

LONDON ENERGY BROKERS' ASSOCIATION OTC ENERGY VOLUME REPORT – AUGUST 2016

London Energy Brokers' Association ("LEBA") is the industry association representing the FCA regulated wholesale market brokers in the OTC and exchange traded European energy markets.

CHANGE IN REPORT FORMAT & METHODOLOGY

As of January 2016, LEBA made the following changes to the Monthly Volume Report:

- France PEG and TRS have been separated from the previously combined 'France Hubs' to be reported in their own right.
- Netherlands and Belgian Power have been separated from 'Other Power' and are now reported in their own right.
- globalCOAL NEWC® has been added to the 'European Financial Coal Swaps' section of the report.

Due to these changes and the previously missing or combined volumes, LEBA are unable to provide comparable data for these line items under the 'Month' and 'Year to Date' comparisons and in these cases, have been represented by 'N/A'.

Market	August 2016			2016 Year to Date		
	Total OTC Bilaterally Settled Volume	Total OTC Cleared Volume	Grand Total OTC Volume	Total OTC Bilaterally Settled Volume	Total OTC Cleared Volume	Grand Total OTC Volume
<u>Natural Gas (MWh)</u>						
UK NBP	577,781,492	63,554,736	641,336,228	6,154,391,608	781,579,831	6,935,971,439
<u>European Hubs</u>						
Netherlands TTF	1,210,863,995	79,832,615	1,290,696,610	10,443,760,965	622,248,595	11,066,009,560
Germany NCG	145,693,699	0	145,693,699	1,154,969,457	945,014	1,155,914,471
Germany GasPool	71,845,603	0	71,845,603	669,051,105	43,800	669,094,905
France PEG	22,492,106	10,800	22,502,906	304,188,884	3,711,070	307,899,954
France TRS	3,659,987	0	3,659,987	28,975,565	0	28,975,565
Austria VTP	45,870,340	0	45,870,340	318,603,357	0	318,603,357
Italy PSV	51,364,206	0	51,364,206	585,600,029	2,836,320	588,436,349
Zeebrugge Hub	43,807,785	0	43,807,785	509,902,362	0	509,902,362
Other Gas	36,725,182	0	36,725,182	274,219,658	4,555,480	278,775,138
Total European Gas	1,632,322,903	79,843,415	1,712,166,318	14,289,271,384	634,340,279	14,923,611,663
<u>Power (MWh)</u>						
UK Power	75,107,867	153,590	75,261,457	819,956,482	490,070	820,446,552
<u>European Power</u>						
German Power	223,873,270	57,629,945	281,503,215	2,596,818,462	730,368,661	3,327,187,123
French Power	33,245,470	7,208,502	40,453,972	551,529,424	165,704,720	717,234,144
Nordic Power	0	16,491,666	16,491,666	0	215,177,567	215,177,567
Italian Power	13,469,084	15,994,398	29,463,482	185,300,942	195,138,027	380,438,969
Spanish Power	3,434,415	3,382,115	6,816,530	50,634,619	50,705,732	101,340,351
Netherlands Power	8,091,017	2,519,109	10,610,126	116,174,113	21,291,000	137,465,113
Belgian Power	1,580,618	459,635	2,040,253	25,262,837	3,726,281	28,989,118
Central & Eastern Europe	29,363,894	87,600	29,451,494	259,104,648	1,006,405	260,111,053
Other Power	13,185,940	703,270	13,889,210	159,041,112	8,106,191	167,147,303
Total European Power	326,243,708	104,476,240	430,719,948	3,943,866,157	1,391,224,584	5,335,090,741
<u>European Financial Coal Swaps (MT)</u>						
API 2 Rotterdam	60,000	116,362,000	116,422,000	19,890,000	1,562,691,800	1,582,581,800
API 4 Richards Bay	0	12,452,000	12,452,000	8,015,000	175,574,500	183,589,500
globalCOAL NEWC®	4,785,000	22,129,000	26,914,000	24,613,000	167,304,000	191,917,000
Total European Financial Coal	4,845,000	150,943,000	155,788,000	52,518,000	1,905,570,300	1,958,088,300
<u>European Carbon Emission Allowances (MT)</u>						
EUA	21,476,000	59,188,000	80,664,000	229,867,000	810,803,884	1,040,670,884
CER	0	0	0	565,508	13,428,224	13,993,732
Other Emissions	3,604,350	0	3,604,350	15,691,350	0	15,691,350
Total European Carbon Emission	25,080,350	59,188,000	84,268,350	246,123,858	824,232,108	1,070,355,966

