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ESO Operational Transparency Forum

10 August 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

System Events
Questions from last week
Demand review
Costs for last week
Constraints

Focus Areas

Signpost to: Net Zero Market Reform – Locational Marginal Pricing (LMP)

Additional C16 Consultation Launched: Winter Contingency

Contingency Contracts

Things we hope to answer in the coming weeks

Costs

- When will you be able to provide a forecast of costs?
- How much will the contracts cost?
- How will the contracts work in relation to cash-out?

Dispatch

- Will market be made aware of ESO chooses to warm the plant ahead of dispatch?
- How will it be dispatched?
- What does ‘not in the market’ mean?
- When will they be dispatched in relation to the Capacity Market?

Other

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

Upcoming soon:
CMNs and decision making in op timescales – 17th August
Inertia deep dive – 24th August
Carbon intensity deep dive – 31st August
ESO Trading on Interconnectors - September

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

Feedback welcomed on our identified topics for inclusion

Frequency event

No system frequency events to report ✓

Questions outstanding from previous weeks

Q: How much consideration is given to the impact of battery operators charging up to full capacity prior to the CMN period? // Can we have some more clarity over the role batteries play in Triads, CM events and ENMs? If a CM is called, will batteries need to be at 100% availability? This is difficult with aux load & may require an import close to the CM, which could potentially lead to an import over a triad/tight period.

A: The obligation under the Capacity Market (CM) is for capacity providers to provide the capacity they have committed to in the CM auction during System Stress Event (SSE) periods.

The level of capacity that a participant can enter into the CM (and will therefore be obliged to provide) takes account of de-rating factors, which in the case of storage can be high (see pages 44 onwards in the Electricity Capacity Report 2022).

For a storage provider who has CM agreement it is ultimately a commercial decision at what point in time they choose to import and when they decide to export. As part of that, they may choose to not deliver their CM obligation during a SSE period, in which case they may face penalties under the CM regime.

Q: How does the ESO estimate what volume of non-PN dispatch will arrive should a CMN remain in force into real time?

A: It would be reasonable to assume that a significant proportion of parties with Capacity Market agreements would dispatch during a System Stress Event should they not already be dispatching.

Capacity Market agreements can be found here: https://www.emrdeliverybody.com/CM/Registers.aspx

As ESO, we would apply our engineering judgement to derive a range of volume we might anticipate arriving and would then ensure the operational tools available to us could manage the system impact of any credible volume.

Questions outstanding from previous weeks

Q: BM spend for the 20th was reported as >£60m in the Daily Cost reports but <£1m in the daily System Operator reports. Would you be able to explain the massive discrepancy occurred?

A: The daily System Operator reports only includes the cost of actions taken in the Balancing Mechanism and is an initial view. ~£59m spend on this day was through trading so would not be visible in this first look.

Q: PV 02-Aug: in some hhrs yesterday NG's PV forecast of 5.5->5.8GW was +1.6->1.7GW above estimated actuals. I believe NG uses multiple internal models to blend the best forecast, were all these models suggesting such high PV?

A: Tuesday 2 Aug was affected by rather variable cloud cover and wind conditions, causing increased solar uncertainty for that day. Some of our models were affected by this.

We regularly review our models and look to improve them, especially where we notice larger errors like this. Currently we are working to increase the level of detail in the weather forecasts we receive, for example the number of forecast locations that feed into our models.

Q: On Monday 1st Aug, DR and DM auctions showed a procurement target >0MW. However come the auction, this was reduced to 0MW stranding assets who had tendered for this service rather than DC. Can you clarify why this happened, whether this is a risk for assets going forward?

A: Unfortunately, this issue was down to human error, our intent is that the indicative forecasts published should reflect our auction requirements for DR and DM as often as possible, but on this occasion this did not happen, we have taken steps to mitigate the risk of this happening again, and apologise for any impact this had on service providers.

Questions outstanding from previous weeks

Q: Has the changes of LE1 constraint in the real-time been published anywhere? This can be a REMIT requirement for ESO?

A: We have committed to coming back to this forum with a discussion on the REMIT obligations for ESO.

Q: Initial understanding was that Ofgem were due to make a decision on 26th August re: CMP360/361 BSUoS fixed tariff implementation but now believe Ofgem will be announcing a further consultation instead (even though NG BSUoS Taskforce was completed in March 22) - any further view on this from NGESO?

A: Regardless of whether Ofgem run a further consultation we continue to work towards being ready to implement a fixed tariff BSUoS charging methodology when directed to do so.

We have been running some webinars to engage with industry (see prior comms) on the model that would be used to set a fixed BSUoS tariff and will continue to work and seek feedback on this whilst awaiting a decision on implementation from Ofgem. Please email bsuos.queries@nationalgrideso.com if you wish to engage with us further on the forecasting/fixed tariff BSUoS model.

Q: Given that Draxx-1 CFD payment may be less than COG?, is there any concern that the unit may not despatch on a PN this winter but be held for the BM (as has been seen in recent days)

A: It is up to generators on how to operate their assets. In relation to the early view for winter, we assume all plant are available in line with their published position on REMIT.

Q: On 10th June, during period 32, T_AKGLW-3 had their Offer price (bid undo) accepted at £99,999 /MWh for just over 2 MWh. Please could you provide an explanation for this?

A: A software defect led to the BOA being unintentionally unwound at £99,999/MWh.

Questions outstanding from previous weeks

Q: Surely the prudent base case for inter-connecter flows should be float. Imports can't be guaranteed u less they have direct access to power, but at least exports could be prevented. As already noted, spreads are currently in favour of continental markets.

A: These questions follow on from the many questions that were asked on our Base Case assumptions for interconnectors in the early view for winter that we published at the end of July and whether we can expect interconnector imports to be available. Our current Base Case assumes interconnectors deliver in line with their Capacity Market agreements, responding to market signals including scarcity prices as they have done in previous winters.

All capacity providers receive financial payment to deliver against the obligations of their agreements. We think it is reasonable to expect capacity providers to take steps to ensure they meet their obligations as set out in the terms of their agreements delivering value for GB electricity consumers. We recognise that there is uncertainty with the availability of the French nuclear fleet and stated in the early view that this is something that we will continue to monitor and assess ahead of the full Winter Outlook.

Q: How quickly do messages on BMRS appear after voltage or demand control actions? Specifically if it is automatic relays tripping?

A: Following automatic relays tripping BMRS messages are published promptly, within minutes. For tests and other planned actions we do issue BMRS messages ahead of time to inform the wider audience. There is a further service that can be signed up for via Elexon.

