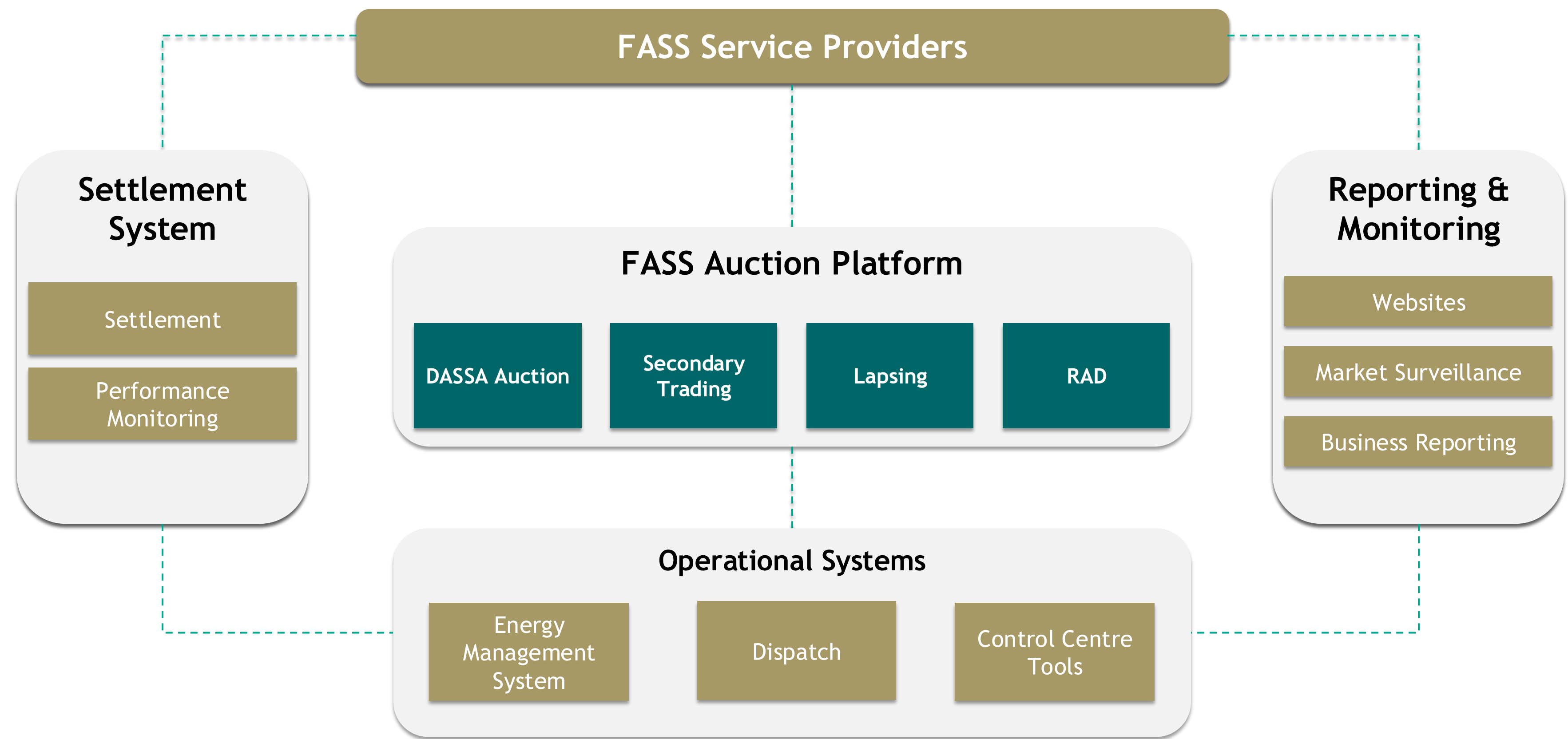
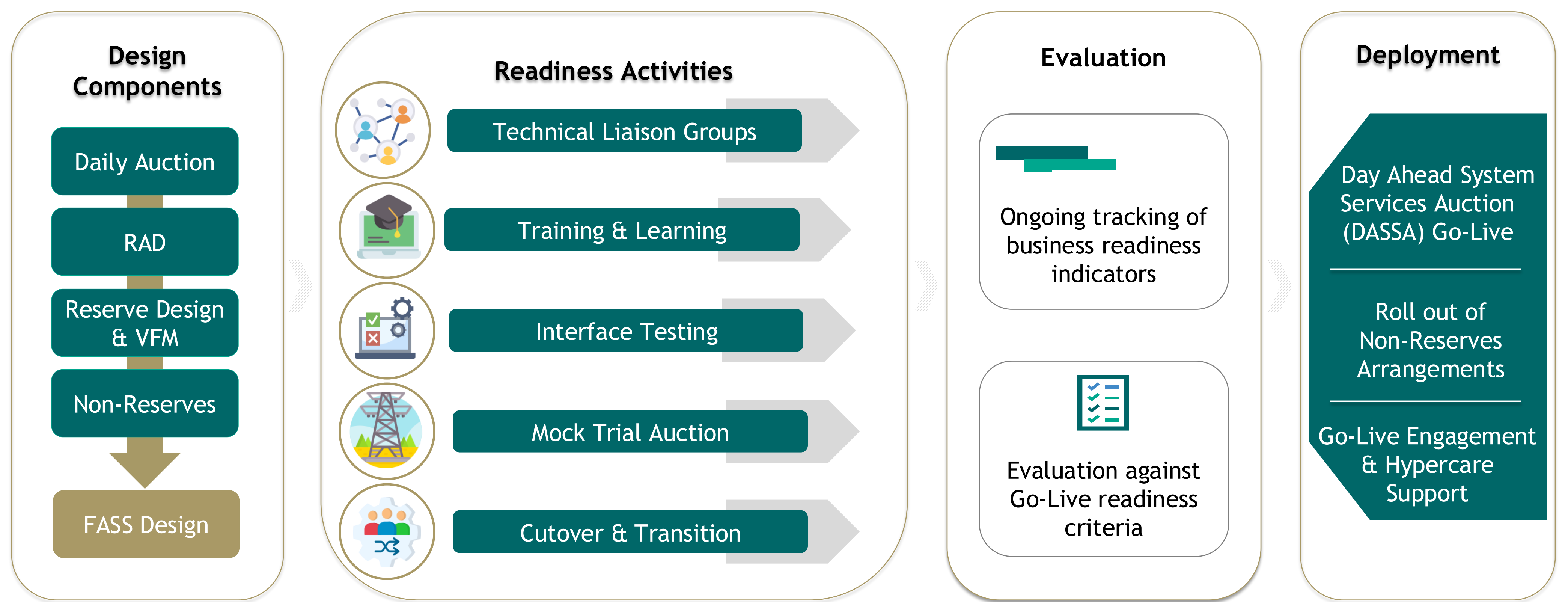


FASS

Conceptual FASS Solution:



Our Approach:



Our Schedule:

Schedule	2025	2026				2027		
	Q4 Oct - Dec	Q1 Jan - Mar	Q2 Apr - Jun	Q3 Jul - Sep	Q4 Oct - Dec	Q1 Jan - Mar	Q2 Apr - Jun	Q3 Jul - Sep
Readiness & Cutover	PIR 4.0	PIR 5.0		PIR 6.0				
	Engagement & Market Readiness Approach			Industry Training				
		Technical Liaison Group						
			Industry IT Testing Preparation	Industry IT Testing & Mock Auction				
				Systems Cutover Approach				
	Qualification Approach	Registration, Qualification & Accession to the SS Code						
							May 2027 Go Live	Hypercare. Transition to BAU Operations.

