

**LONDON ENERGY BROKERS' ASSOCIATION OTC ENERGY VOLUME REPORT – SEPTEMBER 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	September 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
<b><u>Natural Gas (MWh)</u></b>						
<b>UK NBP</b>	<b>495,891,002</b>	<b>90,773,029</b>	<b>586,664,031</b>	<b>4,704,429,962</b>	<b>892,045,639</b>	<b>5,596,475,601</b>
<b><u>European Hubs</u></b>						
Netherlands TTF	1,898,383,733	158,444,495	2,056,828,228	14,375,951,765	1,229,855,478	15,605,807,243
Germany NCG	112,380,731	91,080	112,471,811	1,116,926,465	505,728	1,117,432,193
Germany GasPool	67,113,580	87,600	67,201,180	681,399,016	1,266,030	682,665,046
France PEG	38,268,324	549,670	38,817,994	408,146,966	3,712,010	411,858,976
France TRS	915,680	0	915,680	24,309,418	341,600	24,651,018
Austria VTP	29,888,953	0	29,888,953	382,330,956	300,360	382,631,316
Italy PSV	81,794,190	346,200	82,140,390	720,562,767	6,061,560	726,624,327
Zeebrugge Hub	24,110,222	0	24,110,222	376,267,339	454,846	376,722,185
Other Gas	25,810,966	609,000	26,419,966	281,916,031	83,546,353	365,462,384
<b>Total European Gas</b>	<b>2,278,666,379</b>	<b>160,128,045</b>	<b>2,438,794,424</b>	<b>18,367,810,721</b>	<b>1,326,043,965</b>	<b>19,693,854,687</b>
<b><u>Power (MWh)</u></b>						
<b>UK Power</b>	<b>96,578,506</b>	<b>277,680</b>	<b>96,856,186</b>	<b>655,647,307</b>	<b>1,088,073</b>	<b>656,735,380</b>
<b><u>European Power</u></b>						
German Power	509,194,457	98,452,493	607,646,950	3,377,550,229	659,997,934	4,037,548,163
French Power	47,959,280	17,111,132	65,070,412	400,422,833	111,223,548	511,646,381
Nordic Power	0	31,146,400	31,146,400	0	219,111,922	219,111,922
Italian Power	11,904,075	41,845,158	53,749,233	79,814,443	266,406,830	346,221,273
Spanish Power	3,404,074	10,000,072	13,404,146	31,334,200	56,378,660	87,712,860
Netherlands Power	15,464,449	3,612,966	19,077,415	135,845,732	36,672,795	172,518,527
Belgian Power	7,843,497	863,558	8,707,055	53,255,238	7,076,527	60,331,765
Central & Eastern Europe	24,027,788	7,669,633	31,697,421	214,776,963	44,706,173	259,483,136
Other Power	16,777,212	1,429,807	18,207,019	123,088,115	4,668,721	127,756,836
<b>Total European Power</b>	<b>636,574,832</b>	<b>212,131,219</b>	<b>848,706,051</b>	<b>4,416,087,753</b>	<b>1,406,243,110</b>	<b>5,822,330,863</b>
<b><u>European Financial Coal Swaps (MT)</u></b>						
API 2 Rotterdam	0	53,596,500	53,596,500	3,000	464,093,500	464,096,500
API 4 Richards Bay	0	3,110,500	3,110,500	20,000	58,971,500	58,991,500
globalCOAL NEWC®	546,000	8,718,000	9,264,000	1,620,000	100,785,000	102,405,000
<b>Total European Financial Coal</b>	<b>546,000</b>	<b>65,425,000</b>	<b>65,971,000</b>	<b>1,643,000</b>	<b>623,850,000</b>	<b>625,493,000</b>
<b><u>European Carbon Emission Allowances (MT)</u></b>						
EUA	13,565,116	375,541,257	389,106,373	326,794,348	2,574,935,396	2,901,729,744
CER	0	2,466,581	2,466,581	0	7,007,279	7,007,279
Other Emissions	0	0	0	0	132,000	132,000
<b>Total European Carbon Emissions</b>	<b>13,565,116</b>	<b>378,007,838</b>	<b>391,572,954</b>	<b>326,794,348</b>	<b>2,582,074,675</b>	<b>2,908,869,023</b>

