11/12/2024

FASS Programme

System Services Code Development Working Group

December 2024

Agenda

Working Group Meeting 2

11th December 2024

1. Welcome and Introduction
2. DASSA Mechanics
3. Secondary Trading
4. Actions from Previous Working Group Meeting
5. AOB

Scope

The decisions as set out in the SEM Committee publications need to be transposed into a binding set of market rules which require extensive input and review from the Working Group. The System Services market rules should reflect the decisions included in the following SEM Committee decision documents:

- SEM-21-021 System Services Future Arrangements - Decision Paper 1
- SEM-22-012 System Services Future Arrangements High Level Design Decision Paper 2
- SEM-23-103 System Services Future Arrangements – Detailed Design & Implementation – Phased Implementation Roadmap - Decision Paper 3
- SEM-24-066 System Services Future Arrangements – DASSA Design Decision Paper
- SEM 24 – 074 System Services Future Arrangements – Product Review Decision Paper

Note: The System Services Code Working Group will not re-open any previous SEMC Decisions.

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Section Ref.	Code Section
2	Background and Interpretation
3	Legal and Governance
4	Participation, Accession and Registration
5	Qualification
6	Auction format of DASSA
7	Secondary and Bilateral Trading
8	Obligations
9	*TBC - Real Time Security Solution (Alternative to FAM)*
10	System Service Supplier Charge
11	Long Term Contracts
12	Delivery – Performance Monitoring
13	Transition Arrangements for existing DS3 contracts - Migration
14	Settlement
15	Appendices

Deliverables:

Per the PIR, the Plain English draft of the System Services Code is due for completion by **Q1 2025**. It is envisioned that the Q1 2025 deliverable will consist of a **consolidated word document**, comprising a Plain English Version of each section of the code.

SEM Committee Decisions:

- Parameters and Scalars Consultation (Price Caps, Commitments and Obligations)*
- Real Time Security Solution*
- Second Product Review*
- System Services Supplier Charge (Q1 2025)*
- Volume Forecasting Methodology (Q1 2025)*

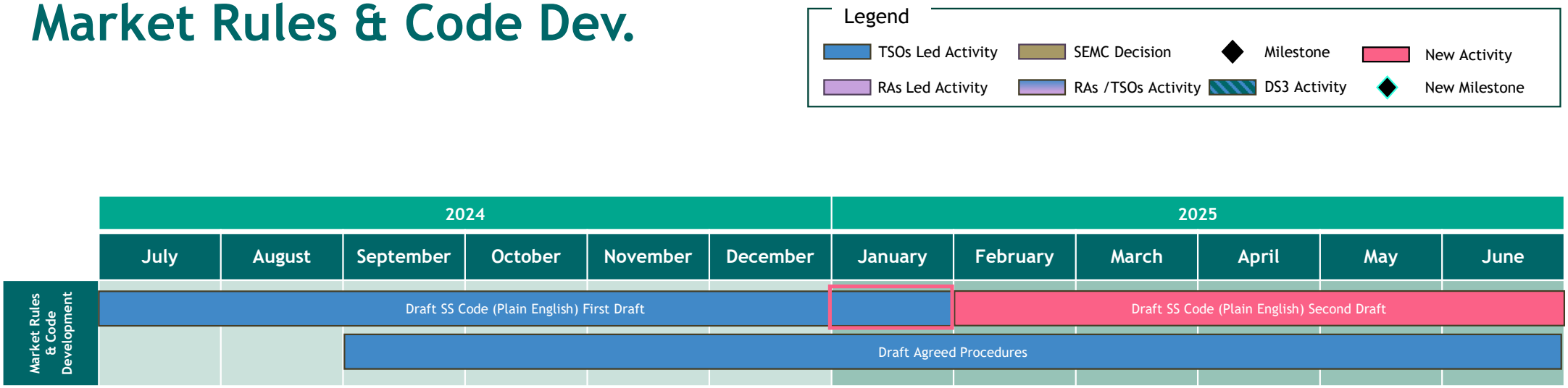
The timing of the following activities are also considered:

- Licence modification required to implement this framework (Q4 2025)

Therefore, it is proposed to commence work on these topics later in the process in line with publication of the relevant SEM Committee decisions.

