

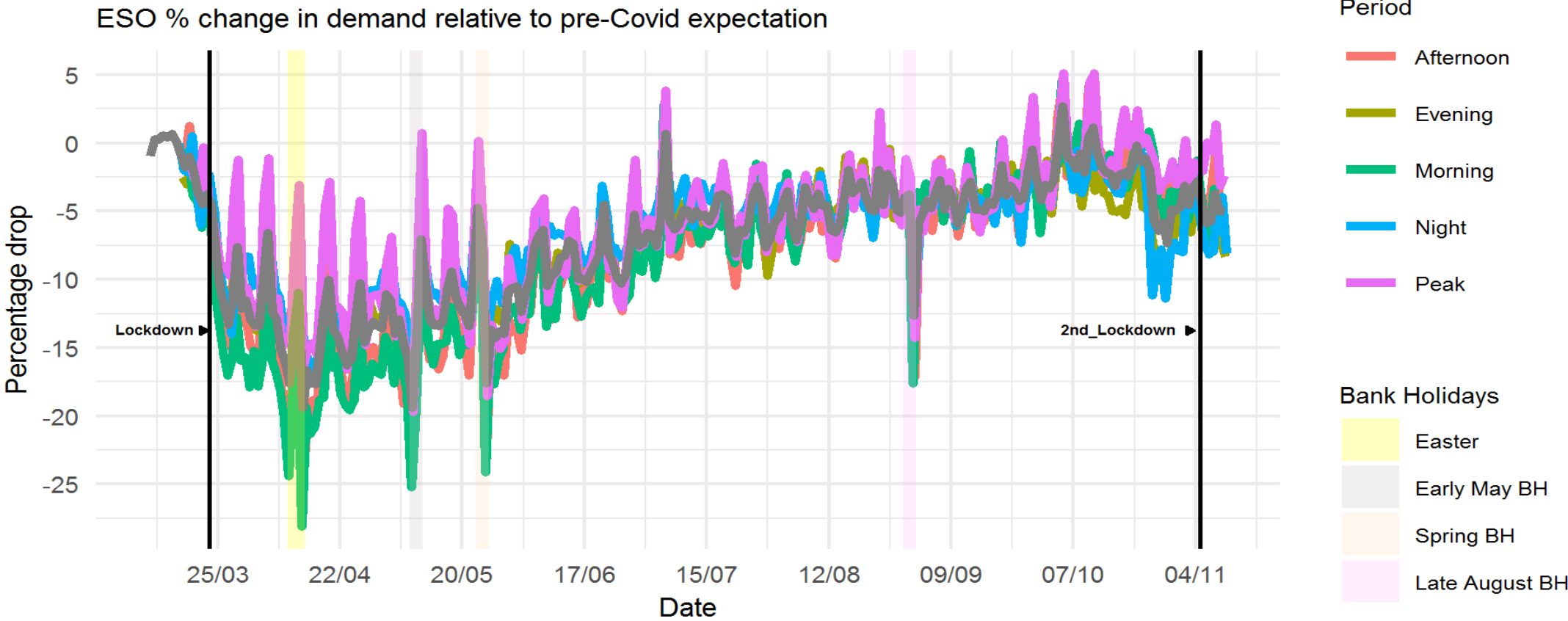


ESO Operational Transparency Forum

11th November 2020

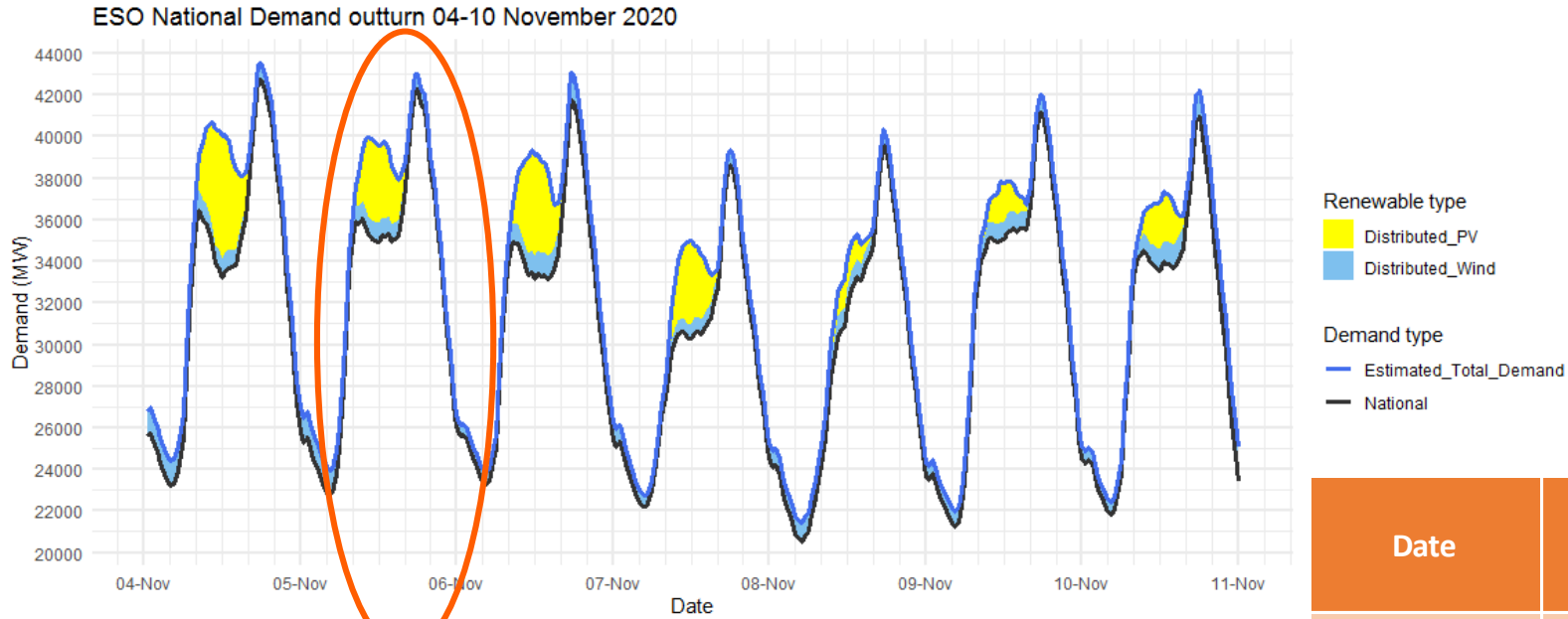
nationalgrid**ESO**

Demand | Latest demand suppression assessment