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Questions outstanding from previous weeks

Q: BMRS Unavailability of Transmission Infrastructure reports: I find a few sparsely detailed submissions under the Off-Shore Grid Infrastructure section but not able to find any under either of the Transmission Grid sections. Is NG not submitting this information for its assets - if not, why?

A: These are ETR (European Transparency Regulation) reports from articles 10.1a and 10.1b of the ETR regulation 543/2013. They relate to planned or real-time fault transmission outages that would directly restrict any interconnector transfer capacities. We do not normally have outages in this category and so nothing will be published. Our control rooms will occasionally publish a 10.1c report if a transmission fault disconnects an offshore windfarm that is generating 100MW or more. We publish the original ETR reports on BMRS in line with our retained obligations.

Q: I posted a quick calc on the potential benefit being about 1.7GW based on 12.3MW for 105,320 households and expanded to 28mn households with 49% smart meter penetration. However, I worry that you're putting money in the pockets of those more able to afford energy prices (being able to afford smart devices) and that these balancing costs via BSUoS, into energy prices, into billing will then hit those least able to afford them. So you're giving to the richer by taking from the poorer. Why?

A: The driver for running this trial was high balancing costs experienced in the previous Winter, as a prudent system operator we are always seeking options that could look to minimise these costs whilst maintaining security of supply, which is to the benefit of all consumers. The trial showed the bulk of the demand reduction was from households not on smart tariffs, implying customers without smart appliances have a huge role to play in unlocking this type of flexibility.

Questions outstanding we are still working on

Q: The Irish ICs over July (Moyle basically all July, East-West 10th July) generated to a nomination profile completely away from their PNs. This is a semi-regular occurrence since ISEM. After several years why are PNs still not submitted correctly for Irish ICs?

Q: If in a dynamic service like DC, would an import, such as ABSVD, or other actions used to contain frequency, be included in a charge?

Q: Regarding TSO-TSO trade with SEMO - I am interested with trades with Ireland (I have not seen trades with Ireland appear in BSAD)

Net Zero Market Reform – Locational Marginal Pricing (LMP)

Following some high costs days, several questions were been raised in OTF regarding the impact of LMP.

The link to our Market Reform Program with key updates and related publications is available below.

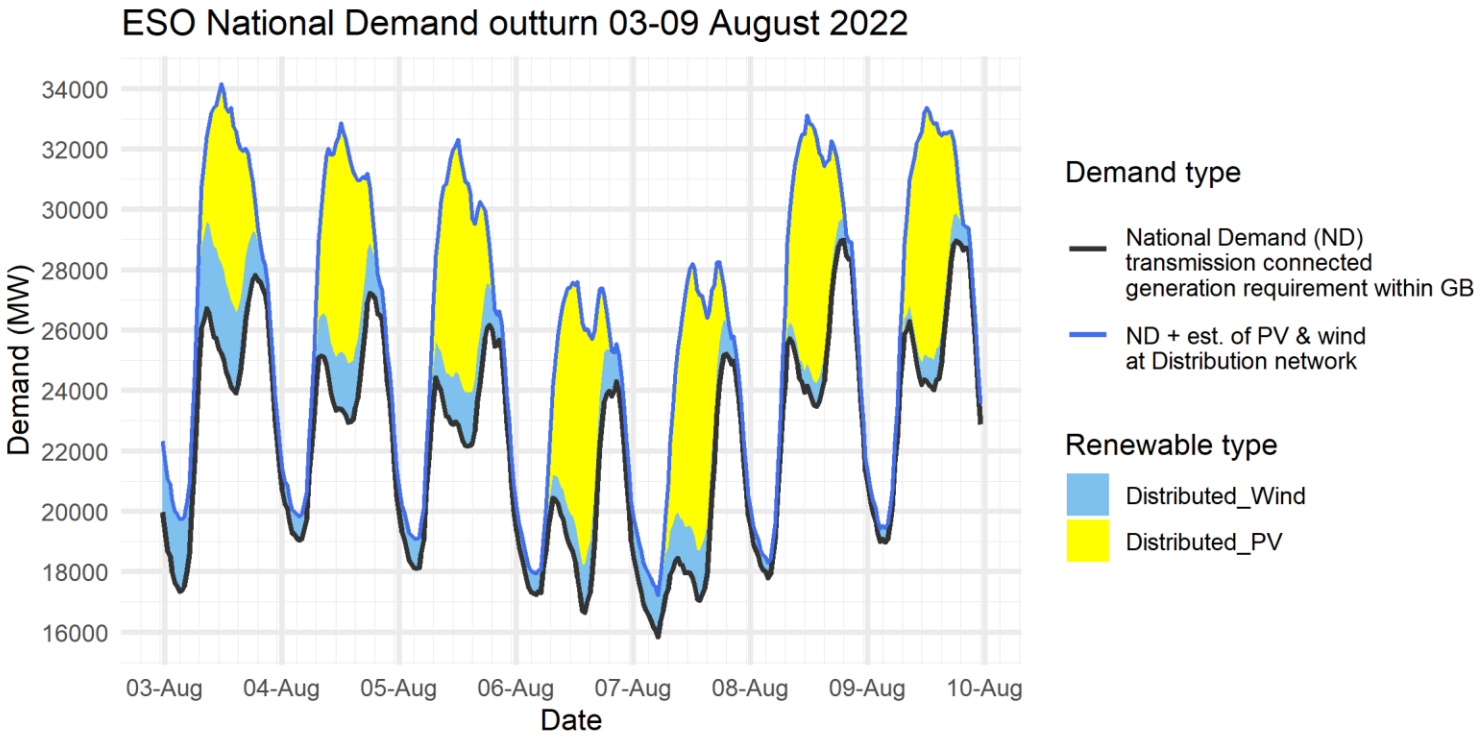
Net Zero Market Reform

You can also subscribe for updates via the following link.

