

Selected findings for the press

European Gas Trading 2019

16th edition of this popular report

Record Trading Volumes In 2018

In 2018, we estimate that the total volume of gas traded at European hubs was 52,604 TWh. This is a new annual trading volume record, beating the previous high of 51,145 TWh, set in 2016, by 3%. In 2017, trading activity had dipped by 2%, but between 2017 and 2018 it grew by 5%.

While volume growth was modest in 2018, market value rose sharply as gas prices increased by around 30% on 2017 on average across the year. We estimate that gas contracts worth €1,190 bn changed hands in the wholesale markets during 2018, up by 35% from 2017. This is the first time that the nominal value of gas contracts traded in a year has exceeded one trillion euro.

Table 1 Top Markets - Estimated Gas Trading Volumes, 2018

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TWh

Country	2018	% change 2017-18	Trading multiple of national demand
Netherlands	27,219.0	+28%	68.6
UK	16,176.9	-19%	18.5
Germany	4,231.0	+5%	4.3
France	1,154.3	+3%	2.4
Italy	1,110.0	-2%	1.4
Belgium	1,027.1	-2%	5.2
Other Markets	1,685.7	+12%	
Total European Trading	52,604.0	+5%	10.2

Source: Prospex Research

The growth in trading was far from evenly spread across European markets. The Dutch TTF market raced ahead, posting a 28% gain in 2018 and recovering from a small dip in annual trading volumes in 2017. In contrast, trading activity in the British NBP market contracted for the third year running - volumes slumped by 19% in the year.

Outside these two dominant markets, although the performance of the individual smaller trading hubs was mixed, overall trading volumes increased by 4%, continuing a long trend of steady expansion of trading in these markets.

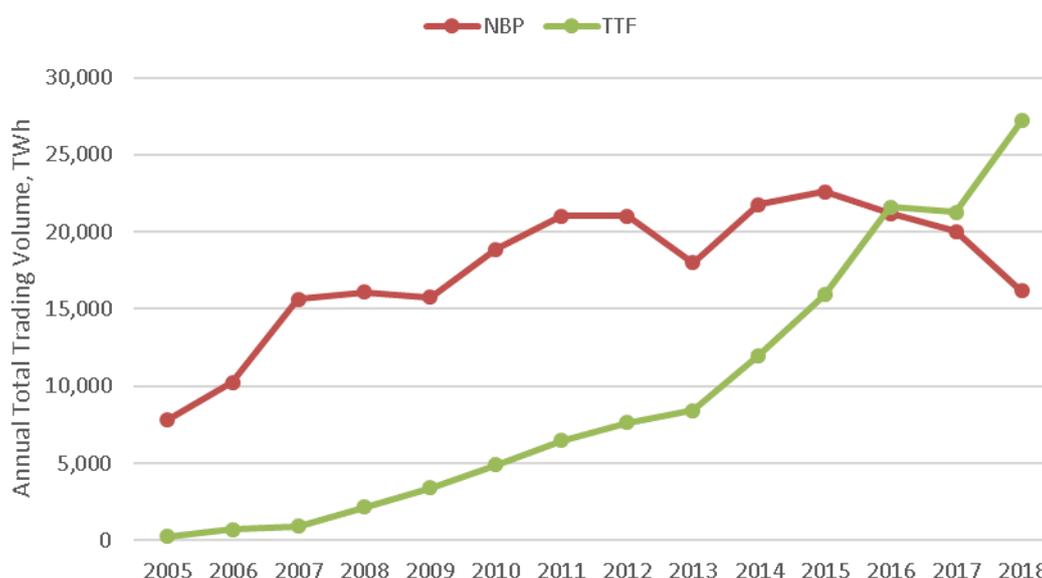
These trends have continued into 2019, with trading volumes continuing to fall sharply in the NBP market (down by around 25% year-on-year) but growing strongly in the TTF market (up by nearly 30%). Total European gas trading volumes were up by around 10% year-on-year in the first few months of 2019.

TTF Now Dominates European Gas Trading

The annual total of trading activity at the Dutch Title Transfer Facility (TTF) hub narrowly overtook volumes in the British NBP market for the first time in 2016. By 2018, the annual trading volume at TTF was 68% higher than at NBP. And in 1H 2019, we estimate that TTF had trading volumes around three times those of the NBP market.

In 2018, on an annual basis, the NBP market remained Europe’s largest market for exchange futures trading of gas, but in the final months of the year, there was more futures volume traded at TTF than at NBP. The TTF market was already far larger than NBP for OTC trading of gas for forward delivery. TTF has also surpassed NBP in exchange-trading volumes for spot gas and for options contracts. So, by the end of the year, TTF had higher volumes than NBP in all forms of trading.

