

Trayport Euro Commodities Report

Trayport Analysis Team
June 2019

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Editorial summary

June 2019: Contracts traded down 1% vs May, TTF front month price down 10%, Emissions up 18% MoM, H1 2019 review.

Monthly contracts traded in June 2019 fell for a third successive month, down 1% MoM to 8.201 million, as Europe saw record heatwaves towards the end of the month. UK Gas saw the biggest drop, down 9% MoM, Euro Power fell 3%, whilst Euro Gas and UK Power fell 1%. Emissions bucked the trend, up 18% MoM, and interestingly Coal rose 7% a month after the UK went without using it as a fuel for power generation for a fortnight. YTD contracts traded are up 17% vs 2018, driven largely by the Euro Gas volume growth.

Gas

Despite the MoM fall Euro Gas volumes remain buoyant, with five of the seven commodities up over 25% vs June 2018. Only two have fallen against this time last year, Gaspool down 9% and ZEE down 36%. NBP continues to decline, down 9% MoM and 25% YoY, falling below 1,000 TWh for the first time since Dec-18. TTF was down 1% MoM with 3,118 TWh traded, representative of a 54% increase YoY. As for market dynamics, Euro Gas share was flat between the three execution methods, whilst UK Gas saw a 2% increase in cleared execution with broker cleared and exchange executions picking up 1% each. TTF front month price fell 10% to €10.12 per MWh, a 54% decrease from this time last year.

As we move into the second half of the year, let's take a look the headline stories so far in 2019. The Euro Gas group growth has been the standout story of the year. Six of the seven commodities are up over 20% vs YTD 2018, with TTF up 49% and ZEE the only faller, down 30%. NBP is down 16%. TTF front month price has fallen 49% since the beginning of the year, with oversupply driving gas prices down. Towards the end of Q1 we saw the Japan Korea Marker (JKM) – the Asian LNG benchmark – price fall below TTF, increasing the potential for LNG imports to Europe, whilst a greater flow of Russian gas has been heading this way. We continue to see how the USA will influence the market, with exports to Europe increasing as the USA's production capacity grows. What will happen to prices in the second half of the year?

It has also been interesting to see the changing market dynamics. Euro Gas, largely dominated by TTF's activity, has seen a 7% increase in exchange execution share, moving from broker bilateral. The split for the year sits at 68% broker bilateral / 6% broker cleared / 26% exchange executions. Whilst we have seen record high exchange share coupled with record low broker share, volumes have peaked across all execution methods, with the three highest volume months for each method on record (since Jan-11) having occurred this year. Against YTD 2018, broker bilateral volumes are up 31%, broker cleared up 47% and exchange executions up 102%. We await to see what will happen to volumes in second half of the year, will continued growth lead to higher exchange execution share?

Gas	Total Volume (TWh)			Exchange Volume (TWh)		
	Jun-19	May-19	MoM Change	Auction	Continuous	Total
NBP	983	1,086	-9%	-	548.94	548.94
TTF	3,118	3,162	-1%	-	1,005.11	1,005.11
NCG	169	185	-9%	-	23.88	23.88
Gaspool	105	117	-10%	-	15.60	15.60
France Hubs	85	82	4%	-	10.11	10.11
Austria VTP	78	76	2%	-	12.42	12.42
PSV	134	111	20%	-	2.09	2.09
ZEE	24	25	-2%	-	0.77	0.77

Power

Euro Power fell 3% vs May, with German Power's influence on overall Euro Power volume driving the fall, down 7%. It wasn't all decline for Euro Power, four of the eight commodities rose (Note: we are currently excluding Swiss Power as it does not have 24 months of data), with French Power the largest riser up 15%. Front month price for German Power rose 1% to €35.83 per MWh. Looking at market dynamics, in Euro Power we saw a 2% increase in broker cleared share, with just over 1% coming from broker bilateral, whilst UK Power saw 2% increase in broker bilateral at the expense of exchange executions.

Looking at the year so far, we've seen a 10% increase in the market share for cleared settlement, with both broker cleared and exchange executions increasing 5%. It's a similar market share move as seen in Euro Gas, however volumes haven't been increasing, with Euro Power down 7% vs YTD 2018. This begs the question of the cause - could it be the impact of MiFID II? Alternatively, could the rise of renewables be affecting market dynamics? The big news in Britain was the coal-free fortnight for power generation in May, the longest period since the 1880s, a clear indication of progress on the decarbonisation of the European energy markets. Increased reliance upon renewables leads to a greater requirement for spot (short term) trading, due to the unpredictable nature of renewable energy generation. Has this driven the increase in exchange market share? Should we have seen an increase in volume though? Looking at prices, we saw a 29% drop in German Power front month from January to February, with a further 7% drop since then. What is the outlook for power prices for the second half of the year?

Power	Total Volume (TWh)			Exchange Volume (TWh)		
	Jun-19	May-19	MoM Change	Auction	Continuous	Total
UK Power	77	78	-1%	10.18	1.96	12.13
German Power	441	472	-7%	20.58	88.23	108.81
French Power	70	61	15%	10.09	10.09	20.18
Nordic Power	83	80	4%	-	54.54	54.54
Italian Power	50	50	-1%	-	8.12	8.12
Spanish Power	29	28	5%	-	14.04	14.04
CEE Power	50	57	-12%	-	25.96	25.96
Dutch Power	26	23	12%	2.88	5.12	8.00
Belgian Power	5	6	-19%	1.32	0.62	1.94

Coal

Coal volumes rose 7% MoM to 122 million metric tonnes (mmT) driven by an 8% increase in API2. API4 volumes rose 39% and gC Newcastle fell 8%. We saw a 4% increase in broker cleared market share, moving from exchange executions, whilst API2 price fell 14% to \$48.85 per tonne. June-19 also saw CME gain 5% cleared market share to finish at 36%, with ICE holding the remaining 64%.

Coal volumes are down 7% vs YTD 2018, with all three commodities that make up the group falling, whilst API2 price has fallen 38% since the start of the year. We mentioned in the Power section that the UK went coal free for a fortnight. Further to this, emissions prices have continued to rise, and gas prices have fallen drastically, catalysts for an even quicker coal exit. Market share has seen an interesting shift, with 7% of execution moving from exchange executions to broker cleared, reversing the trend in recent years of a move to exchange executions. The split YTD is 70% broker cleared / 30% exchange executed, what has caused the change in trend?

Coal	Total Volume (MMT)			Exchange Volume (MMT)		
	Jun-19	May-19	MoM Change	Auction	Continuous	Total
API2	101	93	8%	-	32.45	32.45
API 4	6	4	39%	-	0.38	0.38
gC NEWC	15	17	-8%	-	2.54	2.54

Emissions

Contrary to the general direction of the market this month, Emissions rose 18% MoM to 652 mmT. EUA Dec-19 price rose 7% to €26.28 / tonne, one cent short of the April record. We saw a large shift in market share with the increased trading, with a 13% increase in broker cleared market share, 12% coming from exchange executions.