Subscribe for updates

If you have any questions or to find out how to get involved please email box.Market.Strategy@nationalgrideso.com

Demand | Last week demand out-turn



		FORECAST (Wed 03 Aug)			OUTTURN		
Date	Forecasting Point	National Demand (GW)	Dist. wind (GW)	Dist. PV (GW)	National Demand (GW)	Dist. wind (GW)	Dist. PV (GW)
03 Aug	Afternoon Min	23.4	2.7	6.3	23.9	2.7	6.0
04 Aug	Overnight Min	18.9	0.8	0.0	19.0	0.8	0.0
04 Aug	Afternoon Min	23.9	1.7	7.0	22.9	2.0	7.0
05 Aug	Overnight Min	18.2	1.2	0.0	18.1	1.0	0.0
05 Aug	Afternoon Min	22.5	1.6	6.9	22.2	1.8	6.9
06 Aug	Overnight Min	17.7	0.6	0.1	17.2	0.7	0.0
06 Aug	Afternoon Min	19.3	1.1	5.6	16.7	1.6	7.7
07 Aug	Overnight Min	16.7	0.7	0.1	15.8	1.4	0.0
07 Aug	Afternoon Min	18.9	0.7	7.2	17.1	1.7	8.5
08 Aug	Overnight Min	18.0	0.5	0.0	17.8	0.5	0.0
08 Aug	Afternoon Min	23.3	0.7	7.9	23.5	0.8	8.1
09 Aug	Overnight Min	18.8	0.8	0.0	19.0	0.5	0.0
09 Aug	Afternoon Min	25.2	1.0	5.5	24.0	1.0	7.8

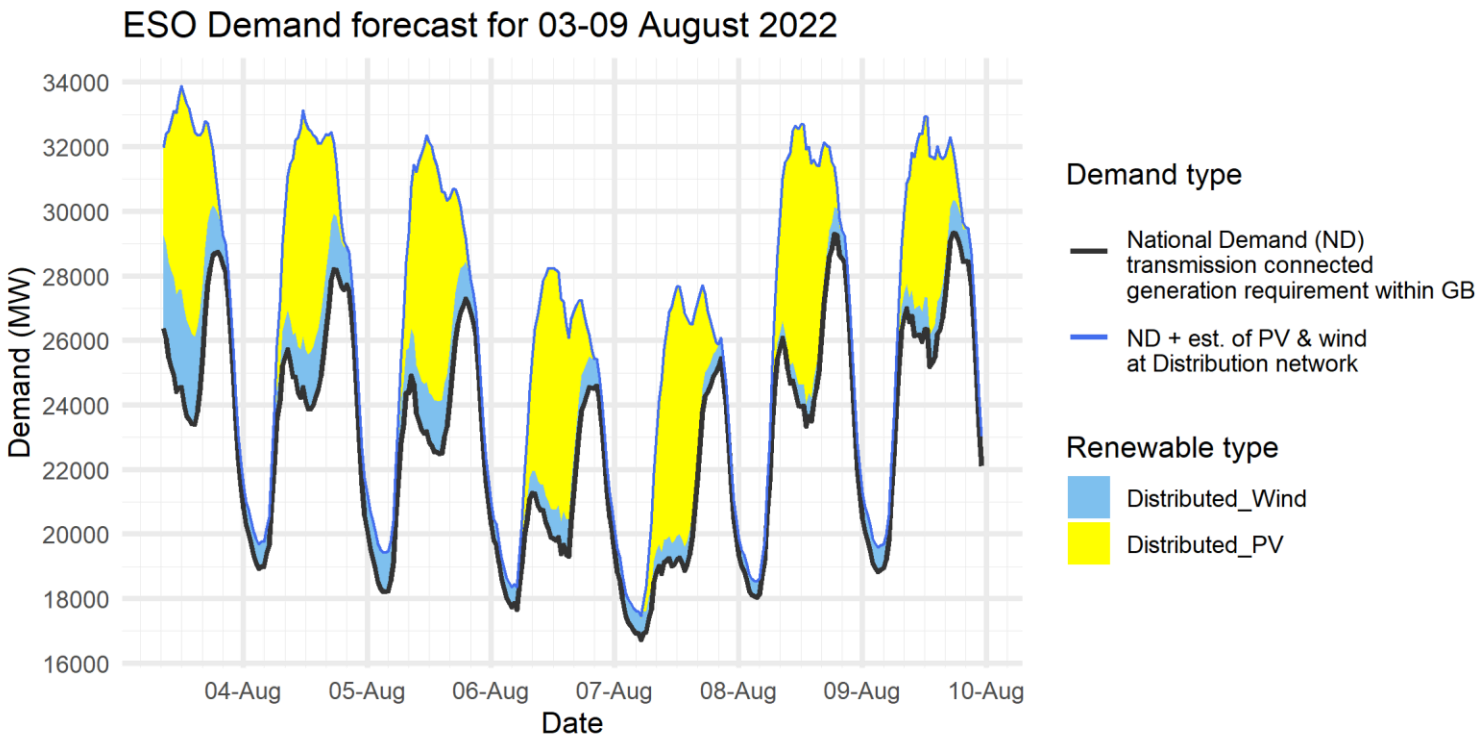
The black line (National Demand ND) is the measure of portion of total GB customer demand that is supplied by the transmission network.

