



ESO Coronavirus Preparedness

4th June 2020

Recap of topic areas from the Webinar last week

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.

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

We highlighted a new record for the GB electricity system – the lowest carbon intensity record was set on Sunday 24th May at 46g CO₂/kWh. On Sunday afternoon wind and solar contributed 58% of the energy mix

We carried out a deep dive into the bank holiday weekend, including demand, ODFM enactment, balancing actions and a breakdown of the costs of managing the bank holiday weekend

This was followed by a look forward to the coming weekend

And finally, there was then an update on the ODFM product and the BM flexible asset trial

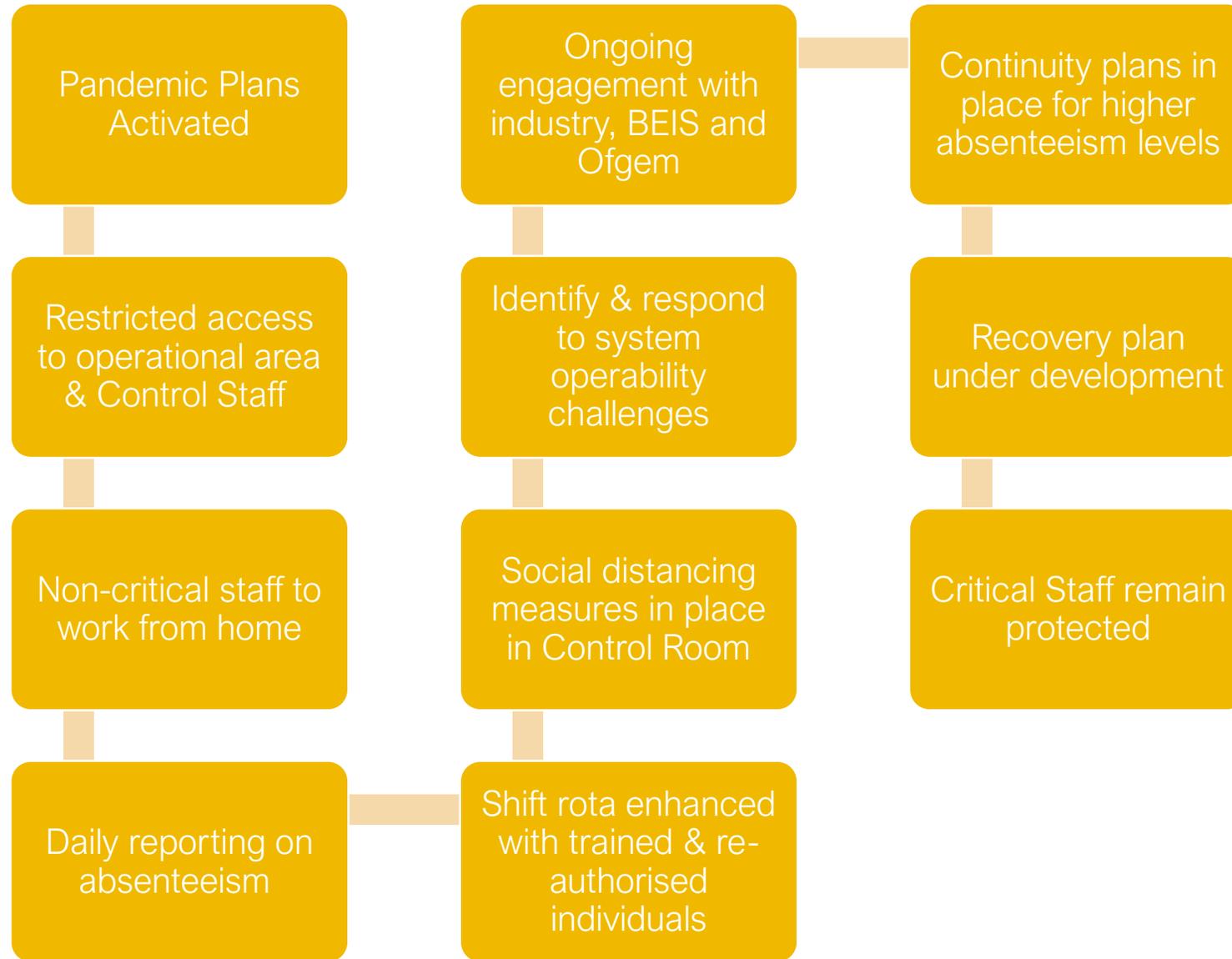
ACCURATE

TIMELY

FLEXIBLE

nationalgridESO

Protecting Critical Staff to maintain Critical Operations



Recovery Plan

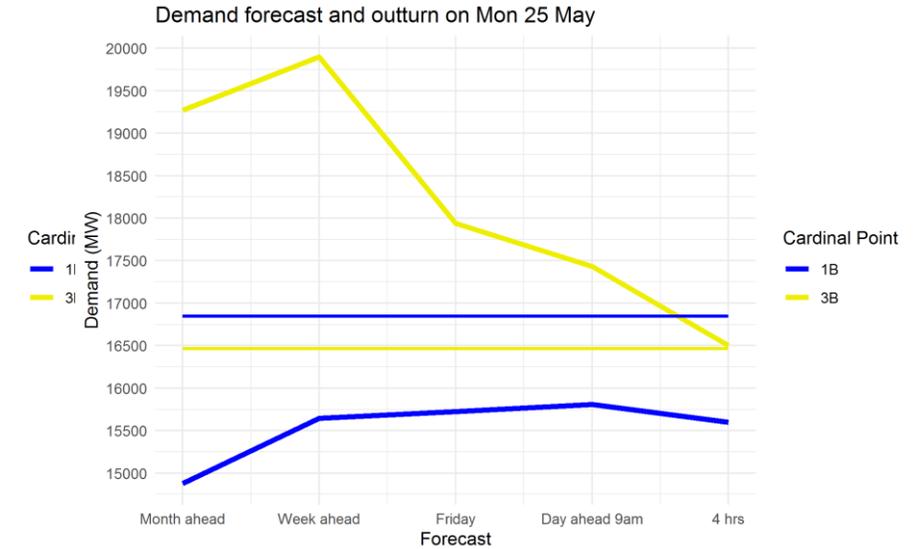
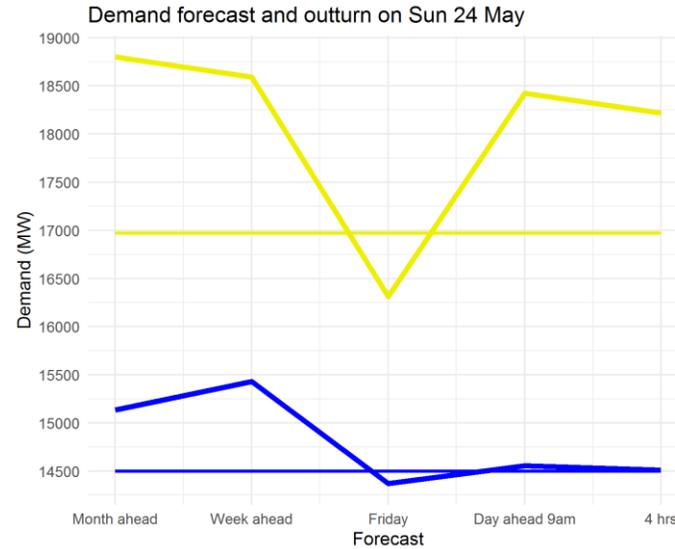
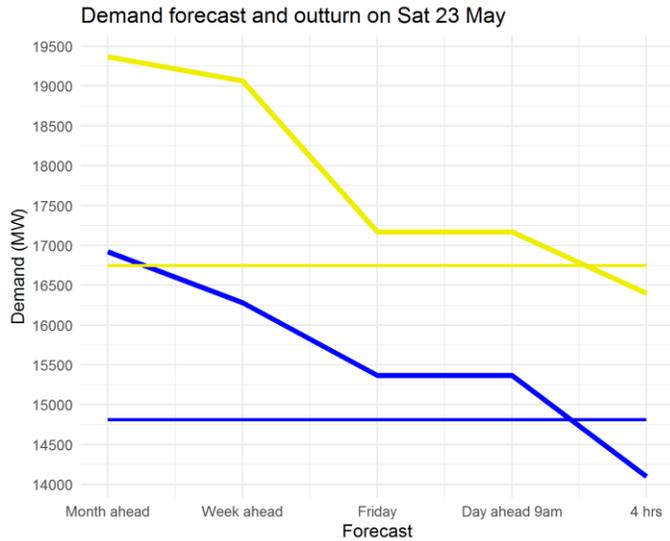
Plan developed & undergoing review with TUs and stakeholders