2015 and 2016 “Month” and “Year to Date” comparisons.

	Grand Total OTC Volume			Grand Total OTC Volume		
	August 2015	August 2016	% Change	Year to Date 2015	Year to Date 2016	% Change
<u>Natural Gas (MWh)</u>						
UK NBP	655,990,999	641,336,228	-2.23%	6,852,255,332	6,935,971,439	1.22%
<u>European Hubs</u>						
Netherlands TTF	976,337,696	1,290,696,610	32.20%	9,134,760,535	11,066,009,560	21.14%
Germany NCG	128,373,989	145,693,699	13.49%	1,059,736,120	1,155,914,471	9.08%
Germany GasPool	61,239,702	71,845,603	17.32%	585,343,132	669,094,905	14.31%
France PEG	N/A	22,502,906	N/A	N/A	307,899,954	N/A
France TRS	N/A	3,659,987	N/A	N/A	28,975,565	N/A
Austria VTP	33,828,600	45,870,340	35.60%	213,556,306	318,603,357	49.19%
Italy PSV	58,103,410	51,364,206	-11.60%	474,779,132	588,436,349	23.94%
Zeebrugge Hub	50,466,275	43,807,785	-13.19%	574,453,299	509,902,362	-11.24%
Other Gas	46,630,278	36,725,182	-21.24%	278,660,972	278,775,138	0.04%
Total European Gas	1,395,108,057	1,712,166,318	22.73%	12,616,420,508	14,923,611,663	18.29%
<u>Power (MWh)</u>						
UK Power	64,526,030	75,261,457	16.64%	635,664,497	820,446,552	29.07%
<u>European Power</u>						
German Power	288,477,150	281,503,215	-2.42%	2,930,218,030	3,327,187,123	13.55%
French Power	63,810,151	40,453,972	-36.60%	682,090,251	717,234,144	5.15%
Nordic Power	26,928,093	16,491,666	-38.76%	171,429,308	215,177,567	25.52%
Italian Power	33,086,296	29,463,482	-10.95%	413,901,001	380,438,969	-8.08%
Spanish Power	6,785,414	6,816,530	0.46%	78,064,010	101,340,351	29.82%
Netherlands Power	N/A	10,610,126	N/A	N/A	137,465,113	N/A
Belgian Power	N/A	2,040,253	N/A	N/A	28,989,118	N/A
Central & Eastern Europe	24,747,575	29,451,494	19.01%	202,292,101	260,111,053	28.58%
Other Power	N/A	13,889,210	N/A	N/A	167,147,303	N/A
Total European Power	468,776,028	430,719,948	-8.12%	4,736,385,541	5,335,090,741	12.64%
<u>European Financial Coal Swaps (MT)</u>						
API 2 Rotterdam	275,106,000	116,422,000	-57.68%	1,677,081,632	1,582,581,800	-5.63%
API 4 Richards Bay	15,357,000	12,452,000	-18.92%	185,320,500	183,589,500	-0.93%
globalCOAL NEWC®	N/A	26,914,000	N/A	N/A	191,917,000	N/A
Total European Financial Coal	N/A	155,788,000	N/A	N/A	1,958,088,300	N/A
<u>European Carbon Emission Allowances (MT)</u>						
EUA	52,422,000	80,664,000	53.87%	779,133,123	1,040,670,884	33.57%
CER	367,000	0	-100.00%	11,803,014	13,993,732	18.56%
Other Emissions	0	3,604,350	N/A	3,590,000	15,691,350	337.08%
Total European Carbon Emiss	52,789,000	84,268,350	59.63%	794,526,137	1,070,355,966	34.72%

* Nb. The 2015 Month and Year to Date volumes for ‘Total European Gas’ and ‘Total European Power’ will not equal the sum of the individual items. This is due to the reporting changes as reflected on Page 1. The month and year % Change of the Total Volumes still represents valid comparisons.