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



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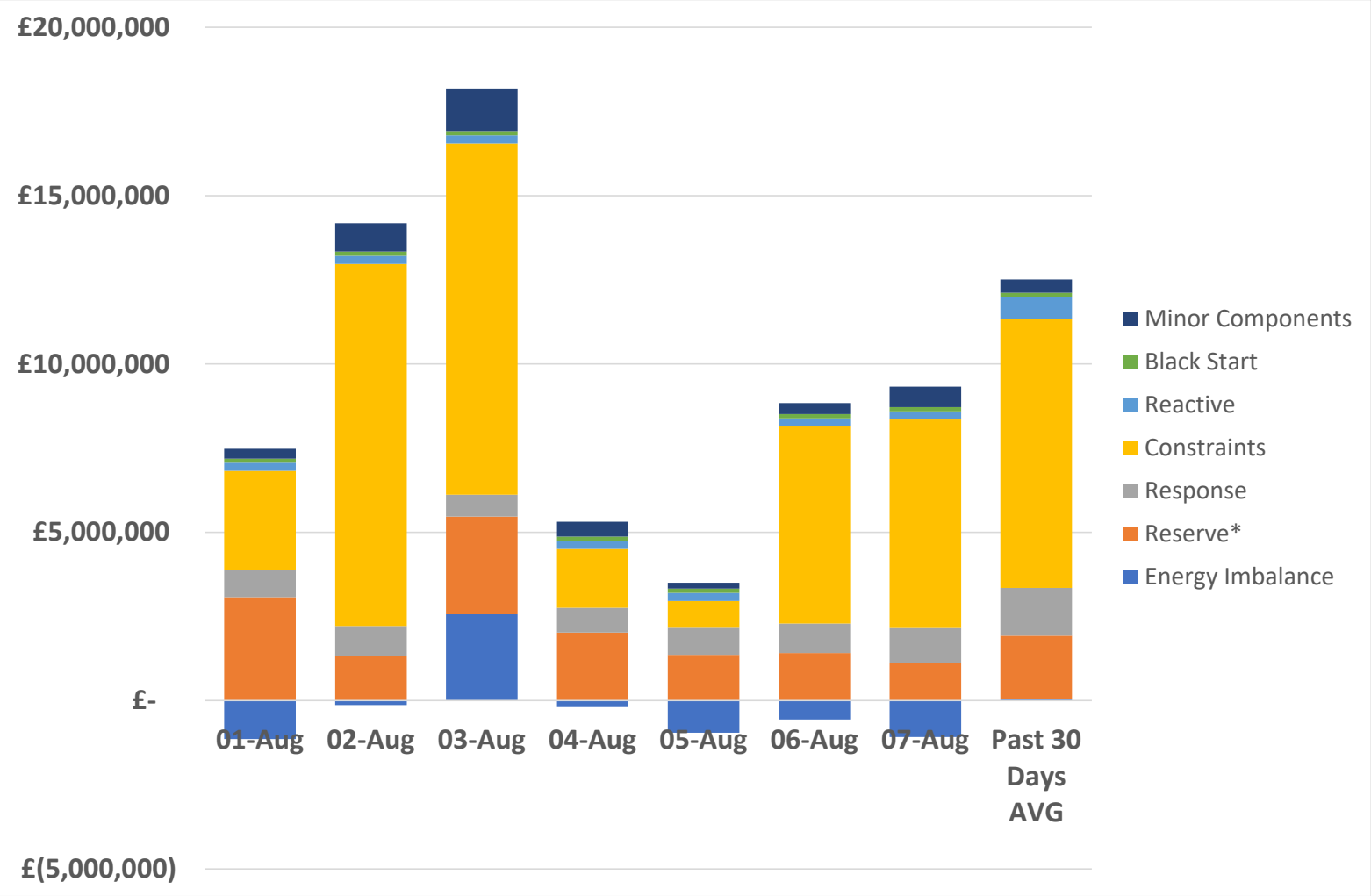
		FORECAST (Wed 10 Aug)		
Date	Forecasting Point	National Demand (GW)	Dist. wind (GW)	Dist. PV (GW)
10 Aug	Afternoon Min	23.1	1.2	8.9
11 Aug	Overnight Min	19.7	0.4	0.0
11 Aug	Afternoon Min	25.4	0.8	7.8
12 Aug	Overnight Min	19.9	0.4	0.0
12 Aug	Afternoon Min	25.2	0.6	8.1
13 Aug	Overnight Min	19.3	0.5	0.0
13 Aug	Afternoon Min	20.7	0.6	7.3
14 Aug	Overnight Min	18.7	0.5	0.0
14 Aug	Afternoon Min	21.8	0.8	6.6
15 Aug	Overnight Min	19.8	0.6	0.0
15 Aug	Afternoon Min	27.8	0.9	4.3
16 Aug	Overnight Min	19.9	0.8	0.0
16 Aug	Afternoon Min	26.2	1.3	5.0

ESO Actions | Category costs breakdown for the last week



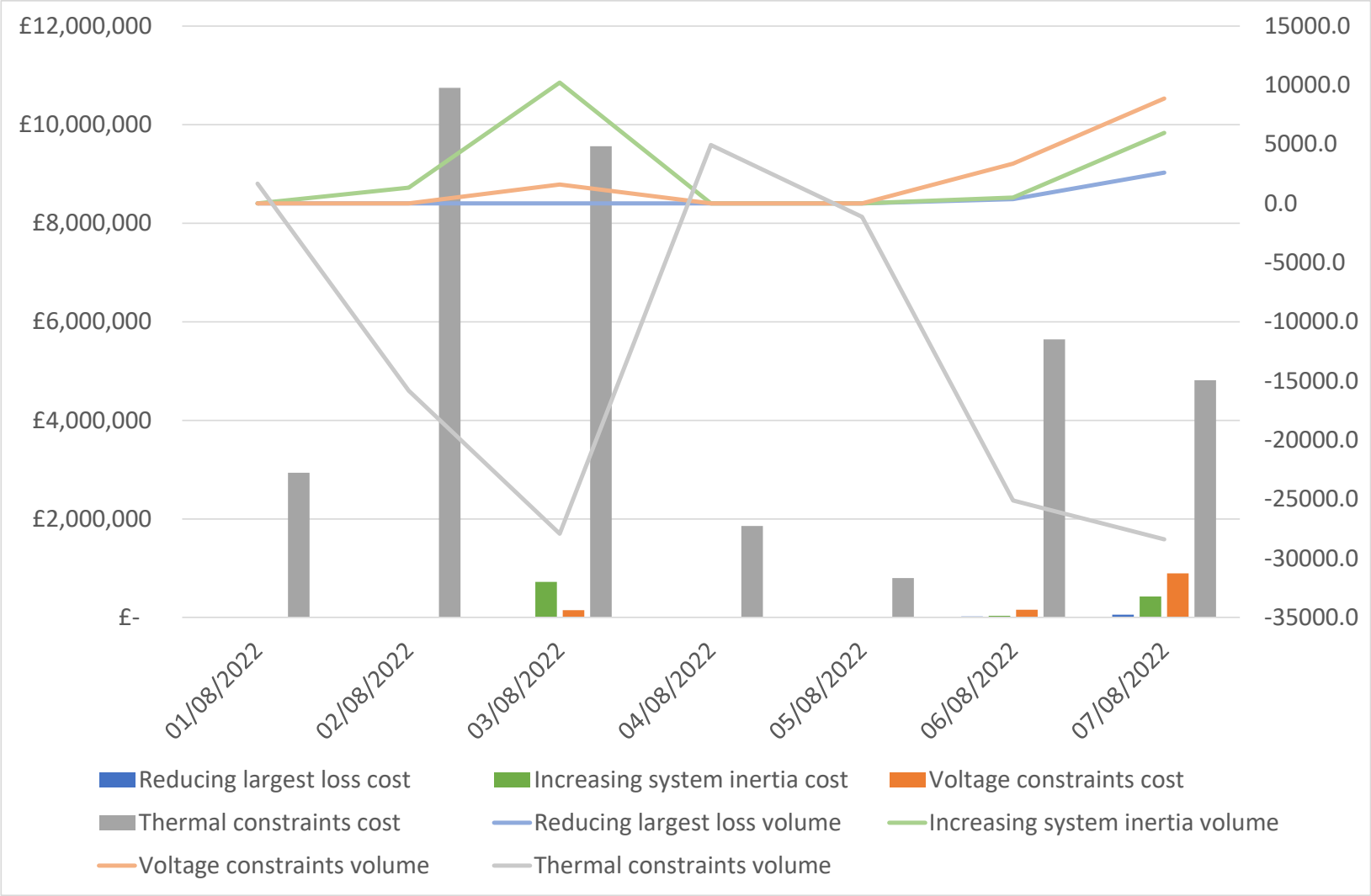
Date	Total (£m)
01/08/2022	6.3
02/08/2022	14.0
03/08/2022	18.2
04/08/2022	5.1
05/08/2022	2.5
06/08/2022	8.3
07/08/2022	8.2
Weekly Total	62.8

