FASS: DASSA Parameters & Scalars

Recommendations Paper

October 2025

EirGrid SONI

Executive Summary

In September 2024, the SEM Committee (SEMC) published its decision[1] with respect to the recommended design for the Day-Ahead System Services Auction (DASSA)[2], that was submitted by the Transmission System Operators (TSOs) to the SEMC in July 2024. The TSOs have progressed the development of the DASSA on foot of that decision.

The SEMC decision also instructed the TSOs to consult on aspects of the daily auction design that had not previously been subject to industry consultation.

To address these outstanding elements, the TSOs published our DASSA Parameters and Scalars consultation on 9 June 2025. The paper set out proposals across several functional areas to finalise the design of the DASSA arrangements for go-live:

Summary of Parameters and Scalars Consultation Proposals				
I.	DASSA Qualified Volumes	Min and Max Service Volumes		
II.	DASSA Pricing	Price Cap	Price Floor	Scarcity Price
III.	DASSA Bidding	Max Number of P/Q Pairs	Min Step Size in P/Q Pairs	Auction Gate Window
IV.	Secondary Trading Matching	Schedule of Batch Matching	Batch Matching Clearing and Pricing	
V.	Volume Insufficiency	Threshold for TSO Participation in Secondary Trading		
VI.	Commitment Obligations & Incentives	Pre-gate Closure: Compensation Payment	Post-gate Closure: Availability Incentives	Post-gate Closure: Delivery Incentives
VII.	Service Quality Value Function	Objective Function: Quality Value Function		
VIII.	Bundles of Services	Implicit and Explicit Bundles		
IX.	Auction Fallback	DASSA Fallback Mechanism		

[1] SEM-24-066 Future Arrangements for System Services DASSA Market Design Decision Paper (semcommittee.com)
[2] DASSA Design Recommendations Paper (EirGrid); DASSA Design Recommendations Paper (SONI)

The above proposals were the outcome of a collaborative development process the TSOs undertook with our strategic design partners, AFRY and DotEcon, and engagement with the Regulatory Authorities (RAs), incorporating their insights and perspectives.

The Parameters and Scalars consultation[3] closed on 25 July 2025. Virtual industry workshops were held on 18 June 2025 and 09 July 2025 to support the consultation process. In total, the TSOs received 19 responses to the consultation from industry stakeholders. All non-confidential responses have been published on the TSOs' consultation portals[4][5].

In developing our recommendations, the TSOs conducted a comprehensive review of respondents' feedback. The TSOs also engaged with our partner AFRY to consider industry feedback and develop alternative mechanisms as appropriate. A report detailing AFRY's updated approach to Parameters and Scalars is published alongside this recommendation paper.

An overview of the TSOs' recommendations, including indication of whether each recommendation differs from the consultation, is provided in the following section.

Overview of TSOs' Recommendations

There follows a high-level summary of the TSOs' recommendations for DASSA go-live with changes compared to the consultation document noted. For a detailed description of each recommendation, including post-DASSA go-live considerations, please refer to the relevant sections of this recommendations paper and, where applicable, within the Appendix.

DASSA Qualified Volumes (Proposal unchanged)

The TSOs recommend that existing DS3 Regulated Arrangements system service volume limits for upward reserve services be maintained for the DASSA. Service providers must be capable of delivering a minimum of 1 MW for each reserve service to qualify for participation in the daily auction. Maximum qualified volumes will be capped at 75 MW for each of the FFR sub-categories, POR, SOR, TOR1, and TOR2, and at 300 MW for Replacement Reserve (RR). The same limits will apply to downward reserve services.

DASSA Pricing (Modified proposals)

The TSOs recommend a Total Bid Price Cap of €500/MWh per each individual upward and downward service - FFR, POR, SOR, TOR1, TOR2 and RR - and the £/MWh equivalent for Northern Ireland. The TSOs recommend that the Bid Price Caps be reviewed periodically post-DASSA Go-live to ensure they remain appropriate for the arrangements and in the context of any future implementation of linked bids and bundles of reserve services.

For the Bid Price Floor, the TSOs recommend a value of €0/MWh and £0/MWh for each reserve service.

To address potential scarcity in the DASSA, the TSOs recommend that a DASSA Scarcity Price of €1000/MWh per individual reserve service be implemented for DASSA Go-live. The

[3] FASS: DASSA Parameters & Scalars Consultation Paper (EirGrid & SONI)
[4] SONI Consultation Portal
[5] EirGrid Consultation Portal

Scarcity Price will apply once a threshold for volume insufficiency is met. Post-DASSA go-live, the TSOs recommend that the DAM clearing price be integrated into the calculation of the DASSA Scarcity Price per individual reserve service.

DASSA Bidding (Modified proposal)

The TSOs recommend several measures to finalise the bidding process for the DASSA:

- Each bid per service per Trading Period may include up to 10 price/quantity (P/Q) pairs.
- The minimum step size for bid prices will be €0.01/MW in Ireland and £0.01/MW in Northern Ireland.
- The minimum step size for bid quantity will be 0.001 MW.

The TSOs recommend that the DASSA gate window open at 23:00 on D-19 and close at 15:30 on D-1, with the RAD gate window to align with the DASSA gate window. The TSOs will keep the DASSA (and RAD) gate opening and closure timings under review post DASSA go-live.

These proposals maintain the core DASSA bidding process as approved by the SEM Committee in decision SEM-24-066[6].

Secondary Trading Matching (Modified proposals)

As per SEM-24-066, the matching of secondary trading of DASSA Orders is to be done on a batch basis. In this paper, the TSOs make recommendations for the schedule of the batches and the clearing of secondary trades.

The TSOs recommend that the batch process for matching Buy and Sell Orders will run every 30 minutes, immediately following the secondary trading gate closure for the Trading Period one hour ahead. Each batch will process all trades in the Order Book for Trading Periods from one hour ahead up to the final Trading Period covered by the daily auction.

Regarding the clearing of secondary trades and the establishment of a Secondary Trading Clearing Price, the TSOs make several recommendations, accounting for implementation considerations, for both DASSA go-live and post go-live.

- For DASSA go-live, the TSOs recommend two options: Simple batch matching, as described in Proposal 1 - Option A in our consultation paper[7], or a first-come, first-served (FCFS) continuous matching mechanism for clearing secondary trades, as initially described in the TSOs' 2024 DASSA Design consultation paper[8]. However, the feasibility of implementing the latter for DASSA go-live has not yet been determined by the TSOs.
- For post DASSA go-live, the The TSOs recommend that the optimisation of secondary trades, as described in detail in our consultation paper[9], be implemented post DASSA go-live (Day 2). Or, if simple batch matching (without optimisation) is initially

[6] SEM-24-066 Future Arrangements for System Services DASSA Market Design Decision Paper (semcommittee.com)
[7] Section 6.3.3.1 (EirGrid); Section 6.3.3.1 (SONI)
[8] Section 5.4.3 (EirGrid); Section 5.4.3 (SONI)
[9] Section 6.3.4 (EirGrid); Section 6.3.4 (SONI)

implemented and issues are observed relating to liquidity, the TSOs propose introducing simple batch matching with an enhanced pricing (Day 1+)[10].

The TSOs also recommend that a price floor of zero be applied to secondary trading Buy and Sell Orders for go-live.

Volume Insufficiency (Modified proposals)

In situations where required service volumes are not procured in the DASSA, the TSOs recommend defining this threshold as the maximum of:

A. Volume to account for unavailability of reserve service providers (as described in the consultation paper), or,
B. Alternate value that will be greater than zero, to ensure a threshold is defined if Value A is zero.

Both values will be determined as part of the year-ahead (Y-1) volume forecasting process.

Commitment Obligations and Incentives (Modified proposals)

The TSOs recommend that a layered incentive mechanism to support the fulfilment of Commitment Obligations under DASSA be implemented. This mechanism will apply progressively stronger incentives as the system approaches real-time delivery, ensuring that service providers are motivated to submit compatible Final Physical Notifications (FPNs), maintain availability of confirmed reserve volumes, and deliver services when required. The overall structure of the recommended mechanism will be as per our consultation paper, with some changes recommended to the design of the individual components.

Regarding the application of the Compensation Payment, the TSOs recommend proceeding with our preferred approach: Compensation Payments will be payable to the TSOs when a DASSA Order is not compatible with the service provider's Final Physical Notification (FPN) or has been self-lapsed, either fully or partially, with exceptions for lapsing due to TSO actions.

The TSOs recommend that the value of the Compensation Payment for go-live will be 'Compensation Payment = DASSA Clearing Price x Service-Specific Multiplier', and for post-go live will be the delta between the ex-post Adjusted DASSA Price and the DASSA Clearing Price (as per our consultation paper).

The TSOs recommend that the post-gate closure availability incentive will be as per our consultation paper: Compensation Payment (and forfeit of the DASSA payment) for the applicable Trading Period, and an Availability Performance Scalar.

Likewise, the TSOs' recommendation for the post-gate closure delivery incentive is that an Event Performance Scalar (as per our consultation) be implemented to incentivise the delivery of reserve services when called upon to do so, either in response to a frequency event or dispatch instruction.

[10] DASSA 'Day 1+'refers to items to be delivered post go-live under the existing FASS Programme, while Day 2 refers to a Separate 'Day 2' FASS programme which will run independently once scoped, funded and planned. Full details on the programme of work within each of these phases will be communicated in due course.

For both the post-gate closure availability and delivery incentives, the TSOs suggest values for one-off payments, should the SEMC consider proceeding in that direction.

The TSOs recommend the implementation of a Grace Period of eight hours, applicable to energy storage units (ESUs), and that the application of the Grace Period to other technology types be evaluated prior to DASSA go-live.

Bundles of Services (Proposal unchanged)

The TSOs recommend that the DASSA will procure only individual reserve services at go-live, with no provision for either explicit or implicit bundling. The TSOs will establish a separate workstream to evaluate the bundling of services and related mechanisms such as the linking of bids.

Service Quality Value Function (Proposal unchanged)

For the initial implementation of the DASSA, the TSOs recommend setting the Service Quality Value Function to zero across all reserve services: this means that, beyond meeting any minimum dynamic service volume requirement, no additional preference will be applied for dynamic over static service provision during the auction clearing process.

DASSA Fallback Mechanism (Proposal unchanged)

The TSOs recommend that a DASSA Fallback Mechanism be implemented, as per our consultation proposal, to ensure continuity of reserve service procurement and settlement in the event of the DASSA suspension. The primary fallback mechanism will be the DASSA Top-up Mechanism, and if the DASSA Top-up Mechanism is also unavailable, the TSOs recommend that all available reserve volumes be remunerated at predefined regulated tariffs.

Table 1: DASSA Parameters and Scalars Recommendations

#	Module	Question	Change to TSOs' Cons Proposal	TSOs' Recommendation
1	Volumes	Do you agree with the TSOs' proposals for the minimum and maximum reserve service volumes for the go-live of the DASSA arrangements?	No Change	Minimum volume of 1 MW for all reserve services. Maximum volume of 75 MW for FFR (each sub-category), POR, SOR, TOR1 and TOR2. Maximum volume of 300 MW for RR.
2	Pricing	Do you have any comments on the proposed DASSA Bid Price Cap design and value?	Significant Change	€500/MWh Bid Price Cap per each individual upward and downward reserve service. Value to be reviewed periodically, including in context of bundles and linked bids.
3	Pricing	Do you have any comments on the proposed DASSA Bid Price Floor value?	No Change	DASSA Bid Price Floor value of €0/MWh and £0/MWh for each individual reserve service
4	Pricing	Do you have any comments on the proposed DASSA Scarcity Price design and value determination?	Significant Change	Scarcity Price of €1000/MWh per individual service, for DASSA go-live. Post go-live (Day 1+), integrate DAM Clearing Price and Scarcity Cap: min(max(Bid Cap, DAM Price), Scarcity Cap) per service.
5	Bidding	Do you agree with the TSOs' proposals for the maximum number of P/Q pairs and minimum step sizes in P/Q pairs for price and quantity?	No Change	Service providers may submit up to a maximum of 10 price/quantity pairs, which must be increasing. Minimum step size for bid prices will be €0.01/MW in Ireland and £0.01/MW in Northern Ireland. Minimum step size for bid volumes in the DASSA will be 0.001 MW.
6	Bidding	Do you agree with the TSOs' proposal for the DASSA gate window opening time?	Significant Change	DASSA gate opening of D-19. RAD gate opening of D-19.

7	Secondary Trading	Do you have any comments on the TSOs' proposals for the batch matching of Buy and Sell Orders and the determination of prices in secondary trading?	Minor Change	Simple batch matching of secondary trades, with the price per trade established on the buy side (starting with the highest Buy Order price matching with the lowest Sell Order price, and sequentially in order of decreasing Buy Order price). TSOs to evaluate FCFS continuous matching for go-live or post go-live (D 1+). Optimisation of secondary trades for post go-live (Day 2). No negative prices on Buy or Sell side to be facilitated for DASSA go-live – will be a Day 1+ deliverable.
8	Secondary Trading	Do you agree with the TSOs' proposal for establishing the value of the threshold for an instance of volume insufficiency?	Minor Change	Maximum of: - Volume to account for unavailability of reserve service providers (as described in the consultation). - Alternate value that will be greater than zero, to ensure a threshold is defined if Value A is zero. Both values will be determined as part of the year-ahead (Y-1) volume forecasting process
9	Commitment Obligations & Incentives	Do you have any comments on the proposed Commitment Obligations & Incentives process overview and hierarchy	No Change	As per consultation paper, noting change to Compensation Payment and suggestions for once-off payments.
10	Commitment Obligations & Incentives	Do you have any comments on the proposals for the application of the Compensation Payment noting the TSOs' preferred approach?	No Change	Apply Compensation Payment to Lapsed Orders with exceptions (Option 1 in consultation paper). Note Grace Period recommendation.
11	Commitment Obligations & Incentives	Do you have any comments on the options for the calculation of the Compensation Payment noting the TSOs' preferred option and the proposal that no reduced Compensation Payment will apply to early self-lapsing?	Minor Change	Go-live: DASSA Clearing Price x Multiplier (defined by service) Post go-live (Day 2): Value based on Delta between Adjusted DASSA Clearing Price and Actual DASSA Clearing Price (as per consultation paper).

12	Commitment Obligations & Incentives	Do you have any comments on the Post-Gate Closure Availability Incentive options noting the TSOs' preferred option?	Minor Change	Availability Performance Scalar (as per consultation paper). Suggested One-off Charges: DASSA Clearing Price x Multiplier (defined by Service)
13	Commitment Obligations & Incentives	Do you have any comments on the Post-Gate Closure Delivery Incentive options noting the TSOs' preferred option?	Minor Change	Event Performance Scalar (as per consultation paper). Suggested One-off Charges: €1000/MWh or €2000/MWh depending on value of DASSA Clearing Price.
14	Commitment Obligations & Incentives	Do you have any comments on TSOs' proposal for a Grace Period for energy storage units?	Minor Change	Grace Period of 8 hours to apply to BESS units (waiving application of Availability Incentives); in practice, expected to apply to TOR2 and RR services only. TSOs to evaluate application of Grace Period for other service providers pre-DASSA go-live.
15	Bundles	Do you agree with the TSOs' proposals to only procure individual services – and neither implicit nor explicit bundles – in the DASSA at go-live?	No Change	Individual services to be procured in the DASSA for go-live. Post go-live, TSOs will examine bundles and linked bids.
16	Service Quality	Do you agree with the TSOs' proposal to set the Value Function in the objective function of the DASSA clearing to zero?	No Change	Value Function in the objective function to be set to zero for the go-live of the DASSA for all services, meaning that there will be no operational preference to procure dynamic over static service provision above the minimum auction dynamic volume requirement.
17	Fallback Mechanism	Do you have any comments on the proposed DASSA Fallback Procedure design and value determination?	No Change	Initial DASSA fallback mechanism is the RAD. Pre-defined tariffs (based on LRMC of a BESS unit) to apply if RAD is not available.

Contents

Glossary

Term or Abbreviation	Meaning
BCOP	Bidding Code of Practice
BESS	Battery Energy Storage System
BM	Balancing Market
CAPEX	Capital Expenditure
CCGT	Combined Cycle Gas Turbine
COD	Commercial Offer Data
DAM	Day Ahead Market
DASSA	Day Ahead System Services Auction
DS3	Delivering a Secure, Sustainable Electricity System
DSR	Demand Side Response
FAM	Final Assignment Mechanism
FASS	Future Arrangements for System Services
FFR	Fast Frequency Response
FPN	Final Physical Notification
GT	Gas Turbine
HLD	High Level Design
IDM	Intraday Market
IMR	Inframarginal Rent
LPF	Layered Procurement Framework
LRMC	Long-run Marginal Cost
PIR	Phased Implementation Roadmap
POR	Primary Operating Reserve
PQ pairs	Price-Quantity Pairs
RAD	Residual Availability Determination
RAs	Regulatory Authorities
RES	Renewable Energy Sources
RO	Reliability Option
RR	Replacement Reserve
SEM	Single Electricity Market
SEMC	Single Electricity Market Committee

SONI	System Operator for Northern Ireland
SOR	Secondary Operating Reserve
SSFA	System Services Future Arrangements
TOR1	Tertiary Operating Reserve 1
TOR2	Tertiary Operating Reserve 2
TSO	Transmission System Operator
V_m	Dynamic Time Scaling Factor
F_A	Availability Factor
Q_i	Performance Incident Scaling Factor
K_m	Monthly Scaling Factor
S_A	Availability Performance Scalar
S_E	Event Performance Scalar

Relevant SEMC Decisions

SEM-20-044 System Services Future Arrangements Scoping Paper

SEM-21-021 System Services Future Arrangements Decision Paper 1

SEM-22-012 System Services Future Arrangements High-Level Design Decision

SEM-23-103 System Service Future Arrangement Phase III: Detailed Design & Implementation Decision Paper

SEM-24-066 Future Arrangements for System Services DASSA Market Design Decision Paper

SEM-24-074 Future Arrangements for System Services Product Review and Locational Methodology Decision Paper

SEM-25-011 Future Arrangements for System Services Volume Forecasting Methodology Decision Paper

SEM-25-056 Future Arrangements for System Services DASSA Top-up Mechanism Decision Paper

1 Introduction

1.1 Background

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

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

Currently, under the DS3 System Services (Volume Uncapped) Regulated Arrangements, the procurement of system services is based on technical qualification and availability-based tariffs. In enabling a transition to a low carbon energy system and ensuring efficient procurement of relevant services, while ensuring compliance with EU requirements, there is a need to move to a more competitive procurement process.

1.2 System Services Future Arrangements

The System Services Future Arrangements (SSFA) programme was officially launched by the SEM Committee (SEMC)in July 2020 with the publication of a Scoping Paper (SEM-20-044)[11] for public consultation.

As set out in the SEMC's SSFA Decision Paper 1 (SEM-21-021)[12], the objective of the programme is:

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

In April 2022, the SEMC published the SSFA High-Level Design (HLD) Decision (SEM-22-012)[13]. The HLD set out a framework for the competitive procurement of system services, consisting of the following:

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

[11] SEM-20-044 System Services Future Arrangements Scoping Paper (semcommittee.com)
[12] SEM-21-021 System Services Future Arrangements Decision Paper 1 (semcommittee.com)
[13] SEM-22-012 System Services Future Arrangements High-Level Design Decision Paper (semcommittee.com)

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

In December 2023, the SEMC published its SSFA Phase III: Detailed Design & Implementation Decision Paper (SEM-23-103)[14], in which it decided that the commercial arrangements as described in the HLD should be progressed by the TSOs.

In September 2024, the SEMC published its Future Arrangements for System Services DASSA Market Design Decision Paper (SEM-24-066)[15] with respect to the TSOs' recommended design for the Day-Ahead System Services Auction (DASSA)[16] that was submitted to the SEMC in July 2024.

Subsequent SEMC decisions that are relevant for this paper are the Future Arrangements for System Services Product and Locational Methodology Decision Paper (SEM-24-074)[17], published in October 2024, the Future Arrangements for System Services Volume Forecasting Methodology Decision Paper (SEM-25-011)[18], published in March 2025, and the Future Arrangements for System Services DASSA Top-up Mechanism Decision Paper (SEM-25-056)[19], published in October 2025.

1.3 Consultation Responses Overview

The DASSA Parameters and Scalars consultation was published on 09 June 2025 and closed on 25 July 2025. Virtual industry workshops were held on 18 June 2025 and 09 July 2025 to support the consultation process. In total, the TSOs received 19 responses to the consultation from industry stakeholders. The 18 non-confidential responses were as follows:

- Bord Gáis Energy
- Bord Na Mona
- Captured Carbon Limited
- Demand Response Association of Ireland (DRAI)
- Electricity Association of Ireland (EAI)
- Energia
- EP UK Investments
- ESB Generation

[14] SEM-23-103 System Service Future Arrangement Phase III: Detailed Design & Implementation Decision Paper (semcommitte.com)
[15] SEM-24-066 Future Arrangements for System Services DASSA Market Design Decision Paper (semcommittee.com)
[16] DASSA Design Recommendations Paper (EirGrid); DASSA Design Recommendations Paper (SONI)
[17] SEM-24-074 Future Arrangements for System Services Product Review and Locational Methodology Decision Paper (semcommittee.com)
[18] SEM-25-011 Future Arrangements for System Services Volume Forecasting Methodology Decision Paper (semcommitte.com)
[19] SEM-25-056 Future Arrangements for System Services DASSA Top-up Mechanism Decision Paper (semcommittee.com)

- Federation of Energy Response Aggregators (FERA)
- Greenlink Interconnector Limited
- Hanwha Energy Corporation Ireland Limited
- iPower
- Irish Energy Storage Association (IESA)
- Moyle Interconnector Limited
- Lumcloon Energy Ltd
- RWE Renewables Ltd
- Statkraft Markets GmbH
- Wind Energy Ireland (WEI), Energy Storage Ireland (ESI) & RenewableNI (RNI)

All non-confidential responses have been published on the TSOs' consultation portals.

The TSOs acknowledge the comprehensives responses received to our consultation proposals. We greatly appreciate the time and effort taken to make these submissions.

1.4 Development of Parameters and Scalars Recommendations

The TSOs conducted a thorough evaluation of the feedback received to each response, including requests for clarification and suggestions of alternative mechanisms. In the sections below, the TSOs summarise and address respondents' commentary.

The TSOs engaged with our auction design partner AFRY to consider industry feedback and develop alternative mechanisms as appropriate. A report detailing AFRY's updated approach to Parameters ad Scalars is published alongside this recommendation paper.

During the development process, the TSOs shared our recommendations, and AFRY's analysis, with the RAs and their advisors, Nera.

1.5 Purpose of Paper

The purpose of this recommendations paper is to set out the TSOs' recommendations across several functional areas to finalise the design of the DASSA arrangements for FASS go-live.

These recommendations are summarised in Table 2 below.

Table 2: Summary of Recommendations

Summary of Parameters and Scalars Recommendations			
DASSA Qualified Volumes	Min and Max Service Volumes		
DASSA Pricing	Price Cap	Price Floor	Scarcity Price
DASSA Bidding	Max Number of P/Q Pairs	Min Step Size in P/Q Pairs	Auction Gate Window
Secondary Trading Matching	Schedule of Batch Matching	Batch Matching Clearing and Pricing	
Volume Insufficiency	Threshold for TSO Participation in Secondary Trading		
Commitment Obligations & Incentives	Pre-gate Closure: Compensation Payment	Post-gate Closure: Availability Incentives	Post-gate Closure: Delivery Incentives
Service Quality Value Function	Objective Function: Quality Value Function		
Bundles of Services	Implicit and Explicit Bundles		
Auction Fallback	DASSA Fallback Mechanism		

1.6 Structure of Paper

This paper is structured as follows:

- Section 1: Introduction
- Section 2: DASSA Qualified Volumes
- Section 3: DASSA Pricing
- Section 4: DASSA Bidding
- Section 5: Secondary Trading Matching
- Section 6: Volume Insufficiency
- Section 7: Commitment Obligations and Incentives
- Section 8: Bundles of Services
- Section 9: Service Quality Value Function
- Section 10: DASSA Top-Up Mechanism
- Section 11: DASSA Fallback Mechanism
- Section 12: Other Consultation Feedback
- Section 13: Summary and Next Steps
- Section 14: Appendices

1.7 Next Steps

The TSOs will submit this recommendations paper to the SEM Committee for consideration at its October 2025 sitting. As per the PIR V3.0, the TSOs anticipate the SEMC will publish its decision on the DASSA Parameters and Scalars shortly thereafter.

The TSOs will consider the SEMC decision in the context of the design and implementation timelines for DASSA go-live in May 2027.

2 DASSA Qualified Volumes

2.1 Introduction

This section sets out the TSOs' recommendations for the minimum and maximum volumes per service that may be procured from individual service providing units in the DASSA at go-live.

2.2 Minimum and Maximum Service Volumes

2.2.1 Service Volumes - Consultation Proposal

For DASSA go-live, the TSOs proposed to apply a 1MW minimum for all reserve services per contracted service providing unit, 75MW maximum limits for FFR to TOR2 and a 300MW maximum for Replacement Reserve, as set out in Table 3 below.

Table 3: Proposed DASSA Min and Max Volumes

System Service	Min Vol Dynamic Provider	Min Vol Static Provider	Max Vol Dynamic Provider	Max Vol Static Provider
FFR Sub-category 1	1 MW	1 MW	75 MW	75 MW
FFR Sub-category 2	1 MW	1 MW	75 MW	75 MW
FFR Sub-category 3	1 MW	1 MW	75 MW	75 MW
POR	1 MW	1 MW	75 MW	75 MW
SOR	1 MW	1 MW	75 MW	75 MW
TOR1	1 MW	1 MW	75 MW	75 MW
TOR2	1 MW	1MW	75 MW	75 MW
RR	1 MW	1 MW	300 MW	300 MW

2.2.2 Service Volumes - Consultation Responses

All 19 consultation respondents commented on the DASSA Qualified Volumes proposal.

Most respondents broadly supported the proposed minimum and maximum service volumes, noting their consistency with existing DS3 arrangements and the potential to ensure a smooth transition. Several respondents emphasised that the volumes should be regularly reviewed to ensure that they remain appropriate for the market

Two respondents suggested alternatives to the TSOs' proposal. One respondent suggested lowering the minimum reserve service volume to 0.001MW (or 0.1MW if deemed more practical), stating that this lower volume is reflected in the minimum P/Q step sizes and can be facilitated by the TSOs' IT systems, to encourage new market entrants. Another respondent supported retaining the 1MW minimum and requested that the TSOs consider allowing increased maximum volumes for units with unique delivery properties. Finally, one

respondent suggested that the 75MW maximum for FFR–TOR2 should include a mechanism for revision, similar to the current 100MW 'Max Volume Requested by TSO' to provide flexibility in scarcity situations.

Some respondents sought clarification from the TSOs in relation to terminology used in the consultation paper. One respondent asked how the maximum volume would be applied across the three FFR sub-categories - specifically whether a service provider could be allocated as much of the 75MW as possible in FFR Sub-category 1. One respondent requested clarification on the definition of a "provider" to which the maximum service volume would apply, understanding it to mean "a "unit" that is separately metered, declared, and dispatched, with a single connection agreement potentially comprising several units, each able to contract up to the full maximum volume". Another respondent requested similar confirmation that the volume limits apply to a unit, in line with the current arrangements.

Some respondents raised broader concerns about the implications of the proposed volume limits. One respondent suggested that the TSOs consider the proposed MW size for future LDES units, cautioning that the limits could disadvantage larger LDES projects and undermine investor confidence.

