



We will be starting at 3pm.

If you have any issues please email us  
directly at

[demandflexibility@nationalgrideso.com](mailto:demandflexibility@nationalgrideso.com)

ESO Demand Flexibility Service  
Industry Update Webinar  
16<sup>th</sup> March 2023

# Our presenters today

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Richard Hanson  
Flexibility Services  
Development Manager



Hannah Rochford  
Senior Balancing  
Markets Development  
Officer



Rob Westmancoat  
Senior Strategy Analyst

# Aims and objectives of the session

- Summarise our feedback from the show and listen event
- Share our learning to date
- Offer thoughts on potential routes for future options
- Launch our call for input on DFS
- Continue to collaborate with industry to form and shape future flexibility

## Q&A

Please submit your questions using the teams Q&A function

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A futuristic, curved tunnel with blue lighting and people walking. The tunnel has a curved ceiling and walls, with a series of blue light strips along the floor and walls. Several people are walking away from the camera in the distance. The overall atmosphere is modern and high-tech.

# Recap of winter 2022/23 and DFS

## Recap of winter 2022-2023

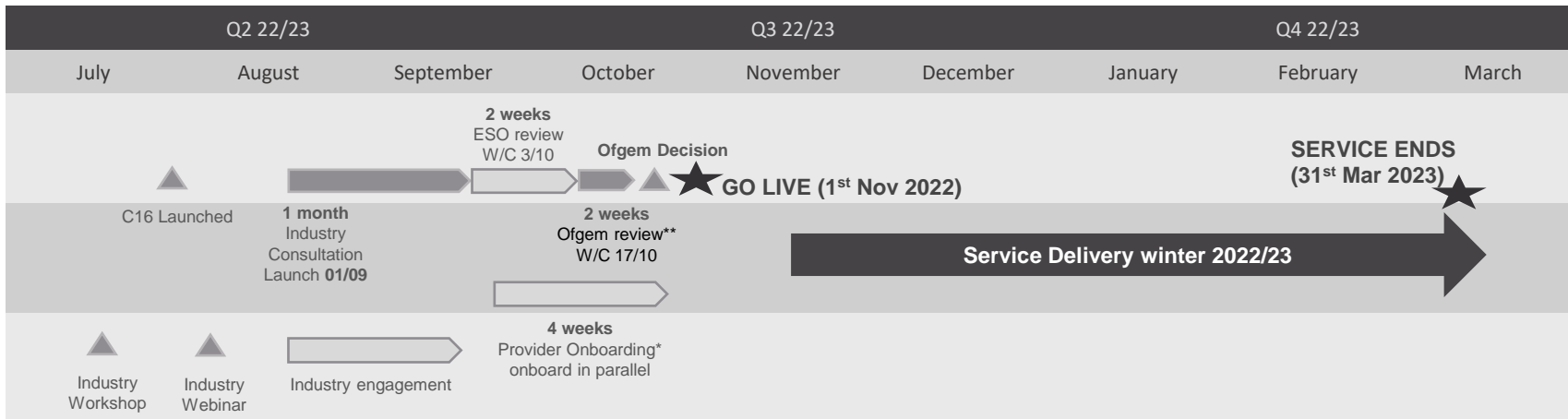
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- There were risks and uncertainties for winter 2022/23, as a direct result of possible shortfalls in Europe's gas supply
- As a prudent system operator, we took steps to ensure we were well prepared to maintain safe and secure operation of the electricity system
- Those steps included actions to build our resilience and mitigate the potential impact to electricity customers in GB
- The Demand Flexibility Service was launched to support a package of winter contingency options for ESO

# Design principles for last winter 2022/2023

We had five key design principles for the new demand flexibility service:

- **Simplicity** to maximise participation & enable implementation within the tight timeline for November '22
- **Transparency** to ensure we minimise any market distortion as a consequence of our actions
- **Minimising uncertainty** and **making the service viable** for providers as far as possible to maximise participation
- Usage in line with **operational needs**
- Accessing **new flexibility**, not existing flexibility (e.g. CMUs, existing Ancillary Service providers)