***Note:** Finalisation of the Plain English Version (PIR milestone FASS.M22) is dependent on the timely progression of business design activities concluding with the publication of the respective SEMC Decisions.

Market Rules & Code Dev.



Workstream Summary

- System Services Code Plain English Version First draft extended to January 2025 due to extension of DASSA Design Consultation.
- Second draft of the code added to the plan.

DASSA

Auction Format of DASSA

DASSA
Products
Volume Requirements
Zones
Timings
Bidding Structure
Validation of Bids
Clearing Overview
DASSA Outcomes

Dependencies

Volume Forecasting Methodology

Parameters and Scalars

2nd Product Review

System Security Solution Needs Analysis

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Auction Format of DASSA

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Dependency
Volume Forecasting Methodology Recommendation Paper
Parameters and Scalars Recommendation Paper
2nd Product Review and Locational Methodology Recommendation Paper
System Security Solution Needs Analysis

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Products

Per SEM Product Review

Reserve Product	Brief Description
Upward FFR	"The "The additional MW Output or MW Reduction in Demand required compared to the pre -incident MW Output or MW Reduction, which is fully available from a Providing Unit within 1 seconds after the start of an Event and sustainable up to 10 seconds after the start of the Event. The increase in energy provided in the 1 to 10 second timeframe by the increase in MW output /or decrease in demand must be greater than any subsequent decrease in energy output or increase in demand in the 10 to 20 second timeframe."
Downward FFR	"The amount of energy (MW) reduction /withdrawal (i.e. demand increase or generation decrease) compared to the pre-event unit MW Output or MW Demand, which is fully available from a Providing Unit within 1 seconds after the start of an Event and sustainable up to 10 seconds after the start of the event. The reduction in energy provided in the 1 to 10 second timeframe by the decrease in MW output /or increase in demand must be greater than any subsequent increase in energy output or decrease in demand in the 10 to 20 second timeframe."
Upward POR	"The automatic response (additional energy output and/or reduction in Demand) to System Frequency changes released increasingly from the time of Frequency change with a full activation time of 5 seconds, and sustainable until at least 15 seconds from the time of Frequency change"
Downward POR	"Downward POR is the automatic energy output reduction (generation output decrease or increase in demand) in response to System Frequency changes, released increasingly from the time of Frequency change with a full activation time of 5 seconds, and sustainable until at least 15 seconds from the time of Frequency change"
Upward SOR	"The additional MW Output (and/or Reduction in demand) required compared to the pre -incident Output (or Demand), which is fully available and sustainable over the period from 15 to 90 seconds following an Event"
Downward SOR	"Downward SOR is the additional energy output reduction (generation output decrease or increase in demand) in response to System Frequency changes, released increasingly from the time of Frequency change with a full activation time of 15 seconds and sustainable out to 90 seconds following an Event"
Upward TOR 1	"The additional MW output (and/or reduction in Demand) required compared to the pre incident output (or Demand) which is fully available and sustainable over the period from 90 seconds to 5 minutes following an Event"
Downward TOR 1	"Downward TOR1 is the additional energy output reduction (generation output decrease or increase in demand), compared to pre-incident output or demand, which is fully available within 90 seconds and sustainable for 5 minutes following an Event"
Upward TOR 2	"The additional MW output (and/or reduction in Demand) required compared to the pre incident output (or Demand) which is fully available and sustainable over the period from 5 minutes to 20 minutes following an Event"
Downward TOR2	"Downward TOR2 is the additional energy output reduction (generation output decrease or increase in demand) compared to pre -incident /dispatch output or demand, fully available within 5 minutes and sustainable for 20 minutes following an Event"
Upward Replacement Reserve	"the additional MW output (and/or reduction in Demand) required compared to the pre Event /dispatch output (or Demand) which is fully available and sustainable over the period from 20 minutes to 1 hour following an event /dispatch instruction"
Downward Replacement Reserve	"the additional energy output reduction (Generation output decrease or increase in Demand) required compared to the pre-incident (dispatch) output or demand which is fully available and sustainable over the period from 20 minutes to 1 hour following an event/dispatch instruction"

