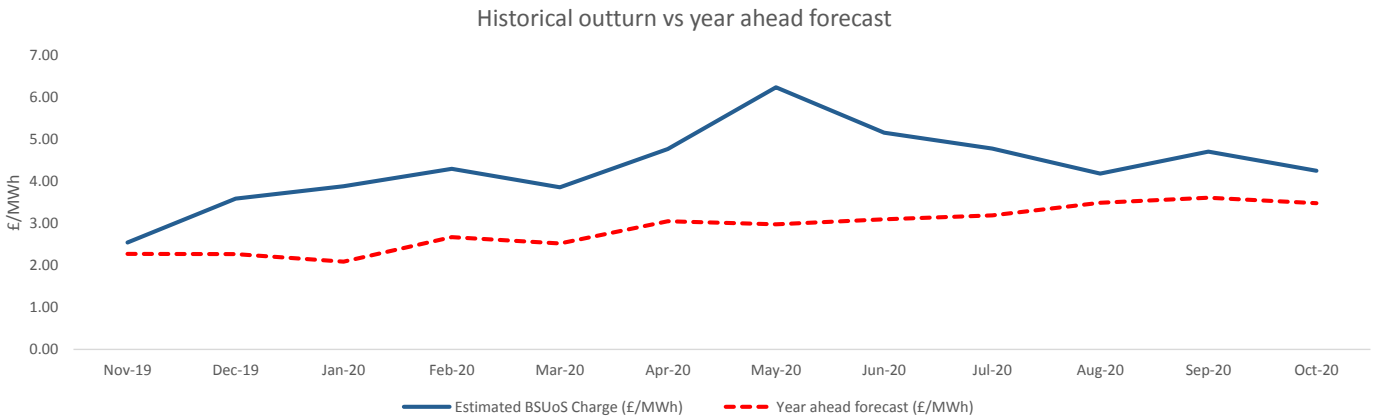
BSUoS Outturn

Average BSUoS charge	£/MWh
Oct-20	4.26
Past 12 months	4.24
2019/20	2.88

Balancing costs were slightly higher in October than September as costs rose in most categories, however this was offset by a reduction in constraint costs as the Sizewell contract ended in September. Due to demand increasing as we moved towards the winter and only a small increase in balancing costs the BSUoS charge was lower in October than September.

The blue line on the chart shows the estimated monthly average BSUoS charge for the past 12 months. The red line shows our forecast for each month, made at year ahead. The table shows a breakdown of the elements that make up the BSUoS charge (including volume), broken down by cost category. The total cost divided by the volume gives the estimated average charge.



Month	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20
Energy Imbalance	6.0	8.8	8.8	10.7	4.4	12.5	12.3	7.6	5.7	6.8	8.5	10.9
Operating Reserve	9.7	12.2	8.5	7.4	5.3	4.9	4.8	3.8	3.1	4.8	8.7	11.1
STOR	3.9	3.9	4.1	3.3	6.0	2.4	3.9	2.9	3.1	2.7	2.3	3.0
Constraints - E&W	20.5	43.7	33.0	21.8	38.3	59.4	67.5	74.6	69.4	41.9	43.1	59.5
Constraints - Cheviot	5.9	10.4	22.7	17.9	22.0	1.5	17.4	0.5	0.5	0.6	10.8	8.0
Constraints - Scotland	6.0	19.0	36.4	57.8	16.9	5.1	3.1	5.7	7.9	13.1	19.0	17.3
Constraints - AS	2.3	2.3	2.1	2.1	0.3	0.6	19.0	13.7	21.8	22.3	17.9	0.7
Negative Reserve	0.1	0.2	0.4	0.3	0.4	0.6	0.6	0.2	0.2	0.5	0.5	0.5
Fast Reserve	8.1	7.7	7.4	8.5	8.9	7.4	7.8	8.7	7.1	8.5	8.6	9.3
Response	14.6	13.9	13.9	12.6	11.2	13.3	8.7	7.0	8.1	7.2	8.3	12.8
Other Reserve	1.3	1.1	1.2	1.8	1.4	1.9	2.6	1.8	2.5	1.9	1.9	1.5
Reactive	4.9	5.4	4.9	3.8	4.5	6.3	5.8	4.8	4.6	4.7	4.0	4.5
Minor Components	3.3	1.6	1.5	1.2	2.5	6.6	5.5	4.0	2.0	2.6	2.0	3.5
Black Start	3.6	4.7	5.3	3.4	9.8	3.5	3.8	3.6	3.4	3.3	8.7	7.1
Total BSUoS	90.1	134.8	150.3	152.6	131.9	125.9	163.0	139.2	139.4	121.0	144.3	149.5
Estimated BSUoS Vol (TWh)	44.9	44.5	45.1	40.2	40.0	30.2	29.1	30.5	33.1	33.4	34.5	39.6
Estimated Internal BSUoS (£m)	24.9	25.7	25.7	23.2	25.7	18.3	18.9	18.3	18.9	18.9	18.3	18.9
ESO Incentive	-3.2	-3.3	-3.3	-3.0	-3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ALoMCP	2.4	2.4	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Estimated BSUoS Charge (£/MWh)	2.55	3.59	3.88	4.30	3.86	4.77	6.24	5.16	4.78	4.19	4.71	4.26
Year ahead forecast (£/MWh)	2.28	2.27	2.09	2.67	2.53	3.05	2.98	3.10	3.19	3.49	3.61	3.48