# DFS key statistics

2 Live events so far

c.0.6 GWh delivered

Over 1.6 million reach

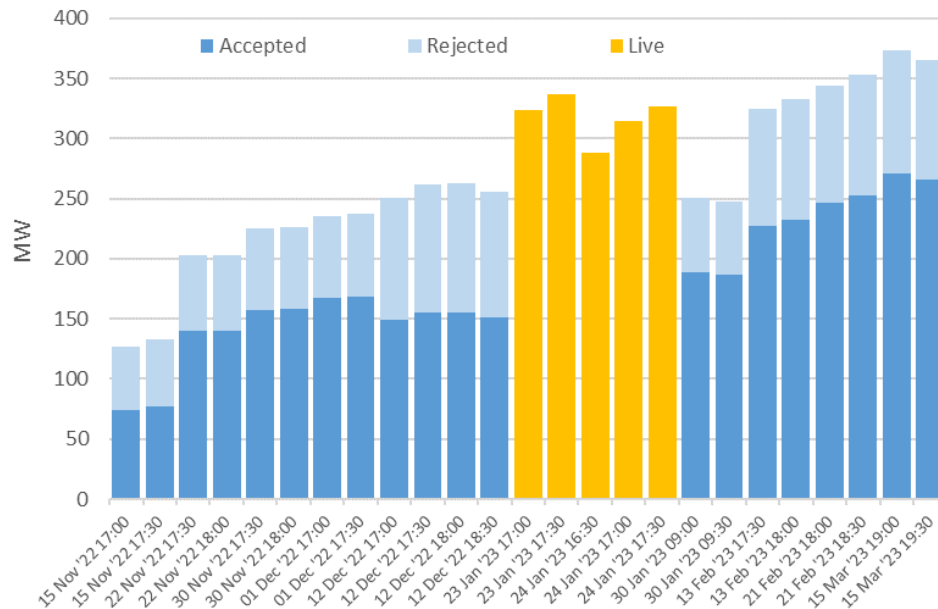
c.350 MW contracted capacity

31 DFS approved providers

16 onboarding & regular Tests so far

>1.6 GWh delivered

DFS volumes over winter 2022-23

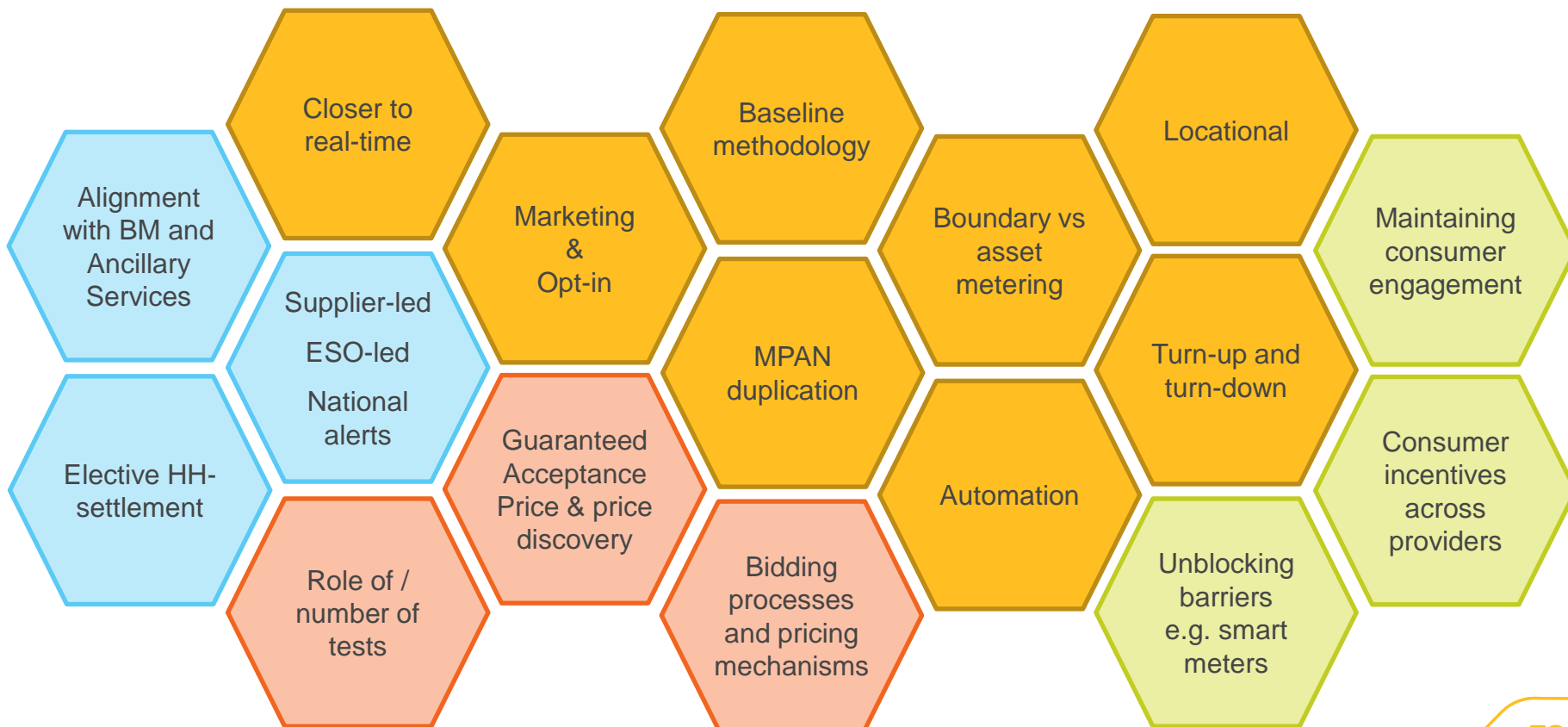




What  
we've  
heard



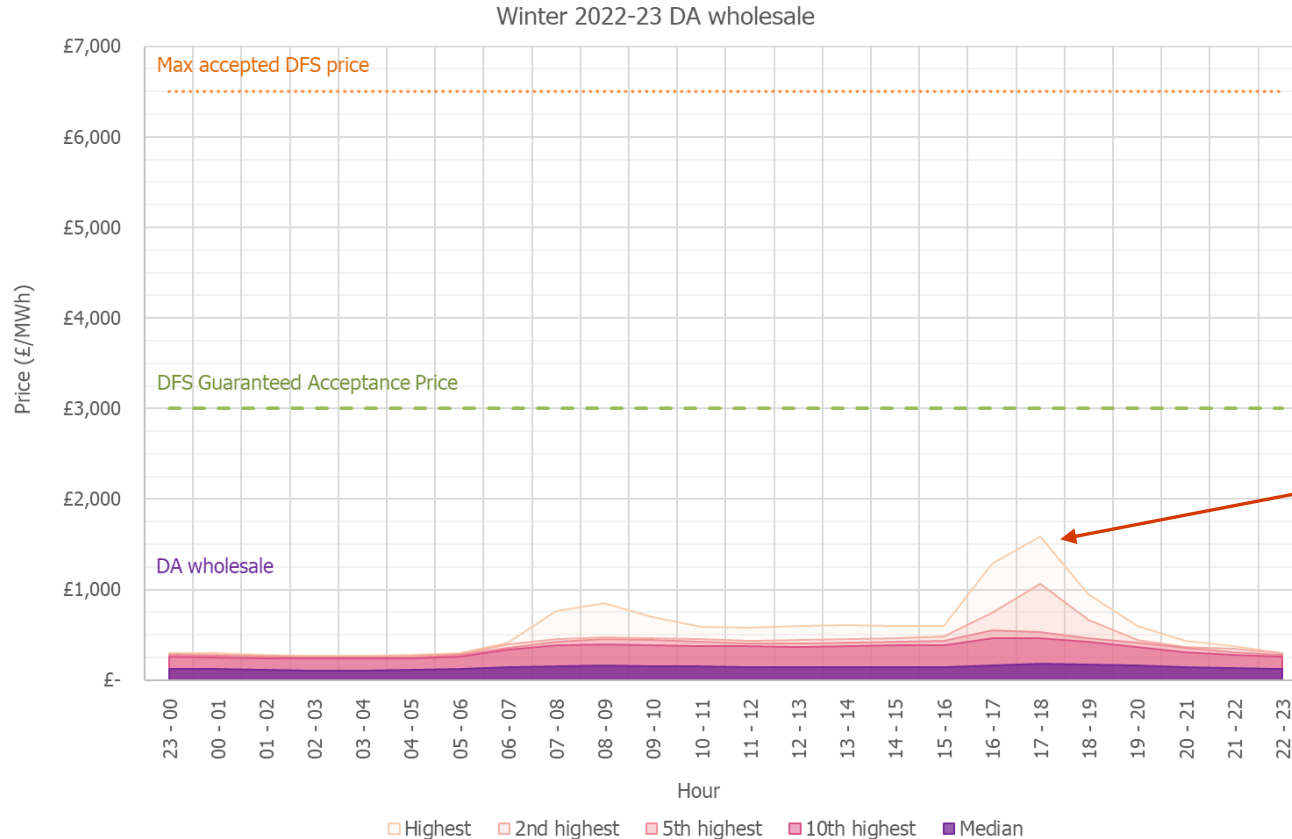
# Feedback from Show & Listen + 1:1s



A landscape photograph of a field at sunset. The sun is low on the horizon, casting a warm glow. The field is a mix of green and golden-brown grass. Several bright green, glowing light trails curve across the middle of the image, suggesting movement or data flow. The sky is a mix of orange, yellow, and blue.