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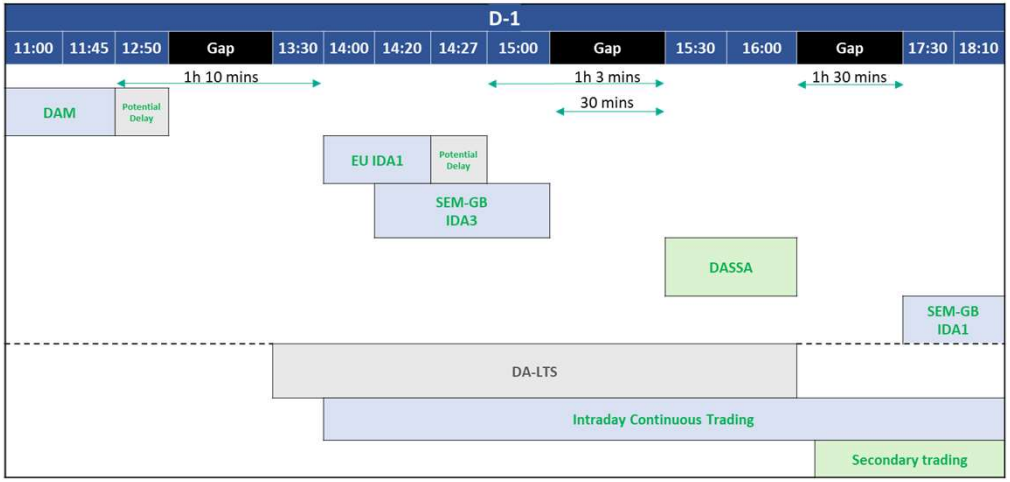
Timings

Auction Timing:

- Daily after the DAM and before the Day-Ahead LTS
- DASSA GCT~15:30



Auction Timeframe:

- 24 hours from 23:00 day-ahead (D-1) to 23:00 the next day (D)

Trading Period Duration:

- Auction will be cleared for every 30-min Trading Period
- Design allows for other durations e.g., to align with future 15-minute imbalance settlement period.

Volume Requirements:

- By 10:00 each day, the TSOs will publish the required reserves volumes that will be procured in the DASSA on that day D-1 for the following day D

Bidding Format

Service providers can submit a bid (which must be associated with a single Providing Unit) for each individual product for each Trading Period within the Auction Timeframe with no interdependency between bids

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

- Service providers may submit one or more price/quantity pairs, which must be increasing in price with increasing aggregate quantity that is bid.
- The maximum number of price/quantity pairs that can be submitted is 10
- Minimum acceptable values for quantity and price for each step may be implemented
- Auction Price Caps (per product) and Scarcity Price Caps (per product) to be implemented – Values to be determined based on Parameters and Scalars Workstream
- Zone must be specified per unit
- Where the Providing Unit has submitted an offer for more than one reserve product, the characteristics of the response capability must be consistent across all products.
- Only one quality type per bid is permitted for a unit.
- Bids may be divisible or non-divisible. SFG is applicable in case of non-divisible bids

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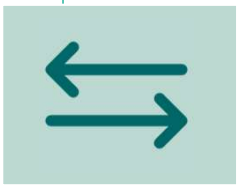
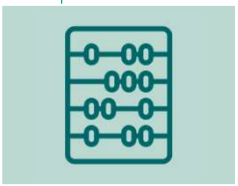
Validation of Bids



Products offered must be consistent with qualified products for the providing unit.