One respondent stressed that the reserve service volume proposals require greater transparency and analytical rigour, pointing to the absence of a clear rationale, supporting evidence, or explanation of how the values were derived and how they are intended to operate within the wider market framework.

2.2.3 Service Volumes – Recommendation

The TSOs recommend that, for DASSA go-live, the qualified volume limits to apply to all service providing units, irrespective of technology type, will be as per the consultation proposal as set out in Table 3 above.

Service providing units must be capable of delivering at least 1MW of each of the reserve services to be eligible for participation in the DASSA arrangements for that service.

The maximum qualified volume for each of POR, SOR, TOR1, and TOR2 will be 75MW, and 300MW for RR.

Regarding the three FFR sub-categories, a service providing unit that qualifies for the provision of the fastest FFR sub-category (Sub-category 1) will automatically qualify for the provision of Sub-categories 2 and 3 for the same service volume. Similarly, a service providing unit that qualifies for the provision of FFR Sub-category 2 (but not Sub-category 1) will automatically qualify for the provision of Sub-category 3 for the same service volume. A service providing unit may also qualify for a greater volume of a slower FFR sub-category than a higher sub-category, e.g. a higher volume of Sub-category 3 than Sub-category 1 or 2. To clarify, this means that:

- A service provider may not bid for a FFR sub-category volume for which its service providing unit is not qualified and
- The total volume of FFR awarded in the auction across the three sub-categories will not exceed the value of the service providing unit's highest qualified sub-category capacity, e.g. if a service providing unit qualifies for 75MW of FFR Sub-category 1, the total volume of FFR awarded to that unit in the auction will not exceed 75MW.

The minimum and maximum service volume thresholds will apply per contracted service providing unit, where “providing unit” refers to a unit that is separately metered, declared, and dispatched, consistent with contracted units under the current DS3 arrangements.

These values will be captured in the System Services Register, which will govern eligibility for participation in the daily auction for services.

2.2.4 Service Volumes - Recommendation Rationale

The TSOs have carefully considered the feedback received from industry stakeholders on the proposed qualified volumes for DASSA go-live.

With regard to the suggestion that the minimum reserve service volume be set to 0.001MW or 0.1MW, the TSOs advise that dispatch actions via EDIL are mainly issued in whole numbers. While it is possible that some units may receive dispatch instructions via EDIL to one decimal place, dispatching to kilowatt level is not feasible at present due to the size of the market and the capability of operational systems. The TSOs recognise that it may be beneficial in the future to have more granularity in reserve service volumes; as such, these values will continue to be reviewed by the TSOs as market requirements and operational system capabilities evolve.

The TSOs note some respondents’ requests that the maximum qualified volume be set above 75MW. However, the TSOs consider that maintaining this limit per unit is appropriate. As described in the consultation paper, for dynamic providers, this limit will help mitigate the risk of oscillatory behaviour from frequency-based activation of fast-acting services, where careful consideration of deadbands and trajectories is required. For static providers, large volumes activating at certain deadbands could cause increased frequency deviation; therefore, the TSOs recommend that the maximum MW step size limitation per static service providing unit also to be set at 75 MW. This maximum qualified volume has been demonstrated through operational experience to be effective for system operation, has been designed to facilitate a smooth transition into the DASSA framework without creating operational risks, while ensuring that investment signals for future technologies, including future LDES projects, are not undermined.

The TSOs consider that the recommended minimum and maximum service volumes are appropriate to ensure alignment with existing DS3 Regulated Tariff Arrangements values and dispatch operational capabilities. However, we recognise the importance of ensuring they remain appropriate as the system evolves. The TSOs will therefore continue to review reserve service volumes periodically, informed by operational evidence and regulatory requirements, and subject to industry consultation and SEMC decision.

TSOs' Recommendation:

Minimum and maximum service volumes to be implemented for the DASSA arrangements:

- Minimum volume of 1MW for all reserve services.
- Maximum volume of 75MW for each FFR sub-category, with the total volume of FFR awarded in the auction across the three sub-categories to not exceed the value of the service providing unit's highest qualified sub-category capacity per Trading Period.
- Maximum volume of 75MW for POR, SOR, TOR1 and TOR2.
- Maximum volume of 300MW for RR.
- Minimum and maximum volume limits will apply at service providing unit level, aligned with how units are currently contracted under DS3.

3 DASSA Pricing

3.1 Introduction

This section sets out the TSOs' recommendations for the following pricing components of the daily auction:

- DASSA price cap.
- DASSA price floor.
- DASSA scarcity price.

3.2 DASSA Price Cap

This section sets out the TSOs' recommendation for the DASSA Price Cap.

3.2.1 DASSA Price Cap - Consultation Proposal

The TSOs proposed a Total Bid Price Cap of €500/MWh (and the £/MWh equivalent for Northern Ireland) to be allocated across all reserve services within each jurisdiction, as shown in Table 4 below.

The same Total Bid Price Cap value would apply to upward and downward reserves.

Table 4: Proposed DASSA Bid Cap per Service (€/MWh)

	FFR Cat1*	FFR Cat2*	FFR Cat3*	POR	SOR	TOR1	TOR2	RR
Bid Cap MWh**	135	135	135	94	81	74	72	44

Total Bid Price Cap of €500 per MWh

Notes:

* The Bid Price Cap would apply to each FFR sub-category.

** The Bid Price Cap values are on a per hour basis and would be halved accordingly when applied to a 30-minute Trading Period.

3.2.2 DASSA Price Cap - Consultation Responses

18 of the 19 consultation respondents expressed views on the proposed Bid Price Cap.

Most respondents were not in favour of a Price Cap in the DASSA, with many commenting on the absence of scarcity in the system services market. Respondents referenced the TSOs' analysis in the DS3 Temporal Scarcity Scalar (TSS) consultation, published on 11 July 2025, noting that it states that the system regularly operates at high SNSP levels, and that the total volumes contracted under DS3 result in no scarcity at any time of the year for fast

acting system services[20]. Respondents noted that contracted volumes (as set out in Table 1 in the TSS consultation paper) for the services to be procured in the DASSA are currently three to four times the system requirement, indicating little risk of scarcity or market power. Respondents questioned the need for a Price Cap in a well-supplied market and stated that additional controls should be supported by robust evidence, warning that such measures send mixed signals and are unnecessary.

Many respondents expressed concern that applying a Total Bid Price Cap of €500/MWh across individual services exposes service providers to the risk of not recovering the costs associated with service provision. They noted that in the absence of linked or combinatorial bidding, it would be unlikely that a service provider would clear volumes across all offered services, making it difficult to spread opportunity costs, therefore increasing the likelihood of the service provider prioritising energy provision over system services. Respondents also highlighted that the TSOs' proposal fails to recognise that service providers may not offer all reserve services into the daily auction. Some respondents noted that this could create inequities where providers offering all services could earn revenue up to the full cap, while others with similar costs but fewer services would be restricted to lower earnings. Respondents also stated that efficient markets require accurate price discovery, and a Bid Price Cap may constrain bid formation during system stress or for high-cost assets. Others considered the proposed service-level caps, such as €135/MW/h for Fast Frequency Response, to offer little incentive for conventional or flexible assets to participate, particularly without bundling.

Many respondents considered that the TSOs' approach will disincentivise participation in the DASSA, thereby increasing the risk of volume insufficiency and leading to inefficient pricing outcomes.

Most respondents disagreed with the analysis underpinning the TSOs' proposal. They stated that linking bid cap values to expected relative scarcity does not account for real-time system conditions and could distort market signals. AFRY's recommendation to set the total bid cap at €500/MWh based on "consistency with the energy markets" was viewed as flawed, given the Day-Ahead Market cap is €4,000/MWh. Respondents maintained that scarcity prices should be allowed to reflect true market conditions during volume scarcity.

Several respondents questioned linking the proposed cap to the RO Strike Price, noting that while the Strike Price applies within the capacity remuneration framework, there is no equivalent fixed availability payment in the system services arrangements. Respondents outlined that the two markets serve different purposes, have different cost structures and are not interchangeable. They also pointed out that the Strike Price is set weekly based on fuel, carbon, and demand response costs, which does not apply to an "increasing proportion of installed capacity on the system that is not covered by a capacity market reliability option" due to derating factors applied in the Capacity Market auction. Aligning the system services cap to the Strike Price was seen as inappropriate, inequitable, and potentially too low to maintain incentives for participation.

Many respondents suggested alternatives to the TSOs' proposal, including:

[20] Section 1 (EirGrid); Section 1 (SONI)

- Aligning the cap with the €4,000/MWh DAM limit, applied across all reserve bids, allowing participants to bid for services at their discretion without individual product caps.
- Setting the cap to maintain incentives, directly linked to wholesale market prices.
- Introducing a make-whole methodology so bids for one service are contingent on meeting a minimum total threshold.
- Applying the cap administratively to protect consumers without limiting participation, or as a higher dynamic backstop rather than a binding limit.
- Applying the cap across all services offered by a provider in a period to ensure cost recovery.
- Implementing independent product caps that sum to more than €500.
- Using higher benchmarks, such as €9,999/MWh (balancing market) or €750/MWh (PJM).
- Allowing bundling of services in the auction.
- Removing fixed caps entirely in favour of an open competitive clearing price model to protect consumers without capping market value.

3.2.3 DASSA Price Cap - Recommendation

The TSOs recommend that a Bid Price Cap of €500/MWh in Ireland, and the £/MWh equivalent in Northern Ireland, will apply to each upward and downward reserve service for DASSA go-live, as set out in Table 5 below.

Table 5: Recommendation DASSA Bid Cap per Service (€/MWh)

	FFR Cat1*	FFR Cat2*	FFR Cat3*	POR	SOR	TOR1	TOR2	RR
Bid Cap MWh**	500			500	500	500	500	500

Notes:

* The Bid Price Cap of €500/MWh (and £/MWh equivalent in Northern Ireland) will apply to each FFR sub-category.

** The Bid Price Cap values are on a per hour basis and will be halved accordingly when applied to a 30-minute Trading Period.

The TSOs consider that it will be prudent to evaluate the appropriateness of the Bid Price Caps in advance of DASSA go-live in the context of evolving operational and service capacity considerations.

The TSOs recommend that the Bid Price Caps be reviewed periodically post DASSA go-live to ensure they remain appropriate for the arrangements and in the context of any future implementation of linked bids and bundles of reserve services.

Any changes to the Bid Price Caps will be subject to industry consultation and SEMC decision.

3.2.4 DASSA Price Cap - Recommendation Rationale

The TSOs acknowledge respondents' commentary on the TSOs' consultation proposal for Bid Price Caps.

We note the comments regarding the content of the DS3 Temporal Scarcity Scalar (TSS) consultation, which states that sufficient upward reserves capacity has registered under the current arrangements. However, the TSOs consider that the absence of scarcity does not preclude the implementation of mechanisms to safeguard consumer interests. Even in markets where supply is sufficient, price volatility can still occur due to operational constraints, strategic bidding behaviour, or unforeseen system conditions. A DASSA price cap provides a critical backstop against excessive pricing, ensuring that consumers are not exposed to disproportionate costs during periods of system stress.

In their updated approach document, AFRY reiterate the rationale to align our consultation proposal of a Total Bid Price Cap of €500/MWh with the Capacity Market Reliability Option (RO) strike price. AFRY clarify that the RO Strike Price does not function as an indirect cap across all market participants but rather applies to a subset of capacity providers – albeit the majority - engaged in the energy markets. AFRY distinguish between energy and reserve markets in the report, emphasising that reserve income is generally pure profit due to the absence of associated variable costs. Through illustrative examples, they demonstrate that the Total Bid Price Cap proposed in our consultation would be sufficient to enable full cost recovery under realistic operational assumptions without presuming baseload operation.

However, the TSOs and AFRY acknowledge that, in the absence of bundles of services, or linked / combinatorial bidding, there may be situations where service providers cannot fully recover their opportunity costs through the DASSA with a €500/MWh Total Bid Price Cap. There is a risk that some units may not be awarded all reserve services, meaning that in periods of high electricity prices the DASSA may become less attractive. The TSOs are committed to ensuring that service providers are appropriately incentivised to participate in the DASSA; as such, we recommend a Bid Price Cap of €500/MWh per service amounting to a Total Bid Price Cap of 3,000 EUR/MWh (with Stg/MWh equivalents).

AFRY's analysis supports a Bid Price Cap of €500/MWh per service, showing that Day-Ahead Market (DAM) prices exceeded the RO Strike Price in only 0.36% of instances between 2021 and 2025. While intraday and imbalance prices have generally been more volatile, data for the same period shows that these prices have also remained below the RO Strike Price in most cases, exceeding it just 0.43% of the time on average across the three Intraday Auctions (IDAs), and 0.68% for imbalance prices. Additionally, AFRY note that the European gas crisis occurred from late 2021 to 2023 and stated, "Excluding this period, DAM electricity prices have never exceeded the RO Strike Price." As such, the TSOs consider that the revised caps will incentivise competitive system services market participation and address respondents' concerns regarding their ability to recover the costs associated with service provision.

In line with our updated Bid Price Caps, the TSOs recommend an updated scarcity pricing mechanism. Further details on scarcity pricing are provided in Section 3.4 below.

SEM-24-074[21] requires that the TSOs conduct a 'Future DASSA Arrangements' work package to evaluate the bundling of services, and related mechanisms such as the linking of bids, as part of DASSA Day 2 activities as outlined in the PIR V3.0. The value of Bid Price Caps will be reassessed in the context of this activity.

TSOs' Recommendation:

DASSA Bid Price Cap of €500/MWh per service (with Stg/MWh equivalents) per Trading Period to be implemented for upward and downward reserve.

FFR Cat1*	FFR Cat2*	FFR Cat3*	POR	SOR	TOR1	TOR2	RR
€500/MWh			€500/MWh	€500/MWh	€500/MWh	€500/MWh	€500/MWh

TSOs consider that it will be prudent to evaluate the suitability of the Bid Price Caps in advance of DASSA go-live.

Post DASSA go-live, Bid Price Caps to be reviewed periodically and in the context of any future implementation of linked bids and bundles of reserve services.

3.3 DASSA Price Floor

This section sets out the TSOs' recommendation for the DASSA Price Floor.

3.3.1 DASSA Price Floor - Consultation Proposal

The TSOs proposed a Bid Price Floor of €0/MWh in Ireland and £0/MWh in Northern Ireland per reserve service, upward and downward, per Trading Period to be implemented as part of the DASSA auction design.

3.3.2 DASSA Price Floor – Summary of Consultation Responses

9 of 19 consultation respondents expressed views on the DASSA Price Floor proposal.

Most respondents supported the TSOs' proposal, viewing it as a reasonable and sensible approach. Some respondents highlighted that the proposal would help to protect Irish consumers from incurring costs if services were to be provided at a negative price.

One respondent expressed concerns about the need for greater clarity and more robust analysis to support both the Bid Price Floor value and the rationale for its introduction. The

[21] SEM-24-074: Section 4 (semcommittee.com)

respondent also noted that equating the opportunity cost for system service with foregone earnings in the energy market may not accurately reflect the value and cost of system services provision.

Some respondents noted that negative pricing could in certain circumstances, such as high-constraint or high-renewables scenarios, be a valid reflection of market dynamics and may warrant future reconsideration.

One respondent proposed setting the minimum Bid Price Floor equal to the Balancing Market Price Floor (-€1,000/MWh) for each individual service, but only if applied alongside individual Bid Price Caps per reserve service. The respondent recognised, however, the low likelihood of such an approach being accepted by the Regulatory Authorities due to "perceived potential risks to consumers".

One respondent was not "in favour of applying any price restrictions in the secondary market" and suggested that "Negative bid and sell prices should therefore be facilitated in the market design."

3.3.3 DASSA Price Floor – Recommendation

The TSOs recommend that a DASSA Bid Price Floor value of €0/MWh in Ireland and £0/MWh in Northern Ireland be implemented for each individual reserve service, both upward and downward, as per the consultation paper proposal.

3.3.4 DASSA Price Floor – Recommendation Rationale

The TSOs acknowledge respondents' feedback on the proposal to introduce a Bid Price Floor in the DASSA.

As stated in our consultation paper, the TSOs consider that there does not appear to be an incentive to bid below zero in the DASSA given that a DASSA Order does not give any priority for activation in the Balancing Market. Section 4.3.4 of our consultation paper references the detailed analysis on price floors conducted by AFRY and described in their report[22]. The TSOs concur with the methodologies utilised by AFRY in determining a value for the price floor, which illustrated that the marginal cost of service provision by a synchronised unit could be zero. However, the TSOs will monitor the functioning of the daily auction post DASSA go-live and consider whether amendments to the recommended Bid Price Floor are required (with any change being subject to the appropriate industry consultation and a SEMC decision).

Commentary on Secondary Trading pricing is provided in Section 5.3.

TSOs' Recommendation:

A DASSA Bid Price Floor value of €0/MWh in Ireland and £0/MWh in Northern Ireland to be implemented at DASSA go-live for each individual reserve service, both upward and downward, per Trading Period.

[22] AFRY DASSA Parameters and Scalars Report: Section 3.5 (EirGrid); AFRY DASSA Parameters and Scalars Report: Section 3.5 (SONI)

3.4 DASSA Scarcity Price

This section sets out the TSOs' recommendation for the DASSA Scarcity Price design and value.

3.4.1 Scarcity Price - Consultation Proposal

The TSOs proposed that a Scarcity Price would apply to all DASSA Orders for any system service requirement / higher quality of service provision requirement / jurisdiction requirement combination when any procurement shortfall (in the requirements combination) exceeds the Volume Insufficiency Threshold (see Section 6 below for further information on the threshold).

We proposed that the Volume Insufficiency Threshold would align with the volume that the TSOs will procure to cover the unavailability of reserve providers for any system service requirement / higher quality of service provision requirement / jurisdiction requirement combination, as per the TSOs' DASSA Volume Forecast Methodology Recommendations Paper[23].

The TSOs proposed to set a Total DASSA Scarcity Price as the maximum of the Total Bid Price Cap and the DAM clearing price (or if that was not feasible to implement by DASSA go-live, the Total Bid Price Cap). The Scarcity Price per reserve service would be determined based on their proportional contribution to the proposed Total Bid Price Cap.

3.4.2 Scarcity Price - Consultation Feedback

17 of the 19 consultation respondents expressed views on the proposed Scarcity Price.

Most respondents linked the need for a Scarcity Price directly to the implementation of the Bid Price Cap, viewing it as a secondary intervention to address issues created by the cap itself. Respondents commented that, in a well-supplied market, scarcity is unlikely to result from a physical lack of capability, but rather from reduced participation caused by the imposition of price caps. In their view, removing or materially increasing the Bid Price Cap would allow scarcity to be reflected organically, providing a more efficient market signal than an administered price. Several respondents added that this would simplify the market design, reduce administrative burden, and lessen the need for secondary trading.

Some respondents supported aligning the Scarcity Price more closely with wholesale energy market prices. Five respondents explicitly proposed setting it at the higher of the DAM clearing price and the RO Strike Price, arguing that this would better reflect opportunity costs and incentivise participation during periods of system stress. Others supported aligning the Scarcity Price with the DAM price and opposed using the DASSA Total Bid Price Cap as a substitute if the DAM price was not implemented for go-live. They emphasised that integrating DAM prices into the DASSA is essential, with ex-post reconciliation to be used as a temporary measure until full integration is possible. One respondent suggested service-specific scarcity prices based on the higher of the Imbalance Settlement Price or the DASSA Bid Price Cap, while others highlighted that locational procurement signals are essential to

[23] SEM-25-011 Future Arrangements for System Services Volume Forecasting Methodology Decision Paper (semcommitte.com)

ensure scarcity pricing addresses genuine shortfalls rather than structural imbalances in service distribution.

Several respondents expressed conditional support for the introduction of a scarcity price, recognising it as a useful investment signal or rare backstop mechanism. They called for greater transparency on how the value would be set, clearer justification for its application, and an explanation of why services without shortfalls would receive the higher price. Some respondents cautioned that applying scarcity prices to services with sufficient procured volumes could unnecessarily increase consumer costs. One respondent sought clarification if this would occur, stating "Maybe this refers solely to a service that has insufficient offers, but that is not clear in the paper or worked examples."

Some respondents highlighted the risk that the combination of a Bid Price Cap and Scarcity Price will lead service providers to prioritise energy market participation during high price periods rather than providing reserves. Respondents noted that unless the Scarcity Price matches or exceeds Energy Market earnings, service providers may be unwilling to switch capacity to system services. Others viewed the scarcity pricing mechanism as overly complex and unnecessary if effective price signals are allowed to form naturally. They stated that the current design adds uncertainty and increases administrative involvement in the secondary market.

One respondent requested clarity on how the Scarcity Price would interact with the RAD, noting the potential for service providers to be priced out of the DASSA due to the inability to reflect appropriate opportunity costs under the proposed Bid Price Caps, only to clear in the RAD at much lower prices, with all DASSA Order Holders subsequently receiving the Scarcity Price.

Another respondent noted that volume insufficiency will only be determined after the DASSA gate closes, negating the ability of service providers to react to scarcity in the DASSA if they already hold positions in the wholesale energy markets.

Other concerns surrounding the TSOs' proposal related to the absence of clear evidence of market power and the already high level of oversupply as set out in the TSOs' DS3 Temporal Scarcity Scalar consultation.

3.4.3 Scarcity Price - Recommendation

The TSOs recommend that a Scarcity Price will apply to all DASSA Orders for any system service (upward or downward) requirement / higher quality of service provision requirement / jurisdiction requirement combination in instances of Volume Insufficiency.

An instance of Volume Insufficiency will occur when the Volume Insufficiency Threshold has been met. The TSOs' recommendation on the value of the Volume Insufficiency Threshold is set out in Section 6 below.

For DASSA go-live, we recommend that a Scarcity Price of €1000/MWh* per individual reserve service be implemented**.

Post DASSA go-live, the TSOs recommend that:

- The DAM clearing price be integrated into the calculation of the DASSA Scarcity Price per individual reserve service.

- The DASSA Scarcity Price be limited by a Scarcity Cap, being the maximum value per MWh that the TSOs will pay for any system service (upward or downward) requirement / higher quality of service provision requirement / jurisdiction requirement combination in instances of Volume Insufficiency, which will be initially set to €1,000/MWh.

To be formulated as follows:

Scarcity Price = min (max(Bid Price Cap, DAM Price), Scarcity Cap)

The TSOs recommend that the Scarcity Price mechanisms be reviewed periodically post DASSA go-live to ensure they remain appropriate for the arrangements. Any changes to pricing will be subject to further consultation and a decision by the SEM Committee.

Notes:

* The Scarcity Price of €1000/MWh in £/MWh equivalent will apply in Northern Ireland.

** The Scarcity Price values are on a per hour basis and will be halved accordingly when applied to a 30-minute Trading Period.

3.4.4 Scarcity Price - Recommendation Rationale

The TSOs acknowledge the views expressed by consultation respondents regarding the design and proposed value of the DASSA Scarcity Price.

Several respondents raised concerns that the introduction of low Bid Price Caps could inadvertently contribute to scarcity by disincentivising participation in the DASSA. The TSOs recognise this risk and therefore recommend a Bid Price Cap of €500/MWh per individual reserve service, as set out in Section 3.2.3.

The recommended Bid Price Caps have in turn informed our recommendation for the Scarcity Price. In our consultation, the TSOs proposed to set a Total DASSA Scarcity Price as the maximum of the Total Bid Price Cap and the DAM clearing price (or, if that was not feasible to implement by DASSA go-live, equal to the Total Bid Price Cap). The TSOs wish to confirm that it is not possible to integrate the DAM price into the DASSA framework at go-live due to implementation constraints. However, we acknowledge respondents' feedback that defaulting the Scarcity Price to that of the Bid Price Cap may not send the appropriate pricing signals in times of scarcity. Therefore, to ensure appropriate price formation in such periods, the TSOs recommend a Scarcity Price of €1,000/MWh per individual service for DASSA go-live, representing an uplift of €500/MWh above the Bid Price Caps.

The TSOs consider that, in the absence of dynamic DAM pricing referencing, the revised Scarcity Price of €1,000/MWh is a reasonable and proportionate interim recommendation that balances effective market signals whilst safeguarding consumer interests from extreme price events.

The TSOs recommend that the integration of DAM pricing into the Scarcity Price determination – 'min (max(Bid Price Cap, DAM Price), Scarcity Cap)' - be delivered as soon as possible post go-live, to ensure that the most appropriate market signals are in place in times of scarcity, while limiting the exposure to the end customer.

In its decision SEM-24-066[24], the SEMC decided that the TSOs will "address instances of volume insufficiency by procuring the volume deficit in secondary trading through issuing Sell Orders at a Secondary Trading Price of zero and assigning the DASSA scarcity price cap to the additional volumes procured in secondary trading." The TSOs wish to clarify, where scarcity has been identified within the DASSA, that the application of a Scarcity Price will be limited strictly to the specific system service (upward or downward) requirement / higher quality of service requirement / jurisdiction requirement combination, e.g. dynamic POR in Northern Ireland for which an instance of Volume Insufficiency has occurred. This targeted approach ensures that price signals reflect genuine shortfalls in specific service provision.

The TSOs note respondents' requests for empirical evidence of market power. The TSOs consider that it is reasonable to mitigate the risk of market power in the development of the DASSA arrangements rather than wait for issues to materialise post go-live. Accordingly, the TSOs have incorporated multiple safeguards into the DASSA design to support fair and efficient market outcomes from go-live.

TSOs' Recommendation:

DASSA Scarcity Price per individual service to be implemented.

- DASSA go-live: Scarcity Price of €1,000/MWh per individual service to be implemented for upward and downward reserve services (with Stg/MWh equivalent).
- Post DASSA go-live: Scarcity Price per individual service = min (max(Bid Price Cap, DAM Price), Scarcity Cap), where Scarcity Cap will be initially set to €1,000/MWh.

Volume Insufficiency Threshold to be implemented for specific system service (upward or downward) requirement / higher quality of service requirement / jurisdiction requirement combination, above which the Scarcity Price will apply.

Post DASSA go-live, Scarcity Price to be reviewed periodically and in the context of any changes to the Bid Price Caps.

[24] SEM-24-066: Section 2.8 (semcommittee.com)

4 DASSA Bidding

4.1 Introduction

This section sets out the TSOs' recommendations for the following bidding-related components of the daily auction.

- Maximum number of P/Q pairs per service per Trading Period.
- Minimum step size in P/Q pairs for price
- Minimum step size in P/Q pairs for quantity.
- DASSA and RAD gate window opening times.

4.2 Max Number of P/Q Pairs per Service per Trading Period

This section sets out the TSOs' recommendation for the maximum number of price/quantity (P/Q) pairs per service per Trading Period allowable in the daily auction.

4.2.1 Max Number P/Q Pairs - Consultation Proposal

The TSOs proposed that the maximum number of P/Q pairs allowed per service per Trading Period in the daily auction would be 10, i.e a bid for a specific service and Trading Period can comprise up to 10 P/Q pairs.

4.2.2 Max Number P/Q Pairs - Consultation Feedback

10 of the 19 respondents expressed views in relation to the TSOs' proposal for the maximum number of P/Q pairs.

All respondents to this proposal supported the proposed limit of ten P/Q pairs, stating that it was appropriate and provided sufficient flexibility for market participation. Several respondents noted that the proposal aligned with existing market frameworks.

4.2.3 Max Number P/Q Pairs - Recommendation

The TSOs recommend that service providing units may submit up to a maximum of 10 P/Q pairs, which must be strictly increasing, for each individual service for each Trading Period within the Auction Timeframe.