2019 has not been smooth sailing for the Emissions market, particularly following the growth seen at the end of 2018. The EU has frozen UK participation in the EU Emissions Trading System (ETS) as the Brexit delay continues. Volumes are down 3% vs YTD 2018, have they suffered due to this uncertainty? Prices, as mentioned above, have continued to rise hitting a record high of €26.29 / tonne in April. Market share has seen a small adjustment, with a 2% increase in exchange executions market share YTD at the expense of both broker bilateral and broker cleared. The Emissions market is the clearest example of politics playing its part in the energy markets, and we await to see its direction in the second half of the year.

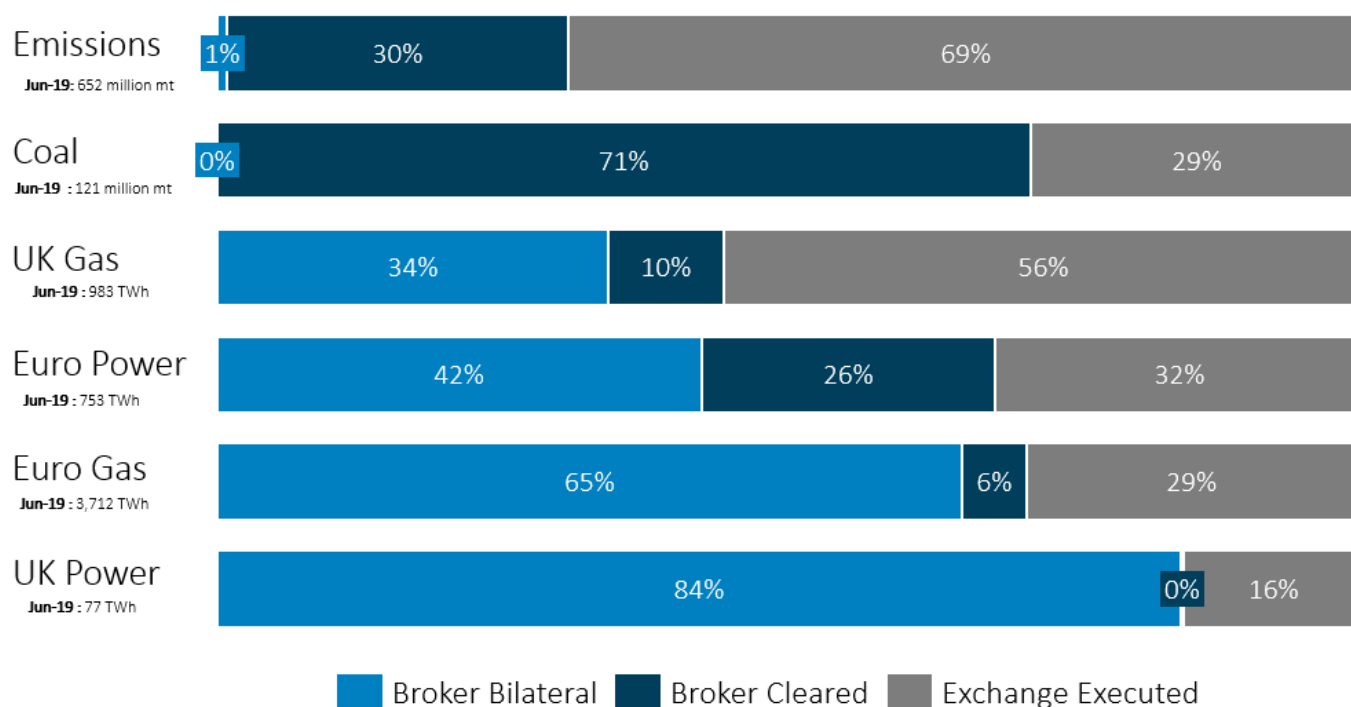
Emissions	Total Volume (MMT)			Exchange Volume (MMT)		
	Jun-19	May-19	MoM Change	Auction	Continuous	Total
EUA	652	551	18%	50.14	402.04	452.18
CER	1	1	-25%	-	0.48	0.48

European Energy Markets Composition: Broker Bilateral, Broker Cleared and Exchange Execution

Information as at: 30 June 2019

Estimates based on Trayport analysis and market research

June 2019



Note: Data sources on page 12.

Table 1: Key Term Definitions

Term	Definition	Calculation
Broker Bilateral	Total volume executed at a broker and settled bilaterally, without the involvement of a clearinghouse	LEBA published total volume minus LEBA published cleared volume
Broker Cleared	Total volume executed at a broker or off-exchange and given up for clearing to a clearinghouse	Aggregated clearinghouse reported broker cleared volume
Exchange Execution	Total volume executed directly on exchange and cleared with the relevant clearinghouse	Aggregated exchange reported executed volume
Cleared Market	Total volume cleared at a clearinghouse	Broker cleared plus exchange execution
Total Execution	Total executed volume, at a broker or an exchange	Broker bilateral plus broker cleared plus exchange executed

