

LONDON ENERGY BROKERS' ASSOCIATION OTC ENERGY VOLUME REPORT – SEPTEMBER 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	September 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	750,404,766	70,215,746	820,620,512	6,904,796,374	851,795,577	7,756,591,951
<u>European Hubs</u>						
Netherlands TTF	1,458,337,840	73,139,689	1,531,477,529	11,902,098,805	695,388,284	12,597,487,089
Germany NCG	147,241,762	0	147,241,762	1,302,211,219	945,014	1,303,156,233
Germany GasPool	96,442,487	223,500	96,665,987	765,493,592	267,300	765,760,892
France PEG	33,513,420	463,200	33,976,620	337,702,304	4,174,270	341,876,574
France TRS	7,454,688	0	7,454,688	36,430,253	0	36,430,253
Austria VTP	53,205,026	0	53,205,026	371,808,383	0	371,808,383
Italy PSV	81,484,336	1,117,440	82,601,776	667,084,365	3,953,760	671,038,125
Zeebrugge Hub	59,078,929	0	59,078,929	568,981,292	0	568,981,292
Other Gas	33,204,200	1,095,360	34,299,560	307,423,858	5,650,840	313,074,698
Total European Gas	1,969,962,688	76,039,189	2,046,001,877	16,259,234,072	710,379,468	16,969,613,540
<u>Power (MWh)</u>						
UK Power	136,572,511	61,560	136,634,071	956,528,993	551,630	957,080,623
<u>European Power</u>						
German Power	395,097,919	112,935,460	508,033,379	2,991,916,381	843,304,121	3,835,220,502
French Power	71,832,402	24,861,401	96,693,803	623,361,826	190,566,121	813,927,947
Nordic Power	0	30,903,677	30,903,677	0	246,081,244	246,081,244
Italian Power	25,473,182	31,439,630	56,912,812	210,774,124	226,577,657	437,351,781
Spanish Power	6,401,355	7,947,019	14,348,374	57,035,974	58,652,751	115,688,725
Netherlands Power	15,162,091	3,683,311	18,845,402	131,336,204	24,974,311	156,310,515
Belgian Power	4,803,690	1,025,407	5,829,097	30,066,527	4,751,688	34,818,215
Central & Eastern Europe	40,828,159	73,695	40,901,854	299,932,807	1,080,100	301,012,907
Other Power	21,031,834	1,368,095	22,399,929	180,072,946	9,474,286	189,547,232
Total European Power	580,630,632	214,237,695	794,868,327	4,524,496,789	1,605,462,279	6,129,959,068
<u>European Financial Coal Swaps (MT)</u>						
API 2 Rotterdam	75,000	153,677,000	153,752,000	19,965,000	1,716,368,800	1,736,333,800
API 4 Richards Bay	15,000	12,079,000	12,094,000	8,030,000	187,653,500	195,683,500
globalCOAL NEWC®	12,100,000	43,604,000	55,704,000	36,713,000	210,908,000	247,621,000
Total European Financial Coal	12,190,000	209,360,000	221,550,000	64,708,000	2,114,930,300	2,179,638,300
<u>European Carbon Emission Allowances (MT)</u>						
EUA	23,896,000	74,000,000	97,896,000	253,763,000	884,803,884	1,138,566,884
CER	1,731,584	2,050,000	3,781,584	2,297,092	15,478,224	17,775,316
Other Emissions	0	0	0	15,691,350	0	15,691,350
Total European Carbon Emissi	25,627,584	76,050,000	101,677,584	271,751,442	900,282,108	1,172,033,550