Quantities offered must be consistent with qualified quantity of the providing unit

The bid must be consistent with required formats as set out in section 6.4.1

The bid must be submitted before gate closure

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DASSA Clearing Overview

- The auction will be run on an all-island basis respecting any locational and long run reserve constraints and operational requirements per SEM 24-074.
- The submitted bids for each service per Trading Period will be stacked to create a system wide supply function
- There will be a single supply function per product per Trading Period for the island of Ireland
- A DASSA Order will be allocated to auction winners for each service for each Trading Period, detailing the volume of the service awarded and the price to be paid for the provision of the service.
- A DASSA Order will include a Commitment Obligation to provide the awarded service for the specified Trading Period.

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DASSA Clearing Overview

Objective Function

- Minimize the cost of system services procurement

Elements of the Objective function

- Procurement cost
- Value functions *(for quality and implicit bundles)*

Constraints to be included

- Min requirement (all Island basis)
- Min requirements per zone/jurisdiction
- TSO's preferences
- Min requirement for implicit bundles
- Min requirement for quality services

Constraints that will not be included

- Transmission line constraints
- Transmission outages

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DASSA Clearing: Objective Function

Selection of bids submitted by service providers on a price basis i.e. selecting the cheapest bids first, up to satisfying the volume requirement for the product

Processing of the value functions set by the TSOs for any operational requirements that will apply to the auction, TSOs operational requirements include:

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

DASSA Prices

A single price is cleared for each system service product and Trading Period in the daily auction. This is compatible with the inclusion of operational requirements in the objective function of the optimisation problem.

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

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DASSA Outcomes

The outcome of the daily auction for reserve services will be:

1. A product volume allocated to each provider unit per service per Trading Period
2. A clearing price per product, per Trading Period; or a clearing price per product, per Trading Period taking into account zonal pricing per SEM 24-074
3. A clearing price for an implicit-bundle of products
4. A clearing price for types of quality of products

Secondary Trading

Secondary Trading

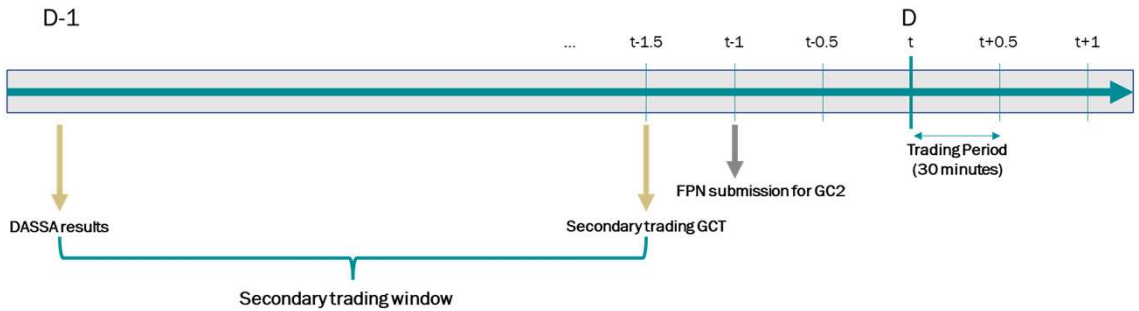
Secondary Trading
Central Trading Platform
Secondary Trading Window
Secondary Trading Mechanics
• Placing Buy and Sell Orders
• Validation of Buy and Sell Orders
• Matching of Buy and Sell Orders
• Bilateral Trading of DASSA Orders
• Validation of Matched and Bilateral Trades
• Notification
• Commitment Obligation and Right to Payment
TSOs Participation in Secondary Trading

Central Trading Platform

An automated secondary trading platform, which facilitates both the matching of Buy and Sell Orders and bilateral trades, will be implemented from go-live of the DASSA arrangements.

Secondary Trading Window

DASSA Orders can be traded after the DASSA has run and up to 60 minutes before the commencement of the relevant Trading Period.



Two types of Secondary Trade

1. Direct placing, matching and validation of Buy and Sell Orders on the Secondary Trading Platform
2. Bilateral Trades

Placing Buy and Sell Orders

Buy Order

An offer to take on a DASSA Order and its associated commitment obligations. Such orders may typically be placed by service providers that know their availability to provide services closer to real time.