Estimated overall demand drop over last 7 days of **4.4%** compared to pre-COVID expectations

Demand | Last Weeks Outturns



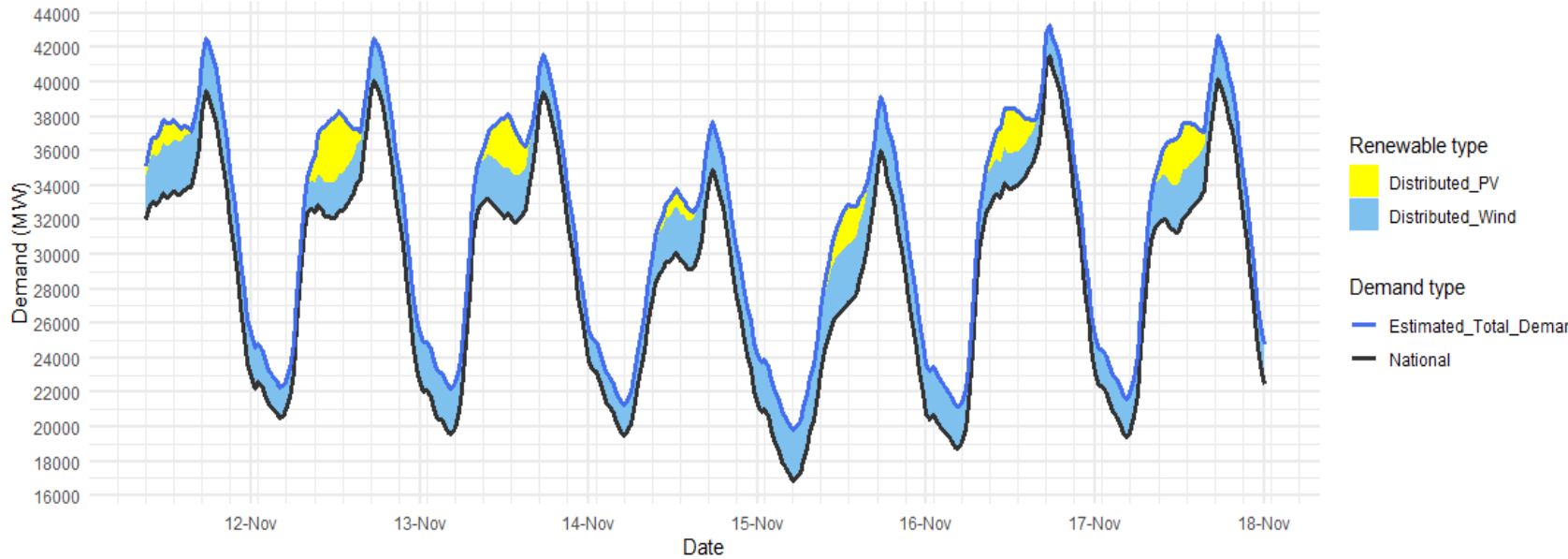
First day of the second national lockdown

