You have been joined in listen only mode with your camera turned off

ESO Operational Transparency Forum

15 June 2022

nationalgridESO

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

Signpost to TNUoS Taskforce update
Signpost to Balancing Market Review

Questions outstanding from previous weeks

Q: Re ESO interconnector register, how did you arrive at the 'MW Effective From' dates? These seem v optimistic, with a further 24GW of interconnectors coming on by 2029. E.g. neuconnect online from Dec 2023 in register but on Neuconnect website they say not operational until 2028

A: https://www.nationalgrideso.com/industry-information/connections/reports-and-registers MW effective date is the completion date in the agreement which is the end of the commissioning of NG assets to allow the customer to start their commissioning process to then move to final completion and start trading.

Q: A few months ago Octopus presented some details regarding a trial of mass demand shifting they were looking to perform along side a DNO. I believe this trial has now completed and was wondering if they could present some of their findings and data to this group?

A: We will be publishing a write up with Octopus Energy during June/July and will bring an update to this forum to talk through the results.

Q: I understand the ESO and DNOs have been trialling/proving voltage reduction - has been published on BMRS. Can results be shared, is there a wider objective, any plans to update OC6?

A: The tests are intended to familiarise Control Engineers (DNOs & NGESO) with the demand control process as mentioned in OC6. We collect results to confirm the estimated figures when performing demand control via voltage reduction. Learnings and results are shared and discussed with all the DNOs in regular meetings. At this stage we are not considering any OC6 modification.

We recently ran a Frequency Response Reform: Market Insights and Procurement Webinar during which covered how our price caps are calculated for DR/DM/DC. This webinar was recorded and can be found here: https://players.brightcove.net/867903724001/default_default/index.html?videoId=6307042548112

Questions outstanding from previous weeks – more information please

Q: thank you for boundary constraint info but this is just a small snap shot of performance vs forecast congestion. Can you provide a 1 or 2 view/ deep dive to show the trend of how boundary capacities have performed compared to the outage plan (i.e. were they above or below that expected?) Thanks

A: Please can you contact us at box.NC.Customer@nationalgrideso.com so we can discuss what you are looking for and then we will be able to plan a time to do a deep dive here

Q: With the changes on frequency settlement from the ABSVD change, can you provide the calculation and an example for each service for the ABSVD calculation? This will enable the finance teams to independently verify and work out financial impact of the change.

A: Please can you contact us at box.NC.Customer@nationalgrideso.com so we can understand the ask here. Please note that any imbalance charges for providers resulting from ABSVD submissions are calculated and imposed by Elexon so the ESO does not have the calculation methodology/ examples for those.

Questions outstanding we are still working on

Q: Eleclink has been live for over a week. Are data flows coming through correctly? i.e. Planned exports via eleclink feeding through into TSDF?

Q: Slide 6 - SE tender - as per GC0156 discussion will ESO require all tender respondents to fully comply with Grid Code (1) re-energisation procedure (2) re-synchronisation procedure and (3) frequency deviation management?

System Events

9 June 2022

ESO requested Emergency Assistance from the IFA interconnector

Request to reduce output by 500MW until 14:00.

EAS reflected UK in alert status.

BMRS warning issued.

Emergency Assistance was required to secure the constraint boundaries in the South East following an increase in expected flows out of the UK on the interconnectors of the order up to 1.9GW.

Upcoming events

Please note change of date to accommodate rail strikes

OTF Stakeholder workshop

Come and meet the face behind the voice on the OTF

- We would like to gather ideas and feedback to continue improving the OTF
- Lunch will be provided
- Visit to control room viewing gallery with some of our regular OTF experts

27 June 1100-1300
In person at our Wokingham offices
Sign up by 17 June

https://forms.office.com/r/G1M277Eqng

Demand Forecasting Consultation

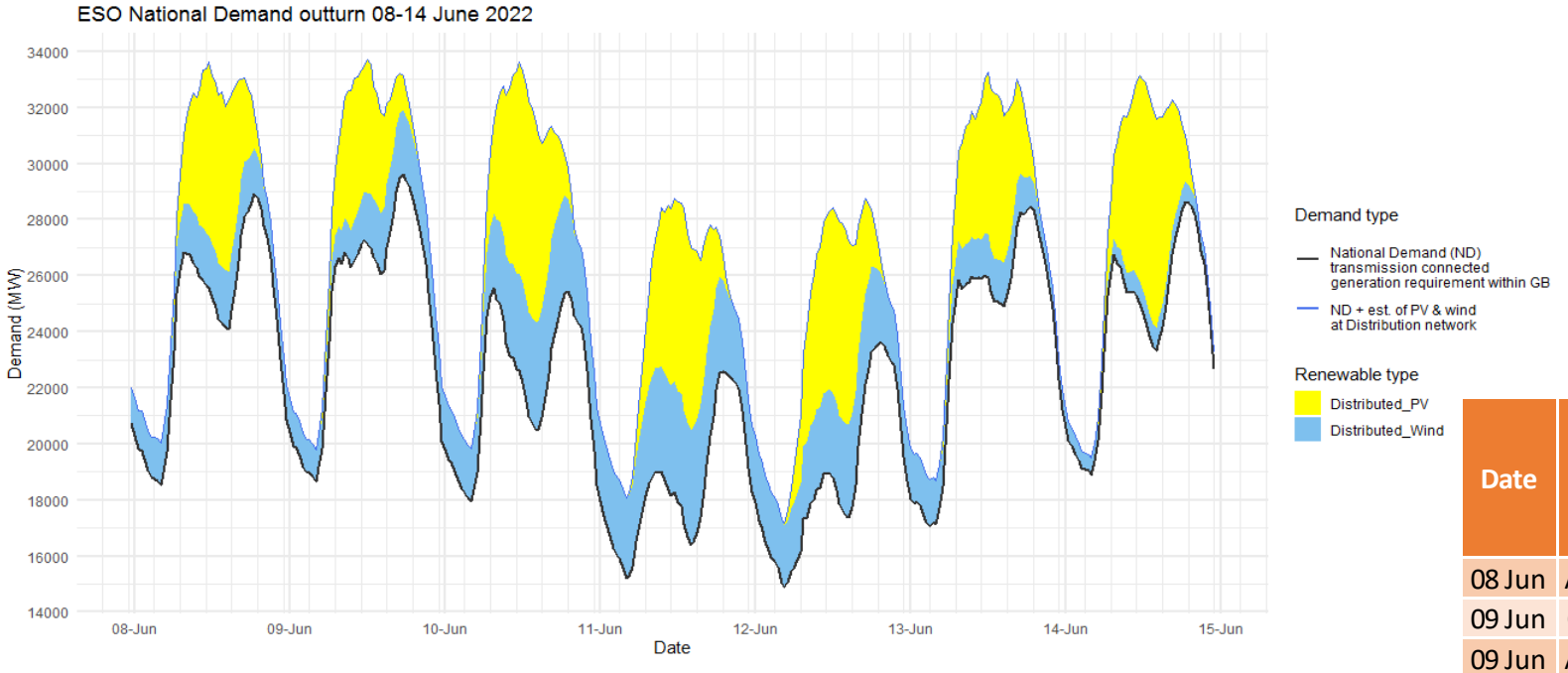
For historical reasons, the Grid Code requires ESO to publish forecasts of quantities called National Demand and Transmission System Demand

