

ESO Operational Transparency Forum

29 June 2022

You have been joined in listen only mode with
your camera 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. **Ask your questions early in the session to give more opportunity to pull together the right people for responses.**

To tailor our forum and topics further we have asked for names (or organisations, or industry sector) against Sli.do questions. If you do not feel able to ask a question in this way please use the email: box.NC.Customer@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
- Demand review
- Costs for last week
- Constraints

Focus Areas

- Transparency Roadmap
- OTF Stakeholder Workshop

Winter Operability 2022-23

We will be giving an early view of winter in July and publishing the Winter Outlook in early Autumn.

We will be unable to answer further questions on this at today's forum

Dynamic Parameters

What we will do

- Review dynamic data daily to test against market rules

- Investigate instances of non-compliance or market manipulation

- Report instances of suspicious behaviour to Ofgem accordingly

- Provide a route for you to highlight any specific concerns to us: MarketReporting@nationalgrideso.com

What we will not do

- Comment on specific instances of market behaviour or individual units in this forum

- Provide information about what instances we have reported to Ofgem

- Provide information in response to any concern raised to us

Contingency Contracts

What we can share now

As per BEIS' request, the ESO has recently entered into a bilateral agreement with EDF, for West Burton A to provide additional coal powered generation this winter if required.

Will the generation be available to the market?

This generation will not be available to the open market and will be dispatched at the request of the ESO.

What period does the contract cover?

The contracts cover winter 2022/23. We anticipate the generation to be available from late autumn to March 2023.

How much will the contracts cost?

We are still in talks with other generators so are unable to provide a forecast of costs at this stage.

How will the contract costs be paid for? When will this happen?

The cost of the contracts will be recovered in BSUoS. We anticipate this will be across October 2022 – March 2023 (inclusive).

Why aren't you able to be fully transparent about these contracts today?

We have developed this service rapidly in response to BEIS' request. There are two key drivers for getting these contracts in place now, ahead of winter; to allow generators to undertake maintenance and source coal.

Contingency Contracts

Things we hope to answer in the coming weeks

What will be the REMIT status of the unit when it is not running/ running?

How will we tell you that we intend to use it?

What data will the unit be submitting and how will this data be made public?

What costs will flow into cash-out?

How are you considering the units in other analysis?

We will be unable to answer further questions on this at today's forum.

Future deep dive/ response topics

Items we have taken offline and will come back to this forum on in the future
REMIT obligations on ESO

Items that we have planned for a deep dive

Demand control tests

Reserve scarcity trial results

Early view of Winter Operability

Items that we have identified for regular slot consideration

[How we are performing under RIIO-2 report](#) (monthly)

Please note the RIIO-2 report for May was published on 27 June at the link above.

Feedback welcomed on our identified topics for inclusion

OTF Stakeholder workshop

Monday 27 June

~15 attendees from 10 companies joined by a number of ESO colleagues

We gathered many ideas and options for developing this forum.

Next steps

We will share the content created with this forum: targeting next week

We will develop a plan for trialling and delivering developments and share this with this forum

Further ideas generation sessions

Regular feedback

Although this was a great session to generate a lot of ideas, we do also appreciate any feedback on a more regular basis. There is a poll on sli.do and we use comments in here to make small developments week to week; this feedback has driven much of the content and developments thus far. So please do use this to pass on any regular feedback.

New OTF documents published

We have published two new documents on the OTF page in our data portal:

- Q&A document
- Deep-dive list of the topics presented in previous OTF

The documents are available on the following location (with slides and event recordings):
<https://data.nationalgrideso.com/plans-reports-analysis/covid-19-preparedness-materials>

We thank you for your patience while we have worked on this.

The objective in the future is to update this document regularly.

Questions outstanding from previous weeks

**Q: Changes in interconnector generation “PNs” or Physical Notifications reflect through into INDGEN (Indicated Generation) on a zonal and national basis every quarter to and quarter past the hour. Does the same also happen to interconnector demand “PNs” to INDDDEM (Indicated Demand) on a zonal and national basis. Might be BMRA data flows but data comes from ESO!
Thanks C**

A: The Indicated Generation (INDGEN) forecast for each period is the sum of all the Physical Notifications submitted for BM Units which are forecast to be exporting energy, presented as a single average MW level for the Settlement Period. This figure is derived by the System Operator for submission to the BMRS but is not formally defined in the Grid Code. The same happens in the case of Indicated Demand (INDDDEM) forecast data with a difference that it is the sum of all the Physical Notifications submitted for BM Units which are forecast to be importing energy.

The INDGEN and INDDDEM Forecasts data are normally received based on the following timing schedule on a daily basis and cover the corresponding coverage windows as follows:

Timing (when issued by NETSO)	Coverage (hrs)
By 0200hrs	Data for 0200D to 0500D+1
By 1000hrs	Data for 1000D to 0500D+1
By 1600hrs	Data for 0500D+1 to 0500D+2
By 1630hrs	Data for 1630D to 0500D+1
By 2200hrs	Data for 2200D to 0500D+2

Q: On 10th of June 2022, in SPs 32 and 33, winds plants such as AKGLW-3 were reversed at expensive prices up to £99,999?

A: We are still looking into this. It does not appear to be as simple as bids being reversed at high prices.

Questions outstanding from previous weeks

Q: Why do you continue to over procure dynamic containment against your forecast? You averaged a 30% over procurement for the past week and a 24% over procurement for the past month. What's changing between forecast publication and the auction submission?

A: We've identified areas for improvement in the forecasting models which we will release soon. The complexity associated with the nature of the Loss of Mains risks and variable system conditions means there will always be a larger variance in the error compared to the case where there are no Loss of Mains risks and we procure much closer to real-time (as opposed to day-ahead).

Questions outstanding we are still working on

Q: Where can I find data on the volumes for each BMU providing the Constraints Management Pathfinder (CMP) B6 intertrip service?

Q: In the REMIT answer NGENSO say "requirements are about making sure that no parties have a competitive advantage by having access to information not freely available to all market participants." So you need to publish it as you trade and you have information we don't have! What have I missed?

We reached out directly for further clarification on this point and to make sure we've understood the concerns raised here and in responses to this question. We will come back to the OTF with ESOs position at a future forum.

