



ESO Coronavirus Preparedness

15th July 2020

nationalgrid**ESO**

Introduction

Please ask any questions via the Q&A section in Webex and we will pick them all up at the end of the session and answer those now which we can. We may have to take away some questions and provide feedback from our expert colleagues in these areas.

These slides, event recordings and further information about the webinars can be found at the following location:

data.nationalgrideso.com/plans-reports-analysis/covid-19-preparedness-materials

Transparency

We will upload a list of units with power available to the data portal next week.

We have listened to your suggestions of an early warning of ODFM enactment. We have taken this onboard and are investigating options to deliver this?

Interconnector flow management

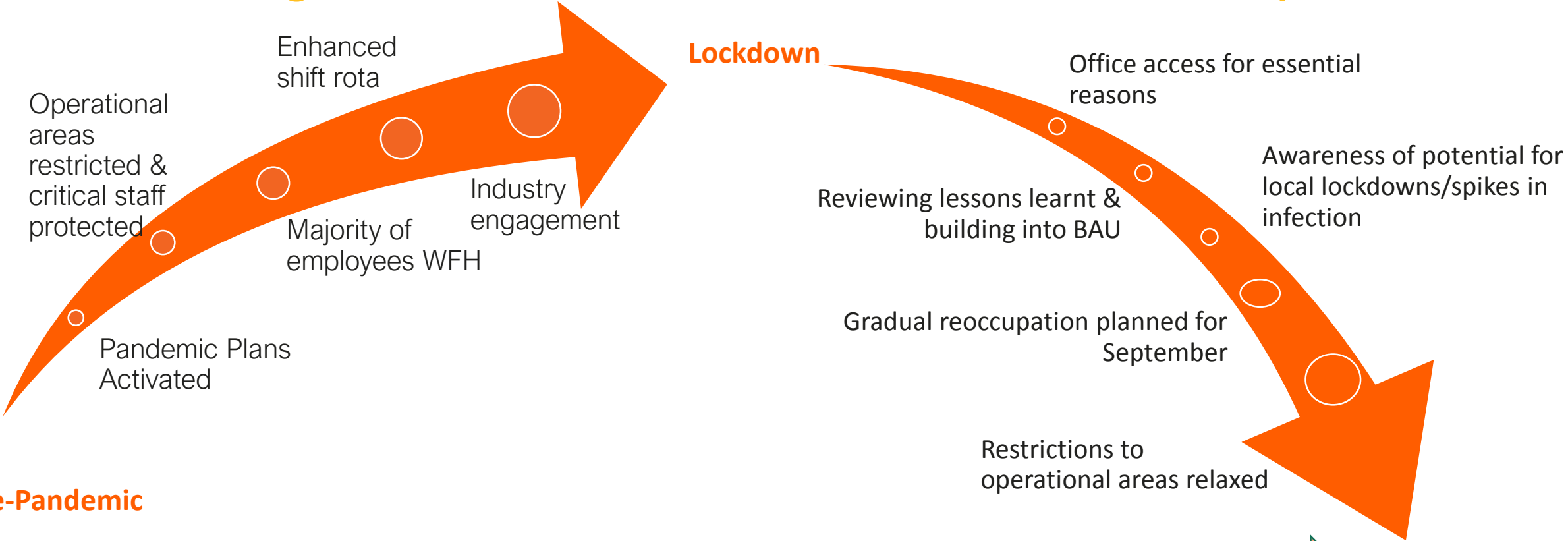
Reserve from storage in the BM

Key topics for this week:

Update on our Business Continuity Plans

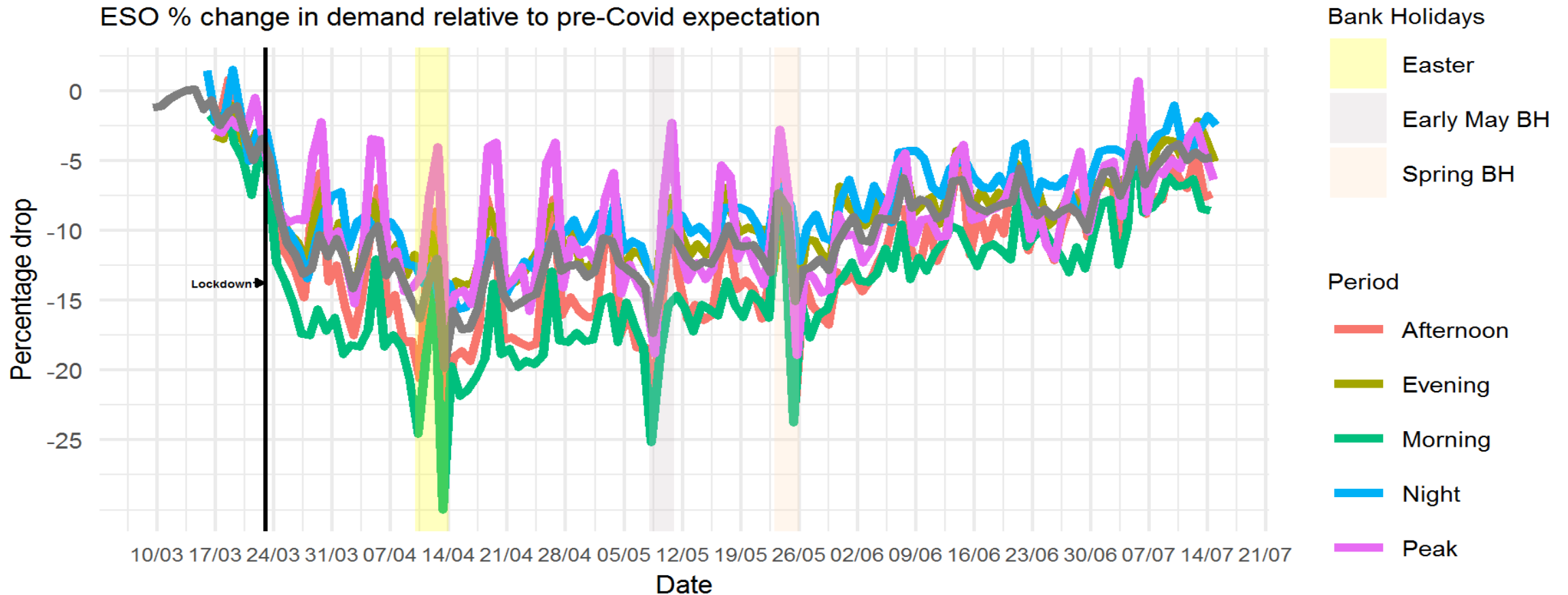
Review of demands and ESO actions last weekend