Sell Order

Placed by the holder of a DASSA Order that may no longer be available to provide all or a portion of its awarded service volume and does not wish to be subject to the associated commitment obligation.

Validation of Buy and Sell Orders

Requirements

- Sell orders consistent with DASSA Order
- Trades are feasible and within unit capability
- Within TSO limits e.g. within Minimum and Maximum Values
- Integrity of bundles must be maintained

Matching

Batch Matching is to be used:

- Orders are be matched in a batch after the secondary trading gate closure.
- Batch Matching will take place at 30-minute intervals
- Buy and Sell Orders are added to the Order Book during the secondary trading window
- After secondary trading gate closure these Orders are to be matched based on Secondary Trade Price limits and potentially other factors such as quality levels and jurisdictional requirements

Providers would learn of their DASSA Obligations after the batch process is complete, this would be after the secondary trading gate closure and therefore closer to real time.

Bilateral Trades

Trades to be recorded, validated, and confirmed on the central trading platform

Same validation process as for Batch Matching

Per SEM 24-066, the SEM Committee reserves the right to develop and implement market power mitigation measures in the future, and to cease operation of the bilateral trading arrangements if potential market power issues are identified

Validation of Matched Buy and Sell Orders

Requirements:

- DASSA constraints (e.g. location requirements) must not be broken
- Trading of a DASSA Order for a product with a particular quality type between service providers with non-identical capabilities is permitted if the product could be provided by the buying party at the same quality level or higher

Notification

These are sent through Central Trading Platform:

- Successful/Unsuccessful Validation
- Successful/Unsuccessful Bilateral Trade

Commitment Obligation and Right to Payment

Following the successful trade of a DASSA Order, which has been approved by the TSOs, the Commitment Obligation and right to payment will transfer to the buyer.

This means that the buyer will receive the DASSA price for the Order from the TSOs provided they meet their obligations, regardless of the Secondary Trading Price at which the secondary trade was matched in the platform or agreed bilaterally

Update from Previous Meeting

Queries arising from Second Meeting

No	Action/Query	Response
1	Mandatory Accession to Code	The RAs will be seeking SEM Oversight Committee's views on this, an update will be provided once available.
2	Use of term Products or Services	TSOs consider Products to be more suitable
3	Consideration of non-binding votes for all members of System Services Code Modification Panel	The RAs see non-binding voting as an appropriate approach. Section 3.3.4 of Code has been updated accordingly
4	Further discussion in relation to Dispute Resolution Board fees/costs-	The RAs and TSOs consider mirroring the T & SC as appropriate, ultimately this will be driven by responses to the SEM Committee consultation
5	Provide clarification regarding relationship for new units that have not acceded to the code that may wish to escalate a dispute to DRB.	Under the T&SC, there is no grounds for dispute before accession to the Code as there are no obligations or rights in place. The TSOs consider this should be also be approach for System Services Code. A qualification dispute would fall under General Dispute.

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Section 3.3.4

Updated text to incorporate non-binding votes of System Services Code Committee Members

At a duly convened meeting of the System Services Modification Committee, the Proposal shall be presented to the Members by the Proposer, who shall endeavour to answer any initial questions which the other Members may have in respect of the Proposal or the presentation. The Modification Committee shall discuss the Proposal. Members of the System Services Modification Committee shall be entitled to one, non-binding, vote. Voting may be conducted by open ballot. Each voting Member may communicate their approval or disapproval of the Proposal by a show of hands.

~~The Secretary shall record the views of the Panel through a round table statement of each Member's position. Members have the responsibility to state their position in accordance with the views and interests of the Appointor~~.

The Chairperson taking into account the views and votes cast of the System Services Modifications Committee may determine that the Proposal:

- does not merit any further consideration, particularly where the Proposal is deemed, in the Chairperson's opinion, to be contrary to the SEM Objective or System Services Code Objectives or does not further any of those objectives;

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