Demand forecasting consultation

Monday 27 June

~14 attendees from 7 companies joined by a number of ESO colleagues

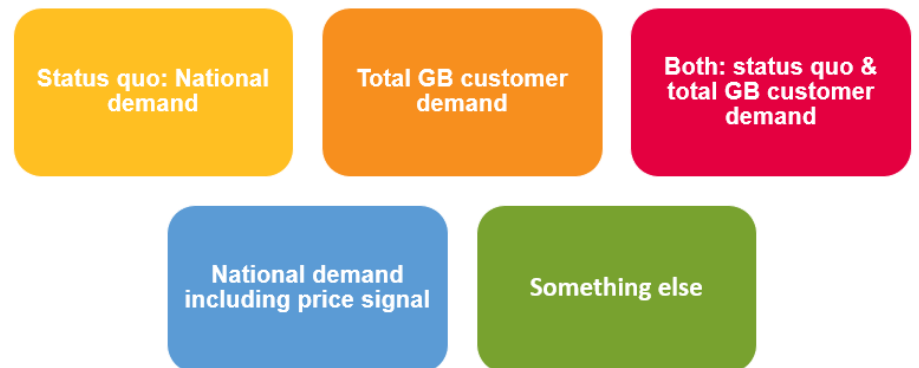
We discussed a wide range of topics in relation to ESO's demand forecasting.

We clarified what various demand definitions entail, provided deep dive into what parameters we are allowed to include in the forecast of national & transmission system demand, forecasting metric (metric 1B) which we have in place with the regulator, and asked the participants **what would be the best forecast product(s)** and what data would be needed to ensure we could provide each proposed forecast quantity.

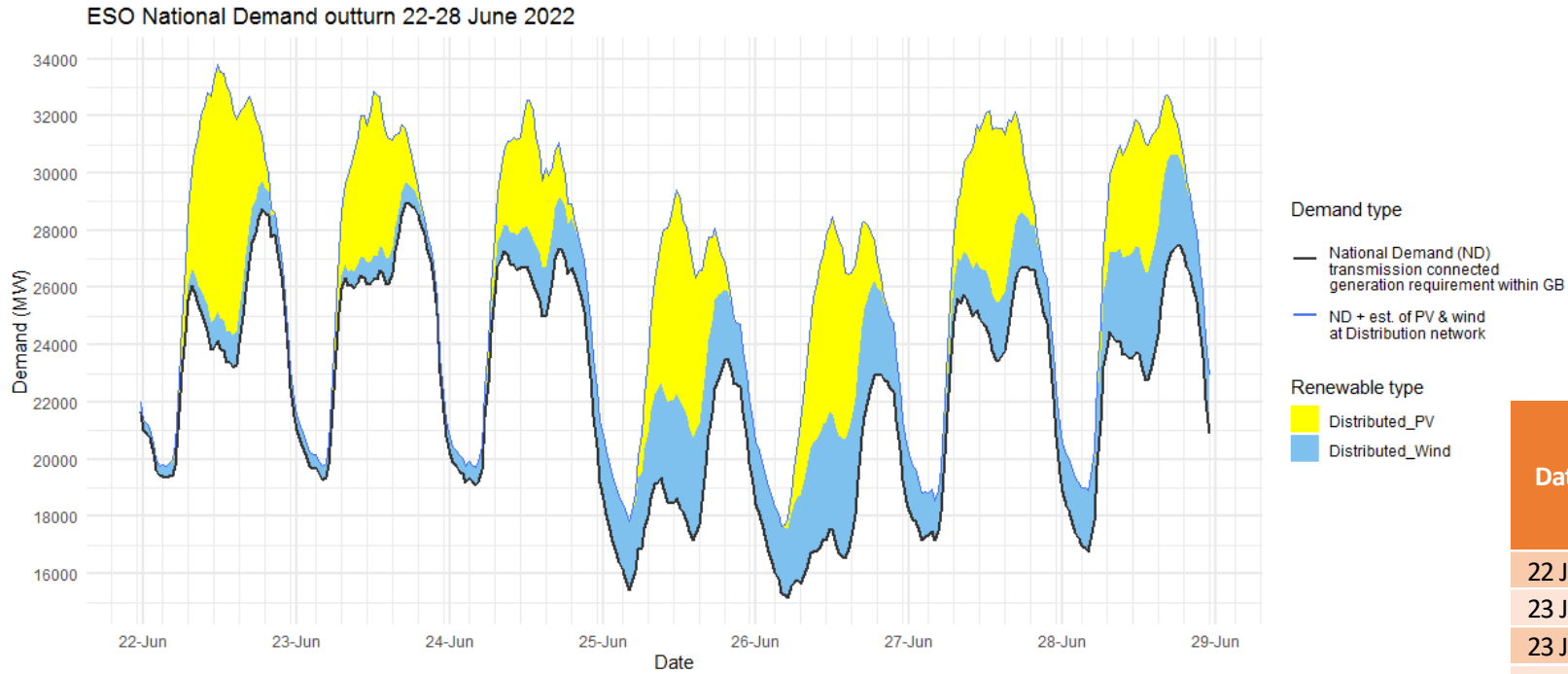
Next steps

We will summarise the discussions and share with the participants of the consultation and OTF forum.

Share the consultation summary and proposal with Ofgem



Demand | Last week demand out-turn



Date	Forecasting Point	FORECAST (Wed 22 Jun)			OUTTURN		
		National Demand (GW)	Dist. wind (GW)	Dist. PV (GW)	National Demand (GW)	Dist. wind (GW)	Dist. PV (GW)
22 Jun	Afternoon Min	23.0	1.2	8.2	23.2	1.1	7.9
23 Jun	Overnight Min	18.8	0.5	0.0	19.3	0.5	0.0
23 Jun	Afternoon Min	25.4	1.0	5.6	26.1	0.9	4.3
24 Jun	Overnight Min	18.7	1.0	0.0	19.1	0.6	0.0
24 Jun	Afternoon Min	22.9	2.4	5.2	25.0	1.7	3.1
25 Jun	Overnight Min	17.3	1.1	0.1	15.4	2.4	0.0
25 Jun	Afternoon Min	19.7	1.5	4.8	17.2	3.6	6.0
26 Jun	Overnight Min	16.1	0.8	0.5	15.2	2.4	0.3
26 Jun	Afternoon Min	18.8	1.7	5.9	16.5	4.2	5.8
27 Jun	Overnight Min	17.1	1.2	0.0	17.2	1.4	0.0
27 Jun	Afternoon Min	24.1	2.1	5.6	23.4	2.1	6.1
28 Jun	Overnight Min	17.7	1.5	0.0	16.7	2.2	0.0
28 Jun	Afternoon Min	23.3	2.6	5.8	22.7	3.8	4.5

