

## LONDON ENERGY BROKERS' ASSOCIATION OTC ENERGY VOLUME REPORT – MAY 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	May 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
<b><u>Natural Gas (MWh)</u></b>						
<b>UK NBP</b>	<b>851,918,273</b>	<b>91,287,919</b>	<b>943,206,191</b>	<b>4,141,233,240</b>	<b>547,908,876</b>	<b>4,689,142,116</b>
<b><u>European Hubs</u></b>						
Netherlands TTF	1,193,985,277	72,903,242	1,266,888,519	6,712,728,324	414,773,021	7,127,501,345
Germany NCG	108,983,468	0	108,983,468	769,495,432	48,494	769,543,926
Germany GasPool	68,868,183	0	68,868,183	423,359,419	43,800	423,403,219
France PEG	31,337,414	1,138,560	32,475,974	219,068,655	2,599,870	221,668,525
France TRS	2,325,027	0	2,325,027	19,414,697	0	19,414,697
Austria VTP	31,456,226	0	31,456,226	191,742,721	0	191,742,721
Italy PSV	79,524,504	750,720	80,275,224	420,576,431	1,184,160	421,760,591
Zeebrugge Hub	60,095,199	0	60,095,199	317,808,794	0	317,808,794
Other Gas	26,852,331	621,120	27,473,451	177,081,525	1,604,680	178,686,205
<b>Total European Gas</b>	<b>1,603,427,629</b>	<b>75,413,642</b>	<b>1,678,841,271</b>	<b>9,251,275,998</b>	<b>420,254,025</b>	<b>9,671,530,023</b>
<b><u>Power (MWh)</u></b>						
<b>UK Power</b>	<b>102,104,532</b>	<b>0</b>	<b>102,104,532</b>	<b>566,379,164</b>	<b>336,480</b>	<b>566,715,644</b>
<b><u>European Power</u></b>						
German Power	288,707,154	82,192,630	370,899,784	1,650,688,640	489,542,865	2,140,231,505
French Power	65,283,163	20,392,779	85,675,942	406,510,357	126,162,538	532,672,895
Nordic Power	0	33,143,562	33,143,562	0	151,291,149	151,291,149
Italian Power	22,270,998	27,319,251	49,590,249	134,869,412	140,863,888	275,733,300
Spanish Power	7,367,915	5,468,755	12,836,670	37,848,939	34,206,986	72,055,925
Netherlands Power	14,899,963	1,117,090	16,017,053	78,176,572	12,349,119	90,525,691
Belgian Power	1,351,122	474,720	1,825,842	18,617,440	2,422,631	21,040,071
Central & Eastern Europe	25,987,837	87,600	26,075,437	169,811,216	644,245	170,455,461
Other Power	15,004,685	882,320	15,887,005	106,481,456	5,827,976	112,309,432
<b>Total European Power</b>	<b>440,872,837</b>	<b>171,078,707</b>	<b>611,951,544</b>	<b>2,603,004,032</b>	<b>963,311,397</b>	<b>3,566,315,429</b>
<b><u>European Financial Coal Swaps (MT)</u></b>						
API 2 Rotterdam	3,095,000	172,993,000	176,088,000	7,755,000	1,096,222,800	1,103,977,800
API 4 Richards Bay	1,120,000	12,467,000	13,587,000	7,515,000	133,633,000	141,148,000
globalCOAL NEWC®	3,410,000	15,602,000	19,012,000	10,980,000	115,675,500	126,655,500
<b>Total European Financial Coal</b>	<b>7,625,000</b>	<b>201,062,000</b>	<b>208,687,000</b>	<b>26,250,000</b>	<b>1,345,531,300</b>	<b>1,371,781,300</b>
<b><u>European Carbon Emission Allowances (MT)</u></b>						
EUA	37,706,000	89,438,000	127,144,000	128,634,000	454,746,884	583,380,884
CER	0	3,032,112	3,032,112	100,000	7,854,112	7,954,112
Other Emissions	50,000	0	50,000	12,087,000	0	12,087,000
<b>Total European Carbon Emissi</b>	<b>37,756,000</b>	<b>92,470,112</b>	<b>130,226,112</b>	<b>140,821,000</b>	<b>462,600,996</b>	<b>603,421,996</b>