Note: Conceptual FASS solution subject to change as vendor design discussions progress and pending outcome of final SEMC Decisions. Master programme timelines to be maintained via subsequent iterations of the Phased Implementation Roadmap (PIR).

Integration with EU Balancing Platforms - MARI

The challenge...

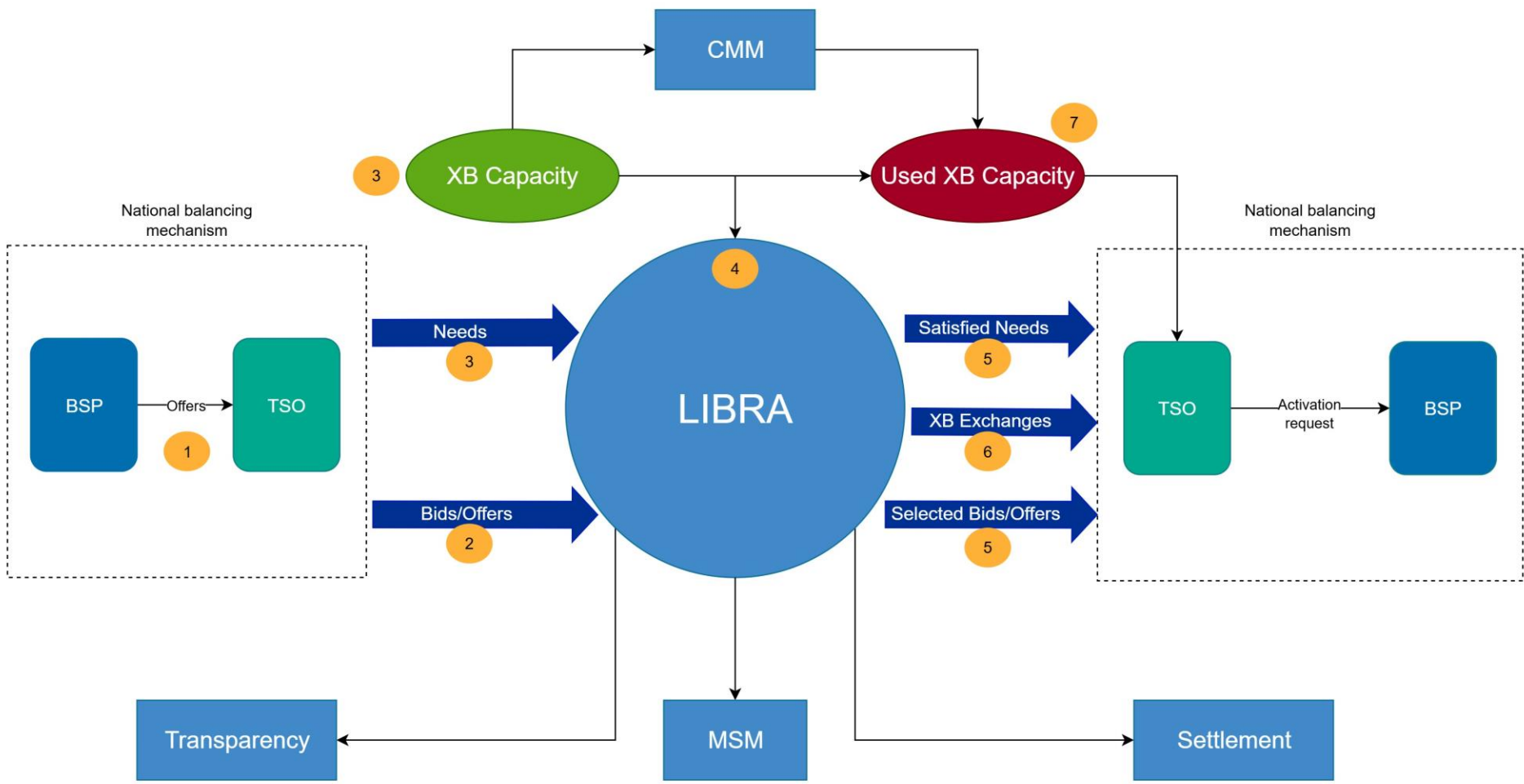
Manually Activates Reserves Initiative (MARI) is the European balancing energy platform used for Manual Frequency Restoration Reserves (mFRR).

Participating in the MARI platform is a requirement of the Energy Balancing Guideline (EBGL) with the Celtic interconnector go-live.

Currently, EirGrid and SONI are observers on the MARI platform and will be seeking full membership to join the platform as active participants.

We will not be joining TERRE, as it is gradually being decommissioned, due to the change in the intraday cross-zonal gate closure time (IDGCT) from 60' to 30'.

Steps	Parties Responsible
1 TSO receives COD from BSPs in local market balance area	TSO, Participant
2 Forward of coherent mFRR balancing products to mFRR platform	TSO, MARI
3 TSOs communicate their balancing demands and the available XB transmission capacities (ATC)	TSO, CMM(MARI)
4 Optimization of the clearing of balancing demands against MOL	MARI
5 Communication of the results, satisfied demands, and prices	MARI, TSO
6 Calculation of the commercial flow between market balancing areas and settlement of the expenditure and revenues between TSOs	MARI, JAO, TSO
7 The resulting XB schedules and remaining ATC are sent to the TSOs	MARI, TSO