- In the current system, these quantities are neither 'National' nor 'Demand'
- We want to **engage with stakeholders** to explain what we are forecasting
- To explore what stakeholders would **find most useful**
- To discuss how forecasts interact with the market mechanisms, and what constraints it puts on forecasting
- To discover routes to realising an **improved service**

27 June 1330-1530
In person at our Wokingham offices
Sign up by 22 June

https://forms.office.com/r/k1baP8k2Yb

Demand | Last week demand out-turn



Date	Forecasting Point	FORECAST (Wed 08 Jun) National Demand (GW)	FORECAST (Wed 08 Jun) Dist. wind (GW)	FORECAST (Wed 08 Jun) Dist. PV (GW)	OUTTURN National Demand (GW)	OUTTURN Dist. wind (GW)	OUTTURN Dist. PV (GW)
08 Jun	Afternoon Min	23.6	2.1	5.8	24.1	2.1	6.1
09 Jun	Overnight Min	18.5	1.1	0.0	18.7	1.1	0.0
09 Jun	Afternoon Min	25.6	1.6	5.4	26.0	2.2	3.6
10 Jun	Overnight Min	17.6	1.9	0.0	18.0	1.9	0.0
10 Jun	Afternoon Min	20.9	3.4	6.7	20.5	3.8	7.2
11 Jun	Overnight Min	15.6	2.7	0.5	15.2	2.8	0.0
11 Jun	Afternoon Min	17.1	3.9	5.7	16.4	4.1	6.5
12 Jun	Overnight Min	15.0	2.2	0.5	14.9	2.2	0.1
12 Jun	Afternoon Min	17.8	2.8	6.5	17.4	3.3	6.5
13 Jun	Overnight Min	16.9	1.5	0.1	17.1	1.7	0.0
13 Jun	Afternoon Min	23.9	1.9	6.0	24.9	1.5	5.3
14 Jun	Overnight Min	18.1	1.3	0.0	18.9	0.6	0.0
14 Jun	Afternoon Min	24.4	2.0	5.5	23.3	0.8	7.4

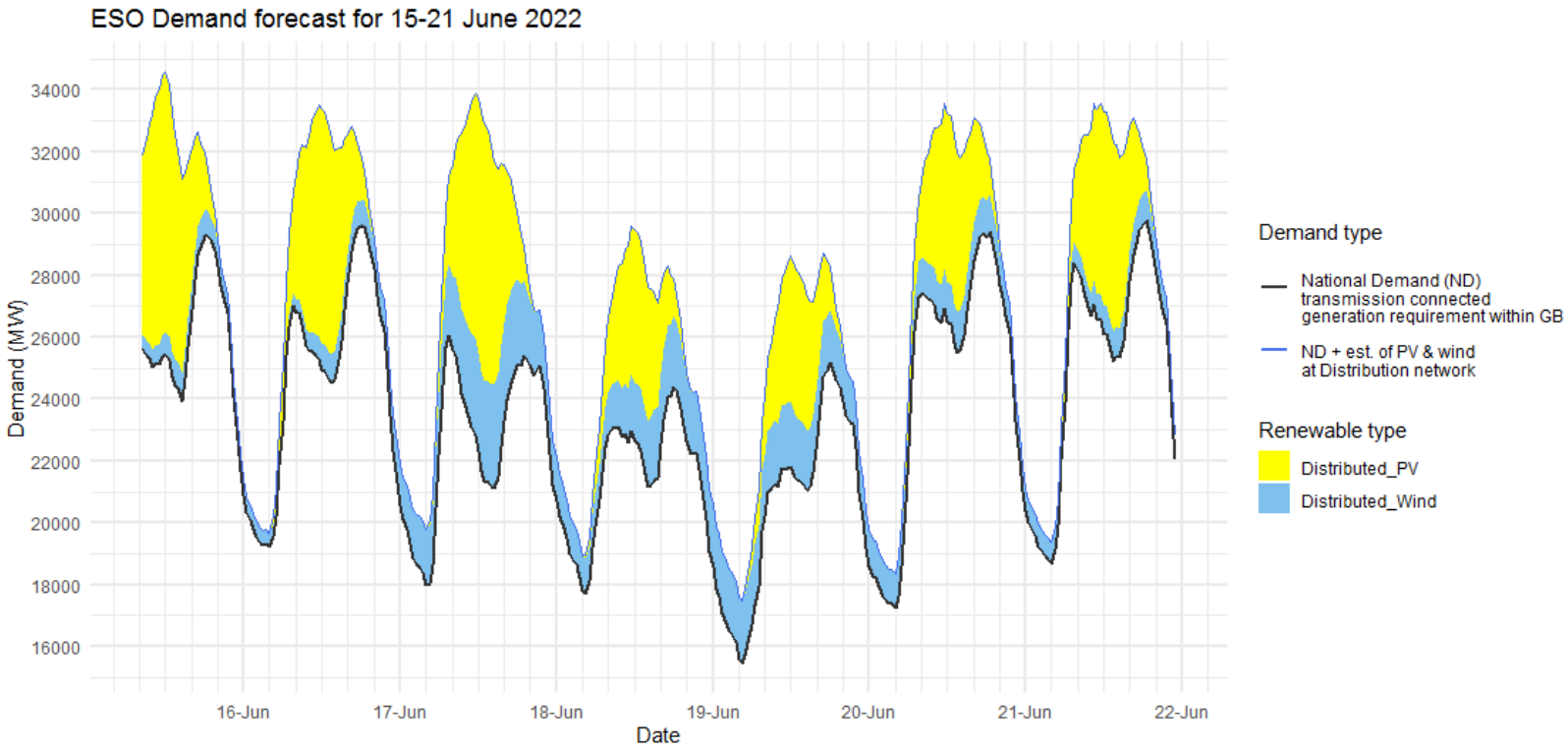
The black line (National Demand ND) is the measure of portion of total GB customer demand that is supplied by the transmission network.