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

	Grand Total OTC Volume			Grand Total OTC Volume		
	May 2015	May 2016	% Change	Year to Date 2015	Year to Date 2016	% Change
<b><u>Natural Gas (MWh)</u></b>						
<b>UK NBP</b>	<b>673,523,106</b>	<b>943,206,191</b>	<b>40.04%</b>	<b>4,669,227,564</b>	<b>4,689,142,116</b>	<b>0.43%</b>
<b><u>European Hubs</u></b>						
Netherlands TTF	798,601,730	1,266,888,519	58.64%	6,017,615,244	7,127,501,345	18.44%
Germany NCG	95,174,681	108,983,468	14.51%	695,656,468	769,543,926	10.62%
Germany GasPool	44,262,680	68,868,183	55.59%	380,936,897	423,403,219	11.15%
France PEG	N/A	32,475,974	N/A	N/A	221,668,525	N/A
France TRS	N/A	2,325,027	N/A	N/A	19,414,697	N/A
Austria VTP	17,978,311	31,456,226	74.97%	122,034,249	191,742,721	57.12%
Italy PSV	52,875,480	80,275,224	51.82%	287,851,636	421,760,591	46.52%
Zeebrugge Hub	64,655,189	60,095,199	-7.05%	404,874,839	317,808,794	-21.50%
Other Gas	26,531,983	27,473,451	3.55%	144,915,378	178,686,205	23.30%
<b>Total European Gas</b>	<b>1,122,556,135</b>	<b>1,678,841,271</b>	<b>49.56%</b>	<b>8,248,200,477</b>	<b>9,671,530,023</b>	<b>17.26%</b>
<b><u>Power (MWh)</u></b>						
<b>UK Power</b>	<b>53,421,940</b>	<b>102,104,532</b>	<b>91.13%</b>	<b>420,450,032</b>	<b>566,715,644</b>	<b>34.79%</b>
<b><u>European Power</u></b>						
German Power	276,976,277	370,899,784	33.91%	1,982,742,183	2,140,231,505	7.94%
French Power	70,585,739	85,675,942	21.38%	458,321,844	532,672,895	16.22%
Nordic Power	23,255,478	33,143,562	42.52%	104,103,512	151,291,149	45.33%
Italian Power	31,967,680	49,590,249	55.13%	281,232,567	275,733,300	-1.96%
Spanish Power	6,765,791	12,836,670	89.73%	55,938,933	72,055,925	28.81%
Netherlands Power	N/A	16,017,053	N/A	N/A	90,525,691	N/A
Belgian Power	N/A	1,825,842	N/A	N/A	21,040,071	N/A
Central & Eastern Europe	24,407,393	26,075,437	6.83%	115,449,760	170,455,461	47.64%
Other Power	N/A	15,887,005	N/A	N/A	112,309,432	N/A
<b>Total European Power</b>	<b>464,324,057</b>	<b>611,951,544</b>	<b>31.79%</b>	<b>3,173,048,586</b>	<b>3,566,315,429</b>	<b>12.39%</b>
<b><u>European Financial Coal Swaps (MT)</u></b>						
API 2 Rotterdam	130,804,000	176,088,000	34.62%	1,030,450,600	1,103,977,800	7.14%
API 4 Richards Bay	22,753,000	13,587,000	-40.28%	115,906,500	141,148,000	21.78%
globalCOAL NEWC®	N/A	19,012,000	N/A	N/A	126,655,500	N/A
<b>Total European Financial Coal</b>	<b>N/A</b>	<b>208,687,000</b>	<b>N/A</b>	<b>N/A</b>	<b>1,371,781,300</b>	<b>N/A</b>
<b><u>European Carbon Emission Allowances (MT)</u></b>						
EUA	71,792,050	127,144,000	77.10%	458,614,050	583,380,884	27.21%
CER	1,581,014	3,032,112	91.78%	8,592,014	7,954,112	-7.42%
Other Emissions	1,600,000	50,000	-96.88%	3,590,000	12,087,000	236.69%
<b>Total European Carbon Emiss</b>	<b>74,973,064</b>	<b>130,226,112</b>	<b>73.70%</b>	<b>470,796,064</b>	<b>603,421,996</b>	<b>28.17%</b>