	YTD Total OTC Market Volume Change 1 year	Proportion Cleared OTC August 2016	Proportion Cleared OTC August 2015	Average Price August 2016	Price Change 1 Month	Price Change 1 Year	Historical Volatility 1 Month
Natural Gas (MWh)							
UK NBP	+ 1 %	9.91%	16.04%				
Netherlands TTF	+ 21 %	6.19%	9.77%	Benchmark LEBA TTF Day Ahead 12.01 €/MWh			
Germany NCG	+ 9 %	0.00%	0.03%				
Germany GasPool	+ 14 %	0.00%	0.00%				
France PEG	N/A	0.05%	N/A				
France TRS	N/A	0.00%	N/A				
Austria VTP	+ 49 %	0.00%	0.00%				
Italy PSV	+ 24 %	0.00%	0.00%				
Zeebrugge Hub	- 11 %	0.00%	0.00%				
Other Gas	+ 0 %	0.00%	0.00%				
Total European Gas	+ 18 %	4.66%	6.99%			- 16 %	- 40 %
Power (MWh)							
UK Power	+ 29 %	0.20%	0.23%		- 22 %	- 20 %	113%
German Power	+ 14 %	20.47%	19.71%	Benchmark LEBA UK Day Ahead 36.35 £/MWh			
French Power	+ 5 %	17.82%	19.16%				
Nordic Power	+ 26 %	100.00%	100.00%				
Italian Power	- 8 %	54.29%	28.74%				
Spanish Power	+ 30 %	49.62%	34.67%				
Netherlands Power	N/A	23.74%	N/A				
Belgian Power	N/A	22.53%	N/A				
Central & Eastern Europe	+ 29 %	0.30%	0.17%				
Other Power	N/A	5.06%	N/A				
Total European Power	+ 13 %	24.26%	23.46%				
European Financial Coal Swaps (MT)							
API 2 Rotterdam	- 6 %	99.95%	99.52%	Price Benchmark LEBA API 2 Front Month 60.6 US\$/MT			
API 4 Richards Bay	- 1 %	100.00%	99.54%				
globalCOAL NEWC®	N/A	82.22%	N/A				
Total Coal	N/A	96.89%	99.52%		- 1 %	+ 10 %	35%
European Carbon Emission Allowances (MT)							
EUA	+ 34 %	73.38%	98.66%	Price Benchmark LEBA EUA Spot Average 4.69 €/MT			
CER	+ 19 %	N/A	66.76%				
Other Emissions	+ 337 %	0.00%	N/A				
Total Emissions	+ 35 %	70.24%	98.44%		+ 2 %	- 45 %	46%

Notes:

1. Price Change - 1 Month: calculated using the percentage change from the previous month
2. Price Change - 1 year: calculated using the percentage change from the previous year
3. Historical Volatility - 1 month: calculated by taking the annualised standard deviation of daily logarithmic returns over the last month.
4. N/A - no comparable data due to change in methodology

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NOTES TO EDITORS:

LEBA, the London Energy Brokers' Association, is the industry association representing the FCA regulated wholesale market brokers in the over the counter (OTC) and the exchange traded liberalised European energy markets. These brokers intermediate and facilitate bilateral contracts to be concluded between banks, trading houses, commercial enterprises, public utilities and integrated energy businesses, providing liquidity and price discovery to these markets as well as contributing significant liquidity to European exchange traded markets.

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