

ESO Operational
Transparency Forum
21 July 2021

You have been joined in listen only mode,
please ensure your cameras are turned off

Introduction | Sli.do code #OTF

Please visit www.sli.do and enter the code #OTF to ask questions & provide us with post event feedback.

We will answer as many questions as possible at the end of the session. We may have to take away some questions and provide feedback from our expert colleagues in these areas during a future forum.

Please continue to use your normal communication methods with the ESO including the below:

For future market developments: box.futureofbalancingservices@nationalgrideso.com

For pathfinders: box.networkdevelopment.roadmap@nationalgrideso.com

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

<https://data.nationalgrideso.com/plans-reports-analysis/covid-19-preparedness-materials>

Regular Topics

- Questions from last week
- Business continuity
- Demand review and outlook
- Costs for last week
- Constraints

Additional topics for this week

- Inertia
- Whole system Code

Questions outstanding from last week

Q: What is the consumption to keep the plants activated through the stability pathfinder online and ready for inertia drops?

The consumption depends on the individual unit. This was a tendered value during stability pathfinder phase one and the values are published in the tender results table. The values are between 0.5 and 7 MW.

Q: Can you publish how much inertia each machine / BMU contributes with?

The consumption depends on the individual unit. This was a tendered value during stability pathfinder phase one and the values are published in the tender results table. The values are between 0.5 and 7 MW.

Q: Can you publish inertia estimates live?

No as we need access to the operational view of generator output, what MELs are (to deduce configuration) and what Bids/Offer and trades were enacted. The database that updates this is updated once a day just after midnight. The real-time systems that manage the system are cordoned off from the analysis teams to ensure they are not at risk of data request overload – so the data is in our system, but we have to wait for it to be safely transferred into the data warehouse.

When we have the new measurement tools in use we will be able to publish the measurement data however again the time taken to publish these will depend on the access the analysis team has to this data and is not initially likely to be live.

Questions outstanding from last week

Q: Inertia deep dive: Given DC & Stability Pathfinders do not provide a signal to existing inertia providers, is there a 3rd way of managing inertia decline by ensuring existing inertia providers have the opportunity to compete / be rewarded for inertia thereby signalling them to remain on the system?

This is a question which will be considered as part of the [Stability Market Design](#) Innovation Project which will be investigating enduring approaches for procuring services to fulfil our stability needs. This project will be taking part throughout the second half of this year and we will be engaging with the industry during the project to get input on the approaches to be considered.

Q: Will you be publishing the inertia data generated via these new tools as well, and which inertia value will drive your procurement and balancing actions?

Yes we will be publishing the inertia measurement data once we build confidence in their results. The work to incorporate these new tools into our existing processes will identify how we decide which determine the actions we will take.

Q: Sometimes interconnectors are traded down by NG (e.g. currently IFA2 traded down 300MW), but there does not appear to be a reason on data portal. Is there a reason for this trade, and why is the reason not given on the data portal?

Interconnectors are traded down for a number of reasons – to manage RoCoF, for constraint reasons, for downward regulation and occasionally for voltage control.

If we have understood the question correctly, the trades referred to on IFA2 are being undertaken to manage a constraint in the south of England (MACHEX constraint). We haven't had to manage this constraint through trading previously and did not have the option to include this constraint name. It was updated yesterday and will be applied to these trades going forward.

Questions outstanding from last week

Q: Oliwia noted that you lack real-time data for distributed generation. What are doing to get real-time data for all significant DG in order that your forecasts of actual demand and assessments of system stability can be improved?

This is something that is a high priority for us. We've been working on it and faced some GDPR issues.

However, we are planning to have a consultation in autumn for what we forecast and what data we need to have rights to access in order to do this.

Future forum topics

While we want to remain flexible to provide insight on operational challenges when they happen, we appreciate you want to know when we will cover topics.

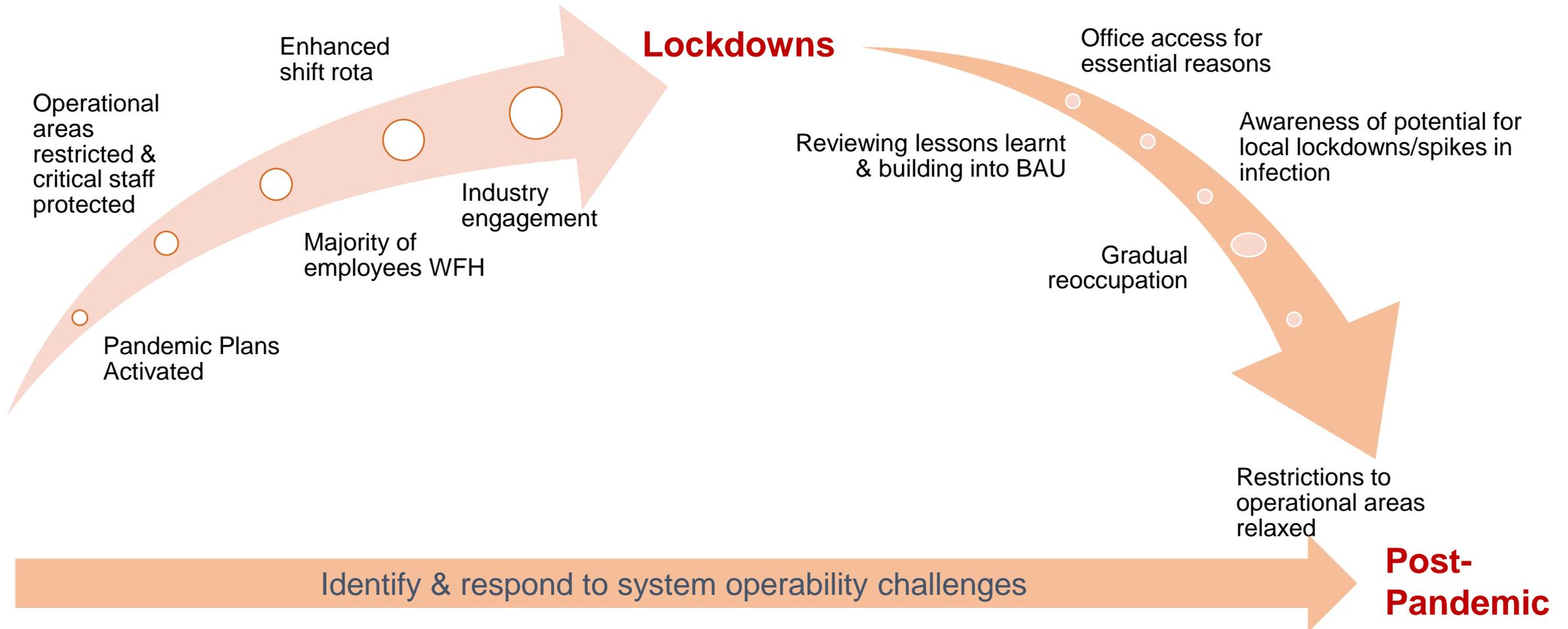
In response to questions and asks from previous weeks, we have the following deep dives planned in:

