

Trayport Euro Commodities Report

Trayport Analysis Team
July 2018

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Editorial summary

July 2018: Lowest volume since April 2017, YoY TTF growth masks Euro Gas decline, German Power drives Euro Power YoY growth.

July 2018 saw 5.953 million monthly contracts traded, down 18% MoM, with total volumes the lowest recorded since April 2017. All groups fell vs June - UK Gas most notably down 28%, with Euro Gas, Euro Power and Coal all dropping 17% MoM. YTD we have seen 51.953 million monthly contracts traded, up 9% vs YTD 2017. With MoM metrics subject to seasonal distortion, YoY metrics are a valuable insight. Emissions, Euro Gas and Euro Power are up vs this time last year, whilst UK Gas, UK Power and Coal have all fallen. With the continental heatwave predicted to last until October, how will this shape European energy demand toward the end of the year?

Gas

All gas markets fell MoM, with Gaspool showing the largest drop, retreating 38%. Exchange executions saw gains in a number of the smaller gas markets, growing their share in the recently volatile France Hubs by 13%, with Gaspool and Austria VTP also showing exchange execution growth primarily at the expense of broker bilateral. NBP retreated 28% MoM to 951 TWh, while TTF fell 16% to 1,707 TWh, 179% of NBP's volume. Broker cleared lost 3% share in NBP's volume, with broker bilateral gaining 2%. TTF had the opposite story, where broker bilateral lost 2% share to broker cleared. YoY the picture is rather varied, PSV is up 37%, and TTF gained 17%. The latter's strong influence has pushed Euro Gas up 14% YoY, however this masks a weak summer for the smaller gas markets, five out of seven show flat or lower volumes against this time last year.

	Growth		Current Month Market Share			Exchange volume		
	Growth	Metric	Broker Bilateral	Broker Cleared	Exchange Executed	Auction	Continuous	Total
Gas								
						TWh		
NBP	-28%	MoM	43%	8%	49%	-	461.56	461.56
TTF	-16%	MoM	73%	7%	20%	-	337.18	337.18
NCG	-3%	MoM	88%	0%	12%	-	14.72	14.72
Gaspool	-38%	MoM	80%	1%	19%	-	13.23	13.23
France Hubs	-34%	MoM	66%	0%	34%	-	13.87	13.87
Austria VTP	-23%	MoM	75%	0%	25%	-	10.88	10.88
PSV	-6%	MoM	97%	1%	2%	-	1.47	1.47
ZEE	-31%	MoM	98%	0%	2%	-	0.43	0.43

Power

Power saw MoM declines in all markets except for Belgium Power, which shows strong growth in all three metrics. Nordic Power and Italian Power saw the largest MoM decline at 25% and 23% respectively, whilst German Power fell 19% MoM. Broker bilateral lost 5% market share in German Power, with 4% moving to exchange executions. Exchange executions currently hold 23% market share in German Power, the highest since April-17. Over the past year it has hovered around the high teens, against the 30% high seen in July 2016. Amongst other Euro Power markets, gains in market share were varied. CEE Power gained 14% in broker cleared at the cost of exchange executions, whilst Belgium Power saw a 12% decline in exchange executions split between broker cleared and broker bilateral. A quick look at YoY shows a strong picture. Euro Power is up 9% driven by German Power's 9% growth, only French Power and Dutch Power register negative change against July 2017.

	Growth		Current Month Market Share			Exchange volume		
	Growth	Metric	Broker Bilateral	Broker Cleared	Exchange Executed	Auction	Continuous	Total
Power								
						TWh		
UK Power	-7%	MoM	81%	0%	19%	12.67	1.47	14.14
German Power	-19%	MoM	64%	13%	23%	18.55	87.25	105.80
French Power	-3%	MoM	54%	15%	31%	10.04	9.48	19.52
Nordic Power	-25%	MoM	0%	43%	57%	-	48.66	48.66
Italian Power	-23%	MoM	14%	70%	16%	-	6.80	6.80
Spanish Power	-2%	MoM	8%	43%	49%	-	13.54	13.54
CEE Power	-9%	MoM	39%	14%	47%	-	21.13	21.13
Dutch Power	-16%	MoM	51%	12%	37%	3.16	5.56	8.72
Belgium Power	58%	MoM	58%	17%	25%	1.99	1.56	3.54

Coal

Coal's downward trend continues, as all markets fell MoM, YTD and YoY. API2 fell 13% MoM with broker cleared taking 3% market share from exchange executions. CME gained 1% in cleared market share, up to 25%. API2 front month price fell 3% to \$95.10 per tonne.

	Growth		Current Month Market Share			Exchange volume		
	Growth	Metric	Broker Bilateral	Broker Cleared	Exchange Executed	Auction	Continuous	Total
Coal			MMT					
API2	-13%	MoM	0%	58%	42%	-	38.73	38.73
API 4	-7%	MoM	0%	88%	12%	-	0.81	0.81
gC NEWC	-39%	MoM	1%	85%	14%	-	1.83	1.83

Emissions

Emissions fell 12% MoM however is up 49% YoY. CER registered strong broker cleared volumes despite the time of year, however remains considerably down (77%) YTD vs last year. EUA prices for Dec-18 rose 16% MoM to €17.40.

