Roadshows Presentation Slides

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Agenda

Frequency Response Reform updates

Maximum Ramp Rates

Availability & State of Energy

24/7 Non-BMU Data

24/7 Arming Instructions

New Reason Codes for Dis-arming & Re-arming BMUs

Resubmission of Performance Monitoring After the Deadline

Monitoring, Reporting and Penalties

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Reserve Reform Updates

Use of Balancing Reserve and Quick Reserve

Headline Parameters Quick (phase 1) and Slow

Delivery Plan

Balancing Reserve

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Response Reform

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Dynamic Response policy: Maximum Ramp Rate
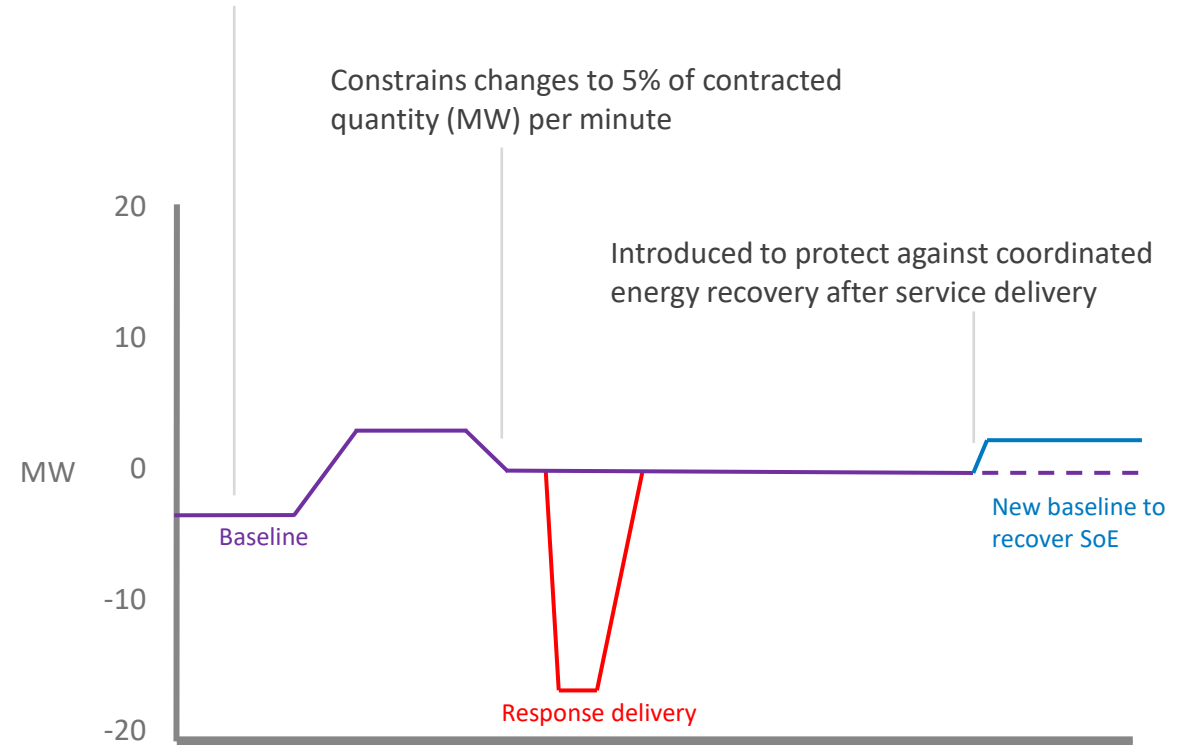
Proposal

- Remove the Maximum Ramp Rate

Explanation

- Removing the Maximum Ramp Rate could unlock benefits of in greater participation in other markets, more efficient state of energy management, and remove the disincentive on small bid sizes
- In our review of the rule, we considered the system security impacts of removing the Maximum Ramp Rate are outweighed by these benefits

Implementation

- We intend to consult on Service Term changes in June-24
- We propose the removal of the Maximum Ramp Rate would take effect immediately following Ofgem approval (as soon as Oct-24)
- As we communicated to providers in April-23, we currently are not enforcing the Maximum Ramp Rate
- We will monitor effects of removing the Maximum Ramp Rate

Maximum Ramp Rate applies to baseline during, and SP either side of, Contracted Service Period

Constrains changes to 5% of contracted quantity (MW) per minute

Introduced to protect against coordinated energy recovery after service delivery

20

10

MW   0

-10

-20

Baseline

Response delivery

New baseline to recover SoE

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Dynamic Response policy: Availability & SoE

Proposal

- There will be no fundamental change to the existing availability or SoE policy
- We are proposing to add the SoE management values from guidance and into the service terms.
- We wish to clarify the service terms to ensure that the availability policy is clear, consistent and fit for purpose to ensure system security

Explanation

- Ensuring that we have the right availability policy in place is critical in ensuring that we have enough response available to us when needed during a frequency response event.
- Our review of availability policy considered different potential solutions such as partial availability which proved to pose too much of a risk to system security.
- Enforcing the SoE management rules will ensure we have the appropriate tools to incentivise the required behaviour to support system security

Implementation

- We are currently checking how frequently assets are declaring unavailable and when assets are not correctly managing their SoE, which is prompting conversations with account managers.
- We will review the current service terms and guidance documentation and revise if appropriate to ensure that they are clear and consistent.