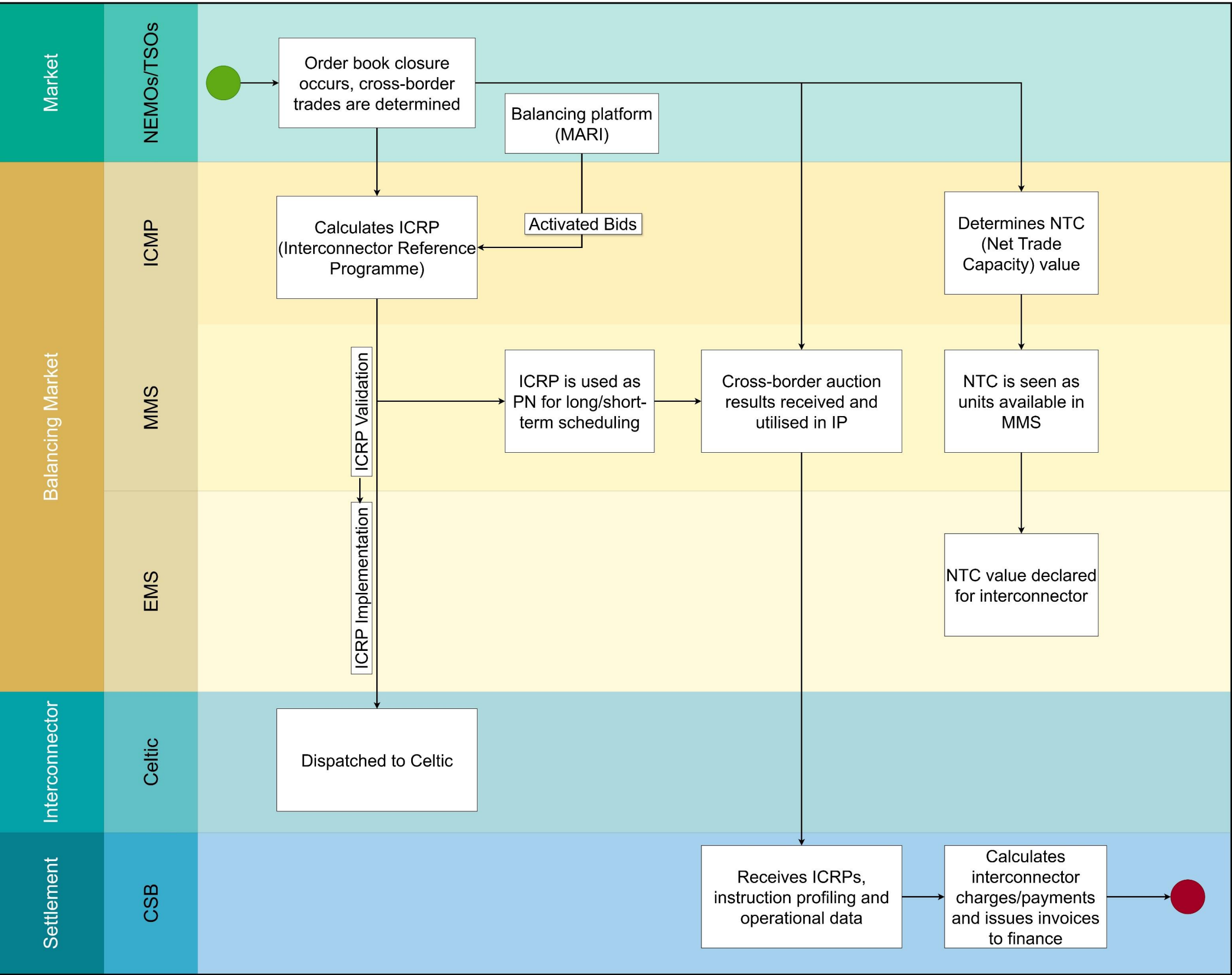
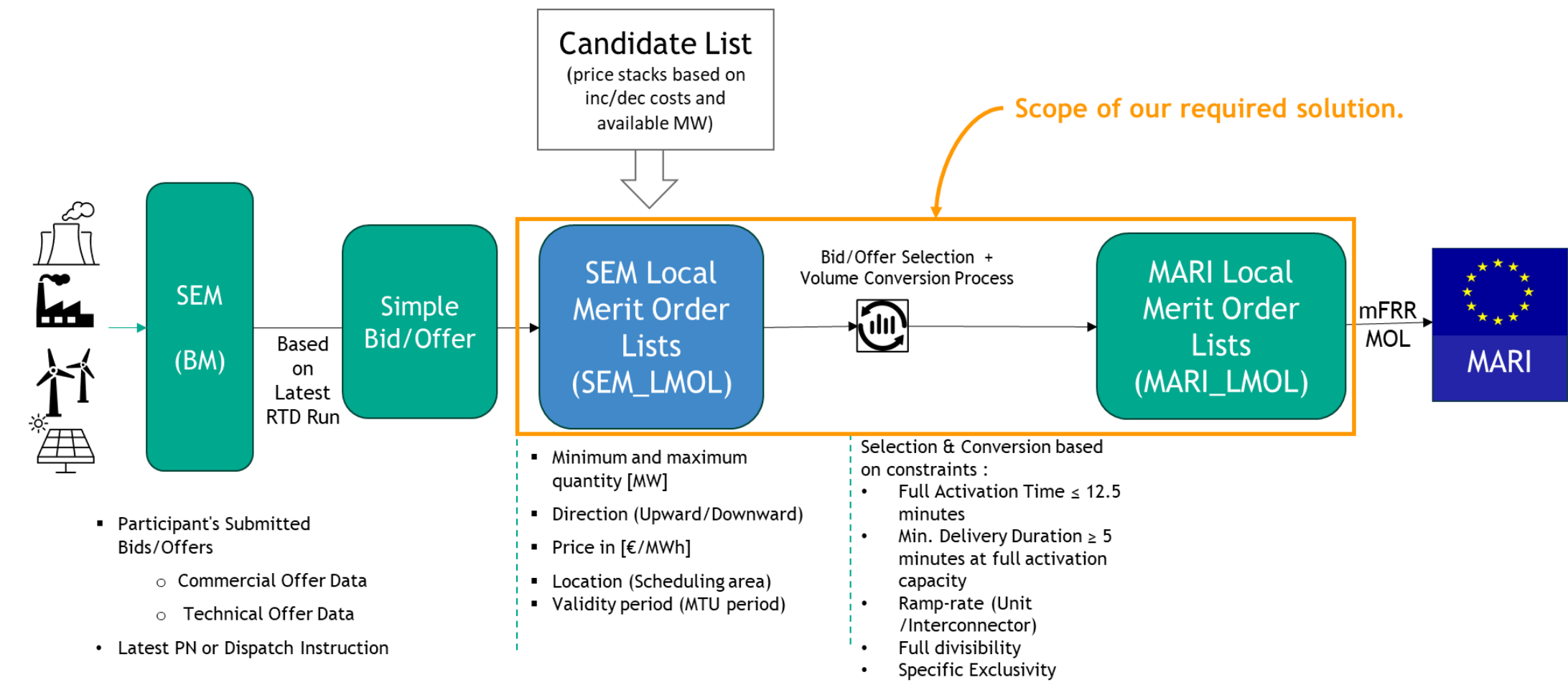
The proposed solution ...