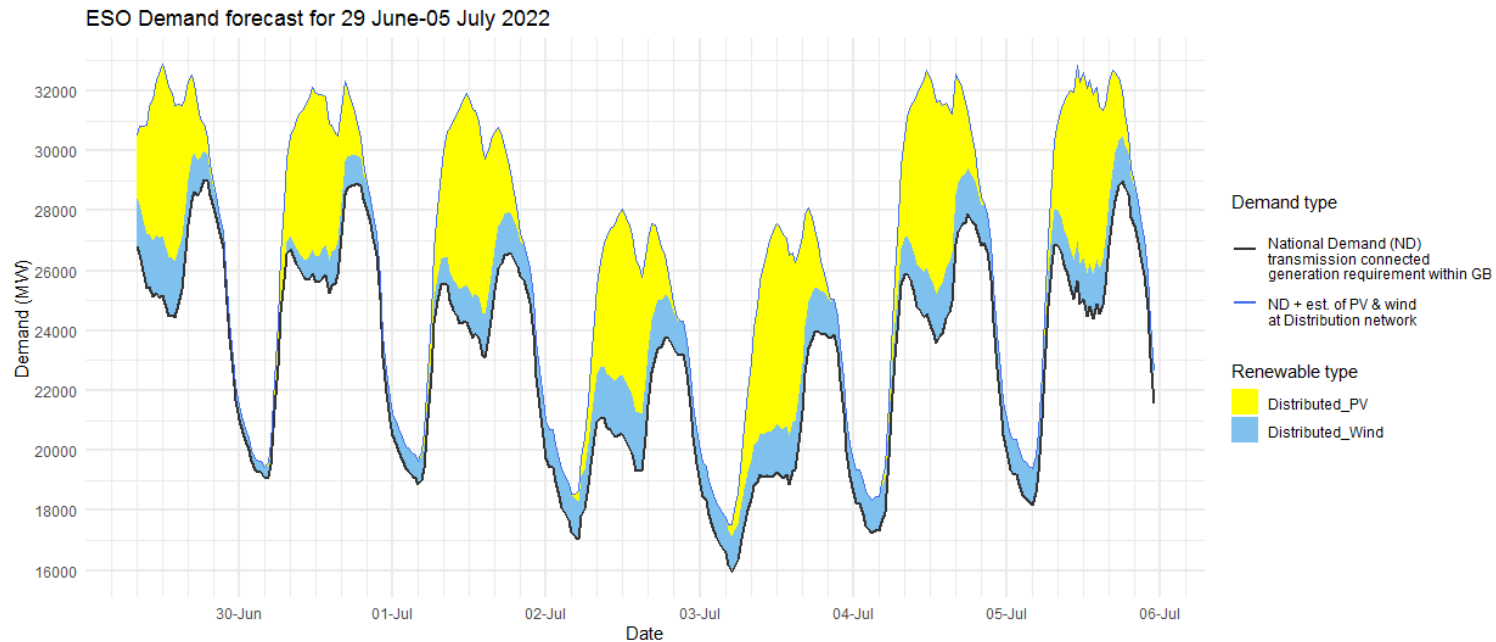
The black line (National Demand ND) is the measure of portion of total GB customer demand that is supplied by the transmission network.

ND values **do not include** export on interconnectors or pumping or station load

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.

Historic out-turn data can be found on the [ESO Data Portal](#) in the following data sets: [Historic Demand Data](#) & [Demand Data Update](#)

Demand | Week Ahead



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

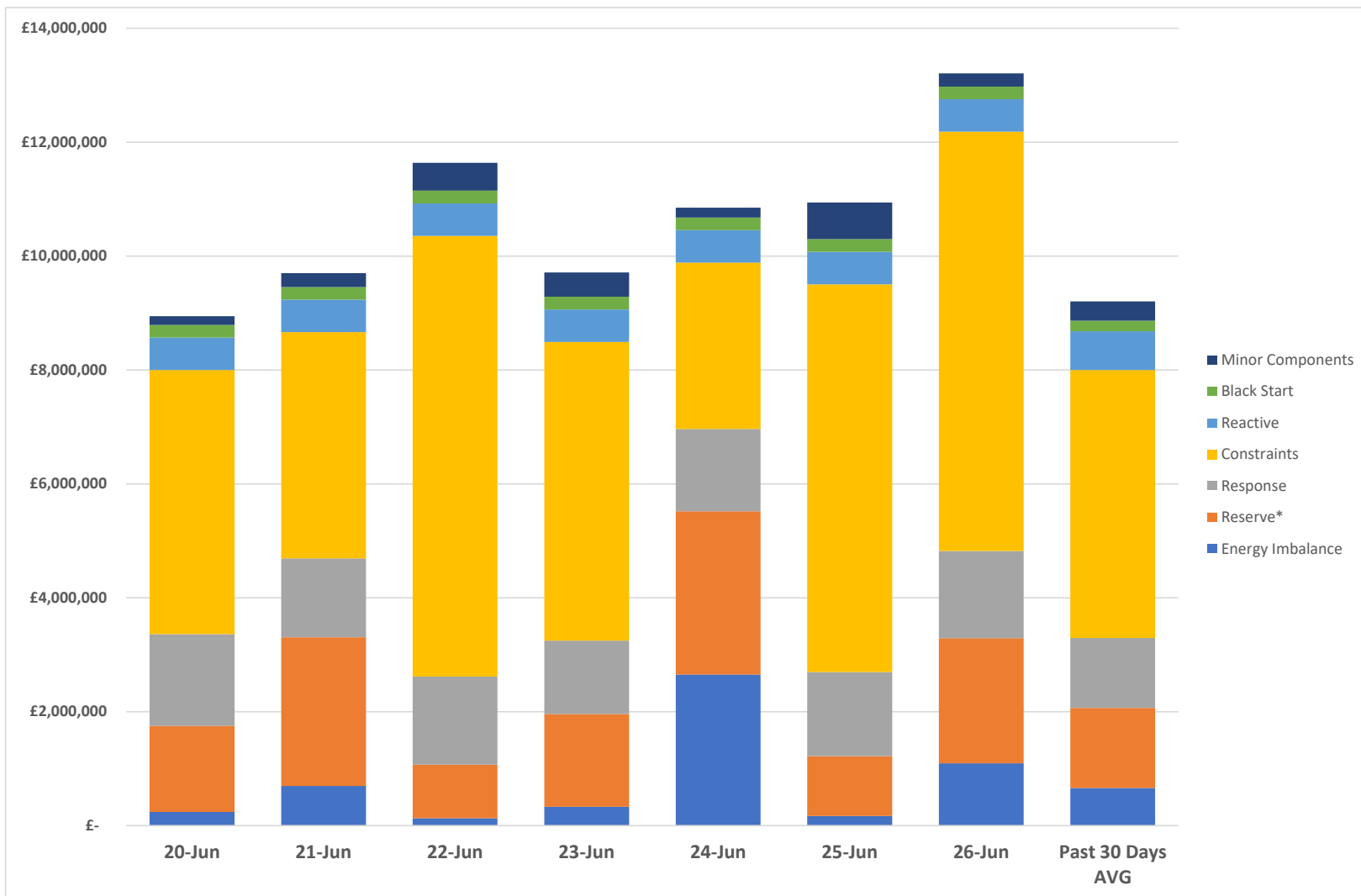
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Historic out-turn data can be found on the [ESO Data Portal](#) in the following data sets: [Historic Demand Data](#) & [Demand Data Update](#)