There will be no change to the bidding process and format as described in the TSOs' DASSA Design Recommendations Paper[25].

4.2.4 Max Number P/Q Pairs - Recommendation Rationale

The TSOs note respondents' agreement with the consultation proposal. As noted in our consultation paper, the proposal aligns with the 10 bid steps allowed for incremental bids (increasing net generation) and decremental bids (decreasing net generation) in the

[25] DASSA Design Recommendations Paper: Section 3.6 (EirGrid); DASSA Design Recommendations Paper: Section 3.6 (SONI)

Balancing Market, i.e. in moving from an original FPN, a unit's output can cross no more than 10 real-time energy bid steps.

TSOs' Recommendation:

- Service providing units may submit up to a maximum of 10 price/quantity pairs, which must be strictly increasing, for each individual service for each Trading Period within the Auction Timeframe.
- Bids must take the form of a stepwise linear supply function, as described in the TSOs' DASSA Design Recommendations Paper.

4.3 Min Step Size in P/Q Pairs - Price

This section sets out the TSOs' recommendation for the minimum price step size in P/Q pairs allowable in the daily auction.

4.3.1 Min P/Q Pair Price Step - Consultation Proposal

The TSOs proposed that the minimum step size for bid prices in the DASSA be the minimum non-zero positive price that can be expressed to 2 decimal places, which is €0.01/MW in Ireland and £0.01/MW in Northern Ireland.

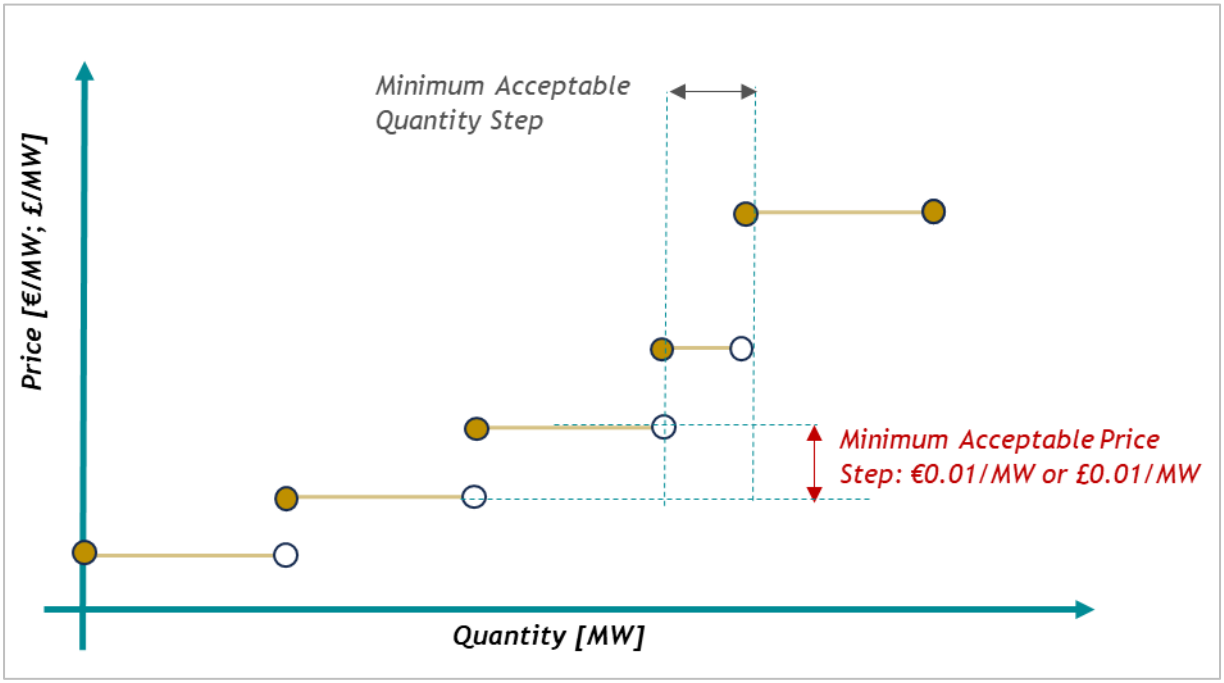

Figure A: DASSA Proposed Min Price Step Size

This proposal is illustrated in Figure 1 below.

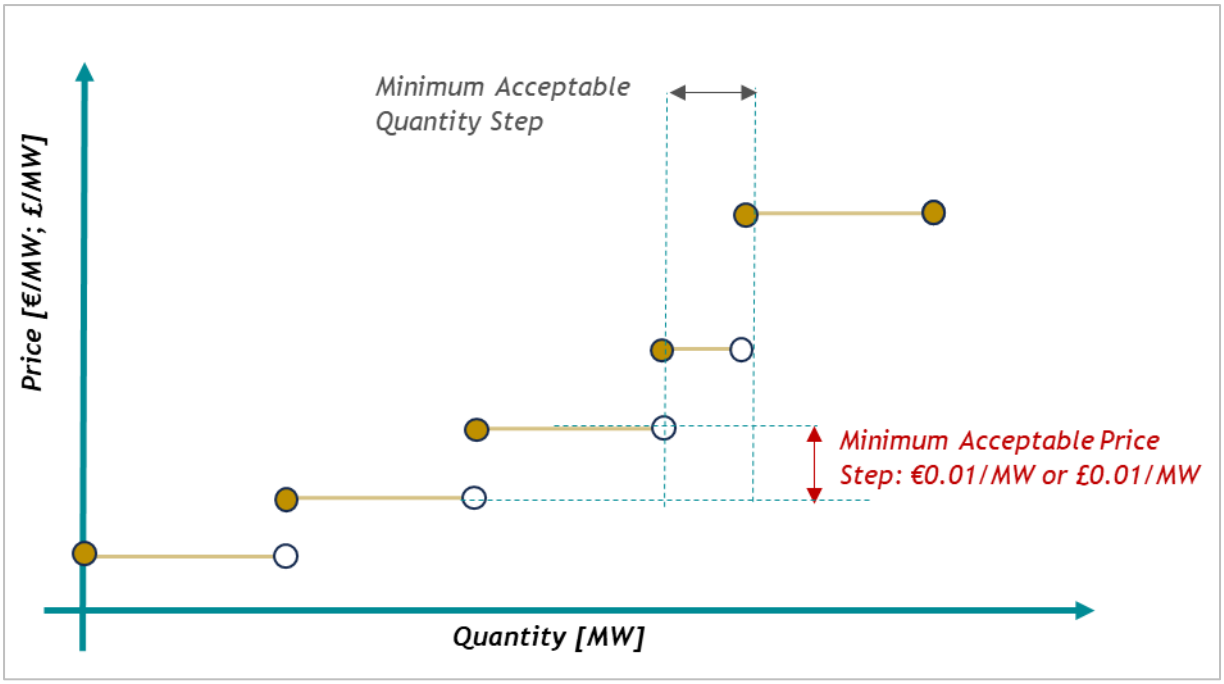

Figure A: DASSA Proposed Min Price Step Size

4.3.2 Min P/Q Pair Price Step - Consultation Feedback

10 of the 19 respondents expressed views on the TSOs' proposal for the minimum price step size in P/Q pairs.

All respondents to this proposal supported the proposed minimum price step size of €0.01, stating that this level of granularity was appropriate and provided sufficient flexibility to service providers.

4.3.3 Min P/Q Pair Price Step - Recommendation

The TSOs recommend that the minimum step size for bid prices in the DASSA will be **€0.01/MW in Ireland** and **£0.01/MW in Northern Ireland**, with bids to take the form of a stepwise linear supply function.

4.3.4 Min P/Q Pair Price Step - Recommendation Rationale

The TSOs note respondents' agreement with the consultation proposal. As noted in our consultation paper, the proposal is consistent with practices in other SEM markets where €0.01/MW in Ireland and £0.01/MW in Northern Ireland is the minimum difference between successive bids, and the minimum resolution of a difference is 0.01 for each currency per MWh (Day Ahead Market and Balancing Market) or per MW (Capacity Market).

TSOs' Recommendation:

- Minimum step size for bid prices in the DASSA will be €0.01/MW in Ireland and £0.01/MW in Northern Ireland.

- Bids must take the form of a stepwise linear supply function, as described in the TSOs' DASSA Design Recommendations Paper.

4.4 Min Step Size in P/Q Pairs - Quantity

This section sets out the TSOs' recommendation for the minimum volume step size in P/Q pairs allowable in the daily auction.

4.4.1 Min P/Q Pair Quantity Step - Consultation Proposal

The TSOs proposed that the minimum step size for bid volumes in the DASSA will be 0.001 MW. This is illustrated in Figure 2 below (red text).

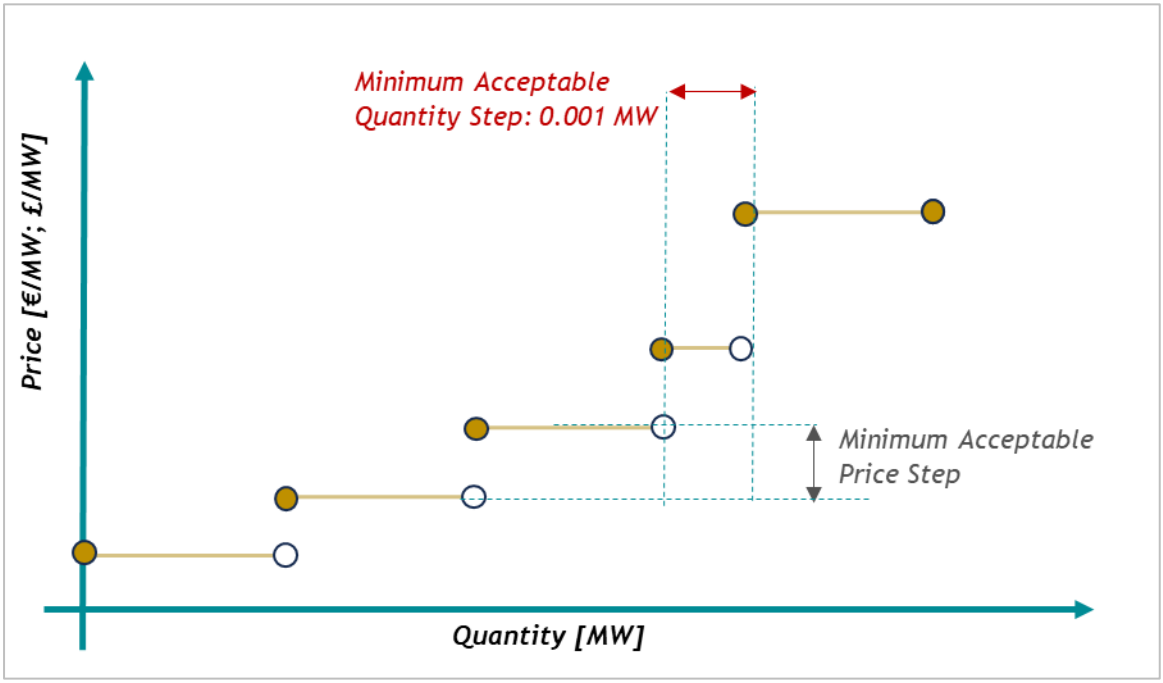

Figure 2: DASSA Proposed Min Quantity Step Size

4.4.2 Min P/Q Pair Quantity Step - Consultation Feedback

10 of the 19 respondents expressed views on the TSOs' proposal for the minimum quantity step size in P/Q pairs.

Most respondents considered the proposed quantity step size to be acceptable.

Some respondents raised concerns regarding the compatibility of the proposed quantity step size of 0.001 MW with existing systems, particularly EDIL. These respondents highlighted that dispatch values not expressed in whole integers may not be supported by current infrastructure. One respondent noted that "the current EDIL system used by the TSOs cannot

facilitate dispatch availability values that are not of unitary size," and suggested that this may not be an issue if settlement processes do not rely on EDIL figures.

One respondent highlighted that the proposed step sizes are small in comparison to typical dispatch levels issued to battery storage units which "which rarely tend to see instructions that are not whole integer levels, irrespective of the FPNs submitted."

4.4.3 Min P/Q Pair Quantity Step - Recommendation

The TSOs recommend that the minimum step size for bid volumes in the DASSA will be 0.001 MW, with bids to take the form of a stepwise linear supply function.

4.4.4 Min P/Q Pair Quantity - Recommendation Rationale

The TSOs note that most respondents to this proposal agreed with the 0.001 MW increment per bid step.

Regarding the compatibility of decimal values with existing dispatch systems, the TSOs confirm that dispatch actions via EDIL are mainly issued in whole numbers. While it is possible that some units may receive dispatch instructions via EDIL to one decimal place, dispatching to the kilowatt level is not feasible at present due to the size of the market and the capability of operational systems.

In some cases, such as windfarms, control setpoints may be issued to two decimal places depending on group targets, but this is not universally applicable across all technologies. The TSOs acknowledge that there is a distinction between the granularity required for auction submissions and the precision used in operational dispatch. The value of this parameter will be reviewed by the TSOs as market requirements and operational system capabilities evolve.

TSOs' Recommendation:

- The minimum step size for bid volumes in the DASSA will be 0.001 MW.
- Bids must take the form of a stepwise linear supply function, as described in the TSOs' DASSA Design Recommendations Paper.

4.5 Auction Gate Window Opening Time

This section sets out the TSOs' recommendation for the DASSA and RAD gate opening times.

4.5.1 Auction Gate Window - Consultation Proposal

The TSOs proposed that the gate opening time for the DASSA would be 11:45 AM day ahead (D-1) of the Auction Timeframe (23:00 D-1 to 23:00 D). Figure 3 below illustrates the proposed timing of the DASSA gate window.

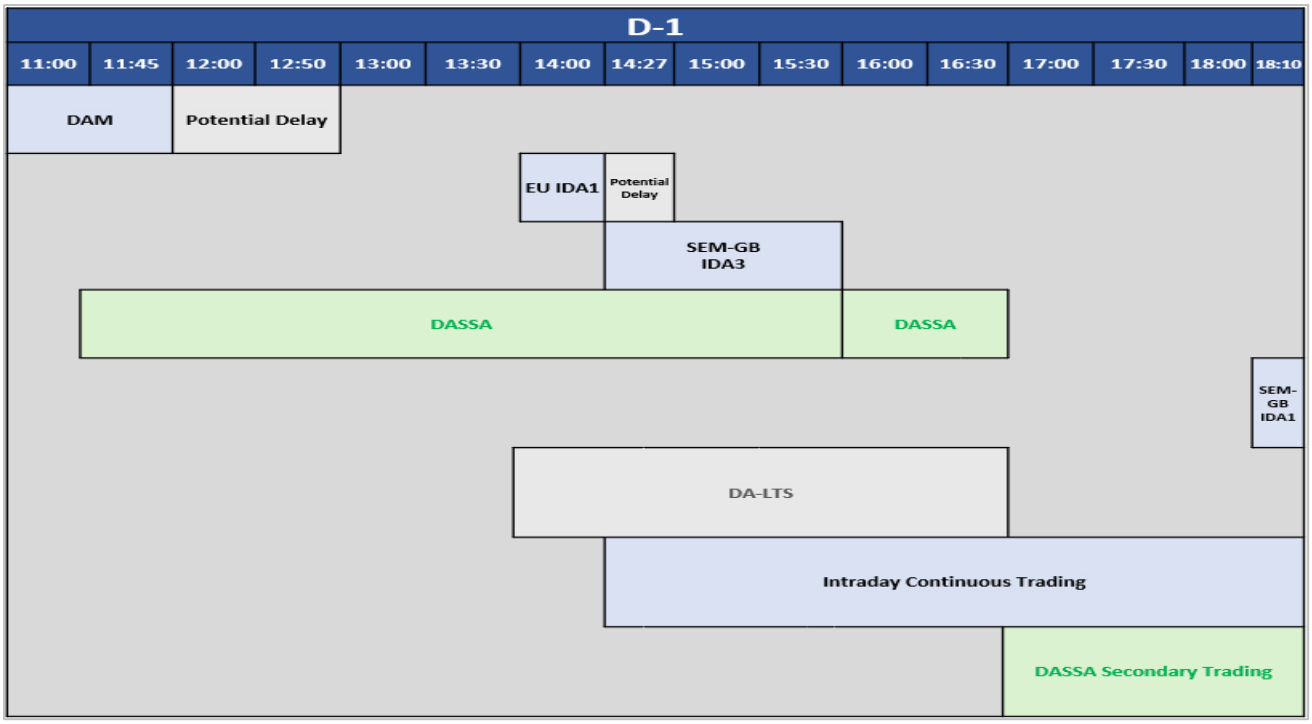

Figure 3: DASSA Gate Window Consultation Proposal

4.5.2 Auction Gate Opening - Consultation Feedback

14 of the 19 consultation respondents expressed views on the TSOs' proposal for the DASSA gate opening time.

A minority of respondents supported the proposed gate opening time of 11:45 AM (D-1), stating that it would provide sufficient time for bid preparation between the closure of the Day-Ahead Market (DAM) and the start of the DASSA auction. These respondents considered the timing reasonable and aligned with the current market sequencing.

However, many respondents did not support the proposed gate opening time, citing concerns about practicality, administrative burden and limited flexibility. Several respondents highlighted that the proposed auction gate window was short and would require 24/7 trading operations, increasing costs for service providers and particularly disadvantaging smaller participants. One respondent stated that "restricting the opening time to within day (D-1) shall require participants to work weekends and bank holidays" Several respondents raised concerns about interconnector participation, noting that interconnector schedules are not known until after the DASSA gate closure, which undermines their ability to tailor bids effectively and increases trading risk.

Some respondents expressed mixed views, acknowledging the rationale for aligning the gate window with the DAM results but raising concerns about operational challenges. One respondent noted that while the timing allows for re-trading opportunities before IDA1, battery operators may face difficulties recovering their state of charge (SoC) within-day due to dispatch constraints or market timing. Others requested further clarity on how service providers that do not as a matter of course submit FPNs, such as interconnectors and Priority Dispatch units, would interact with the auction gate window.

Several respondents suggested specific improvements to enhance flexibility, reduce administrative burden, and support broader participation. Some proposed allowing bids to be submitted further in advance, including the option for a rolling 365-day gate window. This would enable participants to bulk-enter bids ahead of time, reducing the need for daily manual submissions, and easing operational load, particularly for providers without continuous trading operations. Others recommended aligning DASSA gate winnow practices with those of the Balancing Market, which permits earlier submissions. A few respondents also suggested enabling default or standing offers, which could be automatically applied in cases where updated bids have not been submitted during the gate window; this would help ensure continuity of participation while reducing operational burden, especially during weekends and bank holidays.

4.5.3 DASSA Gate Opening - Recommendation

The TSOs recommend a revised DASSA gate opening time of 23:00 19 days (D-19) ahead of the relevant Auction Timeframe.

It remains the responsibility of DASSA Order Holders to ensure that their Orders are compatible with their market positions, regardless of the date and time of the Trading Period in question.

For clarity, the DASSA gate closure time will remain unchanged as per the SEMC decision in SEM-24-066, i.e. 15:30 on D-1[26].

4.5.4 DASSA Gate Opening - Recommendation Rationale

The TSOs acknowledge the feedback received from industry stakeholders regarding the proposed DASSA gate window opening time. The consultation responses highlighted a range of perspectives - from support for the proposed timing to concerns about operational feasibility, market alignment and service provider flexibility.

Operational Burden and Accessibility for Smaller Providers

The TSOs recognise that not all service providers currently maintain 24/7 trading operations, and that the proposed timing may limit participation from those with constrained resources. The recommended gate opening time of 23:00 on D-19 will allow service providers to submit bids well in advance of the Auction Timeframe and will facilitate the use of standing or default offers.

Market Alignment and Interconnector Participation

In response to stakeholder feedback regarding the interaction between deemed Final Physical Notifications (FPNs) and the DASSA gate window, the TSOs wish to clarify the treatment of interconnector participation.

For existing SEM-GB interconnectors, the deemed FPN, which will be used to confirm DASSA Orders, is based on the service provider's market schedule, which reflects the expected energy flow across the interconnector. This schedule is finalised through the Intraday Auctions: IDA1 determines the first twelve hours of the Trading Day, while IDA2 finalises the second twelve hours. However, under SEM market rules, the FPN only becomes final at IDA2.

[26] SEM-24-066: Section 2.2 (semcommittee.com)

Prior to this point positions are considered Physical Notifications (PNs) and remain subject to change.

As a result, interconnector service providers will not have full visibility of their final market position at the time of DASSA gate closure (15:30 D-1). While this timing presents challenges, service providers retain the discretion to:

- Submit bids into the DASSA in advance of knowing their final schedule.
- Wait until their energy position is confirmed and participate in the DASSA secondary trading market.
- Submit bids into the RAD and potentially receive payments if a volume deficit is identified in real time and the service provider is in merit.

The TSOs note that if an interconnector is dispatched differently from its scheduled market position — for example, through a System Operator-to-System Operator (SO-SO) Dispatch Instruction — this does not affect the Final Physical Notification (FPN). The FPN is determined solely from ex-ante market trades (Day-Ahead and Intraday Auctions) and is finalised at IDA2. Any dispatch instruction issued after this point modifies the interconnector's reference programme, which governs physical flows but does not alter the market schedule.

Looking ahead, the integration of the Celtic Interconnector will introduce additional complexity, particularly in relation to timing. While the method of calculating FPNs will remain consistent, the schedule finalisation process for Celtic will align with EU market processes, applicable to interconnectors with other EU Member States. This means that schedules will be available for parts of the day following each EU Intraday Auction but will only become final after EU intraday gate closure — currently one hour ahead of delivery.

In addition, future activity through EU balancing platforms may alter interconnector flows every fifteen minutes, requiring more dynamic scheduling and increased responsiveness. The TSOs acknowledge these evolving requirements and will continue to monitor developments to ensure effective integration and participation.

Priority Dispatch Units and Implicit FPNs

With regard to respondents' feedback requesting clarity on how Priority Dispatch (PD) units will interact with the DASSA gate window, particularly in relation to FPNs, the TSOs note that currently PD wind and solar units do not submit explicit Physical Notifications; instead, for the purpose of the daily auction, their FPN will be calculated directly based on their real-time availability, as received into the Energy Management System (EMS) via Supervisory Control and Data Acquisition (SCADA). Because this availability is not known at gate opening or gate closure, DASSA Orders for PD wind and solar units will automatically be confirmed at gate closure. This confirmation will not be based on forecasted availability but on the principle that delivery capability will be assessed closer to real time.

This approach will enable non-dispatchable PD technologies to participate effectively in the DASSA without being disadvantaged by their inability to forecast availability at the time of gate closure. By decoupling service delivery from market exposure and relying on real-time availability for validation, the framework ensures that PD units can compete on a level playing field with other technologies. This reflects the TSOs' commitment to inclusive participation and ensures that the auction process accommodates the diverse operational characteristics of all service providers.

Gate Closure and Secondary Market Participation

While some respondents suggested that the DASSA gate closure time – 15:30 on D-1, per SEM-24-066[27] - should be extended to accommodate service providers with unpredictable availability, the TSOs consider that such providers can still participate effectively through secondary market mechanisms and the RAD. However, the TSOs support the SEMC decision to keep the timing of the DASSA auction and gate closure under review post go-live. This will allow for further refinement based on market and operational experience.

4.5.5 RAD Gate Opening – Recommendation

The TSOs also recommend that the RAD gate window will open at 23:00 on D-19 ahead of the relevant Auction Timeframe, aligning with the recommended DASSA gate opening time.

Although the gate opening time for the RAD was not subject to consultation, agreement has been reached with the RAs to include it in this Parameters and Scalars Recommendations Paper. This formal inclusion ensures transparency for service providers and provides clarity on the operational timelines associated with the RAD mechanism.

In our DASSA Top-Up Mechanism Recommendation paper, the TSOs recommended that the RAD gate closure align with the DASSA, with both submission windows closing at 15:30 on D-1. This has been confirmed by the SEMC decision on the RAD[28].

TSOs' Recommendation:

- The DASSA gate window to open at **23:00 on D-19** and close at **15:30 on D-1**.
- The RAD gate window to open at **23:00 on D-19** and close at **15:30 on D-1,** aligning with the DASSA gate window.
- The TSOs will keep the DASSA (and RAD) gate opening and closure timings under review post DASSA go-live.

[27] SEM-24-066: Section 2.2 (semcommittee.com)
[28] SEM-25-056: Section 4.2 (semcommittee.com)

5 Secondary Trading

5.1 Introduction

This section sets out the TSOs' recommendations for the following DASSA secondary trading processes:

- Schedule for the matching of secondary trades.
- Clearing and pricing of the secondary trades.

In this paper, the TSOs do not recommend any mechanism for the settlement of secondary trades between buyers and sellers, i.e. the payment of the Secondary Trading Clearing Price per traded MW volume. The current design allows for such financial arrangements to be managed bilaterally between secondary trading parties. However, following feedback received from industry, the TSOs agreed to take necessary measures to facilitate centralised settlement and credit management services for secondary trades. The TSOs intend to procure the credit management services from a third-party provider; however, the TSOs cannot confirm the exact timeframe for the completion of related procurement activities. An update will be provided to industry through appropriate channels in due course.

5.2 Schedule for Secondary Trading Batch Matching

This section sets out the TSOs' recommendation for the schedule of secondary trading batch matching.

5.2.1 Batch Matching Schedule - Consultation Proposal

In our consultation paper, the TSOs proposed that the batch process to match secondary trading Buy and Sell Orders would be run every 30 minutes, immediately after the secondary trading gate closure for the Trading Period one hour hence.

Service providers participating in secondary trading could submit at most one price/quantity pair per service per Trading Period in any one batch, should they wish to buy or sell a DASSA Order.

The minimum volume for the Buy and Sell Orders in secondary trading would be 0.001 MW, aligning with the minimum step size for bid volumes in the DASSA.

As recommended in our DASSA Design recommendation paper[29], service providers would be able to specify relevant conditions associated with a Buy or Sell Order, such as Fill or Kill and Good Till. Non-divisible bids, where a Buy or Sell Order must be traded in full or not at all, would be facilitated.

From the opening of secondary trading, at approximately 16:00 D-1, the batch would process all trades in the Order Book for all Trading Periods from one hour hence up to the final Trading Period for which the daily auction has executed.

[29] Section 4.3.4 (EirGrid); Section 4.3.4 (SONI)

5.2.2 Batch Matching Schedule - Consultation Feedback

17 of the 19 consultation respondents expressed views on the TSOs' proposals for the scheduling of batch matching in the secondary trading market.

Some respondents supported batch matching as a pragmatic and centralised solution to facilitate secondary trading. These respondents acknowledged the benefits of a structured schedule and agreed that a centralised approach could support market transparency and accessibility.

Several respondents expressed mixed views, acknowledging the potential benefits of batch matching but raising concerns about operational complexity. Respondents noted that implementing batch matching across six reserve markets and half-hourly intervals would introduce significant administrative overhead, particularly for participants without 24/7 trading desks. One respondent stated that "The complexity of running batch matching on half hourly basis across the trading day for six separate reserve markets, the requirement to update bids and offers, process awards, and update FPNs on half hourly basis adds a huge layer of operational complexity." This respondent also warned this would result in smaller participants "avoiding secondary trading thereby reducing liquidity."

Concerns were also raised regarding the timing of the final batch settlement at gate closure and its impact on liquidity. Respondents noted that the outcome of the last batch would not be known until after gate closure, at which point it would no longer be possible to update FPNs. As one respondent explained, "the mechanics of batch matching means the outcome of the 'last batch settlement' will not be known until after gate closure etc. this introduces a risk that positions and FPNs will not align resulting in infeasible positions/imbalance risk."

