potential delays in the availability of frequency event data.

As such, the TSOs recommend that any volume deficit between the expected availability of a DASSA Order holder and the actual balancing energy delivered in response to a frequency event will no longer be considered in the FAM calculation.

6.2.3.3 Timing of the FAM volume requirement data

The TSOs note respondents' comments regarding the publication of FAM volumes. The TSOs reiterate that the FAM volume requirement is determined ex-post. As set out in Section 3.5, the TSOs recommend that the volume requirement for the DASSA will be determined once a day in advance of the day-ahead auction; the daily volume requirement will not be updated during the Auction Timeframe. Service providers will not be able to update their DASSA bids in advance of the FAM.

The FAM volume requirement will be determined ex-post and serves as a reconciliation mechanism to bridge any gap between the outcomes of the daily auction and the actual service volume availability of DASSA Order holders in real time. This ensures that the FAM volume calculation fully reflects actual system conditions and service provider availability.

6.2.3.4 FAM volume requirement and Scheduling and Dispatch data

The TSOs acknowledge respondents' requests for clarity on the integration of data from the LTS, RTC, or RTD into the FAM calculations and settlement processes.

As described above, the TSOs recommend that the FAM volume requirement will be calculated ex post based on the difference between the DASSA volume requirement and the actual total compatibility and availability of DASSA Order holders in real time. The TSOs do not consider that service providers may use published scheduling and dispatch outcomes, such as LTS, RTC and RTD, to forecast the FAM volume requirement. The Balancing Market primarily revolves around the scheduling of balancing energy. What is procured through the DASSA and what is scheduled for reserve may differ. The TSOs address the interaction of the DASSA with the energy markets in Section 12.

6.2.3.5 Post DASSA changes and FAM volume requirements

With regard to respondents' comments as to whether the FAM volume would account for changes in system needs following the execution of the DASSA, the TSOs reiterate that the DASSA volume requirement will be determined and published once a day in advance of the day-ahead auction. Please refer to Section 3.5.

6.2.4 Recommendation – Calculating the FAM Volume Requirement

The TSOs recommend proceeding with the proposed methodology to calculate the FAM volume requirement ex-post, based on the difference between the DASSA volume requirement and the actual total availability of DASSA Order holders in real time.

The exception to this is that the TSOs recommend that the volume of any deficit between the expected delivery of a DASSA order holder and the actual balancing energy delivered in response to a frequency event will no longer be included in the FAM volume calculation.

The FAM volume requirement will not consider any system changes after the execution of the daily auction.

6.3 FAM Adjusted Supply Functions

6.3.1 Question 28 - Consultation Proposal Summary

TSOs' Proposal:

Adjusted Supply Functions will be established by the TSOs based on the available data to be considered for FAM payments.

The FAM Adjusted Supply Functions will be generated for all service providers and will then be cleared on a merit order basis (with lower priced bids placing higher in the merit order). The volume that can be provided by a service provider from their Adjusted Supply Function will be based on their eventual availability (calculated ex-post), and DASSA Order holders will only have their availability that is in excess of the volume of their DASSA Orders considered for the FAM.

Any bids which were partially accepted in the DASSA will have the remainder of their bid included in their FAM Adjusted Supply Function, and a service provider with lower availability than its maximum offer will have its FAM volume lowered to its eventual Availability.

If a service provider does not bid in the DASSA, then the FAM default price will be applicable to their Adjusted Supply Function. Volume cap bids allow for a service provider to specify a maximum volume of their bid that can be accepted in the DASSA, with the remainder only being acceptable in the FAM.

Question 28. Do you have any comments on the proposed methods for establishing the Adjusted Supply Functions for FAM payments?

6.3.2 Question 28 - Summary of Consultation Responses

9 of the 16 respondents set out their views on the proposed methods for establishing the Adjusted Supply Functions for FAM payments.

A few respondents requested clarity on whether the default price would be carried over to the FAM if no DASSA bid was submitted. Respondents also questioned why it will not be possible to update commercial offer data for the FAM after DASSA gate closure.

Where a service provider purchased additional volumes in secondary or bilateral trading, a number of respondents agreed with the TSOs' preferred option to not allow the DASSA clearing price to determine the service provider's price in the Adjusted Supply Function.

Respondents noted that the design of the FAM should not rely on the Grid Code or scalars and should provide positive incentives for participation rather than using penalties.

6.3.3 Question 28 – TSOs' Commentary

The TSOs would like to clarify that the FAM default price would be applied to a service provider's Adjusted Supply Function if no bid was submitted to the DASSA.

Article 16.3[19] of the EBGL states that "Each balancing service provider participating in the procurement process for balancing capacity shall submit and have the right to update its balancing capacity bids before the gate closure time of the procurement process." The TSOs' interpretation of this is that each service provider must submit its bids before DASSA gate closure and may update these bids up to DASSA gate closure. In this case, the procurement process for the services in question terminates at DASSA gate closure.

[19] EU (2017/2195)

Furthermore, the TSOs consider that allowing rebids after DASSA gate closure for FAM payments would raise concerns about increased market power resulting from known energy positions after the LTS.

The TSOs note the support from industry for the TSOs' preferred option of not allowing the DASSA clearing price to influence the price in the Adjusted Supply Function. The avoidance of a non-increasing Adjusted Supply Function simplifies the design and reduces the risk of issues when clearing the FAM.

The TSOs agree that positive incentives for participation are preferable to the use of penalties, and see the FAM payment as remuneration for the service provider making itself available to participate in the Balancing Market as opposed to providing energy in the energy market.

6.3.4 Recommendation - FAM Adjusted Supply Functions

The TSOs recommend that the Adjusted Supply Function be established by the TSOs based on the available data to be considered for FAM payments.

6.4 FAM Clearing and Assignments

6.4.1 Question 29 - Consultation Proposal Summary

TSOs' Proposal:

Service providers in receipt of a FAM Assignment to be paid the FAM clearing price.

Question 29. Do you have any comments on the FAM clearing and FAM Assignments?