IT change: Fix to partial availability submission for NBMUs

- A fault with the ability declarations for NBMUs has been identified in our systems.
- As a consequence we will be rescinding the ability to submit "partial availability" which is not in line with the service terms
- From 24th June 2024 NBMUs will only be able to submit 0MW or the full contract value as their availability submission.

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Dynamic Response policy: 24/7 NBMU data

Proposal
- Require Non-BM participating Response Units to submit operational baselines and operational metering at all times
- Currently we require operational baselines and operational metering during contracted service periods (/and the SP either side)

Explanation
- Enhanced distributed energy resource (DER) visibility will facilitate new and coordinated market access and is critical to effective and efficient system operation
- Through our DER Visibility Programme, we anticipate rolling out industry-wide visibility improvements in the medium-longer term
- But there is an urgent case to address forecasting errors and situational awareness challenges caused by lack of continuous visibility
- NBMU Dynamic Response units, and other NBMU ancillary service units, have the capability to submit this data and are likely to be disproportionate drivers of forecasting errors and situational awareness challenges.
- As such, we consider introducing this requirement represents a pragmatic, targeted step along the path to fuller DER visibility

Implementation
- We wish to engage with providers on implementation options, practicability, costs and impacts on technology type
- One option for enforcement is to make participation in Response auctions conditional on having continuous submission of Response Unit operational data
- We intend to consult on changes in June-24
- Implementation would be no sooner than Oct-24, reflecting our determination of appropriate lead-in time
- We are currently considering Dynamic Response markets, but will consider applicability to other ancillary service markets as appropriate

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[Oct-24] Dynamic Response policy: 24/7 arming instructions

Proposal
- ESO may send disarming and re-arming instructions outside of contracted service periods
- Participant to acknowledge instruction following receipt, then **to have in effect from the start of next contracted period**

Explanation
- Currently, the Service Terms only provide for the ESO to issue an instruction during a contracted service period.
- Service Providers must bring the instruction into effect within two minutes of its receipt.
- This could mean the ESO is aware in advance of an operational need to have units disarmed (or re-armed) from the start of a contracted service period, but does not have the ability to require disarming (or re-arming) until 2 minutes after the start of the contracted service period.

Implementation
- We intend to consult on changes to Service Terms in June-24
- Implementation would be no sooner than Oct-24, reflecting our determination of appropriate lead-in time

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Response IT – New Reason Codes for Disarming & Re-arming BMUs

- There will be new reason codes for disarming and re-arming BMUs for DM, DR and DC via EDL.

- The new codes will take effect in June 2024

- Please contact our test team via email to arrange (optional) testing of the new codes:
Sandeep.Burde1@nationalgrid.com

- Testing is available for booking 20th – 31st May 2024

New Reason Codes:

Reason Code	Instruction Description	Reason Code	Instruction Description
XCL	Cease DCL	DCL	Resume DCL
XCH	Cease DCH	DCH	Resume DCH
XML	Cease DML	DML	Resume DML
XMH	Cease DMH	DMH	Resume DMH
XRL	Cease DRL	DRL	Resume DRL
XRH	Cease DRH	DRH	Resume DRH

N.B. The valid EDL Reason Codes are published on our website here: https://www.nationalgrideso.com/document/33351/download

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Response IT – Resubmission of Performance Monitoring after deadline

- A new process will be introduced to allow providers to resubmit their performance monitoring data after the usual deadline of the 5th day of the following month

- Providers will need to contact their account manager to kick off the process of a resubmission

- If the account manager approves the request, a window will be opened for the provider to resubmit the performance monitoring data via the usual systems

- The provider will receive updated settlement information via the usual systems

- We expect this facility to be available from end of June 2024.

Response IT – Monitoring, Reporting and Penalties

This introduces a method of systematically and automatically monitoring non-submission, non-compliance and potential gaming for all response units. Below you can find the specific areas of focus, which will be automatically penalised and which will be reported to account managers.

We expect to introduce these checks incrementally starting in July 2024 with all checks in place by Sep 2024.