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



		FORECAST (Wed 15 Jun)		
Date	Forecasting Point	National Demand (GW)	Dist. wind (GW)	Dist. PV (GW)
15 Jun	Afternoon Min	23.9	0.9	6.3
16 Jun	Overnight Min	19.2	0.4	0.0
16 Jun	Afternoon Min	24.5	0.9	6.9
17 Jun	Overnight Min	18.0	1.8	0.0
17 Jun	Afternoon Min	21.1	3.3	7.2
18 Jun	Overnight Min	17.7	1.1	0.1
18 Jun	Afternoon Min	21.1	2.1	4.3
19 Jun	Overnight Min	15.4	2.0	0.1
19 Jun	Afternoon Min	21.0	1.9	4.3
20 Jun	Overnight Min	17.2	1.1	0.0
20 Jun	Afternoon Min	25.5	1.3	5.2
21 Jun	Overnight Min	18.7	0.7	0.0
21 Jun	Afternoon Min	25.2	0.9	6.1

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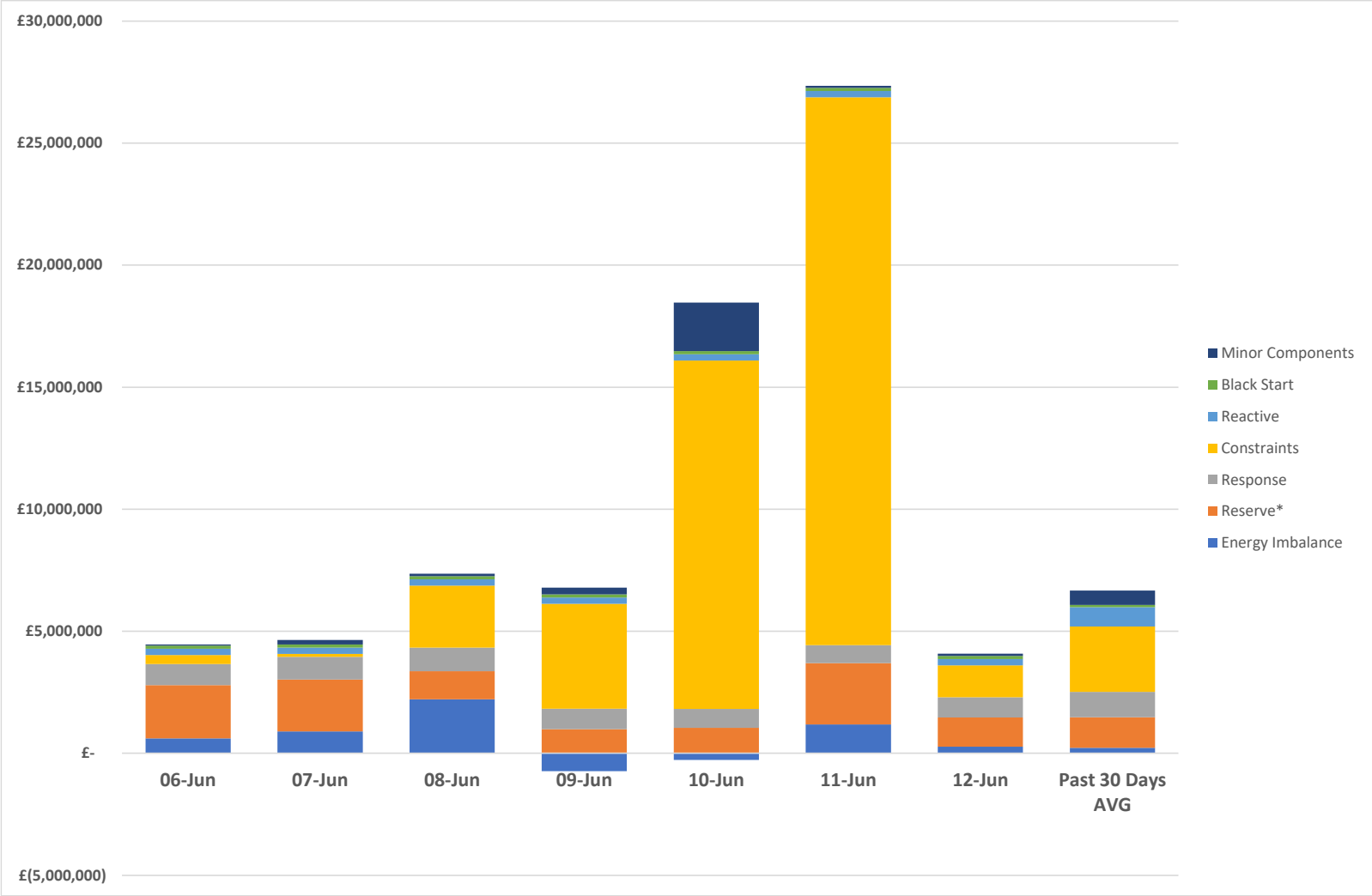
ESO Actions | Category costs breakdown for the last week



