BSC OPERATIONS HEADLINE REPORT

1 In this report you will find commentary on BSC market operation, identification of key events and reporting of key data.

2 The Trading Operations Report publishes key market data graphically, giving a performance indicator for the Balancing and Settlement arrangements.

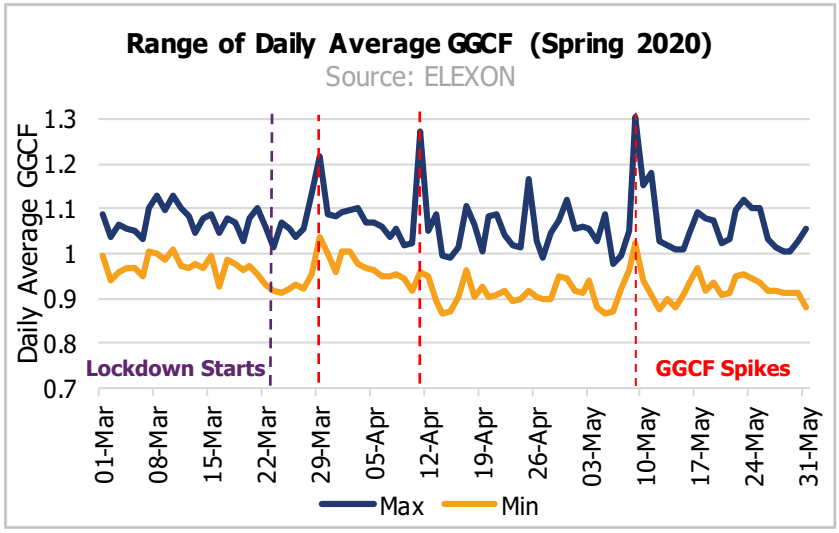
3 Trading Operations Report Data. The graphs and backing data are available in Excel format on the ELEXON website.

GGCFs SPIKES SEEN DURING SPRING 2020

ELEXON monitors changes in the Grid Supply Point Group Correction Factors (GGCFs) in all 14 distribution regions, and examines any significant spikes to ascertain their causes. The graph here shows the lowest and highest daily average GGCFs for 1 March to 31 May 2020.

Since the beginning of the COVID-19 lockdown on 23 March 2020, GGCFs have become more volatile. The standard deviation from the lockdown period was 12% higher than February 2020, with significant spikes occurring on 29 March, 11 April and 9 May.

These GCF changes could be caused by a number of factors, and so cannot solely be attributed to the COVID-19 lockdown. The lockdown started in a period where Load Profiles tend to be less accurate due to the clock change, changing seasons (winter to spring) and Bank Holidays (with two occurring in both April and May).



Spikes that occur in a number of GSPs are usually due to the profiling process, whilst those in single GSPs are usually errors in metered volumes. The spikes on the graph occur on a clock change day (29 March) or Saturdays around bank holidays, days when profiling tends to be less accurate. Days around the changing of the seasons, called "shoulder days", are more difficult to profile as consumer behaviour changes around this time. Electric heating tends to reduce around the clock change as spring approaches, whilst the higher temperatures in April and May this year are also likely to impact profiling and therefore GGCFs.

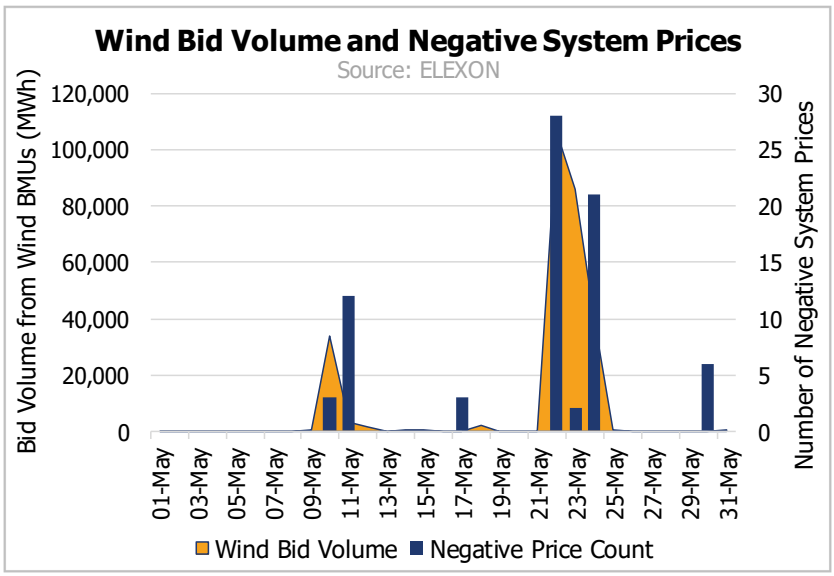
MAY WIND BIDS DRIVE DOWN SYSTEM PRICES

In order to keep the GB Electricity System balanced, the National Electricity Transmission System Operator (NETSO) takes actions to either reduce (Bids) or increase (Offers) the amount of electricity on the System to meet demand. During May 2020, 85% of Bid volume from Wind BMUs occurred on three days: 22, 23 and 24 May.

The largest daily amount of Wind Bid volume, 106,150MWh, occurred on 22 May. This was 12 times greater than the average daily Wind Bid volume (8,829MWh) for the month, and this average includes 10 days where no Bid volume was accepted.

Bids from Wind BMUs are the main contributor of negatively priced Balancing Market (BM) actions, with Wind generation accounting for 70% of negatively priced Bids. The average initial Wind Bid price, before possible repricing for the purposes of calculating the System Price, was -£81.54/MWh across 22, 23 and 24 May 2020.