# DFS learnings

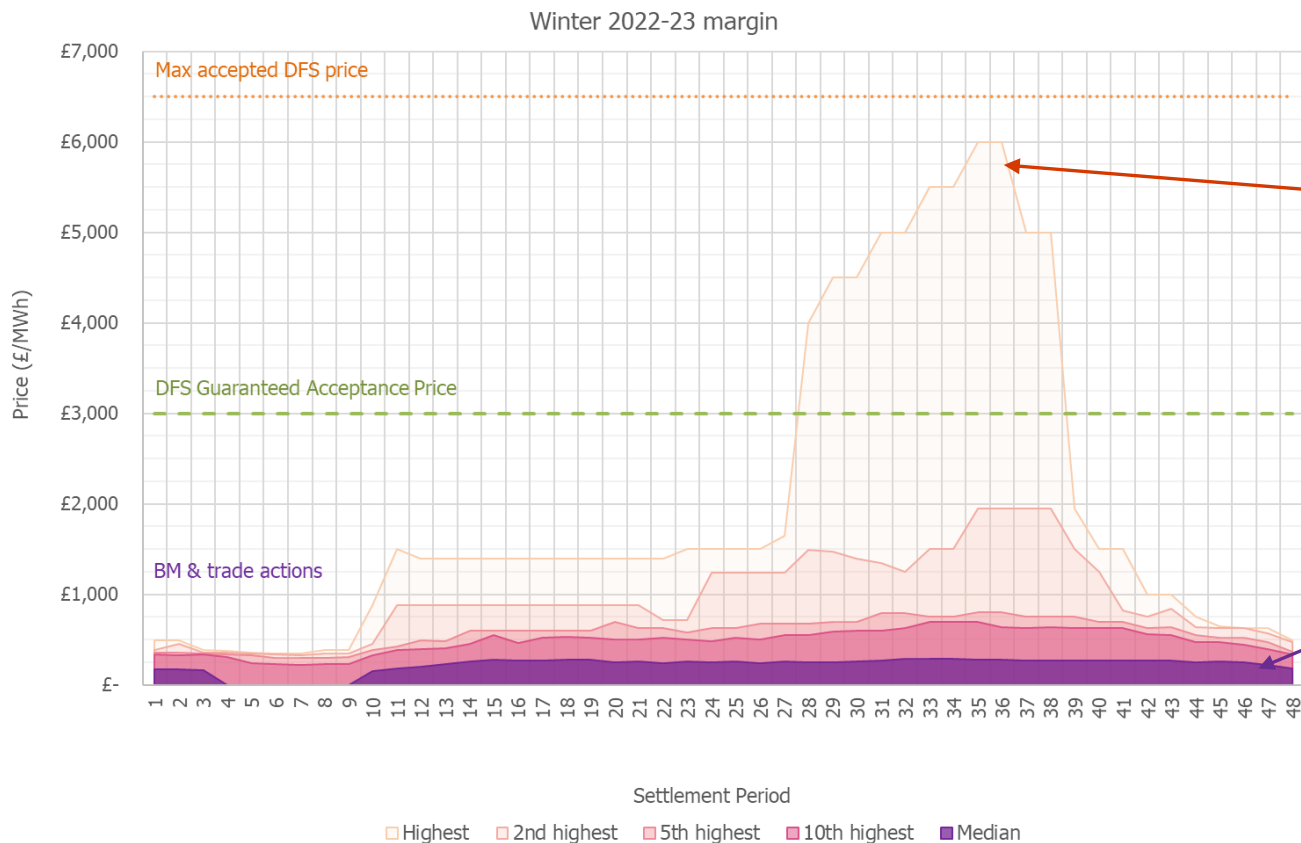
# DFS prices compared to other prices



Day Ahead wholesale prices have been well below the Guaranteed Acceptance Price (GAP) all winter

Despite this, we have seen other parties pursue their own commercial versions of demand flexibility