Thermal Constraint costs 18 Aug

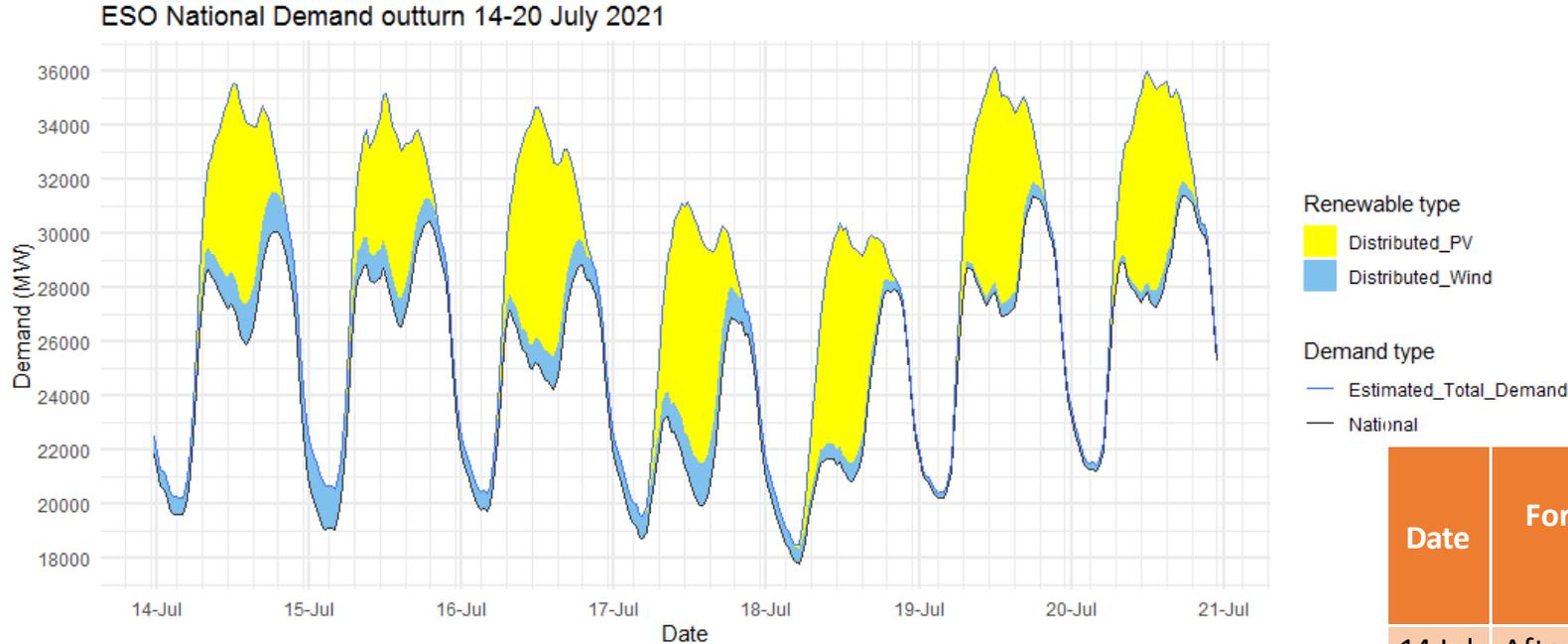
Also coming up:

Network Options Assessment (NOA) Deep dive

Protecting critical staff to maintain critical operations

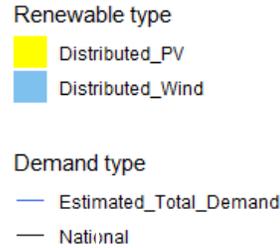


Demand | Last 7 days outturn



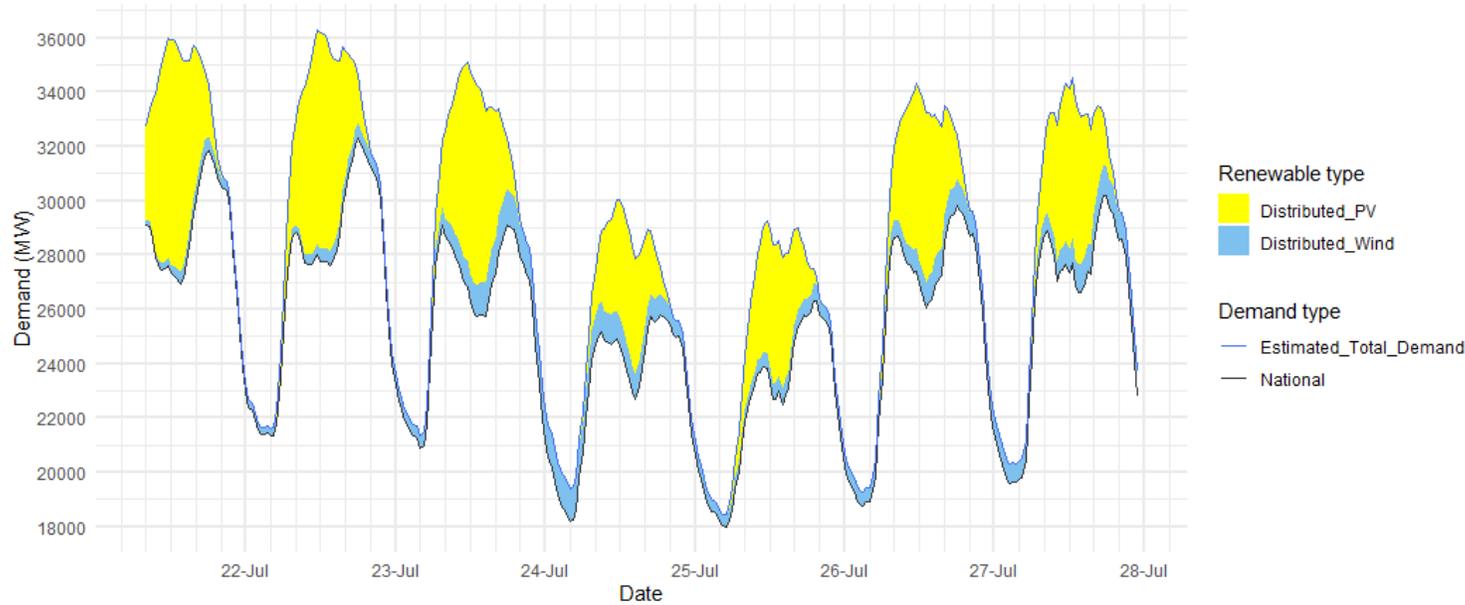
The black line (National Demand) is the measure of portion of total GB customer demand that is supplied by the transmission network.

Blue line serves as a proxy for total GB customer demand. It includes demand supplied by the distributed wind and solar sources, but it does not include demand supplied by non-weather driven sources at the distributed network for which ESO has no real time data.



Date	Forecasting Point	FORECAST (Wed 14 Jul)			OUTTURN		
		National Demand (GW)	Dist. wind (GW)	Dist. PV (GW)	National Demand (GW)	Dist. wind (GW)	Dist. PV (GW)
14 Jul	Afternoon Min	26.2	1.3	7.8	25.9	1.5	6.7
15 Jul	Overnight Min	18.9	1.5	0.0	19.1	1.6	0.0
15 Jul	Afternoon Min	26.9	1.1	6.3	26.6	1.1	5.4
16 Jul	Overnight Min	19.6	0.6	0.0	19.7	0.7	0.0
16 Jul	Afternoon Min	24.8	0.8	7.2	24.2	1.2	7.2
17 Jul	Overnight Min	18.4	0.6	0.3	18.7	0.8	0.0
17 Jul	Afternoon Min	20.3	0.7	7.6	19.9	1.6	8.2
18 Jul	Overnight Min	17.9	0.5	0.3	17.8	0.6	0.2
18 Jul	Afternoon Min	21.0	0.6	8.0	20.8	0.7	8.0
19 Jul	Overnight Min	19.3	0.4	0.0	20.2	0.2	0.0
19 Jul	Afternoon Min	26.3	0.5	7.7	26.9	0.4	7.7
20 Jul	Overnight Min	20.4	0.5	0.0	21.2	0.2	0.0
20 Jul	Afternoon Min	28.2	0.6	5.3	27.3	0.6	7.5