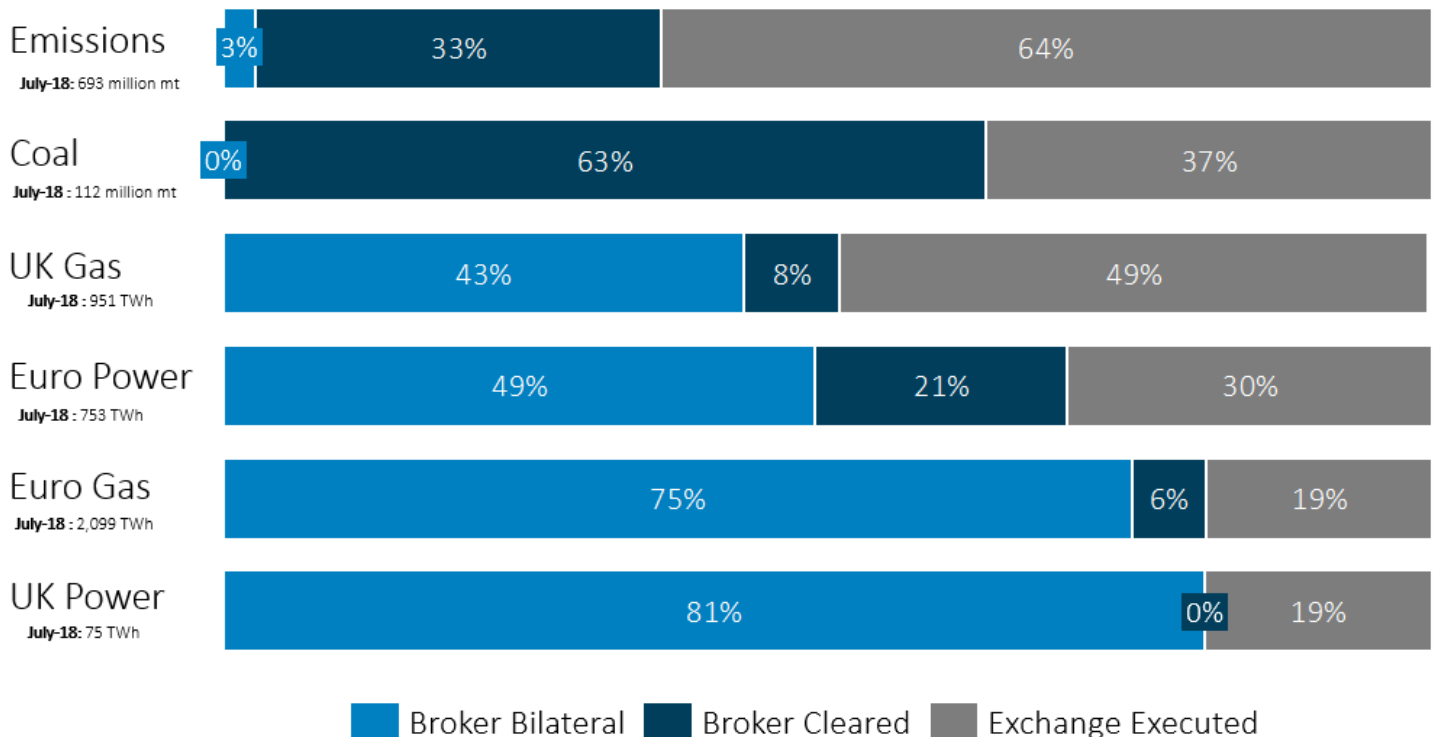
	Growth		Current Month Market Share			Exchange volume		
	Growth	Metric	Broker Bilateral	Broker Cleared	Exchange Executed	Auction	Continuous	Total
Emissions			MMT					
EUA	-13%	MoM	3%	33%	64%	89.26	351.62	440.88
CER	319%	MoM	0%	62%	38%	-	1.90	1.90

