



ESO Operational Transparency Forum

12th August 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.

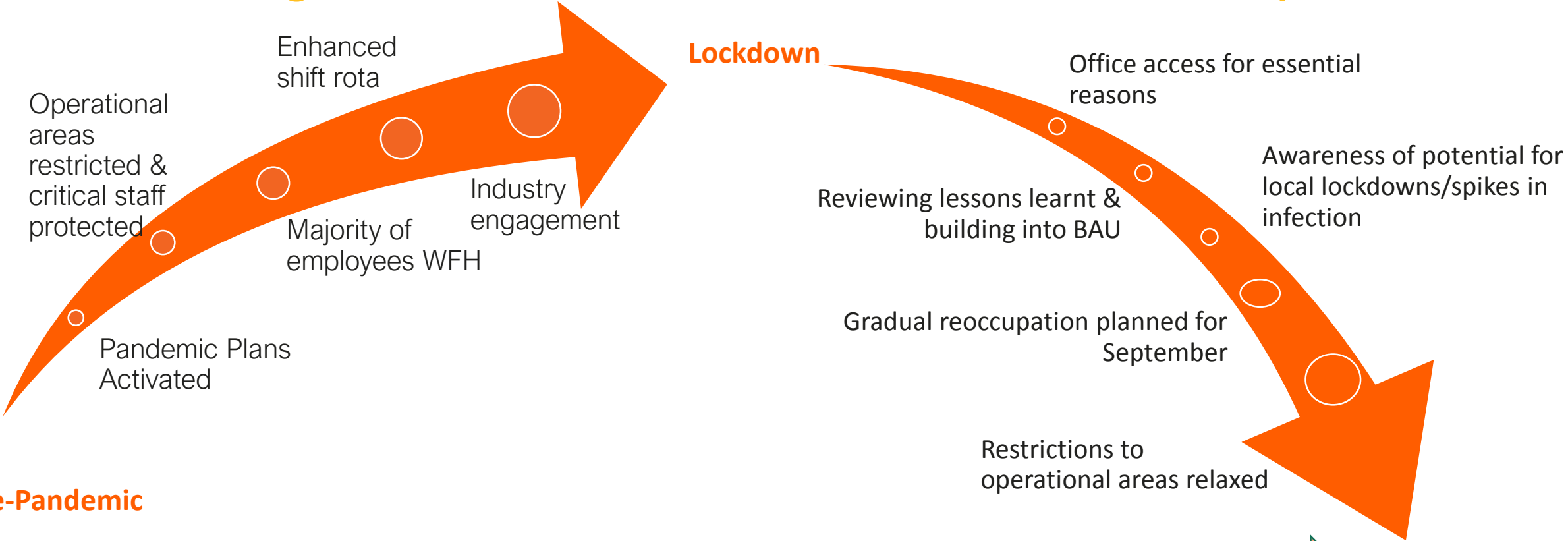
These slides, event recordings and further information about the webinars can be found at the following location:

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

Key topics for this week:

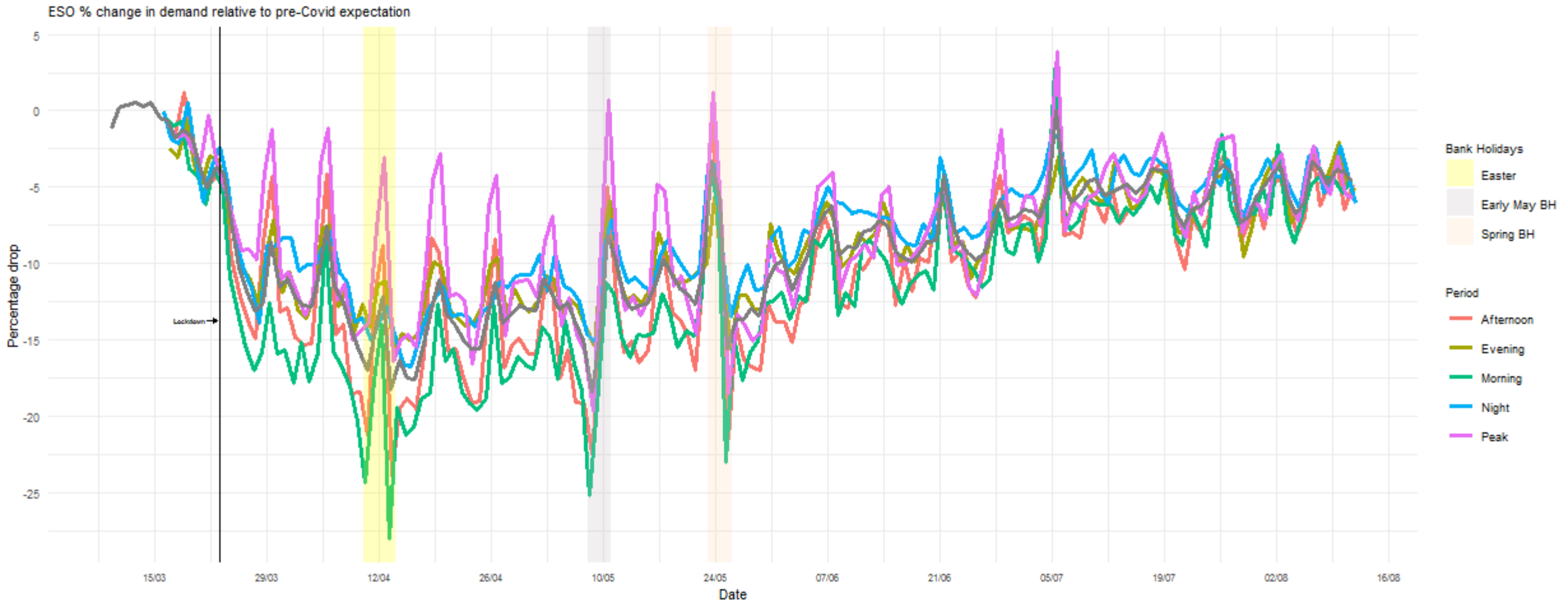
- Business continuity
- Demand review and outlook
- ESO actions
- Reserve from Storage in the BM
- Power Available
- Torness Deload Contract

Protecting Critical Staff to maintain Critical Operations



Identify & respond to system operability challenges

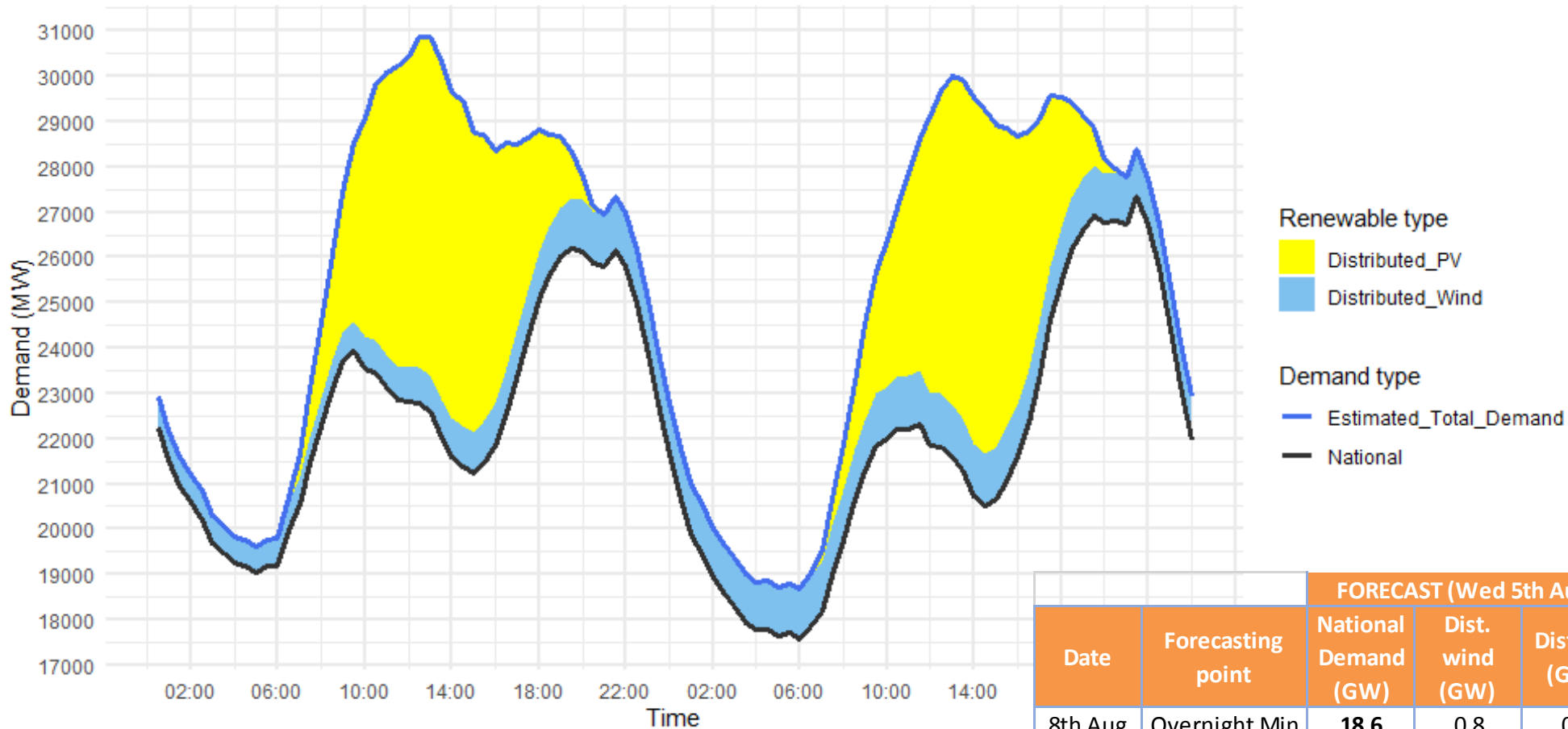
ESO % change in demand relative to pre COVID