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



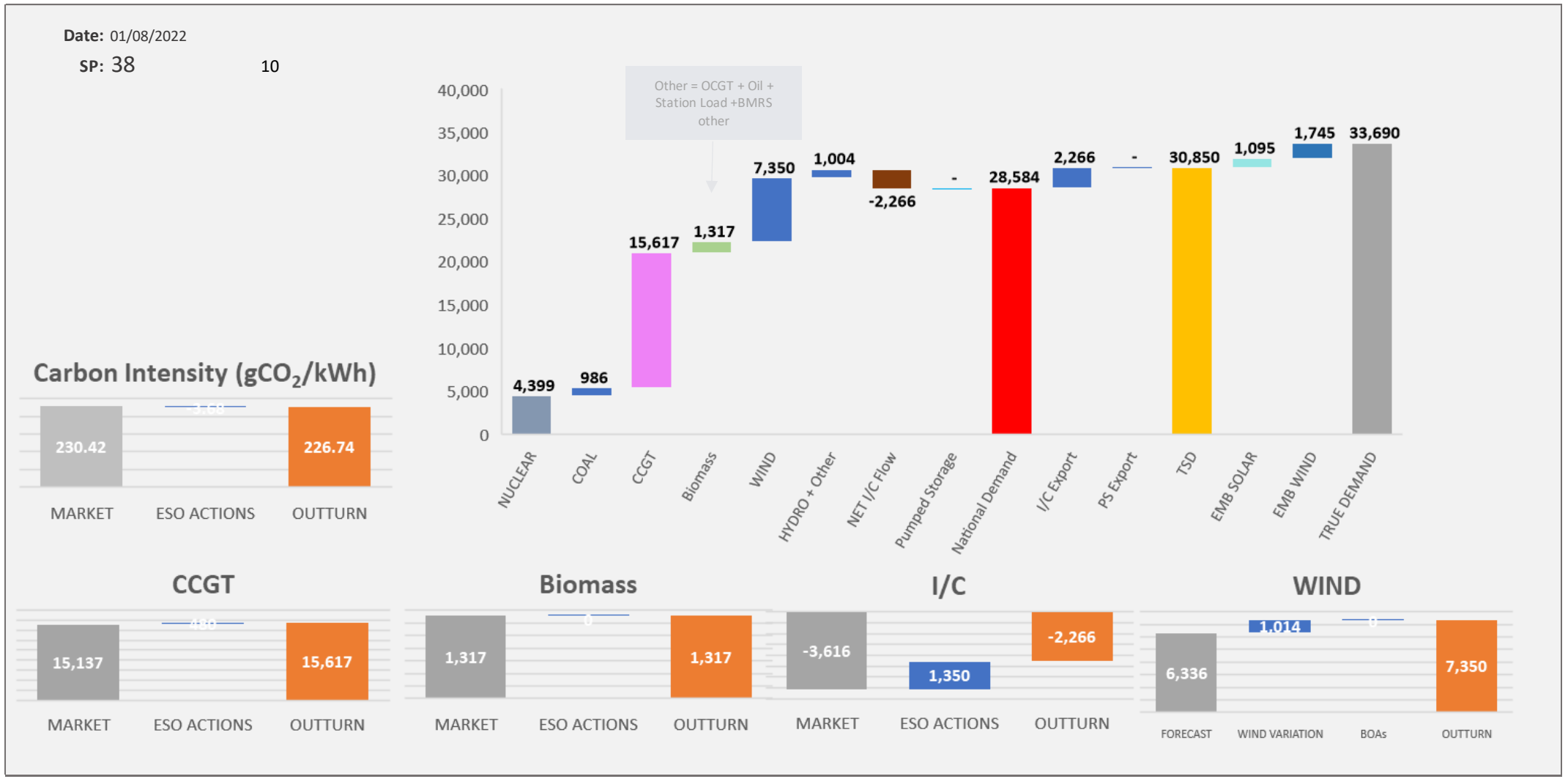
Thermal – network congestion
Actions required to manage Thermal Constraints throughout the week

Voltage
Intervention to manage the voltage levels on Wednesday, Saturday and Sunday.

Managing largest loss for RoCoF
Intervention required to manage largest loss on Saturday and Sunday.