Date	Forecasting Point	FORECAST (Wed 29 Jun)		
		National Demand (GW)	Dist. wind (GW)	Dist. PV (GW)
29 Jun	Afternoon Min	24.5	1.9	5.2
30 Jun	Overnight Min	19.1	0.4	0.0
30 Jun	Afternoon Min	25.2	1.1	4.6
01 Jul	Overnight Min	18.9	0.8	0.0
01 Jul	Afternoon Min	23.1	1.5	5.2
02 Jul	Overnight Min	17.0	1.3	0.4
02 Jul	Afternoon Min	19.3	1.9	4.9
03 Jul	Overnight Min	15.9	1.2	0.4
03 Jul	Afternoon Min	18.9	1.7	6.0
04 Jul	Overnight Min	17.2	1.1	0.0
04 Jul	Afternoon Min	23.6	1.6	6.4
05 Jul	Overnight Min	18.2	1.2	0.0
05 Jul	Afternoon Min	24.4	1.5	6.0

ESO Actions | Category costs breakdown for the last week



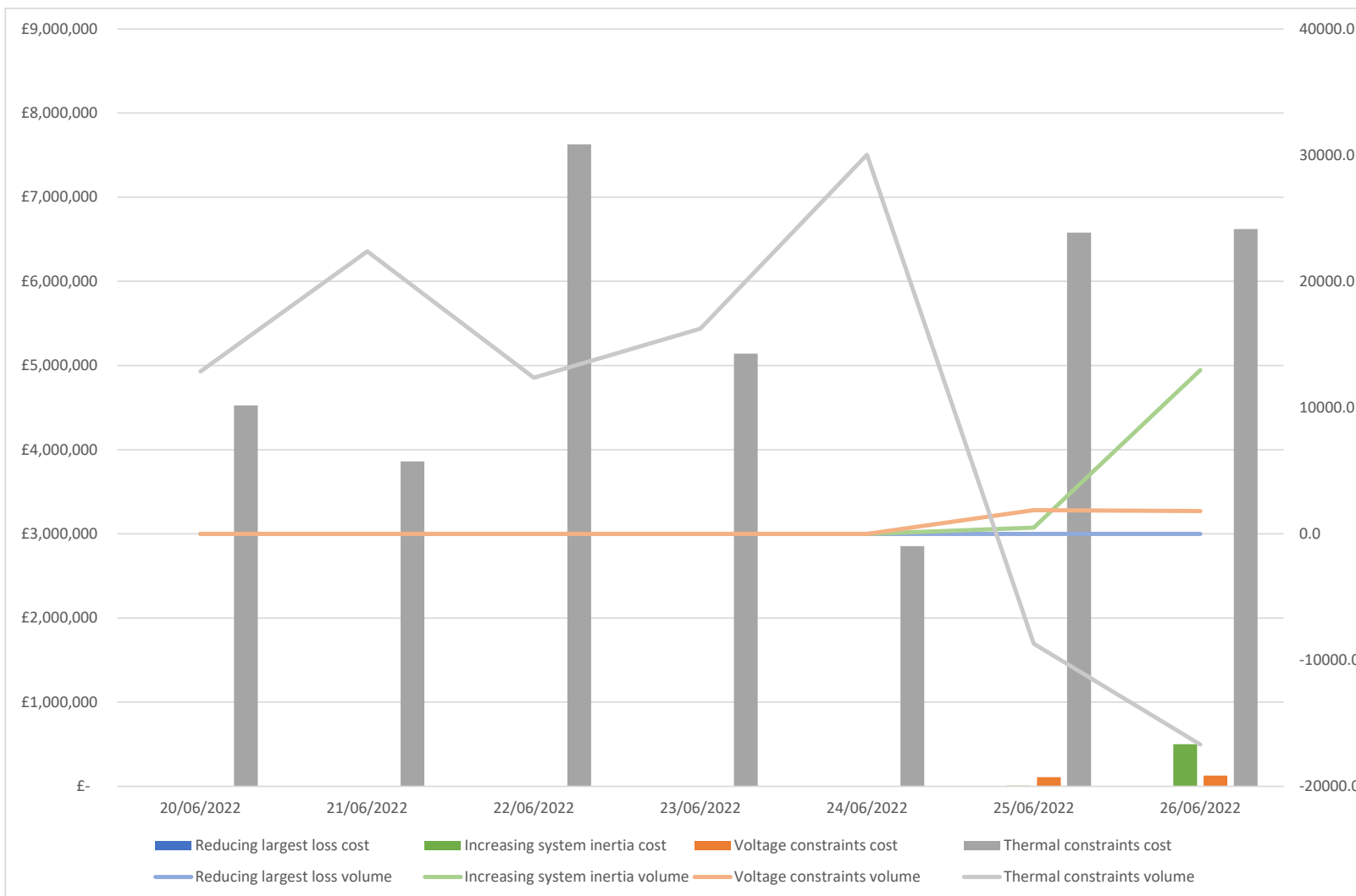
Date	Total (£m)
20/06/2022	8.9
21/06/2022	9.7
22/06/2022	11.6
23/06/2022	9.7
24/06/2022	10.8
25/06/2022	10.9
26/06/2022	13.2
Weekly Total	75.0

Constraint category was the key cost component throughout the week.

*Reserve includes Operating Reserve, STOR, Fast Reserve, Negative Reserve, Other Reserve