In the **last 7 days**, rolling average overall demand drop was **4.8%**; a month ago it was 5.1%

Demand | Last Weekend Outturn

ESO National Demand outturn 8th & 9th August 2020

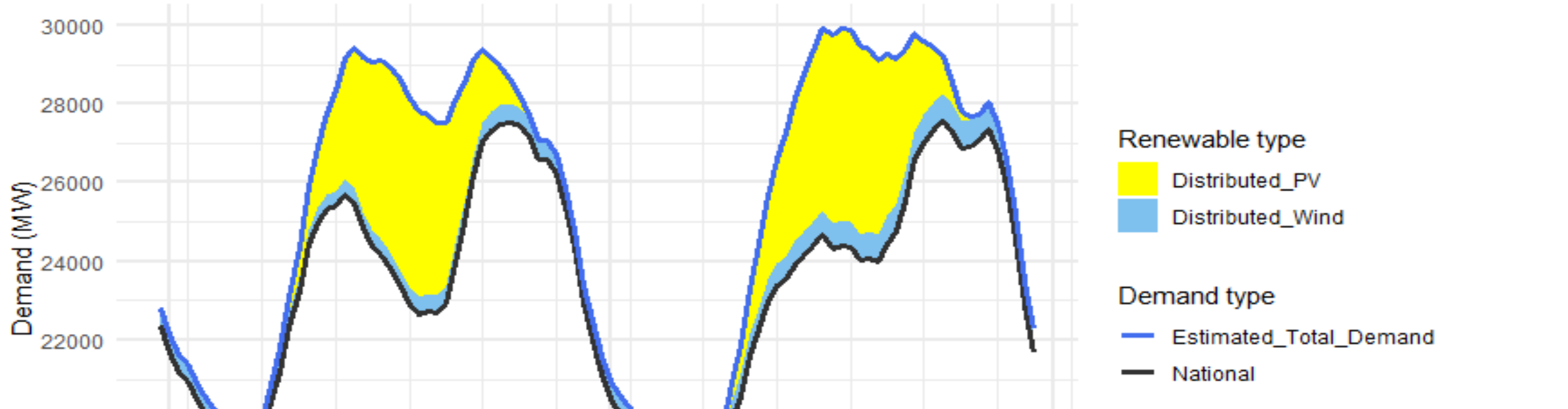


		FORECAST (Wed 5th Aug)			OUTTURN		
Date	Forecasting point	National Demand (GW)	Dist. wind (GW)	Dist. PV (GW)	National Demand (GW)	Dist. wind (GW)	Dist. PV (GW)
8th Aug 2020	Overnight Min	18.6	0.8	0.1	19.0	0.6	0.0
	Afternoon Min	20.7	1.0	7.0	21.2	0.9	6.6
9th Aug 2020	Overnight Min	17.3	0.9	0.0	17.6	1.1	0.0
	Afternoon Min	20.1	1.2	6.6	20.5	1.2	7.6

