

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

Market	August 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
<u>Natural Gas (MWh)</u>						
UK NBP	410,844,468	68,380,740	479,225,208	4,208,538,960	801,272,610	5,009,811,570
<u>European Hubs</u>						
Netherlands TTF	1,472,958,002	142,056,469	1,615,014,471	12,477,568,032	1,071,410,983	13,548,979,015
Germany NCG	99,654,886	0	99,654,886	1,004,545,734	414,648	1,004,960,382
Germany GasPool	53,224,518	0	53,224,518	614,285,436	1,178,430	615,463,866
France PEG	34,216,708	140,000	34,356,708	369,878,642	3,162,340	373,040,982
France TRS	813,260	0	813,260	23,393,738	341,600	23,735,338
Austria VTP	38,731,088	0	38,731,088	352,442,003	300,360	352,742,363
Italy PSV	79,665,207	163,440	79,828,647	638,768,577	5,715,360	644,483,937
Zeebrugge Hub	46,486,754	67,406	46,554,161	352,157,116	454,846	352,611,963
Other Gas	20,833,019	34,729,750	55,562,769	256,105,065	82,937,353	339,042,418
Total European Gas	1,846,583,442	177,157,065	2,023,740,508	16,089,144,342	1,165,915,920	17,255,060,262
<u>Power (MWh)</u>						
UK Power	79,837,300	131,040	79,968,340	559,068,801	810,393	559,879,194
<u>European Power</u>						
German Power	313,196,613	92,873,921	406,070,534	2,868,355,772	561,545,441	3,429,901,213
French Power	37,649,908	13,319,039	50,968,947	352,463,553	94,112,416	446,575,969
Nordic Power	0	22,486,465	22,486,465	0	187,965,522	187,965,522
Italian Power	5,575,046	25,504,437	31,079,483	67,910,368	224,561,672	292,472,040
Spanish Power	1,825,056	2,354,777	4,179,833	27,930,126	46,378,588	74,308,714
Netherlands Power	12,644,954	2,186,871	14,831,825	120,381,283	33,059,829	153,441,112
Belgian Power	8,419,807	999,375	9,419,182	45,411,741	6,212,969	51,624,710
Central & Eastern Europe	20,255,546	7,527,484	27,783,030	190,749,175	37,036,540	227,785,715
Other Power	12,760,132	266,062	13,026,194	106,310,903	3,238,914	109,549,817
Total European Power	412,327,062	167,518,431	579,845,493	3,779,512,921	1,194,111,891	4,973,624,812
<u>European Financial Coal Swaps (MT)</u>						
API 2 Rotterdam	0	43,486,000	43,486,000	3,000	410,497,000	410,500,000
API 4 Richards Bay	0	6,084,000	6,084,000	20,000	55,861,000	55,881,000
globalCOAL NEWC®	148,000	11,023,000	11,171,000	1,074,000	92,067,000	93,141,000
Total European Financial Coal	148,000	60,593,000	60,741,000	1,097,000	558,425,000	559,522,000
<u>European Carbon Emission Allowances (MT)</u>						
EUA	33,845,372	238,014,418	271,859,790	313,229,232	2,199,394,139	2,512,623,371
CER	0	0	0	0	4,540,698	4,540,698
Other Emissions	0	0	0	0	132,000	132,000
Total European Carbon Emissions	33,845,372	238,014,418	271,859,790	313,229,232	2,204,066,837	2,517,296,069

2017 and 2018 "Month" and "Year to Date" comparisons.