One respondent requested that the TSOs provide a dedicated testing window for the secondary trading platform prior to go-live.

Respondents also emphasised the need for clear governance and rules to support confidence in the market: without these, participants would struggle to assess risk and engage confidently in the secondary market.

5.2.3 Batch Matching Schedule - Recommendation

The TSOs recommend setting the secondary trading gate closure at 60 minutes prior to the start of the relevant Trading Period, together with the bidding format as per our consultation proposal.

This means that the batch process to match secondary trading Buy and Sell Orders will be run every 30 minutes, immediately after the secondary trading gate closure for the Trading Period one hour hence.

5.2.4 Batch Matching Schedule - Recommendation Rationale

In its DASSA Design Decision Paper[30], the SEMC decided that secondary trading will be cleared using batch matching and that the secondary trading window will close 60 minutes before the relevant Trading Period. It is in this context that the TSOs recommend that the

[30] SEM-24-066: Section 3.5 (semcommittee.com)

batch process run immediately after the secondary trading gate closure for the Trading Period one hour hence.

In our DASSA Design consultation paper[31], the TSOs had originally proposed that the gate closure for secondary trading should occur 90 minutes before the applicable Trading Period, considering that this timeline would allow service providers a 30-minute window (before BM gate closure) to submit FPNs that would be compatible with the outcome of their secondary trades. However, in response to that consultation, industry feedback broadly favoured closing the secondary trading gate 60 minutes ahead, rather than 90 minutes. Accordingly, in our DASSA Design recommendations paper[32], we recommended that the secondary trading window open at the publication of the DASSA results (around 16:00 D-1) and close 60 minutes before the relevant Trading Period, a recommendation that was subsequently approved by the SEMC.

The TSOs acknowledge respondents' concerns regarding the limited time available to submit a compatible FPN when a DASSA Order is acquired in the final batch of secondary trades, 60-minute prior to the applicable Trading Period. Nevertheless, secondary trades are expected to be compatible with a service provider's ex-ante energy market position, and we would expect service providers to undertake secondary trades with due consideration of same.

TSOs' Recommendation:

- Secondary trading gate for the buying and selling of DASSA Orders to close 60 minutes before the relevant Trading Period
- Bidding format as per our consultation proposal to be implemented for go-live.

5.3 Secondary Trading Clearing and Pricing

This section sets out the TSOs' recommendation for the clearing and setting of prices in secondary trading, together with a recommendation for the price floor for secondary trading orders.

Secondary Trading Clearing Prices, the value of the Buy and Sell prices to apply to completed secondary trades in the Order Book as part of the matching process, are not to be confused with the DASSA Clearing Price. For the avoidance of doubt, the DASSA Clearing Price will apply to all DASSA Orders, i.e. Order Holders will be paid the DASSA Clearing Price, irrespective of whether the Order was obtained in the daily auction or via secondary trading.

[31] Section 5.3 (EirGrid); Section 5.3 (SONI)
[32] Section 4.2.4 (EirGrid) ; Section 4.2.4 (SONI)

5.3.1 Secondary Trading Clearing and Pricing - Consultation Proposal

In our consultation, the TSOs proposed two mechanisms for the clearing of secondary trades and the establishment of Secondary Trading Clearing Prices:

1. Simple matching of Buy and Sell Orders.
2. Optimisation of Buy and Sell Orders (this was the TSOs' preferred option).

Proposal 1 - Simple Matching of Buy and Sell Orders

Under this proposal, a Secondary Trading Clearing Price would be established for each individual matched trade, subject to the conditions set out in the consultation paper. The TSOs proposed two sub-options for how secondary trades may be matched for a given system service and Trading Period:

- Option A: Starting with the highest Buy Order price matching with the lowest Sell Order price, and sequentially in order of decreasing Buy Order price, until there are no Sell or Buy Orders left that can be matched.
- Option B: Starting with the lowest Buy Order price matching with the lowest Sell Order price, and sequentially in order of increasing Buy Order price, until there are no Sell or Buy Orders left that can be matched.

Proposal 2 - Optimisation of Buy and Sell Orders (TSOs' Preferred Option)

Under this proposal, each batch in secondary trading would be cleared by solving an optimisation problem that would determine a Secondary Trading Clearing Price for buyers and sellers to be applicable to all secondary trades for a given system service and Trading Period. The aim of the secondary trading optimisation problem would be to maximise the overall social welfare, i.e. the total benefit available to the buyers and sellers in secondary trading. At a high level, and excluding consideration of non-divisible bids, this proposed option is illustrated in Figure 4 below.

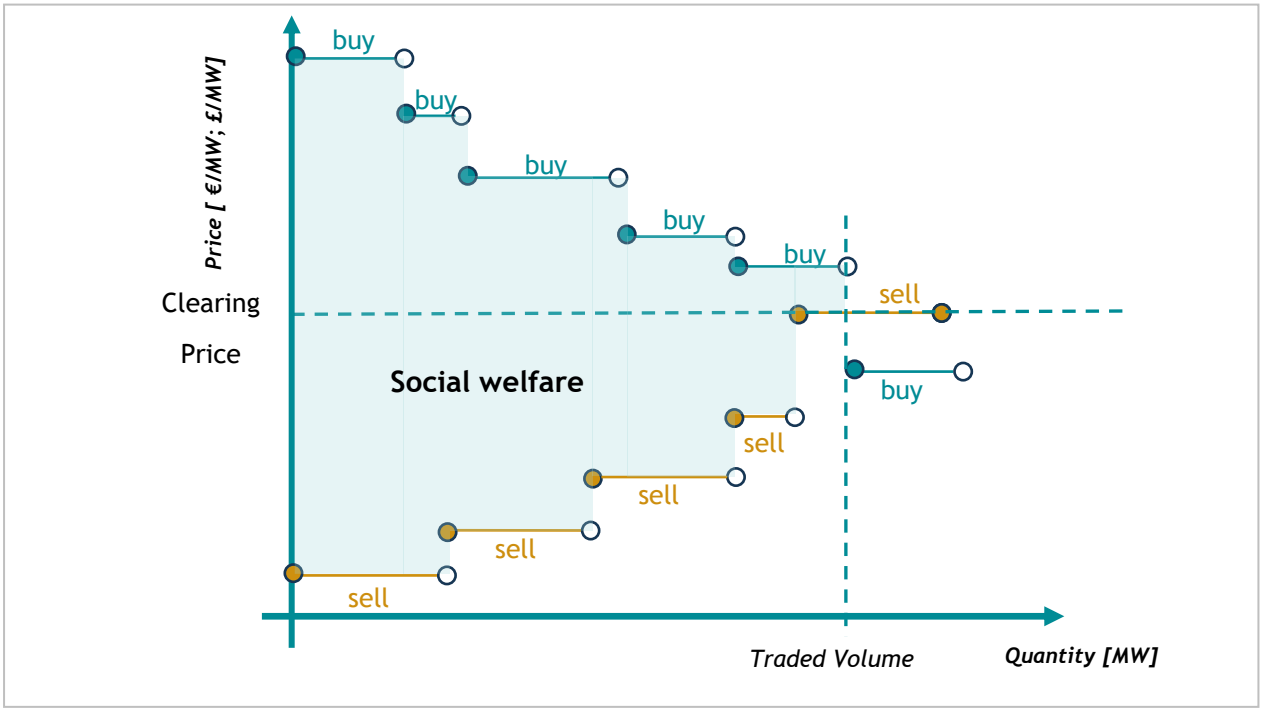

Figure 4: Secondary Trading Optimisation (Option 2)

The TSOs' consultation paper set out the constraints that would apply to the optimisation process.

The consultation paper also described proposed processes for handling non-divisible bids, as the presence of such orders in secondary trading would add complexity to the optimisation of trades and the establishment of a Secondary Trading Clearing Price. To address this issue, the TSOs proposed that, in certain circumstances, two separate Secondary Trading Clearing Prices would be determined - one for Sell Orders and one for Buy Orders.

The TSOs favoured the optimisation approach as it would maximise gains for participants and prevent distortions caused by inefficiencies in the secondary trading clearing process.

5.3.2 Secondary Trading Clearing and Pricing - Consultation Feedback

17 of the 19 consultation respondents expressed views on the TSOs' proposals for the clearing and pricing mechanisms in the DASSA secondary trading market.

Some respondents supported the TSOs' preferred proposal, the Optimisation of Buy and Sell Orders, noting that it better reflects participants' willingness to buy and sell, improving price formation. These respondents recognised that a single clearing price per service and Trading Period may offer transparency and consistency. However, even among supporters of this proposal, there was a strong emphasis on the need for simplicity at DASSA go-live. Respondents stressed that the clearing and pricing mechanism should be intuitive, transparent, and aligned with the goal of building liquidity in secondary trading. One respondent noted that "simplicity and clarity are essential to encourage participation and build liquidity in the secondary market."

Several respondents expressed mixed views on our preferred proposal, recognising the theoretical benefits of optimisation but raising concerns about its complexity, deliverability, and exclusion from the original scope of the DASSA IT solution. These respondents expressed concerns that introducing a complex clearing mechanism could delay DASSA go-live and recommended a phased approach, starting with simple batch matching and revisiting optimisation post go-live. One respondent proposed that "a compromise could be to use simple matching for the first 12 months and use that as a counterfactual to conduct a cost-benefit analysis of the co-optimisation approach."

Many respondents did not support the optimisation approach for the clearing and pricing of secondary trades, citing concerns about complexity, lack of clarity, and potential market distortion. Several respondents argued that the optimisation approach could result in separate buy and sell prices, which may obscure price signals and reduce transparency. Others warned that the complexity of the mechanism could erode participant confidence and discourage engagement, particularly from smaller service providers, who may face greater risk exposure and operational challenges. One respondent noted that "the complexity undermines the confidence of market participants to the extent that liquidity in the market is eroded."

Several respondents commented on bilateral trading, stating that it could reduce transparency and undermine liquidity in the secondary trading market and that, without a centralised platform, secondary trading may be limited to intra-portfolio transactions among large service providers. Several respondents stressed that all trades should be processed through a centralised platform with integrated clearing and settlement, and that

reliance on bilateral or intra-company trading would disadvantage smaller participants and reduce market efficiency. Additionally, multiple respondents highlighted a preference for the TSOs to manage collateral arrangements centrally to reduce operational burden.

Several respondents requested further clarity on key aspects of the batch matching proposals. These included questions about how non-divisible bids would be handled, whether price caps would apply in the secondary market, how buy orders would interact with batch matching, and whether TSO orders would persist across multiple batches. One respondent asked whether "negative-priced buy orders would be permitted, particularly in scenarios where the TSO is selling at zero." Respondents expressed concern about the administrative burden of rolling bids into future auction periods if not cleared, with some warning that this could create unnecessary overhead and risk.

Some respondents proposed alternative models, suggesting that a first-come-first-served or continuous matching approach would be more intuitive and better suited to building liquidity.

Concerns were also raised about the TSOs' role in the secondary trading process (in instances of volume insufficiency). Several respondents opposed the idea of the TSOs participating directly in secondary trading, arguing that this could distort market outcomes and create conflicts of interest. Respondents highlighted that the TSOs are both market operators and potential participants, which could undermine the integrity of the clearing process. Some questioned whether this arrangement would comply with European unbundling requirements, which are designed to separate system operation from market participation. Respondents requested that robust governance arrangements be put in place to ensure transparency, fairness, and independence in market operations.

5.3.3 Secondary Trading Clearing and Pricing – Recommendation

In this section, the TSOs make several recommendations for secondary trading and clearing and pricing, accounting for implementation considerations for DASSA go-live and post go-live.

For DASSA Go-live

The TSOs recommend two options for DASSA go-live, subject to the feasibility of implementing the second option. These options have been considered in the context of the SEMC decision to implement batch matching of secondary trades.

Option 1 - Simple Batch Matching

Simple batch matching as described in Proposal 1 - Option A in our consultation paper[33].

Secondary trades will be cleared starting with the highest Buy Order price matching with the lowest Sell Order price, and sequentially in order of decreasing Buy order price, until there are no Sell or Buy Orders left that can be matched. The Secondary Trading Clearing Price for each matched trade will be determined by the price of the corresponding Buy Order.

The implementation of this option is feasible for DASSA go-live.

[33] Section 6.3.3.1 (EirGrid); Section 6.3.3.1 (SONI)

Option 2 – First-Come, First-Served Continuous Matching
First-come, first-served (FCFS) continuous matching mechanism for clearing secondary trades, as initially described in the TSOs' DASSA Design consultation paper[34].

The rolling matching of secondary trades will be executed throughout the secondary trading window. Valid Buy and Sell Orders will be placed in the Order Book and matched to a corresponding Order in real-time. If an Order cannot be matched immediately, it will remain in the Order Book where it can be matched at a later stage. Orders will be allowed to be partially matched, subject to limits to be established by the TSOs.

The TSOs understand that this option may be preferred by the RAs over simple batch matching without optimisation (Option 1). However, the feasibility of implementing FCFS matching for DASSA go-live has not yet been determined by the TSOs.

The TSOs also note that it will not be possible to implement a "demand curve on the economic merit of submitted Buy Orders" as required in SEM-24-066 in times of volume insufficiency[35] with FCFS matching. Please refer to Section 6 for more information.

The mechanics of the FCFS continuous matching mechanism are set out in Appendix A.

Post DASSA Go-live

The TSOs recommend two options for the clearing and pricing of secondary trades for implementation post-DASSA go-live.

Option A - Optimisation of Secondary Trades (Day 2)
The TSOs recommend that the optimisation of secondary trades, as described in detail in our consultation paper[36], be implemented post DASSA go-live (Day 2).

Option B - Simple Batch Matching with Enhanced Pricing (Day 1+)
Should simple batch matching (without optimisation) be implemented and issues are subsequently observed relating to liquidity, distortions in bidding behaviour or economic efficiency in the secondary trading market, the TSOs recommend that enhanced pricing mechanisms be considered for the batch matching process, such as establishing a single secondary trading clearing price referencing the value of buy side trades.

This measure will be subject to further assessment, industry consultation and SEMC decision. The TSOs consider that this would be an interim deliverable (Day 1+) in advance of the implementation of the optimisation of secondary trades (Day 2).

5.3.4 Secondary Trading Clearing and Pricing - Recommendation Rationale

Central Platform for Secondary Trading

The TSOs note respondents' comments on the need for a centralised secondary trading platform. Firstly, the TSOs wish to reiterate that a fully automated secondary trading platform to facilitate the submission and matching of Buy and Sell Orders will be implemented for DASSA go-live. Secondly, the TSOs acknowledge respondents' concerns regarding the settlement of secondary trades between trading parties: we are actively

[34] Section 5.4.3 (EirGrid); Section 5.4.3 (SONI)
[35] SEM-24-066: Section 3.8 (semcommittee.com)
[36] Section 6.3.4 (EirGrid); Section 6.3.4 (SONI)

progressing a centralised solution for this process and refer to the update on this matter in Section 5.1 above.

Bilateral Trading

The TSOs acknowledge the concerns expressed by respondents regarding the bilateral trading of DASSA Orders and the potential impact on the liquidity of the secondary trading market. The TSOs note that the SEMC, in its DASSA design decision paper[37], approved bilateral trades for the go-live of the DASSA but reserved the right to suspend such trades should market power concerns materialise.

Optimisation of Secondary Trades

TSOs note respondents' feedback regarding the complexity of the optimisation approach for the clearing and pricing of the secondary trading market. However, we wish to state that the complexity will be on the TSOs' side to implement and operate the optimisation of secondary trades. Service providers will submit Buy and Sell Orders as per any other clearing alternative. The TSOs consider the main advantages of optimisation to be that it:

- Enables the TSOs to maximise the overall gain of the trades (social welfare).
- Efficiently manages indivisible bids without undermining the volume of the possible trades.
- Supports normal bidding behaviours by prevent distortions caused by inefficiencies in the clearing process.

No other solution can fully meet these requirements simultaneously; therefore, the TSOs recommend optimisation as the most optimal solution for the clearing and pricing of secondary trades from a market design point of view, notwithstanding the complexity to implement. The TSOs noted the implementation challenges of this approach in our consultation paper. We have since conducted a further feasibility assessment, the outcome of which is that it will not be possible for the TSOs to implement optimisation for DASSA go-live. As such, the TSOs recommend that the optimisation of secondary trades be delivered post go-live.

Simple Batch Matching

The TSOs note concerns raised by respondents regarding the proposals for batch matching set out in our Parameters and Scalars consultation paper[38]. We are of the view that both sub-options proposed – A) starting with the highest Buy Order price matching with the lowest Sell Order price, and B) starting with the lowest Buy Order price matching with the lowest Sell Order price – may give rise to distorted biding behaviours. However, the TSOs consider that the former, Proposal 1 - Option A in our consultation paper, to be preferrable as it will maximise the social welfare of each individual trade. The TSOs recommend that enhanced pricing mechanisms be considered for the batch matching process, such as establishing a single secondary trading clearing price referencing the value of buy side trades, in the event that issues are observed post DASSA go-live.

Regarding respondents' commentary received on whether negative pricing will be allowable in the secondary market, please refer to Section 5.3.5 below.

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[37] SEM-24-066: Section 3.6 (semcommittee.com)
[38] Section 6.3.3.1 (EirGrid); Section 6.3.3.1 (SONI)

First-Come First-Served Continuous Matching

The TSOs are of the view that FCFS matching of secondary trades has some advantages over simple batch matching, namely:

- Service providers will learn of their DASSA obligations during the secondary trading window as trades are approved or rejected, allowing them more time to adjust their DASSA position ahead of real time.
- Service providers will have more opportunities to submit/adjust their secondary trading orders, meaning that liquidity may be less of a concern.

The TSOs also understand that this option may be preferred by the RAs over simple batch matching (without optimisation). Considering the above, the TSOs will evaluate the feasibility of implementing FCFS for DASSA go-live, noting that our current IT solution design requirements reflect the SEMC decision to implement batch matching of secondary trades.

TSOs' Participation in Secondary Trading

The TSOs note respondents' comments on the participation of the TSOs in secondary trading in instances of volume insufficiency. In the first instance, we refer respondents to SEM-24-066[39], in which the SEMC decided that "the TSOs may participate in secondary trading in the event of volume insufficiency in the DASSA. They may do this 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." The TSOs reiterate the rationale that was set out in our DASSA Design recommendations paper[40]: "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."

Section 6.2.3 below sets out the TSOs' recommendation for the volume insufficiency threshold.

5.3.5 Price Floor for Secondary Trading - Recommendation

The TSOs recommend that the bid price floor for Buy and Sell Orders in secondary trading be set to zero for DASSA go-live. This floor will apply to secondary trades under normal trading conditions and in instances of volume insufficiency.

Given that the submission of negative priced Sell Orders during instances of volume insufficiency may result in service providers being paid above the Scarcity Price, the TSOs recommend that negative pricing not be permitted in such circumstances.

As it will not be feasible to implement separate price floors for secondary trading orders under normal trading conditions and in instances of volume insufficiency for DASSA go-live, nor separate price floors for Buy and Sell Orders, it is necessary for the TSOs to recommend a price floor of zero for all secondary trading orders in all circumstances for go-live.

The TSOs recommend that separate price floors for normal secondary trading and instances of volume insufficiency be facilitated post-go live as part of a Day+1 deliverable, with any

[39] SEM-24-066: Section 3.8 (semcomittee.com)
[40] Section 4.9.3 (EirGrid); Section 4.9.3 (SONI)

changes to the values of the floor(s) being subject to industry consultation and SEMC decision.

The TSOs recognise the added complexity that negative pricing introduces to secondary trading arrangements. To support stakeholder understanding, Appendix C describes the TSOs' initial views on how negative pricing may interact with secondary trading post go-live.

TSOs' Recommendation:

For DASSA go-live, the TSOs recommend:

- Option 1: Simple Batch Matching

  OR
- Option 2: First-come; first-served continuous matching (subject to a feasibility assessment for go-live).

Post go-live:

- Optimisation of secondary trades (Day2).
- If required, upon observance of issues with simple batch matching, simple batch matching with an enhanced pricing (Day1+).

The TSOs also recommend that a price floor of zero be applied to secondary trading Buy and Sell Orders for go-live.

6 Volume Insufficiency

6.1 Introduction

This section sets out the TSOs' recommendations for the value of the DASSA Volume Insufficiency Threshold, at which an instance of volume insufficiency is deemed to have occurred and the TSOs will enter secondary trading to procure any shortfall arising from the daily auction at the Scarcity Price, and related mechanisms.

6.2 Volume Insufficiency Threshold

6.2.1 Volume Insufficiency Threshold and Related Mechanisms - Consultation Proposal Summary

The TSOs proposed that the value of the threshold for volume insufficiency – an instance of which would apply to any volume requirements being treated as a constraint in the clearing of the DASSA - would align with the volume that the TSOs would procure to cover the unavailability of reserve providers for any system service requirement / higher quality of service provision requirement / jurisdiction requirement combination, as per the TSOs' DASSA Volume Forecast Methodology recommendations paper[41], which will be published as part of the annual Y-1 forecast.

The TSOs also proposed that, in instances of volume insufficiency for a given Trading Period, and until the shortfall in volumes had been procured by the TSOs in secondary trading:

- The only Sell Orders that would be matched in a batch would be TSO Sell Orders.
- Bilateral trading would not be permitted.

6.2.2 Volume Insufficiency Threshold and Related Mechanisms – Summary of Consultation Responses

14 of the 19 respondents expressed views on the TSOs' proposals for establishing the value of the threshold for volume insufficiency and related mechanisms.

Some respondents supported the proposal for the threshold, agreeing that a volume insufficiency threshold is necessary to trigger market incentives and manage shortfalls. These respondents generally supported aligning the threshold with the volume the TSOs must procure to cover unavailability of reserve providers. and requested that the TSOs publish a methodology with worked examples to support industry in understanding the threshold. Several respondents referenced the Volume Forecasting Methodology (VFM) for reserve services, noting that the threshold should be consistent with the assumptions and outputs of the VFM to ensure coherence across procurement processes. One respondent requested clarity on how future changes to the insufficiency threshold would be reviewed and communicated with market participants.

[41] Section 4.2 (EirGrid); Section 4.2 (SONI)

One respondent questioned, when an instance of volume insufficiency occurs, why the TSOs would procure the full volume shortfall per service rather than just procuring sufficient volume to reduce the deficit below the threshold.

Many respondents opposed the proposals, citing concerns about vagueness, market distortion, and punitive implications. One respondent stated that "the proposed methods for determining and applying the volume insufficiency threshold are vague and appear overly punitive." One respondent noted that "participants are unable to place sell orders [in secondary trading] until the TSOs have addressed their volume insufficiency," and warned that this would distort the market and limit participants' ability to manage exposures in the event of non-availability due to a forced outage. This concern was echoed across multiple responses, with calls for a more balanced and transparent approach.

Many respondents referred to their feedback provided on the TSOs' bid price cap proposals, warning that the proposed cap structure could discourage participation and increase the risk of triggering volume insufficiency.

Interaction with the TSOs' proposed Residual Availability Determination (RAD) mechanism was also raised. Respondents noted that the proposed threshold could affect how and when the TSOs engage in secondary trading and subsequently trigger RAD procurement. Some questioned the rationale for using reserve service provider unavailability as the basis for the threshold and suggested that the threshold should be aligned with the volume the TSOs would procure via the RAD in cases of volume insufficiency. Others called for clarity on how the threshold would interact with fallback mechanisms and whether it would be applied uniformly across all system services.

6.2.3 Volume Insufficiency Threshold and Related Mechanisms - Recommendations

This section sets out the TSOs' recommendations for the volume insufficiency threshold and related procurement mechanisms.

To recap, per SEM-24-066, the TSOs "will address instances of volume insufficiency by procuring the volume deficit in secondary trading through issuing Sell Orders at a Secondary Trading Price of zero and assigning the DASSA scarcity price cap to the additional volumes procured in secondary trading."

The TSOs recommend that the volume insufficiency threshold for any system service, higher quality of service provision (dynamic) and zone (jurisdiction) requirement combination will be defined as the maximum of the following:

A. The value set by the TSOs to account for the unexpected unavailability of reserve providers for any system system service, higher quality of service provision, and jurisdiction requirements, that will be determined within the year-ahead (Y-1) volume forecasting process in line with the TSOs' DASSA Volume Forecasting Methodology recommendations paper[42].
B. A value that will be determined within the year-ahead (Y-1) volume forecasting process, which will be greater than zero and will represent the maximum value of any system system service, higher quality of service provision, and jurisdiction requirement combination that the TSOs will not procure via secondary trading in the

[42] Section 4.2 (EirGrid); Section 4.2 (SONI)

event of volume insufficiency. This value will be required if the value of A is ever set to zero or a miniscule value, i.e. to ensure that there will always be a threshold.

The TSOs recommend that the entire volume shortfall required to resolve volume insufficiency will be procured once the threshold is met, rather than procuring sufficient volumes just to reduce the shortfall below the volume insufficiency threshold.

The TSOs recommend that TSO Sell Orders will be prioritised in instances of volume insufficiency, as described in the following two sub-sections.

Simple Batch Matching

For a given secondary trading batch under volume insufficiency conditions, and where a TSO Sell Order is present in the Order Book, the following restrictions will be applied on the matching of orders to ensure TSO Sell Orders are prioritised:

- No Sell Order with a negative price will be matched. (In Section 5.3.5 of this paper, the TSOs recommend applying a zero-price floor to all secondary trading orders under all circumstances.)
- Sell Orders offered at a price of zero by service providers will only be matched if the TSOs' Sell Order has been cleared in full, i.e the TSOs' Sell Orders will be cleared first.
- No bilateral trades will be validated.

Where the total volume of Buy Orders exceeds the sell volume offered by the TSOs, any surplus Buy Orders may be matched with Sell Orders submitted by service providers, provided such trades meet the clearing criteria.

Once the TSOs' Sell Order is fully cleared within a batch, resolving volume insufficiency for a service, any subsequent bilateral Buy and Sell Orders for the same Trading Period will be processed under normal conditions and clearing criteria.

First-Come, First-Served Matching

Where FCFS matching is the designated approach for the clearing and pricing of secondary trades, and where a TSO Sell Order is present in the order book for a system service, the same restrictions recommended for simple batch matching above will be applied.

Following the clearing of the TSOs' Sell Order, all orders will be processed under normal conditions. This means that bilateral trades will be considered for validation and Buy and Sell orders may be matched if they meet the FCFS continuous matching criteria described in Appendix A of this paper.

6.2.4 Volume Insufficiency Threshold and Related Mechanisms – Recommendations Rationale

Volume Insufficiency Thresholds

The TSOs acknowledge respondents' comments on the value of the volume insufficiency threshold.

The volume to account for the unavailability of reserve providers (value A in our recommendation) will be determined using the methodology outlined in the TSOs' DASSA

Volume Forecast Methodology Recommendations Paper[43], one year in advance (Y-1). Any future changes to the proposed methodology will be subject to industry consultation and SEMC decision.

Value B in our recommendation will also be determined as part of the TSOs' Y-1 volume forecasting exercise. This value addresses industry feedback regarding value A being set to zero in the future (for any system service, higher quality of service provision, jurisdiction requirement combinations), thereby resulting in no threshold being in place for volume insufficiency.

The TSOs recommend that the entire volume deficit be procured by the TSOs – not just the volume to reduce the shortfall below the volume insufficiency threshold – in order that our daily service procurement requirement is observed.

