

A landscape photograph of a valley with mountains and glowing yellow light trails. The scene is captured during sunset or sunrise, with a bright sun partially obscured by clouds in the upper left. The mountains are dark and rugged, with some snow or light-colored patches. The foreground is a grassy valley floor. Several bright, glowing yellow light trails curve across the valley, suggesting a long-exposure shot of a road or a path. The overall mood is dramatic and scenic.

Stakeholder Workshop for Transmission Licence Condition C16 & Relevant Balancing Services (RBS) Guidelines

7 November 2022

Introduction

Purpose of today

- Early sharing of possible changes to the statements in the consultation this year
- Discussion and feedback from industry on possible changes and additional suggestions

Goal of today

- Build clarity on the change being recommended, and where priorities are
- We encourage attendees to challenge or support what is presented at the end of each topic
- Not to agree or finalise changes, but to have a structured open discussion

Next steps

- This is an “informal” element of the C16 process.
- The obligations and formal consultations begin in 2023, and this event is an important feeder into that work

Introduction – Jon Wisdom

- Please stay on mute and with your camera off
- Please raise hands/post questions in the teams chat after each section

Update on changes since C16 Annual Review 2021/22

- MW Dispatch
- Winter Contingency Services
- ODFM
- Demand Flexibility Service*

RBS Guidelines are now administrated under Code Change Delivery and will be reviewed annually with C16.

Early sharing of possible changes to the statements in this years C16 consultation

Introduction to our new services

- Balancing Reserve (BR)
- Slow & Quick Reserve

Early thoughts on redrafts of the Statements for existing services

- Static Firm Frequency Response (FFR)
- Dynamic Moderation (DM) & Dynamic Regulation (DR)

Early sharing of possible changes to the Relevant Balancing Services Guidelines (RBS)

Introduction to our new services

- Local Constraint Markets (LCM)

Early thoughts on redrafts of the guidelines for existing services

- Network Services Procurement: Commercial Inter-trip Service

C16

Consultation



C16 Introduction

- Standard Condition Licence C16 "Procurement and use of balancing services" sets out the obligation on National Grid ESO to publish five statements addressing the procurement and use of balancing services. It also sets out the process to be followed in amending the five statements.
- The five documents are:
 - Procurement Guidelines;
 - Balancing Principles Statement;
 - Balancing Services Adjustment Data Methodology Statement (BSAD) ;
 - System Management Action Flagging Methodology Statement (SMAF);
 - Applicable Balancing Services Volume Data Methodology Statement (ABSVD)

Update on
changes since
C16 Annual
Review 2021/22



MW Dispatch

Update on changes since C16 Annual Review 2021/22

Keith Parker , Product Owner

MW Dispatch

- The MW Dispatch service is a pre fault 'turn to zero' service being developed for trial with DERs in the NGED (WPD) DNO region – utilisation payment only service
- South West only in the initial phase
- DERs will register upfront for the service and agree a multipartite (ESO / DNO / DER Contract)
- Registration anticipated to start late 2022 with first trial dispatch instructions expected to be issued Spring 2023
- Dispatch solution utilises existing NGED Customer Control Panel functionality to dispatch based on ESO Control Room instructions
- Plans are to roll out to other areas on a 'needs case' basis

Winter Contingency Services

Update on changes since C16 Annual Review 2021/22

Ad-hoc C16 consultations (September & October)

Rob Marshall, Contracts Manager

Winter Contingency Services

What are the Winter Contingency Services (WCS)?

- At the request of BEIS, the ESO has agreed contracts with Drax, EDF and Uniper to extend the life of coal fired power plants this winter. The new winter contingency contracts will only be used as a last resort and to ensure resilience and security of supply. These units will be available from 1 October 2022 until 31 March 2023, with expected capability to generate in the region of 1-2 TWh.
- Costs will be recovered through BSUoS between 1 October 2022 and 31 March 2023.
- The units contracted will not be available to the open market and will only be dispatched at the request of the ESO. These contracts are only intended to be used when all commercial options have been exhausted within the Balancing Mechanism.
- Volumes delivered under the 2022/23 Winter Contingency Services will be submitted in the BSAD. Volumes will be system flagged and priced at £99,999/MWh.