Date	Forecasting Point	FORECAST (Wed 04)		OUTTURN	
		National Demand (GW)	Dist. wind (GW)	National Demand (GW)	Dist. wind (GW)
04 Nov 2020	Evening Peak	43.2	0.8	42.8	0.7
05 Nov 2020	Overnight Min	22.7	1.2	22.8	1.2
05 Nov 2020	Evening Peak	42.4	0.7	42.3	0.7
06 Nov 2020	Overnight Min	23.5	0.6	23.3	0.6
06 Nov 2020	Evening Peak	41.1	1.1	41.8	1.3
07 Nov 2020	Overnight Min	22.9	0.5	22.2	0.5
07 Nov 2020	Evening Peak	37.7	0.7	38.7	0.7
08 Nov 2020	Overnight Min	21.1	0.8	20.5	0.9
08 Nov 2020	Evening Peak	37.7	1.0	39.7	0.7
09 Nov 2020	Overnight Min	20.6	1.1	21.2	0.7
09 Nov 2020	Evening Peak	41.2	1.3	41.2	0.9
10 Nov 2020	Overnight Min	21.1	0.9	21.8	0.6
10 Nov 2020	Evening Peak	41.4	0.9	40.9	1.3

Demand | Week ahead forecast

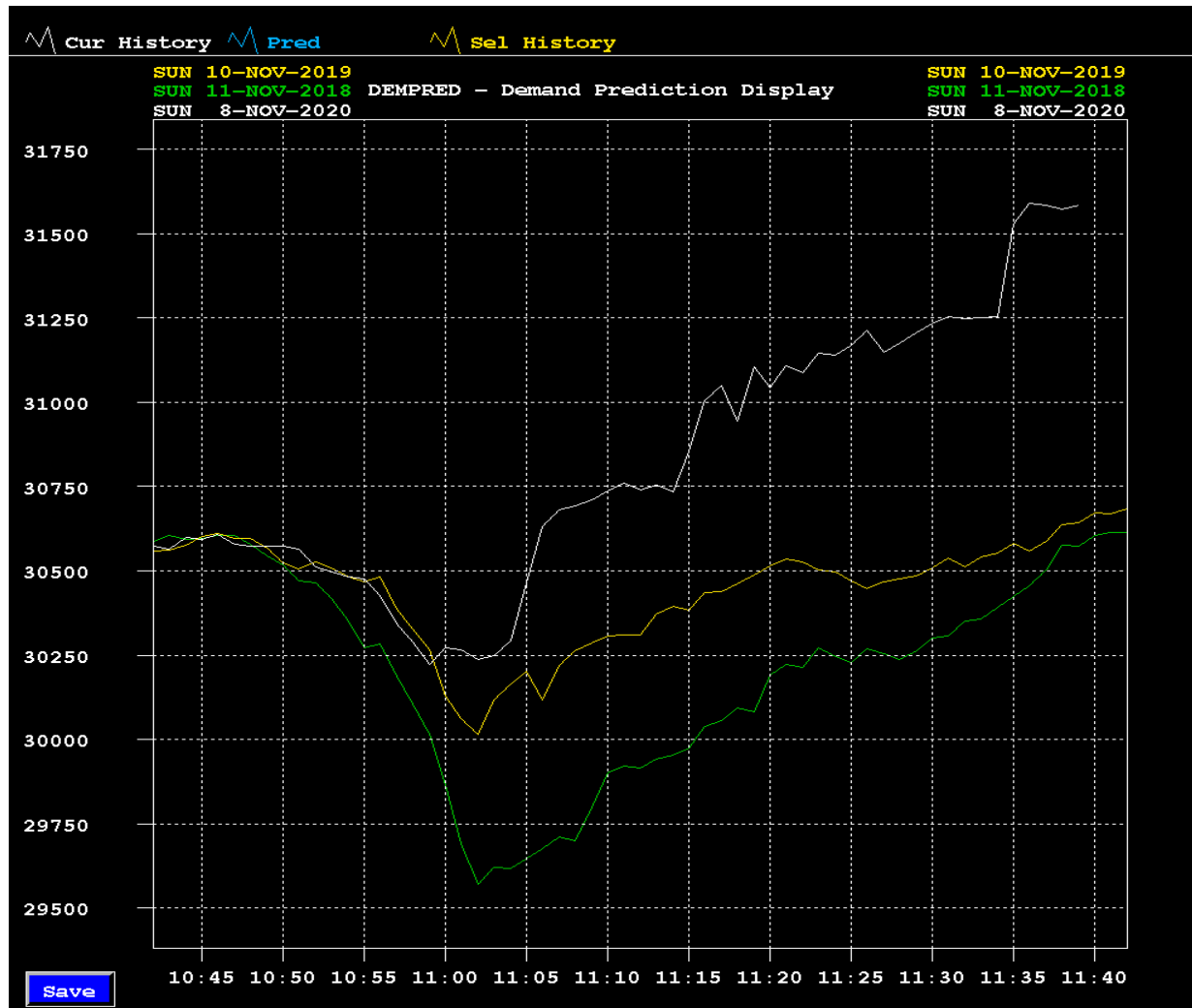
ESO Demand forecast for 11-17 November 2020

based on the current government policies in relation to the pandemic and on the latest weather forecast