Past 30 Days Average is displayed in the chart

ESO Actions | Constraint Cost Breakdown



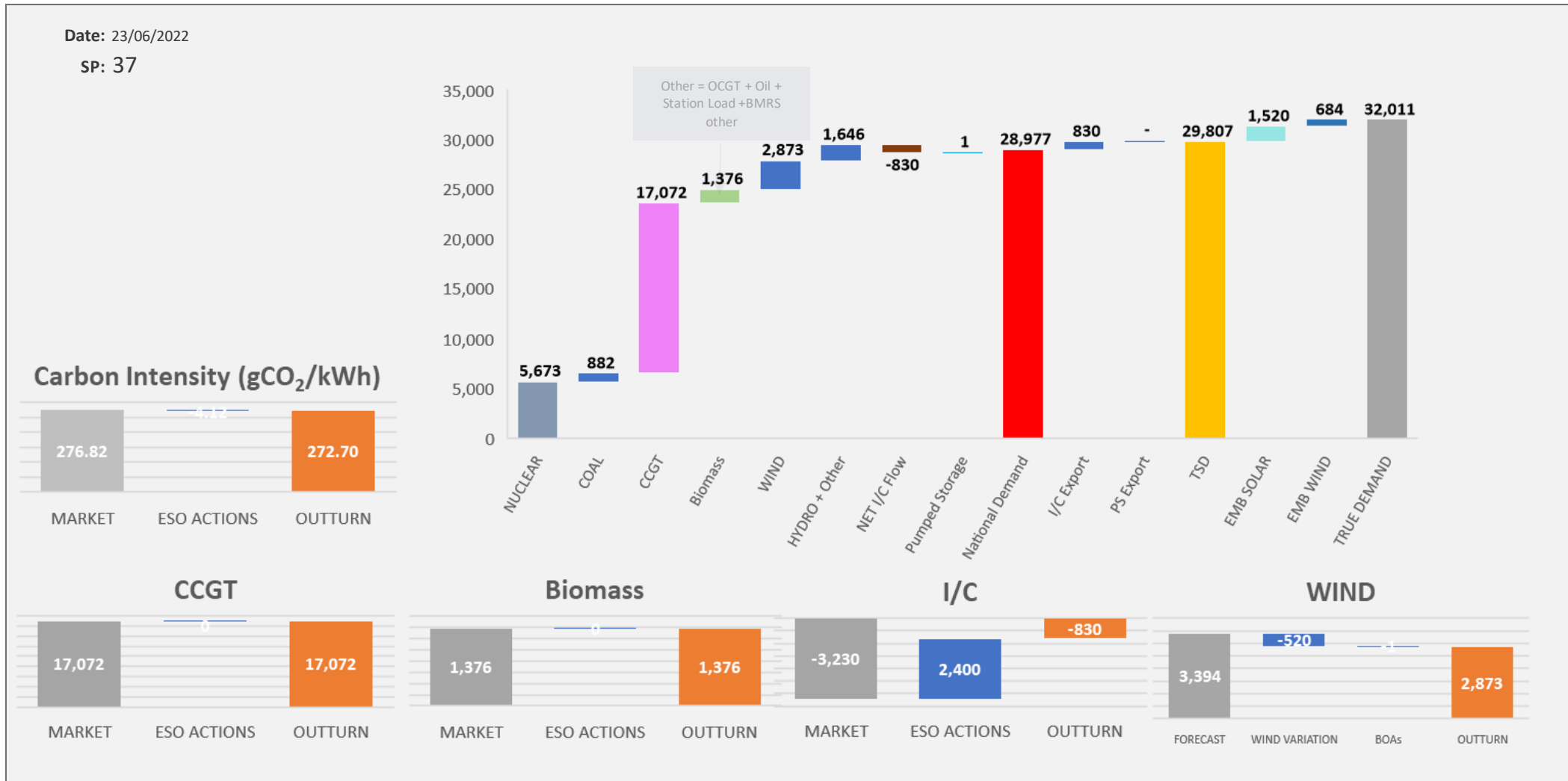
Thermal – network congestion
 Actions required to manage Thermal Constraints throughout the week

Voltage
 Actions taken to synchronise generation to meet voltage requirements were taken on Saturday and Sunday

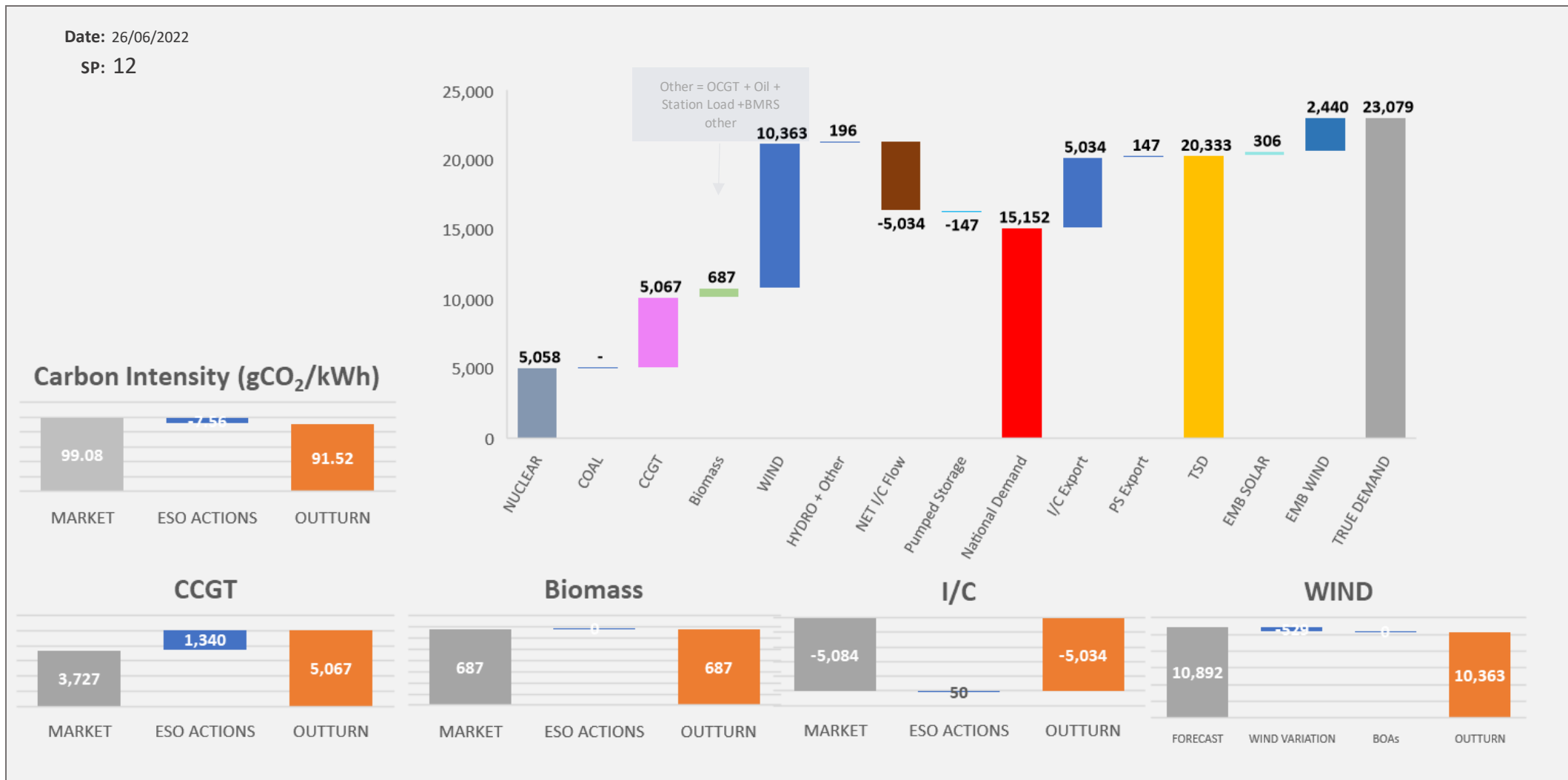
Managing largest loss for RoCoF
 No Intervention required to manage largest loss