6.4.2 Question 29 - Summary of Consultation Responses

11 of the 16 respondents set out their views on the FAM clearing and FAM Assignments.

Respondents were supportive of the pay-as-clear approach for clearing the FAM. However more detail and further consultation on the FAM clearing methodology was requested. Specifically, more detail was requested on whether the FAM clearing will incorporate the value functions of service quality and continuous provision of services and if the FAM clearing price will be higher or lower than the DASSA clearing price.

Many respondents commented that service providers are not being fairly compensated if they do not hold a DASSA Order or are not in merit in the FAM but are still required to provide System Services. They emphasised that such service providers should not be subject to any penalty for not being able to provide a service.

A few respondents expressed concern with not knowing whether they are in the merit order for the FAM, and therefore not knowing whether they should continue to make their service available. They requested clarification regarding when FAM positions would be made clear to participants so that they could assess outcomes and revise bidding strategies.

Respondents asked for safeguards to be put in place to ensure that the TSOs would purchase the required volume of services in the DASSA and FAM, and not rely on Grid Code obligations to make up for under-procurement. Additionally, some respondents requested that the volumes applied in the TSOs' dispatching systems and instructions be published alongside FAM volume requirements.

6.4.3 Question 29 – TSOs' Commentary

6.4.3.1 FAM clearing

The TSOs note the support for pay-as-clear as the mechanism for clearing the FAM.

For the avoidance of doubt, the FAM clearing process closely mirrors that of the DASSA, and all features present in the DASSA market clearing objective function - such as valuation functions – are equally applicable to the FAM.

Since the FAM is an ex-post reconciliation mechanism, non-divisible bids specified by service providers for the DASSA will be disregarded in FAM clearing. Consequently, all submitted bids will be treated as divisible bids to construct the Adjusted Supply Functions. This will avoid unnecessary lumpiness issues in the FAM.

6.4.3.2 FAM price, FAM merit and availability obligations

The TSOs acknowledge that it is not knowable a priori whether the FAM clearing price will be higher than the DASSA clearing price. Due to the existence of volume-cap bids, which allow participation in the DASSA for potentially lower-cost service providers who only know their availability closer to real-time, the FAM price may indeed be lower than the DASSA price. However, the TSOs expect that, due to the repeated nature of the FAM, service providers should be able to form expectations of the FAM clearing price which will provide an incentive to make themselves available for the FAM based on these expectations. The lowest cost service providers will be those in merit in the FAM - resulting in lower costs for the consumer. Service providers therefore have an incentive to declare their availability in accordance with their costs to be in merit in the FAM and to receive a FAM payment.

The TSOs appreciate that, due to the ex-post nature of the FAM, providers will not know their merit position in the FAM in real time. However, declaring technical availability regardless of being entitled to a FAM payment will be an obligation for service providers. This obligation is addressed in Section 6.7. FAM payments will be in place to incentivise real-time availability.

For the avoidance of doubt, the pricing mechanism in the FAM – which may be either uniform pricing or zonal pricing – will be the same as the pricing mechanism in the DASSA, which is to be specified by the Regulatory Authorities. This is addressed in Section 3.14.

6.4.3.3 FAM payments and actual system service providers

The TSOs note service providers' concerns regarding being available to provide system services and not receiving a FAM payment. However, the reason for having the merit order in the FAM is to incentivise those who are best placed to supply for system services at the most efficient price.

6.4.3.4 Other

For questions regarding the TSOs procuring the correct amount of system services, the TSOs refer the reader to the TSOs' Commentary in Section 3.5.

6.4.4 Recommendation – FAM Clearing and Assignments

The TSOs recommend that service providers who are in receipt of a FAM Assignment be paid the FAM clearing price.

6.5 FAM Default Price

6.5.1 Question 30 - Consultation Proposal Summary

TSOs' Proposal:

A FAM default price to be determined and be applicable to service providers that did not submit a bid into the daily auction.

Question 30. Do you have any comments on the considerations for determining the default price?

6.5.2 Question 30 - Summary of Consultation Responses

10 of the 16 respondents set out their views on the considerations for determining the default prices.

A number of respondents felt that there was insufficient information to respond comprehensively to this question. Some respondents were not sure how an appropriate default price would be established that would be transparent and flexible.

The majority of responses supported further engagement and information on the default price. There was support for the TSOs' considerations that it should not undermine incentives to participate in the DASSA or reduce economic efficiency.

Respondents indicated that service providers should not receive a price that is below the cost of delivery, and that the default price should not distort the FAM outcome. In addition, some respondents stated that default pricing should only apply to services which are mandated under Grid Code and not for units that have not submitted a bid to the DASSA. One respondent raised a concern that the inclusion of a default bid made participation in the DASSA mandatory.

6.5.3 Question 30 – TSOs' Commentary

The TSOs acknowledge the feedback on the FAM default price, noting the need for more clarity and transparency in its determination.

6.5.3.1 Setting the default prices

The TSOs would like to highlight that setting the default price is the responsibility of the Regulatory Authorities and that the TSOs will collaborate closely with the RAs to determine an appropriate default price. Determining the exact value of the default price is not in scope for this recommendations paper.

The TSOs' position is that a default price is essential for incentivising participation in the DASSA. Without a default price, service providers which do not submit bids into the daily auction would be excluded from the FAM, which would limit market inclusivity. A gradual reduction in the default price may be considered to encourage broader participation in the DASSA and to ensure that the market remains competitive and effective.

6.5.3.2 Cost of delivery and FAM payments

All eligible service providers that are in merit will be assigned a FAM volume and will receive payment at the FAM clearing price. The TSOs wish to clarify that default prices are an input into a service provider's Adjusted Supply Function and do not directly limit the level of FAM payments that the service provider can receive. The TSOs wish to clarify that default prices will not be set to determine the FAM payments. Instead default prices enable TSOs to consider the service providers that have not submitted a DASSA bid in the FAM merit for potential payment.

Service providers concerned about the cost of being available for reserve relative to the FAM default price have the option to submit bids in the DASSA.