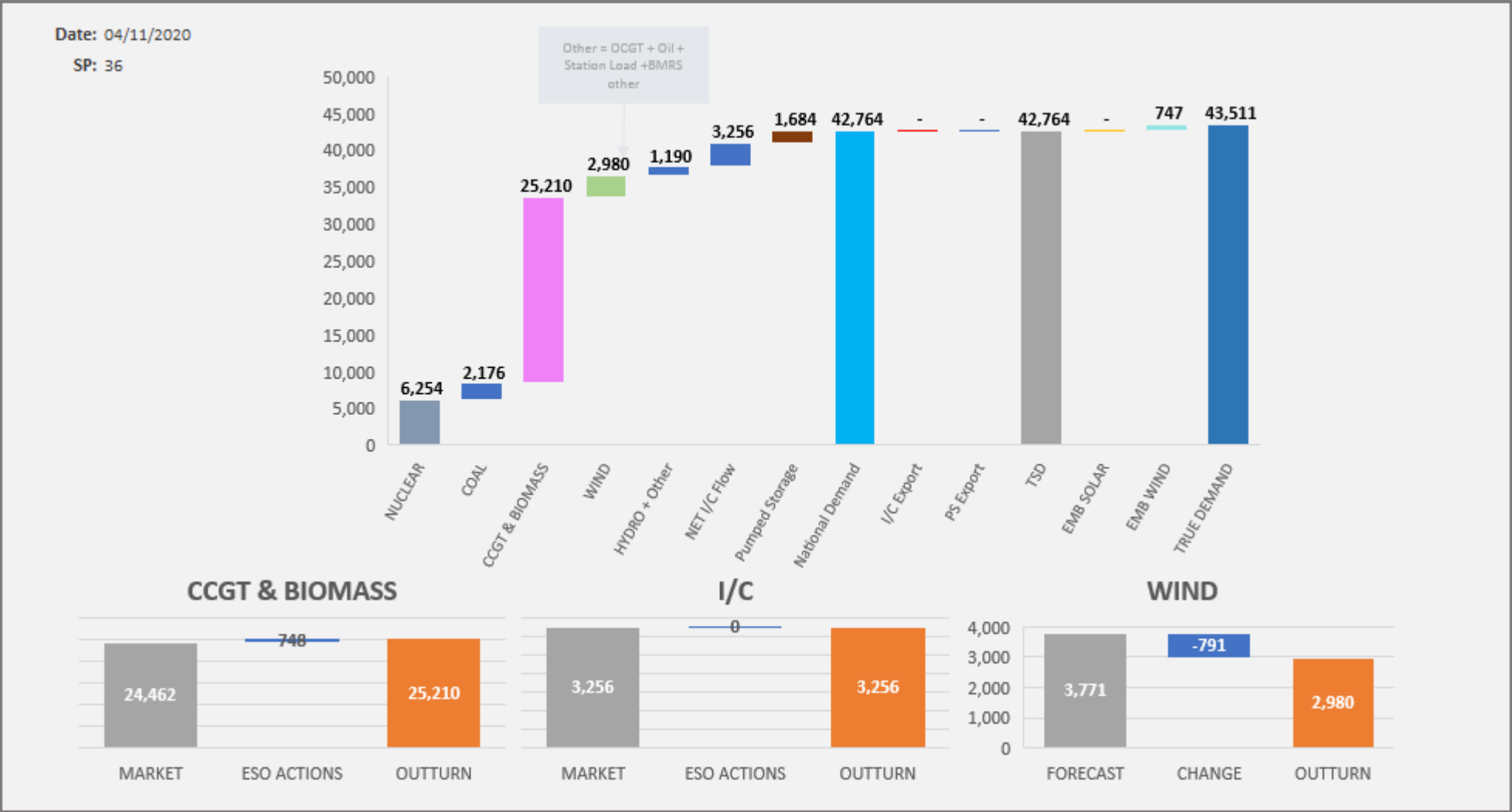
		FORECAST (Wed 11)	
Date	Forecasting Point	National Demand (GW)	Dist. wind (GW)
11 Nov 2020	Evening Peak	39.5	3.1
12 Nov 2020	Overnight Min	20.5	1.8
12 Nov 2020	Evening Peak	40.1	2.4
13 Nov 2020	Overnight Min	19.6	2.6
13 Nov 2020	Evening Peak	39.4	2.2
14 Nov 2020	Overnight Min	19.5	1.8
14 Nov 2020	Evening Peak	34.9	2.8
15 Nov 2020	Overnight Min	16.8	3.0
15 Nov 2020	Evening Peak	36.0	3.2
16 Nov 2020	Overnight Min	18.8	2.4
16 Nov 2020	Evening Peak	41.5	1.8
17 Nov 2020	Overnight Min	19.4	2.2
17 Nov 2020	Evening Peak	40.2	2.5