Protecting Critical Staff to maintain Critical Operations



Identify & respond to system operability challenges

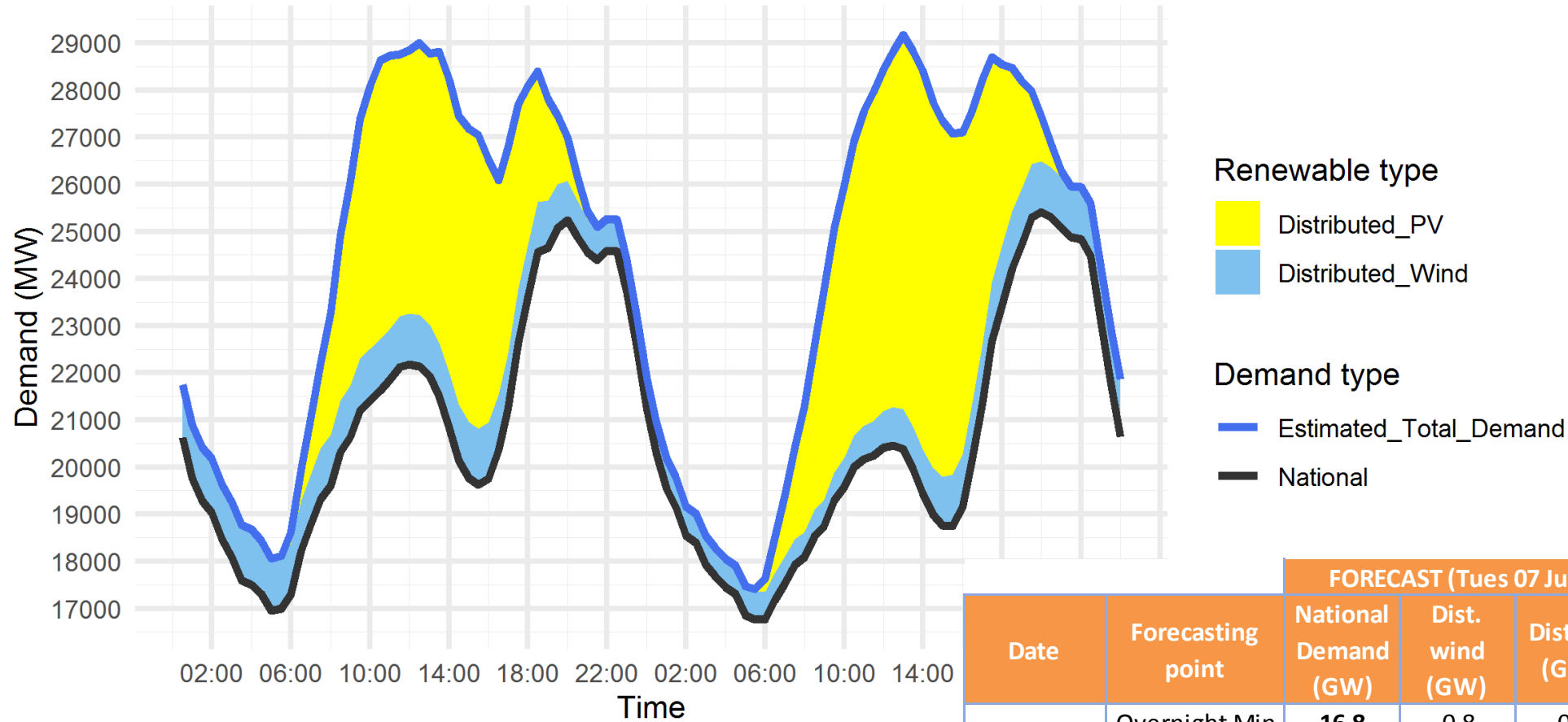
ESO % change in demand relative to pre COVID



In the **last 7 days**, average demand has been **5.7%** lower in the day and **2.8%** lower overnight. Overall demand drop of **5.1%**