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

Information as at: 31 July 2018

Estimates based on Trayport analysis and market research

July 2018



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: 31 July 2018

Estimates based on Trayport analysis and market research

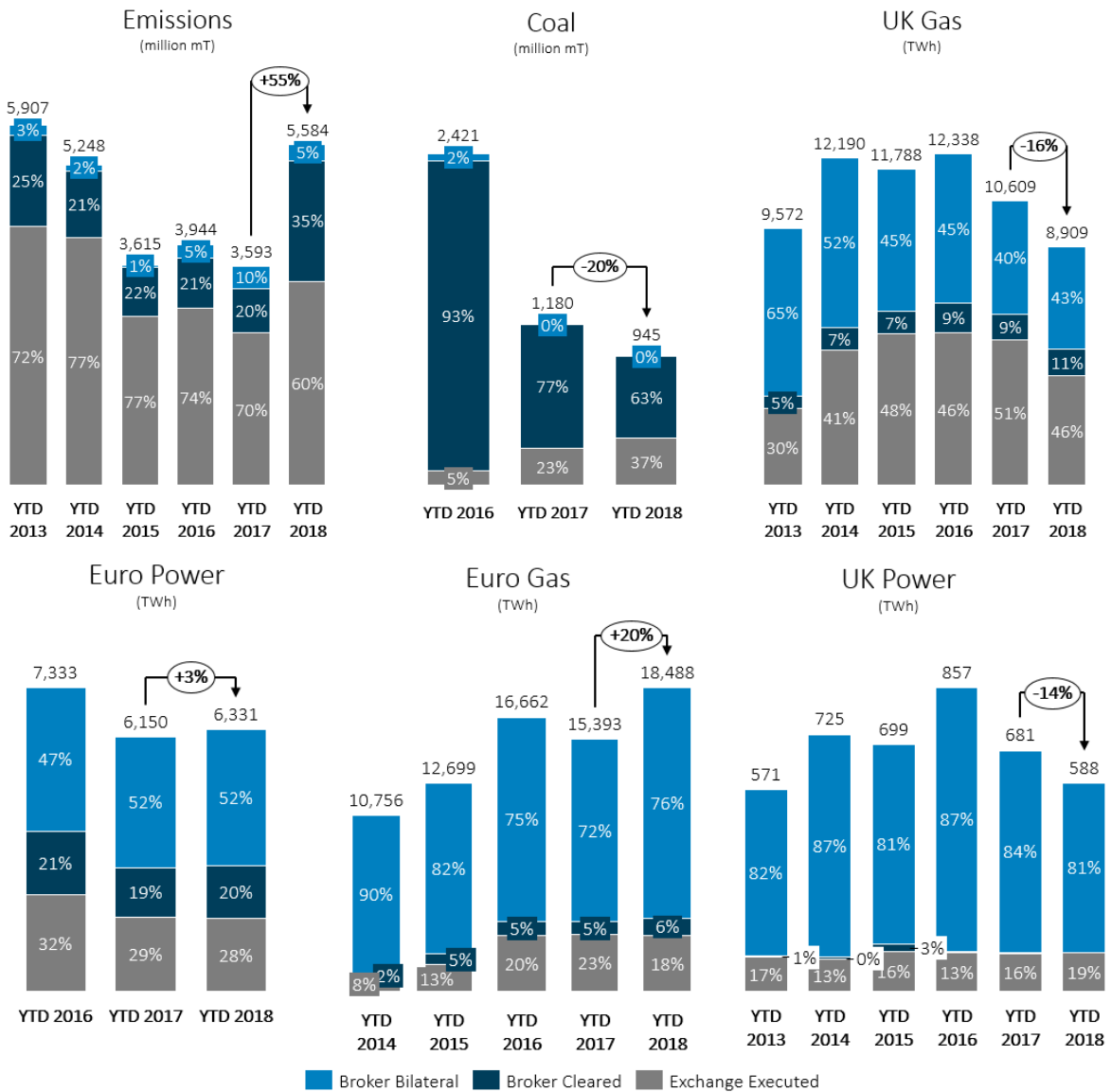


Table 2: Volume Traded Change

Commodity Class	MoM	YoY	YTD	Term	Definition
Emissions	-12%	49%	55%		
Coal	-17%	-17%	-20%	MoM	Current month volume versus previous month volume (e.g. October 2012 vs. September 2012)
UK Gas	-28%	-29%	-16%		
Euro Power	-17%	9%	3%	YoY	Current month volume versus same month last year volume
Euro Gas	-17%	14%	20%		
UK Power	-7%	-27%	-14%	YTD	Total volume YTD 2014 versus total volume YTD 2013 (e.g., Jan – Oct 2014 vs. Jan – Oct 2013)

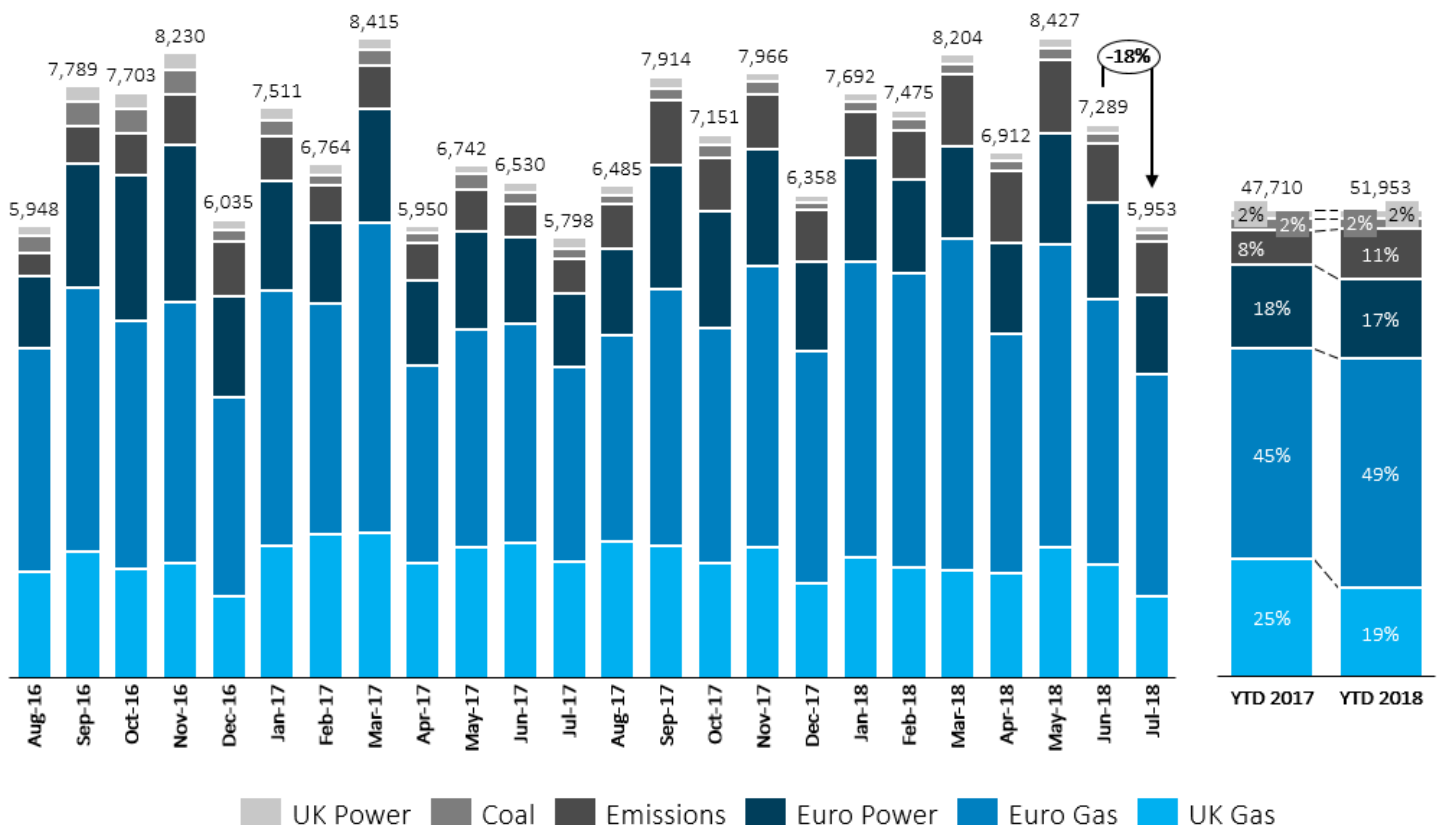
Note: Data sources on page 12.