BSUoS Forecast

nationalgridESO

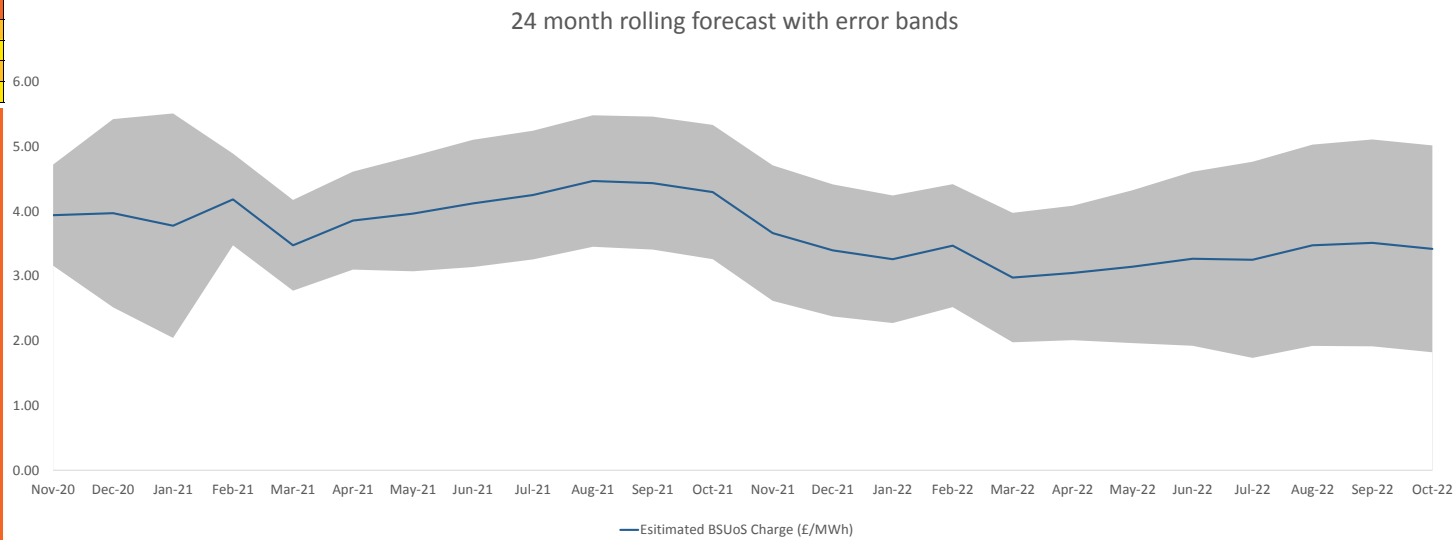
Average BSUoS charge	£/MWh
Nov-20	3.94
2020/21	4.36
2021/22	3.75
Next 12 months	4.02

As we move towards winter and naturally higher demand levels, we don't expect to see the same types of additional costs brought about by managing the system during extremely low demand periods. We are therefore returning to producing a single best view of BSUoS per month.

We have added an additional line to the forecast from Apr 21 to Mar 22 to account for the deferred BSUoS as per CMP345/350.

Accelerated Loss of Mains Change Programme: the cost recovery process for the Accelerated Loss of Mains Change Program has been paused as per the following update from the last TCMF:
With £4m recovery in FY19/20 covering the cost of works completed todate, we'll continue to hold-off charging until costs surpass this level
The forecast charge has been removed until January but this is subject to change based on the progress of the work.

Changes have been made to the ESO incetive scheme element of the BSUoS charge, details can be found in the Ofgem letter: https://www.ofgem.gov.uk/system/files/docs/2019/10/authoritys_consent_new.pdf