It is important to note that FAM payments serve as compensation for being available to provide services. The actual cost associated with delivering the services (i.e. being activated to deliver balancing energy) will be covered through Balancing Market payments.

6.5.4 Recommendation – FAM Default Price

The TSOs recommend proceeding with the original proposal that the FAM default price will apply to service providers who do not submit a bid into the daily auction.

The value of the FAM default price will be established by the Regulatory Authorities in conjunction with the TSOs.

6.6 Constraints and FAM Payments

6.6.1 Question 31 - Consultation Proposal Summary

TSOs' Proposal:

DASSA and Secondary Trading constraints to be met in the FAM.

Additional locational constraints for the FAM to be considered in light of Firm Access for system services.

Question 31. Do you have any comments on constraints in the FAM?

6.6.2 Question 31 - Summary of Consultation Responses

10 of the 16 respondents set out their views on constraints in the FAM.

Many respondents stated that they required more detail on these proposals to be able to comment fully on this question, with some respondents requesting further engagement, in particular relating to locational constraints and Firm Access. Respondents requested further detail on what constraints will apply, how these will impact the merit order determination in the FAM and how constraints limiting actual delivery will affect the Adjusted Supply Functions.

Some respondents stated that they were supportive of local constraints being applied in the FAM. Several respondents specifically affirmed their support for the constraints from the DASSA and secondary trading being applied to the FAM.

Several respondents requested more detail and engagement on how Firm Access would be implemented and stated that they do not understand why Firm Access is required. Some respondents stated that they would prefer Firm Access to be dropped as it would create more challenges to service providers and increase complexity.

One respondent suggested that the proposal to apply constraints to the FAM when a unit has firm access contradicts SEM-22-012.

6.6.3 Question 31 - TSOs' Commentary

The TSOs acknowledge respondents' feedback on the proposal for constraints in the FAM.

The rationale for the allocation of payments in the FAM lies in the SEM-22-012 decision on auction design, and subsequent discussions with the Regulatory Authorities as to their intentions in this matter. Specifically, when implementing the "top-up physical auction", the TSOs consider that it is crucial that FAM payments are only made to those service providers in merit that are physically capable of providing the service.

Upon consideration of the feasibility of our original consultation proposal to model temporary locational constraints in the FAM, the TSOs wish to clarify that a network model that captures line congestion will not be applied in the FAM. The TSOs now recommend that a service provider's ability to physically deliver a service will only be evaluated with regard to the inputs to its calculated availability, which would not include broader network congestion that would be captured by a network model. To clarify, the TSOs do not recommend including any temporary locational constraints in the FAM other than those that may be captured in the calculation of service providers' availability.

The TSOs consider that this recommendation aligns with the intention of the Regulatory Authorities to only pay service providers that are physically capable of providing the service.

With regards to the implementation of Firm Access for system services, this is addressed in Section 7.

6.6.4 Recommendation – Constraints and FAM Payments

The TSOs recommend that the DASSA and Secondary Trading constraints be met in the FAM. The TSOs will utilise service providers' calculated availability in determining the ability to physically deliver a service and be eligible for a FAM payment.

The TSOs no longer recommend the inclusion of temporary locational constraints in the FAM, such as broader network congestion that would be captured by a network model, other than those constraints that may be considered in the calculation of service providers' availability.

6.7 Service Availability Requirement

6.7.1 Question 32 - Consultation Proposal Summary

TSOs' Proposal:

Service providers to be obligated to declare their availability to provide a service to the TSOs if they are technically capable of doing so, irrespective of whether they hold a DASSA Order for the service volume.

The TSOs proposed that the system service availability requirement will be stipulated in the System Services Code. A new forecast system service capability signal was also proposed.

Question 32. Do you have any comments on the obligation for service providers to declare availability irrespective of whether they hold a DASSA Order for the service volume?

6.7.2 Question 32 - Summary of Consultation Responses

14 of the 16 respondents set out their views on this question.

A number of respondents accepted the proposals as a means of ensuring system security. However, some respondents requested additional information as to whether this would be an additional requirement to that set out under the relevant Grid Codes.

Some respondents stated they were not in favour of any obligation to declare availability because it could undermine the outcome of the DASSA and make participation in the DASSA less attractive. One respondent also expressed concern that the proposals could restrict participation between the energy markets and the DASSA for energy storage units.

Several respondents were in favour of avoiding the duplication of signals where possible. A number of respondents requested more details regarding the implementation of the forecast availability signal.

As noted in the responses to Question 29, some respondents reiterated their opposition to service providers being required to declare their availability and potentially provide a service but not being compensated for it if they are not in merit in the FAM. Respondents indicated this would place too much risk on service providers, with insufficient upside.

6.7.3 Question 32 – TSOs' Commentary

The TSOs welcome the understanding expressed by several respondents regarding the need to implement an availability requirement and related forecast capability signal. These are essential to ensure that sufficient service capability is available within the scheduling and dispatch process to maintain system security.

The availability requirement will oblige units to declare their technical system service availability if they are capable of doing so. This requirement will leverage existing availability declarations that will be used to calculate a unit's eventual availability, which will be an input to the Adjusted Supply Functions for the FAM. The TSOs' recommendation on Adjusted Supply Functions is set out in Section 6.3. The TSOs' recommendation on the payments in the FAM is set out in Section 6.4.

This requirement does not restrict a service provider from taking up a position in the ex-ante markets.

This obligation will be stipulated in the System Services Code, which service providers must accede to in order to participate in the DASSA arrangements. The service availability requirement covers all services to be procured through the DASSA arrangements and therefore extends the existing obligations on service providers to declare their ancillary service technical capability as set out in the EirGrid and SONI Grid Codes.

A new signal for forecast system services capability will be required to enable service providers to declare indicative availability data to the TSOs. We acknowledge some respondents' concerns regarding the challenges of an additional signal. However, the TSOs consider this is required for operational reasons. Providers will submit their forecast capability after the DASSA has run and can subsequently reflect changes to this. The implementation of this signal will be considered as part of the delivery of the DASSA solution and captured under the industry readiness workstream as set out in the PIR.