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

	Grand Total OTC Volume			Grand Total OTC Volume		
	September 2017	September 2018	% Change	Year to Date 2017	Year to Date 2018	% Change
<b><u>Natural Gas (MWh)</u></b>						
<b>UK NBP</b>	<b>667,852,297</b>	<b>586,664,031</b>	<b>-12.16%</b>	<b>6,268,572,561</b>	<b>5,596,475,601</b>	<b>-10.72%</b>
<b><u>European Hubs</u></b>						
Netherlands TTF	1,366,480,644	2,056,828,228	50.52%	11,322,189,573	15,605,807,243	37.83%
Germany NCG	132,913,402	112,471,811	-15.38%	1,109,397,905	1,117,432,193	0.72%
Germany GasPool	114,998,048	67,201,180	-41.56%	678,301,920	682,665,046	0.64%
France PEG	44,568,459	38,817,994	-12.90%	331,028,942	411,858,976	24.42%
France TRS	2,103,273	915,680	-56.46%	43,870,954	24,651,018	-43.81%
Austria VTP	38,808,956	29,888,953	-22.98%	327,659,448	382,631,316	16.78%
Italy PSV	85,404,072	82,140,390	-3.82%	676,742,477	726,624,327	7.37%
Zeebrugge Hub	46,475,350	24,110,222	-48.12%	404,805,831	376,722,185	-6.94%
Other Gas	41,692,598	26,419,966	-36.63%	339,273,457	365,462,384	7.72%
<b>Total European Gas</b>	<b>1,873,444,801</b>	<b>2,438,794,424</b>	<b>30.18%</b>	<b>15,233,270,507</b>	<b>19,693,854,687</b>	<b>29.28%</b>
<b><u>Power (MWh)</u></b>						
<b>UK Power</b>	<b>97,393,093</b>	<b>96,856,186</b>	<b>-0.55%</b>	<b>749,548,338</b>	<b>656,735,380</b>	<b>-12.38%</b>
<b><u>European Power</u></b>						
German Power	568,859,928	607,646,950	6.82%	3,870,301,368	4,037,548,163	4.32%
French Power	104,785,828	65,070,412	-37.90%	532,584,948	511,646,381	-3.93%
Nordic Power	32,876,572	31,146,400	-5.26%	201,548,323	219,111,922	8.71%
Italian Power	36,150,860	53,749,233	48.68%	266,382,280	346,221,273	29.97%
Spanish Power	10,627,608	13,404,146	26.13%	91,252,795	87,712,860	-3.88%
Netherlands Power	26,024,145	19,077,415	-26.69%	173,899,834	172,518,527	-0.79%
Belgian Power	5,552,135	8,707,055	56.82%	34,992,562	60,331,765	72.41%
Central & Eastern Europe	50,939,529	31,697,421	-37.77%	342,536,063	259,483,136	-24.25%
Other Power	15,139,320	18,207,019	20.26%	149,191,438	127,756,836	-14.37%
<b>Total European Power</b>	<b>850,955,925</b>	<b>848,706,051</b>	<b>-0.26%</b>	<b>5,662,689,611</b>	<b>5,822,330,863</b>	<b>2.82%</b>
<b><u>European Financial Coal Swaps (MT)</u></b>						
API 2 Rotterdam	76,822,000	53,596,500	-30.23%	671,123,000	464,096,500	-30.85%
API 4 Richards Bay	8,086,000	3,110,500	-61.53%	78,140,000	58,991,500	-24.51%
globalCOAL NEWC®	10,334,000	9,264,000	-10.35%	154,669,000	102,405,000	-33.79%
<b>Total European Financial Coal</b>	<b>95,242,000</b>	<b>65,971,000</b>	<b>-30.73%</b>	<b>903,932,000</b>	<b>625,493,000</b>	<b>-30.80%</b>
<b><u>European Carbon Emission Allowances (MT)</u></b>						
EUA	326,392,000	389,106,373	19.21%	1,619,199,030	2,901,729,744	79.21%
CER	3,306,631	2,466,581	-25.41%	42,358,477	7,007,279	-83.46%
Other Emissions	0	0	0.00%	0	132,000	100.00%
<b>Total European Carbon Emissions</b>	<b>329,698,631</b>	<b>391,572,954</b>	<b>18.77%</b>	<b>1,661,557,507</b>	<b>2,908,869,023</b>	<b>75.07%</b>