Demand | Week Ahead

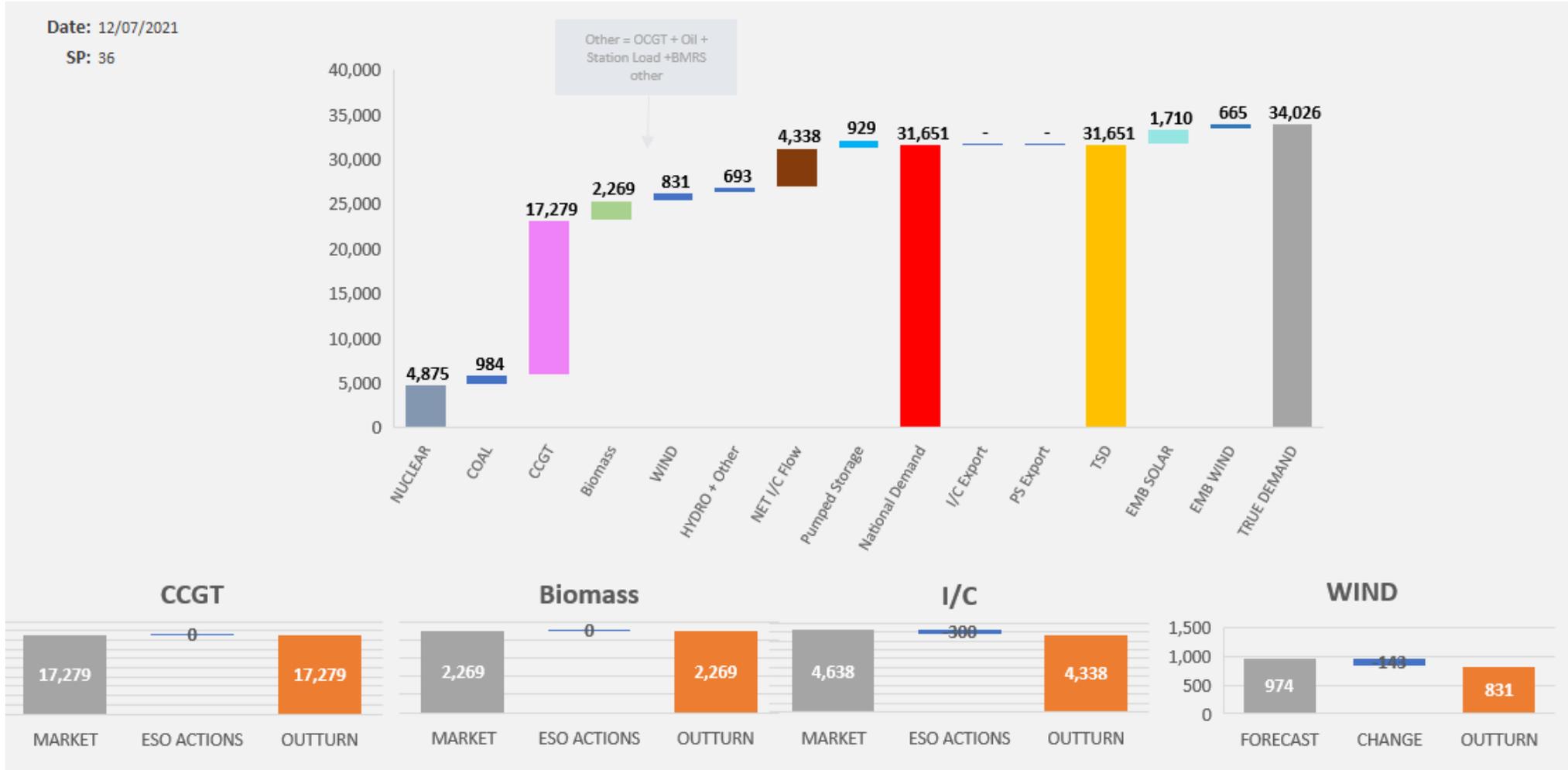


The black line (National Demand) is the measure of portion of total GB customer demand that is supplied by the transmission network.

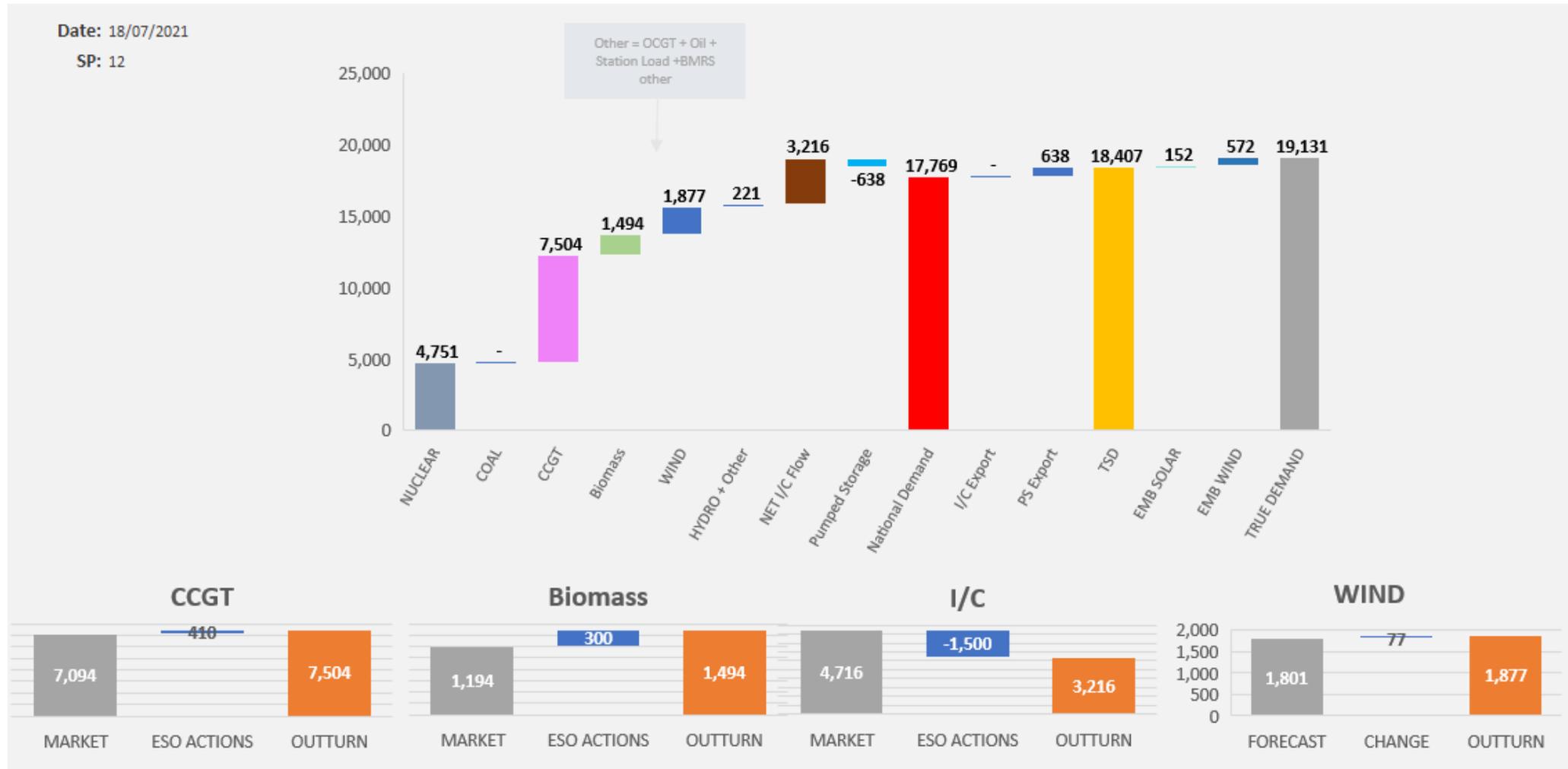
Blue line serves as a proxy for total GB customer demand. It includes demand supplied by the distributed wind and solar sources, but it does not include demand supplied by non-weather driven sources at the distributed network for which ESO has no real time data.