Demand | Last Weekend Outturn

ESO National Demand outturn 11th & 12th July 2020



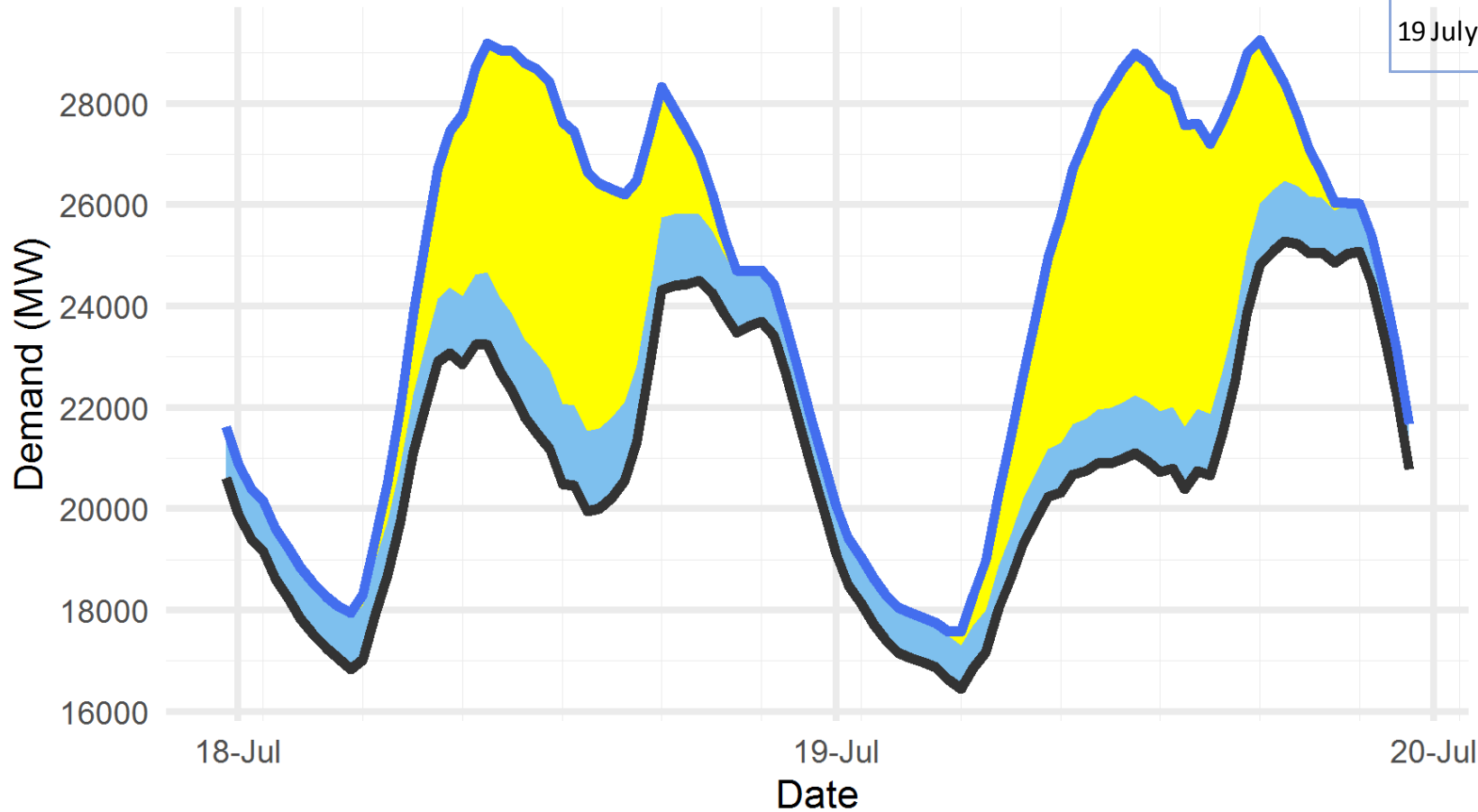
Date	Forecasting point	FORECAST (Tues 07 Jul)			OUTTURN		
		National Demand (GW)	Dist. wind (GW)	Dist. PV (GW)	National Demand (GW)	Dist. wind (GW)	Dist. PV (GW)
11 July 2020	Overnight Min	16.8	0.8	0.5	17.0	1.0	0.2
	Afternoon Min	19.6	0.8	5.6	19.6	1.0	5.6
12 July 2020	Overnight Min	15.8	0.5	0.4	16.8	0.5	0.3
	Afternoon Min	19.1	0.6	7.4	18.8	0.9	6.8

Demand | Forecast for this Weekend

ESO Demand forecast 18th to 19th July 2020

based on the current government policies in relation to the pandemic and on the latest weather forecast

		FORECAST (Wed 15 Jul)		
Date	Forecasting point	National Demand (GW)	Dist. wind (GW)	Dist. PV (GW)
18 July 2020	Overnight Min	16.8	1.0	0.1
	Afternoon Min	19.9	1.6	5.1
19 July 2020	Overnight Min	16.5	0.8	0.3
	Afternoon Min	20.4	1.2	6.0