What will be changing

The WCS contracts are in place between 1 October 2022 to 31 March 2023 and therefore shall be removed from the C16 statements from 1st April 2023, as the services will not be utilised beyond this point.

Services and statement impacted:

Current wording regarding these services will be removed from the following statements: SMAF, BSAD, ABSVD, Balancing Principles

ODFM

Update on changes since C16 Annual Review 2021/22

Rob Marshall, Contracts Manager

ODFM

- The ODFM product was a temporary arrangement to manage unforeseen and unprecedented low demand conditions between April and October 2020, and to minimise any potential use of Grid Code emergency measures to curtail embedded generation
- The service was reinstated for summer 2021 as there were credible forecast scenarios in which it was required, however it has not been utilised since being reinstated in May 2021 and the service is no longer operational
- In last years review we indicated we would be reviewing to remove ODFM. This year we will be removing ODFM from the included statements; Procurement Guidelines, ABSVD & BSAD

Early sharing of possible changes to the statements in this years C16 consultation



A futuristic, curved hallway with blue lighting and people walking. The hallway is long and narrow, with a curved ceiling and walls. The floor is dark, and there are bright blue light trails on the floor. Several people are walking away from the camera. The overall atmosphere is high-tech and modern.

New Services

Balancing Reserve

Early sharing of possible changes to the statements in the C16 consultation

Ewa Krzywkowska, Ancillary Services Design Engineer

Balancing Reserve

What is Balancing Reserve?

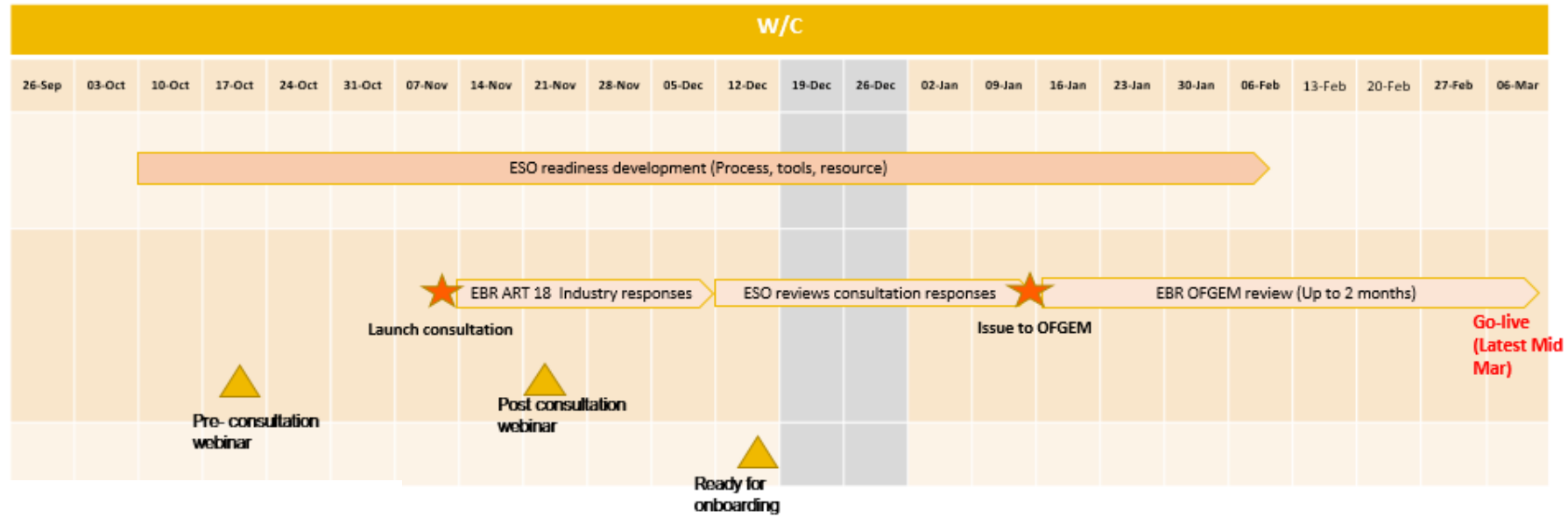
- Balancing Reserve (BR) is designed to balance demand and generation in real-time and reduce balancing costs.
- Daily auction which will lock in volume at day ahead, securing our requirement for headroom or foot room. Therefore, buying reserve capacity will improve system security as the unit headroom and footroom will be guaranteed for the Control Room to access when needed.
- This product has a potential to bring significant savings to balancing costs from procurement at day ahead stage.
- Buying reserve capacity ahead of time means that the purchase of our reserve requirements would be aligned with the wholesale market in a timescale that allows the market to re-balance their position before gate closure. This would move the scarcity into a more transparent, liquid and competitive market with more participants and better information balance between the market participants.
- Utilisation will be in line with normal Balancing Mechanism operation by way of Bid-Offer Acceptances (BOAs) via EDL/EDT.