		FORECAST (Wed 21 Jul)		
Date	Forecasting Point	National Demand (GW)	Dist. wind (GW)	Dist. PV (GW)
21 Jul	Afternoon Min	26.9	0.5	8.0
22 Jul	Overnight Min	21.4	0.2	0.0
22 Jul	Afternoon Min	27.6	0.5	7.4
23 Jul	Overnight Min	20.9	0.5	0.0
23 Jul	Afternoon Min	25.7	1.1	7.4
24 Jul	Overnight Min	18.2	1.2	0.0
24 Jul	Afternoon Min	22.7	1.0	4.2
25 Jul	Overnight Min	18.0	0.4	0.1
25 Jul	Afternoon Min	22.5	0.6	4.8
26 Jul	Overnight Min	18.8	0.5	0.0
26 Jul	Afternoon Min	26.0	0.9	6.2
27 Jul	Overnight Min	19.6	0.7	0.0
27 Jul	Afternoon Min	26.6	1.0	5.5

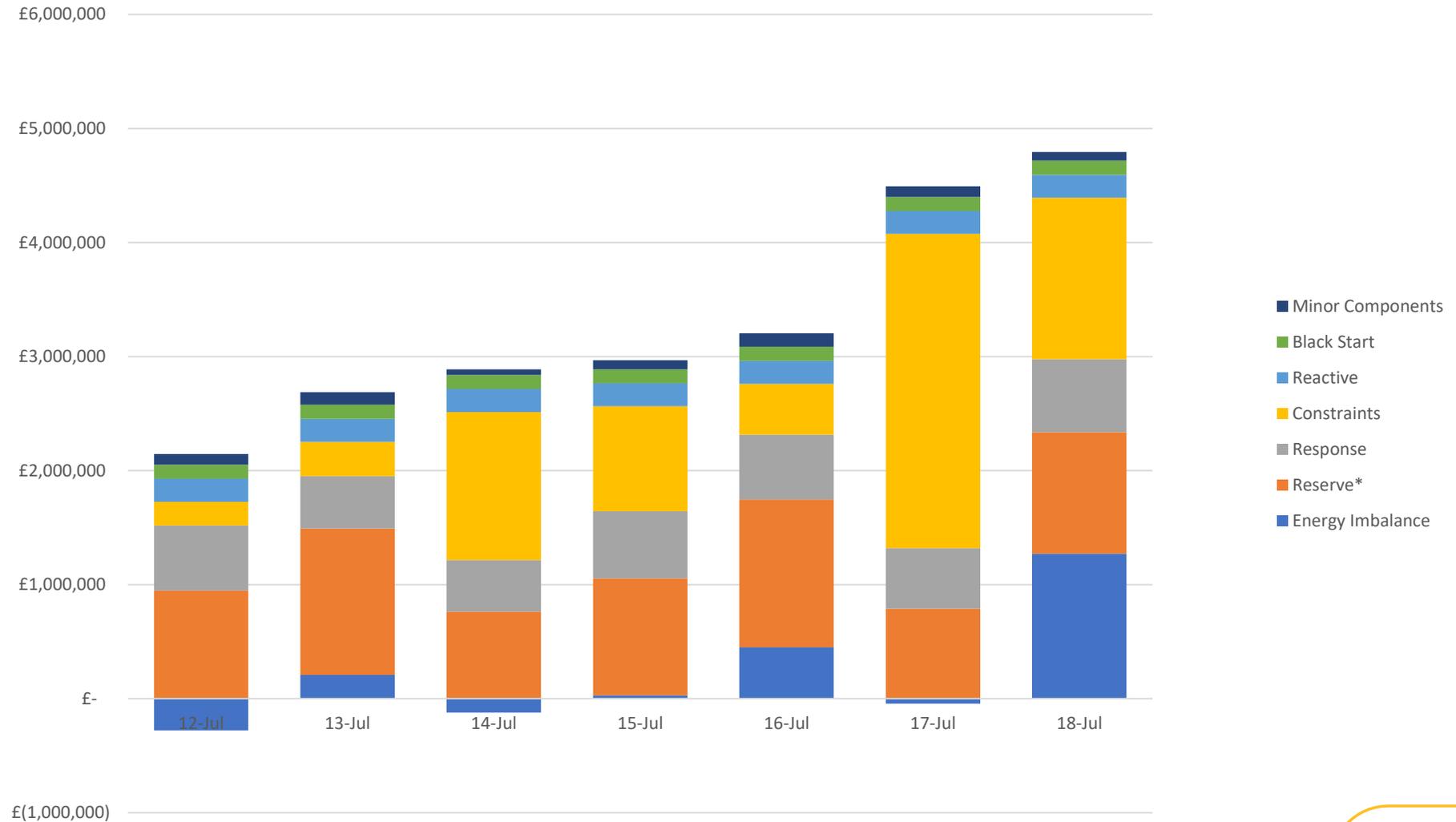
ESO Actions | Monday 12th July Peak



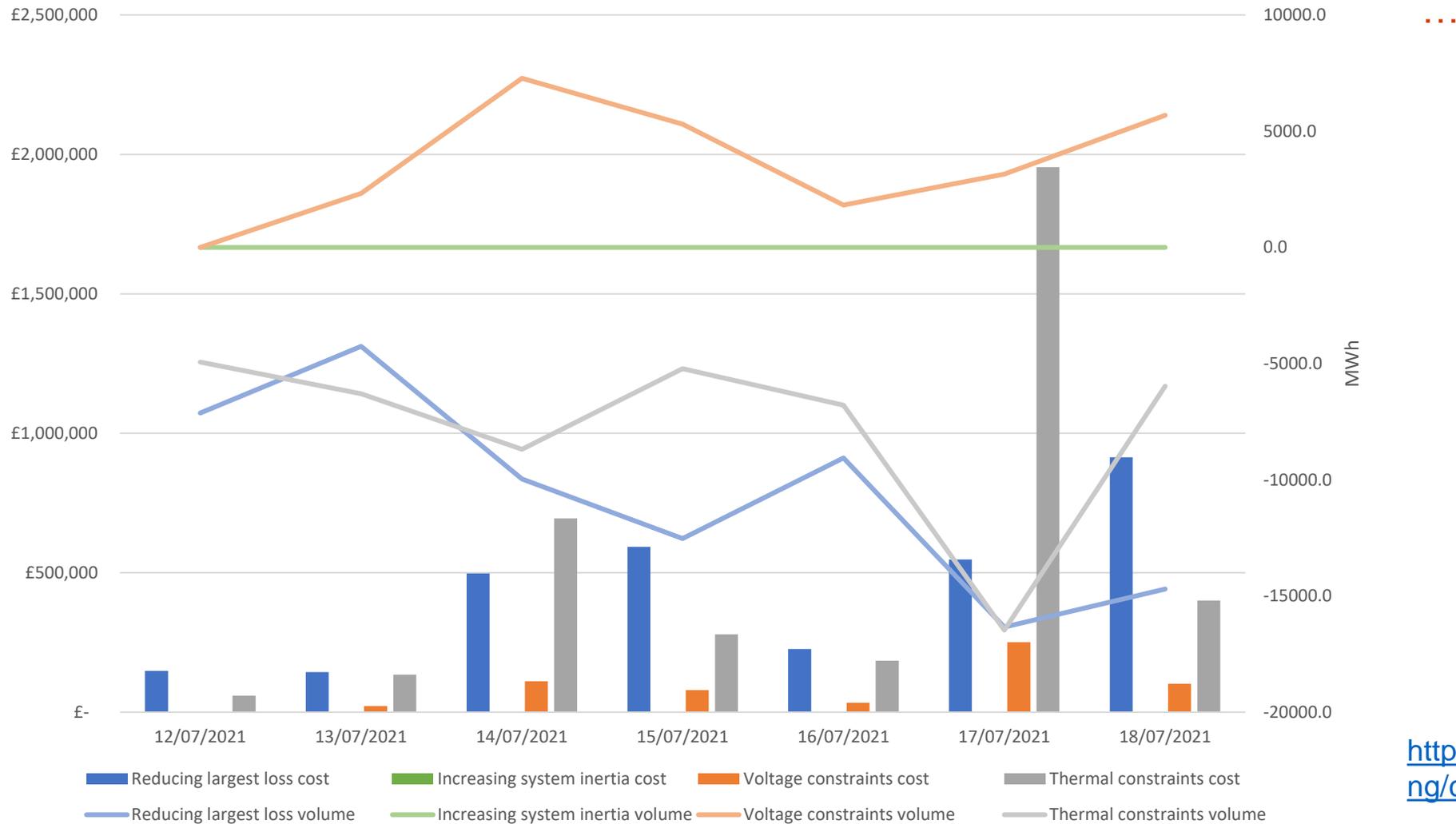
ESO Actions | Sunday 18th July Minimum



Transparency | Costs for the last week



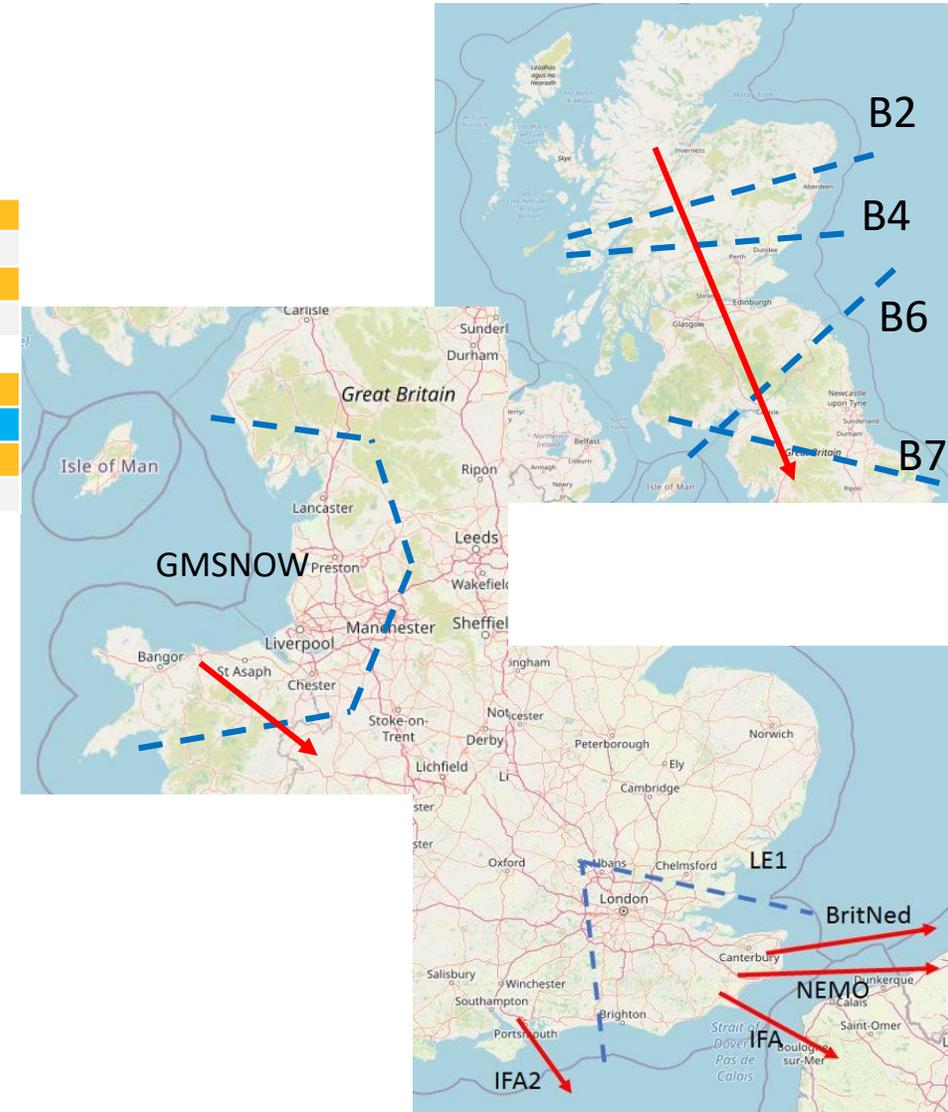