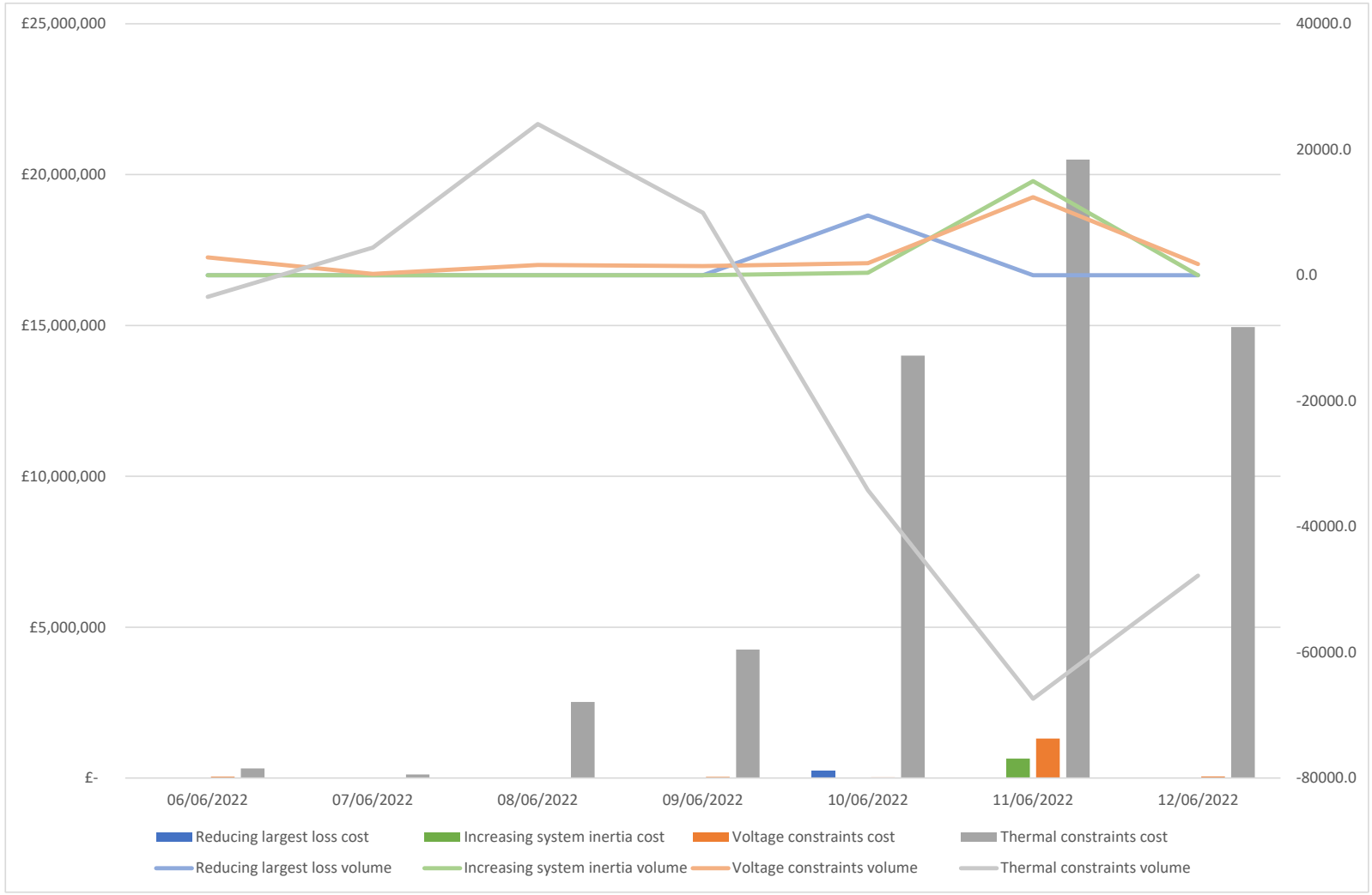
Date	Total (£m)
06/06/2022	4.5
07/06/2022	4.6
08/06/2022	7.4
09/06/2022	6.1
10/06/2022	18.2
11/06/2022	27.4
12/06/2022	4.1
Weekly Total	72.2

Constraint category was the key cost component from Wednesday.

*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



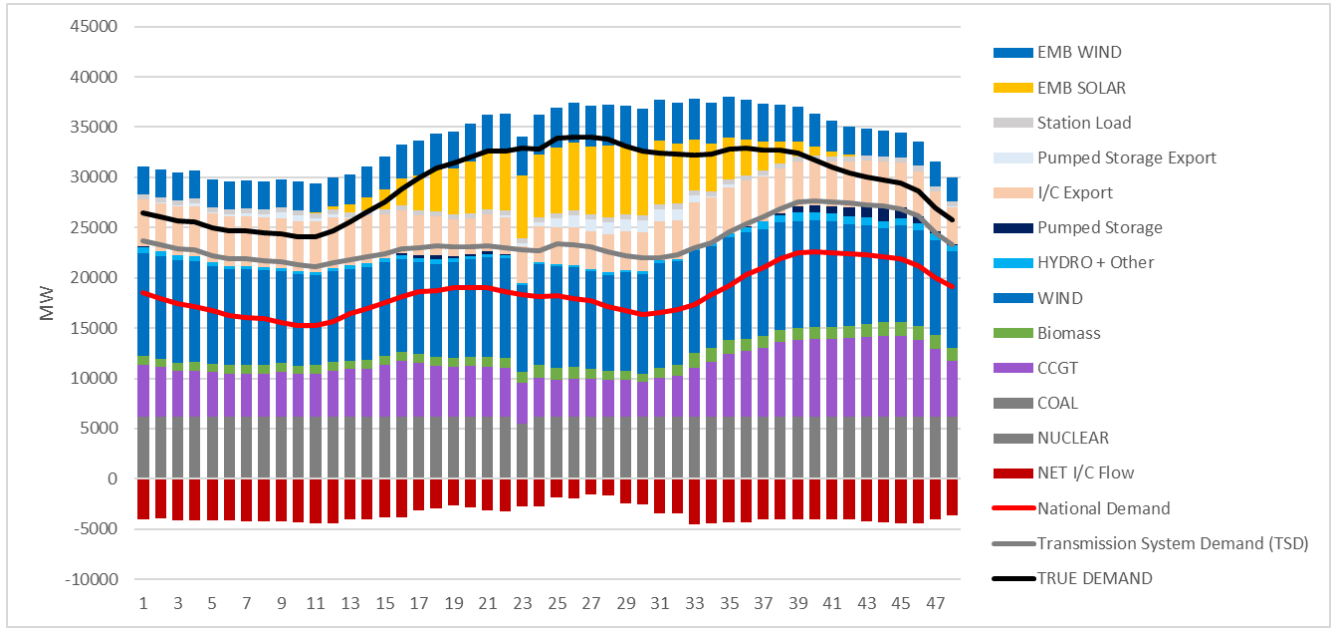
Thermal – network congestion
Actions required to manage Thermal Constraints throughout the week