Minimum change to SEM balancing arrangements.

Available / realisable SEM bids converted to standard products for MARI consumption.

Results of MARI integrated into ICMP and redispatch of Celtic.

Integrated into imbalance settlement as IRCU.



Activated Bid Means:

- The same bids as sent to the platform if available.
- Otherwise, in case SEM has already used those bids in local balancing, then the same volume with next cheapest available bids on the merit order will be used.

Dispatchable Consumption Units

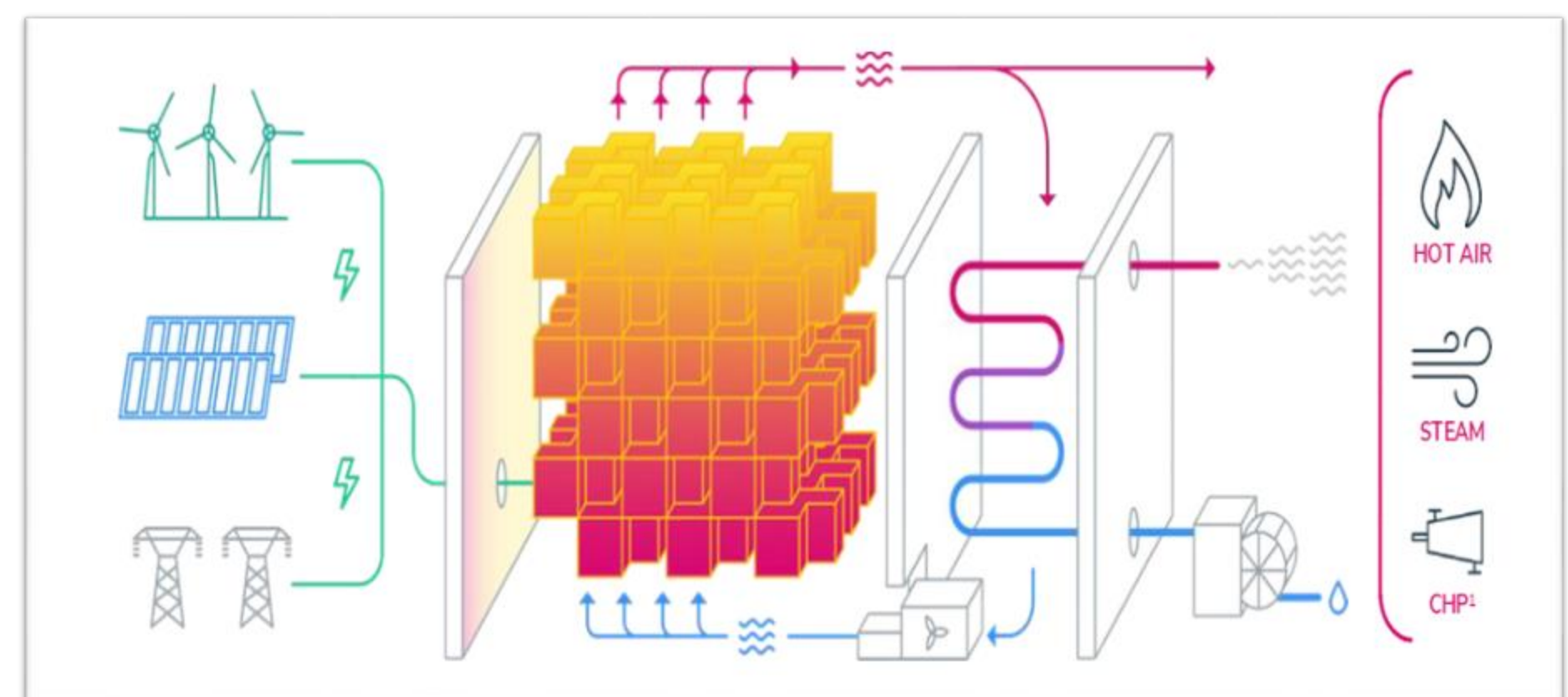
The challenge...

Climate Action Plans for Ireland set targets for decarbonisation of commercial sectors. These are largely based on electrification of processes that currently use fossil fuels. Climate Action Plans for Northern Ireland not yet published but expected to follow similar model.

Businesses are already looking at how to achieve this.

Solutions vary from dynamic response to use of thermal energy storage solutions at fixed times

Examples in place or being planned ...



The proposed solution ...

Proposals to develop a new unit type for the SEM - a Dispatchable Consumption Unit

This unit will represent demand turn up in all timeframes of the energy market

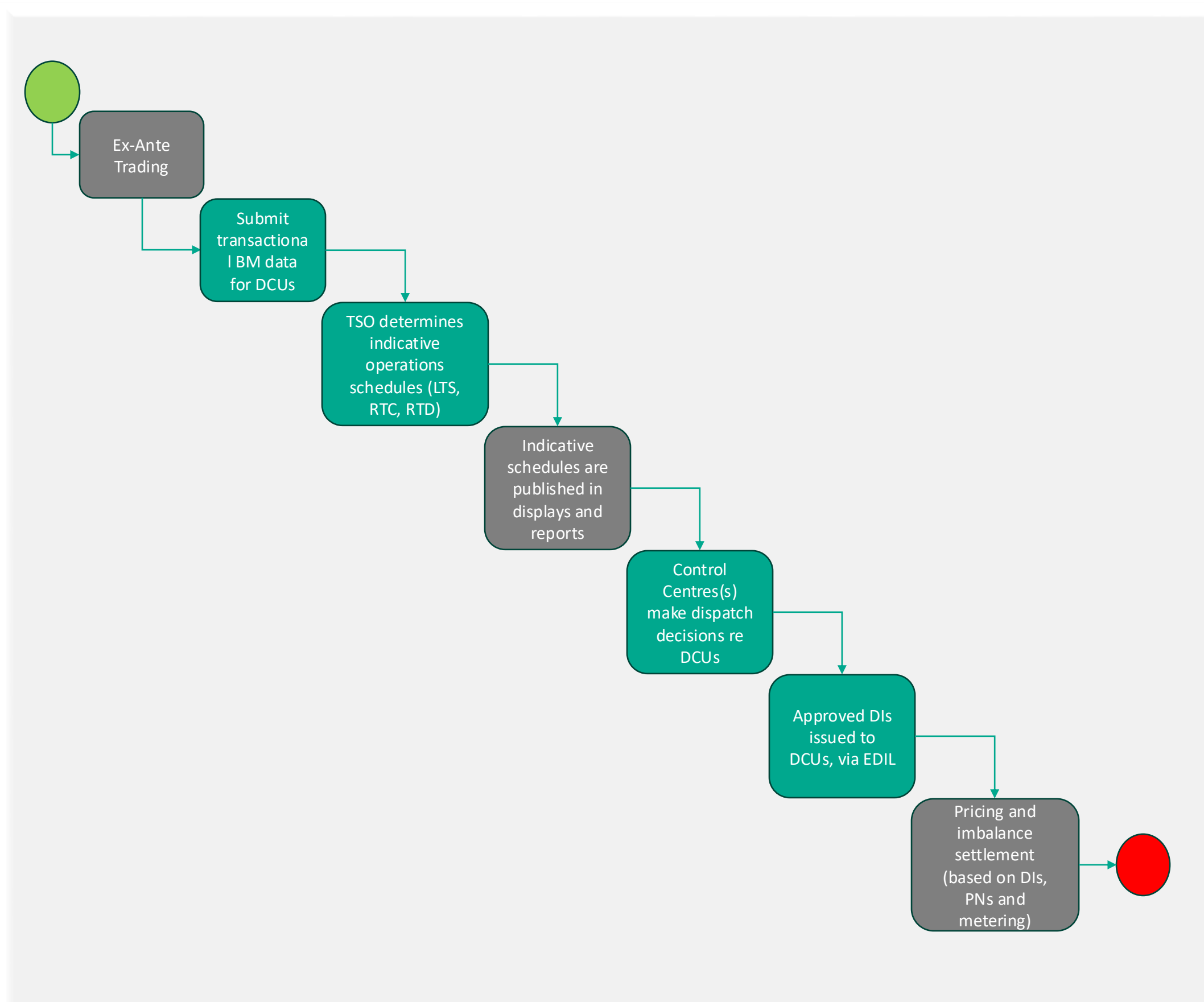
The DCU model will inherit a lot of behaviour from the current design of generators - this means better technical data and locational modelling