As these balancing actions filter into the System Price calculation, negative Bids can push down the System Price and cause it to go negative. Even so negative System Prices are still fairly rare, having only occurred in 200 Settlement Periods this year (equivalent to 2.5%).



However from 22 to 24 May, there were 51 negative System Prices, with 28 of these falling on the 22 May - making this the highest number of negative System Prices seen on a single day since the implementation of BSC Modification P305 on 5 November 2015.

BALANCING MECHANISM VOLUMES IN APRIL 2020[1]

The total volume of balancing actions taken in the Balancing Mechanism (BM) for April 2020 was 2,319GWh, a 5% decrease from March 2020. The majority (86%) of balancing volume in April came from Gas BMUs.

Accepted **Bid** volume in April decreased by 25% from last month. 65% of total Bid volume came from Gas BMUs, with 19% coming from Wind, 10% from Pumped Storage BMUs and 3% from Hydroelectric BMUs. Pumped Storage saw a 152% increase from the previous month.

Accepted **Offer** volume in April increased by 9% compared to last month. Gas accounted for 96% of all Offer volume, with Pumped Storage and Biomass BMUs combined responsible for a further 3%. Pumped Storage BMU and Coal BMU Offer volume fell by 68% and 54% respectively, compared to last month.

	Bid Volume (MWh)		Offer Volume (MWh)	
Fuel Type	**Apr-20**	**Mar-20**	**Apr-20**	**Mar-20**
Coal	-4,653	-13,211	6,157	13,349
Gas	-489,791	-656,164	1,501,597	1,327,898
Hydro	-10,140	-39,545	6,256	4,489
OCGT	0	-310	1,591	2,188
Pumped Storage	-75,349	-29,885	21,422	66,740
Wind	-146,094	-254,208	858	1,266
Biomass	-21,827	-6,237	29,737	26,207
Other	-1,693	-1,581	1,675	1,710
Grand Total	-749,547	-1,001,141	1,569,293	1,443,847

SYSTEM PRICES IN MAY 2020[2]

Monthly average System Prices for May 2020 were slightly lower when the market was short (0.2%), but higher when the market was long (28%), compared to April 2020. The average System Price regardless of length was **£23.21/MWh**; the lowest monthly average System Price since BSC Modification P305 was implemented in November 2015.

System Prices did not exceed £100/MWh during May 2020; the second month in a row where prices have remained below £100/MWh. The highest System Price this month, **£59.00/MWh**, occurred in Settlement Periods 3, 4 and 5 on 23 May. The price in Settlement Periods 3 and 4 was set by five balancing actions from a single CCGT BMU, all priced at £59.00/MWh. The price in Settlement Period 5 was set by nine balancing actions from two CCGT BMUs, all priced at £59.00/MWh.

There were 75 negative System Prices in May 2020, compared to 70 in April. This is the highest number of negative prices in a month since BSC Modification P305 was implemented, with 28 negative System Prices occurring on 22 May 2020. The low prices in May also resulted in the lowest average Spring System Price (£25.38/MWh) since BSC Modification P305 was implemented.

	Average (£/MWh)		Average (£/MWh) Peak 07:00-19:00	
Period	**Short System**	**Long System**	**Short System**	**Long System**
May-20	37.10	6.70	37.06	5.78
Apr-20	37.18	5.20	38.61	3.64
Mar-20	52.24	11.27	59.55	10.60
Spring 20	41.47	8.05	44.68	6.87
Winter 19-20	51.85	13.25	55.00	14.85
Autumn 19	55.66	19.04	58.81	21.20
Summer 19	56.81	25.05	60.03	25.20
Spring 19	59.69	28.21	62.63	28.17
May-19	59.16	25.77	63.49	25.56

The lowest System Price, **-£70.49/MWh**, occurred in Settlement Period 12 on 22 May 2020 and was set by four Bids from two Wind BMUs, all priced at -£70.49/MWh. All of these balancing actions received a System Operator Flag, but as they were cheaper than the most expensive unflagged balancing action they were not repriced.

TRADING CHARGES IN APRIL 2020[1]

Gross Party Imbalance cashflows were £70m in April 2020, a decrease of 15% from March 2020. Debits for being short decreased by £4.6m, and credits for being long fell by £7.7m, between March and April 2020.

Gross Party Imbalance Volumes increased by 11% from March to April 2020. Energy Imbalance Volumes for Parties that were long increased by 20% this month, compared to last month, whilst Energy Imbalance Volumes for Parties that were short only decreased by 3,553MWh (0.2%).

April **Offer** volume and cashflow both decreased compared to March, by 9% and 10% respectively. The average price of Offers also decreased, falling by £8.64/MWh to £41.83/MWh this month.

Net **Bid** cashflow in April 2020 was £14.8m, £2.4m lower than last month (£17.3m in March 2020). This means payment received by Parties for negative Bids were once again higher than payments from Parties for positive Bids.

Total Cashflow (£m)	Apr-20	Mar-20	Feb-20	Jan-20
Long Imbalance Charge (Credit)	-30.07	-37.74	-33.00	-38.51
Short Imbalance Charge (Debit)	40.24	44.87	45.75	49.20
RCRC Credit	11.57	9.55	14.33	12.68
RCRC Debit	-1.41	-2.42	-1.58	-2.00
Offer Cashflow	65.64	72.87	77.14	81.42
Bid Cashflow (Positive Bids)	-1.18	-3.83	-3.45	-5.51
Bid Cashflow (Negative Bids)	16.03	21.10	41.06	35.17

[1] Balancing volumes and trading charges appear as per the latest month with Initial Settlement (SF) run data available.
[2] System prices are based on the previous month's latest Initial Settlement (SF) & Interim Information (II) run data available.