TSO Sell Orders in Instances of Volume Insufficiency

The TSOs acknowledge respondents' feedback on the treatment of service providers in secondary trading at times of volume insufficiency.

The TSOs consider that the mechanisms for the prioritisation of TSO Sell Orders, as recommended above, do not distort the market, as service providers may trade DASSA Orders for the same Trading Period once the TSOs' Sell Orders have been fully cleared. Additionally, the TSOs consider these mechanisms will be essential to ensure sufficient volumes are procured to reliably and safely operate the system.

Further details on the mechanics of TSO Sell Order prioritisation during instances of volume insufficiency are set out in Appendix B.

Price Caps and Volume Insufficiency

Regarding respondents' feedback that the TSOs' proposed price caps may contribute to volume insufficiency, we refer to Section 3.2.3 of this paper and our recommendation for amended Bid Price Cap values per service.

The TSOs consider that scarcity pricing, as recommended in Section 3.4.3, will incentivise service providers to participate in secondary trading when the TSOs submit Sell Orders in instances of volume insufficiency.

Interaction with the RAD

The TSOs wish to clarify that the mechanisms described in this section and those related to the RAD will address distinct issues.

Volume insufficiency will occur when the TSOs do not procure the amount, above a threshold, of any volume requirement being treated as a constraint in the clearing of the DASSA. This will be identified following the execution of the daily auction, at which point the TSOs will enter secondary trading to procure the deficit (approximately 16:00 D-1).

The RAD will address volume deficits in procured DASSA volumes in real-time – due to lapsing / unavailability of DASSA Orders – by incentivising service providers to make residual service capacity available to the TSOs. RAD requirements and payments will be evaluated ex-post as part of a monthly pre-settlement process. RAD clearing prices will not be known during instances of volume insufficiency.

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[43] Section 4.2 (EirGrid); Section 4.2 (SONI)

TSOs' Recommendation:

Threshold for volume insufficiency for any system service / higher quality / jurisdiction requirement will be the maximum of the following two parameters:

- The value that the TSOs will set to cover the unexpected unavailability of reserve providers for any system system service, higher quality of service provision, jurisdiction requirement, which will be determined within the year-ahead (Y-1) volume forecast.
- A value that will be determined within the year-ahead (Y-1) volume forecasting process, which will be greater than zero and will represent the maximum value of any system system service, higher quality of service provision, and jurisdiction requirement combination that the TSOs will not procure via secondary trading in the event of volume insufficiency.

Value of the threshold will be subject to review, with any proposed change to the methodology to be subject to industry consultation and SEMC decision.

In an instance of volume insufficiency for a Trading Period, prioritisation will apply to the TSOs' Sell Order until it has cleared.

7 Commitment Obligations & Incentives

7.1 Introduction

This section sets out the TSOs' recommendations for:

- Hierarchical mechanism of commitment obligations and incentives for DASSA Orders.
- Pre-gate closure: application of a Compensation Payment.
- Pre-gate closure: value of the Compensation Payment.
- Post-gate closure: service availability incentives.
- Post-gate closure: service delivery incentives.

The TSOs did not consult on a value for the frequency trigger to apply to performance monitoring in the DASSA in our consultation paper, nor any mechanism relating to 'data poor' - instances of service providers not demonstrating capability to provide services due to the absence of responses to frequency events over a defined period. These matters are still under consideration with the TSOs.

7.2 Hierarchical Mechanism of Commitment Obligations & Incentives

This section sets out the TSOs' recommendation for the end-to-end hierarchical mechanism of Commitment Obligations and Incentives for DASSA Orders. The details of each recommendation for the individual components of the mechanism are described in the sections below.

7.2.1 Hierarchical Incentive Mechanism - Consultation Proposal

In the consultation paper, the TSOs proposed a structured approach to ensure that service providers would be incentivised to meet their obligations, including fulfilling their DASSA Order, accurately declaring their service availability, and delivering the service when required. Importantly, a hierarchy was applied to the incentive structure so that stronger incentives applied in real time up to the time that the delivery of a service was required:

- Post-Gate Closure Availability Incentives to be stronger than Pre-Gate Closure Incentives.
- Service Delivery Incentive to be sufficiently strong and exceed the applicable availability incentives over the subsequent Trading Periods during which an energy storage unit may become unavailable following the delivery of a service.

This proposed incentive structure is summarised in Table 6 below.

Table 6: Commitment Obligations & Incentives Hierarchy Consultation Proposal

Pre-Gate Closure Incentives		
Incentive	Which volumes are impacted?	What is the incentive?
Compensation Payment	• Self-lapsed DASSA Order • Submission of incompatible FPN • Exemptions[1]: 1) Lapsed orders as a result of TSO actions; 2) DASSA Orders for the Trading Periods falling within the Grace Period, post a response delivery by the unit	• DASSA payments for the lapsed volumes are forfeit and the service providers have to pay a Compensation Payment in respect of the lapsed volumes • The Compensation Payment[2], as proposed, is to be calculated as the difference between the adjusted DASSA price and the DASSA Clearing Price. • In the proposed approach, the 'adjusted' DASSA price is the theoretical clearing price excluding the DASSA Orders that were eventually lapsed.
Objective / Rationale:		
• **Incentivise service providers to make DASSA Order volumes available by submitting a compatible FPN or find replacement volumes in the secondary market. The Compensation Payment is an estimate of the counterfactual cost faced by the TSOs.**		

Post-Gate Closure - Service- Availability Incentives		
Incentive	Which volumes are impacted?	What is the incentive?
Availability Performance Scalar **&** ***Compensation Payment***	• Unavailable confirmed DASSA Order volumes • Exemptions[1]: 1) Unavailable confirmed DASSA Order volumes as a result of TSO actions; 2) Confirmed DASSA Orders for the Trading Periods falling within the Grace Period, post a response delivery by the unit	• DASSA payments for the unavailable volumes are forfeit and the service providers have to pay a Compensation Payment[2] for the concerned Trading Periods. • Reduced DASSA settlement payments, with the application of the scalar ranging between 0 and 1. The value of the scalar depends on the weighted average monthly performance of the unit and impacts payments for all the Trading Periods in the months falling in the persistence duration of the scalar.
Objective / Rationale:		

- **Incentive to maintain availability for the contracted volumes.**
- **Post Gate Closure incentive for volume availability is stronger than the pre-Gate Closure incentive. This is to maintain a hierarchy and avoid situations where providers can arbitrage between 'lapsing' and post Gate Closure unavailability.**

Post-Gate Closure - Service Delivery Incentives		
Incentive	Which volumes are impacted?	What is the incentive?
Event Performance Scalar	• Failure to respond and deliver the volumes cleared in the DASSA and made available by the unit • This may also extend to the RAD[3] should this be eventually adopted	• Reduced DASSA settlement payments, with the application of the scalar ranging between 0 and 1 in value. • Reduced RAD[3] (should the RAD be adopted) settlement payments, with the application of the scalar ranging between 0 and 1 in value. • The value of the scalar depends on the monthly performance of the unit and impacts payments for all the Trading Periods in the months falling in the persistence duration of the scalar.
Objective / Rationale:		
• **Incentivise delivery of a service in response to a frequency event or a dispatch instruction, when available to do so.** • **The scalar has been structured to provide strong incentives to perform in most circumstances.**		

Notes: (1) For all the exemptions noted in the table above, the suspension of DASSA payment would continue to apply, in line with the SEMC's decision paper[44] (SEM-24-066); (2) The proposed approach for determining the Compensation Payment as the difference between the adjusted DASSA price and the DASSA Clearing Price was the TSOs' preferred option among the approaches considered, but was subject to implementation considerations; (3) The Residual Availability Determination (RAD), the proposed DASSA top-up mechanism option by the TSOs, had not been approved by the SEMC at the time of the consultation.

7.2.2 Hierarchical Incentive Mechanism - Consultation Feedback

15 respondents set out their views on the TSOs' proposals for the hierarchical mechanism for Commitment Obligations and Incentives.

[44] SEM-24-066: Section 4.1 (semcommittee.com)

Many respondents expressed concern that the proposed framework is overly punitive rather than genuinely incentivising participation. Some respondents considered that forfeiting a DASSA payment for non-delivery already serves as sufficient incentive to deliver services. For instance, one respondent noted that “The framework appears to be based on punitive mechanisms rather than genuine incentives. Where a provider wins a DASSA order, forgoing the payment due to lapsing a DASSA Order is a significant incentive to deliver”.

Several respondents opposed the use of persistent scalars, arguing that the framework could discourage participation, thereby increasing the risk of volume insufficiency, while also distorting price formation by encouraging participants to factor penalty risks into their bidding strategies. Some respondents commented on the “SEMC's earlier stated position against performance scalars”.

Several respondents argued that the proposed framework does not adequately differentiate between deliberate commercial decisions to lapse orders or underperform and factors beyond a provider’s control (e.g., technical issues, forced outages or TSO actions). They considered that penalties in these scenarios are damaging to market confidence, calling for softer treatment in such cases, and clearer, targeted enforcement, potentially via the MMU, for deliberate non-delivery. One respondent considered this in the context of the UK, noting that, “…within the UK market (as our closest market) if the reason an ancillary services provider could not deliver is due to a technical issue, then there is no compensation payable – penalties would only be considered if the participant had made a deliberate decision to move its position to take advantage of a more lucrative market.”

Some respondents requested greater clarity, transparency and simplification of the Commitment Obligations and Incentives framework. They considered it overly complex lacking sufficient detail, especially for the treatment of non-standard participants like interconnectors and priority dispatch units, with some respondents calling for the publication of a detailed analysis of the rationale, design, and expected impact of the scalars. For example, "[We] recommend that the TSO publish worked examples that simulate unit behaviour and payment outcomes under the proposed incentive regime.” Another respondent considered that the framework lacks precedence as it is inconsistent with the DAM, which does not include scalars, e.g., “it is unclear why the TSO is proposing to design DASSA in a manner that is distinct from the current DAM auctions. No reason has been provided for this deviation.”

Some respondents considered that the proposed framework does not consider the financial exposures service providers face across various energy and capacity markets. They highlighted that the introduction of additional penalties from FASS risks subjecting service providers to multiple charges for a single failure to deliver, potentially creating a risk profile that could disincentivise participation. Many respondents called for a comprehensive, holistic review of all market exposures (including energy, capacity and SNDs) before the FASS arrangements are implemented. For example, one respondent noted, "There is increasing risk that a provider will be charged multiple times for a cost in some way tied to the replacement energy necessary arising due to its failure to deliver. We see no holistic review whether all of these mechanisms stack up appropriately."

As an alternative, several respondents suggested that a simpler, one-off penalty payment would be preferable to the proposed persistent scalar mechanisms. They argued that such penalties, potentially linked to the DASSA clearing price, would be easier to manage and implement and be more predictable for participants. For example, "…it would be both simpler and more economically efficient to remove the proposed hierarchy and impose the same one-off penalty in all circumstances."

7.2.3 Hierarchical Incentive Mechanism - Recommendation

The TSOs recommend that a layered incentive mechanism to support the fulfilment of Commitment Obligations under DASSA be implemented. This mechanism will apply progressively stronger incentives as the system approaches real-time delivery, ensuring that service providers are motivated to submit compatible Final Physical Notifications (FPNs), maintain availability of confirmed reserve volumes, and deliver services when required.

The overall structure of the recommended mechanism will be as per our consultation paper, with some changes recommended to the design of the individual components: these are described in detail in the sections on pre-gate and post-gate closure incentives below. The recommended structure comprises:

- A Compensation Payment for lapsed DASSA Orders, with exceptions.
- A combination of Compensation Payment and Availability Performance Scalar for post-gate closure unavailability of contracted services.
- An Event Performance Scalar for post-gate closure non-delivery of services when called upon.

In addition, the TSOs have suggested alternative one-off payment mechanisms for both availability and delivery incentives, should the SEMC decide to implement these in place of the scalar-based approach. The recommended incentive structure is summarised in Appendix D.

7.2.4 Hierarchical Incentive Mechanism - Recommendation Rationale

The TSOs acknowledge respondents' feedback on the proposed Commitment Obligation and Incentives hierarchical mechanism. In this section, we will address commentary on the overall structure of the mechanism; in the sections below, we will respond to feedback on the individual components.

The TSOs' recommendations for our Commitment Obligations and Incentives framework are grounded in the principle that incentives should escalate in strength as the system approaches real-time, reflecting increasing operational risk and system criticality.

Perceived Punitive Nature of the Framework

Respondents expressed concern that the proposed mechanism feels punitive rather than incentivising. Many considered the forfeiture of DASSA payments for non-delivery to be a sufficient deterrent and viewed additional financial consequences as excessive.

The TSOs emphasise that the hierarchical structure is not designed to punish, but to reflect the increasing importance of reliability as the system nears real-time.

The TSOs do not consider the forfeiture of DASSA payments to be sufficient incentive for DASSA Order Holders to fulfil their obligations, given that potential higher earnings for the

service provider may become realisable in other markets. Our key objective is that consistently reliable service provision by Order Holders is incentivised and that strategic lapsing of Orders and unavailability of service providers are discouraged.

Need to Distinguish Between Intentional and Unintentional Underperformance

Consultation responses strongly emphasised the need to differentiate between deliberate commercial decisions to lapse or underperform and situations where service providers are unable to deliver due to technical issues, forced outages, or TSO actions.

The TSOs acknowledge that the reasons behind a service provider failing to fulfil the obligations associated with a DASSA Order are critical considerations in ensuring that the incentive framework remains fair and proportionate. The hierarchical incentive mechanism has been designed to reflect this distinction through the inclusion of targeted exemptions for TSO actions, ensuring that service providers are not penalised for circumstances outside their control. The TSOs remain of the view that the RAs 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.

Complexity and Transparency of the Framework

Several respondents found the proposed mechanism complex and lacking sufficient detail, particularly for non-standard participants such as interconnectors and priority dispatch units. There were calls for worked examples and clearer justification for the use of scalars and layered incentives. The TSOs acknowledge this feedback. In the sections below, the TSOs provide rationale for our recommendation for the use of availability and delivery scalar incentive mechanisms. To support service providers' understanding, the TSOs will publish detailed examples demonstrating how the incentive mechanism applies across diverse technologies and scenarios; these will be communicated as part of industry readiness activities, post SEMC decision.

Concerns About Overlapping Financial Exposure

Respondents raised concerns about cumulative penalties across energy, capacity, and SND markets, warning that multiple charges for a single failure could create an unsustainable risk profile and discourage participation.

The TSOs have designed the incentive mechanism for the DASSA arrangements in the context of the arrangements being distinct from other energy markets and do not consider that the recommended mechanisms duplicate incentives in place elsewhere. The recommended layered structure ensures that consequences are applied in proportion to the timing and severity of any underperformance and allow for exceptions where the cause of any failures are outside of the service provider's control.

TSOs' Recommendation:

The TSOs recommend that a layered incentive mechanism for DASSA Orders be implemented, consisting of:

- Pre-Gate Closure Incentives – Compensation Payment
- Post-Gate Closure Availability Incentives – Compensation Payment and Availability Performance Scalar
- Post-Gate Closure Delivery Incentives – Event Performance Scalar

The TSOs suggest values for one-off payment mechanisms (should the SEMC decide to proceed in this way):

- One-off Availability Penalty
- One-off Delivery Penalty

Structured hierarchy of incentives to be as follows:

- Post-Gate Closure Availability Incentives to be stronger than Pre-Gate Closure Incentives.
- Service Delivery Incentives to be the strongest, exceeding availability incentives over the subsequent Trading Periods, particularly where units (e.g. energy storage) may become unavailable following service delivery.

7.3 Pre-Gate Closure – Application of Compensation Payment

This section sets out the TSOs' recommendation for the application of the Compensation Payment at gate closure.

7.3.1 Application of Compensation Payment - Consultation Proposal

The TSOs considered two options for the application of the Compensation Payment at gate closure:

- Apply to all lapsed Orders with exceptions for TSO actions (TSOs' preference).
- Apply to all lapsed Orders with no exceptions.

Proposal Option 1 - Apply Compensation Payment to Lapsed Orders with Exceptions

The TSOs' preferred proposal for the application of the Compensation Payment at gate closure was as follows:

- Compensation Payments would be payable to the TSOs when a DASSA Order was not fully or partially compatible with the service provider's FPN or when the DASSA Order had been fully or partially self-lapsed by the service provider. Compensation Payments would be proportionate to the volume of the lapsed Order.
- The only exceptions to the above that would apply were:
  - Where a DASSA Order Holder had lapsed due to TSO instructions /actions / frequency events.

- Where the DASSA Order for the Trading Period fell within a Grace Period following the delivery of a service by the service provider.

Proposal Option 2 - Apply Compensation Payment to All Lapsed Orders

Under this option, any failure to fulfil a DASSA Order at gate closure would result in a Compensation Payment being payable to the TSOs, irrespective of the reason for the lapsed Order.

To account for this risk, DASSA Order holders could reflect this potential cost in their Balancing Market bids.

7.3.2 Application of Compensation Payment - Consultation Feedback

16 of the 19 consultation respondents expressed views on the TSOs' proposals on the application of the Compensation Payment to lapsed DASSA Orders at gate closure.

Most respondents supported the TSOs' preferred proposal – to apply to all lapsed Orders with exceptions for TSO actions / frequency events - agreeing that service providers should not be penalised when unable to fulfil DASSA Orders for reasons beyond their control. Respondents described this as a fair and balanced approach that recognised operational constraints while maintaining incentives for service delivery. Several respondents emphasised that actions outside a participant's normal control, such as grid issues, dispatch instructions, or forced outages, should not lead to financial penalties.

Some respondents requested additional detail on how "TSO actions" would be defined in the DASSA, with one specifically recommending that the term explicitly include SO/SO trades between EirGrid /SONI and National Energy System Operator (NESO) in GB. Others sought clarity on the operation of the pre-gate closure incentive, including the timing, price formation, settlement impact, and the alignment of FPNs with FASS positions. Respondents recommended that worked examples be published to demonstrate how incentives and penalties would apply under realistic market scenarios. A question was raised seeking clarity regarding in which energy markets participants are expected to align their Final Physical Notification (FPN) with their FASS position.

Several respondents expressed concerns over the potential infeasibility and risks associated with the alternate proposal – to apply the Compensation Payment to all lapsed orders irrespective of the reason for lapsing. Respondents noted that wind and solar units cannot submit complex COD values above zero for decremental actions, making recovery of costs via the Balancing Market impractical. Respondents cited BESS as being particularly disadvantaged due to limited BM participation, non-firm connections, and the absence of CDISCOUNT payments. Respondents also stated that reflecting foregone DASSA payments in BM bids would be complex and burdensome, potentially exposing service providers to significant unrecoverable penalties. This option was seen as a material risk for non-delivery in cases beyond the service provider's control, including network outages and TSO dispatch instructions. One respondent urged the TSOs to consult with the Regulatory Authorities regarding the decision to withhold DASSA payments for lapsed Orders arising from a TSO action, arguing that withholding payments in such cases undermines the purpose of the Grace Period for BESS units.

7.3.3 Application of Compensation Payment - Recommendation

The TSOs recommend proceeding with our preferred approach – Option 1 - as described in the Parameters and Scalars consultation paper. Under this approach, Compensation Payments will be payable to the TSOs when a DASSA Order is not compatible with the service provider's FPN or has been self-lapsed, either fully or partially. The volume of the Compensation Payment will be proportionate to the volume of the lapsed Order.

The only exceptions to this will be:

- Where a DASSA Order has lapsed due to TSO actions, which - regarding the application of the Compensation Payment at gate closure - are defined as pre-gate closure dispatch instructions or automated responses to frequency events that directly result in an FPN that is incompatible with the DASSA Order.
- Where the DASSA Order for the Trading Period falls within a Grace Period (see Section 7.7.3 below for the TSOs' recommendation on the Grace Period).

This recommendation reflects the TSOs' commitment to maintaining a fair, transparent, and proportionate incentive framework that encourages reliable delivery while recognising legitimate operational constraints.

7.3.4 Application of Compensation Payment - Recommendation Rationale

Of the 19 consultation respondents, 16 provided feedback on the proposals, with a majority supporting the TSOs' preferred proposal, Option 1.

Stakeholder Support for TSOs' Preferred Option

Respondents broadly agreed that service providers should not be penalised for non-fulfilment of a DASSA Order when the cause lies outside of their control. The TSOs fully support the principle that fairness must underpin the incentive structure. The Compensation Payment mechanism is designed to encourage reliable delivery, not to penalise providers for circumstances beyond their control. Option 1 ensures that accountability is applied only where the service provider has control over delivery outcomes. This approach maintains the credibility of the framework and supports continued participation from a diverse range of technologies, which is essential for system flexibility and resilience.

Definition and Scope of TSO Action

Several respondents requested clarity on what constitutes a "TSO action" for the purposes of Compensation Payment exceptions. The TSOs confirm that TSO actions are strictly defined as either pre-gate closure TSO dispatch instructions or automated responses to frequency events that directly result in a service provider submitting a FPN that is incompatible with its DASSA Order. Service providers cannot control TSO actions, which are often necessary to ensure system stability and reliability. Nor can they control the occurrence of frequency events. Requiring a Compensation Payment to be payable in such cases would be disproportionate, as service providers have limited or no control over these actions.

Regarding respondents' commentary on the impact of System Operator-to-System Operator (SO-SO) trades on interconnectors' abilities to fulfil DASSA Orders, the TSOs note that SO-SO actions do not impact their FPNs, which are determined solely from ex-ante market

schedules and finalised at IDA2 under SEM market rules. As such, SO-SO trades do not need to be considered as TSO actions for the purposes of Compensation Payment exceptions.

By contrast, other reasons for non-delivery - such as forced outages or commercial decisions - will not qualify for exemption from the Compensation Payment. In the case of a forced outage, the service provider may be unable to fulfil its DASSA obligations due to an unexpected technical failure and should self-lapse or sell their Order via secondary trading. Where a service provider makes a commercial choice not to deliver the contracted service, a Compensation Payment will be appropriate, as this reflects a voluntary decision, often influenced by alternative market opportunities.

Pre-Gate Closure Incentive Design

The TSOs acknowledge respondents' requests for clarity on the design and operation of the pre-gate closure incentive.

Under the DASSA design, gate closure occurs one hour before the applicable Trading Period. At this point, a DASSA Order Holder must confirm its Order by submitting (or having previously submitted) a Final Physical Notification (FPN) that is compatible with its DASSA Order, i.e. that the Order Holder has sufficient headroom or footroom to deliver the contracted service. If a DASSA Order is not compatible with a service provider's market position prior to gate closure, the TSOs would expect that service providers would utilise either the Intra-Day Auctions (IDAs) to adjust their market position or DASSA secondary trading to offload the portion of their Order that is not compatible. If the FPN is not compatible at gate closure, the Order is deemed fully or partially lapsed. In such cases, the service provider will not receive a DASSA payment for the lapsed portion of the Order and will be liable for a Compensation Payment payable to the TSOs, proportionate to the volume of the lapse. Exceptions will apply only where the lapse is due to pre-gate closure TSO dispatch instructions or automated responses to frequency events (as described above).

The TSOs acknowledge that not all technology types submit FPNs. To ensure inclusive participation, alternative arrangements will be implemented. For example, TSO-deemed FPNs will apply to interconnectors, based on their market position after SEM-GB IDA1 and IDA2 (see Section 4.5 for more information-Bidding Window). For non-dispatchable service providers, such as priority dispatch renewable units, DASSA Orders will be automatically confirmed at gate closure, with the requirement that any contracted balancing capacity be excluded from their ex-ante trading position. These Orders will then be evaluated for availability post-gate closure. In the case of BESS units, where compatibility cannot be definitively verified at gate closure, their FPN will, where appropriate, be deemed compatible with the service provider's Order.

Feasibility and Risk of Universal Application of Compensation Payment (Option 2)

The TSOs note respondents' concerns that Option 2 - which would apply Compensation Payments to all lapsed Orders regardless of the reason – would introduce disproportionate risk, particularly for variable and emerging technologies and could also lead to inefficient bidding behaviour and increased costs in the Balancing Market. The TSOs' recommendation of Option 1 mitigates these risks by applying Compensation Payments only where the provider has control over delivery, while still maintaining strong incentives for performance.

The TSOs note respondents' commentary on the issues and challenges associated with cost recovery in the BM. The TSOs reiterate our concerns, set out in our consultation paper, with

any proposal requiring service providers to reflect the cost of the Compensation Payment into their BM bids:

- Incorporating additional costs into BM bids would make DASSA Order Holders less competitive compared to non-DASSA Order Holders. The TSOs consider that this would be deemed discriminatory under Article 16(7) of the EBGL, which prohibits discrimination between BM bids submitted under a balancing capacity contract and those submitted outside of such a contract. The TSOs cannot prioritise DASSA Order Holders over non-DASSA Order Holders in scheduling and dispatching (activation of) balancing energy.
- The current Bidding Code of Practice (BCOP) in the SEM does not allow for opportunity costs to be reflected in the techno-economic data used for non-energy actions. The BCOP has never allowed the inclusion of Short Notice Declaration or Generator Performance Incentive charges within complex Commercial Offer Data (COD) submitted to the SEM.

DASSA Payments and Grace Period

One respondent raised a concern that withholding DASSA payments for lapsed Orders resulting from TSO actions could undermine the purpose of the Grace Period, particularly for BESS units. The Grace Period is intended to provide operational flexibility following successful service delivery, and respondents emphasised the need to preserve its integrity.

The TSOs agree that the Grace Period is a vital component of the DASSA framework, especially for fast-responding technologies like BESS. The TSOs note that in SEM-24-066[45], "The SEM Committee has decided that all units which are unable to meet commitment obligations will not be eligible to receive a DASSA payment." Building on this decision, the TSOs have included a specific recommendation in Section 7.7.3 – Grace Period, which outlines how Compensation Payments and Availability incentives should apply following delivery of a service. This approach is designed to ensure that the Grace Period continues to function as intended.

TSOs' Recommendation:

The TSOs recommend Option 1 for the application of the Compensation Payment at gate closure:

- Compensation Payment to be payable to the TSOs when a DASSA Order is not compatible with the service provider's FPN or has been self-lapsed.

The exceptions to this will be:

- Where a DASSA Order has lapsed due to TSO actions, which are defined as pre-gate closure dispatch instructions or automated responses to frequency events that directly result in a FPN that is incompatible with the DASSA Order.
- Where the DASSA Order for the Trading Period falls within a Grace Period.

[45] SEM-24-066: Section 4.1 (Semcommittee.com)

7.4 Value of Compensation Payment

This section describes the TSOs' recommendation for the value of the Compensation Payment.

7.4.1 Compensation Payment Value – Consultation Proposal

The TSOs' consultation paper set out various options for the design of the Compensation Payment, as follows:

1. **No Compensation:** No Compensation Payment to apply, with the DASSA Order Holder simply foregoing the DASSA payment in case of a lapsed Order.
2. **Dynamic Compensation:** A Compensation Payment linked to the counterfactual income captured through trading in the Intraday Market, i.e. the Inframarginal Rent (IMR) available through the Intraday Market.
3. **DASSA Price:** A Compensation Payment linked to the DASSA clearing price.
4. **Adjusted DASSA Price minus the DASSA Price:** A Compensation Payment linked to the delta between an adjusted DASSA clearing price and the actual DASSA clearing price, with the adjusted DASSA clearing price reflecting what the price would have been if the lapsed volumes had not participated in the auction. The adjusted DASSA clearing price could be calculated in two ways:
   a) Ex-post: This approach would use actual clearing data to simulate a counterfactual price by re-clearing the DASSA auction, excluding the volumes associated with service providers who failed to submit compatible FPNs. It would provide a retrospective view of the clearing price that would have resulted had only reliable volumes participated and would reflect the actual cost of replacement incurred by the TSO.
   b) Ex-ante: This approach would use a forecast of lapsed volumes to simulate a counterfactual price by re-clearing the DASSA auction, excluding an ex-ante estimate of volumes expected to submit incompatible FPNs. This estimate would be based on historical data. It would provide a forward-looking view of the clearing price that would have resulted had only expected-to-deliver volumes participated and would reflect the expected cost of replacement faced by the TSO.
5. **RAD Price**: A Compensation Payment linked to the price determined in the proposed RAD should there be any residual volumes.
6. **System Security Cost**: A Compensation Payment linked to the Value of Lost Load (VoLL).