Area of focus	Automatically penalised / Reported to account manager
Non-submission of baselines, metering, performance monitoring and connection indicators	Automatically penalised if below threshold
Non-compliance with disarming or re-arming instructions	Automatically penalised if below threshold
Non-compliance with ramp rate	Reported to Account Manager*
Non-compliance with baseline	Reported to Account Manager
Non-compliance with state of energy guidelines	Reported to Account Manager
Gaming Checks to include: • Check that performance monitoring data is in line with operational metering data • Check that the performance monitoring data is independent of the ideal response and has no correlation • Check for periodic and high-level of unavailability. Unavailability if not random, could indicate systematic, deliberate gaming.	Reported to Account Manager

*This will be monitored even though we expect to remove penalties for breaching ramp rates in the next consultation on service terms

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Dynamic Response policy: Penalties

Proposal
- The ESO is proposing the introduction of a regime of tiered penalties which will address instances of non-compliance through a progressive series of actions and provides an opportunity for rectification.

Explanation
- **Non-submission of data:** The regime will target specific checks such as data Non-Submission for Baseline, Metering (Operational), Perf. Mon. data and Connection Indicator. Automatic penalties will be generated for data non-submission breaches.
- **Behavioural checks:** Further checks for SOE Non-compliance, Baseline Non-compliance, Disarm/Re-arm Non-Compliance, Gaming Check, and Strategic Unavailability will initially generate a formal conversation with your Account Manager. Persistent non-compliance will lead to application of penalties.

Process
- **Deemed Unavailability**: Continued non-compliance leads to deemed unavailability for a settlement period, while further non-compliance may result in an EFA block, indicating a more serious breach.
- **Suspension and Deregistration**: Persistent non-compliance or lack of corrective actions could lead to suspension (temporary) and potential de-registration from the system.

Implementation
- We intend to consult on these changes in June 2024 with implementation and enforcement from October 2024 subject to Ofgem approval

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Mandatory Frequency Response

Proposal

1. Extend derogation to continue procuring MFR as is beyond March 2025

2. Explore code changes to make MFR compliant with relevant Electricity Regulation, ie
   - Contracting periods to 24 hours
   - Contracts concluded day-ahead
   - Separate procurement of high and low

3. Consider longer term reform of real-time mandatory service in context of REMA, Dynamic Response reform etc

Explanation

- We currently procure MFR monthly, apply monthly contracts, and procure upward and downward balancing capacity bundled together.

- This is contrary to Article 6(9) of the Regulation (EU) 2019/943 ('Electricity Regulation') and Article 32(3) of Commission Regulation (EU) 2017/2195 establishing a guideline on electricity balancing ('EBGL')

- We currently have a derogation from these requirements until 31 March 2025

- We consider MFR is essential and economical as a response of last resort, commercial counterfactual, and route to increasing holding in real-time and as such will seek a continued derogation

- At the same time, we will explore code changes to make MFR compliant as soon as possible

- In parallel, we will consider longer term reforms across our response services suite to determine the most efficient role for a mandatory real-time response service and will be seeking industry input on the best way to achieve this