Renewable type

- Distributed_PV
- Distributed_Wind

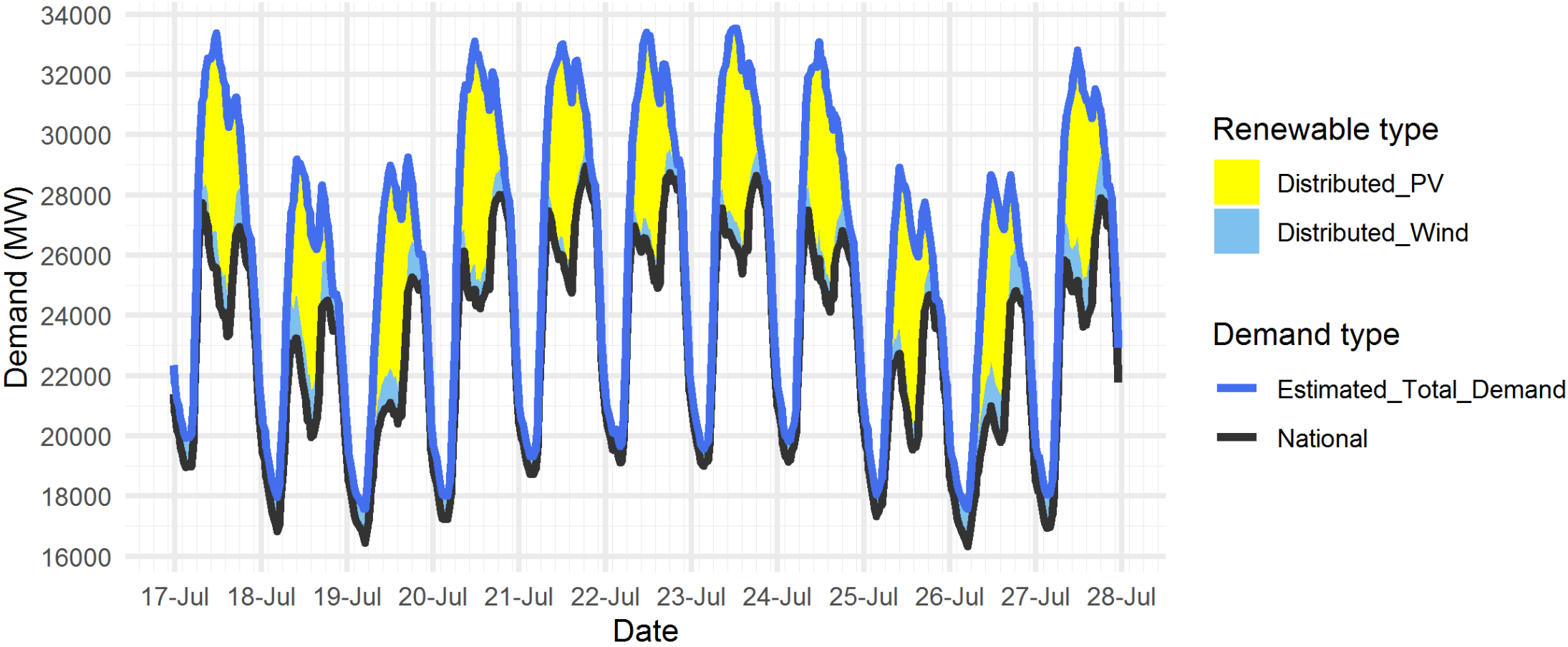
Demand type

- Estimated_Total_Demand
- National

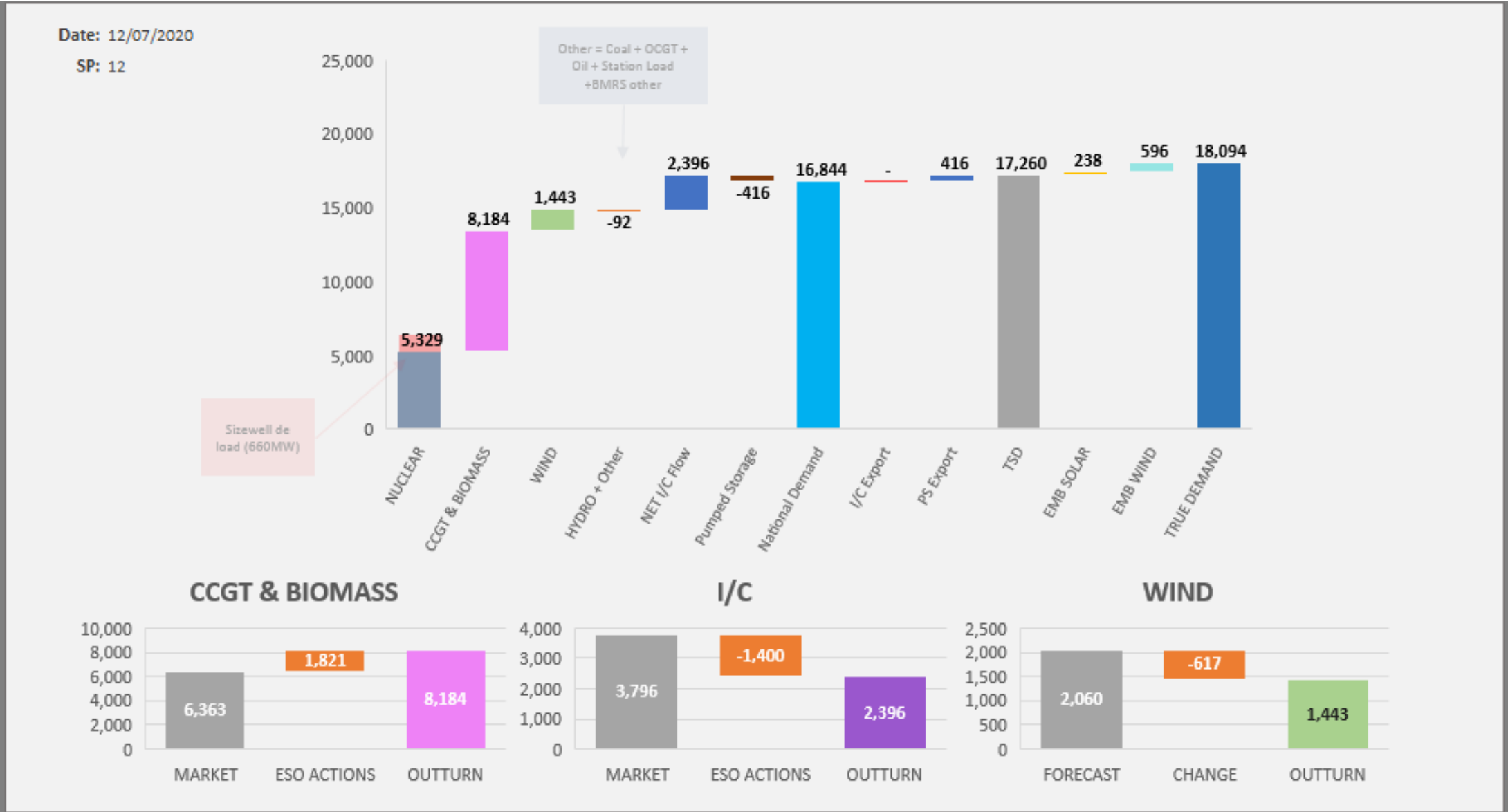
Demand | Forecast for the 17th to 27th of July