European Energy Markets Composition: YTD Trends

Information as at: 30 June 2019

Estimates based on Trayport analysis and market research

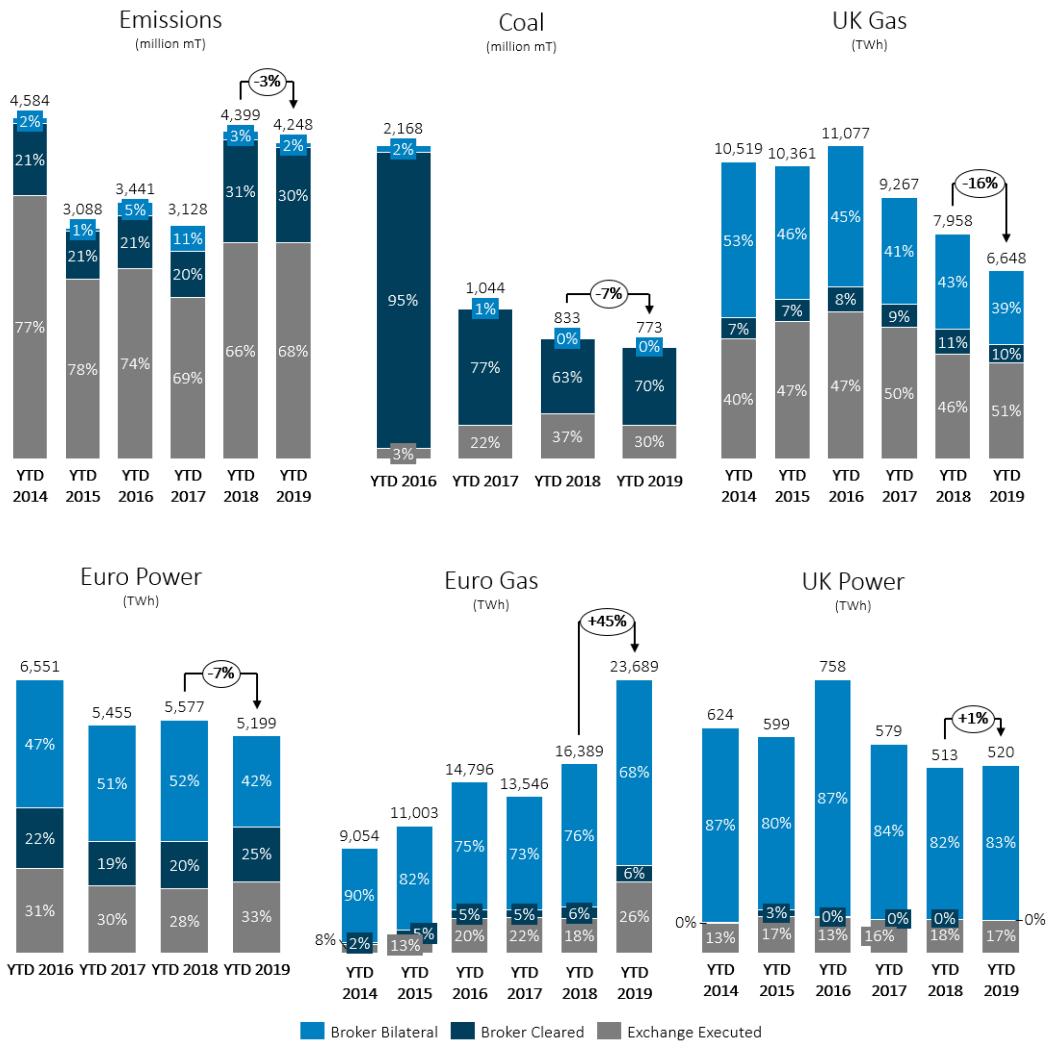


Table 2: Volume Traded Change

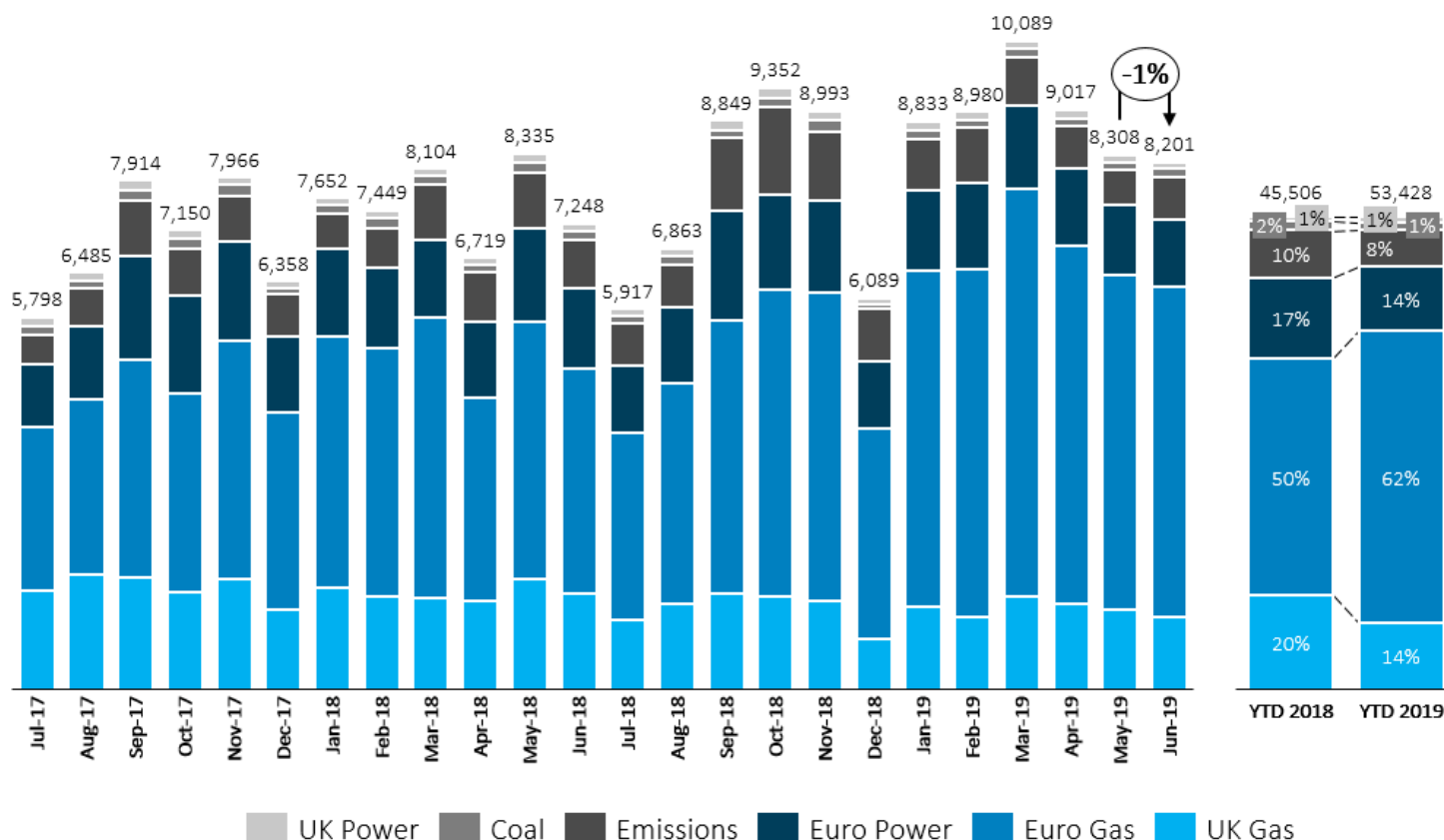
Commodity Class	MoM	YoY	YTD	Term	Definition
Emissions	18%	-13%	-3%	MoM	Current month volume versus previous month volume (e.g. October 2012 vs. September 2012)
Coal	7%	-10%	-7%		
UK Gas	-9%	-25%	-16%		
Euro Power	-3%	-17%	-7%	YoY	Current month volume versus same month last year volume
Euro Gas	-1%	47%	45%	YTD	Total volume YTD 2014 versus total volume YTD 2013 (e.g., Jan – Oct 2014 vs. Jan – Oct 2013)
UK Power	-1%	-5%	1%		

Note: Data sources on page 12.

European Energy Markets Composition: Total Euro Commodity Market Volumes

Information as at: 30 June 2019

Estimates based on Trayport analysis and market research



(Monthly Contract Equivalents* 000's)

Note: Data sources on page 12.