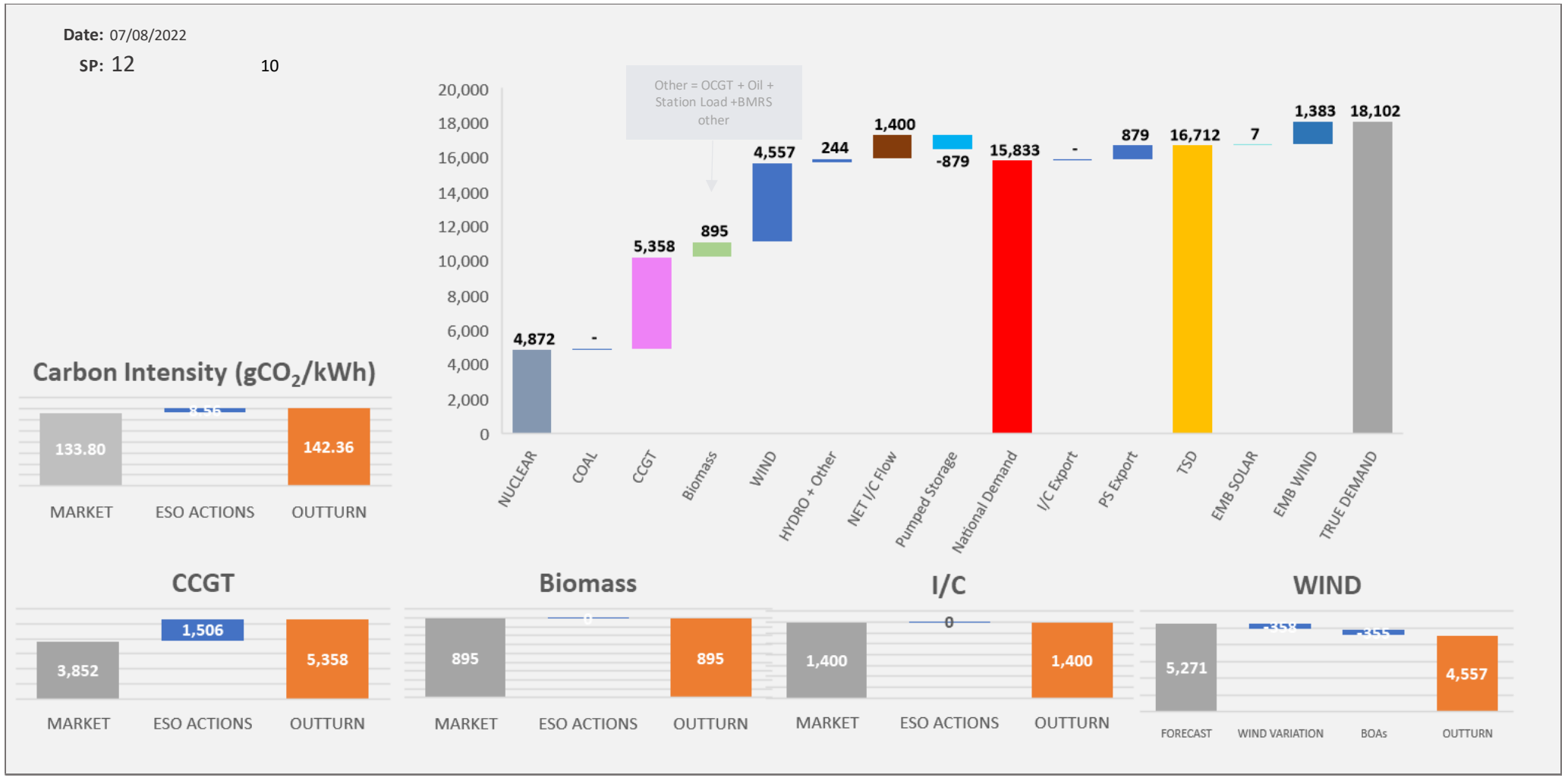
Increasing inertia
Intervention required to manage Inertia on Wednesday, Saturday and Sunday

ESO Actions | Monday 01 August – Peak Demand – SP spend ~£311k



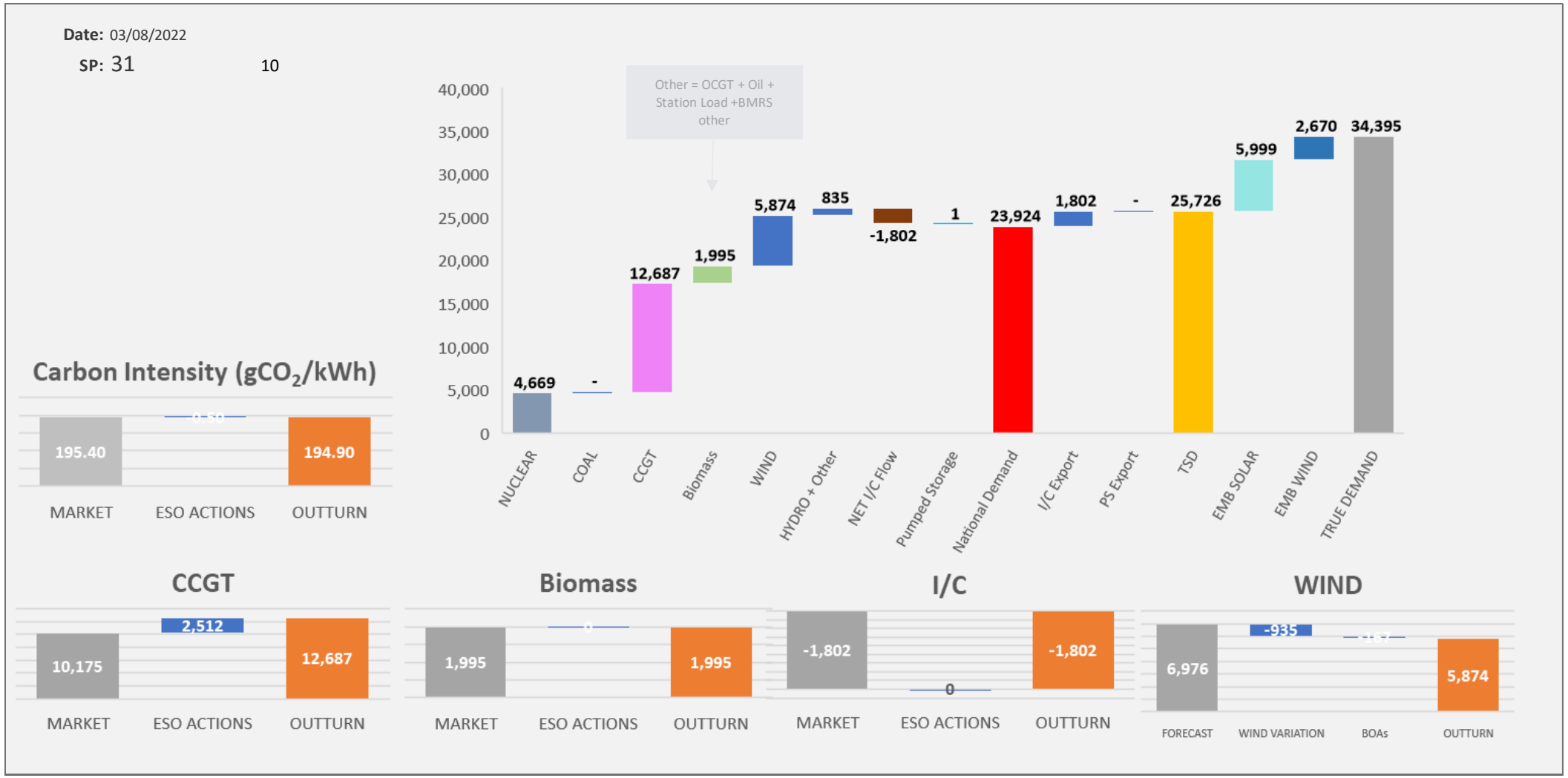
Carbon Intensity data on data portal: https://data.nationalgrideso.com/carbon-intensity1/carbon-intensity-of-balancing-actions