Demand | Remembrance Sunday 8th Nov

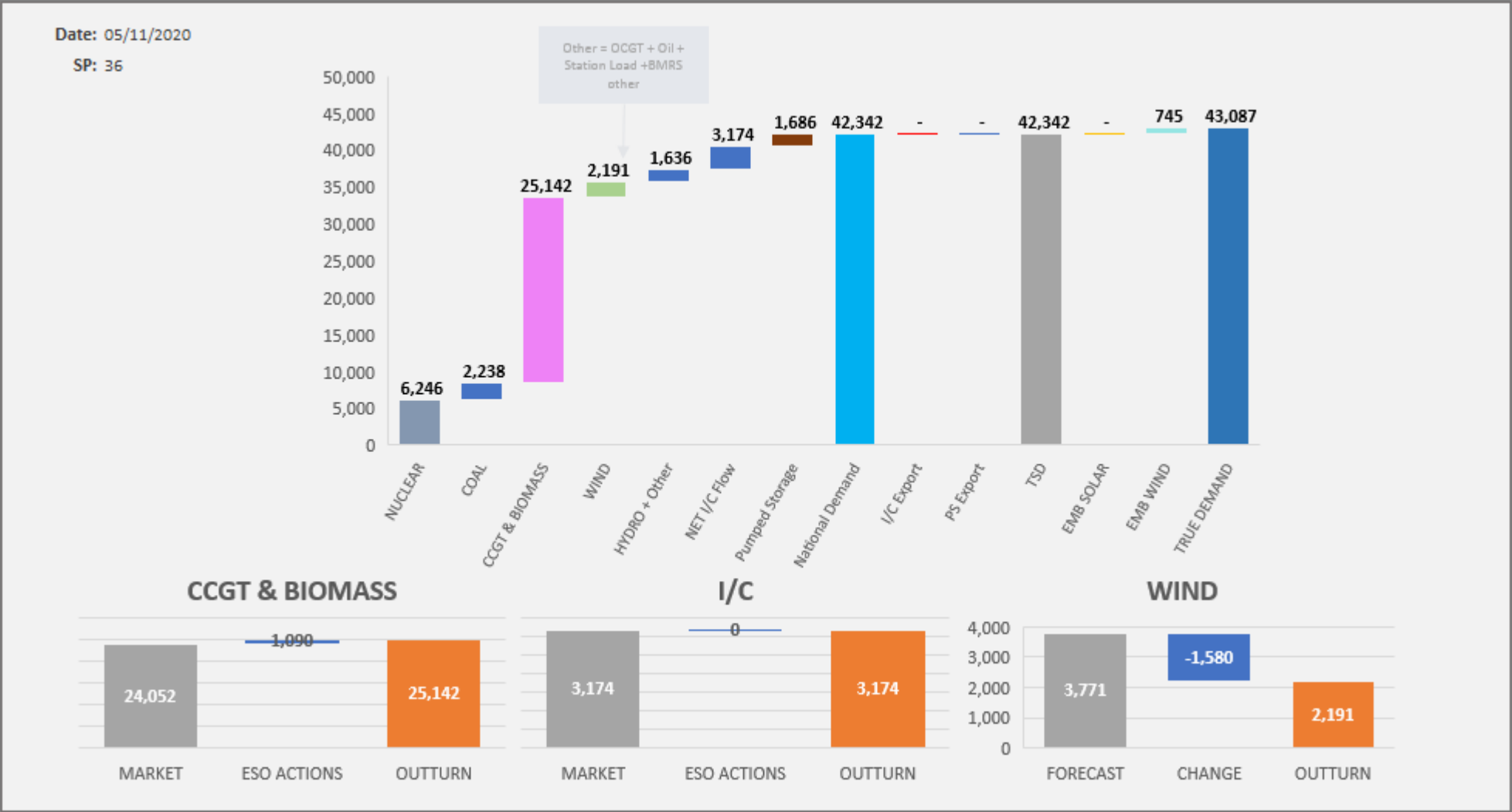


- Minutely demand curve during the 2-minute silence on Remembrance Sunday
- Due to COVID restrictions this year, we observed a smaller drop in demand (~300MW) compared to previous years
- Drop followed by a much bigger and steeper (~500MW) pick up afterwards