*Monthly Contract Equivalents calculated as total volume divided by a standard monthly contract lot size (30 day month):

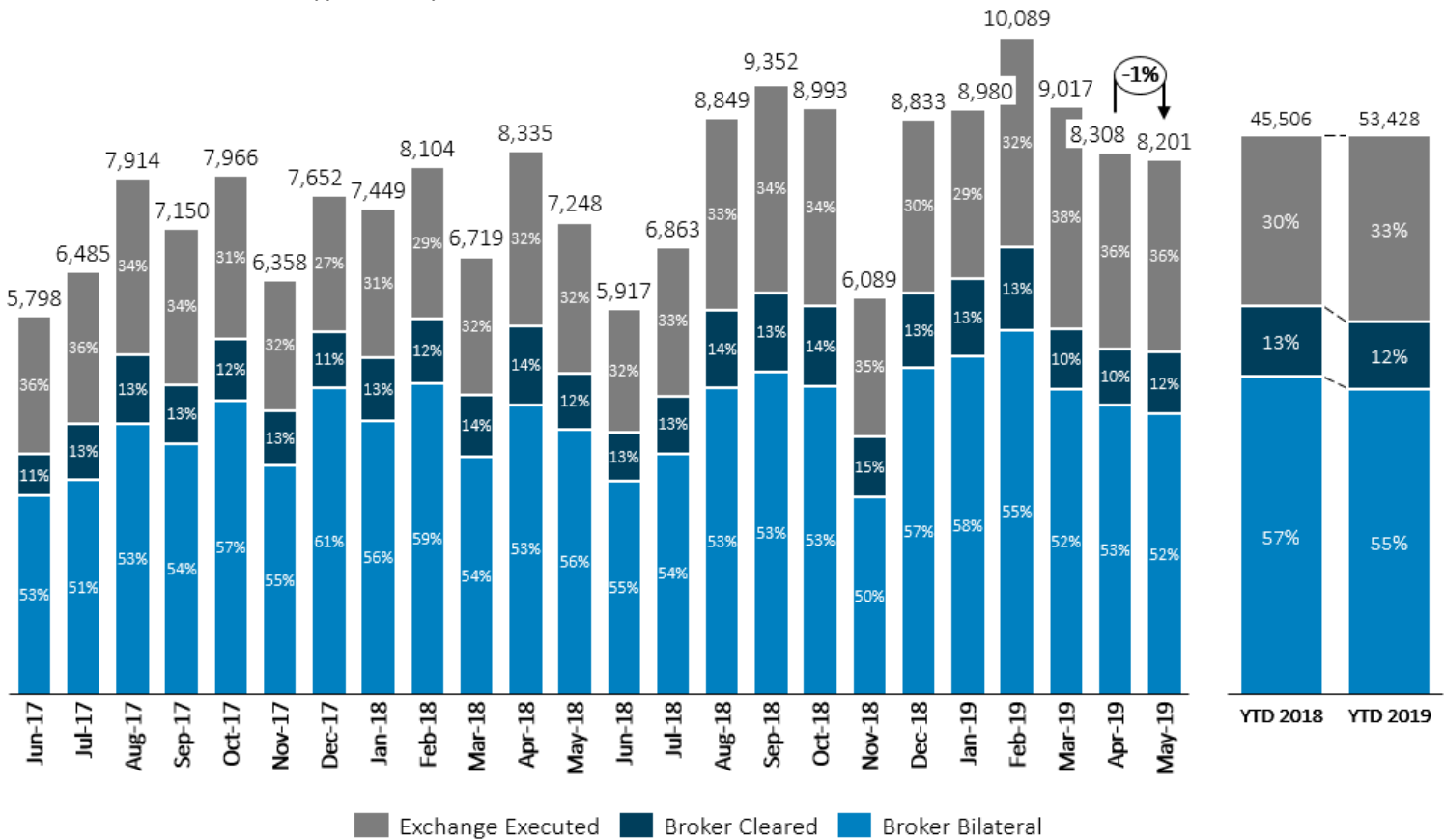
Commodity Class	Volume Unit	Standard Monthly Contract Lot Size	Monthly Contract Equivalent Calculation
Emissions	Metric tonnes	1,000 tonnes	Total volume in metric tonnes divided by 1,000 tonnes
Coal	Metric tonnes	1,000 tonnes	Total volume in metric tonnes divided by 1,000 tonnes
UK Gas	Therms / MWh	30,000 therms / 879 MWh	Total volume in MWh divided by 879 MWh
Euro Power	MWh	720 MWh	Total volume in MWh divided by 720 MWh
UK Power	MWh	720 MWh	Total volume in MWh divided by 720 MWh
Euro Gas	MWh	720 MWh	Total volume in MWh divided by 720 MWh

Monthly Contract Equivalents allow us to compare trading volumes across commodity classes that are traded in different volume units.

European Energy Markets Composition: Total Euro Commodity Market Volumes

Information as at: 30 June 2019

Estimates based on Trayport analysis and market research



(Monthly Contract Equivalents* 000's)

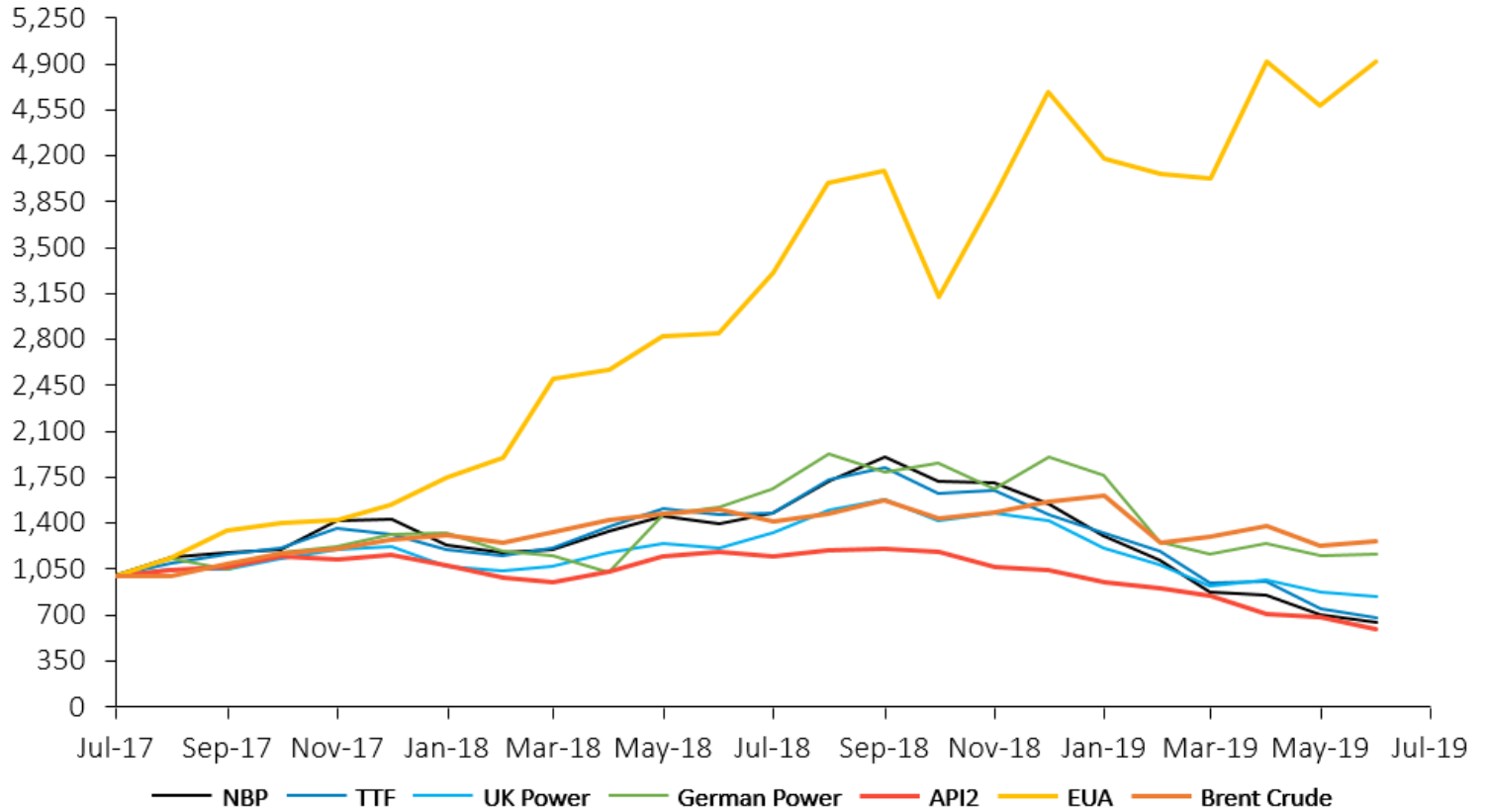
Note: Data sources on page 12.

