BSC Panel 272: November 2017

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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 Operation 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.

SYSTEM PRICES IN OCTOBER[1]

Monthly average System Prices for October were lower when both short (-2.6%) and long (-8.9%) compared to September 2017. The average System Price regardless of length was **£43.60/MWh**, which is 6% lower than in September 2017. In October 2017 the market has been long in 62%, and short in 38% of Settlement Periods.

System Prices **exceeded £100/MWh** 35 times in October 2017 (compared to 47 times in September). In October 2016 there were 100 System Prices above £100/MWh. The 35 System Prices which exceeded £100/MWh occurred across 13 different days.

The highest System Price for October 2017 was **£172.14/MWh**, occurring in Settlement Periods 17, 18 and 19 on 16 October. The System Prices in these Settlement Periods were set by Offers from a single CCGT BMU priced at £172.14/MWh, with volumes greater than the Price Average Reference (PAR) volume.

There were **15 negative** System Prices in October compared to five in September. The lowest System Price was **-£69.17/MWh,** on 29 October in Settlement Period 2. From Settlement Period 1 to Settlement Period 7 on 29 October, there were seven consecutive negative prices. The average System Price in these Settlement Periods was -£53.49/MWh. These prices were set by Bids from Wind, Biomass and Pumped Storage BMUs.

For five Settlement Periods in October the System Price was **£0/MWh.**

	Average (£/MWh)		Average (£/MWh) Peak 07:00-19:00	
Period	**Short System**	**Long System**	**Short System**	**Long System**
Oct-17	67.87	29.42	72.20	30.70
Sep-17	68.89	31.84	73.67	33.67
Aug-17	66.11	27.43	72.60	27.88
Autumn 17	68.43	30.82	72.97	32.49
Summer 17	65.87	25.10	72.67	25.42
Spring 17	69.15	28.58	80.98	28.12
Winter 16/17	82.60	35.93	92.90	37.27
Autumn 16	99.05	28.49	126.25	29.66
Oct-16	90.03	29.29	109.07	30.48

RECORD WIND GENERATION IN OCTOBER

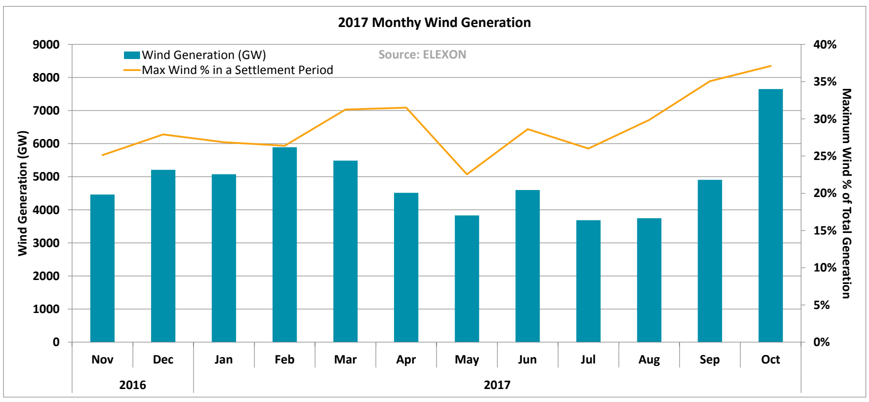
Wind generation in October was not only the highest monthly total in 2017[2], but also the highest monthly total ever. Output totalled 7,650GW in October, or 16.6% of total generation. This was 1,758GW, or 30%, higher than the previous 2017 record of 5,892GW.

October also had the highest wind generation, as a percentage of total generation, in 2017 when it reached 37.1% in Settlement Period 3 on 2 October. Across this month, the average wind generation per Settlement Period was 17.6% compared to an average of 11.3% for the year so far. The four highest daily wind generation totals also occurred in October.

In 2016, December had the highest monthly wind generation (5,208GW), whilst the Settlement Period with the highest wind generation, as a percentage of total generation, was also in December (27.9%).

Up to 29 October, volume from accepted wind Bids totalled 332GWh, representing 25% of Bid volume. The average initial price of an accepted wind Bid in October was -£69.95/MWh.

October's high wind generation is in part due to the strong winds and stormy conditions seen this month, with both the tail end of Hurricane Ophelia and Storm Brian impacting the UK.



[1] System prices are based on the previous month's Interim Information (II) run data. Due to time of publication, II data only available until 29 October 2017.
[2] Wind generation volumes are based on operational metered data, which currently has a total wind capacity of 9.9 GW.

TRADING CHARGES

Gross imbalance cashflows were £324m in August 2017, a 17% increase from £277m in August 2017. Credits for being long, and debits for being short, increased by £22m and £25m respectively between August and September.

Energy Imbalance Volumes for Parties that were long increased by 1%, and decreased by 1% for Parties that were short.