European Energy Markets Composition: Total Euro Commodity Market Volumes

Information as at: 31 July 2018

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

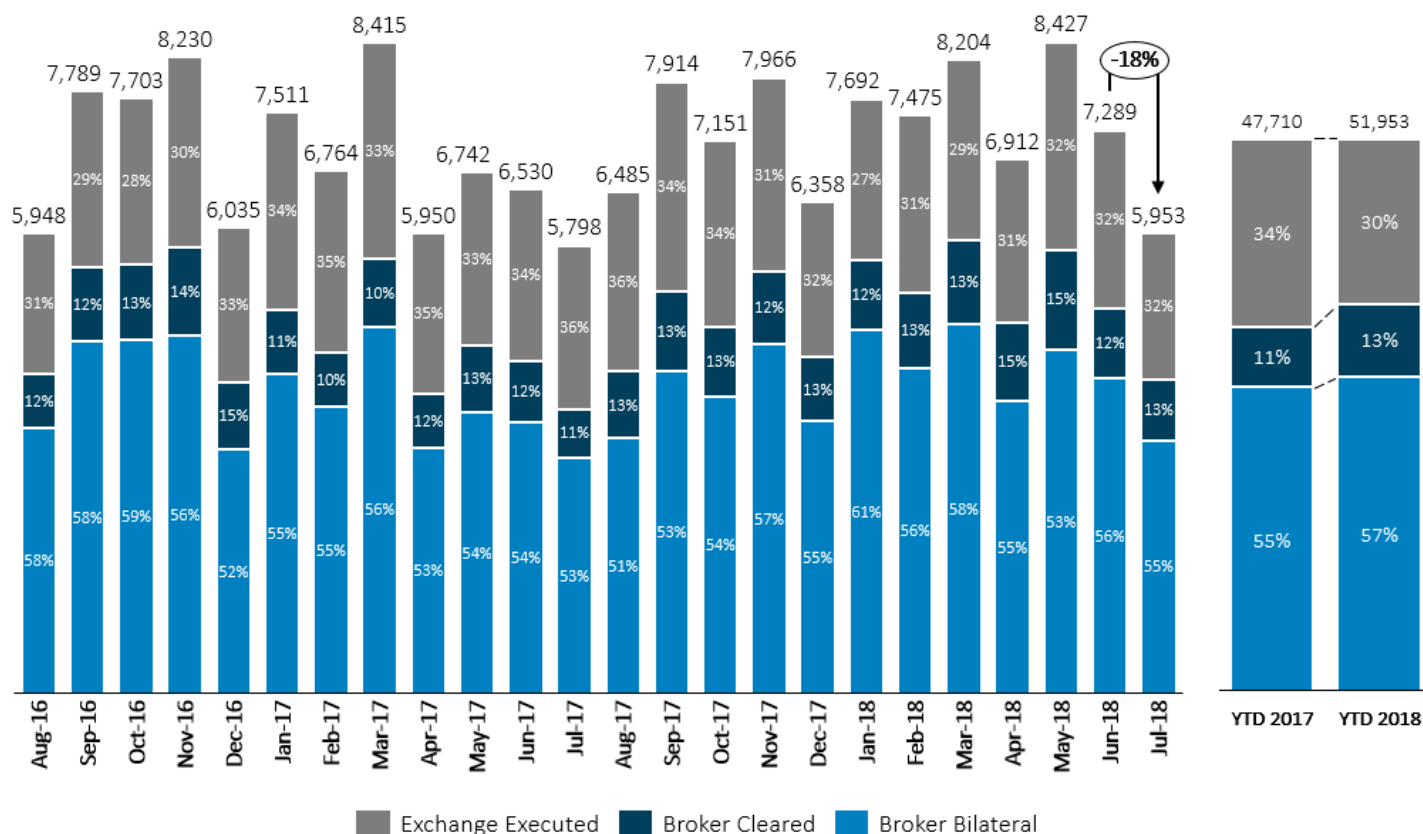
Monthly Contract Equivalents allow us to compare trading volumes across commodity classes that are traded in different volume units.

European Energy Markets Composition: Total Euro Commodity Market Volumes

Information as at: 31 July 2018

Estimates based on Trayport analysis and market research

(Monthly Contract Equivalents* 000's)



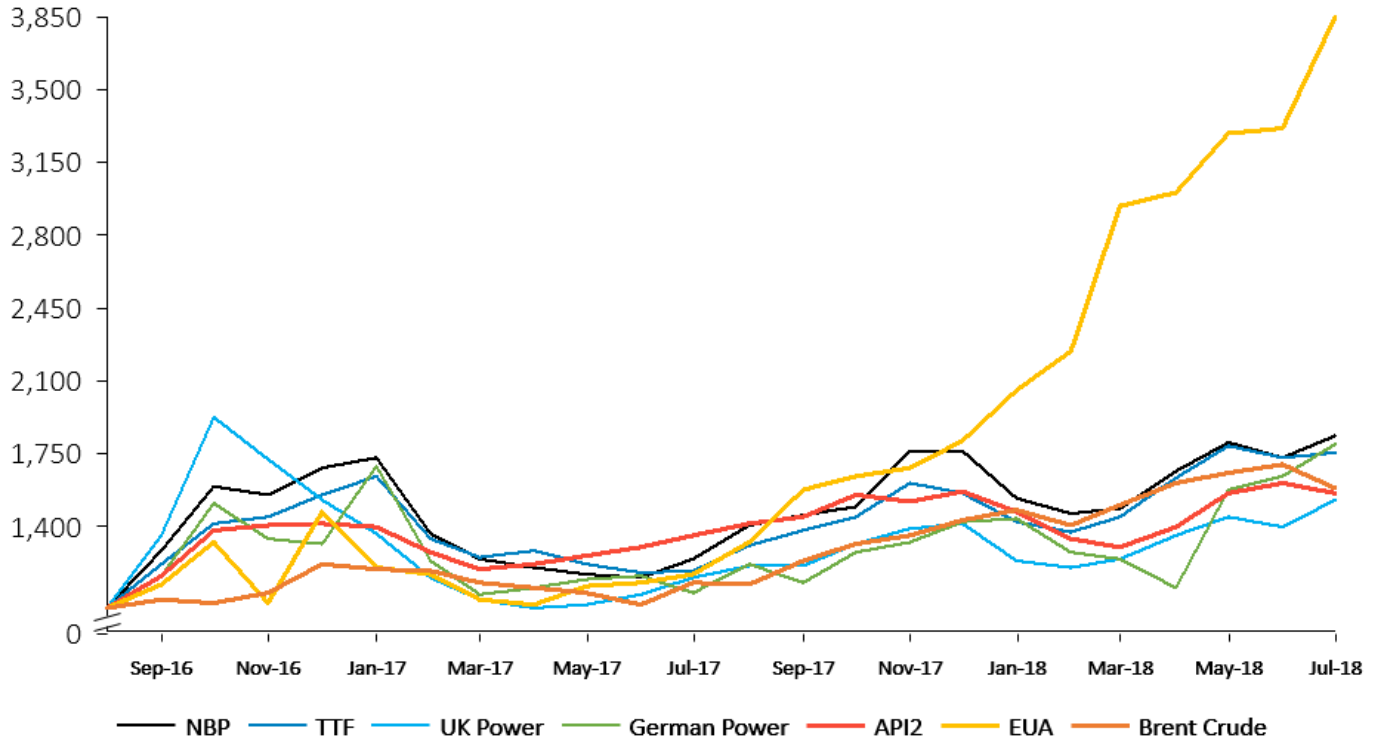
Note: Data sources on page 12.