Demand | Forecast for this Weekend

ESO Demand forecast weekend 15th & 16th Aug 2020

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

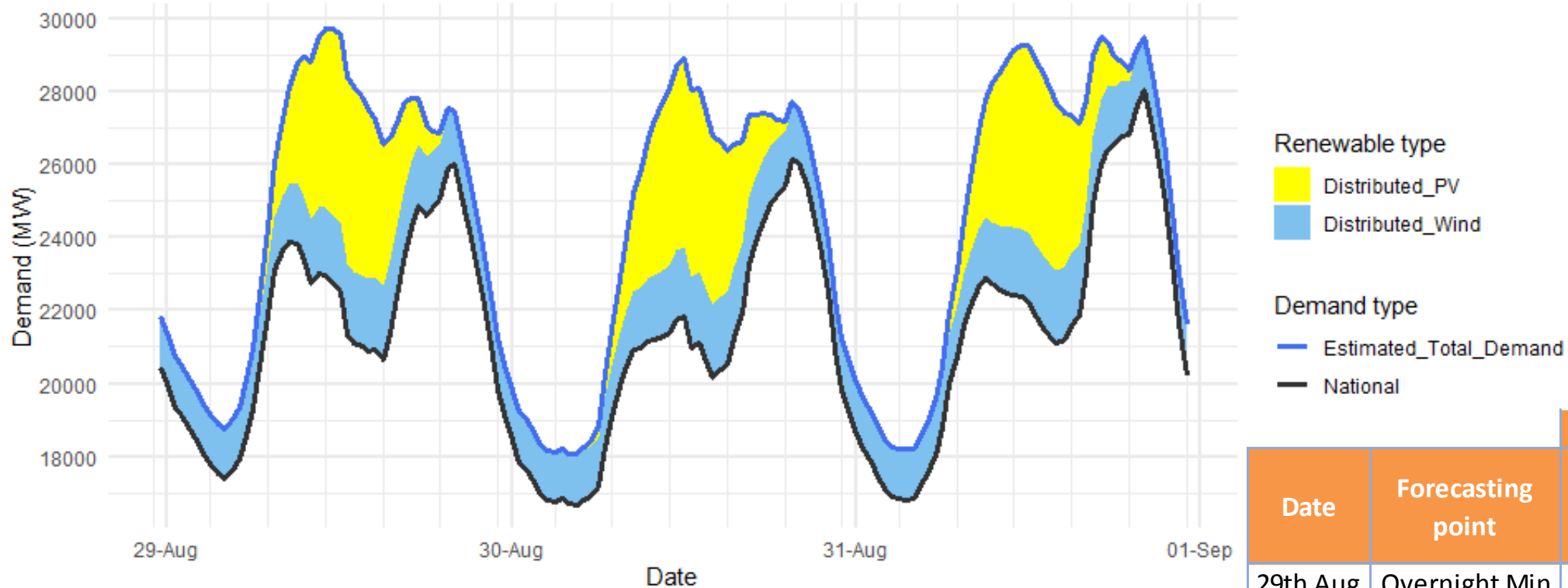


		FORECAST (Wed 12th Aug)		
Date	Forecasting point	National Demand (GW)	Dist. wind (GW)	Dist. PV (GW)
15th Aug 2020	Overnight Min	19.4	0.4	0.0
	Afternoon Min	22.7	0.4	4.7
16th Aug 2020	Overnight Min	18.2	0.5	0.0
	Afternoon Min	24.0	0.7	4.4