ESO Actions | Sunday 07 August – Minimum Demand – SP Spend £150k



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

ESO Actions | Wednesday 03 August - Highest SP Spend ~£466k



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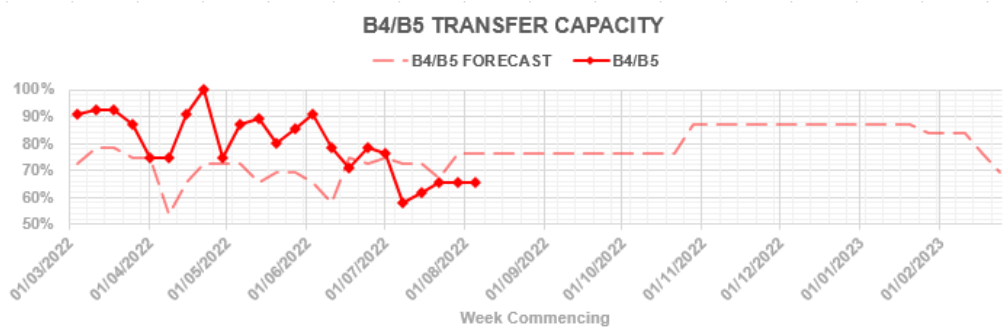
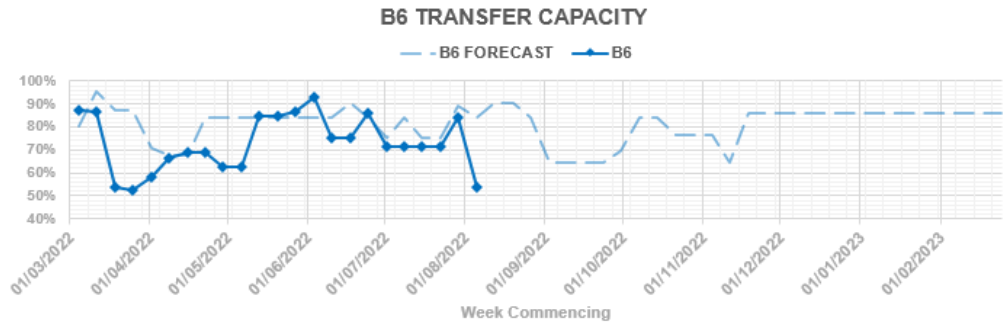
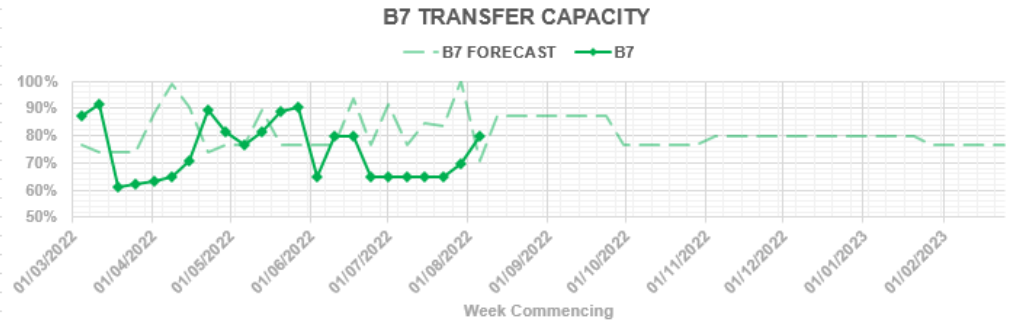
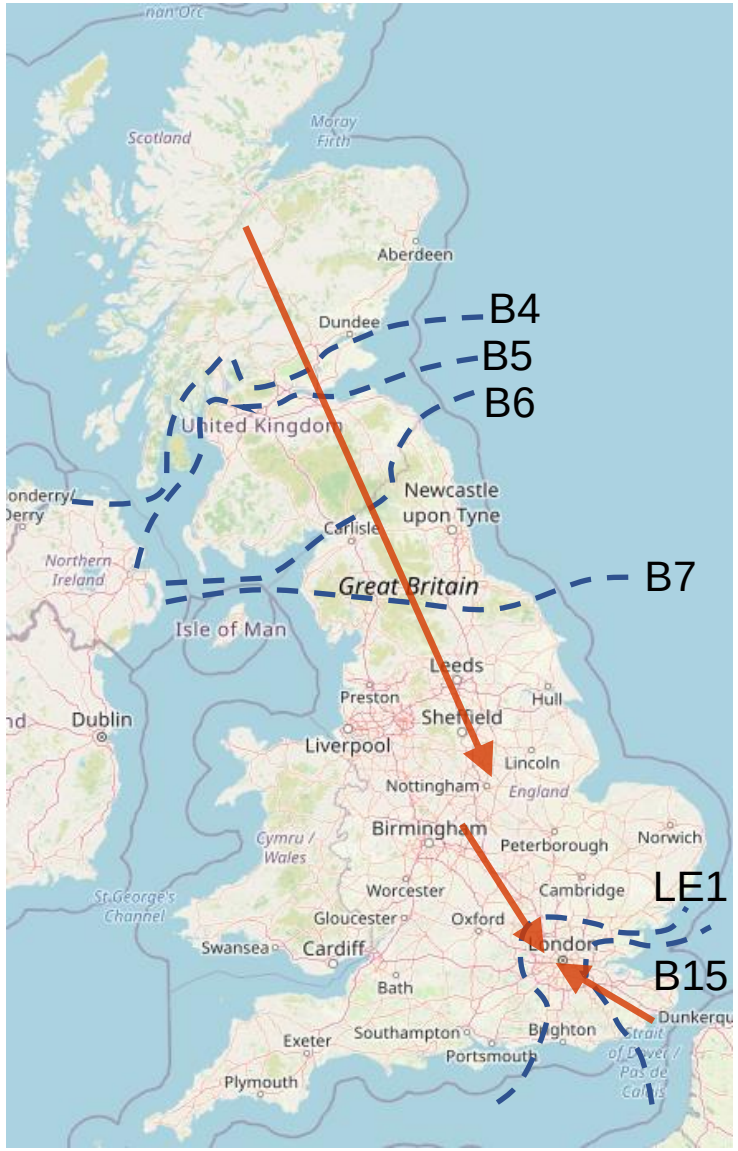
Transparency | Network Congestion