A gradual, phased return, in line with Working Safely Guidelines issued – office capacity is severely reduced and looks very different

Critical staff remain protected and this will continue during Recovery

Taking the opportunity to review our ways of working and a recovery to Build Back Better

ESO forecasting performance: Late Bank Holiday

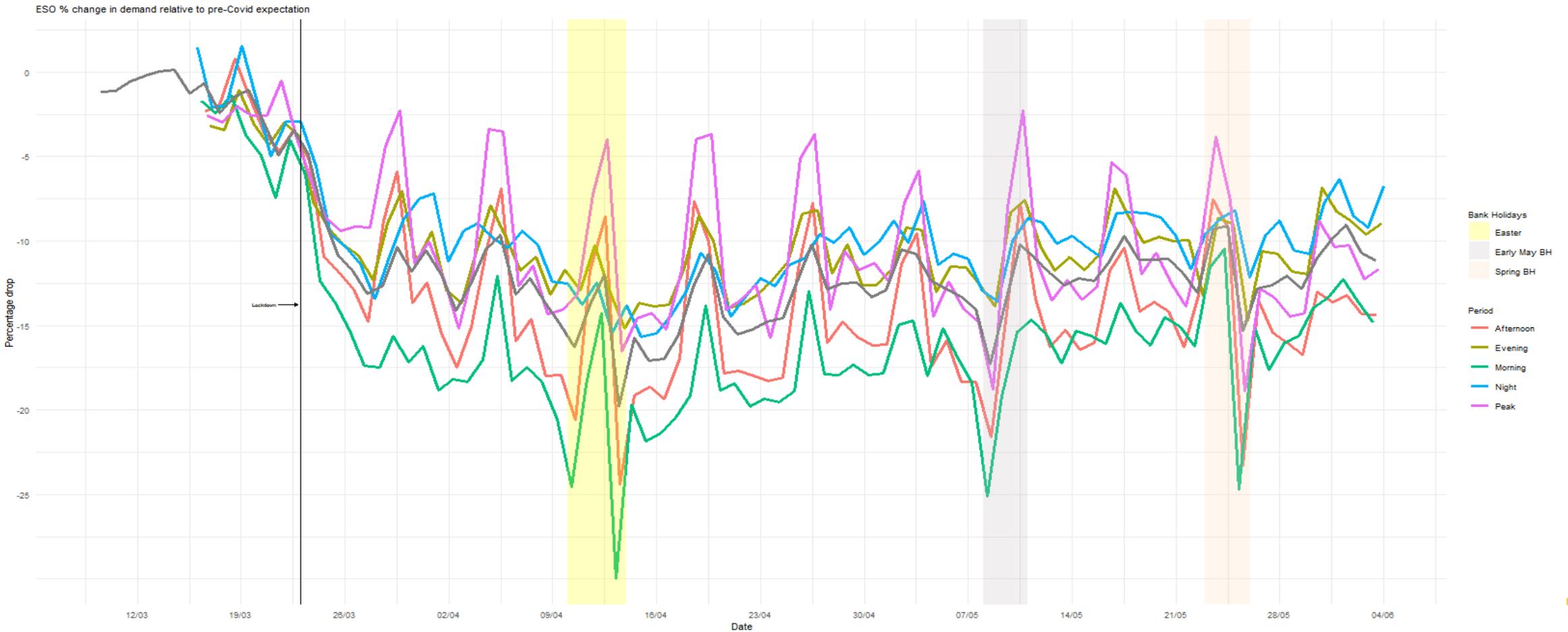


Date	Cardinal Point	Volume of ODFM enacted (increases ND) (MW)	National Demand outturn* inc. ODFM (MW)	Forecast 4 hours ahead (MW)	Error
Sat 23rd May	1B	999	14813	14100	-713
	3B	1902	16744	16400	-344
Sun 24th May	1B	792	14500	14510	10
	3B	NONE	16970	18220	1250
Mon 25th May	1B	NONE	16845	15600	-1245
	3B	1020	16465	16500	35