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

	Grand Total OTC Volume			Grand Total OTC Volume		
	September	September	%	Year to Date	Year to Date	%
	2015	2016	Change	2015	2016	Change
<u>Natural Gas (MWh)</u>						
UK NBP	756,651,766	820,620,512	8.45%	7,608,907,098	7,756,591,951	1.94%
<u>European Hubs</u>						
Netherlands TTF	1,045,270,271	1,531,477,529	46.51%	10,180,030,805	12,597,487,089	23.75%
Germany NCG	121,339,389	147,241,762	21.35%	1,181,075,509	1,303,156,233	10.34%
Germany GasPool	51,880,631	96,665,987	86.32%	637,223,763	765,760,892	20.17%
France PEG	N/A	33,976,620	N/A	N/A	341,876,574	N/A
France TRS	N/A	7,454,688	N/A	N/A	36,430,253	N/A
Austria VTP	27,301,916	53,205,026	94.88%	240,858,222	371,808,383	54.37%
Italy PSV	54,938,112	82,601,776	50.35%	529,717,244	671,038,125	26.68%
Zeebrugge Hub	78,457,364	59,078,929	-24.70%	652,910,663	568,981,292	-12.85%
Other Gas	33,405,976	34,299,560	2.67%	312,066,948	313,074,698	0.32%
Total European Gas	1,445,730,083	2,046,001,877	41.52%	14,062,150,591	16,969,613,540	20.68%
<u>Power (MWh)</u>						
UK Power	83,300,540	136,634,071	64.03%	718,965,037	957,080,623	33.12%
<u>European Power</u>						
German Power	405,444,235	508,033,379	25.30%	3,335,662,265	3,835,220,502	14.98%
French Power	107,889,559	96,693,803	-10.38%	789,979,810	813,927,947	3.03%
Nordic Power	37,146,541	30,903,677	-16.81%	208,575,849	246,081,244	17.98%
Italian Power	66,534,466	56,912,812	-14.46%	480,435,467	437,351,781	-8.97%
Spanish Power	10,489,969	14,348,374	36.78%	88,553,979	115,688,725	30.64%
Netherlands Power	N/A	18,845,402	N/A	N/A	156,310,515	N/A
Belgian Power	N/A	5,829,097	N/A	N/A	34,818,215	N/A
Central & Eastern Europe	39,778,662	40,901,854	2.82%	242,070,763	301,012,907	24.35%
Other Power	N/A	22,399,929	N/A	N/A	189,547,232	N/A
Total European Power	703,873,559	794,868,327	12.93%	5,440,259,100	6,129,959,068	12.68%
<u>European Financial Coal Swaps (MT)</u>						
API 2 Rotterdam	328,516,032	153,752,000	-53.20%	2,005,597,664	1,736,333,800	-13.43%
API 4 Richards Bay	32,025,000	12,094,000	-62.24%	217,345,500	195,683,500	-9.97%
globalCOAL NEWC®	N/A	55,704,000	N/A	N/A	247,621,000	N/A
Total European Financial Coal	N/A	221,550,000	N/A	N/A	2,179,638,300	N/A
<u>European Carbon Emission Allowances (MT)</u>						
EUA	112,856,000	97,896,000	-13.26%	891,989,123	1,138,566,884	27.64%
CER	4,669,000	3,781,584	-19.01%	16,472,014	17,775,316	7.91%
Other Emissions	0	0	0.00%	3,590,000	15,691,350	337.08%
Total European Carbon Emiss	117,525,000	101,677,584	-13.48%	912,051,137	1,172,033,550	28.51%

* 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 September 2016	Proportion Cleared OTC September 2015	Average Price September 2016	Price Change 1 Month	Price Change 1 Year	Historical Volatility 1 Month
Natural Gas (MWh)							
UK NBP	+ 2 %	8.56%	14.68%				
Netherlands TTF	+ 24 %	4.78%	8.81%	Benchmark LEBA TTF Day Ahead 12.2 €/MWh			
Germany NCG	+ 10 %	0.00%	0.00%				
Germany GasPool	+ 20 %	0.23%	0.00%				
France PEG	N/A	1.36%	N/A				
France TRS	N/A	0.00%	N/A				
Austria VTP	+ 54 %	0.00%	0.00%				
Italy PSV	+ 27 %	1.35%	0.00%				
Zeebrugge Hub	- 13 %	0.00%	0.00%				
Other Gas	+ 0 %	3.19%	0.00%				
Total European Gas	+ 21 %	3.72%	6.41%			+ 15 %	- 28 %
Power (MWh)							
UK Power	+ 33 %	0.05%	1.50%		+ 88 %	+ 39 %	814%
German Power	+ 15 %	22.23%	19.34%	Benchmark LEBA UK Day Ahead 52.38 £/MWh			
French Power	+ 3 %	25.71%	19.19%				
Nordic Power	+ 18 %	100.00%	100.00%				
Italian Power	- 9 %	55.24%	37.67%				
Spanish Power	+ 31 %	55.39%	40.55%				
Netherlands Power	N/A	19.54%	N/A				
Belgian Power	N/A	17.59%	N/A				
Central & Eastern Europe	+ 24 %	0.18%	0.12%				
Other Power	N/A	6.11%	N/A				
Total European Power	+ 13 %	26.95%	23.65%				
European Financial Coal Swaps (MT)							
API 2 Rotterdam	- 13 %	99.95%	98.21%	Price Benchmark LEBA API 2 Front Month 61.48 US\$/MT			
API 4 Richards Bay	- 10 %	99.88%	98.05%				
globalCOAL NEWC®	N/A	78.28%	N/A				
Total Coal	N/A	94.50%	98.19%		+ 2 %	+ 22 %	10%
European Carbon Emission Allowances (MT)							
EUA	+ 28 %	75.59%	100.00%	Price Benchmark LEBA EUA Spot Average 4.31 €/MT			
CER	+ 8 %	54.21%	85.24%				
Other Emissions	+ 337 %	N/A	N/A				
Total Emissions	+ 29 %	74.80%	99.41%		+ 13 %	- 39 %	58%

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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