*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: 31 July 2018

Estimates based on Trayport analysis and market research



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

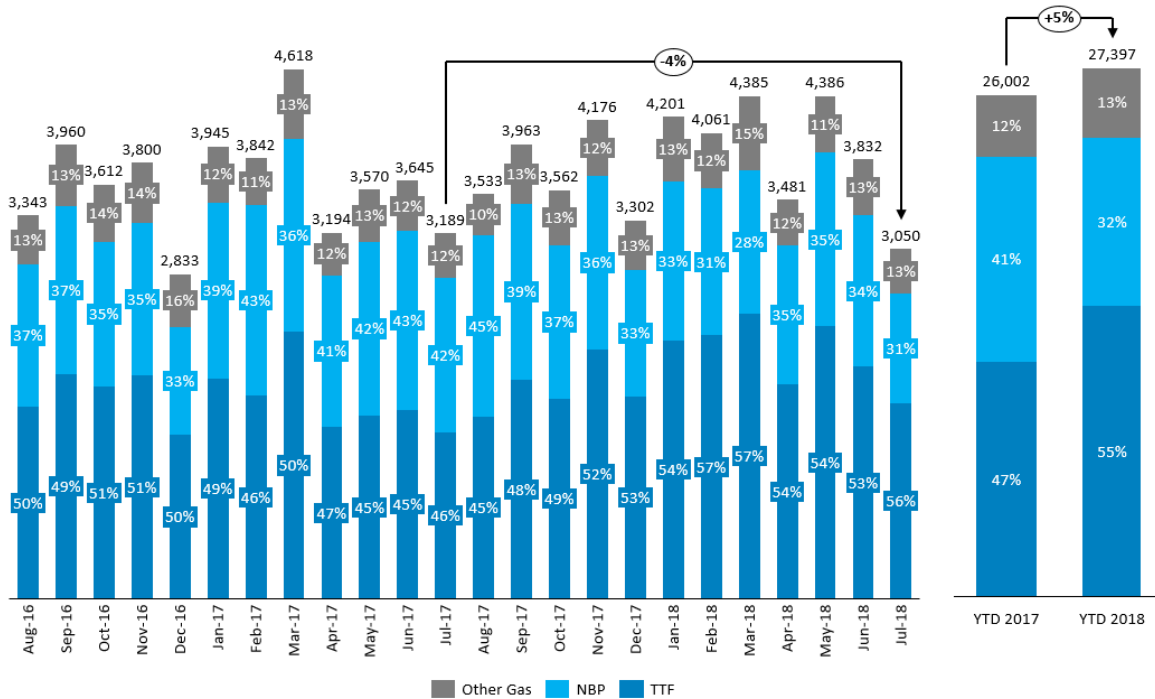
Note: Data sources on page 12.