6.7.4 Recommendation – Service Availability Requirement

The TSOs recommend that service providers be obligated to declare their availability to provide a service to the TSOs if they are technically capable of doing so, irrespective of whether they hold a DASSA Order for the service volume.

The FAM will incentivise service providers to make themselves technically available to provide a service.

Service providers will be obligated to declare their forecast system services capability ahead of real time.

7 Locational Considerations

Section 8 of the consultation paper summarised the TSOs' proposals for how the DASSA would meet locational constraints and addressed the requirement to implement firm access for system services.

7.1 Locational Constraints and Firm Access

7.1.1 Question 33 – Consultation Summary

Question 33. Do you have any comments on the TSOs' approach to the inclusion of distinct locational constraints into the DASSA arrangements and on the requirement to implement Firm Access for system services?

7.1.2 Question 33 - Summary of Consultation Responses

13 of the 16 respondents set out their views on this question.

Regarding inclusion of constraints, respondents provided mixed feedback. While some respondents were in favour of avoiding complexity for both the TSOs and service providers, citing potential transparency issues and complexities, others expressed concerns about the lack of clarity surrounding the application of constraints and the potential negative impacts on the market and on investment. Concerns were raised about the lack of information on how these constraints are defined. The term "zone" and its implications for service provision were particularly noted as requiring further explanation. Some respondents were opposed to the imposition of constraints in the FAM.

A number of respondents were in favour of the TSOs' proposals regarding the application of constraints across the DASSA, Secondary trading and the FAM.

Several respondents emphasised the need for greater clarity on the application of constraints within the DASSA clearing optimisation. Concerns were raised regarding the potential market inefficiency if burdened by locational constraints, citing issues observed in the Capacity Market. Additionally, respondents emphasised the importance of aligning reporting of constraints with volume requirements in the DASSA.

A number of respondents opposed the implementation of Firm Access for system services at this time, arguing that it could introduce unnecessary complexity and would not provide clear benefits. They warned that such an approach might add undue hurdles for market participants, complicating the development and deployment of new projects without delivering proportional advantages. Others suggested an alternative approach to managing both locational constraints and Firm Access, advocating for measures that ensure only those providers capable of delivering services under constraints are compensated.

7.1.3 Question 33 – TSOs' Commentary

7.1.3.1 Locational Constraints

The TSOs note respondents' requests for further clarity on the definition of long-run constraints. The TSOs consider that long-run reserve constraints are the minimum volume requirement of each system service, together with minimum requirements for types or quality of services and bundles of services, that are required on an all-island or zonal basis to ensure system security.

The TSOs wish to clarify that for reserve services, zonal requirements in the DASSA will reflect the jurisdictional constraints in Ireland and Northern Ireland. However, the TSOs also reserve the right to define new zones if the need arises, as could be the case for non-reserve system services with a strong locational requirement e.g. reactive power.

Industry stakeholders had the opportunity to consider and provide feedback on zonal constraints for reserve services as part of the DASSA Product Review and Locational Methodology consultation, which closed on 18 July 2024.

As noted in Section 6.6, the TSOs no longer recommend that additional temporary locational constraints other than those considered in the calculation of a unit's availability will be considered in the FAM.

7.1.3.2 Firm Access

The TSOs understand that the Regulatory Authorities are minded to implement Firm Access for system services, in line with the SEM Committee decision in SEM-22-012.

The TSOs have not currently proposed a design for Firm Access related to system services. However, this matter will be addressed separately through a dedicated design and industry consultation process. The timeline for this workstream will be outlined in the upcoming iteration of the PIR, which is anticipated to be published in September 2024. The TSOs may draw upon similar processes and methodologies used in the SEM. The implementation of Firm Access for system services will be subject to approval by the SEM Committee.

Given that the design of Firm Access for system services has not yet been developed, the functionality will not be in place for the go-live of the DASSA arrangements. The implementation of Firm Access will result in changes to the design of the DASSA; the TSOs consider that this would not be feasible to implement by December 2026.

8 Registration and Qualification

Section 9 of the consultation paper set out the TSOs' proposals for the registration and qualification of service providers for the DASSA arrangements.

8.1 Registration

8.1.1 Question 34 - Consultation Proposal Summary

TSOs' Proposal:

Service providers to register with the TSOs in order to participate in the DASSA arrangements. Registration to be open on a rolling basis. The TSOs to complete the registration process, including qualification, within 90 days of receipt of a completed application.

The System Services Register to regulate eligibility for participation in the DASSA arrangements.

Question 34. Do you have any comments on the proposals for registration in the DASSA arrangements?

8.1.2 Question 34 - Summary of Consultation Responses

10 of the 16 respondents set out their views on this proposal.

Respondents were broadly in favour of the proposal. Suggestions were made as to how the process may be streamlined, including the transfer of service provider data from the DASSA arrangements, opening registration in good time in advance of the DASSA go-live, and processing applications in a timely manner.

8.1.3 Question 34 – TSOs' Commentary

The TSOs note respondents' wishes to make the migration to the DASSA arrangements as smooth and expedient as possible, particularly with regard to the registration of service providers that are currently contracted under the DS3 System Services Regulated Arrangements.

8.1.4 Recommendation – DASSA Registration

The TSOs recommend that service providers register to participate in the DASSA arrangements as per the proposal, with the System Services Register to regulate eligibility for participation in the daily auction.

Where appropriate, the TSOs will utilise data gathered under the existing DS3 System Services Regulated Arrangements to support service providers' registration.

8.2 Qualification

8.2.1 Question 35 - Consultation Proposal Summary

TSOs' Proposal:

The qualification process to leverage the established system services testing regime and to adapt as required to new or amended services.

Question 35. Do you have any comments on the proposals for qualification in the DASSA arrangements?

8.2.2 Question 35 - Summary of Consultation Responses

10 of the 16 respondents set out their views on this question.

