

LONDON ENERGY BROKERS' ASSOCIATION OTC ENERGY VOLUME REPORT – NOVEMBER 2018

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 November 2018, LEBA made the following changes to the Monthly Volume Report:

- France PEG and France TRS have merged into one Trading Region France (TRF). All volumes are now reported under 'France PEG'.
- 'Swiss Power' has been separated from 'Other Power' and is now reported in its own right.

Market	November 2018			2018 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
Natural Gas (MWh)						
UK NBP	524,300,020	74,262,272	598,562,292	5,760,464,532	1,049,714,734	6,810,179,266
European Hubs						
Netherlands TTF	1,930,321,329	186,639,537	2,116,960,866	18,311,277,208	1,568,853,727	19,880,130,935
Germany NCG	145,547,675	0	145,547,675	1,420,666,462	509,328	1,421,175,790
Germany GasPool	96,805,746	152,610	96,958,356	894,766,675	1,440,230	896,206,905
France PEG	73,198,790	395,280	73,594,070	529,610,301	5,487,770	535,098,071
Austria VTP	43,910,752	228,312	44,139,064	483,211,820	551,712	483,763,532
Italy PSV	80,660,456	264,120	80,924,576	886,558,391	6,725,880	893,284,271
Zeebrugge Hub	35,372,710	0	35,372,710	440,823,116	454,846	441,277,962
Other Gas	23,327,201	687,600	24,014,801	333,790,275	86,977,893	420,768,168
Total European Gas	2,429,144,659	188,367,459	2,617,512,118	23,325,724,958	1,671,342,986	24,997,067,944
Power (MWh)						
UK Power	85,023,953	124,920	85,148,873	830,218,010	1,338,033	831,556,043
European Power						
German Power	377,805,248	95,011,641	472,816,889	4,184,076,255	841,479,668	5,025,555,923
French Power	43,522,932	18,675,011	62,197,943	485,688,952	145,128,437	630,817,389
Nordic Power	0	20,387,903	20,387,903	0	259,469,726	259,469,726
Italian Power	6,189,219	33,111,493	39,300,712	94,417,770	340,869,300	435,287,070
Spanish Power	2,766,243	9,925,688	12,691,931	37,381,125	75,923,084	113,304,209
Netherlands Power	13,115,456	2,978,548	16,094,004	163,957,671	42,923,886	206,881,557
Belgian Power	2,579,217	1,247,194	3,826,411	60,979,709	9,166,995	70,146,704
Central & Eastern Europe	24,942,851	10,514,997	35,457,848	266,066,390	62,457,554	328,523,944
Swiss Power	7,447,109	504,618	7,951,727	7,447,109	504,618	7,951,727
Other Power	9,932,070	2,779,863	12,711,933	149,304,147	10,549,911	159,854,058
Total European Power	488,300,345	195,136,956	683,437,301	5,449,319,128	1,788,473,179	7,237,792,307
European Financial Coal Swaps (MT)						
API 2 Rotterdam	0	85,438,000	85,438,000	3,000	609,719,500	609,722,500
API 4 Richards Bay	0	5,069,000	5,069,000	20,000	67,153,500	67,173,500
globalCOAL NEWC®	111,000	12,248,000	12,359,000	2,141,000	123,591,000	125,732,000
Total European Financial Coal	111,000	102,755,000	102,866,000	2,164,000	800,464,000	802,628,000
European Carbon Emission Allowances (MT)						
EUA	17,604,000	333,749,000	351,353,000	207,252,000	2,836,991,000	3,044,243,000
CER	0	105,000	105,000	0	5,406,000	5,406,000
Other Emissions	0	0	0	0	1,965,000	1,965,000
Total European Carbon Emissions	17,604,000	333,854,000	351,458,000	207,252,000	2,844,362,000	3,051,614,000

2017 and 2018 “Month” and “Year to Date” comparisons.