ESO Demand forecast 17th to 27th July 2020

based on the current government policies in relation to the pandemic and on the latest weather forecast



ESO actions | Sunday 12th July 1B



Transparency | Interconnector Flow Management

We have talked about using the interconnectors to continental Europe for management of system security and downward regulation. How does NGESO do this?

Trading

NGESO can trade with counterparties across Europe. The trading team will either buy or sell energy to manage the flow on the interconnectors

Where BM actions are available, trades will only be enacted if cost effective compared to the BM options

Trading would normally be done after the DA auction, once we know the natural flow of the interconnectors

Intraday Transfer Limit (ITL)

NGESO can apply ITLs on individual interconnectors to restrict the available capacity of each interconnector

This can only be done for system reason, such as transmission congestion or system stability

We can only set ITLs after the DA auction and before the applicable Intraday auction

ITLs do not change the flow on the interconnectors, only restrict the available capacity

Transparency | Interconnector Flow Management

Scenario #1:

Transmission congestion means that we can only accept an import of 700MW on an interconnector

The interconnector is flowing at full import (1000MW) to GB after the DA auction

NGESO Response:

Transparency | Interconnector Flow Management

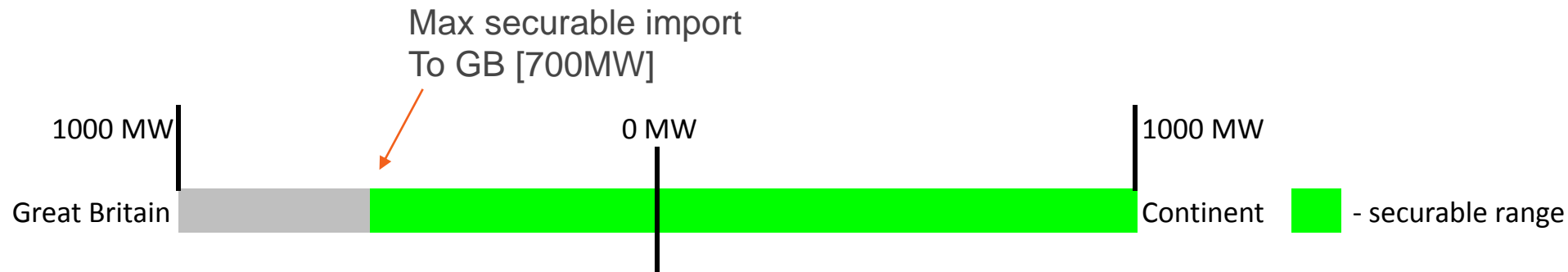
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Transparency | Interconnector Flow Management

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Initial flow (post DA) is set at 1000MW full import to GB by market action



Transparency | Interconnector Flow Management

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The interconnector is flowing at full import (1000MW) to GB after the DA auction

NGESO Response:

Transmission congestion requires flow <700MW import
Initial flow (post DA) is set at 1000MW full import to GB by market action

No capacity left in import direction so no ITL required

Trades enacted (SELL 300MW) to reduce flow to within securable range



Transparency | Interconnector Flow Management

Scenario #2:

RoCoF trigger level 700MW

The interconnector is importing 500MW to GB following the DA auction

NGESO Response:

Transparency | Interconnector Flow Management

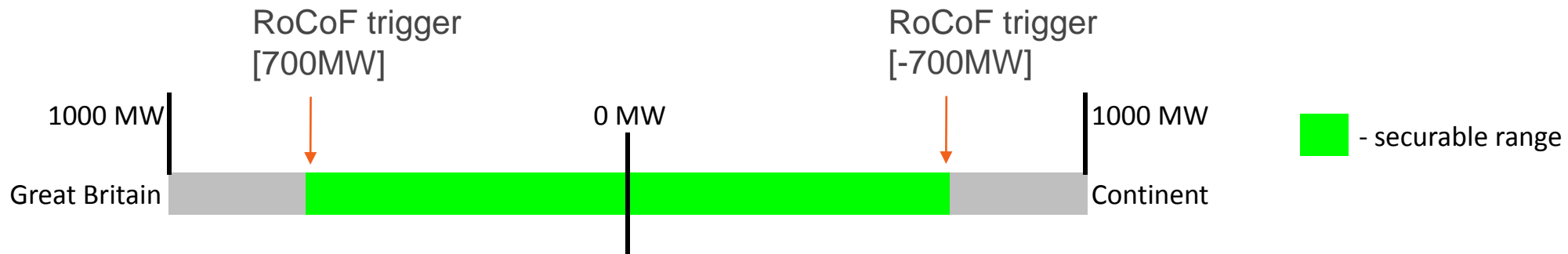
Scenario #2:

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NGESO Response:

RoCoF stability requires flow <700MW import and export



Transparency | Interconnector Flow Management

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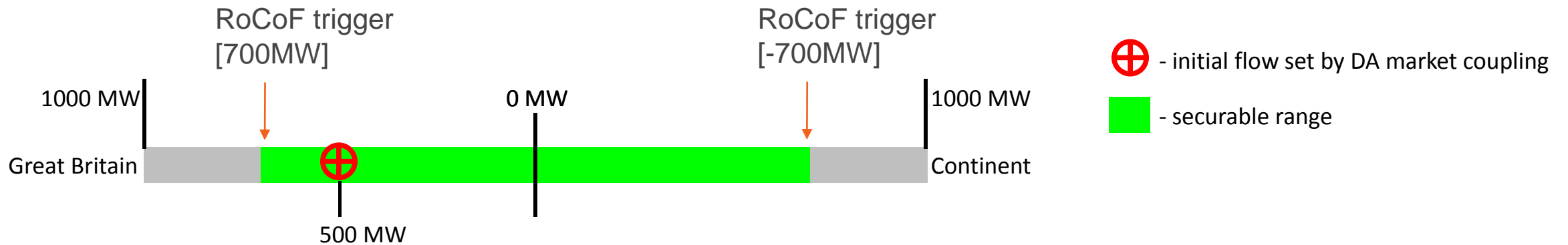
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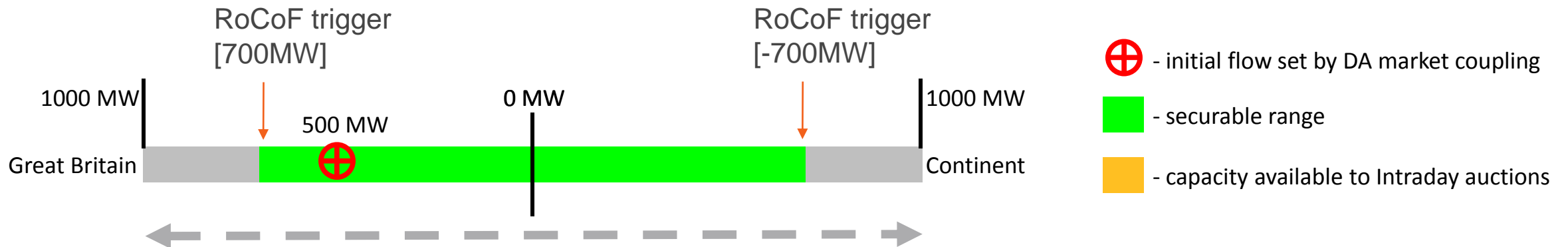
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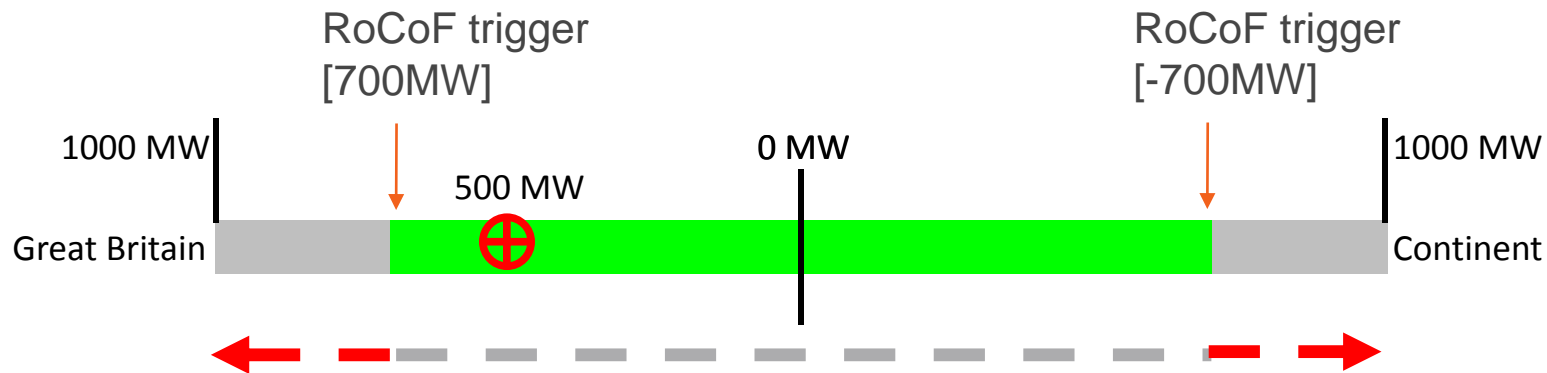
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NGESO Response:

RoCoF stability requires flow <700MW import and export

Initial flow (post DA) is set at 500MW import to GB

Potential risk to RoCoF stability in Intraday auction



-  - initial flow set by DA market coupling
-  - securable range
-  - capacity available to Intraday auctions
-  - potential risk to securing RoCoF due to Intraday trades

Transparency | Interconnector Flow Management

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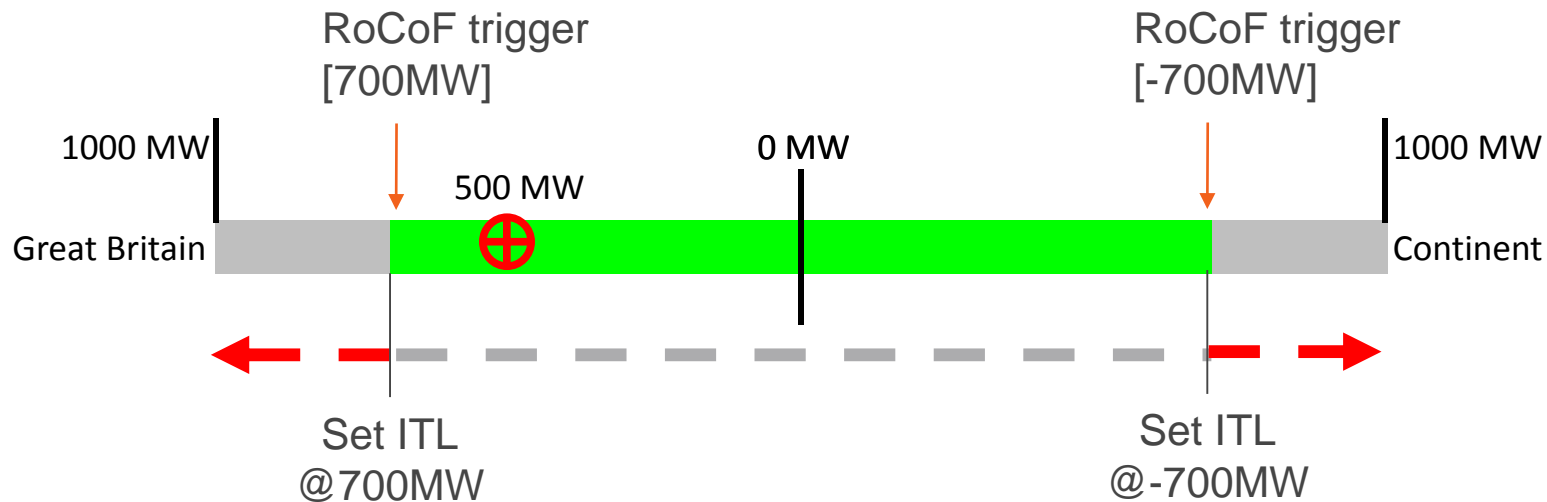
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Potential risk to RoCoF stability in Intraday auction

ITLs set at RoCoF trigger level to restrict Intraday auction

No trading required

RoCoF trigger
[-700MW]



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Transparency | Interconnector Flow Management

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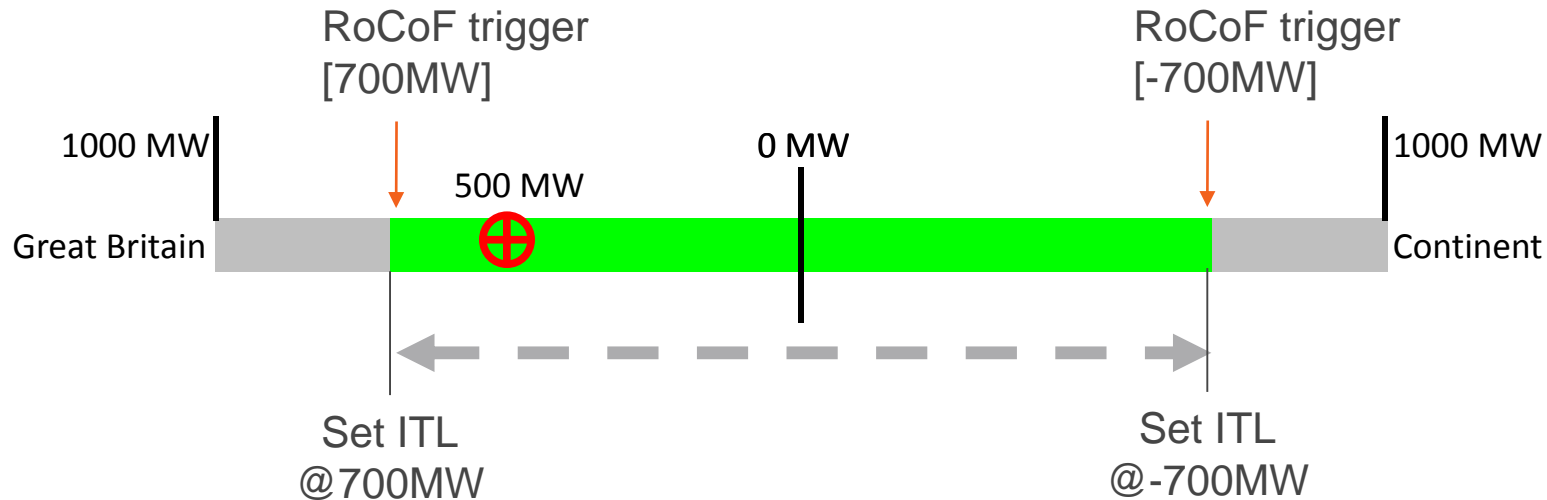
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RoCoF trigger
[-700MW]