	Grand Total OTC Volume			Grand Total OTC Volume		
	August	August	%	Year to Date	Year to Date	%
	2017	2018	Change	2017	2018	Change
<u>Natural Gas (MWh)</u>						
UK NBP	659,647,716	479,225,208	-27.35%	5,600,720,264	5,009,811,570	-10.55%
<u>European Hubs</u>						
Netherlands TTF	1,115,415,822	1,615,014,471	44.79%	9,955,708,930	13,548,979,015	36.09%
Germany NCG	104,806,787	99,654,886	-4.92%	976,484,503	1,004,960,382	2.92%
Germany GasPool	62,350,809	53,224,518	-14.64%	563,303,872	615,463,866	9.26%
France PEG	27,476,255	34,356,708	25.04%	286,460,483	373,040,982	30.22%
France TRS	4,556,440	813,260	-82.15%	41,767,681	23,735,338	-43.17%
Austria VTP	39,191,881	38,731,088	-1.18%	288,850,492	352,742,363	22.12%
Italy PSV	50,011,002	79,828,647	59.62%	591,338,405	644,483,937	8.99%
Zeebrugge Hub	32,728,171	46,554,161	42.24%	358,330,482	352,611,963	-1.60%
Other Gas	35,434,427	55,562,769	56.80%	297,580,859	339,042,418	13.93%
Total European Gas	1,471,971,594	2,023,740,508	37.49%	13,359,825,707	17,255,060,262	29.16%
<u>Power (MWh)</u>						
UK Power	77,685,725	79,968,340	2.94%	652,155,245	559,879,194	-14.15%
<u>European Power</u>						
German Power	385,108,683	406,070,534	5.44%	3,301,441,440	3,429,901,213	3.89%
French Power	61,260,552	50,968,947	-16.80%	427,799,120	446,575,969	4.39%
Nordic Power	18,016,329	22,486,465	24.81%	168,671,751	187,965,522	11.44%
Italian Power	30,795,466	31,079,483	0.92%	230,231,420	292,472,040	27.03%
Spanish Power	9,023,074	4,179,833	-53.68%	80,625,187	74,308,714	-7.83%
Netherlands Power	18,977,273	14,831,825	-21.84%	147,875,689	153,441,112	3.76%
Belgian Power	3,022,134	9,419,182	211.67%	29,440,427	51,624,710	75.35%
Central & Eastern Europe	45,297,686	27,783,030	-38.67%	291,596,534	227,785,715	-21.88%
Other Power	8,038,648	13,026,194	62.04%	134,052,118	109,549,817	-18.28%
Total European Power	579,539,845	579,845,493	0.05%	4,811,733,686	4,973,624,812	3.36%
<u>European Financial Coal Swaps (MT)</u>						
API 2 Rotterdam	49,764,000	43,486,000	-12.62%	594,301,000	410,500,000	-30.93%
API 4 Richards Bay	6,703,000	6,084,000	-9.23%	70,054,000	55,881,000	-20.23%
globalCOAL NEWC®	10,440,500	11,171,000	7.00%	144,335,000	93,141,000	-35.47%
Total European Financial Coal	66,907,500	60,741,000	-9.22%	808,690,000	559,522,000	-30.81%
<u>European Carbon Emission Allowances (MT)</u>						
EUA	242,228,000	271,859,790	12.23%	1,292,807,030	2,512,623,371	94.35%
CER	4,678,284	0	-100.00%	39,051,846	4,540,698	-88.37%
Other Emissions	0	0	0.00%	0	132,000	100.00%
Total European Carbon Emissions	246,906,284	271,859,790	10.11%	1,331,858,876	2,517,296,069	89.01%

	YTD Total OTC Market Volume Change 1 year	Proportion Cleared OTC August 2018	Proportion Cleared OTC August 2017	Average Price August 2018	Price Change 1 Month	Price Change 1 Year	Historical Volatility 1 Month
Natural Gas (MWh)							
UK NBP	- 11 %	14.27%	14.96%				
Netherlands TTF	+ 36 %	8.80%	7.29%	Price Benchmark LEBA TTF Day Ahead 23.86 €/MWh			
Germany NCG	+ 3 %	0.00%	0.12%				
Germany GasPool	+ 9 %	0.00%	0.11%				
France PEG	+ 30 %	0.41%	1.03%				
France TRS	- 43 %	0.00%	0.00%				
Austria VTP	+ 22 %	0.00%	0.23%				
Italy PSV	+ 9 %	0.20%	1.97%				
Zeebrugge Hub	- 2 %	0.14%	0.00%				
Other Gas	+ 14 %	62.51%	2.29%				
Total European Gas	+ 29 %	8.75%	5.69%		+ 19 %	+ 58 %	21%
Power (MWh)							
UK Power	- 14 %	0.16%	0.10%		+ 15 %	+ 46 %	53%
German Power	+ 4 %	22.87%	9.70%	Price Benchmark LEBA UK Day Ahead 61.78 £/MWh			
French Power	+ 4 %	26.13%	20.28%				
Nordic Power	+ 11 %	100.00%	100.00%				
Italian Power	+ 27 %	82.06%	67.99%				
Spanish Power	- 8 %	56.34%	70.77%				
Netherlands Power	+ 4 %	14.74%	25.87%				
Belgian Power	+ 75 %	10.61%	5.72%				
Central & Eastern Europe	- 22 %	27.09%	4.05%				
Other Power	- 18 %	2.04%	0.49%				
Total European Power	+ 3 %	28.89%	17.61%				
European Financial Coal Swaps (MT)							
API 2 Rotterdam	- 31 %	100.00%	100.00%	Price Benchmark LEBA API 2 Front Month 96.98 US\$/MT			
API 4 Richards Bay	- 20 %	100.00%	100.00%				
globalCOAL NEWC®	- 35 %	98.68%	99.86%				
Total Coal	- 31 %	99.76%	99.98%		+ 3 %	+ 11 %	9%
European Carbon Emission Allowances (MT)							
EUA	+ 94 %	87.55%	92.53%	Price Benchmark LEBA EUA Spot Average 18.8 €/MT			
CER	- 88 %	N/A	17.10%				
Other Emissions	0.00%	N/A	N/A				
Total Emissions	+ 89 %	87.55%	91.10%		+ 18 %	+ 253 %	27%

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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