Asset owners can trade in DAM and submit running schedule to TSOs

They will also provide the TSOs with a suite of commercial and technical offer data, in the same manner as a conventional generator

The TSOs will include this unit in its market management systems

Can schedule the unit to consume either based on system conditions or locational issues



Is this the full answer?

Not all of these asset owners want to be controlled by the TSO - decarbonization targets and costs are the main driver

Electricity trading is not their business. What can be their route to market?

Network charges are a barrier (see [ACER - Unlocking Flexibility](#), published 09/04/2025 and CRU's [Electricity Network Tariff Structure Review: Project Re-start](#))

Cost of MIC a significant issue (night-time capacity charging being suggested)

Other schemes have been used elsewhere in EU (e.g., GOPACS, Nutzen Statt Abregeln - "Use Instead of Curtail")

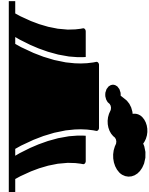


Day in the Life: Current Market Arrangements

A current day in the life of the markets

Timings shown in IST

Forward Markets



Capacity Market

T-4, T-1

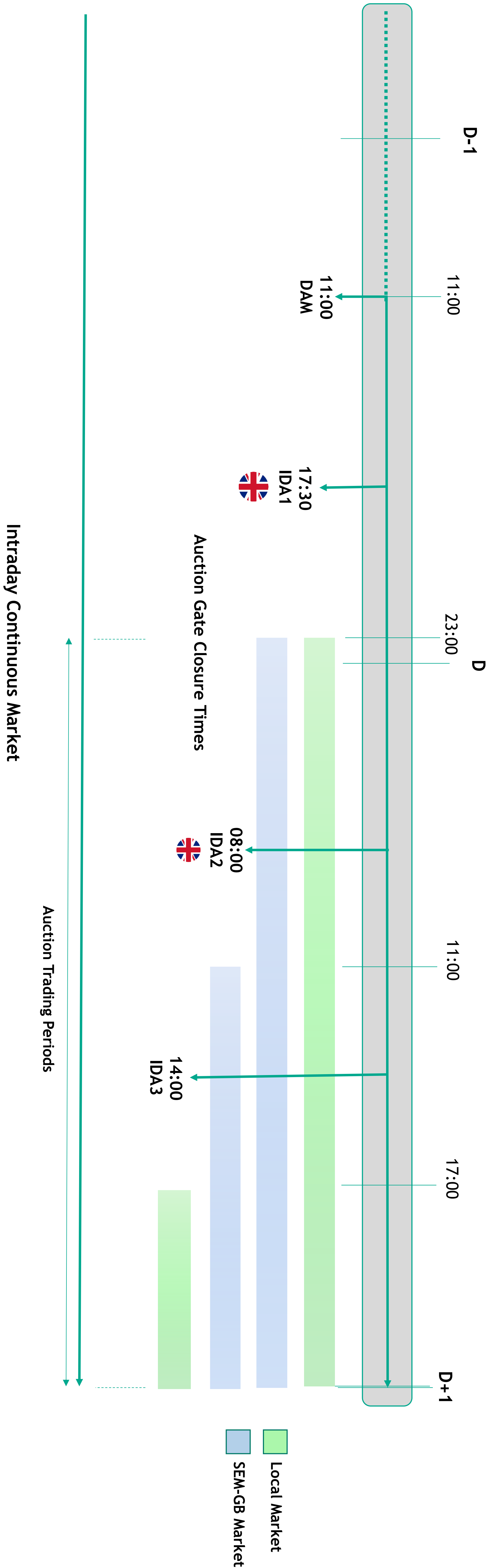


NTC Based Capacity Calculation

Local TSO Capacity Calculation



Ex-Ante Markets

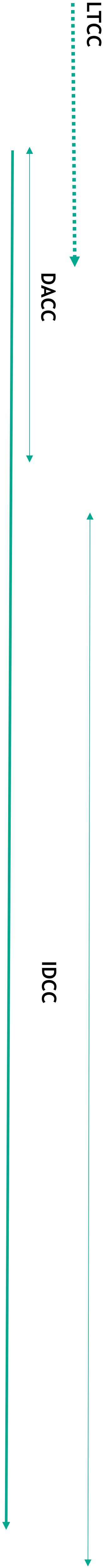




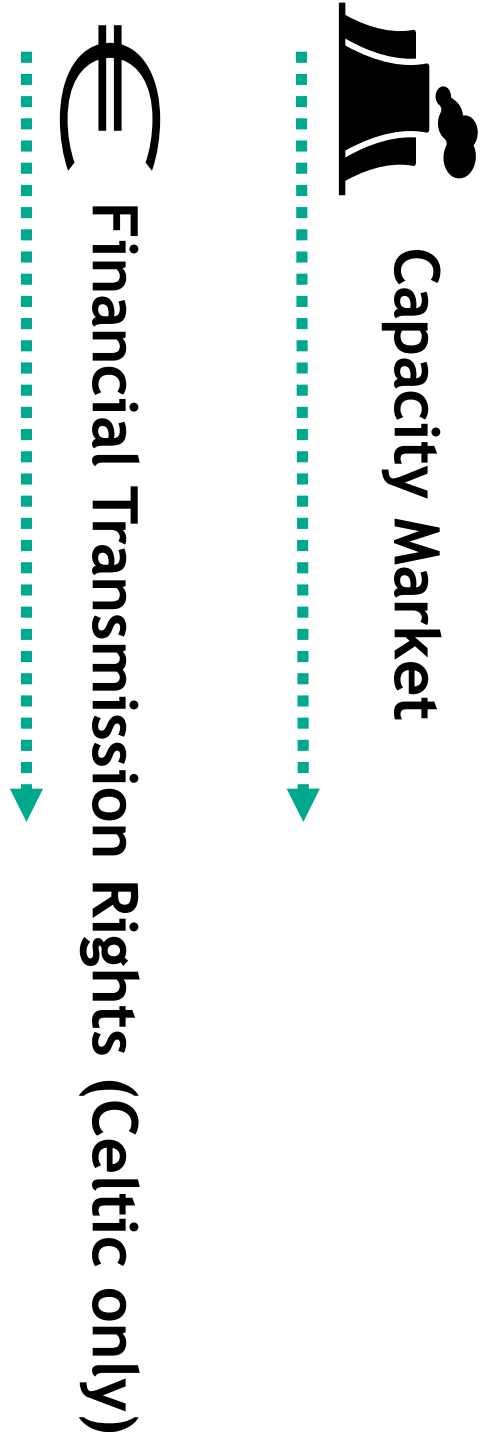
Future Day in the Life: SDAC + SIDC

A future day in the life of the markets
Timings shown in IST

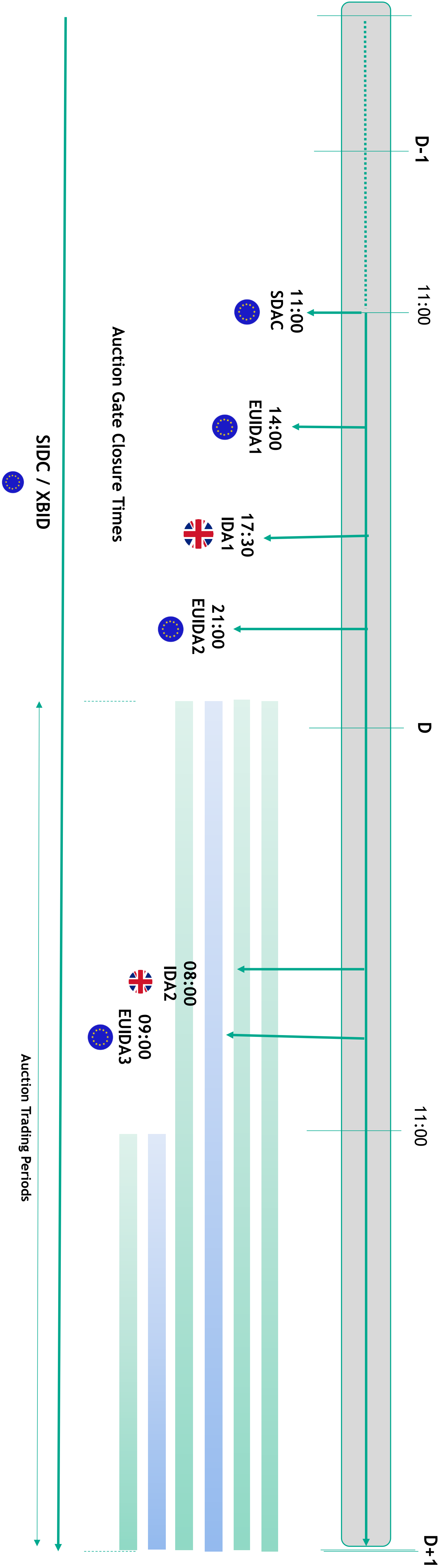
Flow Based Capacity Calculation (SDAC + SIDC)