	Grand Total OTC Volume			Grand Total OTC Volume		
	November 2017	November 2018	% Change	Year to Date 2017	Year to Date 2018	% Change
<u>Natural Gas (MWh)</u>						
UK NBP	766,166,550	598,562,292	-21.88%	7,663,802,305	6,810,179,266	-11.14%
<u>European Hubs</u>						
Netherlands TTF	1,663,521,083	2,116,960,866	27.26%	14,245,583,052	19,880,130,935	39.55%
Germany NCG	147,300,460	145,547,675	-1.19%	1,363,677,859	1,421,175,790	4.22%
Germany GasPool	107,602,800	96,958,356	-9.89%	906,561,921	896,206,905	-1.14%
France PEG*	31,418,869	73,594,070	134.24%	389,239,552	535,098,071	37.47%
Austria VTP	37,962,860	44,139,064	16.27%	408,244,670	483,763,532	18.50%
Italy PSV	65,176,015	80,924,576	24.16%	820,368,828	893,284,271	8.89%
Zeebrugge Hub	29,726,748	35,372,710	18.99%	473,646,796	441,277,962	-6.83%
Other Gas	30,734,212	24,014,801	-21.86%	405,084,118	420,768,168	3.87%
Total European Gas	2,117,569,456	2,617,512,118	23.61%	19,062,914,471	24,997,067,944	31.13%
<u>Power (MWh)</u>						
UK Power	66,955,047	85,148,873	27.17%	898,054,350	831,556,043	-7.40%
<u>European Power</u>						
German Power	511,841,612	472,816,889	-7.62%	4,891,679,240	5,025,555,923	2.74%
French Power	124,414,105	62,197,943	-50.01%	761,148,591	630,817,389	-17.12%
Nordic Power	22,370,325	20,387,903	-8.86%	250,673,806	259,469,726	3.51%
Italian Power	36,315,727	39,300,712	8.22%	338,387,071	435,287,070	28.64%
Spanish Power	11,323,645	12,691,931	12.08%	114,363,654	113,304,209	-0.93%
Netherlands Power	30,400,272	16,094,004	-47.06%	228,073,606	206,881,557	-9.29%
Belgian Power	7,005,996	3,826,411	-45.38%	47,497,852	70,146,704	47.68%
Central & Eastern Europe	59,464,767	35,457,848	-40.37%	454,742,702	328,523,944	-27.76%
Swiss Power	N/A	7,951,727	N/A	N/A	7,951,727	N/A
Other Power**	17,542,149	12,711,933	-27.53%	180,792,618	159,854,058	-11.58%
Total European Power	820,678,598	683,437,301	-16.72%	7,267,359,140	7,237,792,307	-0.41%
<u>European Financial Coal Swaps (MT)</u>						
API 2 Rotterdam	73,407,000	85,438,000	16.39%	816,637,500	609,722,500	-25.34%
API 4 Richards Bay	6,722,000	5,069,000	-24.59%	91,847,000	67,173,500	-26.86%
globalCOAL NEWC®	14,107,000	12,359,000	-12.39%	179,305,000	125,732,000	-29.88%
Total European Financial Coal	94,236,000	102,866,000	9.16%	1,087,789,500	802,628,000	-26.21%
<u>European Carbon Emission Allowances (MT)</u>						
EUA	186,011,000	351,353,000	88.89%	2,021,274,030	3,044,243,000	50.61%
CER	5,021,362	105,000	-97.91%	50,836,542	5,406,000	-89.37%
Other Emissions	0	0	0.00%	0	1,965,000	100.00%
Total European Carbon Emissions	191,032,362	351,458,000	83.98%	2,072,110,572	3,051,614,000	47.27%

Notes:

* Month and Year to Date comparisons for ‘France PEG’, which now covers TRF, will be made against previous France PEG volumes.

** Month and Year to Date comparisons for ‘Other Power’ will be made against volumes that previously included Swiss Power.

	YTD Total OTC Market Volume Change 1 year	Proportion Cleared OTC November 2018	Proportion Cleared OTC November 2017	Average Price November 2018	Price Change 1 Month	Price Change 1 Year	Historical Volatility 1 Month
<u>Natural Gas (MWh)</u>							
UK NBP	- 11 %	12.41%	11.88%				
Netherlands TTF	+ 40 %	8.82%	7.25%	Monthly Average LEBA TTF Day Ahead 24.52 €/MWh			
Germany NCG	+ 4 %	0.00%	0.03%				
Germany GasPool	- 1 %	0.16%	0.10%				
France PEG	+ 37 %	0.54%	0.00%				
Austria VTP	+ 18 %	0.52%	0.00%				
Italy PSV	+ 9 %	0.33%	1.29%				
Zeebrugge Hub	- 7 %	0.00%	0.00%				
Other Gas	+ 4 %	2.86%	2.14%				
Total European Gas	+ 31 %	7.20%	5.78%			+ 4 %	+ 17 %
<u>Power (MWh)</u>							
UK Power	- 7 %	0.15%	0.25%		+ 1 %	+ 9 %	70%
German Power	+ 3 %	20.09%	15.40%	Monthly Average LEBA UK Power Day Ahead 62.16 £/MWh			
French Power	- 17 %	30.03%	15.45%				
Nordic Power	+ 4 %	100.00%	100.00%				
Italian Power	+ 29 %	84.25%	74.00%				
Spanish Power	- 1 %	78.20%	44.84%				
Netherlands Power	- 9 %	18.51%	24.90%				
Belgian Power	+ 48 %	32.59%	7.66%				
Central & Eastern Europe	- 28 %	29.65%	14.05%				
Swiss Power	N/A	6.35%	N/A				
Other Power	- 12 %	21.87%	5.60%				
Total European Power	- 0 %	28.55%	20.69%				
<u>European Financial Coal Swaps (MT)</u>							
API 2 Rotterdam	- 25 %	100.00%	100.00%	Monthly Average LEBA API 2 Front Month 90.66 US\$/MT			
API 4 Richards Bay	- 27 %	100.00%	100.00%				
globalCOAL NEWC®	- 30 %	99.10%	88.20%				
Total Coal	- 26 %	99.89%	98.23%		- 7 %	- 4 %	15%
<u>European Carbon Emission Allowances (MT)</u>							
EUA	+ 51 %	94.99%	79.09%	Monthly Average LEBA EUA Spot 19.13 €/MT			
CER	- 89 %	100.00%	9.64%				
Other Emissions	0.00%	N/A	N/A				
Total Emissions	+ 47 %	94.99%	77.27%		+ 29 %	+ 167 %	53%

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

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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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