Increasing inertia
 Intervention required to increase minimum inertia on Sunday

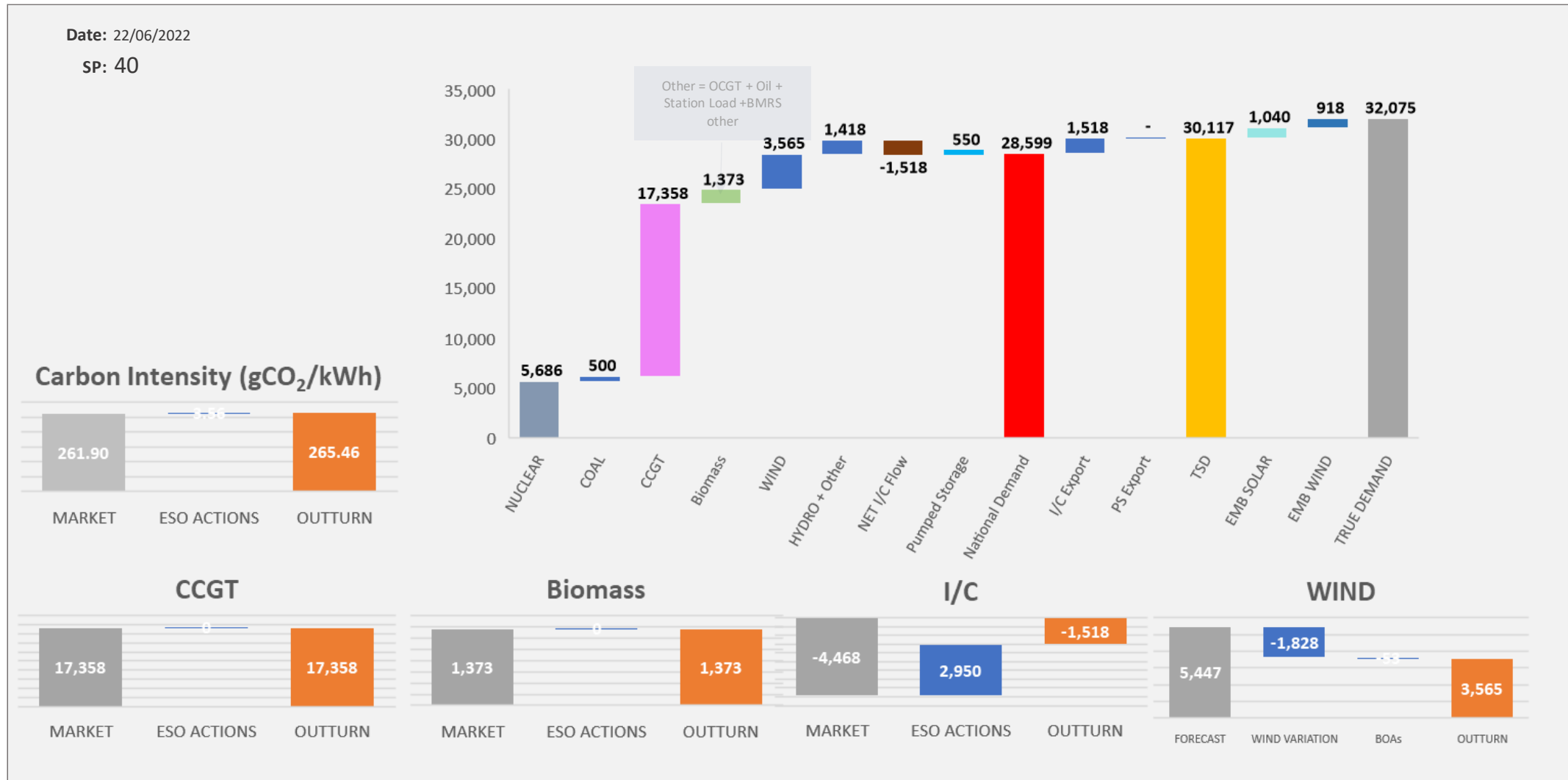
ESO Actions | Thursday 23 June - Peak



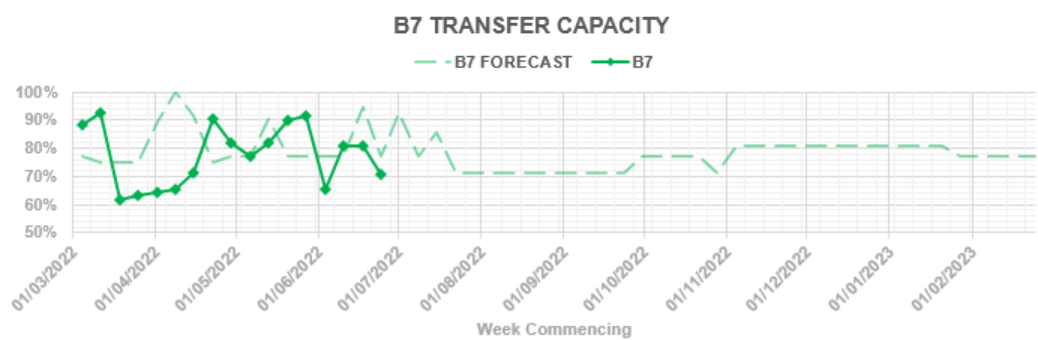
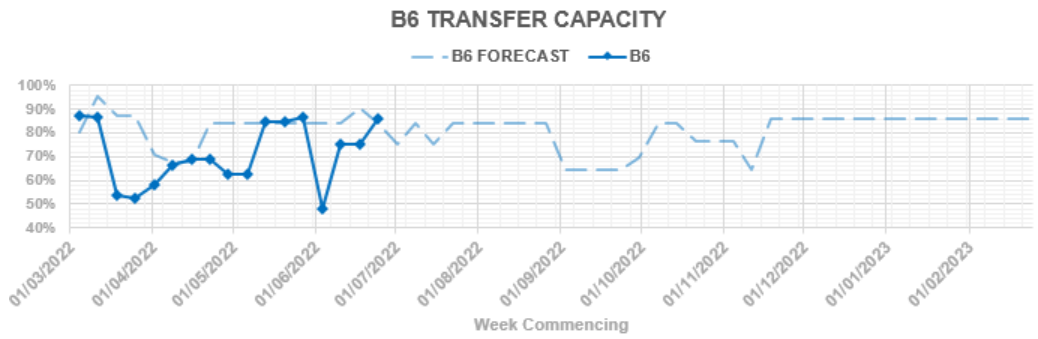
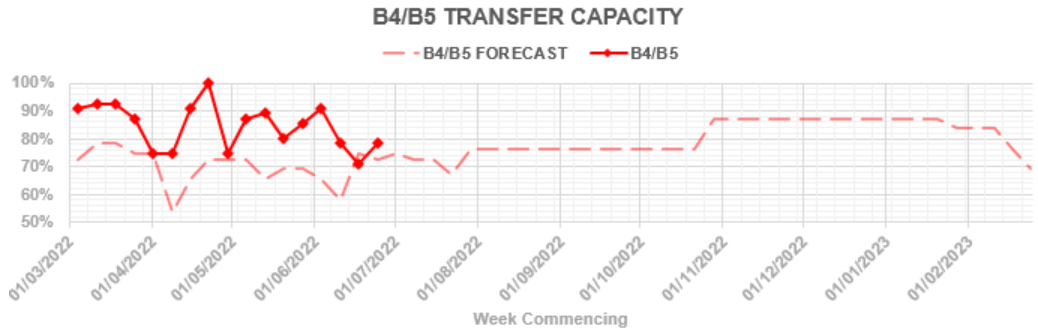
ESO Actions | Sunday 26 June - Minimum