Gas Hub Evolution

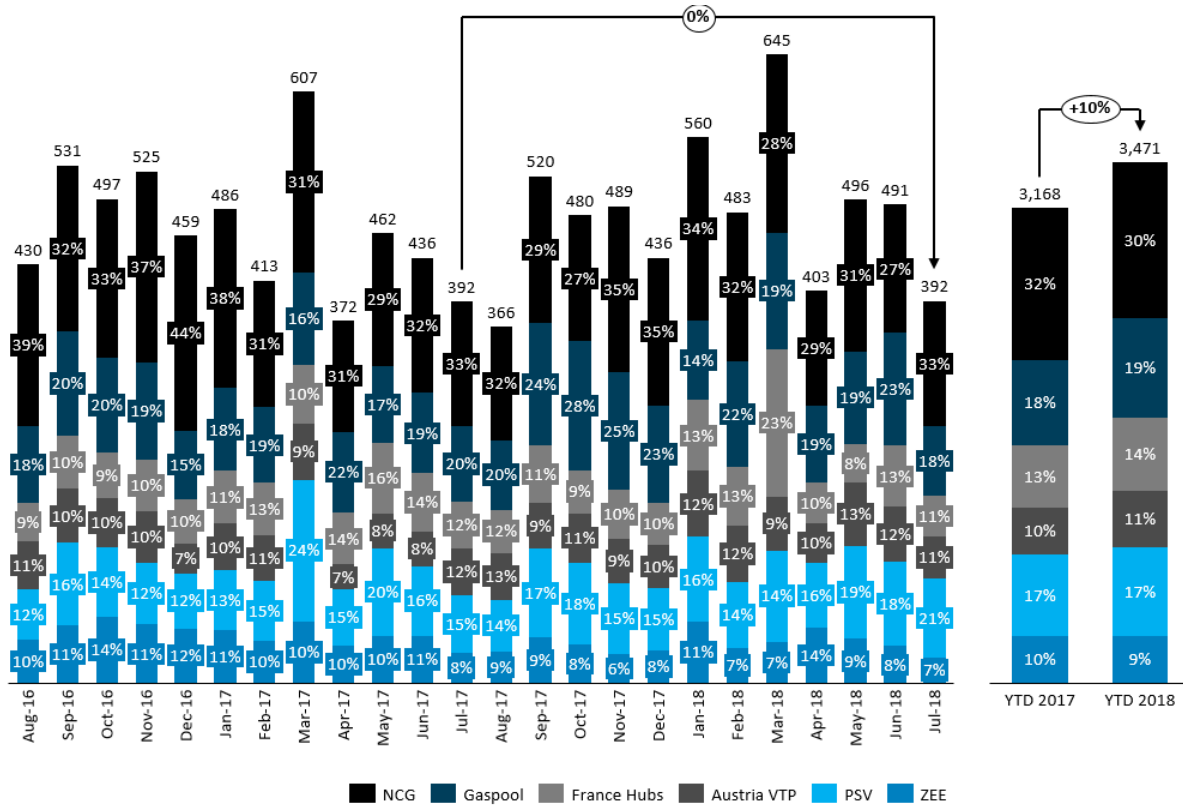
Information as at: 31 July 2018

Estimates based on Trayport analysis and market research

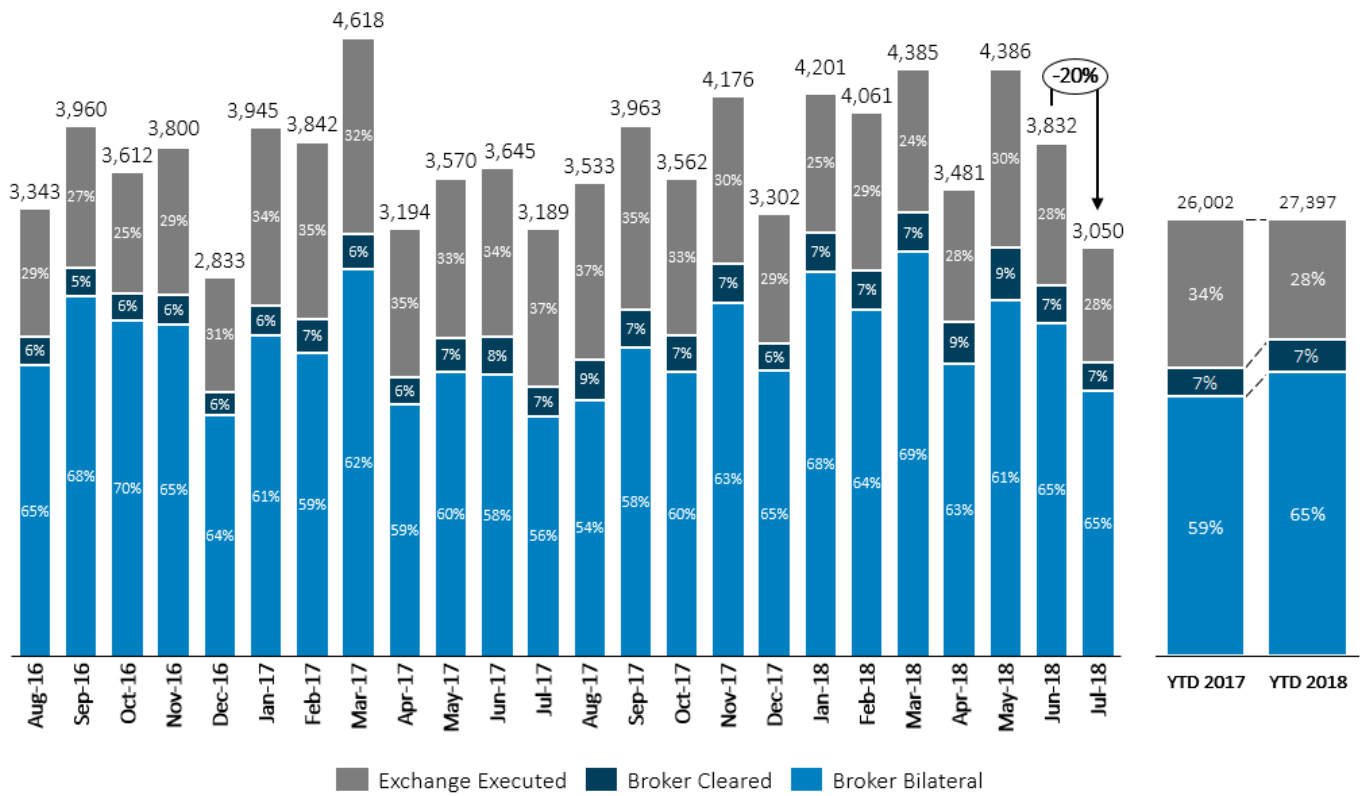
NBP, TTF & Other Gas Chart



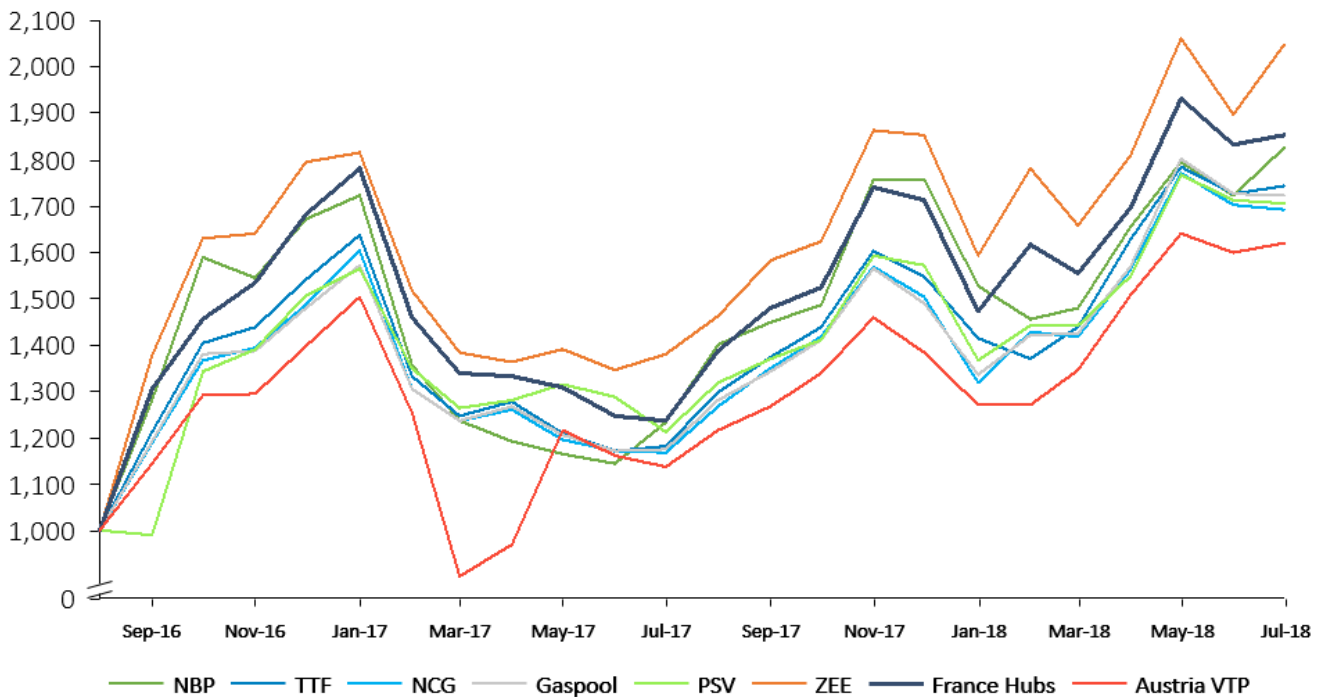