Respondents were broadly in favour of the TSOs' proposals for the qualification of service providers in the DASSA arrangements, in particular leveraging the existing system services testing regime. Several respondents stated that unit capabilities established under the DS3 System Services Regulated Arrangements should transfer to the DASSA, that it would be inefficient for the TSOs to attempt to requalify all existing service providers.

One respondent commented that there should be no duplication or difference in requirements across qualification for the DASSA and the Grid Code. Another respondent raised concerns about the potential timeframe for the qualification of new service provision capability and suggested that the TSOs' qualification obligations should be defined in the System Services Code.

8.2.3 Question 35 – TSOs' Commentary

The TSOs are in agreement with respondents' preferences that existing providers of system service services should automatically qualify for the provision of services in the DASSA. The feasibility of this process will be subject to the outcome of the reserve services product review, particularly in instances of service definitions and quality descriptions changing.

The TSOs currently manage distinct testing regimes to determine system service capability and compliance with the Grid Code. We do not propose to amend these processes as part of this consultation.

It is intended that the TSOs' and service providers' obligations in the qualification process will be set out in the System Services Code.

8.2.4 Recommendation – DASSA Qualification

The TSOs recommend leveraging the established system services testing regime for the DASSA qualification process and adapting it where required for new or amended services. Where possible and subject to the outcome of the product review, the TSOs will endeavour to transfer existing qualified capability to the DASSA arrangements.

9 DASSA Settlement

Section 10 of the consultation paper set out the TSOs' proposal for the settlement period of the DASSA arrangements, together with information on the payments to be made.

9.1 Settlement Period

9.1.1 Question 36 - Consultation Proposal Summary

TSOs' Proposal:

Settlement for the DASSA arrangements to take place monthly in arrears.

Subject to feasibility, an indicative settlement notice to be provided weekly.

Question 36. Do you have any comments on the proposals for the DASSA settlement period?

9.1.2 Question 36 - Summary of Consultation Responses

11 of the 16 respondents responded to this question.

The majority of respondents were broadly supportive of the proposal given that it aligns with the existing settlement of system services under the DS3 System Services Regulated Arrangements and associated industry practices. Several respondents highlighted the benefit of receiving supplementary weekly indicative notices.

Two respondents stated that the proposed timeframe for settlements to take place is too long.

One respondent objected to the inclusion of performance scalars in the settlement process.

One respondent noted issues with the reporting of the settlement of the existing DS3 System Services Regulated Arrangements.

9.1.3 Question 36 – TSOs' Commentary

The TSOs acknowledge that most respondents to this question were in agreement with our proposal.

As noted in the consultation, the TSOs consider that settling the DASSA one month in arrears allows for multiple required inputs to be collated and validated prior to the settlement process being run. From an operational point of view, this is critical to ensuring that all relevant data is utilised and that payments are accurate with a reduced risk of resettlement.

The TSOs acknowledge the preference for weekly indicative settlement notices. The TSOs do not consider that the implementation of such notices is feasible for the go-live of the DASSA; the TSOs will continue to consider the feasibility of providing weekly indicative settlement notices in the future.

Regarding performance scalars, the TSOs refer to our recommendations in Sections 5.1 and 5.2 and further commentary on the next steps for scalar design in Section 5.4.

Commentary received on the settlement process of the existing DS3 System Services Regulated Arrangements has been passed to the relevant departments in EirGrid and SONI.

9.1.4 Recommendation – DASSA Settlement Period

The TSOs recommend that the timing of the settlement of the DASSA arrangements will be monthly in arrears. Payments to service providers will be made within a timeframe that allows for the settlement process to complete and accounts for the settlement timeframe for the System Services Charge.

The TSOs will continue to consider the feasibility of indicative settlement notices to be provided weekly; however, this functionality will not be delivered from the go-live of the DASSA.

10 Forwards Markets

Section 11 of the consultation paper set out the basis for considering forwards markets as a component of the SSFA.

10.1 Forwards Markets

10.1.1 Question 37 – Consultation Summary

Question 37. Do you have any comments on considerations for the introduction of forwards markets in the SSFA?

10.1.2 Question 37 - Summary of Consultation Responses

13 of the 16 respondents set out their views on the considerations for the introduction of forwards markets in the SSFA.

Several respondents expressed support for forwards markets, highlighting the benefits of such long-term contracts in managing service providers' risks and providing investment signals. It was noted that forwards markets could be used to address specific system needs by securing particular services for defined periods, and that they may reduce the likelihood of high prices during periods of scarcity.

Conversely, some respondents were not in favour of forwards markets, citing concerns about the practicality and cost of implementation. Respondents commented that forwards markets would be of limited use to service providers that cannot reliably forecast their availability in the future, favouring technologies with more predictable availability, thus reducing the liquidity of the market and potentially raising overall system services costs.

A common theme among respondents was the need for greater clarity on the purpose and benefits of forwards markets and how such markets would interact with other procurement mechanisms for system services.

One respondent commented that the longer-term procurement of system services should facilitate the introduction of hybrid technologies (where an MEC is dynamically shared by units).

10.1.3 Question 37 – TSOs' Commentary

The TSOs acknowledge the feedback to this question, which will inform our thinking on the development of a forwards market for system services.

While the consultation paper did not make any specific proposal on forwards markets, we noted the SEMC's position on this matter (as stated in SEM-22-012 and SEM-23-103) and considered the paper to be an opportune time to solicit initial industry feedback. The consultation paper stated that any forwards market arrangements would be subject to separate industry consultation and approval by the Regulatory Authorities. The next iteration of the PIR, expected in September 2024, will provide further detail on this workstream. To clarify, a forwards market will not be implemented as part of the go-live of the DASSA.

In Section 2.2 of this paper, the TSOs address respondents' comments relating to the FASS programme's interdependent workstreams and the utilisation of non-DASSA procurement mechanisms.

11 Migration to the DASSA Arrangements

In Section 12 of the consultation paper, the TSOs set out considerations for the migration of the procurement of system services into the daily auctions from the arrangements in place prior to the DASSA.