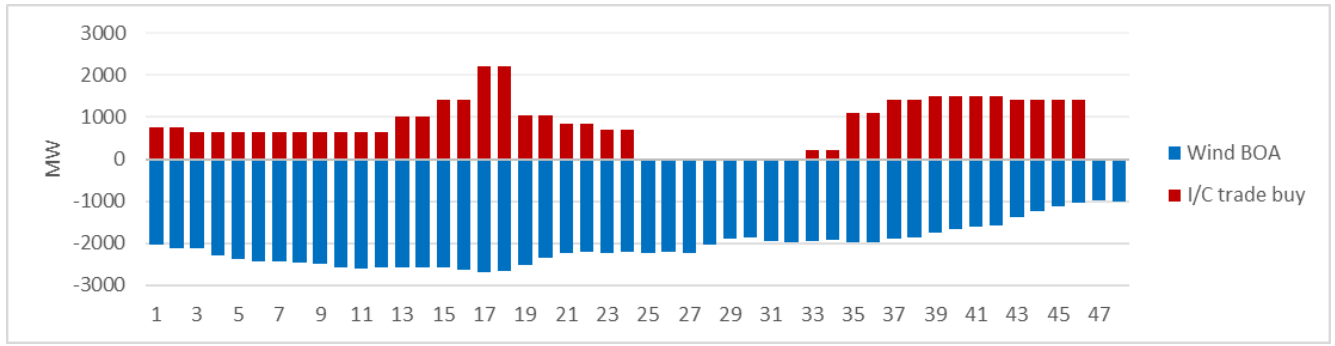
Voltage
Actions taken to synchronise generation to meet voltage requirements were taken on Monday, Thursday and Saturday.

Managing largest loss for RoCoF
Intervention required to manage largest loss on Friday

Increasing inertia
Intervention required to increase minimum inertia on Saturday

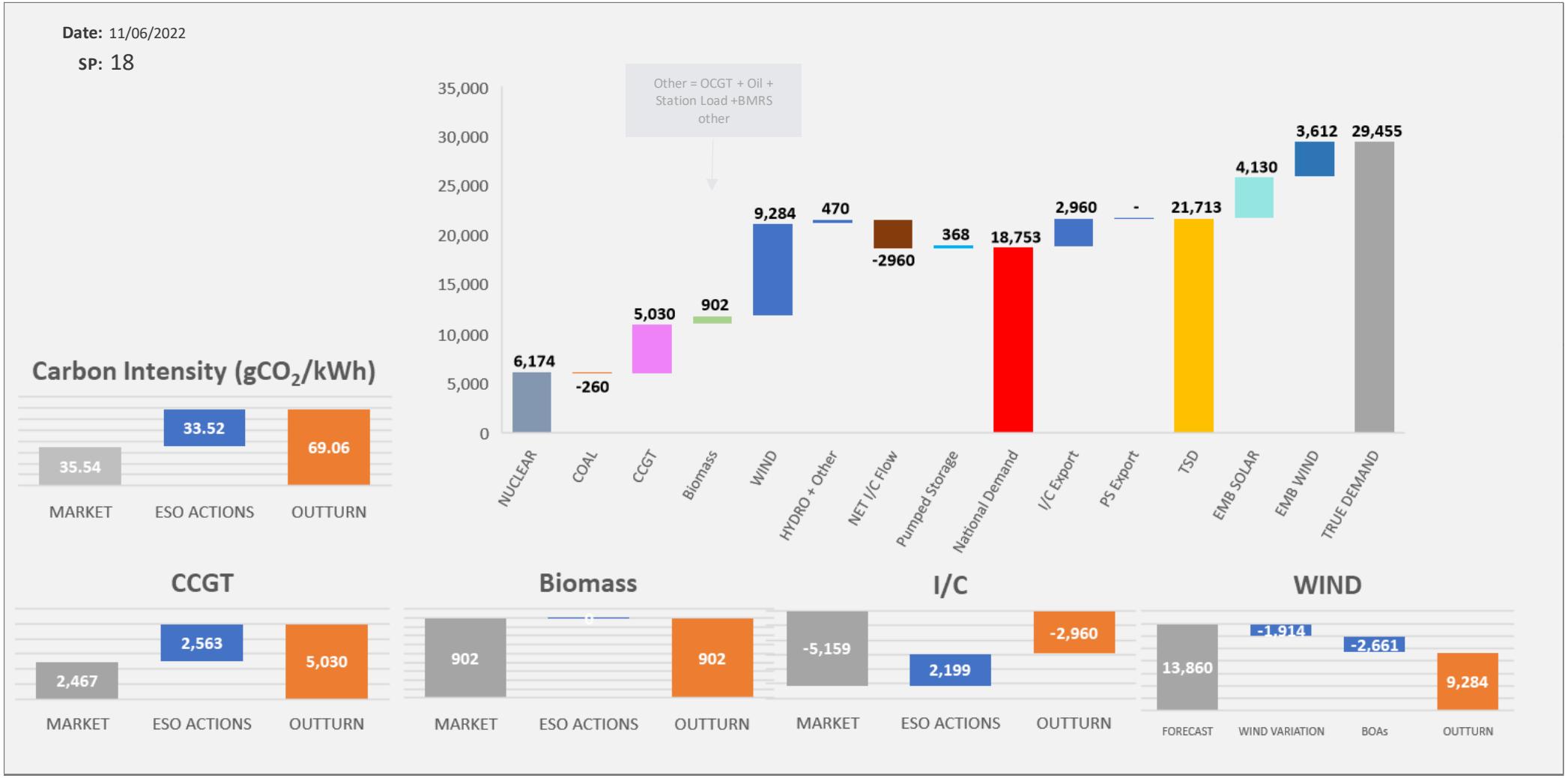
ESO Actions | Saturday 11 June – Daily Outturn £27m