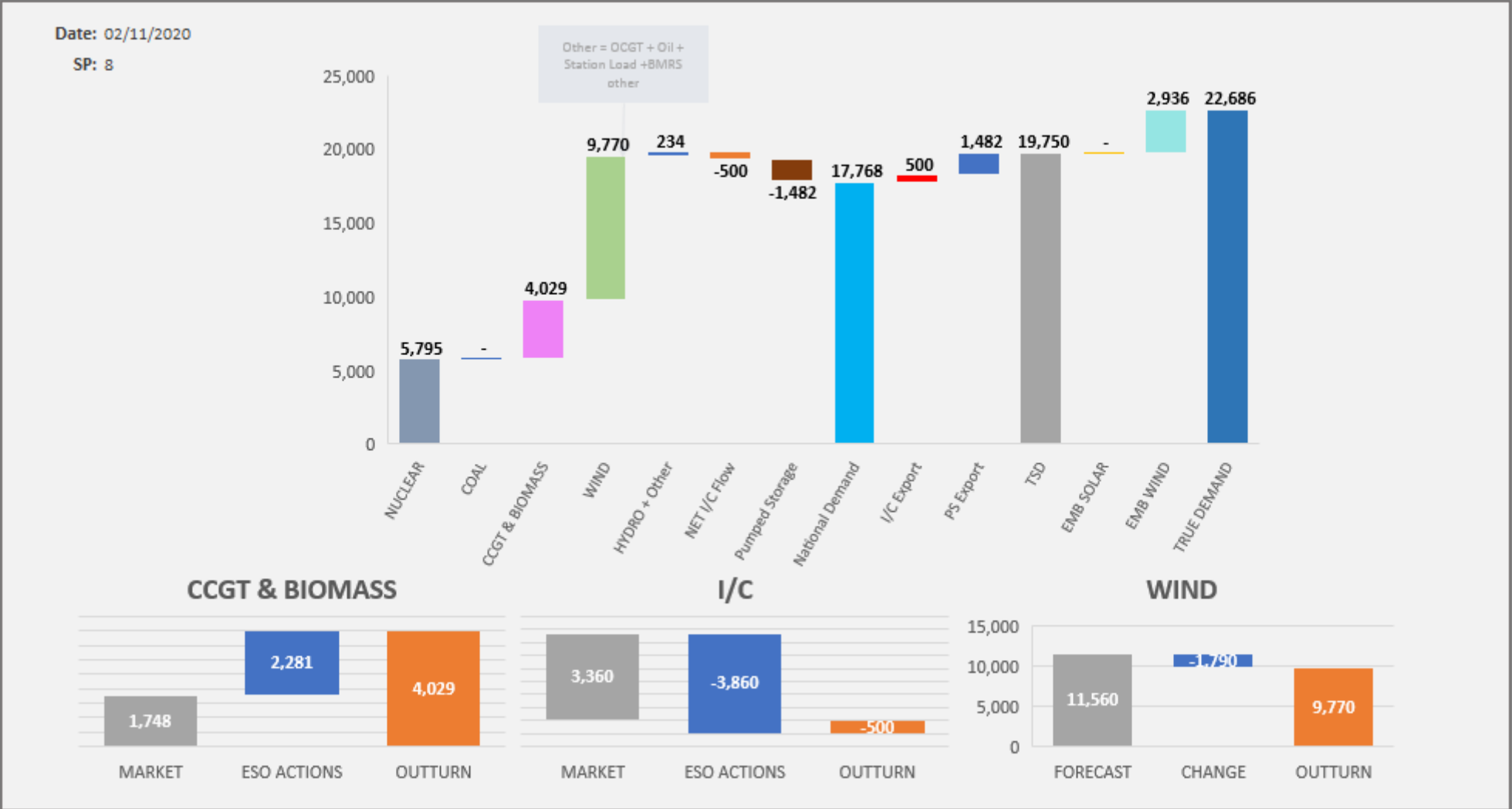
ESO Actions Weekday peak | Wednesday evening



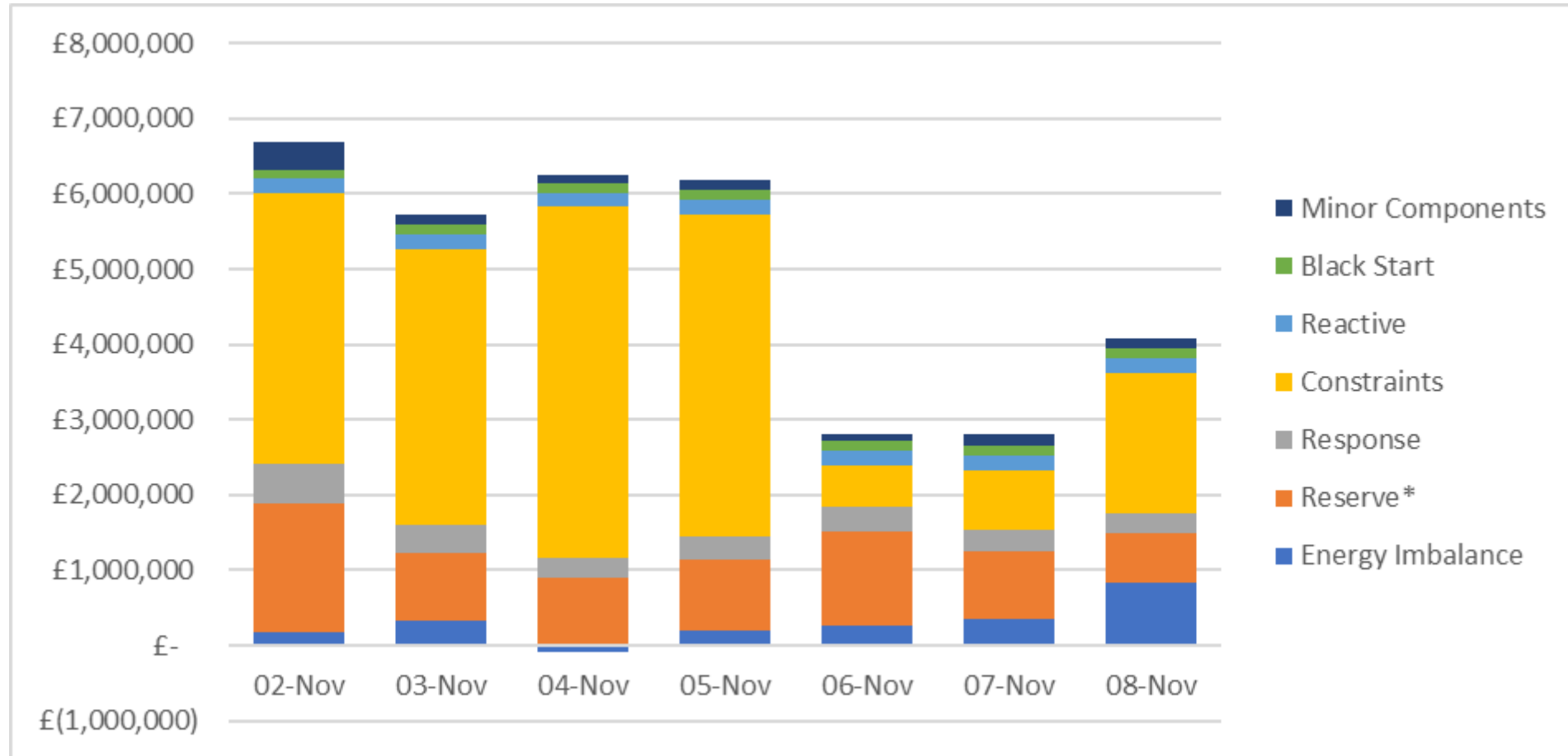
ESO Actions Weekday peak | Thursday evening



