

LONDON ENERGY BROKERS' ASSOCIATION OTC ENERGY VOLUME REPORT – OCTOBER 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	October 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	643,381,991	62,995,795	706,377,787	7,548,178,366	914,791,372	8,462,969,738
<u>European Hubs</u>						
Netherlands TTF	1,426,715,278	72,402,026	1,499,117,304	13,328,814,083	767,790,310	14,096,604,393
Germany NCG	143,084,247	0	143,084,247	1,445,295,466	945,014	1,446,240,480
Germany GasPool	82,749,432	136,800	82,886,232	848,243,024	404,100	848,647,124
France PEG	26,998,206	0	26,998,206	364,700,510	4,174,270	368,874,780
France TRS	5,220,140	0	5,220,140	41,650,393	0	41,650,393
Austria VTP	46,820,673	0	46,820,673	418,629,056	0	418,629,056
Italy PSV	67,601,875	249,480	67,851,355	734,686,240	4,203,240	738,889,480
Zeebrugge Hub	67,843,544	0	67,843,544	636,824,835	0	636,824,835
Other Gas	39,805,693	1,247,880	41,053,573	347,229,551	6,898,720	354,128,271
Total European Gas	1,906,839,087	74,036,186	1,980,875,273	18,166,073,159	784,415,654	18,950,488,813
<u>Power (MWh)</u>						
UK Power	143,831,525	18,720	143,850,245	1,100,360,518	570,350	1,100,930,868
<u>European Power</u>						
German Power	486,427,598	113,978,768	600,406,366	3,478,343,979	957,282,889	4,435,626,868
French Power	127,740,997	27,344,498	155,085,495	751,102,823	217,910,619	969,013,442
Nordic Power	0	25,037,704	25,037,704	0	271,118,948	271,118,948
Italian Power	25,195,263	26,338,803	51,534,066	235,969,387	252,916,460	488,885,847
Spanish Power	7,418,317	14,098,799	21,517,116	64,454,291	72,751,550	137,205,841
Netherlands Power	14,072,195	5,343,161	19,415,356	145,408,399	30,317,472	175,725,871
Belgian Power	3,589,593	238,440	3,828,033	33,656,120	4,990,128	38,646,248
Central & Eastern Europe	47,351,664	87,590	47,439,254	347,284,471	1,167,690	348,452,161
Other Power	22,349,242	846,400	23,195,642	202,422,188	10,320,686	212,742,874
Total European Power	734,144,869	213,314,163	947,459,032	5,258,641,658	1,818,776,442	7,077,418,100
<u>European Financial Coal Swaps (MT)</u>						
API 2 Rotterdam	0	127,047,000	127,047,000	19,965,000	1,843,415,800	1,863,380,800
API 4 Richards Bay	50,000	14,589,000	14,639,000	8,080,000	202,242,500	210,322,500
globalCOAL NEWC®	12,282,000	42,244,000	54,526,000	48,995,000	253,152,000	302,147,000
Total European Financial Coal	12,332,000	183,880,000	196,212,000	77,040,000	2,298,810,300	2,375,850,300
<u>European Carbon Emission Allowances (MT)</u>						
EUA	37,441,000	104,804,000	142,245,000	291,204,000	989,607,884	1,280,811,884
CER	4,448,776	410,000	4,858,776	6,745,868	15,888,224	22,634,092
Other Emissions	0	0	0	15,691,350	0	15,691,350
Total European Carbon Emissi	41,889,776	105,214,000	147,103,776	313,641,218	1,005,496,108	1,319,137,326