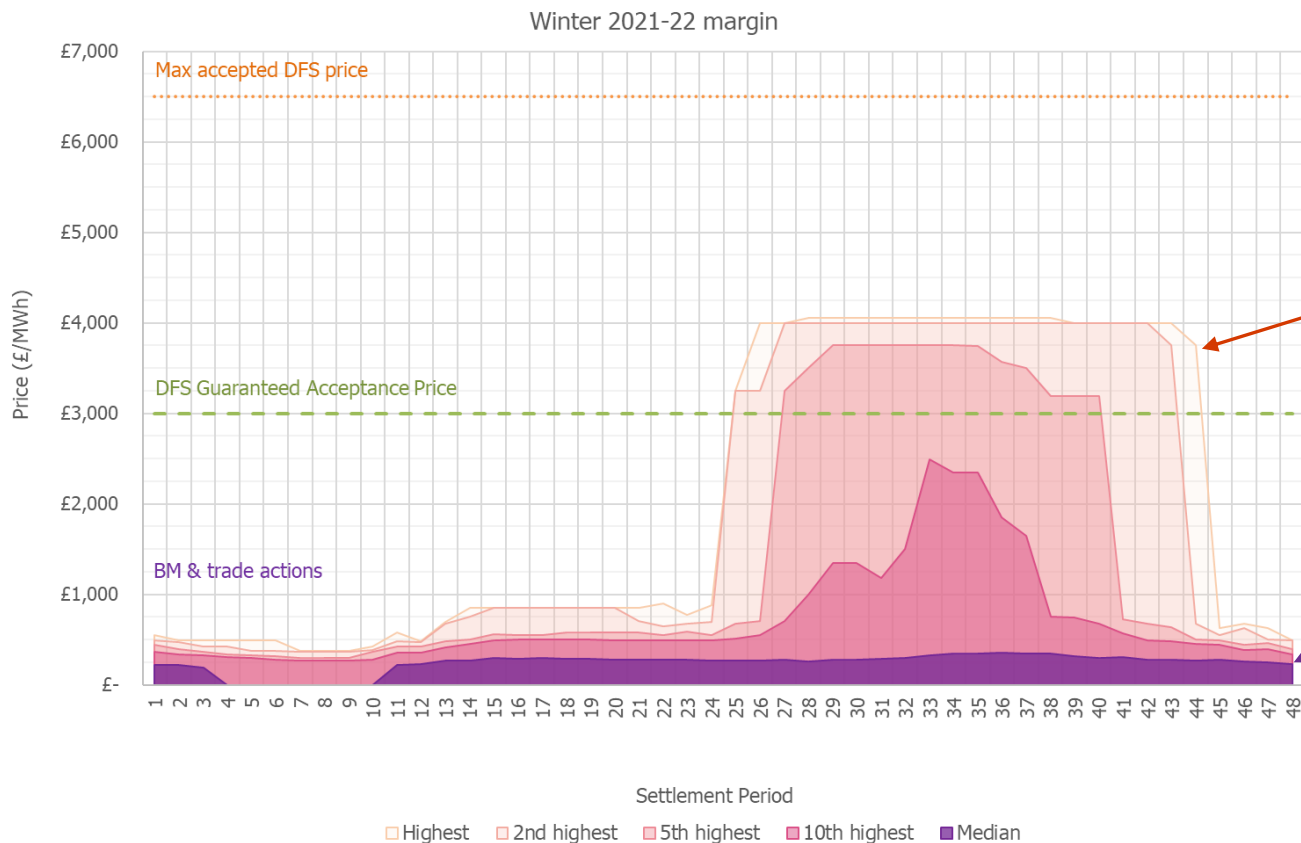
# DFS prices compared to other prices



Real-time margin prices have only exceed the GAP on one day this winter (12<sup>th</sup> Dec 2022)


Typical margin prices have been £250-£300/MWh, around 1/10<sup>th</sup> of the GAP

# DFS prices compared to other prices



Real-time margin prices exceeded the GAP on nine days last winter, but the maximum price paid last winter was lower than this winter

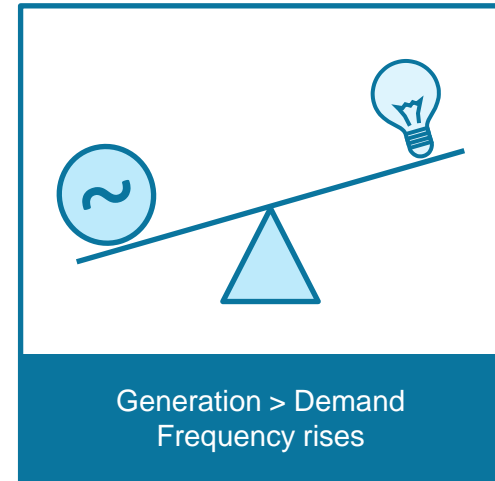
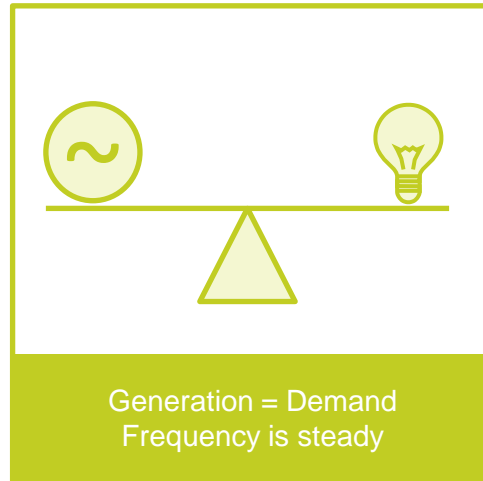
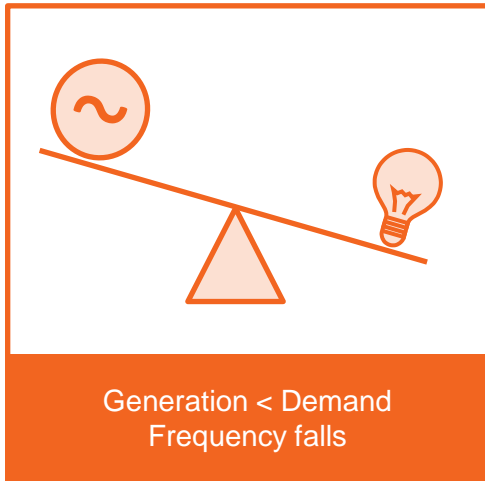
Typical margin prices were again £250-£300/MWh, around 1/10<sup>th</sup> of the GAP

A landscape photograph featuring a sunset over a field. The sun is a bright, glowing orb in the upper right sky, casting a warm orange and yellow light. The sky is filled with soft, wispy clouds. In the foreground, there is a lush green field. Overlaid on the scene are several vibrant green, glowing light trails that curve across the middle ground, suggesting movement or energy. The overall mood is serene and forward-looking.