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Response Roadmap

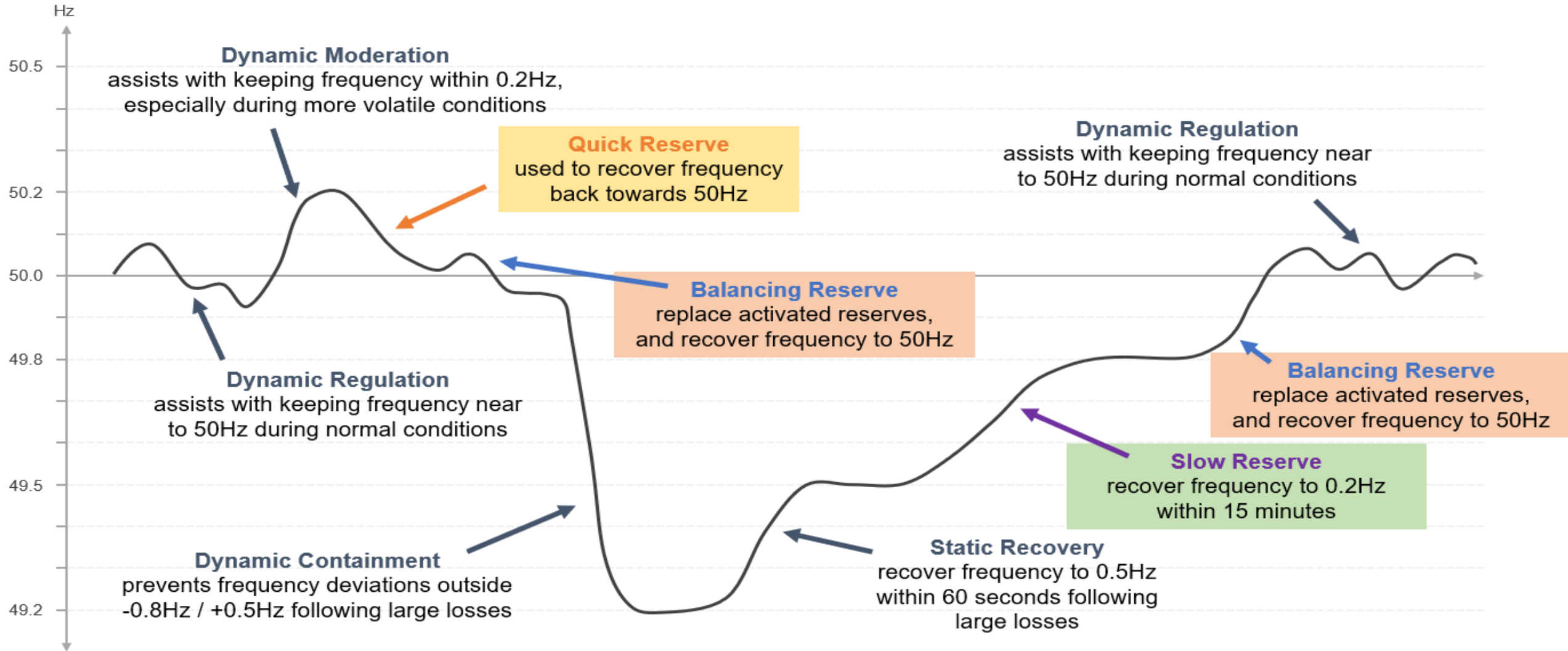|	H1 2024	H2 2024	2025 / 2026
MFR			• MFR Derogation Extension • Transition to OBP
Dynamic services	• New Reason Codes • Introduction of automated monitoring • Resubmission of Performance Monitoring	• New Penalties regime • 24/7 Data (NBMU) • 24/7 Instructions • Ramp Rate removal • Max Unit Size increase	• Transition to OBP • Non-integer MW values

Future considerations:

- Locational Procurement
- Closer to real time procurement
- Reduce EFA blocks to 30 mins
- Target Frequency Instruction
- Reformed MFR
- Reformed sFFR

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Reserve Reform

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Use of Balancing, Quick and Slow Reserve

Dynamic Moderation assists with keeping frequency within 0.2Hz, especially during more volatile conditions

Quick Reserve used to recover frequency back towards 50Hz

Dynamic Regulation assists with keeping frequency near to 50Hz during normal conditions

Balancing Reserve replace activated reserves, and recover frequency to 50Hz

Dynamic Regulation assists with keeping frequency near to 50Hz during normal conditions

Balancing Reserve replace activated reserves, and recover frequency to 50Hz

Dynamic Containment prevents frequency deviations outside -0.8Hz / +0.5Hz following large losses

Slow Reserve recover frequency to 0.2Hz within 15 minutes

Static Recovery recover frequency to 0.5Hz within 60 seconds following large losses

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Headline parameters: Quick (Phase 1) and Slow

Design Element	Quick Reserve (Phase 1) Proposal	Slow Reserve Proposal
Direction	Positive and Negative	Positive and Negative
Time to Full Delivery	1 minute	15 minutes
Minimum Activation Period	Up to 5 minutes	Up to 30 minutes
Max Recovery Period	Up to 3 minutes	Up to 30 minutes
Service Window	30-minute Settlement Period blocks	2-hour blocks at 30-minute granularity
Energy Requirements	Unit must be able to deliver the full contracted capacity per Service Window.	Unit must be able to deliver the full contracted capacity per Service Window.
Frequency of Procurement	Daily – Firm procurement	Daily – Firm procurement Optional – Within day
Auction Platform	EAC	EAC
Auction Timing	Results by D-1 14:30	Results by D-1 09:00
Aggregation	Yes, per GSP group	Yes, per GSP group
Bid Sizing	Above or equal 1MW, up to 300MW	Above or equal 1MW
Payment Structure	Firm: Availability + Utilisation Optional: Utilisation only	Firm: Availability + Utilisation Optional: Utilisation only
Payment Mechanism	Availability: Pay-as-Clear Utilisation: Pay-as-Bid	Availability: Pay-as-Clear Utilisation: Pay-as-Bid

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Delivery Plan

Quick Reserve Phase 1 - BM

- A18 consultation – May 2024 / go live - Autumn 2024

Quick Reserve Phase 2 – Non BM

- Further industry engagement on service designs through 2024

- Go live - mid 2025

Slow Reserve – BM and Non BM

- Further industry engagement on service designs through 2024

- Go live - mid 2025

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Balancing Reserve