* operational metering

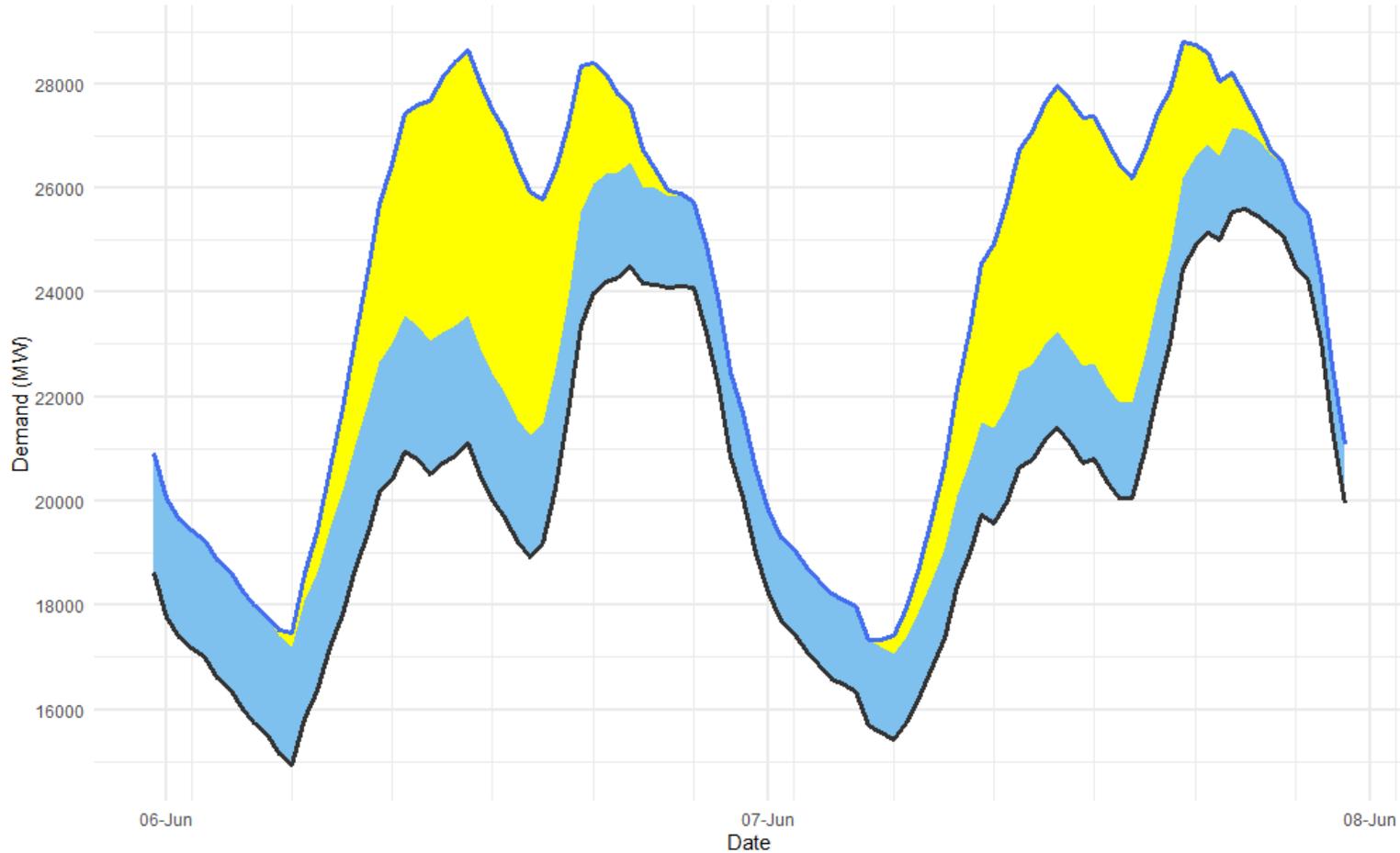
ESO assessment of demand reduction

Graph shows % drop between what we have observed & what we would expect from our models had there was no Covid-19. Demand referred to is our proxy for the total demand in GB; not just the demand on the transmission system.



Demand | 6th & 7th June

ESO Demand forecast for the weekend of 6th June 2020
based on the current government policies /in relation to the pandemic and on the latest weather forecast



Date	Forecasting point	National Demand (GW)	Dist. wind (GW)	Dist. PV (GW)