The above options were evaluated against a set of assessment criteria. The outcome of that evaluation is set out in Table 7 below:

Table 7: Consultation Paper Compensation Payment Options

Assessment Criterion	Compensation Payment Options						
	No Compen-sation	Dynamic Compen-sation	DASSA price	Ex-Ante Adjusted DASSA price minus DASSA price	Ex-Post Adjusted DASSA price minus DASSA price	RAD Price	System security cost
Appropriate incentives	○	◕	◔	◑	◕	◔	◔
Cost-reflectivity	○	○	◑	◑	◕	◑	◑
Ability to Implement	●	◔	●	◔	◔	◕	◕
Predictability	●	●	◕	●	◑	◑	●

Note: The greater the shaded area within the Harvey Ball, the higher the score i.e. ● > ◕ > ◑ > ◔ > ○

The TSOs' preferred option for the calculation of the Compensation Payment was Option 4a: the delta between the Adjusted DASSA clearing price and the DASSA clearing price, where the adjusted DASSA clearing price would be calculated ex-post to account for actual lapsed DASSA Orders.

In the case that Option 4a was not feasible to implement for DASSA go-live, the TSOs' next preferred option in our consultation was the DASSA price (Option 3) due to its predictability for service providers and ease of implementation.

7.4.2 Compensation Payment Value - Consultation Feedback

17 of the 19 consultation respondents expressed views on the TSOs' proposals for calculating the Compensation Payment.

Many respondents were not in favour of the TSOs' preferred proposal, i.e. an ex-post Adjusted DASSA Price less the DASSA Clearing Price (Option 4a), considering it unnecessarily complex, difficult to implement and unlikely to deliver additional benefit. One respondent noted that alternative volumes could often be secured in the RAD at lower cost, meaning the adjusted price might not represent the true counterfactual cost of procurement. Other respondents raised concerns about transparency, stating that the calculation would need to be auditable by participants, which would further add to implementation challenges and administrative burden. Some also argued that the penalty structure would be disproportionate, as the Compensation Payment would increase for all service providers when additional lapses occur; the respondents suggested that if one service provider lapses, the Compensation Payment should remain the same regardless of whether others also self-lapse during the same Trading Period. These respondents further emphasised that delivery of the DASSA by the longstop date (of the DS3 Regulated Tariff arrangements) should remain

the priority, cautioning that Option 4a should not be prioritised for go-live unless it can be clearly justified as the best approach.

Several respondents expressed a preference for a simpler approach: linking the Compensation Payment directly to the DASSA clearing price. They stated that this already reflects participants' opportunity cost in the DAM, is cost-reflective of alternative provision, and is easier to implement. While some respondents acknowledged that this may not act as a strong enough incentive for Order holders to fulfil their obligations, they suggested that this concern could be mitigated through other design measures, like applying a small, fixed multiple of the Clearing Price (e.g. Compensation payment = 1.2 × DASSA Clearing Price for the period in question), subject to review under the System Services Code and incorporating stricter ad-hoc measures into the Code (such as participant exclusions) to address deliberate breaches.

Some respondents also stressed that Inframarginal Rent (IMR) should not be used as a basis for evaluating options for the Compensation Payment, describing such references as misleading. They noted that IMR is not guaranteed in the BM and does not reflect the benefits or intentions of service provider actions; instead, only revenues within the DASSA mechanism should be considered. In this context, one participant expressed support for Option 4a.

A few respondents expressed a preference for Option 1, under which no Compensation Payment would be applied, considering the non-payment of the DASSA Order itself to be a sufficient financial penalty, providing a strong incentive to fulfil obligations without the need for additional punitive measures. Some respondents proposed introducing a cap (and/or a floor if required) on multiple Compensation Payments within a single Auction Timeframe to avoid excessive penalties for service providers facing unavoidable outages.

One respondent expressed concern that removing early self-lapse provisions could discourage prudent operational decisions and expose service providers to excessive financial risk in circumstances beyond their control. Others recommended that the TSOs introduce an exemption allowing service providers to self-lapse early once their position in the IDA1 Market is known, with the Compensation Payment removed if the self-lapse occurs by a specified cut-off time on D-1.

7.4.3 Compensation Payment Value – Recommendation

In this section, the TSOs make two recommendations regarding the value of the Compensation Payment. These recommendations are informed by the fact that the TSOs' preferred option, an ex-post Adjusted DASSA Price less the DASSA Clearing Price (Option 4a), is not implementable for DASSA go-live.

For DASSA Go-live

The TSOs recommend that the following approach for the calculation of the Compensation Payment be implemented for DASSA go-live, with the Compensation Payment applying to each MWh of lapsed DASSA Order volumes:

Compensation Payment = DASSA Clearing Price x Service-Specific Multiplier

The service-specific multipliers are set out in Table 8 below. The values reflect the expected average counterfactual cost of reserve provision, based on AFRY's modelled assumptions for 2030. These multipliers account for the likelihood that a portion of DASSA-procured volumes

may not submit compatible FPNs: they are derived from an analysis of the average change in the cost-of-service provision under counterfactual conditions. If all volumes submitted compatible FPNs, the multiplier would collapse to zero; conversely, if all volumes submitted incompatible FPNs, the multiplier would be significantly higher.

Table 8: Compensation Value Multiplier

	FFR	POR	SOR	TOR1	TOR2	RR
One-off Compensation Payment Service Specific Scalars	70%	70%	50%	50%	40%	40%

These multipliers apply to both upward and downward reserve.

The TSOs and AFRY acknowledge that this approach introduces some inefficiency. At times of low reserve scarcity, the Compensation Payment may be higher than necessary, while during periods of high scarcity, it may be insufficient. However, linking the payment to the DASSA clearing price provides some mitigation by reflecting prevailing market conditions.

There will be no reduced Compensation Payment to apply in instances of early self-lapsing.

Post DASSA Go-live

The TSOs recommend that Option 4a as described in our consultation paper, under which the Compensation Payment is calculated as the delta between the ex-post Adjusted DASSA Price and the DASSA Clearing Price, be implemented post DASSA go-live (Day 2).

7.4.4 Compensation Payment Value - Recommendation Rationale

DASSA Go-Live Implementation Considerations

The TSOs continue to recommend Option 4a as the most economically efficient and cost-reflective approach for the calculation of the Compensation Payment. However, it is not feasible for delivery by DASSA go-live due to implementation complexity and vendor capacity challenges. We therefore recommend that this mechanism be implemented post go-live as a Day 2 deliverable.

Considering this, the TSOs have developed a simplified recommendation that is feasible for go-live and provides a simple, transparent incentive mechanism for service providers to confirm DASSA Orders, thereby addressing respondents' concerns.

Consultation Feedback on Option 4a

The TSOs consider Option 4a to be the most economically efficient and cost-reflective methodology. In the absence of a real-time reserve market - which would ideally reveal the true marginal cost of reserve provision - Option 4a offers a principled proxy. It provides a near substitute to the actual cost of replacing undelivered volumes, based on ex-post adjustment of the DASSA price curve for the lapsed order volumes and net off the DASSA clearing price. While the mechanics of ex-post price adjustment and auction re-clearing are technically involved, they are conceptually aligned with existing market practices - particularly imbalance pricing, which is calculated ex-post to reflect the cost of real-time system balancing.

Respondents expressed concern that Option 4a could introduce uncertainty for participants, as Compensation Payments would vary depending on the number and timing of lapses within a given month, making it difficult for service providers to forecast their exposure and plan accordingly. The TSOs note that while Option 4a introduces variability in Compensation Payments, this is not unlike the uncertainty participants already face with ex-post imbalance pricing, which reflects real-time system balancing action when trading in the ex-ante markets. This inherent uncertainty in the markets, however, has not deterred market engagement.

Alternative Options Considered

Respondents proposed a range of alternative approaches for calculating the Compensation Payment, including using the DASSA Clearing Price directly, applying a fixed multiplier to the DASSA Price, defining a fixed payment based on system security risk or expected counterfactual cost and introducing exemptions for early self-lapse.

The TSOs have carefully evaluated these alternatives. Using the DASSA Clearing Price directly does not account for the cost of replacement and may under-incentivise delivery. Similarly, defining a fixed payment based on system security or expected counterfactual cost is inherently complex and may not align with actual system needs at any given time. In our recommendation for go-live, the TSOs utilise fixed multipliers per service, but note the challenges in calibrating these values.

Our partner AFRY also considered a rule-based approach that links the Compensation Payment to system conditions, such as the Day-Ahead capacity margin. However, this too is suboptimal, as reserve scarcity does not always coincide with energy scarcity - particularly in systems with high renewable penetration and limited storage.

Early Self-lapse and Proportionality

Some respondents suggested that early self-lapse should be permitted without penalty, particularly in cases of unavoidable outages. Concerns were also raised about the proportionality of the penalty structure (under Option 4a), especially when multiple providers lapse in the same Trading Period, potentially increasing the Compensation Payment for all affected parties.

The TSOs consider that allowing early self-lapse without consequence would undermine the integrity of the DASSA mechanism by weakening the incentive for Order Holders to fulfil their DASSA obligations. The Compensation Payment is not intended as a punitive measure, but rather is designed to reflect, as far as practicable, the potential loss that may be incurred by the TSOs should a service provider fail to meet their commitment obligation. It represents the best available estimate of the cost to the TSOs of arranging for a replacement provider to deliver system services when the originally contracted volumes become unavailable, regardless of whether the lapse is intentional or unavoidable.

Furthermore, the TSOs note that DASSA Order Holders will have the opportunity to manage delivery risk through secondary trading, which enables them to transfer their DASSA obligations to other eligible service providers. Allowing early self-lapse without consequence could undermine this mechanism by reducing the incentive to actively manage commitments and participate in orderly market behaviour.

While the TSOs remain open to considering limited exemptions or caps on cumulative payments in the future, any such measures must be carefully assessed to ensure they do not compromise cost-reflectivity or introduce unintended loopholes.

Industry Preference for Simplicity and One-Off Payments

Consultation respondents expressed a clear preference for arrangements that are simple and easy to understand, favouring one-off payments over more complex scalar-based mechanisms. Many also indicated support for an incentive-based framework under FASS, provided it is transparent, proportionate, and straightforward.

The TSOs acknowledge the industry's desire for simplicity and predictability, particularly at go-live. The proposed Compensation Payment structure - based on a service-specific multiplier applied to the DASSA Clearing Price - reflects this feedback and is designed to be both transparent and easy for participants to interpret.

However, the TSOs emphasise that simplicity should not come at the expense of economic efficiency. While the go-live approach prioritises deliverability and clarity, our long-term recommendation remains the implementation of Option 4a.

TSOs' Recommendation:

For DASSA go-live, the TSOs recommend that the Compensation Payment be calculated as:

- *Compensation Payment = DASSA Clearing Price x Service-Specific Multiplier*

	FFR	POR	SOR	TOR1	TOR2	RR
One-off Compensation Payment Service Specific Scalars	70%	70%	50%	50%	40%	40%

For post go-live (Day 2), the TSOs recommend Option 4a: the delta between the Adjusted DASSA Price and the DASSA Price, where the Adjusted DASSA Price is calculated ex-post.

No reduced Compensation Payment to apply in instances of early self-lapsing, as the cost of replacement arises regardless of intent or timing.

7.5 Post-Gate Closure – Availability Incentives

This section describes the TSOs' recommendation to incentivise DASSA Order Holders to maintain availability to provide contracted services in real-time.

7.5.1 Availability Incentive - Consultation Proposal

The consultation paper set out various options for the design of the Availability Incentive, as follows:

1. Application of a performance scalar on subsequent DASSA income, in addition to the Compensation Payment (preferred by the TSOs).
2. Temporary exclusion of a service provider from subsequent DASSA auctions for a time-limited period.
3. Volume derating in subsequent DASSA auctions.
4. Availability one-off payment.

The above options were evaluated against a set of assessment criteria. The outcome of the evaluation is set out in Table 9 below.

Table 9: Consultation Paper Availability Incentive Options

Assessment Criterion	Availability Incentive Options			
	Availability Performance Scalar & Compensation Payment	Temporary exclusion	Volume derating	Availability One-off payment
Appropriate incentives	◕	◑	◕	◑
Proportionality	◕	◑	◕	◑
Ability to Implement	◕	◑	◑	●
Predictability	◕	●	◕	◕

The TSOs proposed that the post-gate closure availability incentive would comprise:

- Compensation Payment (and forfeit of the DASSA payment) for the applicable Trading Period.
- Availability Performance Scalar, being a multiplier - based on a weighted average of the unit's monthly availability performance over a period of 5 months - against a service provider's DASSA payments.

7.5.2 Availability Incentive - Consultation Feedback

17 consultation respondents set out their views on the TSOs' proposals for the Post-Gate Closure Availability Incentives.

Most respondents disagreed with the TSOs' preferred option of introducing an Availability Performance Scalar with a persistent impact, viewing it as excessively punitive. Some considered that scalars would distort future bidding behaviour as service providers could withhold services or increase bid prices to compensate for potential losses, ultimately increasing costs for consumers. One respondent noted that, should service providers identify a potential loss due to the persistence of scalars, then “they shall withhold the service until the scalar recovers, and the revenue would be sufficient to cover the costs.”

Several respondents expressed concern that the nature and persistence of the proposed availability incentives would disincentivise participation in the DASSA and undermine long-term investment signals. They argued that participants’ commercial risk would be imbalanced as they would have to bear penalty costs without guaranteed revenue generation, and that this would not be a sustainable basis for securing long-term system service provision.

Many respondents argued that the introduction of additional post-gate closure incentives is inconsistent with the principle that DASSA payments are contingent on availability and delivery, stating that the DASSA price signal alone should be sufficient to ensure availability. Furthermore, some respondents considered that the removal of the price caps would negate the need for penalties, arguing that the market would function more efficiently and ensure service providers are sufficiently rewarded through market-based signals alone, e.g., “if price caps are removed, the resulting uncapped DASSA clearing prices will naturally reflect the true value of availability and delivery. In this environment, there is no need for additional incentives or scalars.”

Many respondents noted that the TSOs’ proposals would add significant complexity for participants, considering a scalar mechanism to be difficult to track, manage, and reconcile. Respondents referred to administrative burden associated with the existing Regulated Tariff arrangements. For example, " these mechanisms are prone to settlement errors, protracted disputes and frequent resettlements which can impact months of revenue and erode confidence in the system."

Many respondents called for a clearer distinction in penalty application between commercially driven breaches and unavoidable technical failures or forced outages that are beyond the service provider’s control. Some respondents considered that penalties for the latter should be less severe, as technical unavailability will occur regardless of market position, and participants already face revenue loss and increased risk across other markets in such scenarios. For deliberate gaming behaviour, however, some respondents suggested that this should be addressed through ex-post monitoring by the Market Monitoring Unit (MMU), possibly with targeted enforcement outside the penalty framework, where necessary. Other suggestions included non-financial sanctions for either repeat or more egregious offending units and the implementation of a process by which units can retest performance requirements particularly where a failure is demonstrably due to issues outside of a provider’s control.

Several respondents advocated for a simpler, one-off penalty linked to the DASSA clearing price, rather than persistent scalar approaches. They considered that this would be more practical, easier to administer, and still provide a strong deterrent without distorting the market. One respondent noted, "A fixed level of compensation, linked to the DASSA price would be much more easily implemented and balanced."

One respondent expressed a preference for the TSOs' proposal, viewing it as similar to the DS3 scalar and therefore familiar to market participants, and noting that it appropriately incentivises DASSA order holders to remain available. However, the respondent considered that AFRYs analysis on the bid cap, which cites 200 hours of operation for a dedicated BESS unit to recover its annualised cost at €500/MWh, does not account sufficiently for any Compensation Payments or incentives applied to a unit where "there is a lack of liquidity in the secondary trading platform and a provider cannot trade its DASSA order if it can no longer fulfil it."

7.5.3 Availability Incentive - Recommendation

In this section, the TSOs set out our recommendation for the implementation of an availability scalar for DASSA go-live and suggest potential values for a one-off payment incentive mechanism (should the SEMC decide to implement same).

TSOs' Recommendation

The TSOs recommend that the post-gate closure availability incentive will comprise:

- Compensation Payment (and forfeit of the DASSA payment) for the applicable Trading Period.
- Availability Performance Scalar (as per our consultation paper).

The recommended design of the Availability Performance Scalar is unchanged from that set out in the DASSA Parameters and Scalars Consultation Paper and is recapped in Appendix E.

The Availability Performance Scalar will apply to unavailable Confirmed DASSA Order volumes in real-time. In such cases, DASSA payments will also be foregone, in line with the SEMC decision in SEM-24-066[46]. Exceptions will apply where unavailable DASSA Order volumes result from TSO actions / events or for Trading Periods falling within a Grace Period. A tolerance band of 3% will be incorporated into the scalar, allowing for small levels of unavailability without impacting the scalar value. This tolerance will account for reasonable forced outages that a service provider may face.

Suggestion for One-Off Payment Availability Incentives

Noting the RAs' possible preference for a one-off payment incentive mechanism, and as favoured by some respondents, the TSOs, supported by AFRY's analysis, suggest that such an incentive could be based on the same pricing approach as our recommendation for the value of the Compensation Payment at DASSA go-live.

We suggest the following formula:

$$P_O = P_{DASSA} \times Service - Specific\ Scalar \times unavailable\ volumes$$

where:

- P_O is the one-off payment (payable to the TSOs)
- P_{DASSA} is the DASSA Clearing Price in a given Trading Period
- $Service\ Specific\ Scalar$ is a multiplier per service as set out in Table 10 below
- $unavailable\ volumes$ represents the unavailable Confirmed DASSA Order volumes of the service providing unit

[46] SEM-24-066: Section 4.1 (semcommittee.com)

Table 10: Suggested One-Off Payment Availability Incentive Multipliers

	FFR	POR	SOR	TOR1	TOR2	RR
One-off Payment Service Specific Scalars*	25%	25%	25%	25%	25%	25%

Note:

* In their report, AFRY also suggest static one-off payments, in addition to the above multipliers.

Similar to the approach taken with our Compensation Payment recommendation, the scalar values are service-specific and reflect the expected average counterfactual cost of reserve provision, based on AFRY's modelled assumptions for 2030. These scalars also account for the likelihood that a portion of DASSA-procured volumes may not submit compatible FPNs.

This suggested mechanism would function as follows:

- Service providers declaring unavailability in real-time would be subject to the one-off payment and the Compensation Payment, with the payments limited to the applicable Trading Period(s) without persistence.
- All unavailable volumes would be subject to the mechanism, with no exemptions for technical unavailability. This would result in a stricter and more immediate incentive for maintaining high levels of availability.

7.5.4 Availability Incentive - Recommendation Rationale

The TSOs welcome the feedback received from industry stakeholders on the proposed post-gate closure availability incentives.

The TSOs note respondents' feedback disagreeing with the implementation of scalars, with respondents favouring a simpler one-off penalty linked to the DASSA clearing price. While we recognise that this approach would be simpler and easier to implement, we consider that one-off payments (payable to the TSOs) can in practice be more punitive than scalars, as they apply a fixed penalty regardless of context. By contrast, the scalar provides a smoother and more proportionate financial impact, especially for units with high availability records.

Therefore, the TSOs continue to recommend the Availability Performance Scalar as the most appropriate and proportionate incentive mechanism, summarised as follows:

- **Tolerance:** The tolerance band avoids disproportionate impacts to service providers arising from infrequent unavailability.
- **Persistence:** The impact of past performance decreases over time, ensuring that while high availability is incentivised on an ongoing basis, the impact of previous events diminishes gradually.
- **Proportionality:** The scalar-based approach ensures that the financial impact of underperformance increases progressively as availability deteriorates, while limiting

exposure to fluctuations in DASSA clearing prices and maintaining proportionality to revenues earned.

By contrast, a one-off payment mechanism may result in outcomes that are not proportionate. For example, a service provider that clears the DASSA only infrequently could face a penalty exceeding the cumulative revenues it had earned in previous Trading Periods with lower clearing prices, should unavailability occur in a Trading Period with unusually high prices.

As set out in their updated approach report, AFRY conducted comparative analysis of the Availability Performance Scalar and a one-off payment design. Their assessment illustrates that:

- For high-availability units, a scalar design may result in a lower financial impact than a one-off payment, due to the tolerance band which accommodates infrequent technical unavailability.
- For units with poor availability profiles, the scalar impact increases gradually as performance deteriorates, while the one-off payment applies a fixed charge that can in some cases be more punitive.
- The scalar impact remains proportional to revenues earned by the service provider, whereas in some scenarios a one-off payment may exceed cumulative revenues (e.g. where a unit clears infrequently but becomes unavailable in a high-priced period).

Regarding stakeholder comments on potential market distortion and punitive effects of scalars, the TSOs note that any post-Gate Closure mechanism, whether a scalar or One-off Penalty, will influence bidding strategies. The materiality of that impact depends on the calibration of the mechanism rather than the mechanism itself. A high, fixed one-off payment can be equally, or even more, punitive than a calibrated scalar, particularly in periods of high prices or for units with limited DASSA participation.

In practice, service providers can avoid scalar impacts by remaining available, lapsing their orders or using the secondary market to manage subsequent exposure.

The TSOs note respondents' comments regarding the role of market signals, with some suggesting that the removal of DASSA price caps would negate the need for additional incentives. We consider that price signals on their own are insufficient to ensure availability once a unit has secured a DASSA Order. Incentives are necessary to provide consequences in cases where a service provider does not honour its contracted obligations, thereby protecting the integrity of the auction and the reliability of service delivery.

Regarding respondents' feedback on the potential complexity of scalar mechanisms, including concerns that they may be difficult to track, manage, and reconcile, the TSOs reiterate that scalars have been utilised under the DS3 Regulated Tariff arrangements and are therefore familiar to both the TSOs and service providers. The TSOs will ensure that the design is applied transparently and supported by clear settlement processes, building on DS3 experience to minimise administrative burden.

The TSOs will evaluate the availability incentives mechanism post-DASSA go-live, with any changes subject to industry consultation and SEMC approval.

TSOs' Recommendation:

The TSOs recommend that the post-gate closure availability incentive will comprise:

- Compensation Payment (and forfeit of the DASSA payment) for the applicable Trading Period.
- Availability Performance Scalar (as per our consultation paper).

The TSOs also suggest values for one-off payments, if this design is preferable to the SEMC, to apply in addition to the Compensation Payment and which take the form of multipliers against DASSA payments, as follows:

	FFR	POR	SOR	TOR1	TOR2	RR
One-off Payment Service Specific Scalars	25%	25%	25%	25%	25%	25%

7.6 Post-Gate Closure – Delivery Incentives

This section describes the TSOs' recommendation to incentivise DASSA Order Holders to deliver contracted services when called upon to do so, whether in response to a frequency event or dispatch instruction, in the form of an Event Performance Scalar.

7.6.1 Delivery Incentive – Consultation Proposal

The consultation paper set out various options for the design of the Delivery Incentive, as follows:

1. Application of a performance scalar on subsequent DASSA income (TSOs' preferred option).
2. Temporary exclusion of a service provider from subsequent DASSA auctions for a time-limited period.
3. Volume derating in subsequent DASSA auctions.
4. Delivery once-off payment.

The above options were evaluated against a set of assessment criteria. The outcome of the evaluation is set out in Table 11 below.

Table 11: Consultation Paper Delivery Incentive Options

Assessment Criterion	Delivery Incentive Options			
	Event Performance Scalar	Temporary exclusion	Volume derating	Delivery One-off payment
Appropriate incentives	◕	◑	◕	◑
Proportionality	◕	◑	◕	◑
Ability to Implement	◕	◑	◑	●
Predictability	◕	●	◕	◕

The TSOs proposed that the post-gate closure delivery incentive would be an Event Performance Scalar, being a multiplier - based on a sum of the unit's monthly delivery performance over a period of 3 months - against a service provider's DASSA payments.

The TSOs also proposed that the Event Performance Scalar would apply to any reserve volumes cleared by the service provider via a DASSA Top-Up Mechanism.

7.6.2 Delivery Incentive - Consultation Feedback

14 consultation respondents set out their views on the TSOs' proposals for the post-gate closure delivery incentives. Respondents' broader views on the proposed Commitment Obligations and Incentives framework were often reiterated in this section. Accordingly, this section will focus on feedback specific to the post-gate closure delivery incentive, as well as any commentary not already captured under the availability incentives above.

Most respondents expressed a preference for one-off payments (payable to the TSOs) for non-delivery of services post-gate closure, considering that the application of scalars would lead to inflated market clearing prices and increased costs for the end consumer. Respondents had similar views to that of the post-gate closure availability incentive. For example, one respondent noted, "As with our response on the Availability Incentive, we strongly prefer a design based on clear, one-off penalty payments rather than persistent scalar approaches." One respondent proposed applying a multiple of the Compensation payment, linked to the DASSA Clearing price: this could be calculated by reference to the individual settlement period in question or the total received value for the relevant trading-day/auction period, e.g., "Delivery Compensation Payment = [1.5 x] Total DASSA Order Payments for relevant auction day." Some respondents suggested alternative measures for DASSA performance management, outside of one-off payments, e.g., "The cost of non-delivery should be directly proportional to the cost to replace non-delivered services as is the case in energy markets."

Several respondents reiterated comments on the use of a perceived overly penal approach in the case of technical issues beyond a service provider's control, particularly given the perceived likelihood of non-delivery in practice. For example, “Post gate non-delivery by a unit will be almost entirely due to unforeseen circumstances such as generator tripping. It’s not clear how further penalising a unit on top of the revenue lost will enhance improved future performance." Another noted, “In the context of delivery of frequency events, the paper doesn’t seem to consider that it is almost impossible for providers to deliberately not deliver an event when required, save for genuine technical issues.”

Some respondents expressed support for the delivery incentive structure in principle but reiterated some of the concerns discussed above, e.g., “We support targeted penalties for failure during dispatch or frequency events, but not future revenue reductions which like previous question is likely to discourage participation.”

7.6.3 Delivery Incentive - Recommendation

In this section, the TSOs set out our recommendation for the implementation of an event scalar for DASSA go-live and suggest potential values for a one-off payment mechanism (should the SEMC decide to implement same).

TSOs’ Recommendation

The TSOs recommend that an Event Performance Scalar (as per our consultation) be implemented to incentivise the delivery of reserve services when called upon to do so, either in response to a frequency event or dispatch instruction.

The Event Performance Scalar will be applied to both DASSA and RAD payments.

The recommended design of the Event Performance Scalar is unchanged from that set out in the DASSA Parameters and Scalars Consultation Paper and is recapped in Appendix F.

Suggestion for One-Off Delivery Penalties

Noting the RAs’ possible preference for a one-off payment incentive mechanism, and as favoured by some respondents, the TSOs, supported by AFRY’s analysis, suggest values for such a mechanism. The purpose of this incentive would be to create a sharp and immediate financial consequence for failure to deliver contracted reserve volumes when called upon to do.