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

	Grand Total OTC Volume			Grand Total OTC Volume		
	October 2015	October 2016	% Change	Year to Date 2015	Year to Date 2016	% Change
<u>Natural Gas (MWh)</u>						
UK NBP	851,257,275	706,377,787	-17.02%	8,460,164,373	8,462,969,738	0.03%
<u>European Hubs</u>						
Netherlands TTF	1,217,094,400	1,499,117,304	23.17%	11,397,125,206	14,096,604,393	23.69%
Germany NCG	135,436,286	143,084,247	5.65%	1,316,511,796	1,446,240,480	9.85%
Germany GasPool	64,578,524	82,886,232	28.35%	701,802,287	848,647,124	20.92%
France PEG	N/A	26,998,206	N/A	N/A	368,874,780	N/A
France TRS	N/A	5,220,140	N/A	N/A	41,650,393	N/A
Austria VTP	20,915,390	46,820,673	123.86%	261,773,612	418,629,056	59.92%
Italy PSV	56,496,810	67,851,355	20.10%	586,214,054	738,889,480	26.04%
Zeebrugge Hub	46,811,143	67,843,544	44.93%	699,721,806	636,824,835	-8.99%
Other Gas	35,644,609	41,053,573	15.17%	347,711,557	354,128,271	1.85%
Total European Gas	1,608,614,454	1,980,875,273	23.14%	15,670,765,045	18,950,488,813	20.93%
<u>Power (MWh)</u>						
UK Power	88,605,472	143,850,245	62.35%	807,570,509	1,100,930,868	36.33%
<u>European Power</u>						
German Power	446,612,611	600,406,366	34.44%	3,782,274,876	4,435,626,868	17.27%
French Power	122,958,154	155,085,495	26.13%	912,937,964	969,013,442	6.14%
Nordic Power	26,513,056	25,037,704	-5.56%	235,088,905	271,118,948	15.33%
Italian Power	67,894,466	51,534,066	-24.10%	548,329,933	488,885,847	-10.84%
Spanish Power	9,015,938	21,517,116	138.66%	97,569,917	137,205,841	40.62%
Netherlands Power	N/A	19,415,356	N/A	N/A	175,725,871	N/A
Belgian Power	N/A	3,828,033	N/A	N/A	38,646,248	N/A
Central & Eastern Europe	33,514,968	47,439,254	41.55%	275,585,731	348,452,161	26.44%
Other Power	N/A	23,195,642	N/A	N/A	212,742,874	N/A
Total European Power	742,742,774	947,459,032	27.56%	6,183,001,874	7,077,418,100	14.47%
<u>European Financial Coal Swaps (MT)</u>						
API 2 Rotterdam	269,950,000	127,047,000	-52.94%	2,275,547,664	1,863,380,800	-18.11%
API 4 Richards Bay	36,982,000	14,639,000	-60.42%	254,327,500	210,322,500	-17.30%
globalCOAL NEWC®	N/A	54,526,000	N/A	N/A	302,147,000	N/A
Total European Financial Coal	N/A	196,212,000	N/A	N/A	2,375,850,300	N/A
<u>European Carbon Emission Allowances (MT)</u>						
EUA	138,726,000	142,245,000	2.54%	1,030,715,123	1,280,811,884	24.26%
CER	3,236,000	4,858,776	50.15%	19,708,014	22,634,092	14.85%
Other Emissions	250,000	0	-100.00%	3,840,000	15,691,350	308.63%
Total European Carbon Emiss	142,212,000	147,103,776	3.44%	1,054,263,137	1,319,137,326	25.12%

* 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 October 2016	Proportion Cleared OTC October 2015	Average Price October 2016	Price Change 1 Month	Price Change 1 Year	Historical Volatility 1 Month
<u>Natural Gas (MWh)</u>							
UK NBP	+ 0 %	8.92%	17.23%				
Netherlands TTF	+ 24 %	4.83%	7.78%	Benchmark LEBA TTF Day Ahead 16.03 €/MWh			
Germany NCG	+ 10 %	0.00%	0.00%				
Germany GasPool	+ 21 %	0.17%	0.00%				
France PEG	N/A	0.00%	N/A				
France TRS	N/A	0.00%	N/A				
Austria VTP	+ 60 %	0.00%	0.00%				
Italy PSV	+ 26 %	0.37%	0.45%				
Zeebrugge Hub	- 9 %	0.00%	0.00%				
Other Gas	+ 2 %	3.04%	0.14%				
Total European Gas	+ 21 %	3.74%	6.00%		+ 28 %	- 2 %	49%
<u>Power (MWh)</u>							
UK Power	+ 36 %	0.01%	0.00%		+ 14 %	+ 29 %	543%
German Power	+ 17 %	18.98%	18.48%	Benchmark LEBA UK Day Ahead 57.75 £/MWh			
French Power	+ 6 %	17.63%	18.38%				
Nordic Power	+ 15 %	100.00%	100.00%				
Italian Power	- 11 %	51.11%	49.27%				
Spanish Power	+ 41 %	65.52%	42.93%				
Netherlands Power	N/A	27.52%	N/A				
Belgian Power	N/A	6.23%	N/A				
Central & Eastern Europe	+ 26 %	0.18%	1.78%				
Other Power	N/A	3.65%	N/A				
Total European Power	+ 14 %	22.51%	23.31%				
<u>European Financial Coal Swaps (MT)</u>							
API 2 Rotterdam	- 18 %	100.00%	98.82%	Price Benchmark LEBA API 2 Front Month 77.55 US\$/MT			
API 4 Richards Bay	- 17 %	99.66%	96.08%				
globalCOAL NEWC®	N/A	77.47%	N/A				
Total Coal	N/A	93.71%	98.49%		+ 13 %	+ 60 %	65%
<u>European Carbon Emission Allowances (MT)</u>							
EUA	+ 24 %	73.68%	86.61%	Price Benchmark LEBA EUA Spot Average 5.71 €/MT			
CER	+ 15 %	8.44%	80.44%				
Other Emissions	+ 309 %	N/A	0.00%				
Total Emissions	+ 25 %	71.52%	86.32%		+ 12 %	- 32 %	51%

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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