11.1 Migration Considerations

11.1.1 Question 38 - Consultation Summary

In the consultation paper the TSOs considered options for the migration of the procurement arrangements for system services to the daily auction in addition to other considerations such as the FAM default price, the compensation payment, registration and qualification information and system services charges.

For the avoidance of doubt, this section was not concerned with the nature of the commercial arrangements that will be in place for the interim period between the termination of the Regulated Tariff Arrangements in April 2026 and the go-live of the daily auctions.

Question 38. Do you have any comments on the considerations for the migration to the DASSA Arrangements?

11.1.2 Question 38 - Summary of Consultation Responses

15 of the 16 respondents set out their views on the considerations for the migration to the DASSA arrangements.

11.1.2.1 DASSA Volumes and Frequency

Respondents had a strong preference for the full service volume requirement to be procured in the DASSA from the go-live of daily auctions. Most respondents considered that this would provide clarity and minimise risk and complexity. There was less support for gradually increasing the procured volumes in the DASSA while acquiring the remainder in the FAM at the default price. Respondents were concerned that this method could lead to artificially low clearing prices and would cause undue market distortion. Respondents were broadly opposed to holding less frequent auctions initially with longer delivery periods and raised concerns over this approach relating to reduced competition and fairness. Respondents also stated that running auctions less frequently would not align with the regulatory requirements.

A number of respondents noted the need for adequate preparation and system readiness.

11.1.2.2 FAM Default Price

Respondents voiced concerns about the proposed use of a low FAM default price to incentivise participation in the DASSA. Many argued that this could distort market dynamics and lead to unfavourable outcomes.

11.1.2.3 Compensation Payment

Respondents broadly supported starting with a lower value of compensation payment to allow providers to adapt to the DASSA arrangements.

11.1.2.4 Registration and qualification

Respondents supported the efficient transfer of registration and qualification data where possible.

11.1.2.5 System Services Charges

Respondents emphasised the need for transparent and fair system services charges to cover the costs associated with procurement without imposing undue financial burdens on participants.

11.1.3 Question 38 – TSOs' Commentary

The TSOs acknowledge respondents' feedback on the considerations for the migration to the DASSA. The TSOs will engage further with industry via the industry readiness consultation which will address these arrangements. The feedback received as part of the DASSA consultation will feed into this process.

Please refer to the next iteration of the Phased Implementation Roadmap, due to be published in late 2024, for further information.

12 DASSA Interactions with Energy Markets

In Section 13 of the consultation paper, the TSOs provided information on the interaction of the DASSA with other markets.

12.1 Interaction with the Single Electricity Market (SEM)

12.1.1 Question 39 – Consultation Summary

The proposed design of the DASSA, as described in the consultation paper, does not incorporate any changes to the wholesale electricity market in Ireland and Northern Ireland. However, the daily auction has been designed to account for the mechanics of the SEM.

Question 39. Do you have any comments on the interaction of the DASSA with the SEM?

12.1.2 Question 39 - Summary of Consultation Responses

A number of respondents considered that the design does not fully consider, or provide sufficient clarity regarding, the interaction of the DASSA with the SEM. Key issues raised include how the DASSA will operate alongside the energy market, specifically regarding the submission of Physical Notifications (PNs) to avoid unnecessary penalties. Respondents were concerned that, without clear guidelines on the Final Physical Notification (FPN) submission, service providers might face penalties that could otherwise be avoided, creating risks for participation in the DASSA.

The impact of scalars and their application across different markets was another area of uncertainty, with respondents seeking clarity on how these factors would influence market interactions and incentives.

A number of respondents highlighted the need for a clear understanding of how the DASSA would fit into the broader market context, particularly regarding scheduling and dispatch.

While some respondents considered that the interaction between the DASSA and the SEM is adequately considered in the current design, the majority called for further information and transparency. They asserted that a clearer integration of the DASSA within the SEM framework is crucial to avoid disincentivising participation and to ensure that investment signals remain effective.

12.1.3 Question 39 – TSOs' Commentary

The TSOs acknowledge stakeholders' concerns regarding the interaction of the DASSA with the SEM and wish to provide further clarity on this matter.

The proposed DASSA design does not incorporate any changes to the existing wholesale electricity market structure. Instead, it is designed to work in conjunction with the SEM, considering the mechanics and timing of the existing markets. The TSOs consider it is the responsibility of service providers to manage the risks associated with their participation in the DASSA and other markets accordingly.

12.1.3.1 Submission of PNs

The TSOs note the uncertainty regarding the submission of PNs for DASSA participants. The TSOs will evaluate a service provider's FPN at balancing market gate closure against its DASSA Order, as set out in Section 5. A submitted FPN should be compatible with the Order that it has secured in the DASSA for the Trading Period in question.

As set out in the SEM Committee's I-SEM ETA Markets Decision Paper[20] (SEM-15-065), PNs must represent the ex-ante energy market position of participants at gate closure of the Trading Period in question. Participants are required to submit PNs based on their best estimate of the intended level of generation and/or consumption, excluding any accepted balancing market offers and bids. The TSOs consider that the details outlined in SEM-15-065 offer sufficient guidance regarding the submission of PNs. While the participation of battery energy storage units in balancing markets and their FPN submissions may necessitate certain modifications in the Trading and Settlement Code, subject to the Regulatory Authorities' approval, the TSOs do not currently propose any alterations to the rules governing PN submissions on foot of the DASSA.

Service providers are therefore expected to manage their DASSA market position and ex-ante energy market position to avoid the consequences of not meeting their DASSA or energy market obligations. For further detail on enforcing DASSA commitment obligations please refer to Section 5.

12.1.3.2 Performance scalars and incentives

Respondents' comments regarding the impact of performance incentives across different markets are noted. The TSOs consider that Other System Charges (OSCs), such as Generator Performance Incentives (GPIs), are intended to incentivise the optimum performance of generators to ensure efficient use of the power system. The DASSA performance scalar regime will be designed to specifically incentivise the satisfactory provision of services procured through the daily auction arrangements. The detailed design of the performance scalars will be subject to a future workstream, which will be set out in the next iteration of the PIR to be published in September 2024. The feedback received to date will be considered as part of this workstream.