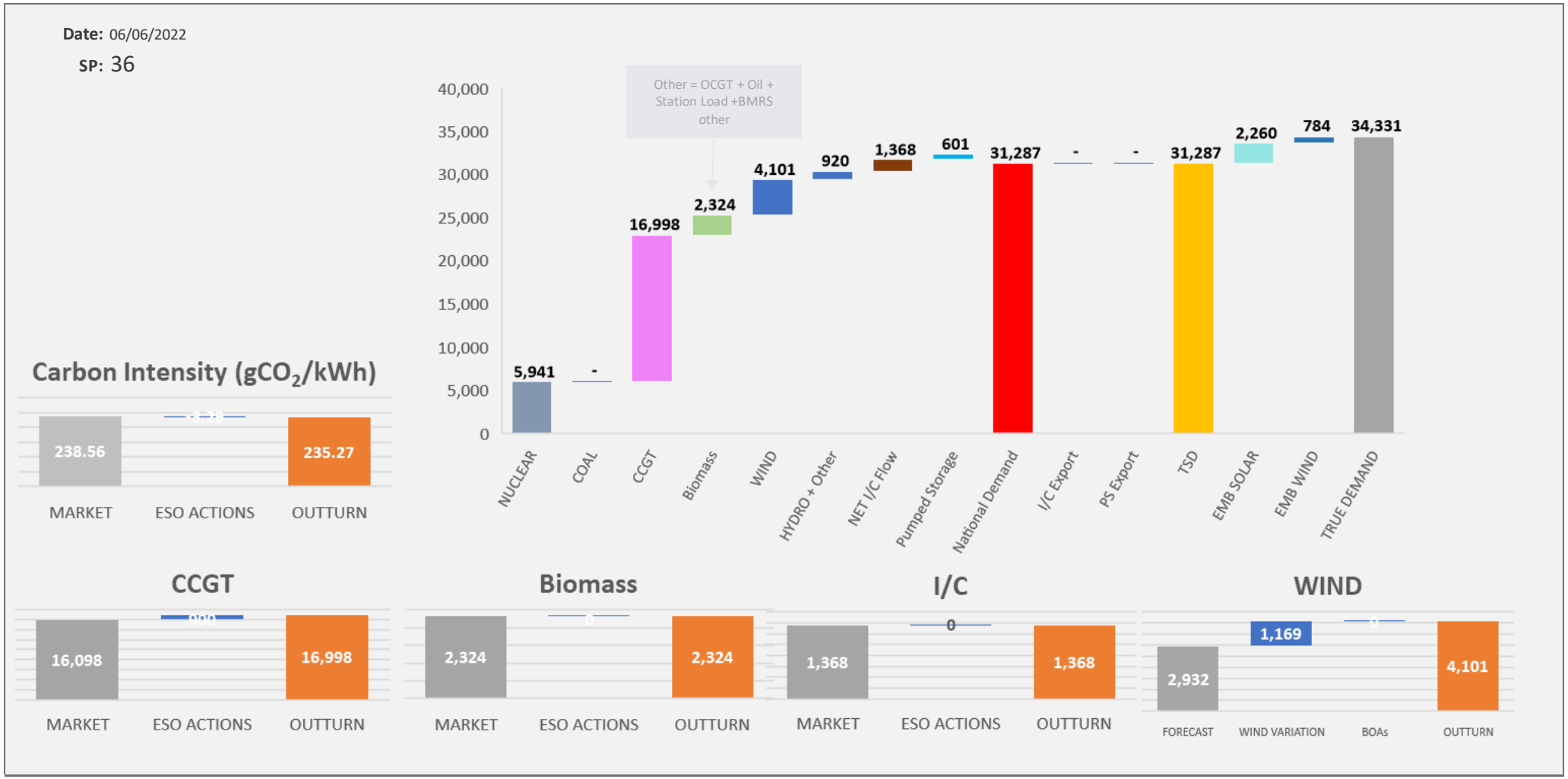
- Low demand during the day with 15.2GW minimum national demand
- High level of wind generation with maximum at 15GW in the evening and solar generation with maximum at 7GW
- A predominantly short market
- Trades and BM Action supported thermal constraints. This included export constraints along the South Coast of England, import constraints in the South East of England and export constraints in Scotland
- Trades and BM Action also supported overnight Voltage Control
- Up to 2.7GW of wind generation was bid off for constraints
- Up to 2.2GW of trades were required, also supporting margin at the start of the day

ESO Actions | Saturday 11 June Highest Spend ~£0.6m



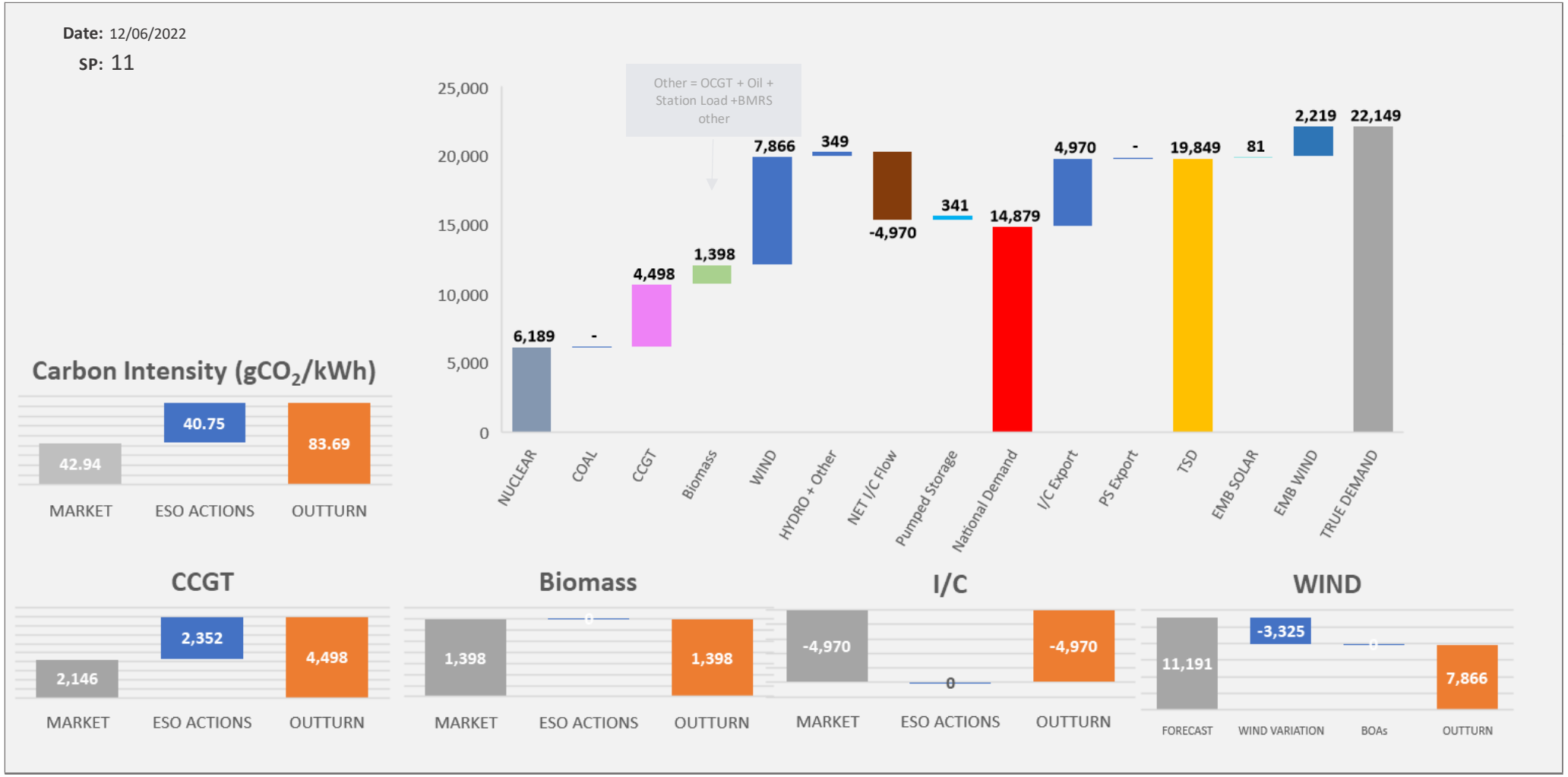
Carbon Intensity data on data portal: https://data.nationalgrideso.com/carbon-intensity1/carbon-intensity-of-balancing-actions