*Monthly Contract Equivalents calculated as total volume divided by a standard monthly contract lot size (30 day month).

European Energy Markets Composition: Rebased Price Trends over Time

Information as at: 30 June 2019

Estimates based on Trayport analysis and market research



All prices are Front Month, except EUAs, which are Front Vintage.
Prices rebased 24 Months previous

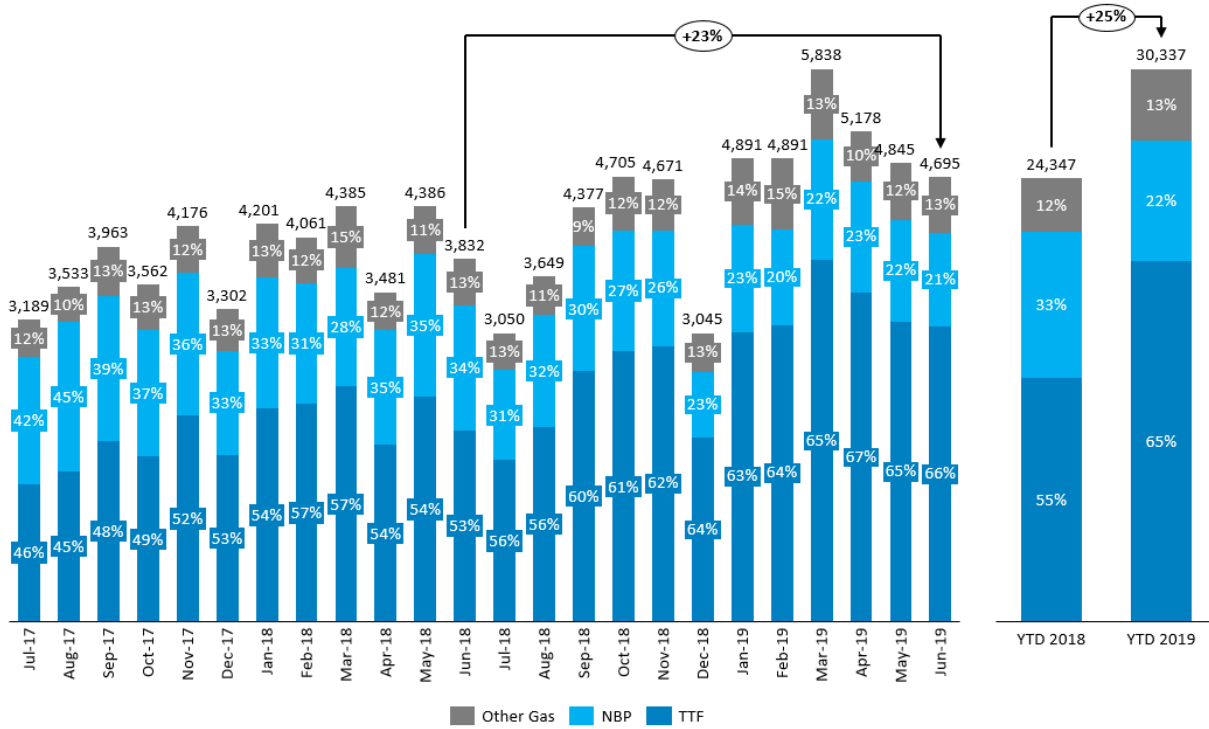
Note: Data sources on page 12.