12.1.3.3 Scheduling and dispatch

The TSOs wish to clarify that the results of the DASSA will not feed directly into the scheduling and dispatch process. However, there is a direct link between service providers' DASSA positions and the scheduling and dispatch process as service providers' FPNs must be compatible with their DASSA Order (where the service provider submits FPNs as a matter of course); these FPNs feed directly into the scheduling and dispatch process. Also, it is important to emphasise that the EBGL stipulates that TSOs should not give preference to balancing energy bids from balancing capacity order holders over those who have not been assigned a balancing capacity order.[21]

As set out in Section 6.7, service providers will also be obliged to declare their forecasted system services availability ahead of real time. Service providers will submit their forecasted availability after the DASSA has run and may subsequently reflect changes to their forecasted availability in this declaration.

[20] SEM-15-065, I-SEM ETA Markets Decision Paper.pdf (semcommittee.com)
[21] EU (2017/2195), Article 16(7)

12.2 Interaction with the Capacity Market

12.2.1 Consultation Summary

In the consultation paper, the TSOs asserted that the proposed design of the DASSA does not alter existing Capacity Market obligations for a service provider that has also been contracted to provide system services.

12.2.2 Summary of Consultation Responses

Respondents raised concerns about the impact of the DASSA on units with Reliability Obligations in the Capacity Market. Several respondents pointed out that the risk of non-performance difference payments might discourage these units from participating in the DASSA. Respondents requested clarity from the RAs and TSOs in this regard.

12.2.3 TSOs' Commentary

Regarding the impact of units participating in the DASSA which have Reliability Obligations in the Capacity Market, the TSOs acknowledge that clarity is required on this issue. At the time of publication of this paper, respondents' concerns have been raised with the Regulatory Authorities. The Regulatory Authorities have advised that this will be addressed in the SEM Committee's decision paper on the DASSA.

12.3 DASSA Interaction with European Markets

12.3.1 Question 40 – Consultation Summary

The proposed design of the DASSA is intended to be compatible with the exchange of balancing capacity and balancing energy in Europe.

Question 40. Do you have any comments on the interaction of the DASSA with European markets following the completion of the Celtic interconnector?

12.3.2 Question 40 - Summary of Consultation Responses

While some respondents commented that they consider the proposed design of the DASSA to be compatible with the exchange of balancing capacity and balancing energy in Europe, the majority stated that they needed further information on how the DASSA auction, the Celtic Interconnector and the European balancing platforms will interact.

Concerns raised by respondents included:

- The DASSA design will make the SEM uncompetitive compared to European markets following completion of the Celtic interconnector.
- How zonal pricing may interact with the cross-border trade of balancing energy via the European balancing platforms.
- Complexity in the interaction with European balancing platforms and potential capacity market redesign.
- Compliance with Capacity Allocation and Congestion Management (CACM) and other network codes.
- Non-SEM generators may face difficulties in providing services via the Celtic Interconnector due to HVDC control system requirements and active power capability constraints.
- The timing of the DASSA auction and post-Celtic Interconnector interaction needs consideration.
- Participants need clear requirements for shadow-settling actions on EBGL platforms to align IT systems with DASSA and FAM.
- Uncertainty on how EBGL, Balancing Market, and FAM transactions will interact and be reported.

12.3.3 Question 40 – TSOs' Commentary

The TSOs address respondents' commentary on the interaction with the European markets below under the following topics.

12.3.3.1 Integration of zonal pricing and cross border trades

Regarding the integration of zonal pricing and potential conflicts with cross border trade principles via MARI / TERRE, it must be noted that the MARI and TERRE platforms are for the exchange of balancing energy, not balancing capacity. Merit Order Lists compiled for submission to the EU platforms will be derived from the balancing energy bids submitted to the SEM balancing market and not from results of the DASSA which may include zonal pricing.

The SEM Bidding Code of Practice may be a concern, particularly in relation to the potential for service providers with DASSA contracts to submit lower bids into the Balancing Market, thereby gaining a competitive advantage. Providers in different zones could experience varying levels of competitiveness due to zonal pricing disparities within the DASSA, which could influence their bid strategies. However, the use of Simple Bids in developing SEM inputs to the European Common Merit Order Lists for balancing platforms like MARI and TERRE might mitigate these concerns by ensuring that submissions are based solely on

balancing energy bids and not influenced by DASSA results. This issue requires further review by the Regulatory Authorities to ensure competitiveness and fairness across zones.

While the DASSA design aligns with Article 33 of the EBGL, it is notable that there are currently no pan-EU balancing capacity platforms. Existing balancing capacity regional platforms mainly trade aFRR[22], which will not be procured in the DASSA, and are situated in central European zones to which the SEM is not connected.

In response to concerns about the competitiveness of the SEM compared to European markets, the TSOs reiterate that the DASSA has been designed to be compatible with both existing and evolving European market structures. The TSOs are committed to ensuring that the DASSA design supports a competitive and transparent market.

12.3.3.2 Timing of DASSA auction and post-Celtic Interconnector interaction

The interaction of the DASSA timing with European markets post Celtic Interconnector go-live has been considered in Section 3.2 of the Recommendation paper.

12.3.3.3 Shadow-settlement action taken on EBGL platforms

The potential for shadow settlement actions taken on European balancing platforms has been noted. However, it is important to clarify that the EU balancing platforms, such as MARI and TERRE, are designed as TSO-to-TSO platforms. This means that individual market participants (i.e., balancing service providers) do not interact directly with these platforms but instead engage with their local TSOs. The local TSOs then exchange balancing services with other TSOs via the EU balancing platforms. Therefore, it is not clear to the TSOs where the need for market participants to shadow settle actions directly on EU balancing platforms arise. This question on shadow settlement should be directed to the TSOs' Strategic Markets Programme at SMP.PMO@Eirgrid.com for further clarification.