Forward Markets

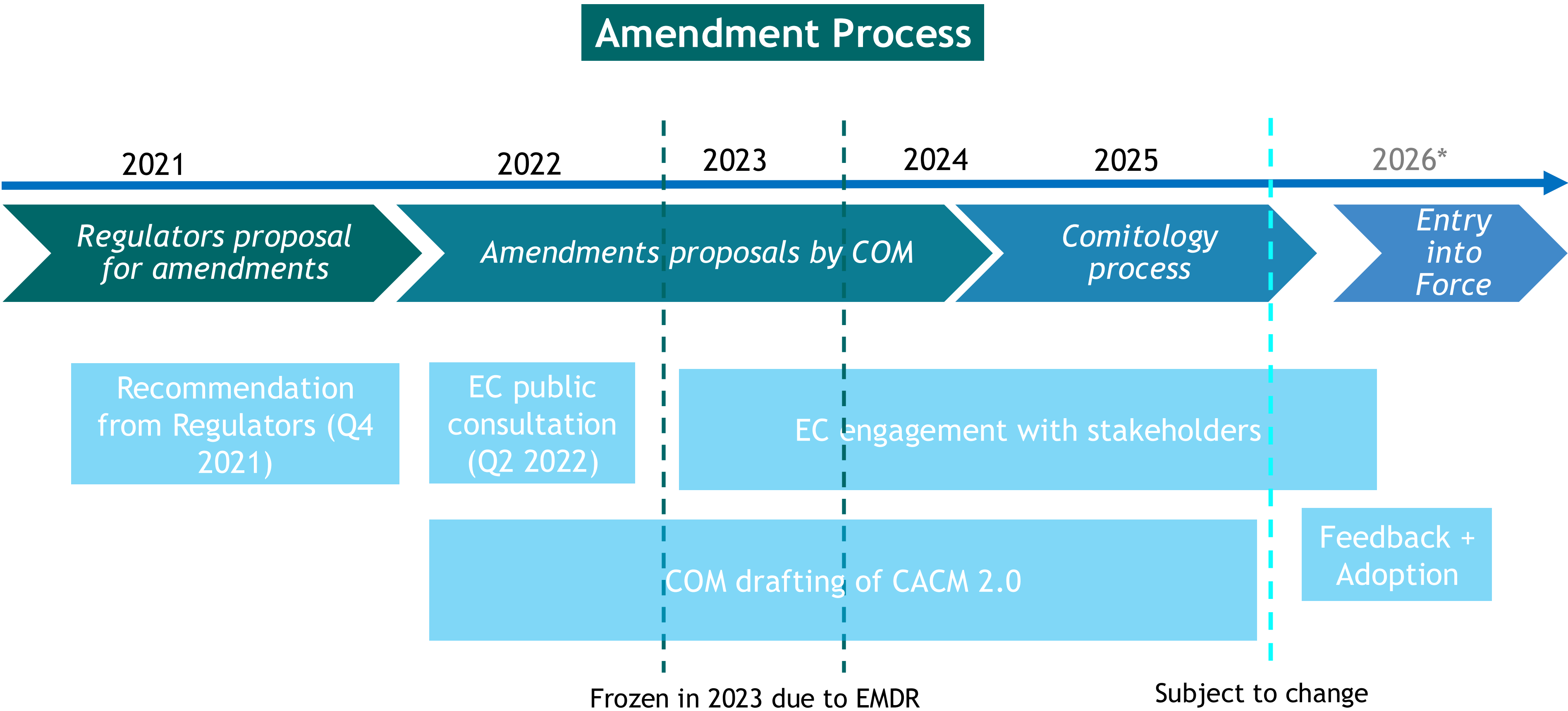


Ex-Ante Markets



Energy Market Policy Team

CACM 2.0: Overview of planned changes and impact on SEM



* The original CACM 2.0 timeline with adoption in 2025 and EiF in early 2026 is being delayed

CACM 2.0 Some expected developments

Increased transparency	Capacity allocation with 3 rd countries	Single Market Coupling Operator	Transfer of some provisions to SOGL
- Strengthening requirements for publication of further market-coupling data - Methodologies will detail tasks and responsibilities - Centralisation of publication of methodologies (TCMs)	CACM 2.0 proposes that the transmission capacity between the EU and 3 rd countries shall be allocated explicitly, unless an agreement concluded between the EU and a 3 rd country provides otherwise. For implicit allocation, the 3 rd country needs to be integrated into the SDAC and SIDC.	- CACM 2.0 establishes a Single Market Coupling Operator (SMCO). - The MCO function will evolve into a new, independent operator offering with its own budget, governance structure, responsibilities, and legal/financial liabilities.	Amendments to SOGL are directly resulting from the proposed changes to CACM, to ensure coherence between both legislative texts. They are related to: - Common Grid Model - Operational security analysis (RD&CT and cost sharing) - Provisions on remedial actions