ESO Actions Weekend minimum | Monday morning



Transparency | Costs last week

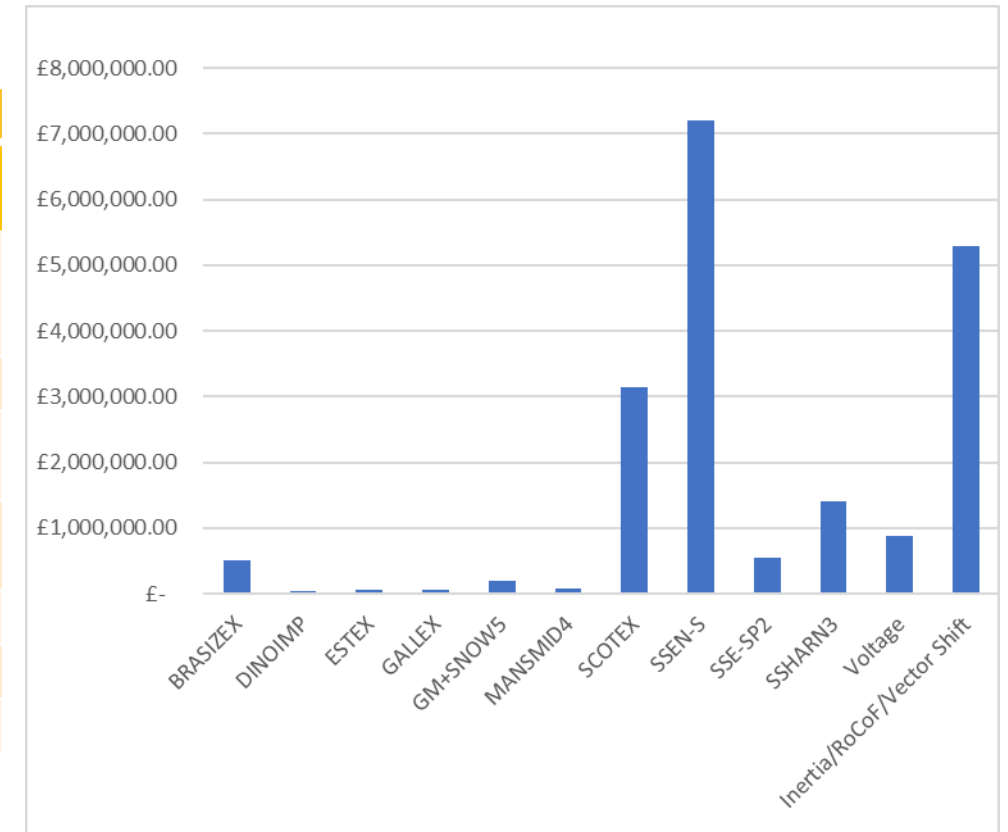


*Includes operating reserve, STOR, fast reserve, other reserve, negative reserve

Note: AS costs are estimated at this timescale so small discrepancies may be observed

Transparency | Constraints Information

	Main drivers for constraint spend		
	System Inertia	Voltage	Key costing boundaries
2 Nov	x	x	SSHARN3 – North England boundary BRASIZEX – Export boundary in East Anglia GM+SNOW5 – Greater Mersey and North Wales export boundary
3 Nov	x	x	SCOTEX – Boundary between Scotland and England & Wales
4 Nov	x	x	SSE N-S – Export boundary in North of Scotland SCOTEX - Boundary between Scotland and England & Wales
5 Nov	x	x	SSE N-S - Export boundary in North of Scotland SSE-SP2 – Export boundary between SSE and SP Transmission networks
6 Nov	x	x	Internal localised Scotland constraints
7 Nov	x	x	Internal localised Scotland constraints
8 Nov	x	x	Internal localised Scotland constraints