Under this approach, a payment (to the TSOs) would be applied to each individual system event in which non-delivery occurred. The level of this payment would be informed by both the Bid Price Cap and the prevailing Scarcity Price. The payment would be calculated as €1,000/MWh when prices are below or equal to the recommended Bid Price Cap of €500/MWh, and €2,000/MWh when prices are above the Bid Price Cap.

$$One-off\ payment\ = 1000€/\text{MW/h}\ \text{X}\ Q_i\ \text{; if}\ P_{DASSA} \leq 500€/MW/h$$

$$One-off\ payment\ = 2000€/\text{MW/h}\ \text{X}\ Q_i\ \text{; if}\ P_{DASSA} > 500€/MW/h$$

where:

- Q_i is the Performance Incident Scaling Factor, determined in accordance with the DS3 Regulated Tariff Arrangements performance monitoring methodology, for each system event.
- P_{DASSA} is the DASSA clearing price in the applicable Trading Period.

The one-off payment would apply to all confirmed available DASSA Order volumes associated with the Trading Period(s) in which non-delivery occurred. The increase in the one-off payment, where DASSA clearing prices exceed the Bid Price Cap, serves to align the penalty with the maximum value under the Scarcity Price, ensuring that the incentive remains proportionate to prevailing market conditions and the system value of delivered services.

7.6.4 Delivery Incentive - Recommendation Rationale

The TSOs welcome the feedback received from industry stakeholders on the proposed post-gate closure delivery incentives.

The TSOs note respondents' feedback disagreeing with the use of scalars, with most respondents favouring a simpler one-off penalty approach for non-delivery during frequency events. As noted in the section above, one-off payments would need to be set at very high levels to be effective, and could therefore be more punitive. In contrast, the Event Performance Scalar provides a proportionate financial impact linked to DASSA revenues, with persistence to ensure that incentives remain sufficiently strong. For this reason, the TSOs continue to recommend the Event Performance Scalar as the most appropriate and proportionate delivery incentive to ensure that confirmed DASSA Order Holders deliver services when called upon, as summarised:

- **Proportionality:** The Event Performance Scalar applies to monthly DASSA revenues, ensuring that the financial impact is aligned with the revenues earned. This provides stronger incentives for service providers that frequently clear the DASSA, while avoiding disproportionate impacts on those that clear infrequently.
- **Persistence:** The persistence element extends the impact window beyond a single Trading Period, ensuring that the incentive remains sufficiently penal while maintaining proportionality, particularly for storage units.
- **Hierarchy:** The Event Performance Scalar maintains the correct hierarchy between delivery incentives and availability incentives, under expected market conditions, ensuring that performance during frequency events is prioritised appropriately.

The TSOs consider that a one-off payment design may result in disproportionate outcomes. For example, a service provider that clears infrequently could face a penalty exceeding its cumulative DASSA revenues if the service provider captures considerably low DASSA clearing prices relative to the penalty. A one-off incentive design would also need to account for DASSA Payments, Compensation Payments, and availability incentives across multiple periods, creating unnecessary complexity.

Building on their initial analysis, AFRY in their updated report provide a set of case examples comparing the Event Performance Scalar and a one-off payment design, emphasising the following points:

- For units with frequent DASSA clearing, the scalar provides stronger and proportionate incentives by linking financial impact to monthly revenues.
- For infrequent clearers, the scalar impact adjusts downward proportionally, while the one-off payment applies the same fixed charge regardless of participation, potentially discouraging market entry.

- In case examples, the one-off payment resulted in a greater financial impact than the Event Performance Scalar, demonstrating the scalar's advantage in avoiding overly punitive outcomes.

The TSOs acknowledge concerns raised by respondents that scalars could inflate market clearing prices or increase consumer costs. The calibration of the Event Performance Scalar will mitigate this risk and ensure proportionality while preserving effective incentives.

Regarding respondents' comments on the complexity of scalars, we reiterate that scalars are already in use under the DS3 Regulated Tariff arrangements.

The TSOs will evaluate the delivery incentive mechanism post-DASSA go-live, with any changes subject to industry consultation and SEMC approval.

TSOs' Recommendation:

The TSOs recommend that the post-gate closure delivery incentive will comprise an Event Performance Scalar (as per our consultation paper).

The TSOs suggest values for one-off payments which take the form of multipliers against failed events, as follows:

- €1000/MWh for each failed event when prices are below the recommended Bid Price Cap of €500.
- €2000/MWh for each failed event when prices are above the recommended Bid Price Cap.

7.7 Grace Period

The section sets out the TSOs' recommendation for a Grace Period from the application of incentive mechanisms.

7.7.1 Grace Period - Consultation Proposal

The TSOs proposed a Grace Period of eight hours, applicable to energy storage units (ESUs) impacted by previous TSO instructions or system events. The purpose of the Grace Period was to provide relief from Commitment Obligations and Incentive Mechanisms, specifically the Compensation Payment and the Availability Performance Scalar, during a defined recovery window.

7.7.2 Grace Period - Consultation Feedback

15 consultation respondents set out their views on the proposed Grace Period.

Several respondents expressed support for the Grace Period proposal, welcoming the TSOs' recognition of operational limitations for ESUs participating in the DASSA. Many respondents, however, noted additional considerations and concerns with the proposal.

Several respondents requested that other technology types be included within the scope of the TSOs' proposal. Regarding demand side units (DSUs), respondents discussed the operational similarities to ESUs where, following a frequency event, equipment must be restored and reach operational setpoints before being available to deliver in subsequent events. A few respondents discussed the operational considerations for thermal generation units, believing their inclusion in the Grace Period would be appropriate. These respondents outlined scenarios where a TSO action would affect a unit's availability in subsequent periods, considering that a CCGT has Technical Offer Data requirements to respect such as minimum off times and ramp rates. A small number of respondents requested that all units be included within the scope of the Grace Period to allow asset recovery following an event.

One respondent opposed the introduction of a Grace Period, expressing concerns that the proposal undermines technology neutrality principles, where the TSOs introduce "a clear and unjustified technology bias" in granting a Grace Period exclusively to ESUs. The respondent commented that this would provide such units "with a competitive advantage over other technology types", potentially distorting market signals and fairness.

A few respondents were of the view that the eight hours Grace Period duration as proposed by the TSOs was not suitable for all ESUs, particularly where the unit's MIC is restricted, limiting asset re-charge rates. One respondent suggested that "Consideration should be given to non-discriminatory project-specific calculation of the Grace Period".

Several respondents expressed concern that units with reduced availability due to TSO actions or system frequency events will forfeit DASSA payments within the defined Grace Period. Some respondents commented that this is an undeserved penalty applied to units who provided services as required to maintain system security. Additionally, concerns were raised that due to the unpredictability of TSO actions and system events, service providers can no longer rely on consecutive time periods to recover costs. With this increased risk, service providers may increase DASSA bids to recover operational and marginal costs in individual time periods.

Finally, respondents outlined the difficulties and uncertainty associated with recovering SOC through trading in the Intra Day Market in a timely manner to obtain the remaining DASSA order payments.

7.7.3 Grace Period - Recommendation

The TSOs recommend the implementation of a Grace Period of eight hours, applicable to ESUs. The Grace Period will provide a defined window during which the unit can recover without being subject to post-gate closure availability-related incentives.

The Grace Period will apply where an ESU's availability is impacted by a prior TSO instruction or system event and will commence from the time of the unit's response to the instruction/event. The Grace Period will remain in effect for each applicable service until the unit's declared availability for that service meets or exceeds its DASSA Order for the current Trading Period. This will signify that the unit has sufficiently recovered and is ready to resume full participation in the market, at which point normal incentive mechanisms and DASSA payments will recommence.

In acknowledgement of respondents' feedback, the TSOs recommend that the application of the Grace Period to other technology types be evaluated prior to DASSA go-live.

Additionally, the TSOs recommend that a review of the Grace Period be conducted following a period of operational experience post DASSA go-live.

7.7.4 Grace Period - Recommendation Rationale

This section sets out the TSOs' rationale for the Grace Period recommendation. The TSOs have carefully considered the views of respondents, including support for the proposal, requests for broader inclusion of technologies, concerns about market impacts, and suggestions for refinement.

Consideration of Other Technology Types

The TSOs acknowledge that various technologies may experience constraints in service provision following TSO instructions and system events. However, the TSOs consider that the extension of the Grace Period to all technologies may risk diluting the effectiveness of incentive mechanisms, which are designed to promote availability and performance. It would also introduce significant complexity into market operations, requiring bespoke treatment for a wide range of unit types with varying recovery profiles and operational behaviours.

The TSOs recognise that certain DSUs may experience operational limitations following system events, depending on the underlying asset types. However, it is also understood that aggregators typically manage a portfolio of assets, which may allow for the reallocation of service delivery across units to maintain overall availability. This inherent flexibility distinguishes DSUs from other technologies with fixed output constraints and limited recovery capability.

Additionally, the TSOs must assess the implications of implementing an all-inclusive Grace Period following a system event. Should all technology types be afforded a recovery window, a material risk may arise where the real-time reserve availability following an event will fall below the real-time reserve requirement, thereby increasing risk to secure system operation.

Consequently, the TSOs consider that further analysis is required to evaluate the impacts of extending the Grace Period beyond ESUs to additional technologies. The TSOs will conduct this review in advance of DASSA go-live.

Grace Period Duration

The TSOs recommend an eight-hour Grace Period duration based on typical recharge profiles and operational experience across a range of ESUs. While recovery times may vary, a standardised duration provides consistency. Introducing project-specific durations would require complex validation processes, increasing operational complexity and could reduce transparency for other market participants.

The TSOs expect that in practice the Grace Period will apply to the TOR2 and RR services, as these are the services most likely to be impacted by a unit's recovery process following a system event or TSO instruction. While a BESS may experience a reduction in state of charge after responding to such events, the TSOs consider the likelihood of a complete discharge to be low. As a result, it is expected that units will retain sufficient capacity to continue delivering most fast-acting services from FFR-TOR1.

The TSOs also recommend that the Grace Period will conclude where a unit's availability recovers, prior to the expiry time of the Grace Period, to a MW value equal to or greater than its DASSA order.

The TSOs will monitor the effectiveness of the eight-hour duration and remain open to future refinements, where justified by operational experience.

Impact on DASSA Payments and Cost Recovery

The recommended Grace Period is designed to protect ESUs from post gate closure availability incentives during recovery periods. The Grace Period should not apply to Compensation Payments for ESUs as we recommend that FPNs for BESS units will be compatible with their DASSA Orders by default (see Section 7.3.4).

The TSOs consider that applying additional availability incentives to ESUs that are already forgoing a DASSA payment would be disproportionate and may discourage their participation in the DASSA.

The TSOs reiterate that only TOR2 and RR are anticipated to be utilised within the Grace Period. The TSOs recommend that ESUs receive DASSA payments for services unaffected by the Grace Period.

TSOs' Recommendation:

A Grace Period of eight hours will apply to ESUs impacted by TSO instructions or system events, starting from the time of response. ESUs will not be subject to availability incentives for the duration of the Grace Period.

The Grace Period will terminate after eight hours or where the unit's availability per service meets or exceeds the volume of its DASSA Order for the current Trading Period.

The TSOs will evaluate the application of the Grace Period to other technology types prior to DASSA go-live.

Additionally, the TSOs will conduct a review of the Grace Period following operational experience post go-live.

8 Bundles of Services

8.1 Introduction

This section sets out the TSOs' recommendation for the procurement of bundles of services for DASSA go-live.

8.2 Implicit and Explicit Bundles

8.2.1 Bundles - Consultation Proposal

The TSOs proposed to only procure individual reserve services at DASSA go-live, with neither explicit nor implicit bundles of services to be procured. The TSOs also proposed to evaluate the potential bundling of services, and related mechanisms such as the linking of bids, for implementation post go-live.

8.2.2 Bundles - Consultation Feedback

17 of the 19 consultation respondents expressed their views on the TSOs' proposals for bundling in the DASSA.

Some respondents agreed with the TSOs' proposals, with one respondent noting that the current design has sufficient complexity without bundling. One respondent considered that the introduction of bundles at this stage in the DASSA design would risk delays to implementation timelines and DASSA go-live. Other respondents requested that the TSOs conduct regular reviews post go-live to determine if the bundling of services should be introduced. Another respondent requested that the TSOs publish a timeline for reviewing the potential inclusion of bundling services.

Many respondents disagreed with the TSOs' proposals, raising concerns around market efficiency, cost recovery and the complexity associated with the TSOs procuring individual services.

Respondents stated that service providers would be unable to spread opportunity costs across multiple products as they may be awarded DASSA orders for non-consecutive services. Respondents considered that this will result in "reduced competition, higher prices, or both across energy, capacity and FASS". Respondents re-emphasised commentary provided in response to the consultation proposal on DASSA price caps, stating that the introduction of price caps was inappropriate without introducing bundles.

Respondents noted the operational complexity of providing a response to individual services without holding DASSA orders for consecutive products, including the example of a BESS unit being awarded POR and TOR1 (but not SOR). Two respondents requested clarification on whether the TSOs expect service providers to provide a continuous response between the two awarded services without renumeration or should they provide a stepped response, potentially causing technical issues with harmonics and network flows. One respondent questioned "Will dispatch instructions continue to be calculated for automated governor response over the full range of the BESS's capability (from FFR to TOR1)?" Additionally, some respondents outlined the complex changes required for unit control systems to

facilitate automated response toggling between DASSA products awarded non-consecutively.

Some respondents commented that bundles provide value to the system and are more efficient from a market perspective. One respondent described bundles as being "an effective way of ensuring excess volumes are not excluded from the ex-ante energy markets". Another respondent suggested that "Conditional and/or combinatorial bidding would be extremely useful for providers to be able to best reflect appropriate opportunity and marginal costs of providing different bundles, with confidence that they would be either rejected or cleared as one". One respondent was in favour of explicit bundling but believed this should not be a Day 1 consideration until stakeholders reach a consensus on renumeration and how bundling would work across upward and downward products.

8.2.3 Bundles - Recommendation

The TSOs recommend that neither explicit nor implicit bundles of reserve services will be procured in the DASSA at go-live, as per our consultation proposal. There will be no change to the auction format: a simple bidding process per service per Trading Period, with no interdependency between bids for different services or Trading Periods, will be implemented.

For the avoidance of doubt, complex or combinatorial bidding will not be implemented for DASSA go-live. However, as required by the SEMC, the TSOs will set up a separate work package to further evaluate bundles of services and related mechanisms such as the linking of bids as part of DASSA Day 2 activities, i.e. for implementation post DASSA go-live.

8.2.4 Bundles - Recommendation Rationale

The TSOs welcome the views expressed by consultation respondents regarding our proposals not to procure explicit or implicit bundles of reserve services at DASSA go-live.

The TSOs acknowledge respondents' commentary on recovering the costs associated with service provision in the absence of services bundling in conjunction with the Total Bid Price Cap of €500/MWh proposed in our consultation. The TSOs have sought to address these concerns by recommending revised individual Bid Price Caps per service, as described in detail in Section 3.2.

With regard to respondents' questions relating to the delivery of services in instances where DASSA Orders are awarded to a service provider for non-consecutive services, e.g. POR and TOR1, but not SOR, the TSOs refer to the SEMC's recent decision on the DASSA Top-up Mechanism, SEM-25-056. In Section 4.2 of this decision paper, the SEMC decided that "Service providers will 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; this requirement will be set out in the Grid Code or System Services Code, as appropriate."[47] In accordance with this decision, the TSOs will expect service providers to respond to frequency deviations per their qualified system service capability. Using the example above, if a service provider holds DASSA Orders for POR and TOR1, it will be required to deliver its full capability for the POR, SOR and TOR1 timeframes

[47] SEM-25-056 FASS DASSA Top-Up Mechanism Decision Paper (semcommittee.com)

as required in response to a frequency event; it should not reduce its SOR response below what it is fully capable of providing, instead delivering a continuous, uniform response. In the event of a real-time volume deficit for the SOR service, a service provider may be remunerated in the RAD, if in merit.

The TSOs wish to reiterate the rationale set out in our consultation paper for not proposing to implement either explicit or implicit bundles for DASSA go-live. The TSOs have concerns that explicit bundles would reduce liquidity in the DASSA and would not be compliant with the EBGL. In its decisions SEM-24-074[48] and SEM-25-011[49], the SEMC decided that implicit bundles may only be used to address operational system needs; however, the TSOs have not currently identified an operational need for bundles. The TSOs will further address these issues in a separate work package that will consider bundles of services, and related mechanisms such as the linking of bids, as part of DASSA Day 2 activities, i.e. for implementation post DASSA go-live.

TSOs' Recommendation:

DASSA to procure individual reserve services only at go-live; neither explicit nor implicit bundles of services will be procured.

TSOs to evaluate the potential bundling of services, and related mechanisms such as the linking of bids, under the 'Future DASSA Arrangements' Work Package as outlined in PIR V3.0. Any implementation of bundling to occur post DASSA go-live.

[48] SEM-24-074 FASS Product Review and Locational Methodology Decision Paper (semcommittee.com)
[49] SEM-24-011 FASS Volume Forecasting Methodology Decision Paper (semcommittee.com)

9 Service Quality Value Function

9.1 Introduction

This section sets out the TSOs' recommendation for the application of the Value Function in the DASSA clearing objective function.

The Value Function allows a preference to be applied in the clearing of the auction for the procurement of a quantity of a higher quality of service additional to any minimum volume for that quality that has already been set as a constraint in the auction. In the case of the DASSA, the Value Function would apply a preference to the procurement of dynamic reserve service provision over static reserve service provision, above any minimum volume requirement for dynamic reserve service provision.

9.2 Quality Value Function

9.2.1 Quality Value Function - Consultation Proposal

The TSOs proposed that the Value Function for all reserve services be set to zero for the go-live of the DASSA, i.e. that the TSOs would not apply a preference for dynamic over static service provision, above the minimum dynamic volume requirement, in the clearing of the auction.

9.2.2 Quality Value Function - Consultation Feedback

11 of the 19 respondents expressed views on the TSOs' Value Function proposal.

Most respondents agreed with the TSOs' proposal, highlighting a need for the TSOs to monitor and determine any future requirement to change the Value Function. One respondent requested that where a need for significant fast response services is identified that this should be outlined in the DASSA volume forecasts. One respondent considered that the Value Function clearing in the DASSA has not been clearly explained to industry, agreeing with the current proposal until greater detail has been provided.

Three respondents opposed the TSOs' proposal to set the Value Function to zero. In their responses, they described the operational complexity of providing dynamic reserve and its advantages to the transmission system. These service providers considered that the DASSA should reward dynamic service provision above static, so as not to discourage investment in future dynamic unit development.

9.2.3 Quality Value Function - Recommendation

The TSOs recommend that the Value Function for all reserve services be set to zero at DASSA go-live. This means that no additional preference for dynamic over static service provision, beyond the defined minimum dynamic volume requirement per service per jurisdiction, will be applied in the auction clearing.

9.2.4 Quality Value Function - Recommendation Rationale

The TSOs have carefully considered the feedback received from industry stakeholders and acknowledge that the majority of respondents supported the TSOs' proposal.

The TSOs consider that the mechanisms for determining service volume requirements, as set out in the DASSA Volume Forecasting Methodology Recommendations Paper[50], are appropriate for DASSA go-live. The procurement of minimum dynamic requirements for each service per jurisdiction reflects the value that the TSOs attach to dynamic reserve capability. The Value Function mechanism may be applied in the future where operational evidence demonstrates a clear requirement; any such change will be subject to detailed evaluation, appropriate engagement with industry, and SEMC approval.

Regarding the consultation response comment relating to fast response, the TSOs wish to clarify that the Value Function relates to the dynamic provision of reserve services rather than speed of response. The TSOs have defined three sub-categories of the FFR service, based on speed of response, that will be procured in the DASSA, as set out in our DASSA Product Review & Locational Methodology Recommendation Paper[51].

TSOs' Recommendation:

Value Function in the objective function to be set to zero for the go-live of the DASSA for all services, meaning that there will be no operational preference to procure dynamic over static service provision above the minimum auction dynamic volume requirement set for each reserve service per jurisdiction.

TSOs to evaluate the Service Quality Value Function post-DASSA go-live. Any change to the Value Function will be subject to industry consultation and SEMC approval.

[50] DASSA Volume Forecasting Recommendations Paper (EirGrid); DASSA Volume Forecasting Recommendations Paper (SONI)
[51] DASSA Product Review & Locational Methodology Recommendation Paper (EirGrid); DASSA Product Review & Locational Methodology Recommendation Paper (SONI)

10 DASSA Top-Up Mechanism

In October 2025, the SEMC published its decision, SEM-25-056[52], with respect to the recommended design for the DASSA Top-Up Mechanism that was submitted by the TSOs to the SEMC in August 2025[53].

In its decision, the SEMC approved the TSOs' design recommendations, implementing the RAD as the DASSA Top-Up Mechanism initially for a period of two years. After two years, the TSOs will make a recommendation on its continued use; the SEMC will then consider any such recommendation considering the evidence submitted.

Additionally, the SEMC has decided that a detailed reporting framework be implemented for the RAD, requiring the TSOs to report on RAD utilisation, reserve volumes, market activity, service provider availability, and price trends. The TSOs note these requirements and will engage proactively with the RAs on their implementation prior to DASSA go-live.

In the Parameters and Scalars consultation, the TSOs proposed that the RAD be implemented as a Fallback Mechanism in the event of a DASSA suspension. Further detail on the DASSA Fallback mechanism is provided in Section 11 below.

[52] SEM-25-056 FASS DASSA Top-Up Mechanism Decision Paper (semcommittee.com)
[53] DASSA Top-Up Mechanism Recommendations Paper (EirGrid); DASSA Top-Up Mechanism Recommendations Paper (SONI)

11 DASSA Fallback Mechanism

11.1 Introduction

This section sets out the TSOs' recommendations for a DASSA fallback mechanism.

11.2 DASSA Fallback Mechanism

11.2.1 DASSA Fallback Mechanism - Consultation Proposal

The TSOs proposed the implementation of a Fallback Procedure to apply in scenarios where the DASSA clearing algorithm is unable to generate results - either fully or partially – in a timely manner. Under this procedure, reserve service volumes made available in real-time would be settled through ex-post arrangements as follows:

- Through the proposed DASSA Top-Up Mechanism, i.e. the Residual Availability Determination (RAD) mechanism, if approved by the SEMC and if available in the event of the DASSA suspension.
- In the event that the RAD is unavailable, using predefined tariffs to settle all reserve service volumes available in real time.

11.2.2 DASSA Fallback Mechanism - Consultation Feedback

16 out of 19 consultation respondents commented on the DASSA Fallback Mechanism proposal.

Several respondents provided feedback on the utilisation of the DASSA Top-Up Mechanism as a fallback in the event of the primary DASSA auction being suspended. Amongst these responses, most commented that it was difficult to consider the RAD facilitating fallback auctions as it had yet to receive approval by the SEMC. One respondent considered "the Residual Availability Determination (RAD) has not been agreed by SEMC so alternative proposals may be needed in the case that the RAD is not approved as the DASSA top up mechanism."

One respondent objected to the utilisation of the RAD, considering that bids for the RAD would not be subject to the same commitment obligations as the DASSA, ultimately changing "the context in which RAD bids had been originally submitted, and hence the submitted price would no longer be appropriate."

Several respondents referred to proposals set out in the TSOs' DASSA Top-up Mechanism Consultation Paper[54]. Respondents commented that the proposed RAD gate closure time of 15:30 D-1 and the capping of RAD payments at the DASSA clearing price would disincentivise participation in the RAD.

Some respondents disagreed with the proposal to determine predefined tariffs based on the long-run marginal costs (LRMC) of a BESS unit dedicated to reserve provision. Those respondents considered that the basis of the value determination was outdated, stating that

[54] DASSA Top-Up Mechanism Consultation Paper (EirGrid); DASSA Top-Up Mechanism Consultation Paper (SONI)

BESS units operate in the wholesale market and therefore have opportunity costs to consider. Secondly, the respondents noted that these units also incur import costs in the wholesale market, which must be accounted for when determining the true costs of BESS units providing reserve services. These respondents suggested alternative tariff arrangements, such as linking fallback prices to the DAM, taking an average of previous DASSA clearing prices, or using a tariff equal to the VOLL, as this would reflect the cost of not procuring sufficient reserves.

One respondent expressed concern surrounding the risk and uncertainty service providers would encounter in the event of a DASSA suspension. The respondent commented that the continued operation of the DASSA should be a primary focus for the TSOs. The respondent also suggested alternative predefined tariffs that could be utilised during a DASSA suspension, including the VOLL or the highest DASSA price observed in the previous 12 months.

One respondent suggested that the predefined tariff be based on a service provider's opportunity costs equal to the DAM price for that time period. This respondent stated that there should always be a positive value associated with system service provision and suggested a predefined tariff could be the "Maximum of (DAM, DS3 Regulated Arrangement fixed tariff)".

One respondent requested clarification from the TSOs as to whether "fallback processes will accommodate interconnector bids and reflect external market positions in the event of auction failure", while another requested additional information regarding the utilisation of long-term contracts in the event of a DASSA suspension.

11.2.3 DASSA Fallback Mechanism - Recommendation

The TSOs recommend that a DASSA Fallback Mechanism be implemented, as per our consultation proposal, to ensure continuity of reserve service procurement and settlement in the event of the DASSA suspension. This means that:

- The RAD will be used as the primary fallback mechanism.
- If both the DASSA and the RAD are unavailable, all reserve volumes made available in real-time will be settled at predefined regulated tariffs, based on the LRMC of a BESS unit, as set out in Table 12 below.
- The TSOs will evaluate the Fallback Mechanism regulated tariffs post-DASSA go-live, with any change being subject to industry consultation and SEMC approval.

Table 12: Fallback Mechanism Tariff Rates

	FFR Cat1	FFR Cat2	FFR Cat3	POR	SOR	TOR1	TOR2	RR
Fallback Tariff MWh*	2.56	2.56	2.56	2.56	2.56	2.56	2.56	3.63

Note:

The Fallback Tariff values are on a per hour basis and will be halved accordingly when applied to a 30-minute Trading Period.

11.2.4 DASSA Fallback Mechanism - Recommendation Rationale

The TSOs welcome the feedback received from industry stakeholders on the proposed DASSA Fallback Mechanism for go-live. We would like to reiterate that what is being proposed is a fallback mechanism to account for the exceptional circumstances of the DASSA being unavailable.

In the first instance, the TSOs refer to the recent SEMC decision approving the RAD (SEM-25-056)[55]. Please see Section 10 above for further information.

The TSOs acknowledge that it would have been preferrable to include a mechanism that had already received SEMC approval as part of our consultation proposal. We consider the RAD to be the most practical and efficient fallback option. In the event of a DASSA suspension, it will be applied to settle reserve services volumes made available by service providers, with prices determined under the RAD bidding and clearing mechanisms. This ensures that, in the exceptional circumstances of the unavailability of the daily auction, continuity of reserve service provision will be maintained in a pragmatic manner.

The TSOs acknowledge stakeholder comments regarding the determination of tariffs based on the LRMC of a BESS unit, as well as the suggested alternatives of linking fallback prices to the DAM price, averaging DASSA clearing prices, or applying the VOLL. However, we consider that LRMC-based tariffs remain an appropriate and transparent measure, noting that we expect such tariffs to apply in the most extraordinary of circumstances, i.e if both the DASSA and the RAD are unavailable. (Note that in AFRY's updated report, the assumptions applied to the BESS unit (CAPEX, OPEX, WACC and economic lifetime) remain consistent with those set out in the previous AFRY report, with the exception that the BESS unit's economic lifetime has been updated to 15 years.)