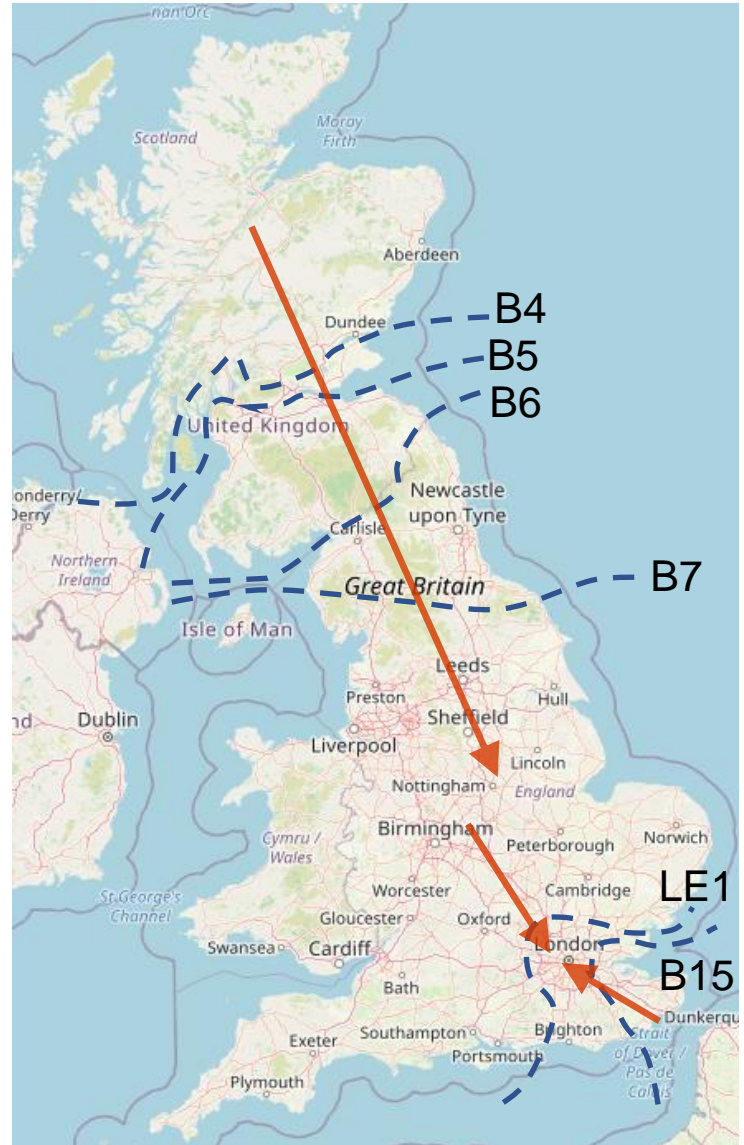
ESO Actions | Wednesday 23 June - Highest SP Spend ~£0.5m



Transparency | Network Congestion



Boundary	Max. Capacity (MW)
B4/B5	2750
B6	5600
B7	8400
LE1	7000
B15	7500

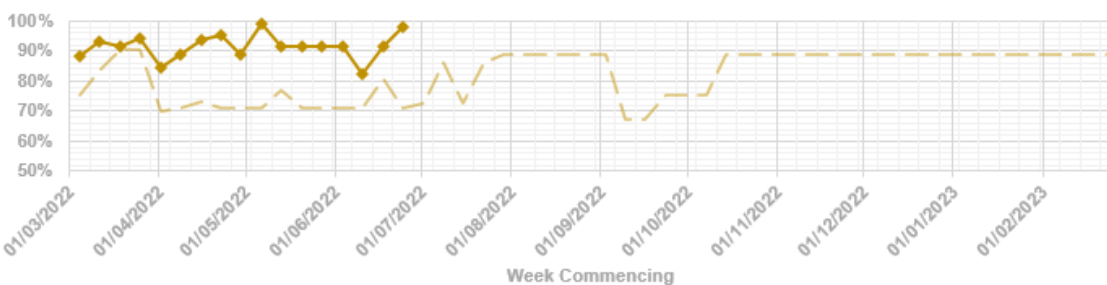


Day ahead flows and limits, and the 24 month constraint limit forecast are published on the ESO Data Portal: <https://data.nationalgrideso.com/data-groups/constraint-management>