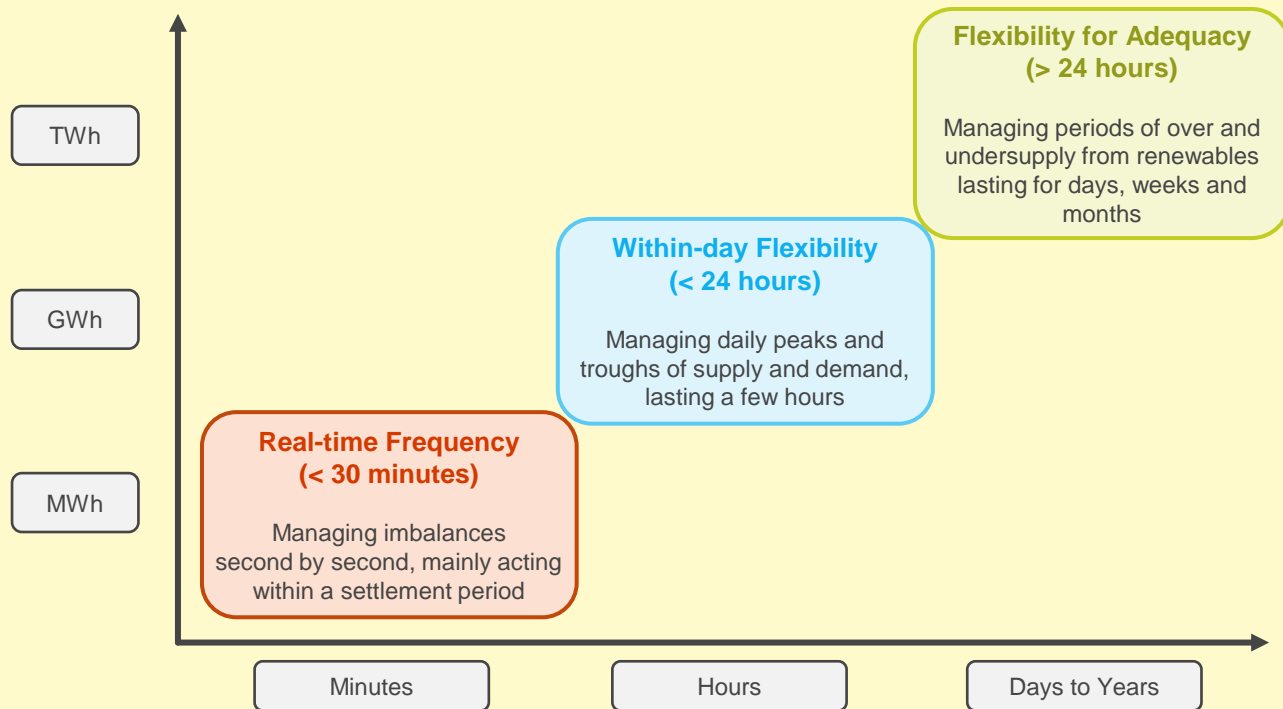
# Long-term vision for flexibility

# Energy balancing 101

- One of the most fundamental requirements of an electricity system is that supply and demand are always balanced
- For us to achieve this energy balancing we need flexibility, in both supply and demand, adjusting both sides to ensure they always match
- The wholesale market currently provides the majority of system balancing during the day, with the ESO performing the residual balancing and balancing on a second-by-second basis