Transparency | Constraint cost breakdown



<https://data.nationalgrideso.com/balancing/constraint-breakdown>

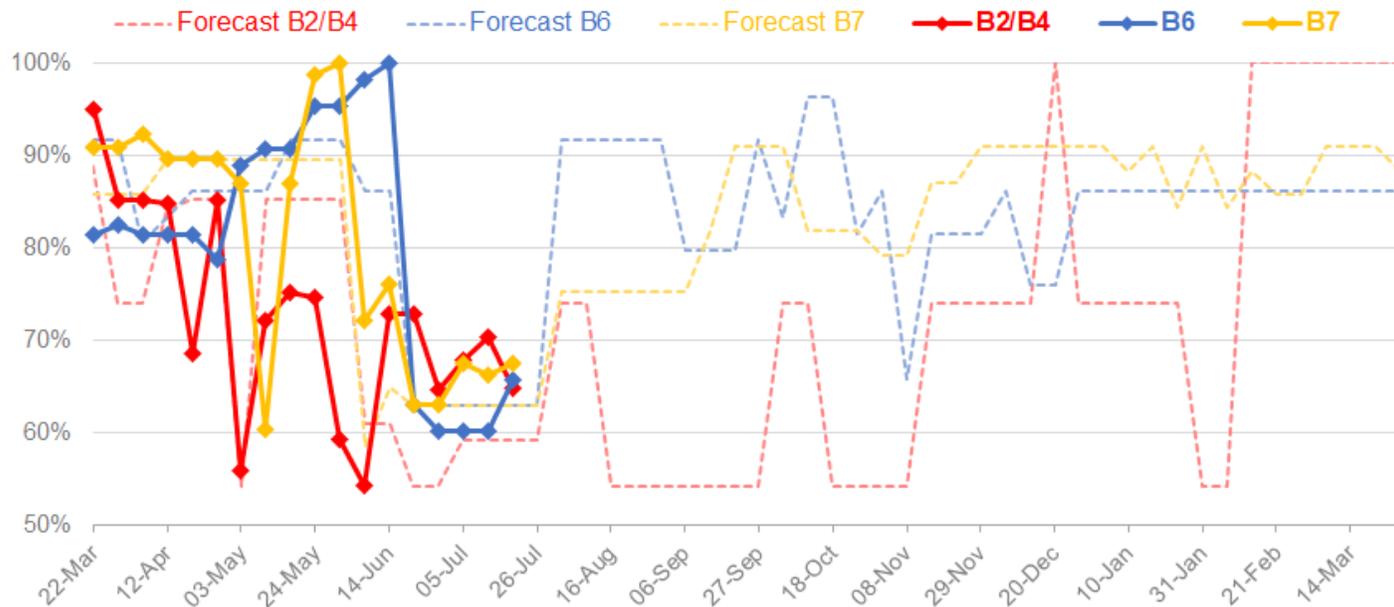
Transparency | Thermal Constraints

	5-Jul	12-Jul	19-Jul	26-Jul	5-Aug										
Scotland															
B6 (SCOTEX)															
B2/B4 (SSE SP2)															
England and Wales															
B7 (SSHARN3)															
(GM SNOW)															