Transparency | Network Congestion

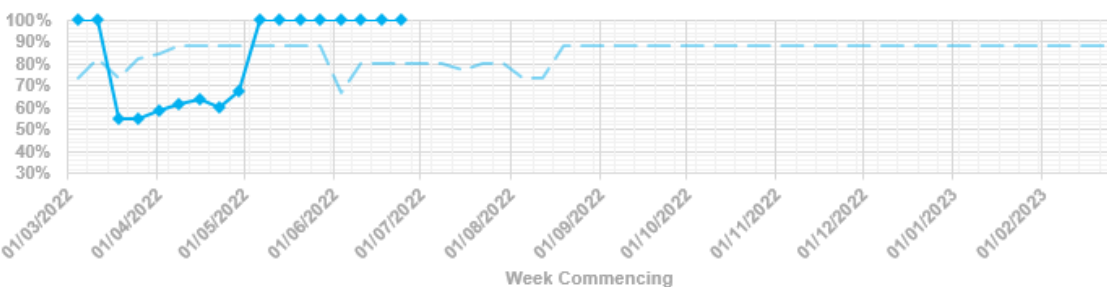
LE1 TRANSFER CAPACITY

— LE1 FORECAST — LE1

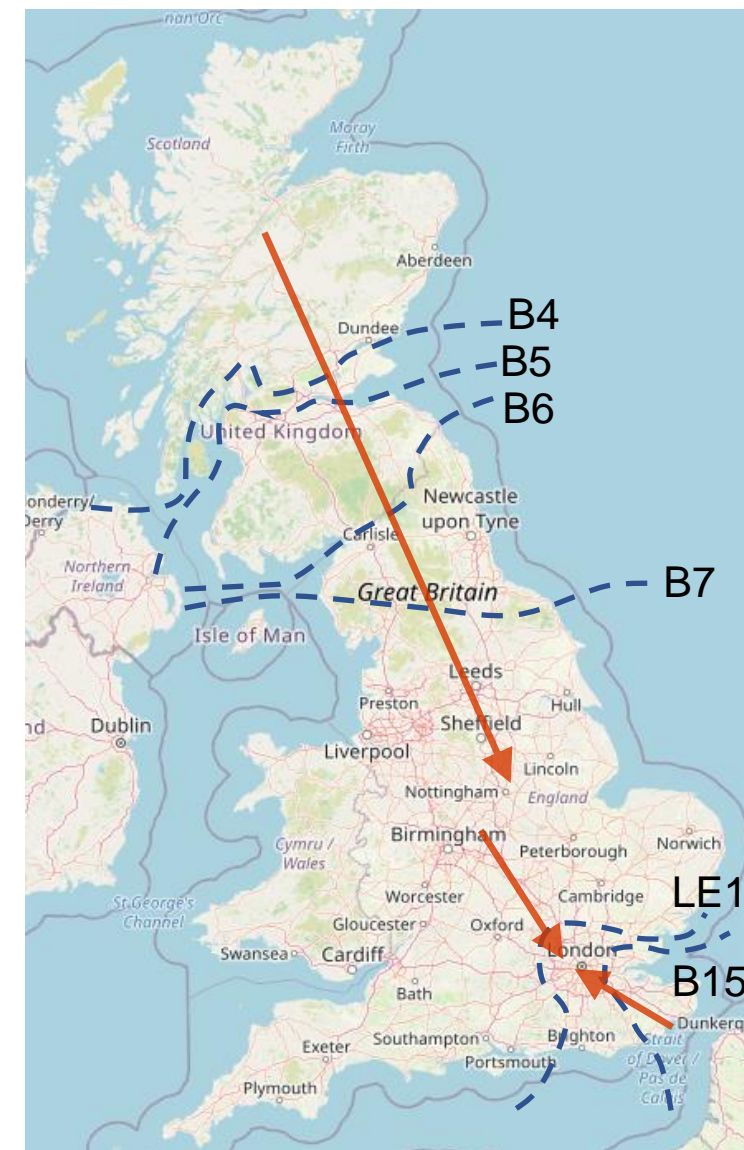


B15 TRANSFER CAPACITY

— B15 FORECAST — B15



Boundary	Max. Capacity (MW)
B4/B5	2750
B6	5600
B7	8400
LE1	7000
B15	7500



Day ahead flows and limits, and the 24 month constraint limit forecast are published on the ESO Data Portal:

<https://data.nationalgrideso.com/data-groups/constraint-management>

Updated Transparency Roadmap

We have updated our ENCC Transparency Roadmap. This roadmap highlights the activities we will be delivering to increase our transparency next year.

- Updated communication channels, including the continuation of OTF and implementation of improvements following the stakeholder event.
- Updated deliverables, including increasing transparency of our operational actions, new dataset related to new AS markets and new constraints data.
- New list of other dataset requests, with an explanation of the current status of those requests.

The document is available here:

<https://www.nationalgrideso.com/our-strategy>

Please email us with any further suggestion:

box.NC.Customer@nationalgrideso.com

Updated 06/2022

ENCC Transparency Roadmap 2022-23

Channels for communication / publications

Key
New channel / publication
Improved channel / publication

	Q1	Q2	Q3	Q4
Transparency Roadmap	Transparency Roadmap refresh		Transparency Roadmap refresh	
Operational Transparency Forum (OTF)	Operational Transparency Forum (OTF) continues to maintain engagement with stakeholders			
	Continued improvement and deep dives in response to feedback received			
Data Portal				
Publications / Others	Summer outlook report			

Updated 06/2022

ENCC Transparency Roadmap 2022-23

Deliverables

Key
New dataset
Improved dataset

	Q1	Q2	Q3	Q4
Transparency of Operational Actions	Dispatch Transparency stakeholder engagement ongoing to further improve clarity and transparency of our operational decision making			
Transparency of Ancillary Services Markets		Stakeholder event building knowledge on and opening up discussion of system operation; 'skips'; dispatch transparency dataset; future of balancing	Stability, voltage and constraints pathfinders' availability and utilisation information	
Transparency of Energy Forecasting and Constraints Data	Dynamic Moderation (DM) and Dynamic Regulation			New Reserve services with increased
Others	Dynamic Co (DC) 4 day			
	24 Months Ah Constraint Forecast			
	GIS Boundary Generation Ch			

Other dataset requests

We welcome and thank you for all your suggestion to improve our data transparency. Some requests are currently being investigated further or unfortunately unable to be currently fulfilled.

Dataset request	Justification
Increasing wind data granularity to 1-min	We could provide higher resolution data up to 1 minute but due to the significant cost impact of doing so, a clear need would need to be articulated for us to be able to build the business case. It is worth mentioning that higher resolution data does not automatically mean higher accuracy.
Mandatory Frequency Response (MFR) instructions	Data on real-time MFR instruction publication is not something we are able to provide at this time. There are a number of publications which provide information related to our mandatory frequency response (MFR) spend actions, including the Monthly Balancing Services Summary and the Firm Frequency Response (FFR) Market Information report.
Synchronised BMUs, more granular information from the submitted PNs	We are assuming that this refers to the data on BMRS and this website is run by Elexon. There is a route to raise requests with Elexon also, this might be a useful step as the data may be accessible from the data already published on BMRS.
Fast Reserve availability pricing	We are currently looking at what additional data we can publish for the optional reserve services we dispatch, including data on availability prices. We first need to ensure consistency with any competing services to ensure we are not disadvantaging any markets. Where we are able to ensure consistency, then we will look to provide further transparency at the earliest opportunity, subject to any IT system constraints.
Constraint breakdown daily costs and volume for thermal, voltage, ROCOF	We currently provide the aggregated data of all the actions that have been taken to resolve each of these constraint categories. It includes the total cost of the action, the action to resolve the constraint and the cost of replacing the energy. If there is an additional ask which we have not captured then please get in touch with us.
Actual flows on the transmission system	We do not, at present, plan to publish all real time flows of power on the transmission system. The data would always show the flows after actions taken by the ENCC to manage constraints and other system requirements. The real time flows will always be below the constraint limits.
System outage	We are currently looking at the obligation on the ESO and TOs to decide who should be supplying this information.

Please email us at box.NC.Customer@nationalgrideso.com with any further suggestion and we will do our best to accommodate wherever possible. Note that we also expect to be able to further increase our provision of data publication when our Data & Analytics Platform (DAP) is established.

slido



Audience Q&A Session

① Start presenting to display the audience questions on this slide.

Feedback

Please remember to use the feedback poll in sli.do after the event.

We welcome feedback to understand what we are doing well and how we can improve the event for the future.

If you have any questions after the event, please contact the following email address: box.NC.Customer@nationalgrideso.com