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Transparency | Reserve from Storage in the BM

We have published review of the trial with Arenko. This can be accessed at the following link:

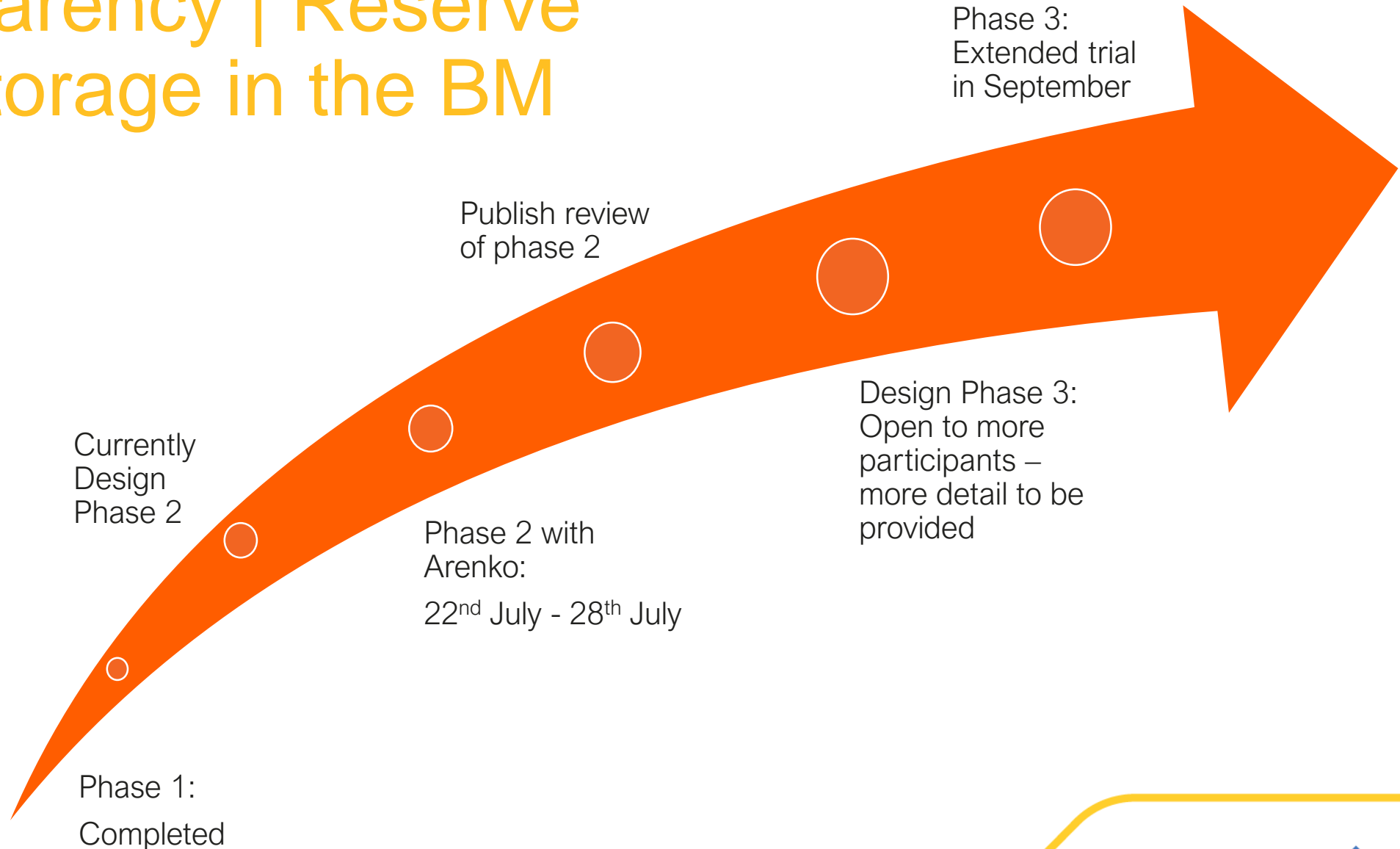
https://data.nationalgrideso.com/plans-reports-analysis/covid-19-preparedness-materials/r/trial_review_-_reserve_from_storage_in_the_bm

The trial was undertaken as an additional flexibility activity alongside the development of ODFM, a greater number of Super SEL Contracts and the EDF Contract

Aligning with our ambition to operate carbon free in 2025, the trial was to investigate how existing mechanisms can be used to facilitate participation of storage assets to provide upward and downward energy reserves

To allow us to learn as fast as possible, we took the approach of a trial. We will be looking at doing more trials like this in the future. If you have any ideas for trials, we welcome these and are happy to discuss these with you.

Transparency | Reserve from Storage in the BM



Q&A

After the webinar, you will receive a link to a survey. We welcome feedback to understand what we are doing well and how we can improve the event ongoing.

Please ask any questions via the Q&A section in Webex and we will try to answer as many as possible now

Please continue to use your normal communication channels with ESO

If you have any questions after the event, please contact the following email address:

box.NC.Customer@nationalgrid.com