Actions by EirGrid

ENTSO-E groups participation	Exchanges with DCEE and CRU	Other actions
Throughout the amendment process, EirGrid is participating in the work of the ENTSO-E's groups on CACM 2.0, such as: - Market Committee - System Operation Committee - CACM/SO Cross Committee - Various subgroups	- As a TSO, EirGrid is closely cooperating with DCEE and CRU, providing opinions and expertise on matters both SEM-relevant and EU-wide. - EirGrid provides written notes at the request of DCEE/CRU	- EirGrid is closely following the outcomes of any high level developments and activities. - Within the Core CCR, EirGrid is following developments and engages with other TSOs/Ministries etc.

LDES

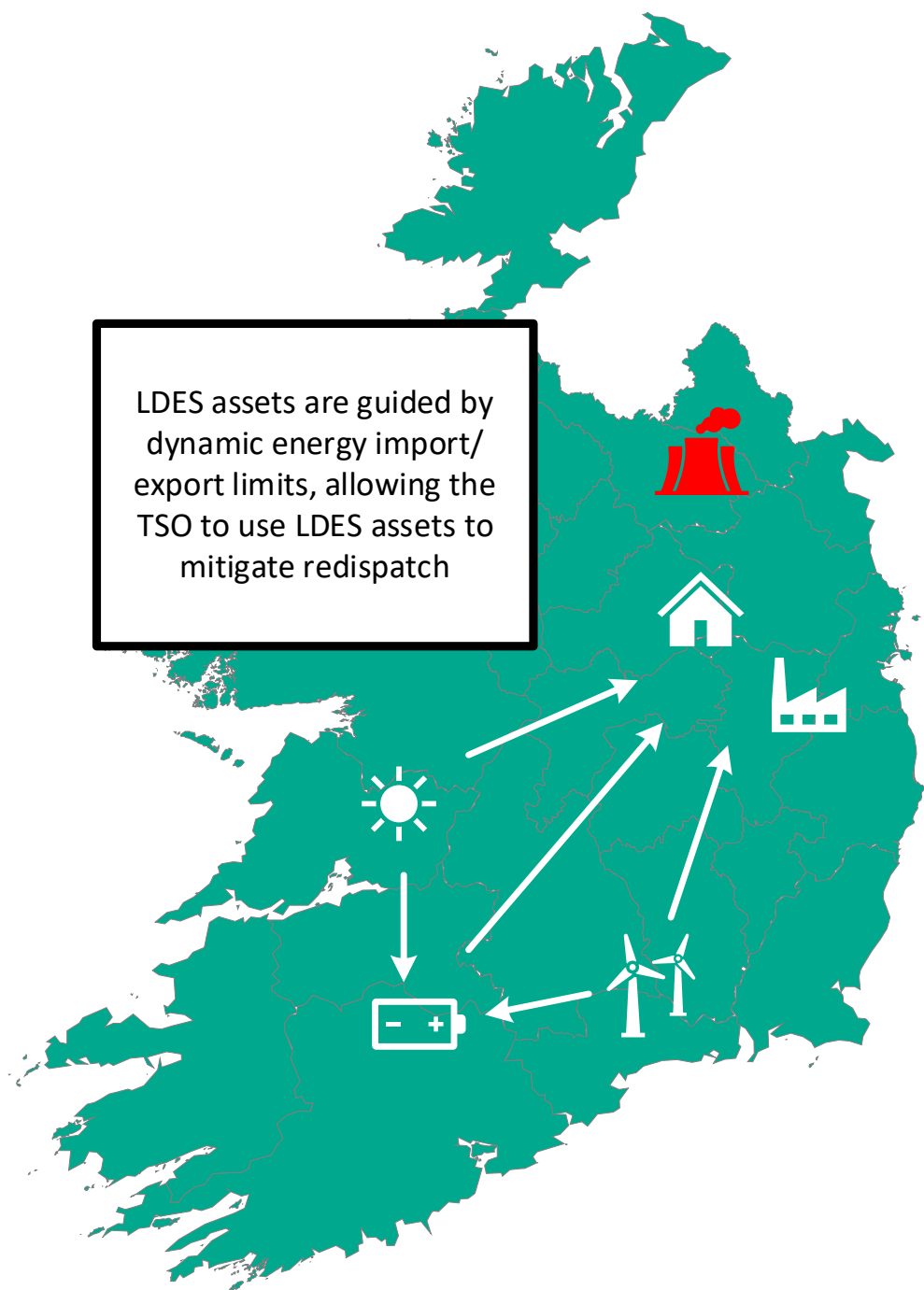
Background

Government requirements and need to reduce renewable dispatch down

The Electricity Storage Policy Framework (ESPF), published by the Department of Climate, Energy and Environment (DCEE) in July 2024, called for, under Action 6, the immediate procurement of up to 500 Megawatt (MW) of long duration electricity storage services of equal to or greater than 4 hours discharge duration of electricity back to the Transmission System.