Sat 6th Jun	Overnight min	14.9	2.3	0.3
	Afternoon min	18.9	2.4	4.7
Sun 7th Jun	Overnight min	15.4	1.6	0.3
	Afternoon min	20.1	1.8	4.3

Renewable type

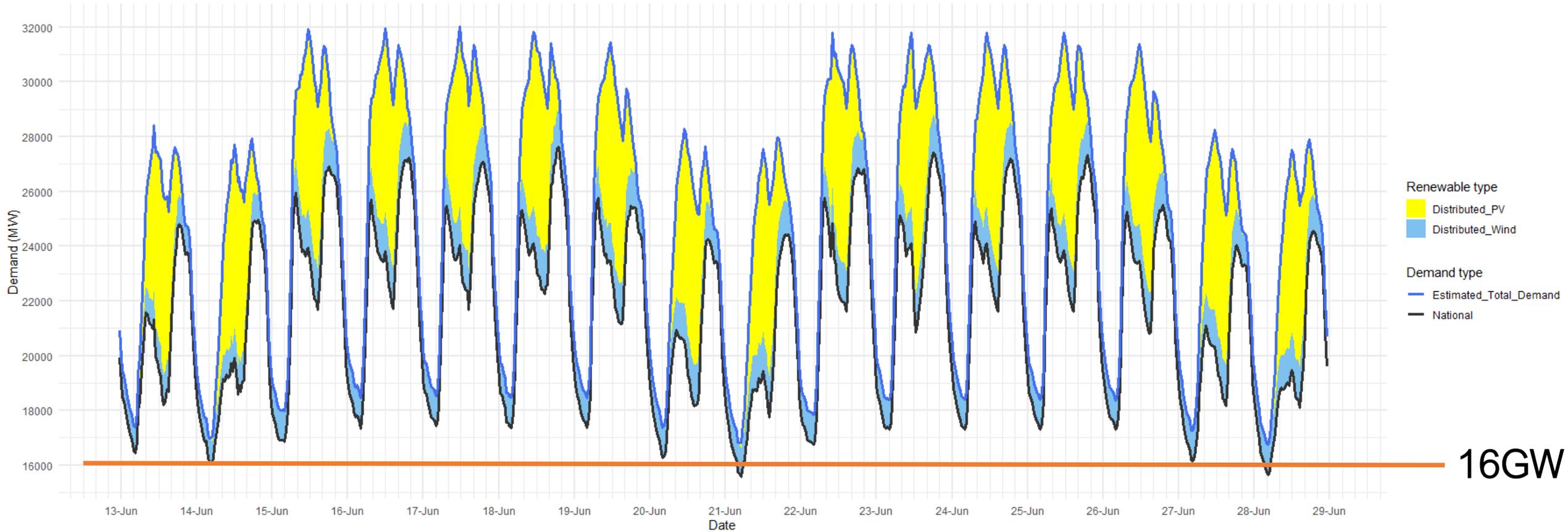
- Distributed_PV
- Distributed_Wind

Demand type

- Estimated_Total_Demand
- National

Forecast for June 2020

ESO Demand forecast between 13th & 28th June 2020
based on the current government policies /nin relation to the pandemic and on the latest weather forecast



What have we done | Optional Downward Flexibility Product | Update

4GW signed onto the service terms so far with provider onboarding continuing.