Other Gas Chart



Broker Bilateral / Broker Cleared / Exchange Executed chart



Price Indexation Chart

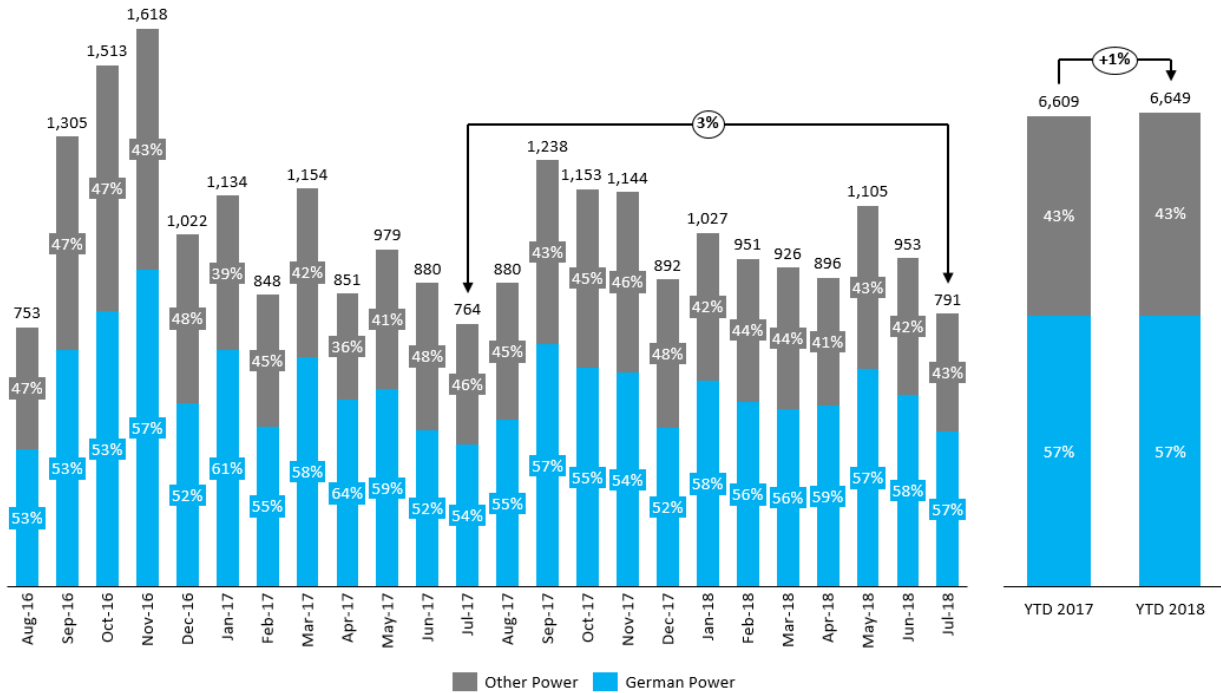


Power Market Evolution

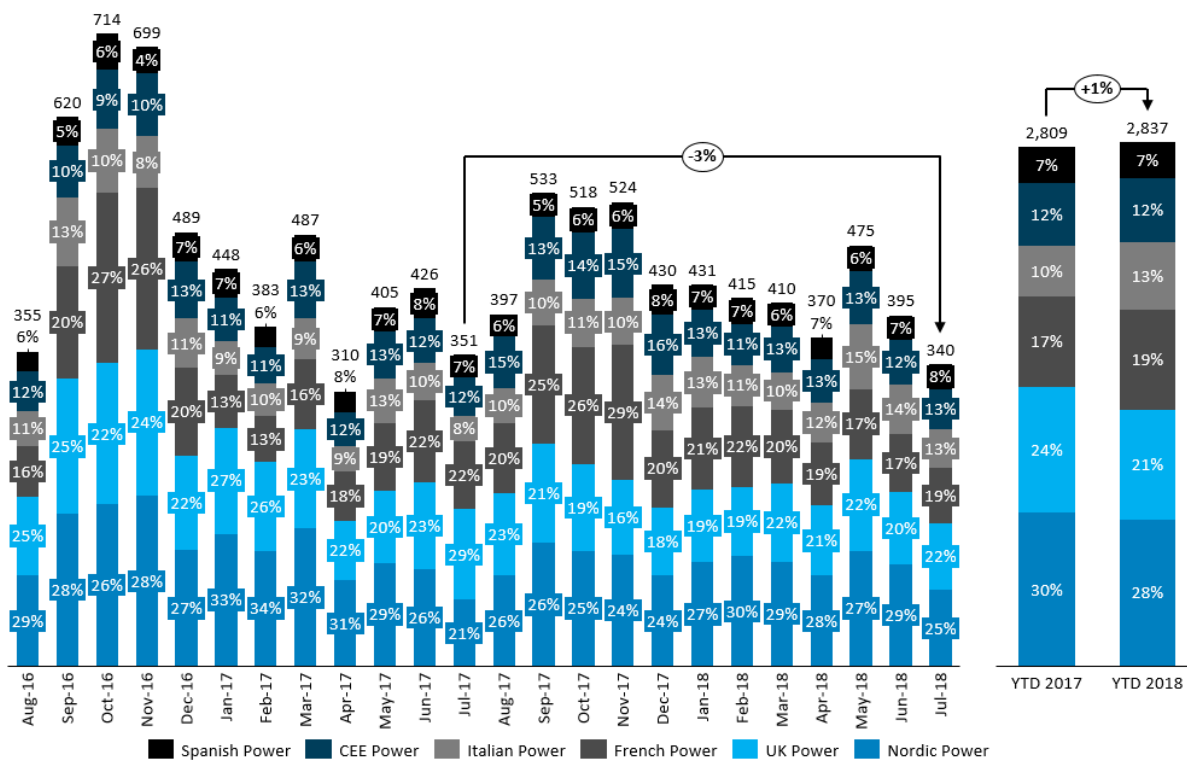
Information as at: 31 July 2018