The TSOs do not consider it practical to account for every possible scenario and cost that diverse technology types will encounter in the provision of services in such exceptional conditions.

The TSOs wish to emphasise that the continuous reliable operation of the DASSA is critical to our sourcing of reserves to ensure operational security. As described in our consultation paper, the Fallback Mechanism is intended as a safeguard only. As a responsible system operator, it is necessary for us to consider measures to ensure continuity of service provision even in the rarest of scenarios.

In common with other recommendations in this paper, the TSOs will review this Fallback Mechanism following a period of operational experience post DASSA go-live. Any changes to fallback design, including the value of the tariffs, would be subject to appropriate industry consultation and SEMC approval.

[55] SEM-25-056 FASS: DASSA Top-Up Mechanism Decision Paper (semcommittee.com)

TSOs' Recommendation:

A DASSA Fallback Procedure to be implemented for DASSA go-live:

- The RAD will be used as the primary fallback mechanism.
- If both the DASSA and the RAD are unavailable, all reserve volumes made available in real-time will be settled at predefined regulated tariffs, based on the LRMC of a BESS unit.
- TSOs to evaluate the Fallback Mechanism regulated tariffs post-DASSA go-live, with any change being subject to industry consultation and SEMC approval.

12 Other Consultation Feedback

12.1 Introduction

Some industry participants, in response to the consultation, raised additional observations pertaining to the DASSA design.

12.2 Complexity of Arrangements

Many respondents expressed concern that the proposed DASSA arrangements are excessively complicated. They highlighted that elements of the design, such as batch matching in secondary trading, introduce considerable complexity, risking an increase in the administrative burden for participants and acting as deterrent to participation, e.g., "More generally the market arrangements for DASSA are becoming increasingly complex, as evidenced by the number of issues in this consultation paper alone."

Most respondents advocated for a simpler and more transparent "Day 1" design for DASSA to encourage liquidity and participation at go-live. Additionally, several respondents expressed concern that the TSOs are allocating critical time and resources to designing overly complex solutions. Some suggested that simplifying these aspects could save time and resources, potentially accelerating implementation and reducing risk to go-live. For example, one respondent noted, "We see no benefit in creating overly complicated solutions where there is not an overwhelming economic justification or operational need for doing so."

One respondent requested clarification on whether the DASSA and RAD would utilise the same or similar IT systems. For instance, “It was thought that the ‘top-up mechanism was part of the DASSA computer system, given the integration of pricing and awards as well as the identification of remaining available volume".

TSOs’ Commentary

The TSOs note participants’ feedback that certain aspects of the DASSA design have increased in complexity. However, the scope of the FASS Programme is necessarily broad, given the competitive procurement requirements specified in European legislation, aligning the arrangements with the SEMC HLD, and the underlying need to ensure the secure operation of the electricity system with higher levels of non-synchronous generation.

To mitigate any burden on service providers and encourage participation, we have endeavoured to simplify proposals within this paper where feasible. However, while FASS design flexibility has been maintained in so far as possible, the degrees of freedom are limited to within the context of preceding SEMC decisions, what is implementable by FASS go-live given the mobilisation of FASS IT vendors is already underway, and the available scope within the three timeframes for delivery (DASSA go-live, Day 1+, Day 2)[56].

[56] To recap, DASSA ‘Day1+’ refers to items to be delivered post go-live under the existing FASS Programme, while Day 2 refers to a Separate ‘Day 2’ FASS programme which will run independently once scoped, funded and planned. Full details on the programme of work within each of these phases will be communicated in due course.

To ensure industry stakeholders are sufficiently prepared to engage with FASS from go-live, the TSOs have progressed a comprehensive business readiness workstream. As outlined in the High-Level Readiness Scope Document[57], our readiness methodology is a structured framework to ensure a successful transition for the TSOs and industry from DS3 to the FASS arrangements. The framework helps to identify potential risks, information gaps and areas of focus related to the transition and serves as a foundation for developing metrics to track and evaluate activities across impacted stakeholder groups. For operational readiness, our approach will prioritise stakeholder engagement, assess readiness using data-driven insights and trial the new interface and auction process to identify and address inconsistencies. Ultimately, the TSOs' readiness effort will support service providers to adopt and integrate changes driven by the introduction of the FASS programme, and ensure that service providers are fully aligned, prepared and ready for a successful implementation. Further detail on the delivery and schedule of readiness activities is included in the TSOs' Phased Implementation Roadmap V3.0[58].

The TSOs confirm that the DASSA and the RAD will operate end-to-end on the FASS platform. The RAD will use the same IT solution, with its inputs, clearing, and outputs integrated, and no additional IT uplift will be necessary for industry stakeholders to participate in the RAD on top of the DASSA.

12.3 System Needs

Some respondents considered that the current DASSA design may not adequately reflect actual system needs, particularly regarding local reserves (e.g. in Dublin), and that a lack of a locational methodology could mean the auction clears system-wide volumes but fails to secure the right services in the right places. For example, "DASSA outcomes, as currently designed, may not reflect actual system needs. Currently, SOs withhold specific volumes of capacity—particularly around Dublin—to ensure adequate local reserves."

TSOs' Commentary

The TSOs note that locational requirements for reserves have been addressed in the TSOs' Product Review and Locational Methodology consultation paper[59], recommendation paper[60] and the SEMC Decision paper[61]. It was concluded that – presently - the only locational requirements for reserves are on a jurisdictional basis, i.e. Ireland and Northern Ireland.

The TSOs do however reserve the right to take action (for system security reasons and to ensure we are able to meet our statutory obligations) to deviate from the annual, weekly or daily forecasted volumes (as defined in the SEM-25-011 Decision Paper on Volume

[57] High-Level Readiness Scope (EirGrid); High-Level Readiness Scope (SONI)
[58] Phased Implementation Roadmap (EirGrid); Phased Implementation Roadmap (SONI)
[59] DASSA Product Review & Locational Methodology Consultation Paper (EirGrid); DASSA Product Review & Locational Methodology Consultation Paper (SONI)
[60] DASSA Product Review & Locational Methodology Recommendation Paper (EirGrid); DASSA Product Review & Locational Methodology Recommendation Paper (SONI)
[61] SEM-24-074 Product Review and Locational Methodology Decision Paper (semcommittee.com)

Forecasting Methodology[62]) if operational circumstances necessitate - for example, to secure additional volumes in Dublin.

Additional locational zones may be introduced in the future, subject to the outcomes of the 2026 Product Review and Locational Methodology consultation; however, this will not contribute to any aspect of the DASSA design for go-live – its outcomes will be addressed, as required, as a Day 1+ activity.

12.4 Value and Pricing of System Services

Several respondents considered that aspects of the DASSA framework risk undermining the true value of system services, particularly regarding the price caps. Some respondents argued that they prevent market prices from reflecting the actual cost of service provision or the opportunity cost of foregone energy market revenues. For example, “The proposals for price caps set based on the Day-Ahead Market (‘DAM’) Strike Price risk distorting the market and failing to capture the true value of System Services. A price cap should only be employed as an administrative measure to protect consumers from extreme prices.”

Some respondents raised concerns that some elements of the proposed DASSA design, including price caps, could distort competitive market outcomes. They argued that such measures are unnecessary given the current supply of system services, which limits the ability of participants to exercise market power. One respondent noted, "Price Caps and other mechanisms are proposed within this consultation to avert the exercise of market power. However, there is no evidence of market power now and into the future as evidenced from the parallel consultation which is proposing expenditure control measures to reduce existing and future over-supply of services and associated expenditure under Regulated Arrangements".

TSOs’ Commentary

The TSOs acknowledge stakeholder concerns regarding the potential distortion of system service value under the DASSA framework, particularly in relation to Bid Price Caps. In developing our proposals and subsequent recommendations for the Bid Price Caps, in collaboration our external partner, AFRY, the TSOs have endeavoured to ensure consumer protection, by managing costs to consumers and mitigating risks of market power, while also maintaining market efficiency by allowing bids to reflect actual operating and opportunity costs to the greatest extent possible. Detail on DASSA pricing, including the TSOs’ updated Bid Price Cap recommendations and commentary on service provision costs, can be found in Section 3.

[62] SEM-25-011 Volume Forecasting Methodology (semcommittee.com)

13 Summary and Next Steps

This paper sets out the TSOs' recommendations to the SEM Committee for the outstanding elements of the DASSA design, considering the detailed responses received from industry during the consultation process. The SEM Committee will review these recommendations and will issue a decision following its October 2025 sitting.

The TSOs will continue to engage with stakeholders on our forthcoming Grid Code alignment workstreams, System Service code development and subsequent consultations.

14 Appendices

14.1 Appendix A: Secondary Trading - Mechanics of First-Come, First-Served Continuous Matching

14.1.1 Secondary Trading Timing

The secondary trading gate window for an Auction Timeframe (23:00 D-1 to 23:00 D) will open immediately after the publication of the DASSA results, i.e. approximately 16:00 D-1, and will remain open up to 60 minutes before the relevant Trading Period.

Under first-come, first-served (FCFS) continuous matching, the submitted buy and sell orders must meet the requirements set out below.

Bid format

- Each service provider will submit a simple P-Q pair as a buy or sell order for each intended trade, where "P" is a price limit and "Q" is the quantity specified.
- On the sell side, "P" denotes the minimum acceptable price for offered quantity, while for on buy side, "P" denotes the maximum acceptable price.
- An order may include a fill or kill condition (indivisible bid), meaning that if the order cannot be immediately matched in full, it is withdrawn from the order book.
- A "Good till" condition may only be applied to divisible bids.

Continuous matching is applied to the order book in real-time, in accordance with the clearing approach outlined below.

Clearing rules

- When a buy order is submitted and a sell order exits in the order book at an equal or lower price, the two orders will be matched considering the divisibility of the bids specified by the buy order.
- When a sell order is submitted and a buy order exists in the order book at an equal or a higher price, the two orders will be matched considering the divisibility of the bids specified by the sell order.
- If a buy order is submitted and multiple divisible sell orders are available at the same or lower price, the buy order will be matched with the sell order offering the lowest price considering the divisibility of the bids specified by the service providers. When two or more divisible sell orders are available at the same lowest price, priority will be given to the order that has been in the order book for the longest time.
- If a sell order is submitted and multiple buy orders are available at the same or higher price, the sell order will be matched with the buy order offering the highest price. When two or more divisible buy orders are available at the same highest price, priority will be given to the buy order that has been in the order book for a longer time.
- When a submitted sell (or buy) order could potentially be matched against a set of existing divisible buy (or sell) orders, the match will be determined based on the

aggregated volume of the divisible buy (or sell) orders existing in the order book. In such cases, the time priority of the existing orders will be strictly observed.

- If an order cannot be matched under the scenarios described above, it remains in the order book until its specified (if applicable) "good till" condition expires.

Pricing

When a buy (or sell) order is submitted to the order book, the matching price (Secondary Trading Clearing Price) is always taken from the price of existing sell (or buy) order(s) in the order book.

14.1.2 First-Come, First-Served Continuous Matching under Volume Insufficiency Conditions

The TSOs will participate in secondary trading by submitting sell orders at a price of zero in an instance of volume insufficiency. The details of the TSOs' participation are set out in Appendix B below.

In its DASSA Design Decision Paper[63], the SEMC outlined a requirement for the TSOs to implement a merit-based settlement mechanism for buy orders matched with TSO sell orders.

Under a FCFS continuous matching approach, in an instance of volume insufficiency, any buy order with a non-negative offer price can be matched against the TSOs' sell order. As outlined in the pricing section above, the clearing price will be set at the price of the existing order in the order book, which in this case is the TSOs' sell order at a price of zero. Consequently, the volume deficit will be procured at the Scarcity Price, and all buyers will be settled accordingly.

The feasibility of implementation of this option requires further assessment by the TSOs for DASSA go-live.

[63] SEM-24-066: Section 2.8 (semcommittee.com)

14.2 Appendix B: Secondary Trading - TSO Participation in Secondary Trading in Instance of Volume Insufficiency

14.2.1 Under Simple Batch Matching

If simple batch matching is the designated approach for the clearing and pricing of secondary trades, the TSOs will submit a sell order at a price of zero, in the first batch following the publication of the DASSA results. The following specifications will apply:

- The sell order will be fully divisible.
- The sell order will be subject to the "good till" condition and will remain valid until the final batch applicable to the Trading Period where the volume insufficiency condition applies.
- If the sell order is partially matched, the remining volume will be carried over to the subsequent batches (if any) and will be subject to the same "good till condition" mentioned above.

14.2.2 Under First-Come, First-Served Continuous Matching

If FCFS continuous matching is the designated approach for the clearing and pricing of secondary trades, the TSOs will submit a sell order at a price of zero, following the publication of the DASSA results, with the following specifications:

- The sell order will be fully divisible.
- The sell order will be subject to the "good till" condition up to 60 minutes before the Trading Period where the volume insufficiency condition applies.
- If the sell order is partially matched, the remining volume will be subject to the same "good till condition" mentioned above.

14.3 Appendix C: Secondary Trading - Mechanics of Negative Pricing

14.3.1 Under Volume Insufficiency Conditions

In instances of volume insufficiency, where the DASSA clearing price is set at the Scarcity Price, negative buy-side offers (if submitting a negative price is permitted), and negative sell-side offers (if submitting a negative price is permitted) will not be processed for clearing in secondary trading.

Restriction on Negative Buy-Side Offers under Volume Insufficiency Conditions

Negative buy-side offers will not be processed because the Scarcity Price constitutes the maximum amount payable by the TSOs to buyers in an instance of volume insufficiency. It is anticipated that, in such circumstances, depending on the designated clearing approach, buyers' competitive dynamics may drive the net payable price downward.

Restriction on Negative Sell-Side Offers under Volume Insufficiency Conditions

By submitting a price for a sell order, a service provider indicates its willingness to receive payments. In cases where the submitted price is negative (if submitting a negative price is permitted), the seller effectively declares a willingness to pay in order to sell its DASSA volume.

Such bidding behaviour is only rational where a service provider risks incurring the consequences of failing to meet commitment obligations associated with a DASSA order (i.e. Compensation Payments).

Under volume insufficiency conditions, the TSOs will submit sell orders at a price of zero in the order book. However, in such circumstances, the TSOs' willingness to pay corresponds to the Scarcity Price of the relevant service.

Consequently, negative prices submitted by other sellers (if allowed) will not take precedence over the TSOs' sell orders, unless a seller is prepared to pay a price above the Scarcity Price. However, in practice such bidding behaviour is unlikely, as Compensation Payments will be set below the Scarcity Price, as recommended in Section 3.4.3 this paper.

Restriction on Negative Sell-Side Offers under Normal Conditions

The financial consequences of failing to meet the commitment obligations associated with DASSA Orders are the same for all service providers submitting an incompatible FPN. If negative prices are not permitted, service providers will still be able to submit sell orders at a price of zero to the secondary trading platform, which under normal conditions will be afforded first priority in the order book. As the financial risk is identical for all service providers, being in a similar position in the merit order for offloading DASSA Orders does not present an issue. Consequently, the restriction on negative sell price does not affect their ability to offload their DASSA Orders. In instances of volume insufficiency however, a sell order placed at zero will result in a tie with the TSOs' sell order, in which case the TSOs' sell order will take precedence.

Restriction on Negative Buy-Side Offers under Normal Conditions

Placing a negative buy-side offer under normal trading conditions would result in buyers receiving a higher revenue relative to the DASSA clearing price. The TSOs are mindful of avoiding incentives for potential service providers to withhold capacity from the DASSA in anticipation of securing a higher payment rate through secondary trades. Accordingly, restricting negative priced buy orders under normal conditions is considered a reasonable approach.

14.4 Appendix D: Recommended Hierarchy of Commitment Obligations and Incentives

Table D- 1: Recommended Pre-Gate Closure Incentives

Pre-Gate Closure Incentives		
Incentive	**Which volumes are impacted?**	**What is the incentive?**
Compensation Payment	• Self-lapsed DASSA Order • Submission of incompatible FPN • Exemptions1: 1) Lapsed orders as a result of TSO actions; 2) DASSA Orders for the Trading Periods falling within the Grace Period, post a response delivery by the unit	• DASSA payments for the lapsed volumes are forfeit and the service providers have to pay a Compensation Payment in respect of the lapsed volumes • For the Go- live the Compensation Payment is to be calculated as: DASSA Clearing Price x Service Specific Scalar • For Post Go-live, the Compensation Payment is to be calculated as: the difference between the adjusted DASSA price and the DASSA Clearing Price.
Objective / Rationale:		
• **Incentivise service providers to make DASSA Order volumes available by submitting a compatible FPN or securing replacement volumes in the secondary market. The Compensation Payment is an estimate of the counterfactual cost faced by the TSOs.**		

Table D – 2: Recommended Post-Gate Closure – Service Availability Incentives

Post-Gate Closure – Service- Availability Incentives		
Incentive	Which volumes are impacted?	What is the incentive?
Availability Performance Scalar ***&*** ***Compensation Payment***	• Unavailable confirmed DASSA Order volumes • Exemptions: 1) Unavailable confirmed DASSA Order volumes as a result of TSO actions; 2) Confirmed DASSA Orders for the Trading Periods falling within the Grace Period, post a response delivery by the unit	• DASSA payments for the unavailable volumes are forfeit and the service providers have to pay a Compensation Payment for the concerned Trading Periods. • Reduced DASSA settlement payments, with the application of the scalar ranging between 0 and 1. The value of the scalar depends on the weighted average monthly performance of the unit and impacts payments for all the Trading Periods in the months falling in the persistence duration of the scalar. • Includes 3% tolerance band for minor outages • Scalar reduces to 0 if availability ≤50%
Suggested One-off Availability Payment	• Unavailable confirmed DASSA Order volumes	• Penalty = Clearing Price × Multiplier × Unavailable Volume • No tolerance band
Objective / Rationale:		
Availability Performance Scalar • **Incentive to maintain availability for the contracted volumes.** • **Post Gate Closure incentive for volume availability is stronger than the pre-Gate Closure incentive. This is to maintain a hierarchy and avoid situations where providers can arbitrage between 'lapsing' and post Gate Closure unavailability. The scalar introduces persistence and proportionality, discouraging repeated underperformance while allowing for operational realities.** ***Suggested One-off Availability Payment*** • **Provide immediate and strict financial consequence for unavailability. Alternative to scalar mechanism.**		

Table D - 3: Recommended Post-Gate Closure - Service Delivery Incentives

Post-Gate Closure - Service Delivery Incentives		
Incentive	Which volumes are impacted?	What is the incentive?
Event Performance Scalar	• Failure to respond and deliver the volumes cleared in the DASSA and made available by the unit • This will also extend to the RAD	• Reduced DASSA Order payments, with the application of the scalar ranging between 0 and 1 in value. • Reduced RAD (settlement payments, with the application of the scalar ranging between 0 and 1 in value. • The value of the scalar depends on the monthly performance of the unit and impacts payments for all the Trading Periods in the months falling in the persistence duration of the scalar.
Suggested One-off Delivery Payment	• Failure to deliver during system events	• €1000 per failed event if Clearing Price ≤ €500 • €2000 per failed event if Clearing Price > €500 • No persistence
Objective / Rationale:		
Event Performance Scalar • **Incentivise delivery of a service in response to a frequency event or a dispatch instruction, when available to do so.** • **The scalar has been structured to provide strong incentives to perform in most circumstances.** ***Suggested One-off Delivery Payment*** • **Provide sharp and immediate financial consequence for non-delivery. Alternative to scalar mechanism.**		

An overview of the TSOs' pre-gate closure Commitment Obligations & Incentives recommendation is described below in Figure D-1.

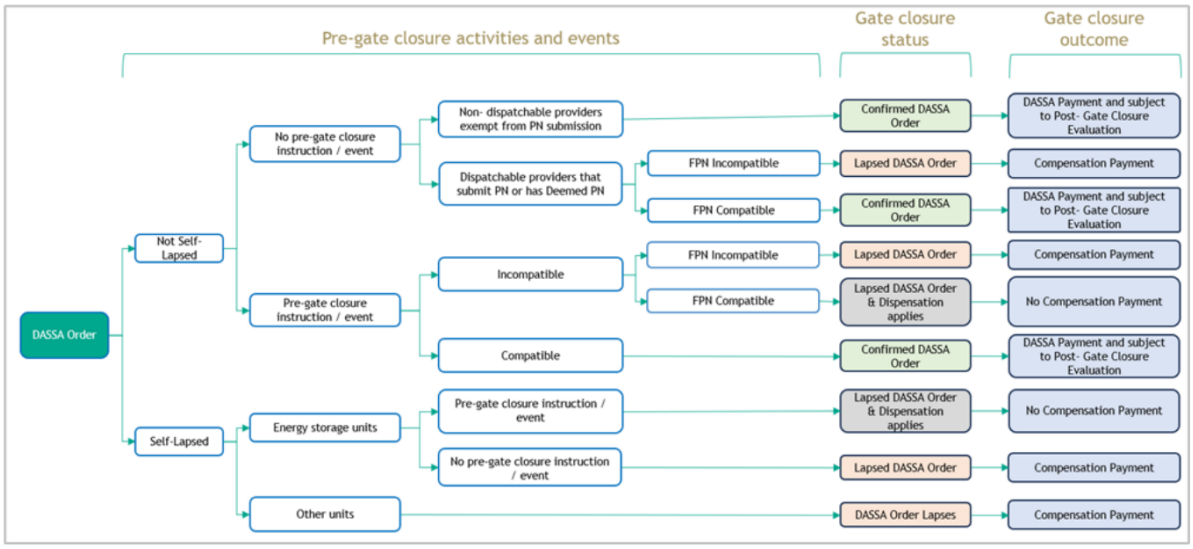

Figure D-1: Pre-gate Closure Commitment Obligations & Incentives Recommendation

An overview of the TSOs' post-gate closure Commitment Obligations & Incentives process is described in Figure D-2 below.

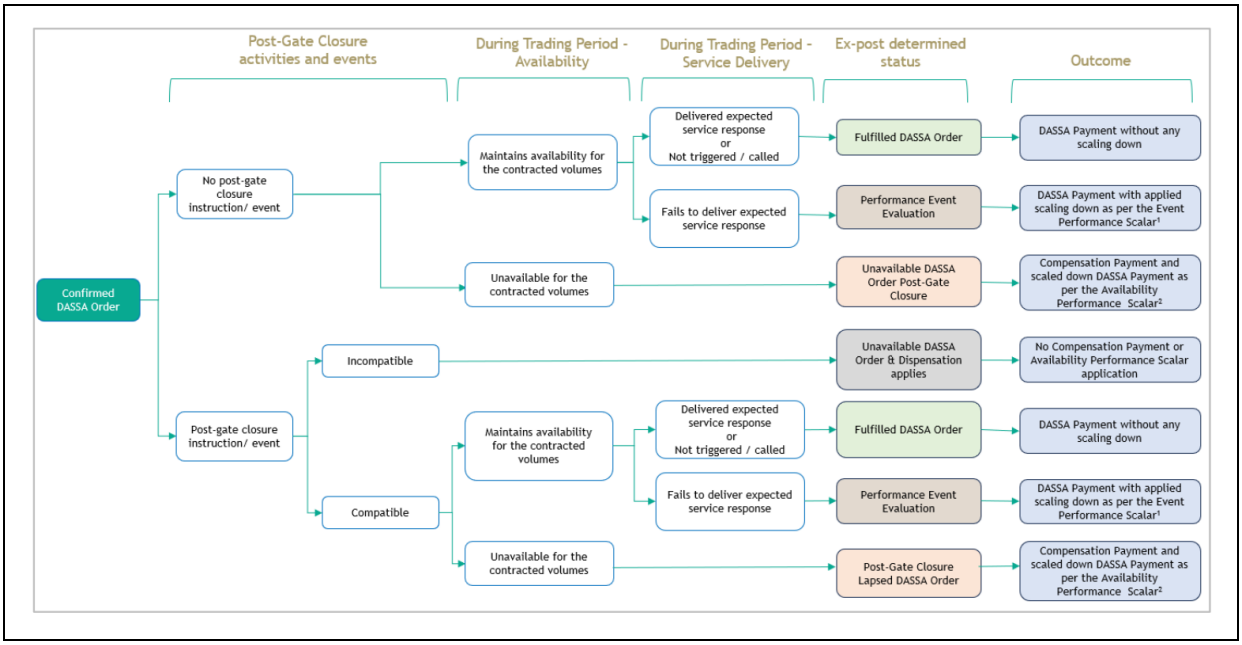

Figure D-2: Post-gate Closure Commitment Obligations & Incentives Recommendation

14.5 Appendix E: Post-Gate Closure Availability Scalar Design

Per our recommendations, an Availability Performance Scalar (S_A) will be applied to future DASSA Payments, consisting of two essential components:

- Availability Factor (F_A) to assess the service provider's performance against confirmed DASSA volumes over five months, with more recent months weighted higher.
- Dynamic Time Scaling Factor (V_m) to assign weightings to performance incidents over the current and four preceding months.

The above elements together define the Availability Performance Scalar (S_A), which will be expressed as follows:

Equation E- 1: Availability Performance Scalar (S_A)

$$S_A = \begin{cases} 1, & F_A > b \\ \dfrac{F_A - a}{b - a}, & F_A > a \\ 0, & a > F_A \end{cases}$$

The Availability Performance Scalar will apply to unavailable confirmed DASSA Order volumes in real-time. In such cases, DASSA payments will also be foregone, in line with the SEMC decision in SEM-24-066[64]. Exceptions will apply where unavailable DASSA Orders volumes result from TSO actions / events or for Trading Periods falling within a Grace Period. A tolerance band of 3% is incorporated into the scalar, allowing for small levels of unavailability without impacting the scalar value (which will remain at 1). This tolerance accounts for reasonable forced outages that a service provider may face.

Where the weighted average availability of a unit falls to 0.5 or below, the scalar will reduce to 0. The calibration will work as per Table E-1 below:

Table E -1: Availability Performance Scalar calibration

Weighted Average Availability	Resulting Scalar
≥ 97%	1
96% - 50%	0.7-0.5
≤ 50%	0

[64] SEM-24-066: Section 4.1 (semcommittee.com)

14.6 Appendix F: Post-Gate Closure Delivery Scalar Design

Per our recommendations, the calculation of the Event Performance Scalar (S_E) will involve two key elements:

- Monthly Scaling Factor (K_m).
- Dynamic Time Scaling Factor (V_m).

The Event Performance Scalar (S_E) is calculated by summing the products of the Monthly Scaling Factor (K_m) and the Dynamic Time Scaling Factor (V_m) as defined above. It is calculated based on the below formula:

Equation F-1: Event Performance Scalar (S_E)

$$S_E = max\left(1 - \sum_{m=M}^{M-2} [K_m \times V_m], \quad 0\right)$$

Both the Monthly Scaling Factor (K_m) and the Event Performance Scalar (S_E) are rounded to two decimal places.

As set out in the consultation paper:

- The Event Performance Scalar maintains the correct hierarchy between incentive mechanisms and provides a sufficiently strong incentive, given the rarity of system events.
- The delivery incentive applies only to available confirmed DASSA Order volumes. Service providers therefore continue to receive the DASSA Payment for contracted volumes made available, irrespective of whether those volumes were delivered at the time of a system event.
- The duration of persistence is crucial to ensure the incentive remains sufficiently penal and maintains the hierarchy between delivery and availability, particularly for storage units. Persistence extends the impact window while adhering to proportionality, addressing the challenge of incentivising units that infrequently clear the market.