The **Offer** cashflow decreased by 12% in September, with the volume of Offers falling by 10%. The average price per MWh of Offer volume decreased by 2% to £70.48/MWh.

Net **Bid** cashflow decreased compared with August, from £2.2m to -£3.4m in September. Bid cashflow from negative Bids decreased by 30%, but increased by 33% for positive Bids, compared to August.

Total Cash Flow (£m)	Sep-17	Aug-17	Jul-17	Jun-17
Long Imbalance Charge (Credit)	-161.94	-139.61	-39.23	-35.18
Short Imbalance Charge (Debit)	162.27	137.69	37.82	34.31
RCRC Credit	7.68	5.34	5.74	5.66
RCRC Debit	-7.35	-7.26	-7.14	-6.53
Offer Cash Flow	42.00	47.58	41.96	54.04
Bid Cash Flow (Positive Bids)	-10.61	-7.98	-7.61	-7.93
Bid Cash Flow (Negative Bids)	7.15	10.27	7.41	19.38

ENERGY BALANCING VOLUMES[3]

The total volume of balancing actions for September was 1,117GWh, a 6% decrease from August 2017.

Accepted **Bid** volume decreased by 2% from August, with both Wind and Hydro Bid volumes falling (by 29% and 34% respectively). Both Gas and Coal Bids increased, with Gas rising by 7% and Coal Bids by 190%. 62% of total Bid volume came from Gas, with Wind accounting for 19%.

Accepted **Offer** volume decreased by 10% from August, with Pumped Storage and Gas Offers falling (by 36% and 11% respectively) and Gas accounting for 80% of total Offers in September. Coal offers increased by 34% to represented 14% of total Offers in September compared to only 9% in August.

	Bid Volume (MWh)		Offer Volume (MWh)	
Fuel Type	Sep-17	Aug-17	Sep-17	Aug-17
Coal	-31,264	-10,800	81,604	60,911
Gas	-322,783	-302,902	477,816	539,591
Hydro	-19,373	-29,416	3,411	2,191
OCGT	0	0	72	94
Pumped Storage	-44,822	-43,442	32,388	50,603
Wind	-96,255	-134,583	675	298
Biomass	-6,782	-9,386	1	5,793
Other	0	0	0	0
Grand Total	-521,280	-530,528	595,967	659,481

WIND OFFERS ACCEPTED AT £9,999/MWh

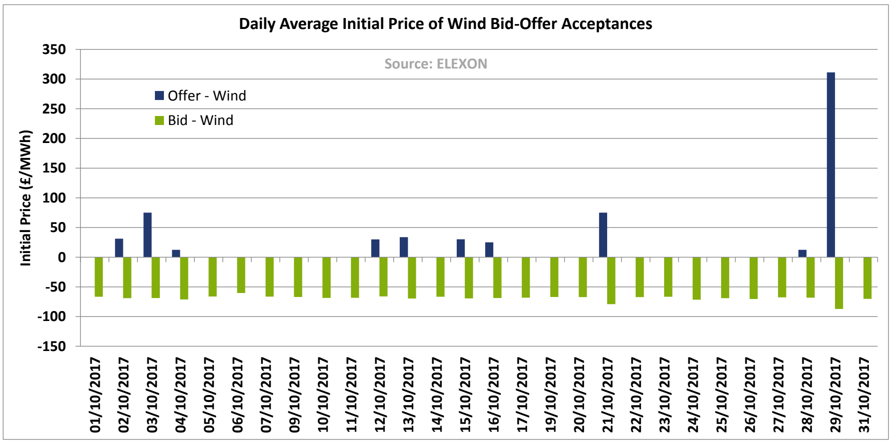
October Bid-Offer Acceptance (BOA) data displayed an unusual spike in the average price of Wind Offers. Wind Offers reached an average of £311.40/MWh on 29 October 2017. This was due to high Offer prices being accepted in Settlement Periods 2 and 3.

In Settlement Period 2, 3MWh of Offer volume was accepted from Wind Balancing Mechanism Unit (BMU) E_ABRTW-1 at £9,999/MWh. The action was Flagged by the System Operator (SO) as a 'system' balancing action rather than 'energy'. In this Settlement Period, the system was also long overall. The System Price was calculated using the Bids, giving a price of -£69.17/MWh, which was the lowest System Price in October.

In Settlement Period 3, a combined 3MWh of Wind Offer volume was accepted at £9,999/MWh from two Wind BMUs (E_ARBTW-1 and T_MILWW-1). An offer was also accepted for Wind BMU T_LCLTW-1 at £999/MWh. These Offers were also Flagged by the SO.

A total of 1,904MWh of Wind Offers were accepted in October 2017. 772MWh, or 40.5%, of Wind Offers for the month were accepted on 29 October.

£9,999/MWh Wind Offer prices were also reported in the July BSC Operations Headline Report. ELEXON has raised this with National Grid for investigation.



[3] Balancing volumes appear as per the latest month with Initial Settlement (SF) run data available.