Design Element	Proposal
Direction	Positive and Negative
Minimum Contract Size	50 MW
Providers	BM providers with telephone control during contracted windows and MFR capability
Time to full delivery	As specified by Providers with minimum ramp of at least 10 MW/min
Energy Requirement	The unit must be able to deliver the full contracted capacity per Service Window
Operational Metering	As per GC
Dispatch mechanism	BOA for BM units
Notice to start ramping	As per GC - 2 minutes
Ramp rates	Maximum as per GC and minimum ramp-up and ramp-down rate to be at least 10 MW/min
Performance Monitoring	“Event of Default” on Availability and Utilisation of Providers in Service Windows Imbalance will be settled by Elexon calculation
Baselining	As per GC – Physical Notifications
Service Window	30 minutes (Settlement Periods)
Frequency of Procurement	Daily
Auction Timing	Results by D-1 09:00 am
Stacking	Same MW cannot be sold twice
Linking of bids	Yes, by Service Windows
Payment Structure	Availability + Utilisation
Payment Mechanism	Availability: Pay-as-clear Utilisation: Pay through BM



Balancing Reserve

When will the changes take place?



Services and statement impacted:

We will be adding Balancing Reserve into the Procurement Guidelines to provide information on the service.



Slow and Quick Reserve

Early sharing of possible changes to the statements in the C16 consultation

Adrian Sellar, Market Development Lead

Slow and Quick Reserve

We are planning to deliver two new reserve products in Q3/Q4 2023-24.

Description of new Service(s)

- Quick Reserve: Reacting to pre-fault disturbances to restore the energy imbalance quickly and return the frequency close to 50.0 Hz
- Slow Reserve: Displace large losses on the system and recover frequency to $\pm 0.2\text{Hz}$ within 15 minutes
- Firm and Optional Service: Dual direction: Positive & Negative Reserve
- Open to BM and non-BM participants (transmission or distribution connected)
- Minimum Capacity: 1MW
- Max bid volume: 300 MW per unit (Quick Reserve only)

When will the changes take place

- We intend to deliver both services in Q3/Q4 2023-24. We will stagger the delivery to ensure a period of bedding in.

What will be changing

- Whilst these new services do intend to replace the exiting STOR and Fast Reserve services, we have no specific plans to phase them out for the time being.
- Neg. Slow Reserve was included in the statements listed below last year; however, its delivery has been reprocured. We therefore intend to update the statements to include by Slow and Quick Reserve (Pos. and Neg.)

Services and statement impacted

- Balancing Principles Statement, Procurement Guidelines Statement, BSAD Methodology Statement, ABSVD methodology Statement



A landscape photograph of a field at sunset. The sun is low on the horizon, casting a warm glow. The field is green and yellow, with some dark trees in the background. Overlaid on the image are several bright green, glowing light trails that curve across the field. The text "Existing Services" is written in white, bold, sans-serif font across the lower part of the image.