Transparency | Hornsea Windfarm Trip

On 30th Oct at 11:10, Hornsea Windfarm tripped whilst generating 1200MW

Close to the maximum ROCOF that was being managed at the time

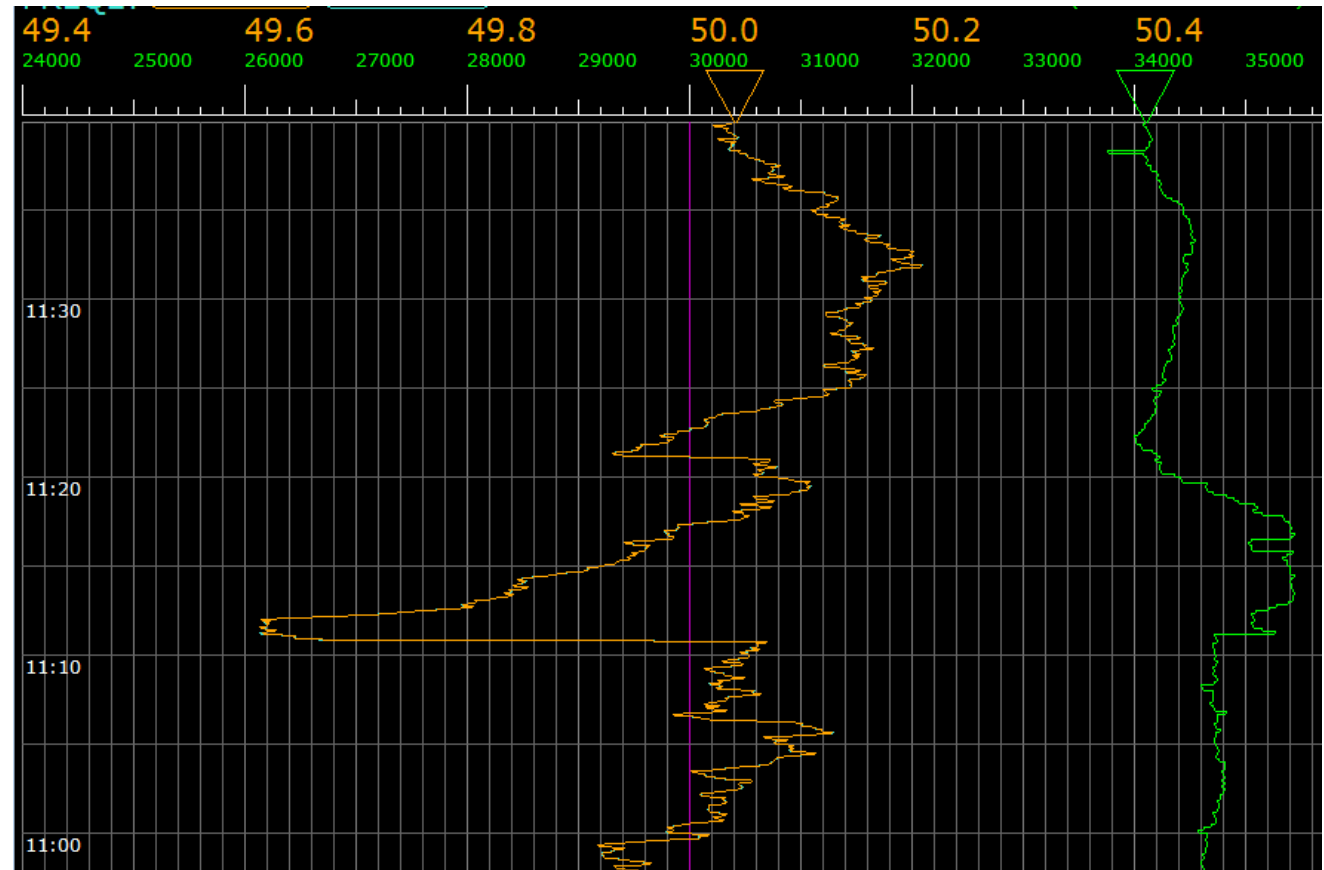
Frequency fell to 49.604Hz

ROCOF measured at 0.123Hz/s

About 1400MW of actions taken to recover the frequency

Frequency back within operational limits within 3 minutes and back to nominal in about 7 minutes

Frequency response and Dynamic Containment delivered in line with expectations



Transparency | Western Link HVDC Trip

Western HVDC Link is a subsea cable that connects the transmission network in Scotland with England and Wales.

It has a transmission capacity of 2,250 MW.

On 25th Oct at 04:41, the link tripped whilst carrying 1950MW North to South

The system frequency dropped from 49.98 to 49.71 Hz and was restored in around 10 seconds to operational limits

Energy flowing on the link at the time of the trip transferred on to the rest of the transmission network, which caused a brief system disturbance

The system disturbance resulted in a loss of embedded generation and hence the drop in system frequency

To re-secure for the next fault, approximately 1500MW of additional wind bids were required

The loss of embedded generation was in line with our expectation for Loss of Mains for this type of event