Long term view

B2/B4, B6 and B7 transfer capacity (March 2021 - March 2022)





Whole System Code
July 2021

Contents – Open Meeting Agenda

1. Recap of the whole system code concept
2. Discussion of how to best consult on identified themes:
 - a) Key benefits of increased whole system alignment of the technical codes
 - b) How to most effectively realise the key benefits
 - c) Potential solutions to realise benefits.
 - d) Effective collaboration with industry during development
 - e) Enduring arrangements within industry
 - f) Digitalisation
3. Next steps

Purpose for this discussion

- To share feedback received to date
- To gather input for the planned consultation paper

Recap: Introducing the Whole System Code Concept

RIO-2 **ambition** to work with all stakeholders to create a fully-digitalised, Whole System Grid Code by 2025

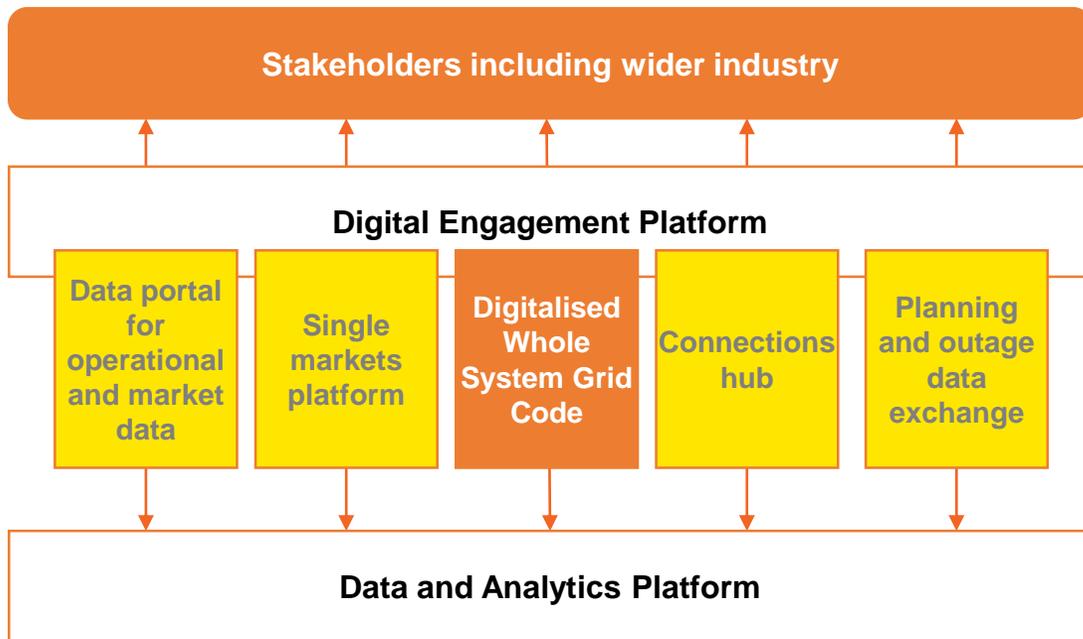
- Focus on providing minimum standards to allow safe and secure operation of the electricity systems.
- **Step 1:** To determine the scope, objectives and approach together with all stakeholders at the start of this activity in 2021/22. This will ensure that there is a consensus on the direction of this work from the beginning.



Recap: Delivery

The concept can be progressed through two distinct – but closely interlinked – work streams.

Work Stream 1: Grid Code Digitalisation



A digitalised code supported by artificial intelligence to signpost and improve the user experience (e.g. a 'smart search' that retrieves code information relevant to the use case of a specific market participant).

Work Stream 2: Whole System Grid Code

Applying a whole system approach to the technical codes at Distribution and Transmission to improve customer experience, deliver consumer benefit, and ensure these codes are fit for the future.

This is focus of today's presentation.

Feedback Themes for Consultation

Stakeholder engagement to date has identified the following themes for consultation:

- a) Understanding the challenges of using the technical codes
- b) Proposing solutions to address the challenges faced with using the technical codes
- c) Effective collaboration with industry
- d) Enduring arrangements

Discussion:

1. Are these the right themes, and are there any missing?
2. What principles should be kept in mind when drafting the consultation?
3. How can we ensure that we attain high quality engagement and responses from the widest possible range of relevant stakeholders?

Next Steps - Proposed Stakeholder Engagement Plan

Phase I: Introduction of concept and initial feedback (June). Complete.

Phase II: Gather input to shape industry consultation (July). Today's discussion.

Phase III: Industry consultation (July / August)

Open Meeting

Date: 30/07/21

Time: 10:00 hrs – 11:00 hrs

Contact: Laetitia Wamala

Email: Laetitia.Wamala@nationalgrideso.com

Thank you

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 Slido (code #OTF) and we will try to answer as many as possible now. If we are unable to answer your question today, then we will take it away and answer it at a later webinar.

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

slido

Audience Q&A Session

 Start presenting to display the audience questions on this slide.

Q&A

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