Existing Services

Static Firm Frequency Response

Early sharing of possible changes to the statements in the C16 consultation

Eleanor Horn, Ancillary Services Analyst

Service transition

	Dynamic FFR	Static FFR
FY 2022-23	<ul style="list-style-type: none">- Dynamic service (as-is)- Procured monthly	<ul style="list-style-type: none">- Static service (as-is)- Procured monthly
FY 2023-24	<ul style="list-style-type: none">- Dynamic service (as-is)- Procured monthly	<ul style="list-style-type: none">- Static service (as-is)- Procured day-ahead
FY 2024-25	<ul style="list-style-type: none">- Ceased	<ul style="list-style-type: none">- Static service (as-is)- Procured day-ahead

- Following the delivery of Release 1 of response reform we intend to explore the role that a static response service might play in our enduring suite of response and reserve products, and what that static service looks like.
- We expect to continue to procure dynamic FFR during the warmer months in 2023 until the DM and DR markets develop. This is subject to extending a derogation against the Clean Energy Package regulation.



Static FFR – impact on C16

Description of change

We are proposing no changes to the Static FFR service technical parameters at this stage however we are looking to move procurement of the existing service from monthly tenders to daily procurement.

When will the changes take place

Our intention is that the move to daily procurement will take place from the 1st April 2023 (when our existing derogation expires) however we are simultaneously seeking an extension to the derogations for both Static and Dynamic FFR as we have reprioritised some workload elements due to impacts of winter planning and prep.

What will be changing

Procurement will take place at day ahead of delivery. We will no longer be allowing providers to link together bids for EFA blocks. There will only be one bid allowed per unit per EFA block.

Service delivery and testing will remain the same.

Services and statement impacted

There is expected to be a small change to Table 2 in the Procurement Guidelines to separate out Dynamic FFR (PSH) and Static FFR into two separate rows. We will then be able to reflect the change in procurement timescale:

Firm Frequency Response	website	MBSS	monthly	https://www.nationalgrideso.com/balancing-services/frequency-response-services/firm-frequency-response-ffr
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Dynamic Regulation (DR) & Dynamic Moderation (DM)

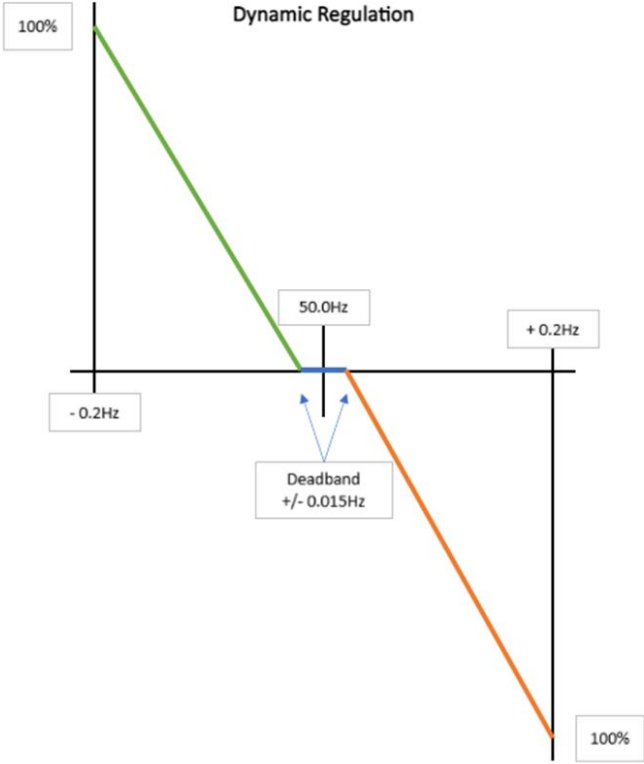
Early sharing of possible changes to the statements in the C16 consultation

Minesh Solanki, Market Change Delivery Officer

Dynamic Regulation

- Designed to slowly correct small continuous deviations in frequency around 50Hz.
- Won't need to respond as rapidly but must have a duration that supports continuous operation.
- These products were delivered in March 2022.