Demand | August Bank Holiday weekend

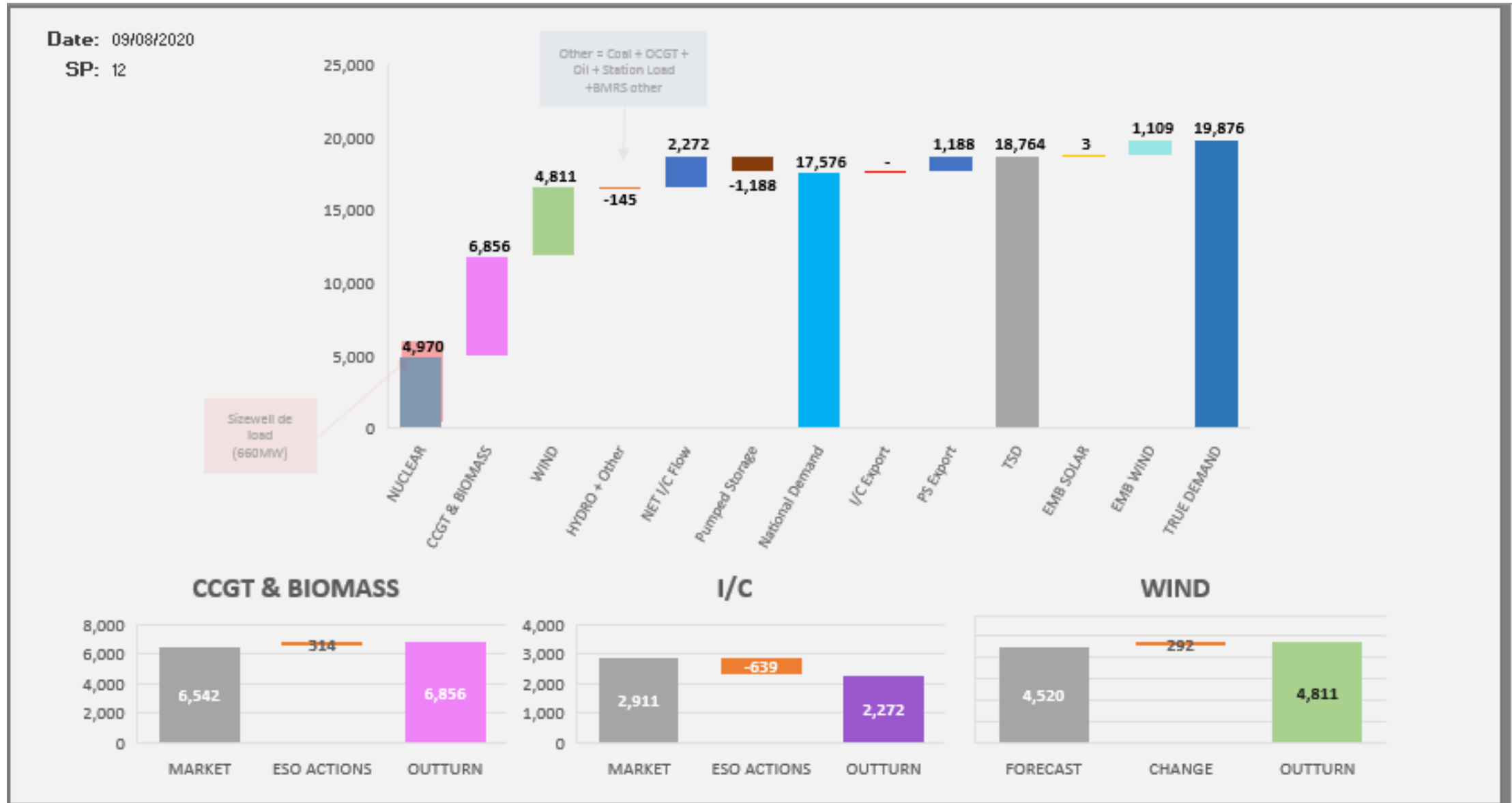
ESO Demand forecast August Bank Holiday weekend 29:31 Aug 2020

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



		FORECAST (Wed 12th Aug)		
Date	Forecasting point	National Demand (GW)	Dist. wind (GW)	Dist. PV (GW)
29th Aug 2020	Overnight Min	17.4	1.4	0.0
	Afternoon Min	20.7	2.0	3.9
30th Aug 2020	Overnight Min	16.7	1.4	0.0
	Afternoon Min	20.2	2.0	4.6
31st Aug 2020	Overnight Min	16.8	1.4	0.0
	Afternoon Min	21.1	2.0	4.6

ESO Actions | 9th August overnight minimum



Transparency | Reserve from Storage in the BM

We completed the second phase of our BM storage trial with Arenko for the provision of Reserve in the BM.

This trial ran from the 22nd July 2020 to 28th July 2020.

We will be publishing a review of the trial this week.

Here is a summary of our findings and the next steps.

Transparency | Reserve from Storage in the BM

Our findings are summarised as follows:

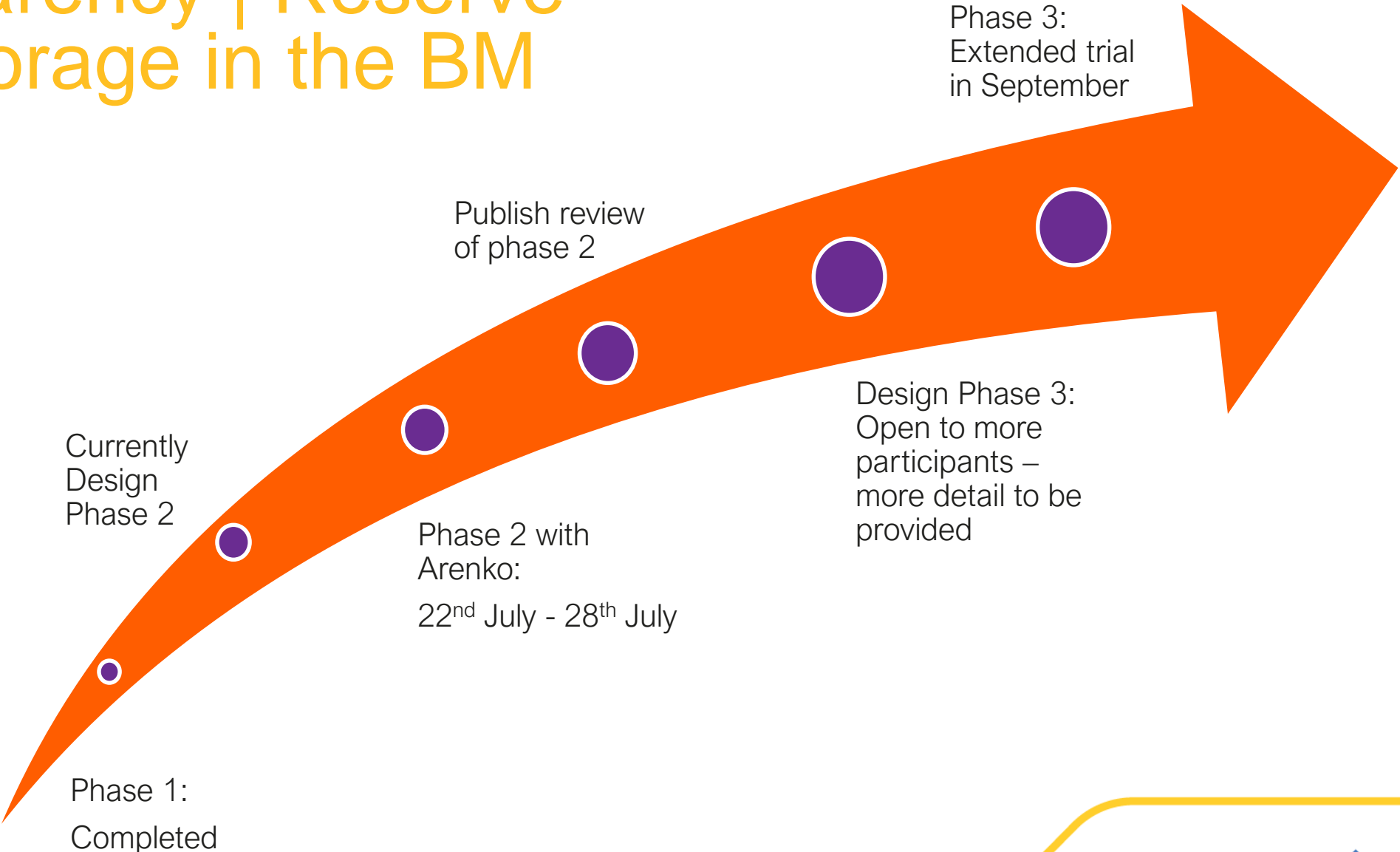
We have shown there is value in creating Sustained Upward and Downward Reserve from BM Storage in addition to the existing flexibility which is available. During the trial there were 106 Hours of the 168 Hours where a commitment decision was made and enacted.

The trial provided the control room with awareness of how best to use the assets over different operational and market conditions.

Volumes taken during the trial have fed through into imbalance price calculation. We have also noted that there are instances where short notice actions of less than 15 minute duration were not tagged.

We have committed to addressing these points during subsequent trials

Transparency | Reserve from Storage in the BM



Transparency | Reserve from Storage in the BM

We are moving to the next phase of our plan to run an extended trial in September

There is be a 3-week period with dates to be announced in our published report on the NGENSO data portal

Participation is extended to other Storage providers in the BM – please contact commercial.operations@nationalgrideso.com to express your interest

Design Questions for third trial:

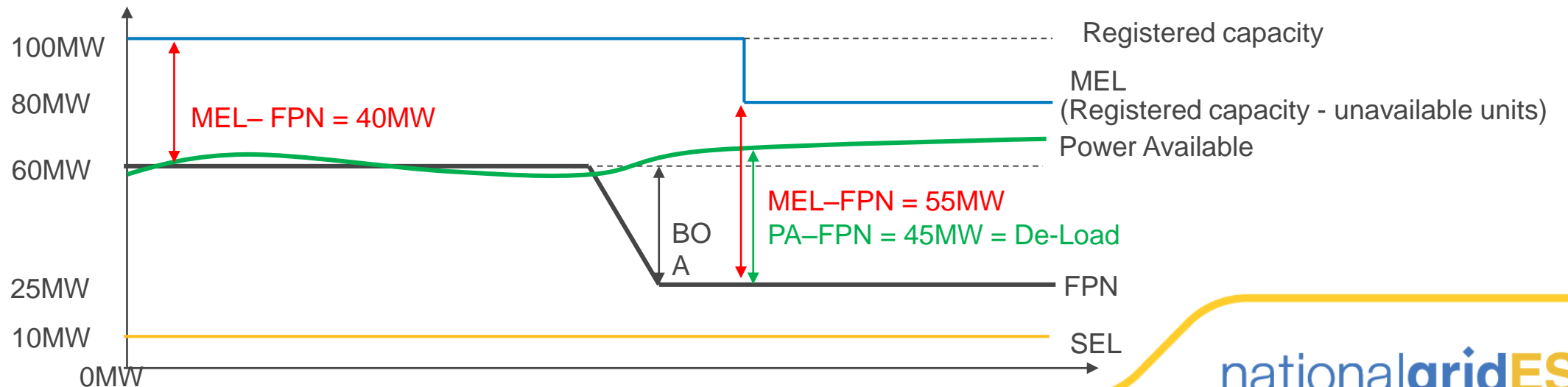
- How to facilitate more participants efficiently and effectively?
- How does the control room robustly plan, commit and utilise providers taking account of the interactions across the various elements of flexibility accessible e.g. sustained reserve versus frequency control
- Consider the design of the trial and imbalance pricing impacts
- What is the enduring solution?

Transparency | What is Power Available (PA)?

A real-time signal communicated from the wind farm SCADA systems to NGENSO control room. PA shows a MW reading of how much active power a site could provide onto the system.

The ESO control room will use PA signalling to increase visibility of what wind will do after a period of shut-down or reduced output.

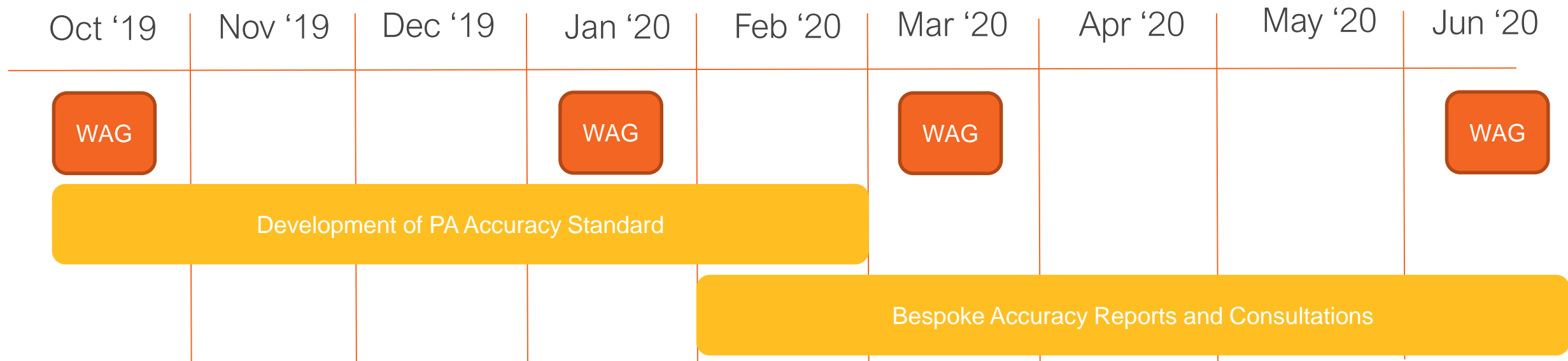
PA signalling also enables the ESO control room to accurately measure and compensate wind farm sites for their response holdings, this was enabled through CUSC change CMP314.



Transparency | PA Go Live and Engagement

The system changes to enable PA signalling into the control room systems successfully went live on 19th May 2020. See publication [here](#).