Month	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22
Energy Imbalance	9.0	10.0	10.8	11.8	9.0	5.5	7.9	8.2	9.3	8.7	10.1	11.3	10.9	11.1	11.9	12.8	-1.2	5.5	7.9	8.2	9.3	8.7	10.1	11.3
Operating Reserve	10.0	11.1	9.4	9.4	9.2	8.3	9.0	5.8	7.0	8.2	14.1	16.4	16.1	11.9	10.1	12.9	13.2	8.3	9.0	5.8	7.0	8.2	14.1	16.4
STOR	6.0	3.4	3.5	2.8	3.3	5.2	5.6	5.4	6.0	5.8	6.3	6.2	7.4	7.5	7.6	6.5	7.4	5.2	5.6	5.4	6.0	5.8	6.3	6.2
Constraints	96.6	90.1	83.4	84.6	77.3	68.5	70.1	68.8	71.1	80.0	82.7	86.5	82.2	77.1	70.4	72.9	72.2	38.9	39.5	39.2	40.5	49.5	53.1	56.0
Negative Reserve	0.5	0.5	0.6	0.1	0.2	0.4	0.9	1.6	1.8	1.7	1.8	1.2	0.5	0.5	0.6	0.1	0.2	0.4	0.9	1.6	1.8	1.7	1.8	1.2
Fast Reserve	7.9	10.0	10.3	8.7	9.7	9.0	9.0	8.8	9.1	9.6	8.8	9.1	9.4	10.0	10.3	8.7	9.7	9.0	9.0	8.8	9.1	9.6	8.8	9.1
Response	11.1	12.3	12.1	11.4	12.4	11.8	12.6	11.9	12.6	13.1	11.3	11.2	11.2	11.3	11.1	10.5	11.4	11.8	12.6	11.9	12.6	13.1	11.3	11.2
Other Reserve	1.1	0.9	0.9	0.9	1.0	1.1	0.9	1.0	1.2	1.3	1.0	0.9	0.9	0.9	0.9	0.9	1.0	1.1	0.9	1.0	1.2	1.3	1.0	0.9
Reactive	6.2	7.1	7.0	5.7	6.1	6.7	7.5	7.0	6.9	6.8	6.6	6.7	6.5	7.1	7.0	5.7	6.1	6.7	7.5	7.0	6.9	6.8	6.6	6.7
Minor Components	2.4	2.5	1.0	2.3	0.3	3.0	3.0	2.6	2.6	1.5	1.1	2.1	0.6	1.0	-0.6	2.3	0.3	3.0	3.0	2.6	2.6	1.5	1.1	2.1
Black Start	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.9	3.9	3.9	3.9	3.9	3.9
Total BSUoS	154.6	151.7	142.7	141.4	132.4	123.3	130.1	125.1	131.3	140.6	147.5	155.5	149.5	142.2	133.2	137.1	124.2	93.8	99.5	95.5	100.7	110.0	118.0	125.0
Esitmated BSUoS Vol (TWh)	43.9	43.0	44.4	39.3	45.3	38.7	39.5	36.6	37.1	37.4	39.1	42.4	47.9	49.7	49.0	46.6	50.7	38.7	39.5	36.6	37.1	37.4	39.1	42.4
Estimated Internal BSUoS (£m)	18.3	18.9	18.9	17.1	18.9	18.4	19.0	18.4	19.0	19.0	18.4	19.0	18.4	19.0	19.0	17.2	19.0	18.4	19.0	18.4	19.0	19.0	18.4	19.0
ESO Incentive	0.0	0.0	1.5	1.3	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
ALoMCP	0.0	0.0	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	0.0	0.0	0.0	0.0
CMP345/350 Deferred Costs						1.8	1.9	1.8	1.9	1.9	1.8	1.9	1.8	1.9	1.9	1.7	1.9							
Esitimated BSUoS Charge (£/MWh)	3.94	3.97	3.78	4.18	3.48	3.86	3.96	4.12	4.25	4.47	4.44	4.30	3.66	3.40	3.26	3.47	2.98	3.05	3.15	3.27	3.25	3.48	3.51	3.42

High Error Band (£/MWh)	4.72	5.43	5.51	4.89	4.18	4.62	4.86	5.11	5.25	5.49	5.46	5.34	4.71	4.42	4.25	4.42	3.98	4.09	4.33	4.61	4.77	5.03	5.11	5.02
Low Error Band (£/MWh)	3.16	2.52	2.04	3.48	2.77	3.10	3.07	3.14	3.26	3.45	3.41	3.26	2.62	2.38	2.27	2.52	1.98	2.01	1.96	1.92	1.74	1.92	1.91	1.82

BSUoS Volatility and Forecast Accuracy

The first chart shows the volatility of the cost categories that make up BSUoS. Constraint costs shown in red are the most variable and difficult to predict, mainly driven by the output of wind generation combined with the transmission outage plan at the time. A fault on the transmission system can add to the underlying volatility and cause large unforeseen increases in constraint costs. Reserve, shown in yellow, is generally stable but can have large deviations when the cost of generator margin increases significantly when generation is short. Predicting increases in the cost of reserve is difficult at long timescales, and can have a significant impact on the average BSUoS charge. Energy Imbalance is the other category that contributes to BSUoS volatility, which is the cost of residual balancing when the energy market is long or short. The other cost categories are relatively stable across the year, although there may be longer term trends that we consider.

The second chart shows the annual outturn BSUoS charge compared with the forecast made at 12 months ahead, and the absolute percentage error for each year.

The third chart shows the month ahead forecast compared with outturn and absolute percentage error. Month ahead is the month ahead of the reporting month.