12.3.3.4 Compliance with CACM

Regarding compliance with CACM, SEM processes already align significantly with CACM requirements due to previous implementations under the I-SEM program. While Brexit led to a temporary decoupling, re-coupling and full CACM implementation are within the scope of the Strategic Markets Programme. There is no indication of significant changes needed to current SEM processes for CACM compliance.

12.3.3.5 Clarity on REMIT

In response to stakeholders' feedback regarding the Regulation on Wholesale Energy Market Integrity and Transparency (REMIT), the TSOs have carefully considered concerns about its application to the DASSA and the withholding of capacity from ex-ante energy markets. While withholding capacity from the ex-ante markets, with the intention of offering it into the DASSA, could potentially be considered as abusive capacity withholding under Article 5 of REMIT, the TSOs have been advised that this would apply only in exceptional circumstances where withholding the capacity aligns with the definition of manipulation as defined in the REMIT. However, each market participant should assess and ensure its own compliance with REMIT in light of market fundamentals, its portfolio, and its commercial strategy.

12.3.3.6 Clarity on EMIR

Regarding European Market Infrastructure Regulation (EMIR), the TSOs have carefully considered the concerns raised by market participants and have been advised that there are strong reasons to conclude that DASSA Orders are not derivative contracts falling within EMIR. Consequently, DASSA Orders are not reportable under EMIR. However, each market participant should assess its reporting and other obligations based on its own interpretation of the relevant legislation.

12.3.3.7 Non-SEM generators providing services via Celtic Interconnector

It should be noted that article 33.2 of the EBGL requires that all balancing capacity exchanges be based on the TSO-TSO model. Furthermore, balancing capacity exchange can only apply to the standard balancing products, not specific products defined in the DASSA Product Review & Locational Methodology Consultation Paper.

[22] Automatic Frequency Restoration Response.

12.3.3.8 Clarity on the methodology used for allocating cross zonal capacity to the Celtic Interconnector for balancing capacity exchange

Currently, both market-based and co-optimization methodologies are being evaluated in Europe for allocating cross-zonal capacity to interconnectors to facilitate balancing capacity exchange. However, the specific approach to be adopted remains uncertain at this time. Further collaboration between EU TSOs and the Agency for the Cooperation of Energy Regulators (ACER) is necessary, and the final decision will be subject to ACER's future determinations.

12.3.3.9 Interconnector participation in DASSA & Interfacing with GB

The TSOs note that interconnector schedules are not known at the time of the DASSA at the day-ahead stage. The TSOs would like to clarify that the current DASSA design permits interconnectors to participate in the DASSA arrangements by submitting volume-capped DASSA bids, whereby the volume above the cap will be considered in the FAM. In addition, the design also permits interconnectors to participate in secondary trading.

The TSOs consider that the proposed DASSA design is compatible with the interface of the SEM with GB. For interconnectors connecting the SEM with GB, interconnector schedules are set based on the intraday auctions. Once interconnector schedules are known, interconnectors will be aware of residual capacity that can be used to provide system services and participate in the DASSA arrangements accordingly through secondary trading and the FAM.

Glossary

Acronym	Meaning
ACER	Agency for Cooperation of Energy Regulators
aFRR	Automatic Frequency Restoration Response.
BCOP	Bidding Code of Practice
BM	Balancing Market
CACM	Capacity Allocation Congestion Management
CAP	Climate Action Plan
CEP	Clean Energy Package
CP	Clearing Price
CRU	Commission for Regulation of Utilities
D	Delivery Day
D-1	Day Ahead
DAM	Day Ahead Market
DASSA	Day-Ahead System Services Auction
DRAI	Demand Response Association of Ireland
DS3	Delivering a Secure Sustainable Electricity System
DSO	Distribution System Operator
EA	Eventual Availability
EAI	Electricity Association of Ireland
EBGL	Electricity Balancing Guidelines
EMIR	European Market Infrastructure Regulation
ESI	Energy Storage Ireland
EU	European Union
EUIDA	European Intraday Cross-Border Auction
EUPHEMIA	European Union Pan- European Hybrid Electricity Market Integration Algorithm
FAM	Final Assignment Mechanism
FASS	Future Arrangements for System Services
FCR	Frequency Containment Reserves
FFR	Fast Frequency Response
FPN	Final Physical Notification
FRR	Frequency Restoration Reserve
GB	Great Britain
GC2	Gate Closure 2
GPI	Generator Performance Incentives

Acronym	Meaning
HLD	High Level Design
HVDC	High Voltage Direct Current
ICM	Intraday Continuous Market
IDA	Intraday Auction
LCIS	Low Carbon Inertia Services
LPF	Layered Procurement Framework
LTS	Long Term Scheduler
MARI	Manually Activated Reserves Initiative
MEC	Maximum Export Capacity
MMU	Market Monitoring Unit
MO	Market Operator
MW	Mega Watt
NI	Northern Ireland
OSC	Other System Charges
P/Q	Price Quantity
PIR	Phased Implementation Roadmap
POR	Primary Operating Reserve
QTP	Qualification Trial Process
RA	Regulatory Authority
REMIT	Regulation on Wholesale Energy Market Integrity and Transparency
RES	Renewable Energy Sources
RM1	Ramping Margin 1
RM3	Ramping Margin 3
RM8	Ramping Margin 8
RRD	Replacement Reserve Desynchronised
RRS	Replacement Reserve Synchronised
RTC	Real Time Commitment
RTD	Real Time Dispatch
SEM	Single Electricity Market
SEM-C	Single Electricity Market Committee
SEM-GB	Single Electricity Market- Great Britain
SEMO	Single Electricity Market Operator
SFG	Sequential Filling Guarantee
SNSP	System Non-Synchronous Penetration
SOR	Secondary Operating Reserve

Acronym	Meaning
SSFA	System Services Future Arrangements
ST	Secondary Trading
TERRE	Trans European Replacement Reserves Exchange
TOR1	Tertiary Operating Reserve 1
TOR2	Tertiary Operating Reserve 2
TSO	Transmission System Operator
UR	Utility Regulator
VFM	Volume Forecasting Methodology
WEI	Wind Energy Ireland