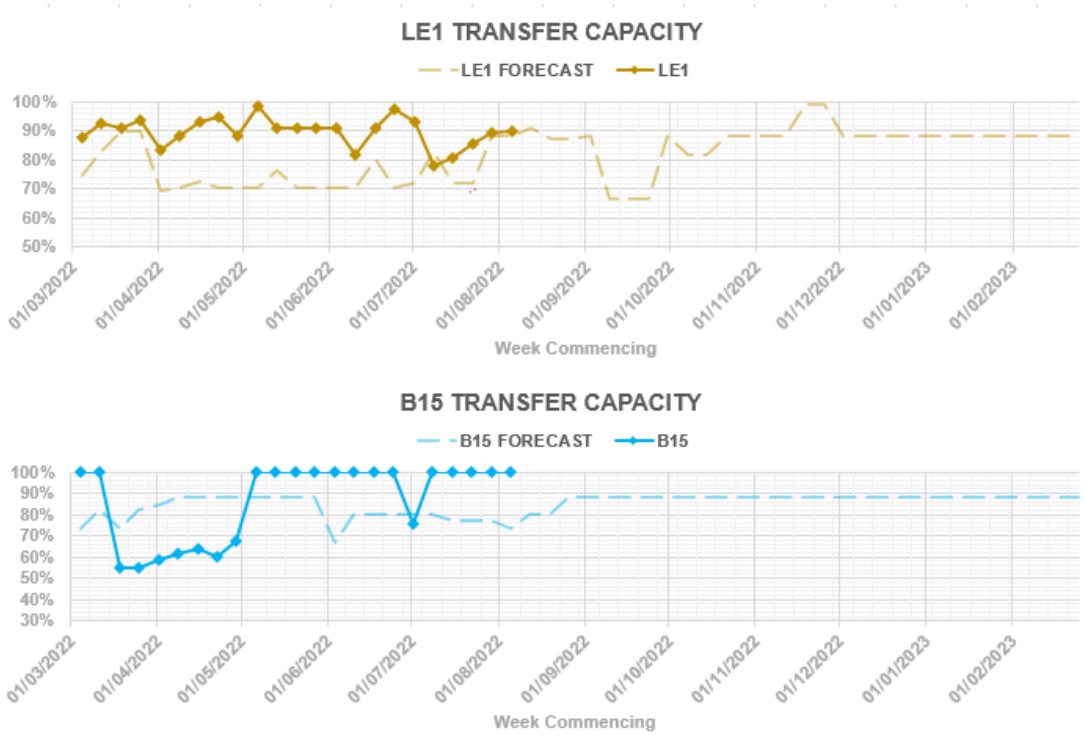


Boundary	Max. Capacity (MW)
B4/B5	2750
B6	5600
B7	8400
LE1	7000
B15	7500



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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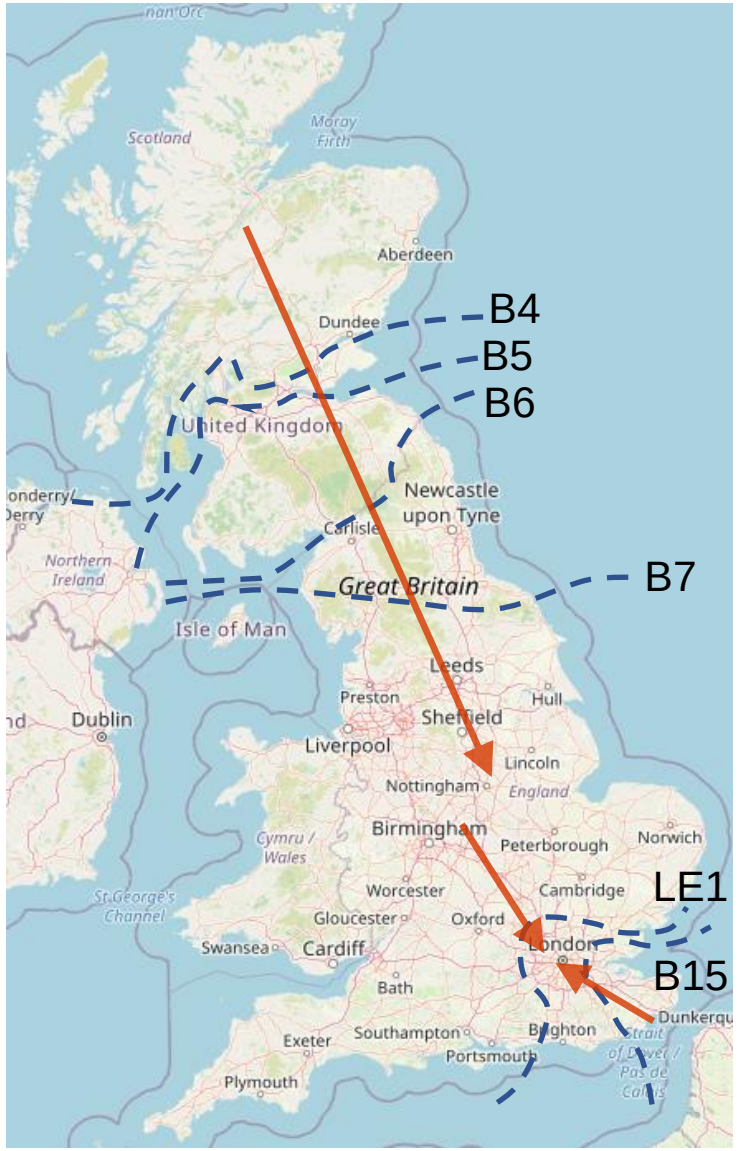

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Additional C16 Consultation Launched: Winter Contingency

NGESO have been requested by BEIS to secure additional capacity with the potential to generate significant MWh from coal units which, under normal market conditions, would have exited the market by September 2022.

The ESO is also exploring a Winter Demand Flexibility service, to ensure greater participation of demand side response from electricity customers

We have launched an additional consultation seeking industry views on changes proposed to the Procurement Guidelines, Balancing Principles, SMAF and ABSVD C16 Statements.

We welcome your views to the proposed changes, please provide a response via the instructions included in the consultation on our C16 Webpage: https://www.nationalgrideso.com/industry-information/codes/balancing-settlement-code-bsc/c16-statements-and-consultations

Key Dates:

Official Consultation Release: 8th August

Official Consultation Close: 5th September

Documents sent to Ofgem: 12th September

Ofgem Direction: By October 10th 2022

Revised C16 Statements Go Live: 11th October 2022

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Audience Q&A Session

ⓘ 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

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