No instructions were issued this week however a market information CSV has been published reflecting the availability of units, including prices and volumes submitted.

Further details can be found in the [market information report](#)

Market communication related to service instructions will be published via BM reports &:

<https://extranet.nationalgrid.com/sonar/>

Please sign up for notifications

We have also published an interactive guidance document on the website. The document provides an overview of the service, explains how to participate, assessment and settlement information, and FAQs. You can access this document via this [link](#)

If you are interested in participating in this service or if you have any questions, please contact: commercial.operation@nationalgrideso.com

Optional Downward Flexibility Product | FAQs

Envelope of uncertainty

Beyond T-24 hours
Scenario analysis &
planning

T-24 hours
Day ahead
planning

T-4 hours
Scheduling
Timescales

T=0
Real time
ENCC actions

T+X
Post event
Review

ODFM
decision

Trades &
Super SEL
enactment

BOAs

Time

Inputs into ODFM decision:

- Demand Forecast
- Positive and Negative Reserve requirement
- Contribution to demand of:
 - Nuclear,
 - Pump Storage,
 - Interconnector flows,
 - Minimum CCGT requirement (to meet the voltage and inertia contributions)
 - additional CCGT MWs running to meet demand not inertia
- Overlay:
 - Metered wind forecast
 - Available bids on wind
 - Balancing actions required for network congestion
 - Any market actions drive by price signals

Assessment of ODFM

- Assess if we have a balanced position and can satisfy our downward requirements, or if further action is needed.
 - Action needed to resolve imbalance?
 - Action needed to meet requirement for negative reserve?
- If yes, review commercial options available e.g. what can reasonably be assumed with respect to trading on interconnectors?
- Refine assumptions to deduce a requirement for ODFM in line with envelope of uncertainty at that time

Optional Downward Flexibility Product | FAQs

Many questions on why ODFM is not included in imbalance or DISBSAD calculations.

- When designing the service, the impact of imbalance when providers deliver the service was considered and a decision to apply ABSVD to keep the parties whole was made. This was possible as a result of the recent go-live of P354.
- Time constraints associated with the need to design and implement the service quickly meant that some service design elements needed to be simpler than would be the case for an enduring reserve product.
- One such design element is the decision for the costs of ODFM to not feed into the imbalance price or into DISBSAD data; as doing so would require data to be sent to Elexon and for which no automated route exists, which would have delayed the implementation of the service.
- Not including the ODFM volume in the NIV calculation is an imperfect solution given the volumes of actions that may be required by NGENSO impacting market length
- To mitigate this, NGENSO updates the demand forecast to reflect the impact of the service to ensure the market is aware of the actions we have taken.
- An improvement to this will be to publish the forecast MW service impact for each settlement period the service is instructed for. This will be published via NGENSO data portal at the same time as the BMRS and SONAR notifications to the market that the service has been called on.
- Data flows for enduring ancillary services are critical to the market & NGENSO and ensuring these can be implemented accurately takes time. An enduring footroom product would address these issues and this work will be picked up as part of Reserve Reform.

A per settlement period MW profile of forecast ODFM will be published on NGENSO data portal

Optional Downward Flexibility Product | Recap

All units are assessed in line with the following principles:

- Assess whether the volume is accessible to NGENSO due to system constraints
 - Units restricted due to network constraints are rejected
- Assess whether the volume is available during the period of our requirement
 - Reject all bids which cannot deliver in the settlement periods for which service is required.
- Bids are ranked according to their effective price (£/MW/hr / NGENSO forecast load factor).
- Assess the ramping times for units and any additional costs incurred from this
- Accept bids in effective price order until the requirement is met.
- All other bids above the requirement are rejected.

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