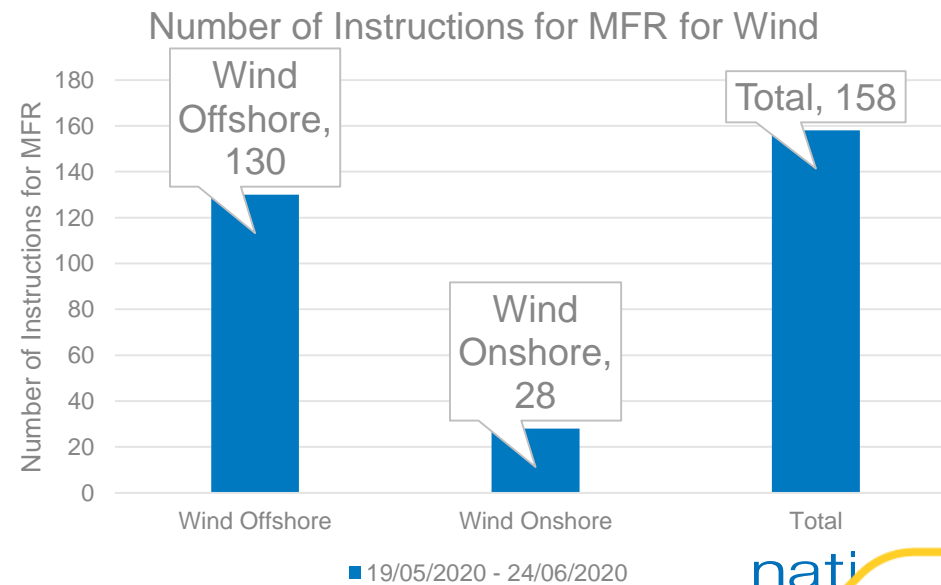
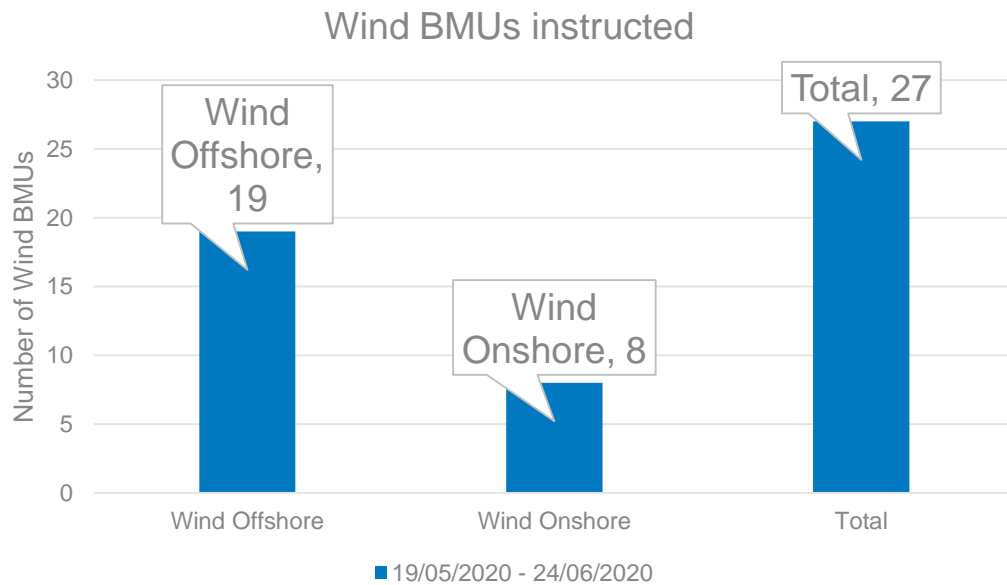
The ESO have engaged throughout the project with impacted stakeholders in the wind community through the Wind Advisory Group (WAG).



Transparency | PA Consumer Value

Wind offers a cost effective option for Mandatory Frequency Response and can provide 'high' response on average cheaper than most competitor technologies.

Between 19th May 2020 – 24th June 2020, 27 different units have been instructed for response for a total of 158 instructions.



Transparency | PA Phase 2

Power Available Phase 2 delivery is in the ESO Forward Plan for 2020/21
Target Date is Q3 2020/21 (December 2020)

Phase 2:

2 weekly PA accuracy reports

- 1) ~79 PPMs with summary of the weekly good signalling minutes
- 2) detailed report for the week by the minute to individual sites

Include PA signalling in Forward looking advice to the ESO Control Room

- Forecasting – blending PA signal into existing forecasting processes
- K factor to better reflect Turbine Availability in 8 hour ahead forecasting
- More support for the control room engineers in forward planning for wind output in their real time decisions
- Streamline BM systems to accommodate wind characteristics in DISPATCH.

Transparency | Torness Deload Contract

- National Grid ESO has agreed a one off, fixed term contract with EDF to partially reduce output from Torness Nuclear Power Station by 200MW for 3 weeks
- Enables essential maintenance to take place on the local transmission network
- Maintenance schedules had been arranged so works to complete work simultaneously and minimize operational impacts. Lockdown restrictions imposed by COVID19 meant the works can no longer be carried out simultaneously.
- Unlike the agreement with EDF to reduce the output of Sizewell B this decision and contract is not related to reduced demand for electricity driven by COVID19.
- This is a one off, short term solution to work around the revised maintenance on this particular part of the transmission network and is in the best interests of consumers, ensuring continued safe and secure operation of the Scottish network.

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@nationalgrideso.com