# Energy balancing over different timescales

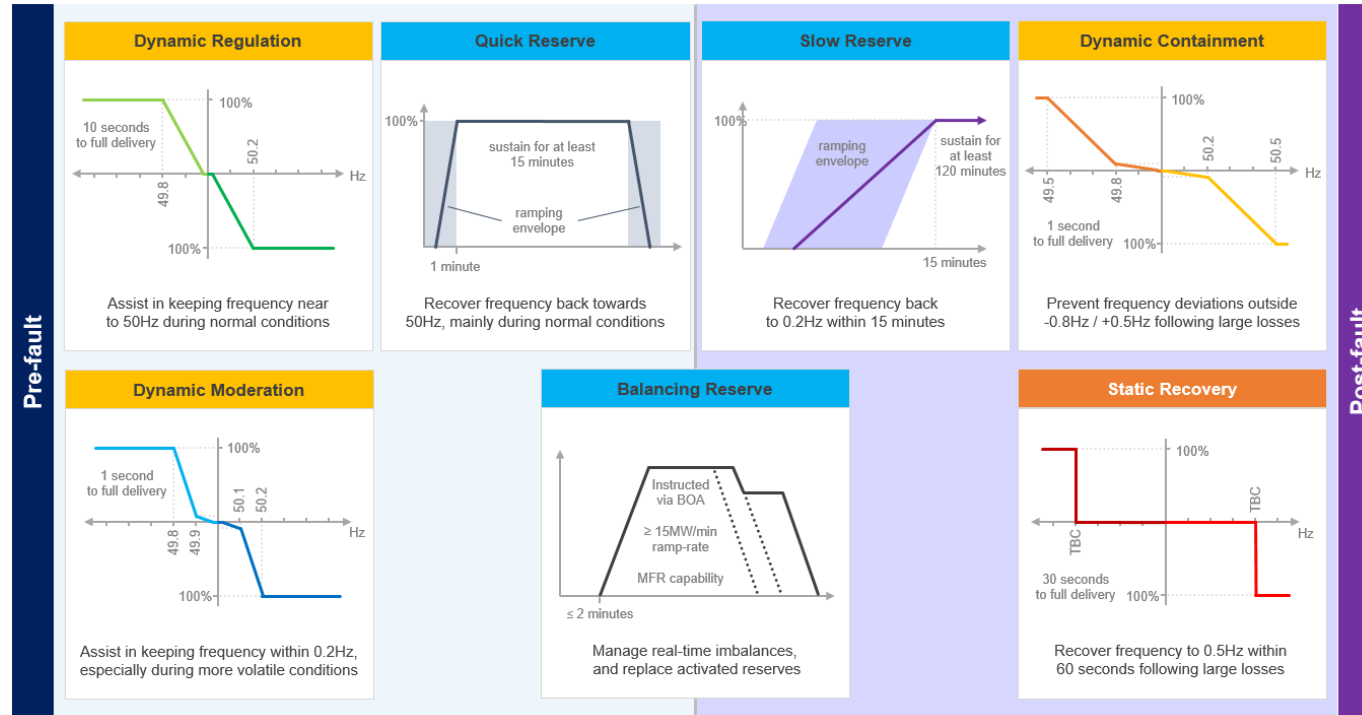


<https://www.nationalgrideso.com/research-publications/system-operability-framework-sof>



# Real-time frequency

- We're in the middle of reforming our response and reserve services, and different types of demand flexibility can fit well into these
- For example: heat pumps and fridges in Static Recovery, EVs in Quick Reserve



# Within-day Flexibility

## Allowing the market to deliver

- Changes to market arrangements, including REMA and market-wide HH settlement, are key to unlocking within-day flexibility
- In the future, we want energy balancing to continue to be mainly delivered by price signals and markets, with the ESO acting as a “residual balancer”