Gas Hub Evolution

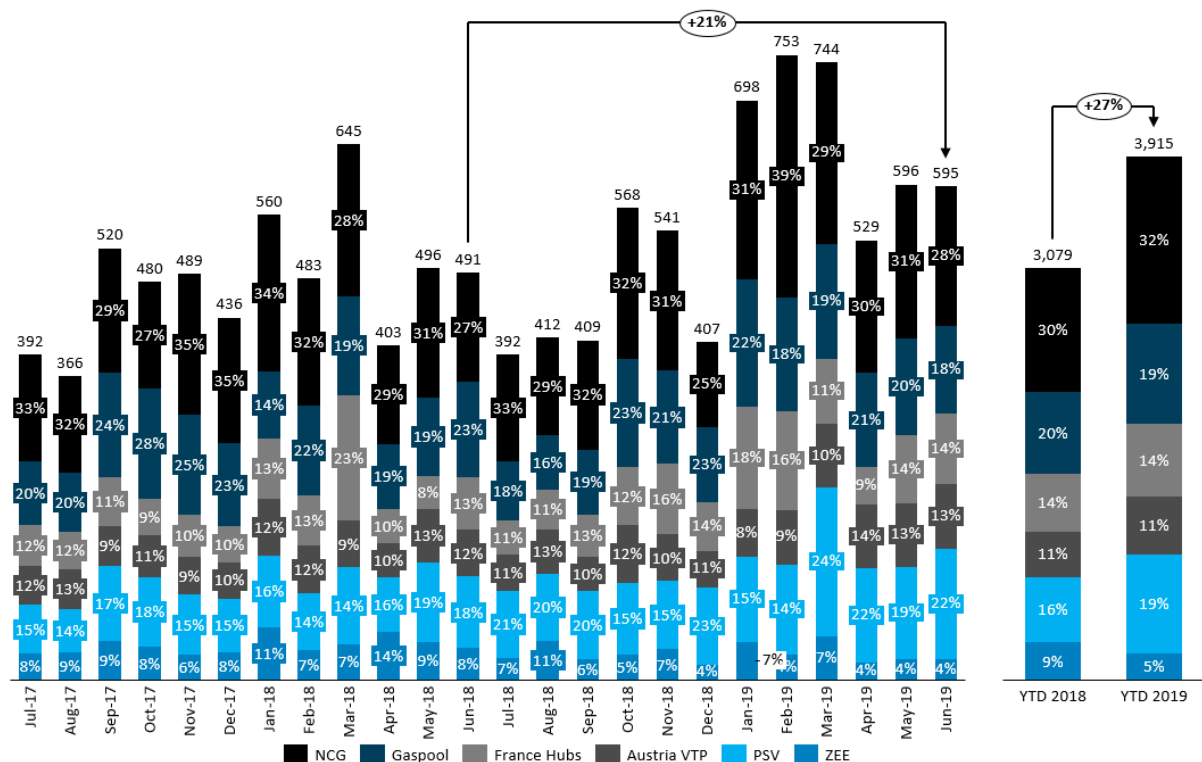
Information as at: 30 June 2019

Estimates based on Trayport analysis and market research

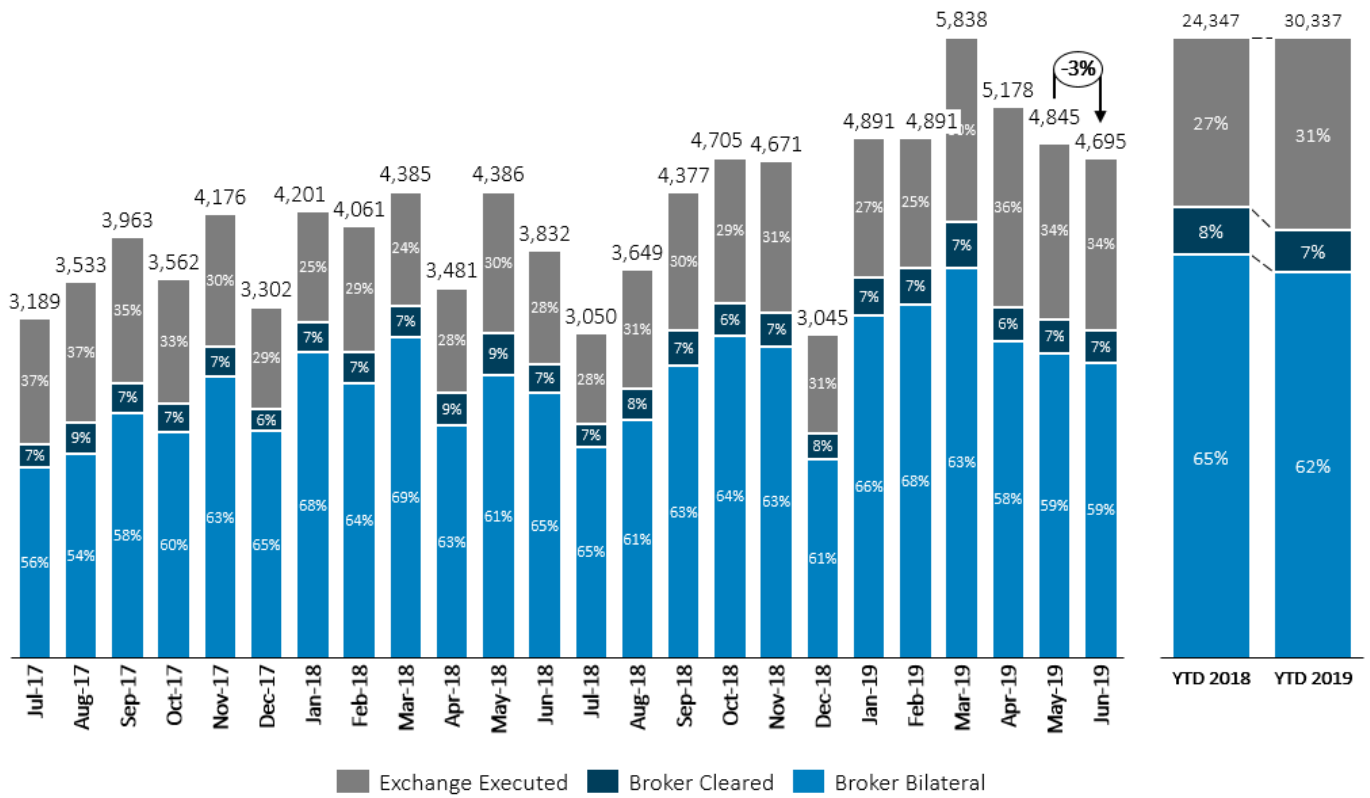
NBP, TTF & Other Gas Chart



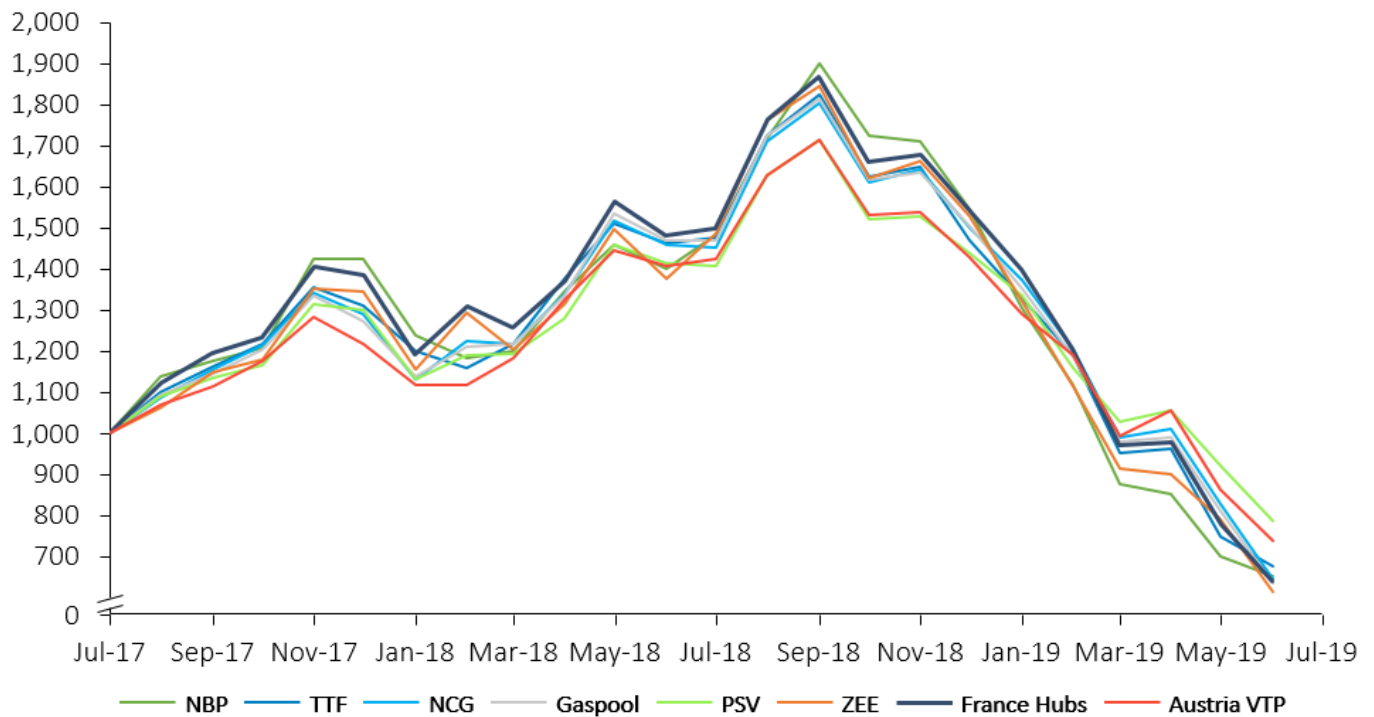
Other Gas Chart



Broker Bilateral / Broker Cleared / Exchange Executed Chart



Price Indexation Chart

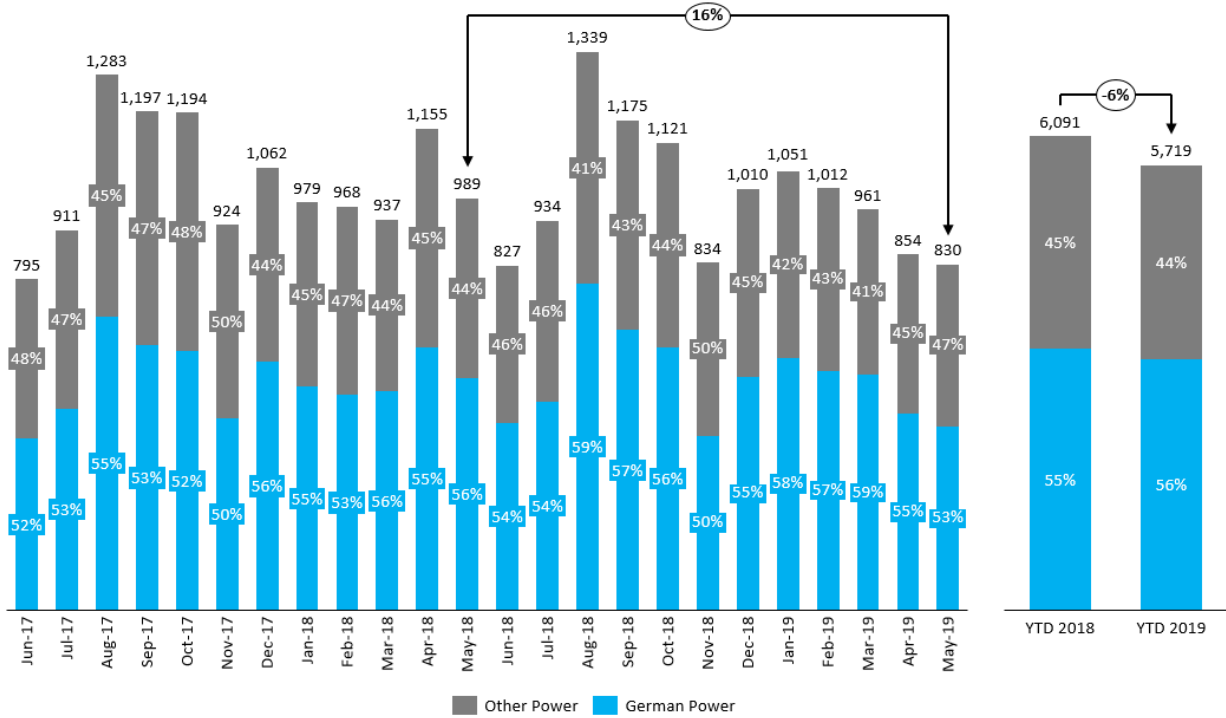


Power Market Evolution

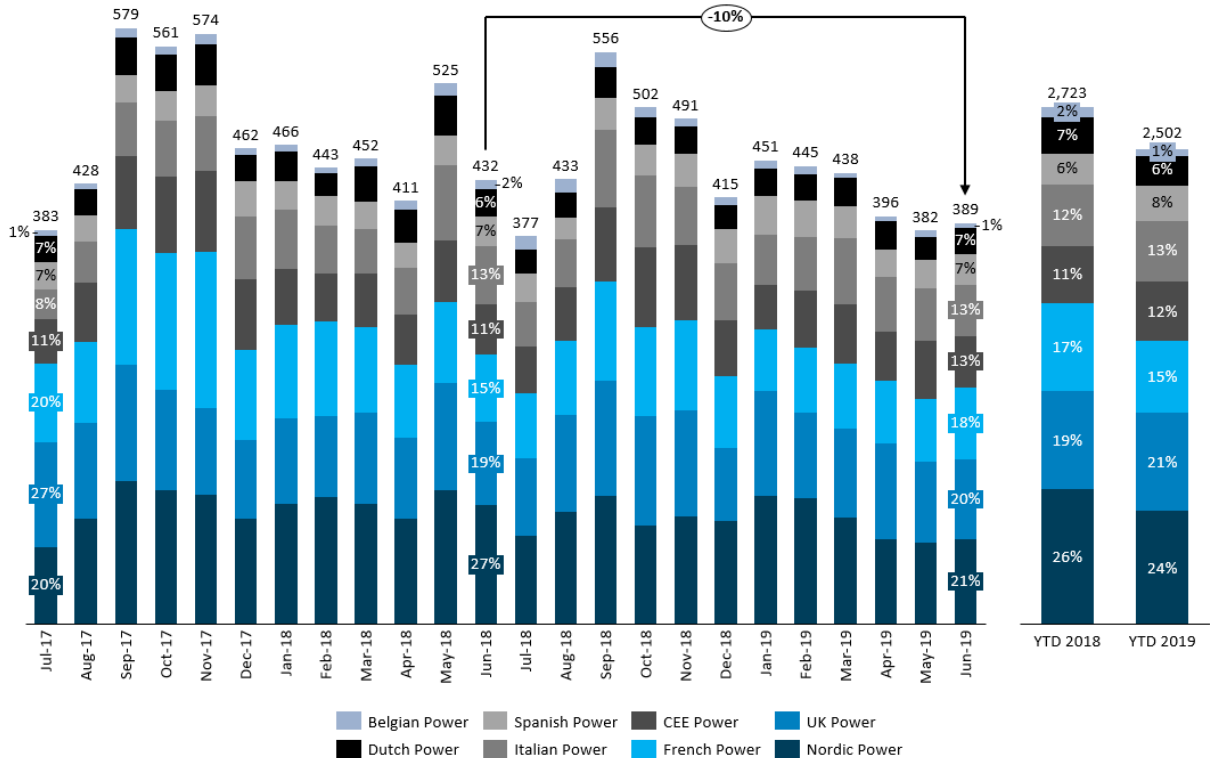
Information as at: 30 June 2019