Estimates based on Trayport analysis and market research

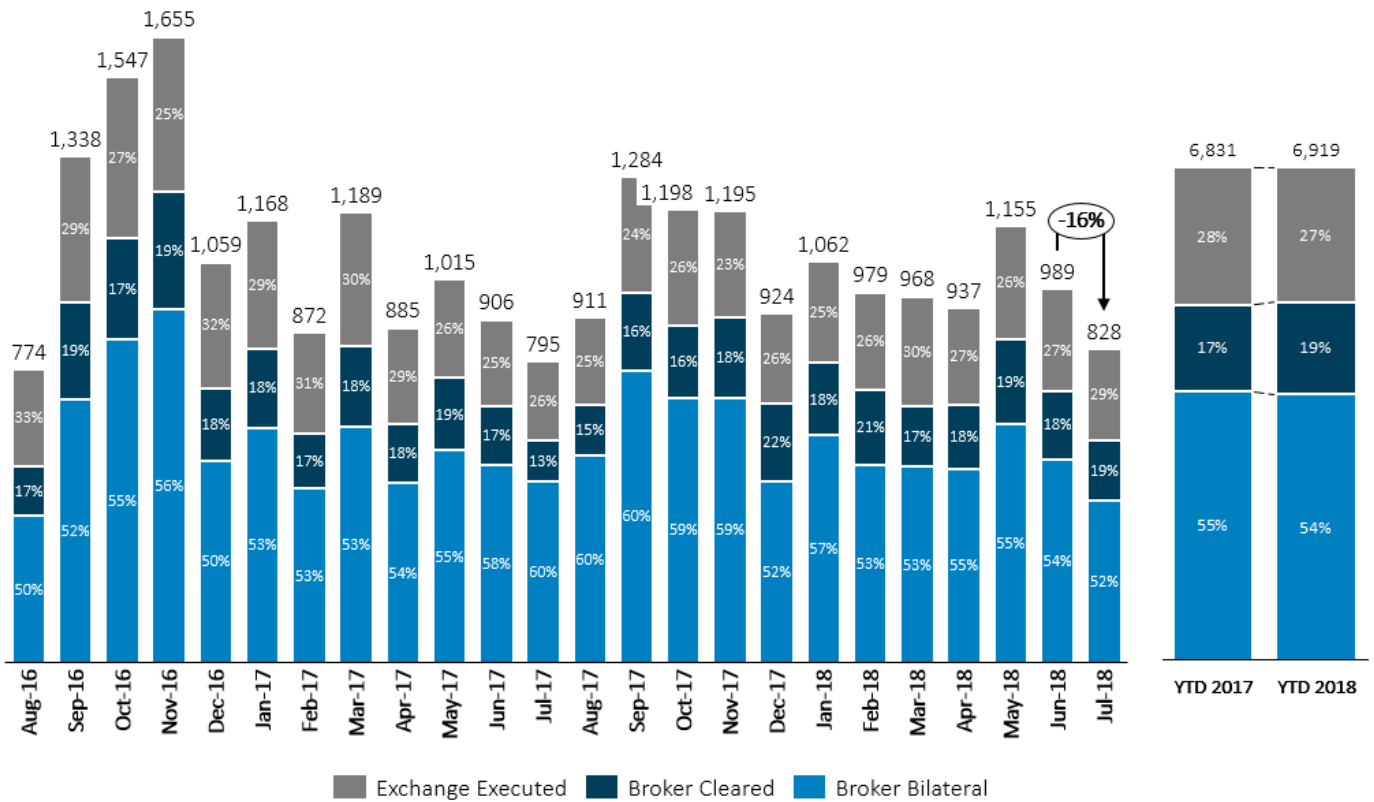
German Power & Other Power Chart



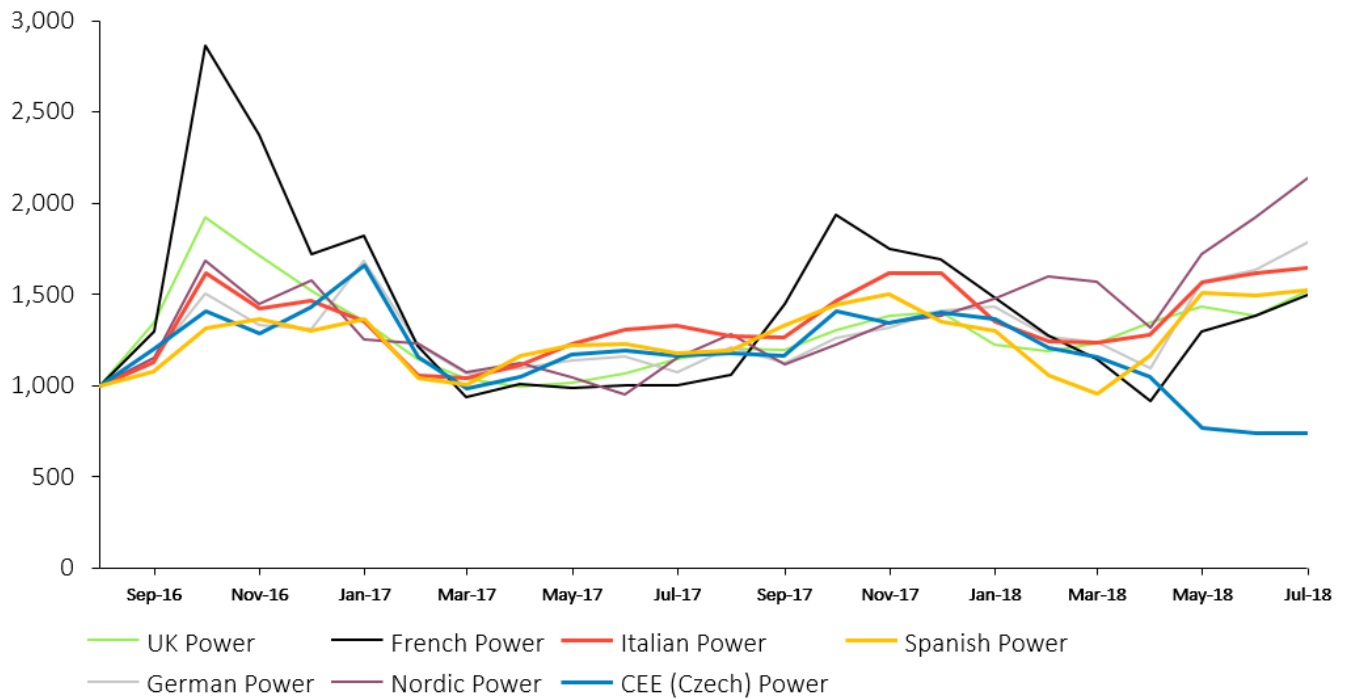
Other Power Chart



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