## Bridging gaps

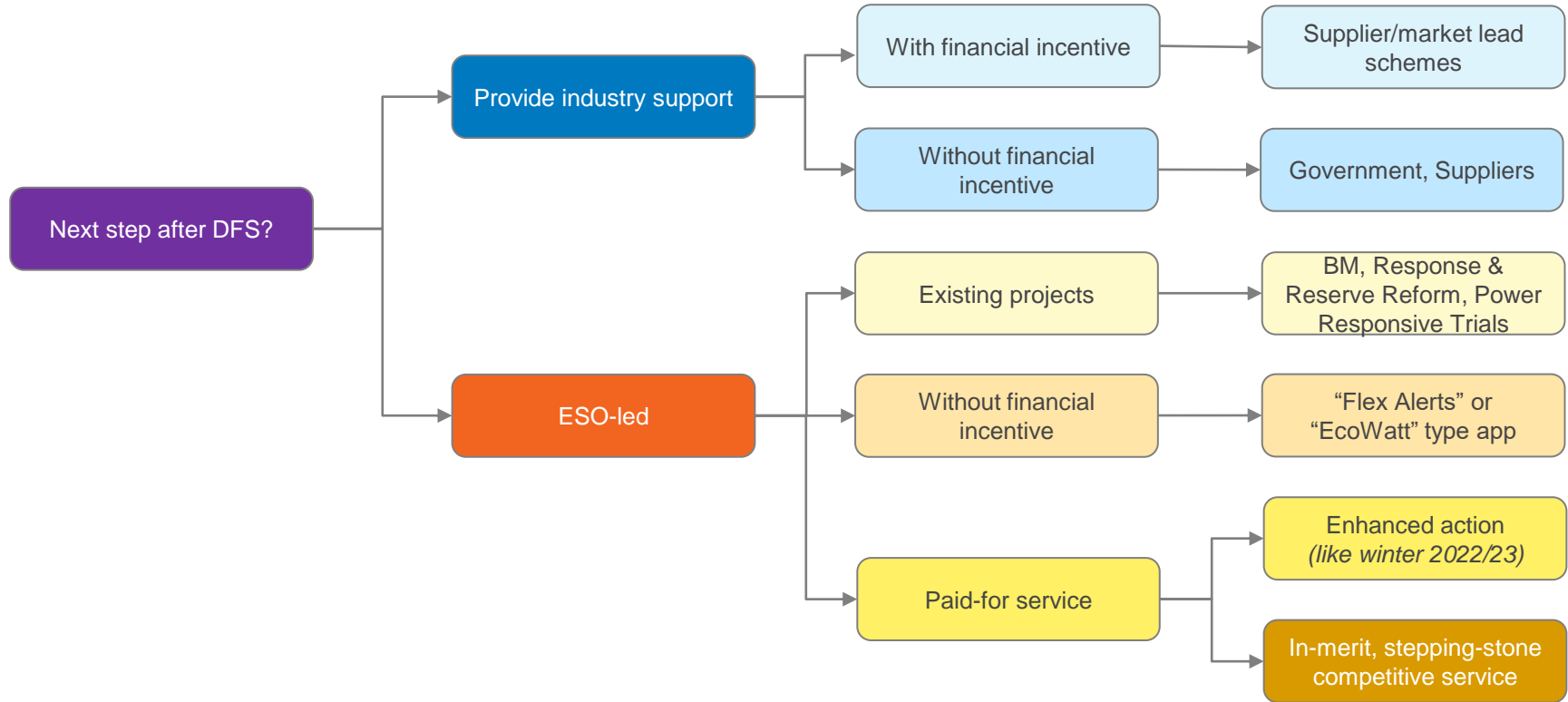
- The timelines for the market arrangements, consumer incentives, technology roll-outs and data provisioning are not currently clear
- The system need for this capability might arise before the market is fully able to provide it
- If necessary, the ESO will bridge gaps between stages by creating temporary alternative mechanisms to help price signals get through to new providers of flexibility
- We will also continue to run trials so that we, and future participants in flexibility markets, can continually learn, informing more appropriate enduring arrangements



An aerial photograph of a river system with vibrant green water and white rapids. Overlaid on the right side of the image are several glowing blue lines that trace potential routes or paths through the water. The text 'Potential routes forward' is written in white, sans-serif font across the lower-left portion of the image.

# Potential routes forward

# Potential routes forward



# Design stages



Develop, improve & finalise service design through industry engagement

Industry Article 18 consultation & ESO review

Ofgem review & approval of Article 18 submission

Provider on-boarding

Service go-live

Ongoing

1-2 months

2 months

2 months

November 2023

**Indicative timescales**

A photograph of a person with blonde hair, wearing a denim jacket, with their arms raised in the air. They are standing in a field at sunset, with tents and other people visible in the background. The scene is illuminated by warm, golden light from the setting sun. There are some decorative elements: a white wavy line in the upper left, a white horizontal bar across the middle, and a white circular line around the person's waist. The bottom of the image has a yellow gradient bar.

Next steps

## What's next

- Publishing a call for input tomorrow
- 2 week submission window
- 2 deep dive days to collaborate on the top priorities
- Progress to confirming desired route forward

### Call for input

Please help us shape the future of flexibility and provide your feedback to our call for input

Closing date  
3<sup>rd</sup> April 10am

## Key dates

- 4 x deep dive virtual workshops
- Topics to be confirmed
- Invitation and registration for the deep dive events will follow after the call for input responses have been reviewed

### The Role of DFS

- 18 April 10am – 12pm
- 18 April 2pm – 4 pm

### Process / operational delivery

- 20 April 10am – 12pm
- 20 April 2pm – 4 pm



# Q&A

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# The virtual Q&A team



Richard Hanson  
Flexibility Services Development  
Manager



Hannah Rochford  
Senior Balancing Markets  
Development Officer



Rob Westmancoat  
Senior Strategy Analyst



Michael Coldwell  
Market Requirements Future  
Design and Development Manager



Francisco Sanchez  
Senior Strategy Analyst



Nigel Talboys  
Balancing Markets  
Development Officer



Laura Parkes  
Consumer Strategy Manager



Annie Truong  
Consumer Strategy Specialist




James Kerr  
Consumer Strategy Lead.



Michael McLaughlin  
News and Social Media Manager



Iris Hau  
Senior Contract Manager



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[demandflexibility@nationalgrideso.com](mailto:demandflexibility@nationalgrideso.com)  
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