ESO Actions | Monday 06 June Peak



Carbon Intensity data on data portal: https://data.nationalgrideso.com/carbon-intensity1/carbon-intensity-of-balancing-actions

ESO Actions | Sunday 12 June Minimum



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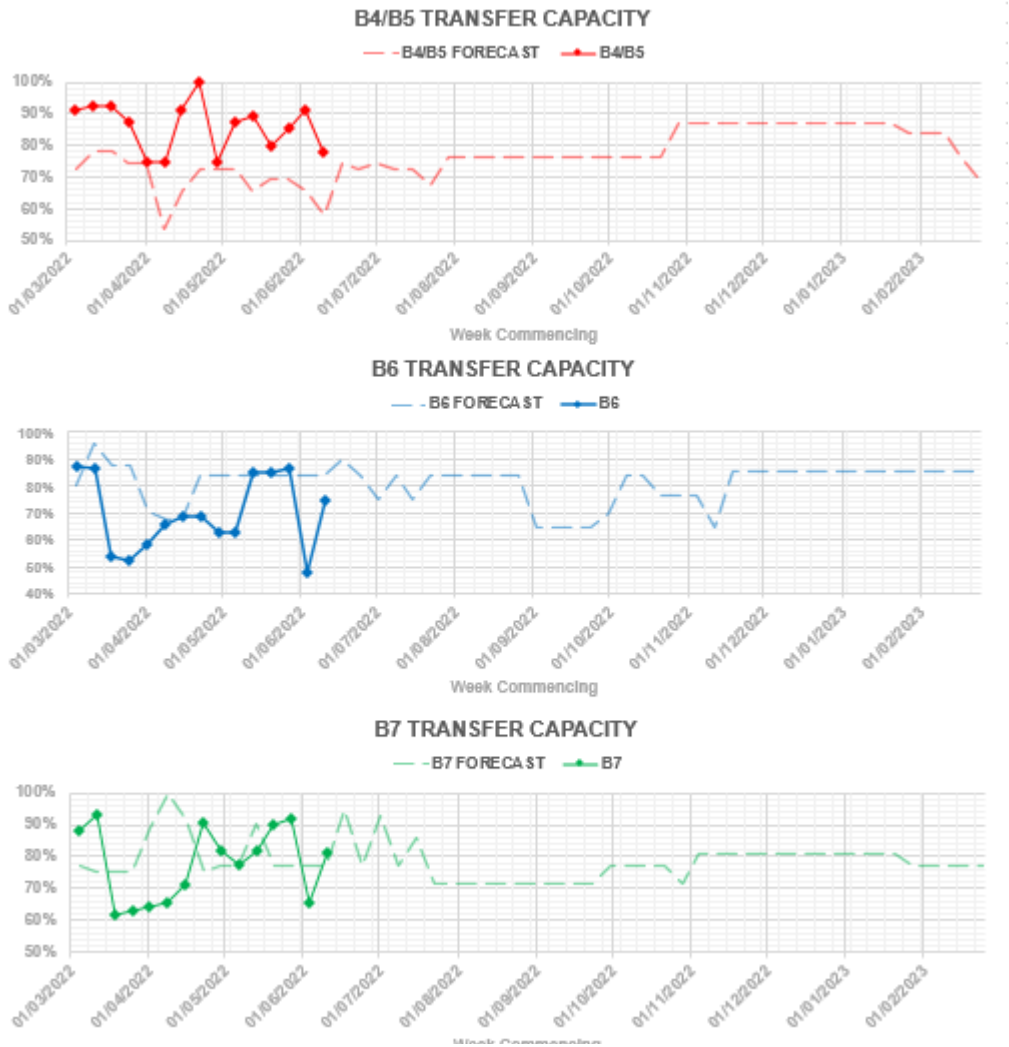
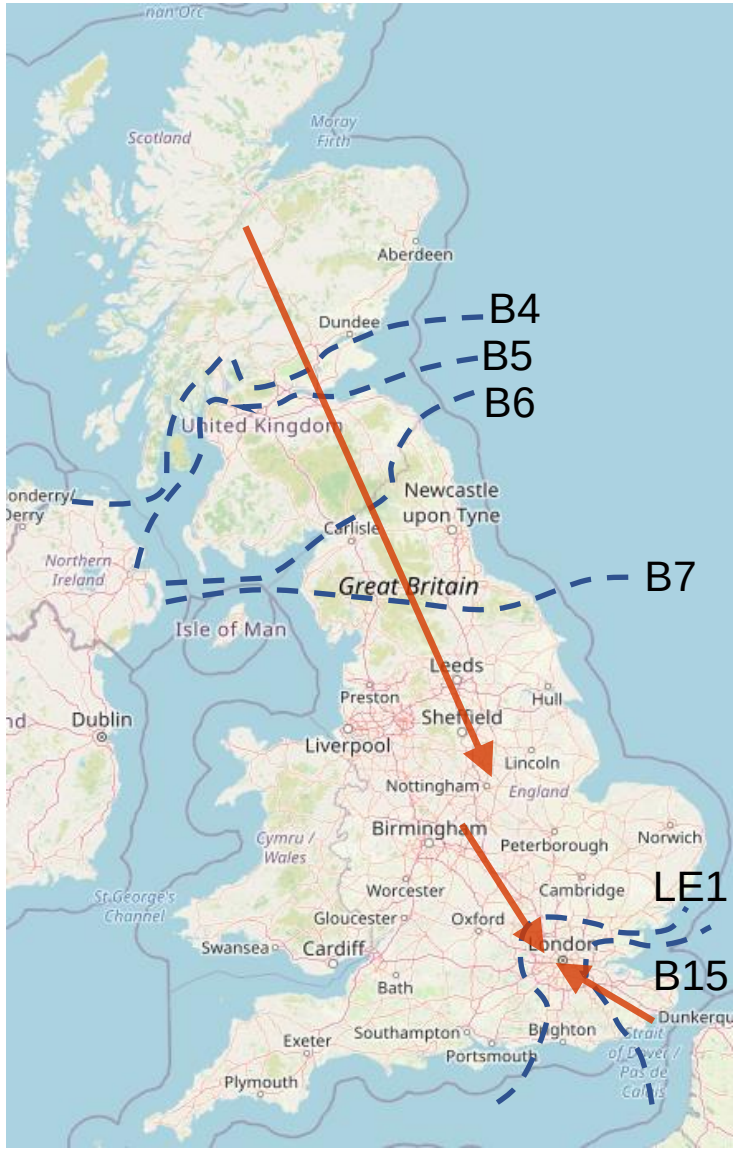
Transparency | Network Congestion