\* 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 May 2016	Proportion Cleared OTC May 2015	Average Price May 2016	Price Change 1 Month	Price Change 1 Year	Historical Volatility 1 Month
<b>Natural Gas (MWh)</b>							
<b>UK NBP</b>	<b>+ 0 %</b>	<b>9.68%</b>	<b>15.39%</b>				
Netherlands TTF	+ 18 %	5.75%	7.57%	<b>Benchmark LEBA TTF Day Ahead 13.01 €/MWh</b>			
Germany NCG	+ 11 %	0.00%	0.14%				
Germany GasPool	+ 11 %	0.00%	0.00%				
France PEG	N/A	3.51%	N/A				
France TRS	N/A	0.00%	N/A				
Austria VTP	+ 57 %	0.00%	0.00%				
Italy PSV	+ 47 %	0.94%	0.00%				
Zeebrugge Hub	- 22 %	0.00%	0.00%				
Other Gas	+ 23 %	2.26%	0.08%				
<b>Total European Gas</b>	<b>+ 17 %</b>	<b>4.49%</b>	<b>5.43%</b>			<b>+ 17 %</b>	<b>- 31 %</b>
<b>Power (MWh)</b>							
<b>UK Power</b>	<b>+ 35 %</b>	<b>0.00%</b>	<b>3.02%</b>		<b>+ 3 %</b>	<b>- 16 %</b>	<b>83%</b>
German Power	+ 8 %	22.16%	19.52%	<b>Benchmark LEBA UK Day Ahead 34.63 £/MWh</b>			
French Power	+ 16 %	23.80%	19.58%				
Nordic Power	+ 45 %	100.00%	100.00%				
Italian Power	- 2 %	55.09%	44.60%				
Spanish Power	+ 29 %	42.60%	36.12%				
Netherlands Power	N/A	6.97%	N/A				
Belgian Power	N/A	26.00%	N/A				
Central & Eastern Europe	+ 48 %	0.34%	0.09%				
Other Power	N/A	5.55%	N/A				
<b>Total European Power</b>	<b>+ 12 %</b>	<b>27.96%</b>	<b>23.70%</b>				
<b>European Financial Coal Swaps (MT)</b>							
API 2 Rotterdam	+ 7 %	98.24%	99.85%	<b>Price Benchmark LEBA API 2 Front Month 47.74 US\$/MT</b>			
API 4 Richards Bay	+ 22 %	91.76%	98.81%				
globalCOAL NEWC®	N/A	82.06%	N/A				
<b>Total Coal</b>	<b>N/A</b>	<b>96.35%</b>	<b>99.70%</b>		<b>+ 12 %</b>	<b>- 13 %</b>	<b>23%</b>
<b>European Carbon Emission Allowances (MT)</b>							
EUA	+ 27 %	70.34%	99.51%	<b>Price Benchmark LEBA EUA Spot Average 5.95 €/MT</b>			
CER	- 7 %	100.00%	100.00%				
Other Emissions	+ 237 %	N/A	0.00%				
<b>Total Emissions</b>	<b>+ 28 %</b>	<b>71.01%</b>	<b>97.40%</b>		<b>+ 2 %</b>	<b>- 17 %</b>	<b>41%</b>

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.

The LEBA member firms that currently operate in the European gas, power, coal and emissions markets are:

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