	Operational Range (Hz deviation)	Max. ramp start (s)	Time to full delivery (s)
Proportional to frequency	+0.015 to +0.2 -0.015 to -0.2	2	10



Services and statement impacted

Procurement Guidelines

Balancing Principles



Dynamic Moderation

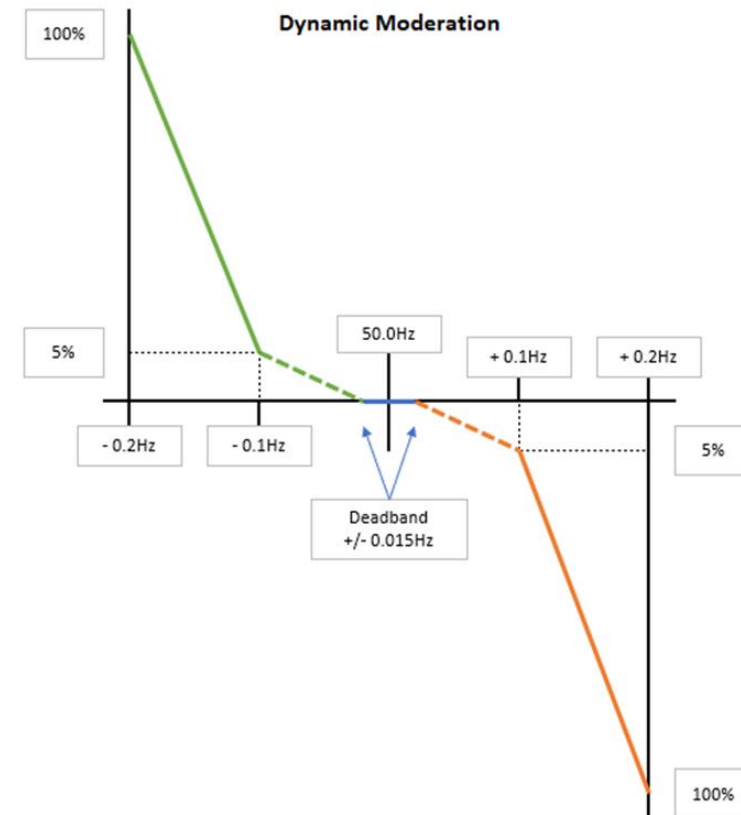
- Rapidly delivers with the aim of keeping frequency within operational limits.
- Helps to manage sudden large imbalances by responding quickly.
- These products were delivered in March 2022.

	Operational Range (Hz deviation)	Max. ramp start (s)	Time to full delivery (s)
Proportional to frequency	+0.1 to +0.2 -0.1 to -0.2	0.5	1