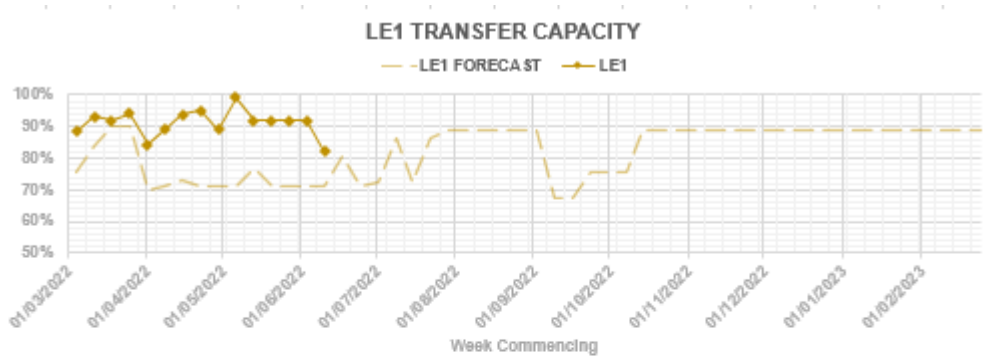


Boundary	Max. Capacity (MW)
B4/B5	2750
B6	5600
B7	8400
LE1	7000
B15	7500



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



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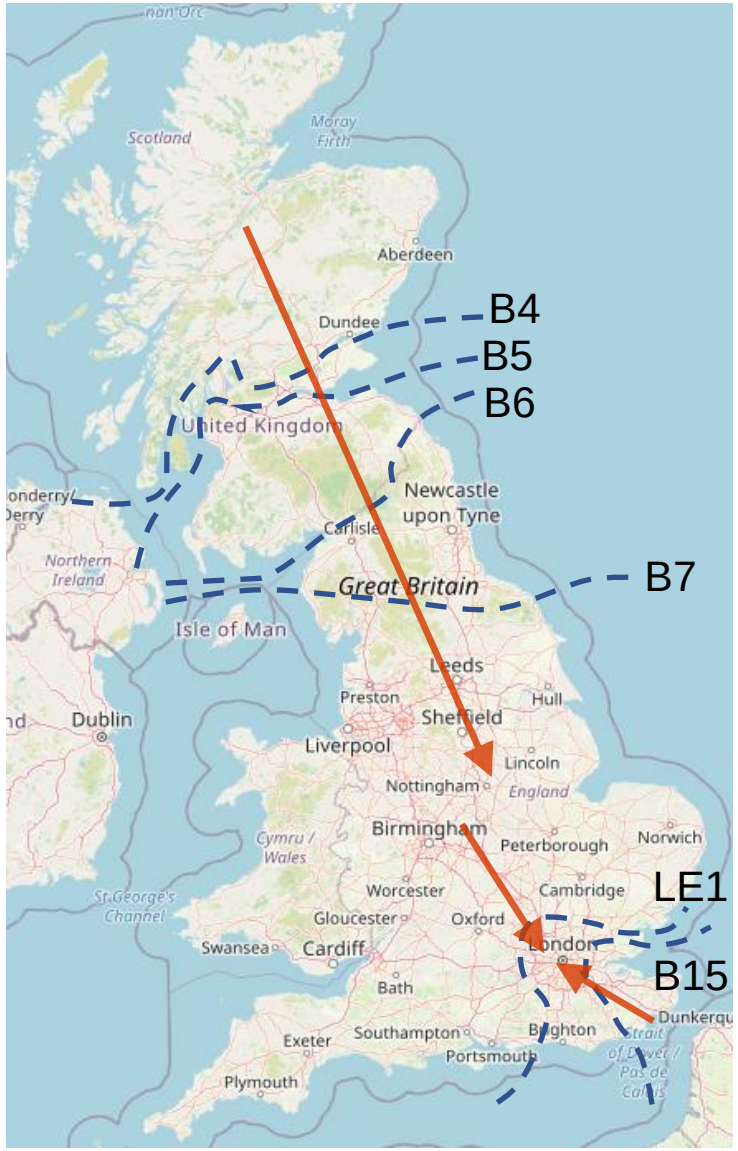

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TNUoS Task Force Update

Transmission Network Use of System (TNUoS) charges recover the cost of provision and maintenance of the transmission system in England, Wales, Scotland and Offshore.

Ofgem provided an update on 30 May 2022 on the scope, structure, and timelines of a Task Force

TNUoS Task Force: NGESO secretariat and Chair

We are looking for members of industry to participate in this Taskforce as members. To apply, please fill out this application form before 5pm 21 June 2022.

Please contact chargingfutures@nationalgrideso.com if you'd like to know more

Industry communications and updates will be provided via Charging Futures Forum with newsletters and webinars/forums

Balancing Market Review | Publication Due Shortly

The final findings report from the Balancing Market Review will be published shortly

A joint BEIS, OFGEM and ESO response will accompany the report which we will share through a future transparency forum

This has been a data driven review, impartially conducted and targeting the root causes of high costs incurred in late 2021

We appreciate all the feedback from those who participated in workshops, interviews and findings webinars

January	January	February	March	April	April	May	June 2022
Frontier, LCP and Cornwall insight jointly awarded project	ESO datasets provided, further data provided on request	Analysis conducted into drivers of cost	Initial findings webinar presented capturing market views	Workshop meetings with grouped market participants	Further analysis conducted into areas identified by the market	Additional interviews conducted with subject matter experts	Final findings report published

slido

Audience Q&A Session

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

Q&A

Please remember to use the feedback poll after the event. We welcome feedback to understand what we are doing well and how we can improve the event ongoing.

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

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