	YTD Total OTC Market Volume Change 1 year	Proportion Cleared OTC September 2018	Proportion Cleared OTC September 2017	Average Price September 2018	Price Change 1 Month	Price Change 1 Year	Historical Volatility 1 Month
<b>Natural Gas (MWh)</b>							
<b>UK NBP</b>	- 11 %	15.47%	15.77%				
Netherlands TTF	+ 38 %	7.70%	6.44%	Price Benchmark LEBA TTF Day Ahead 27.99 €/MWh			
Germany NCG	+ 1 %	0.08%	0.07%				
Germany GasPool	+ 1 %	0.13%	0.10%				
France PEG	+ 24 %	1.42%	1.54%				
France TRS	- 44 %	0.00%	0.00%				
Austria VTP	+ 17 %	0.00%	0.00%				
Italy PSV	+ 7 %	0.42%	0.55%				
Zeebrugge Hub	- 7 %	0.00%	0.00%				
Other Gas	+ 8 %	2.31%	0.90%				
<b>Total European Gas</b>	<b>+ 29 %</b>	<b>6.57%</b>	<b>4.79%</b>		<b>+ 4 %</b>	<b>+ 63 %</b>	<b>37%</b>
<b>Power (MWh)</b>							
<b>UK Power</b>	- 12 %	0.29%	0.28%		- 1 %	+ 64 %	57%
German Power	+ 4 %	16.20%	12.31%	Price Benchmark LEBA UK Day Ahead 67.49 £/MWh			
French Power	- 4 %	26.30%	16.47%				
Nordic Power	+ 9 %	100.00%	100.00%				
Italian Power	+ 30 %	77.85%	69.17%				
Spanish Power	- 4 %	74.60%	57.25%				
Netherlands Power	- 1 %	18.94%	19.82%				
Belgian Power	+ 72 %	9.92%	1.11%				
Central & Eastern Europe	- 24 %	24.20%	5.97%				
Other Power	- 14 %	7.85%	2.23%				
<b>Total European Power</b>	<b>+ 3 %</b>	<b>24.99%</b>	<b>18.78%</b>				
<b>European Financial Coal Swaps (MT)</b>							
API 2 Rotterdam	- 31 %	100.00%	100.00%	Price Benchmark LEBA API 2 Front Month 100.18 US\$/MT			
API 4 Richards Bay	- 25 %	100.00%	100.00%				
globalCOAL NEWC®	- 34 %	94.11%	100.00%				
<b>Total Coal</b>	<b>- 31 %</b>	<b>99.17%</b>	<b>100.00%</b>		<b>+ 1 %</b>	<b>+ 10 %</b>	<b>13%</b>
<b>European Carbon Emission Allowances (MT)</b>							
EUA	+ 79 %	96.51%	91.67%	Price Benchmark LEBA EUA Spot Average 21.48 €/MT			
CER	- 83 %	100.00%	0.00%				
Other Emissions	0.00%	N/A	N/A				
<b>Total Emissions</b>	<b>+ 75 %</b>	<b>96.54%</b>	<b>90.75%</b>		<b>+ 5 %</b>	<b>+ 201 %</b>	<b>86%</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

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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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