Services and statement impacted

Procurement Guidelines

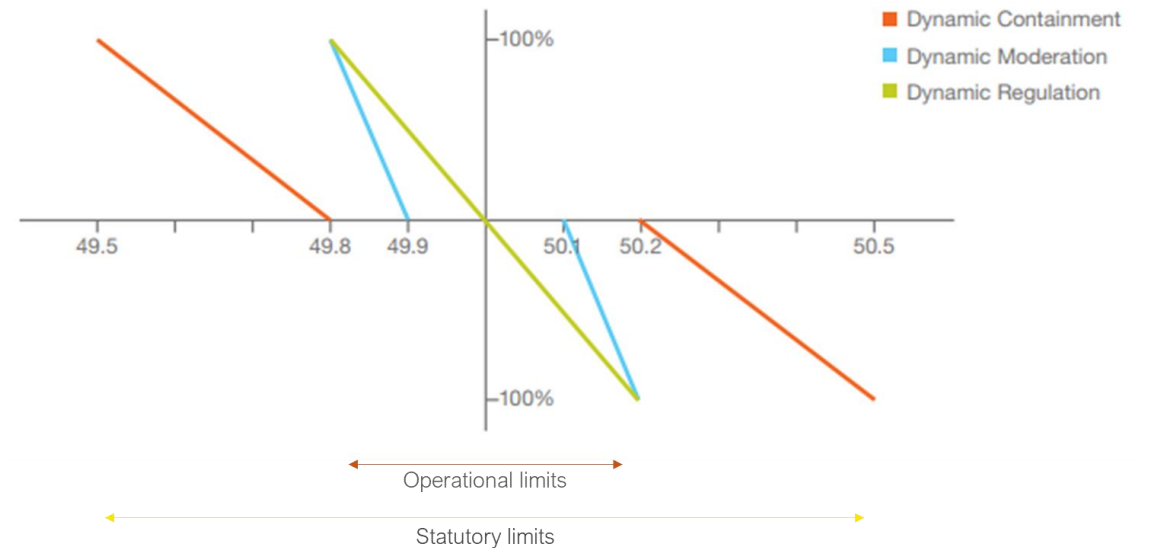
Balancing Principles



Frequency Response Products

High level overview

- All 3 products will work together to protect the system.
- DC kicks in post fault to 'catch' the frequency before it exceeds our SQSS requirements and causes backup schemes such as Low Frequency Demand Disconnection to activate.
- Whereas DM and DR support the system pre-fault to make sure that the frequency stays close to 50Hz most of the time, as we can never know when a fault will happen and so we always have to be ready.



A landscape photograph of a field at sunset. The sun is low on the horizon, casting a warm glow. The field is green and yellow, with some dark trees in the background. Several bright green light trails are superimposed on the image, curving across the field. The text "Other Report Updates" is overlaid in white at the bottom.

Other Report Updates

Balancing Principles Statement (BPS) Report

Pavinder Barbra, Senior Operational Insight Analyst

BPS Report

Provides information for instances where ESO needed to use additional measures to balance the system:

- BMU emergency instructions and interconnector emergency assistance/ instruction
- Demand control actions
- Maxgen
- Negative Reserve Active Power Margin (NRAPM) notice
- Electricity Margin Notices (EMNs)
- Black Start/ Islanding
- Communication failures
- Involuntary reductions
- BMUs disconnected by transmission faults

The final opinion for the BPS audit is included as an attachment to the BPS report

New services (discussed today) will be added to the BPS once they are live

BPS Report

We are currently unable to publish the reports as we are waiting for Auditor Opinion.

The reports will be published under the C16 Statements on the ESO Portal.

Procurement Guidelines Report Changes

- C16, Part G Paragraph 8 set out that NGESO must:
 - *By 31st May each year, prepare a report containing the total costs incurred in that regulatory year (Apr – Mar) on Balancing Services (excluding those acquired through acceptance of a bid or offer in the Balancing Mechanism)*
 - *Demonstrate within this report, how costs have been incurred in accordance with the Procurement Guidelines and Balancing Principles Statement*
 - *Submit the report to Ofgem along with a statement from an independent auditor, confirming that the report is accurate and the extent to which the NGESO has complied with the Procurement Guidelines and Balancing Principles*
- The first report of this kind was submitted to Ofgem earlier this year covering April 2021 – March 2022
- It can be found on NGESO’s website under the C16 statements and consultation section. The report is titled: “Annual Balancing Services Spend Report April 2021 – March 2022” <https://www.nationalgrideso.com/industry-information/codes/balancing-settlement-code-bsc/c16-statements-and-consultations>
- NGESO have held internal lessons learned sessions to discuss how the report can be improved for future years – one key finding is that to provide accurate information and enable a thorough audit to take place, 31st May deadline needs to be pushed back, propose 1st July
- Future sessions planned with auditor and Ofgem to discuss improvements
- This report provides a single view of Balancing Services spend which has been independently audited
- The next iteration of the report will contain any spend incurred between April 2022 and March 2023, including the new services set out within this presentation