With increasing amounts of renewable generation in Ireland coming from intermittent and non-synchronous resources such as wind and solar, there are currently many instances where the transmission grid cannot accommodate all available electricity generation from these sources, either due to local requirements (e.g. network constraints) or system wide requirements (e.g. system wide SNSP curtailment or minimum number of conventional units required for other technical reasons).

The majority of responses to the Call for Evidence from 2023 indicated that there is a missing money issue regarding the development of new energy storage projects. Respondents commented that the root of the problem is a lack of revenue from current markets and a general lack of certainty leading to a shortfall in LDES development.



Procure a time-shifting service and implement an operational envelope model

Proposed Solution

Service Definition

“the ability to import (consume), store and export (back to the transmission system) electricity at times deemed suitable by the TSO to reduce re-dispatch”

Procurement arrangements

1. Qualification System Publication
2. Qualification Phase
3. Tender Process
4. Notification of Preferred Bidders and Contract Award Process

Procurement considerations

- Technology neutral - 4 hr minimum duration, no max duration
- Market based solution
- Allow revenue stacking and participation in all markets
- Aim to target renewable dispatch reduction & timely delivery
 - Locational weightings proposed for procurement
 - Extra weighting for utilisation of existing transmission connection points (hybrid sites)
- 201 MW minimum procurement for Phase 1

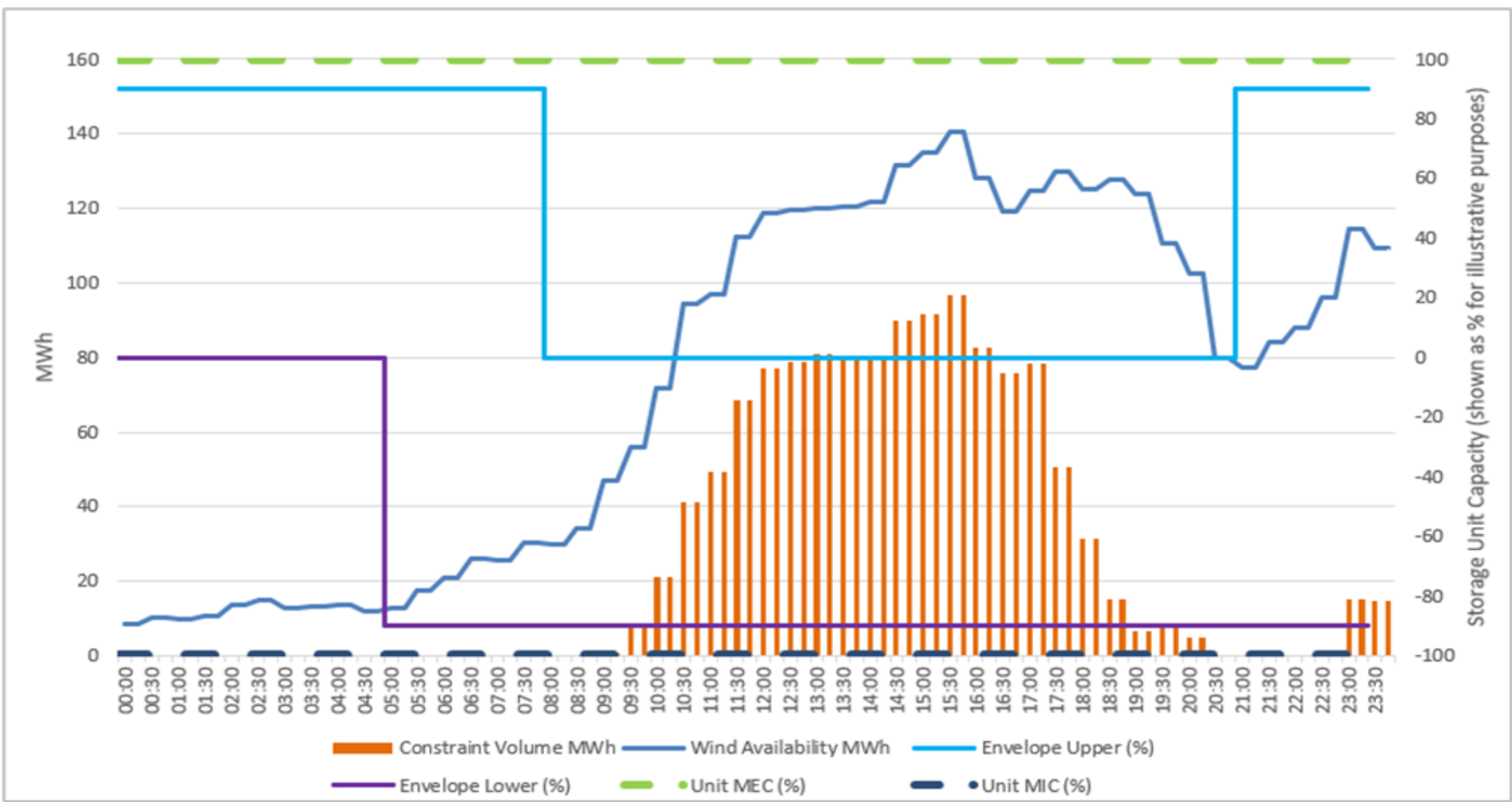
Service compensation

- Revenue floor
- Sharing factor
- Ex-post true up

Operational considerations

- Address lack of locational signals in the market
- Individual envelopes to be provided to units before day ahead gate closure & DASSA auctions
- Constraint based import and export limitations where market signals may not align with system needs
- Market signals should help deliver curtailment reduction
- Non-compliance charges for acting outside of envelope

Example operational envelope



Next Steps

Procurement mechanism consultation and timeline

Description	Start Date
LDES procurement mechanism consultation: publication	13 Oct 2025
Six-week consultation response window	24 Nov 2025
LDES procurement mechanism: recommendation paper and CRU Procurement mechanism decision	Q1 2026
LDES contract and evaluation approach consultation: publication	Q2 2026
Eight-week consultation response window	Q2 2026
LDES contract and evaluation approach: recommendation paper and CRU LDES contract and evaluation method: decision	Q4 2026
Launch LDES procurement round	Q1 2027
Contract execution	Q4 2027

Long Duration Energy Storage (LDES) Procurement mechanism consultation

Publication date: xx xx 2025

Consultation closing date: xx xx 2025



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