Estimates based on Trayport analysis and market research

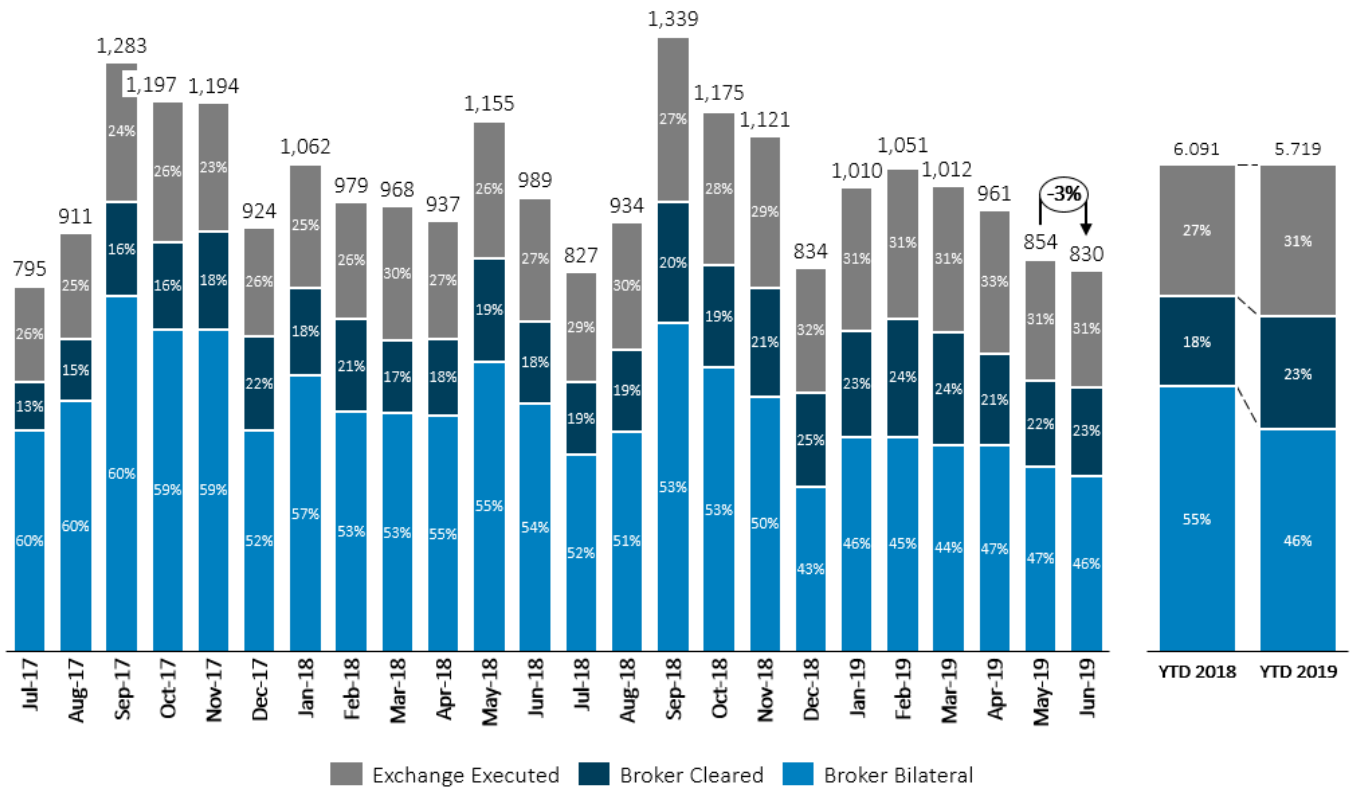
German Power & Other Power Chart



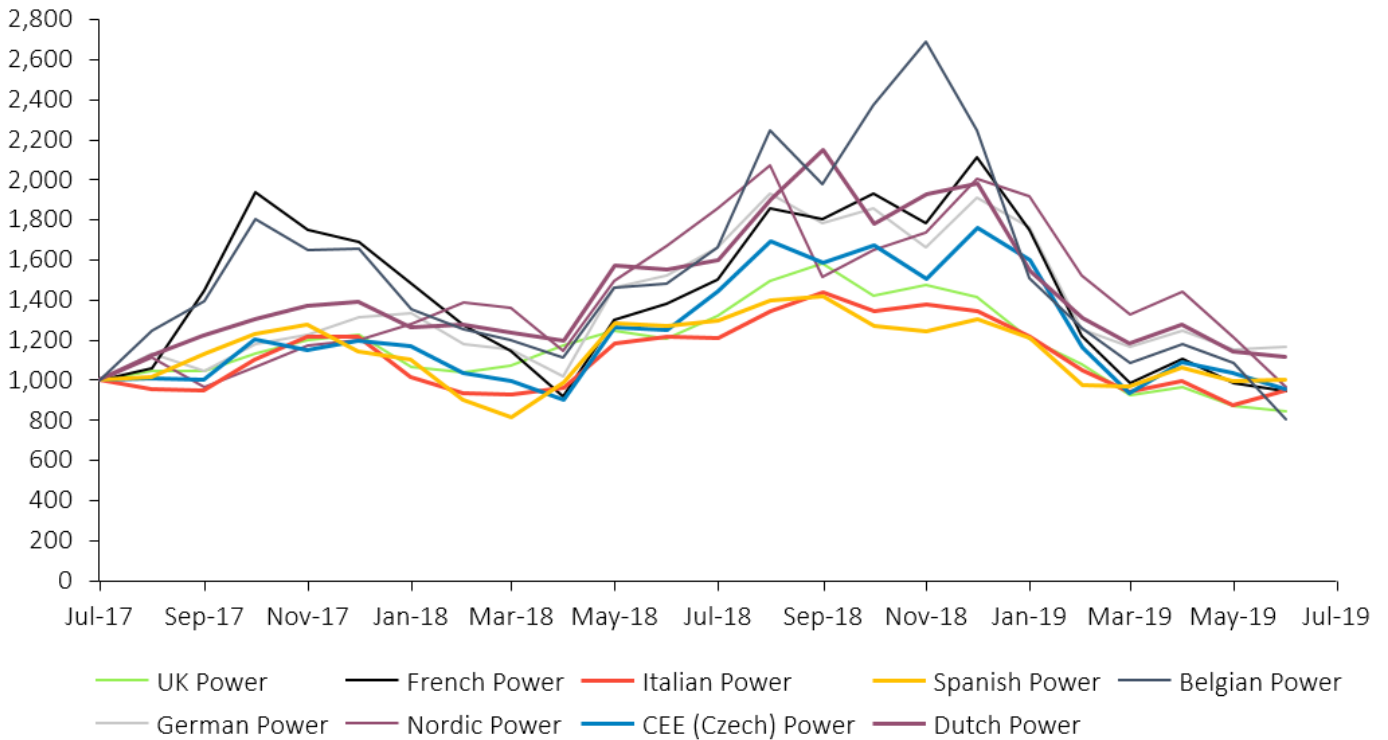
Other Power Chart



Broker Bilateral / Broker Cleared / Exchange Executed Chart



Price Indexation Chart



Data Sources

OTC brokers data

LEBA www.leba.org.uk

Exchange data

APX-ENDEX Data source Jan 2011 – Oct 2013, TTF futures data only; source no longer available

Borsa Italiana S.p.A. <http://www.borsaitaliana.it/>

CME <http://www.cmegroup.com>

EEX <http://www.eex.com/>

ICE www.theice.com

NASDAQ OMX www.nasdaqomxcommodities.com

BMEClearing <http://www.meff.es>

OMIP <http://www.omip.pt>

CEGH <http://www.cegh.at>

Nord Pool Spot <http://www.nordpoolspot.com>

PolPx Terms of use of PolPX data are available on <http://www.tge.pl>

GME <http://www.mercatoelettrico.org>

Bluenext Data source Jan 2011 – Nov 2012; source no longer available

Clearing house data

LCH www.lchclearnet.com