RBS

Consultation



RBS Guidelines Introduction

- Ofgem have changed the CM Rules regarding RBS which came into force on 6th July 2021.
- The main changes involve the removal of the list of RBS (Schedule 4 Part 1) and of the Non-Balancing Mechanism Adjustment Formulae (Schedule 4 Part 2) from Schedule 4 of the CM Rules and publication within a separate documents known as the **RBS guidelines**.
- The ESO is responsible for the process administration and governance in the review of the RBS guidelines including; Managing the production of a consultation document, running industry consultation, Collating consultation responses, submission of recommendations to Ofgem for approval.
- To streamline the review process we will be conducting an annual RBS Guidelines review alongside C16 for changes effective from April 1st 2023

Early sharing of possible changes to the RBS guidelines in the consultation



A futuristic, curved hallway with blue lighting and people walking. The hallway has a curved ceiling and walls, with recessed lighting. The floor is dark, and there are bright blue light trails on the right side. Several people are walking away from the camera in the distance.

New Services

LCM

Early sharing of possible changes to the 2023 RBS guidelines

David Phillips, Product Owner, ESO Markets

Local Constraint Markets (LCM)

Description of product

Local Constraint Market (LCM) will provide an interim solution over the next three to four years to help manage the high and rising costs at the England/Scotland boundary. With industry and partners, we are finalising service terms for the LCM, which will be instructed ahead of BM actions. LCM is expected to be launched in Q1 2023.

Description of changes to existing Service(s)

No existing services are changed. (In some cases where BM may previously have been used for constraint management, LCM will be instructed instead).

When will the changes take place

An RBS change is proposed taking effect in April 1st 2023. Live use of the service will begin ahead of the RBS change in Q1 2023, with live trials expected earlier in the quarter.

What will be changing

A new LCM service will become available to non-BM generation turn down Providers and demand turn up Providers, including those registered in the Capacity Market. The existing service makes use of generation turn down from BM registered assets. The new service will engage wider assets and new flex providers and will be an additional option where it is more cost-effective than the BM.

Services impacted

No other services are directly changed or impacted. CM users who choose to participate in LCM prior to the RBS changes will not benefit from both services. (Prior to changes, the RBS allowance will not be in place to correct for coincident LCM/CM delivery).

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Existing Services

Network Services Procurement: Constraint Management Pathfinder

Early sharing of possible changes to the 2023 RBS guidelines

Haarith Dhorat, Senior Pathfinder Implementation Lead

Network Services Procurement: Constraint Management Pathfinder

Description of product

Constraint Management Pathfinder (CMP) allows contracted units to be armed thereby reducing the need to take actions in the BM.

In the event of a fault e.g., circuit trip, the armed units would be automatically tripped off in 150ms, reducing flows across a constraint boundary.

Currently, the service is looking at the B6 boundary (Anglo-Scottish border) but will be rolled out to other constraint areas.

Description of changes to existing Service(s)

The proposal is to add CMP to the list of service in the RBS so that contracted units would be able to continue to deliver under the CMP contract in the case of a CM event.

When will the changes take place

In the next update to the RBS document, effective from April 1st, 2023.

Services and statement impacted

CMP, added to the list of RBS

Industry

Suggestions



Industry Suggestions

Is there anything we haven't mentioned today that you were expecting to hear about?

Are there any further changes you were hoping to see?

Whilst we may not be able to provide a firm position on everything today, we will include these suggestions in our consultations, and we will use this process and further collaboration with industry to provide more clarity to your suggestions and questions

Next Steps



Next Steps

Key Dates for this year's C16 and RBS consultation

7th November 2022	Industry Event
15th November 2022*	Early Consultation Opens
6th December 2022*	Early Consultation Closes
9th January 2023	Official Consultation, with detailed changes, Opens
6th February 2023	Official Consultation Closes
13th February 2023	C16 and RBS Guidelines Reports to Authority issued
13th March 2023	Authority Direction deadline
1st April 2023	Release of new updated C16 statements and RBS Guidelines

* Dates not confined to license timelines so may be subject to change