Chart 1 Total Annual Trading Volume at NBP and TTF, 2005 - 2018



Source: Prospex Research

The NBP market was already a well-established trading market when TTF came into being in 2003. Its liquidity naturally attracted traders of all kinds, both mainland European physical suppliers wanting to hedge forward price risks and overseas trading and investment companies seeking exposure to European gas prices. But Britain was never a natural focal point for European gas trading, being geographically peripheral, with only two direct pipeline links to the mainland and trading gas in different currency and units to the rest of Europe.

The Dutch market is perhaps also not the most likely focal point for European gas trading, being a relatively small consumption market compared with its huge neighbour

Germany. But TTF gained an early advantage among mainland markets by being a well-designed market in a fully competitive gas economy with stable and trading-friendly regulation, at a time when France was trying to hold back market liberalisation and Germany was struggling and failing to implement it. By the time the larger consuming countries introduced workable wholesale gas trading hubs, TTF was already established as the mainland venue of choice for forward gas trading.

The transfer of trading liquidity from NBP to TTF appears to be happening, like Ernest Hemingway's bankruptcy, "gradually, then suddenly." The last 18 months have seen a clear acceleration in the decline of NBP trading volumes, and strong growth at TTF.

In addition, the NBP market has not been helped by the 2017 closure of the UK's Rough storage facility, which has reduced the opportunity for trading around storage injection and withdrawals, nor by the regulatory uncertainty caused by the UK's decision to leave the EU.

Highest Ever Churn Factor

The quantity of gas traded at European hubs in 2018 was 10.2 times the amount used by European consumers in the same period. This is a record level for the Europe-wide churn factor for natural gas. It is much higher than the comparable figure for European electricity trading, where the churn factor across major markets is around four. But it is still far lower than the churn factors seen in some other commodities, such as oil.

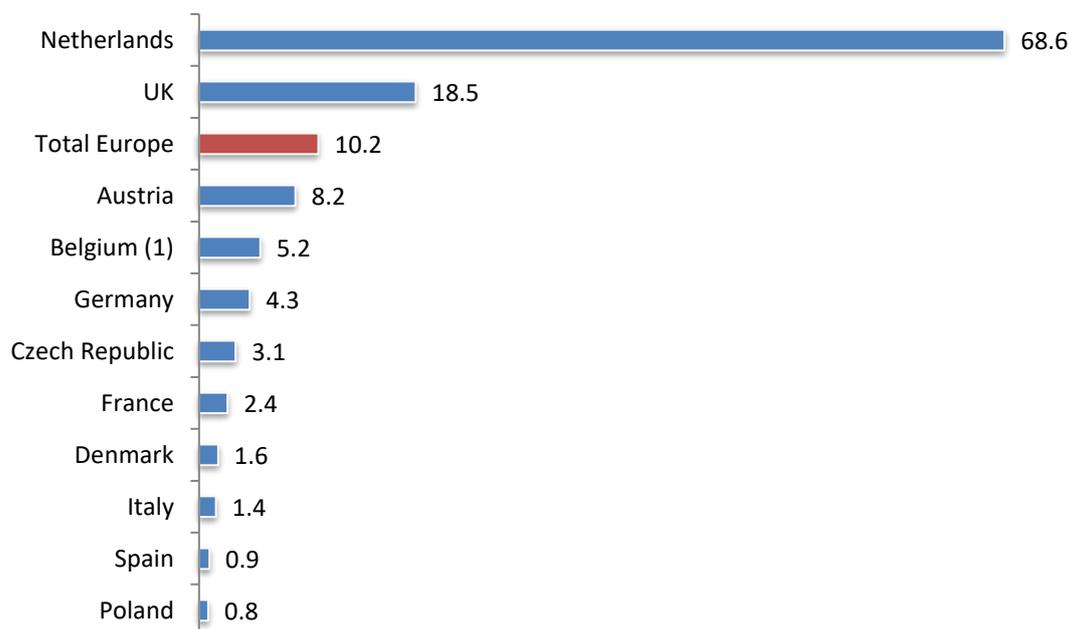
The TTF market has by far the highest churn factor, with traded volume exceeding Dutch annual consumption by a record factor of 68.6 in 2018. But the figure is arguably misleading, as the quantity of gas transmitted each year on the Dutch network is far higher than Dutch national consumption; TTF trading volumes are only 29 times larger than this underlying physical flow.

Furthermore, TTF is not only a market for Dutch gas, but effectively the main forward gas trading venue for a much broader region of north-west Europe, comprising Germany, France and the Benelux countries. Trading volumes at TTF are only 13.3 times higher than the combined annual gas consumption of these countries.

Trading at NBP in 2018 was 18.5 times UK gas consumption, or 17.3 times combined UK and Irish consumption. These figures are substantially lower than the NBP market's highest recorded churn factor of 28.2 in 2015.

Chart 2 European Gas Market Churn Factors, 2018

Total trading volumes as a multiple of national gas consumption



(1) Based on national consumption of both Belgium and Luxembourg

Source: BP / industry sources / regulators / exchanges / hub operators / Prospex Research

Exchange Trading Volumes Dip

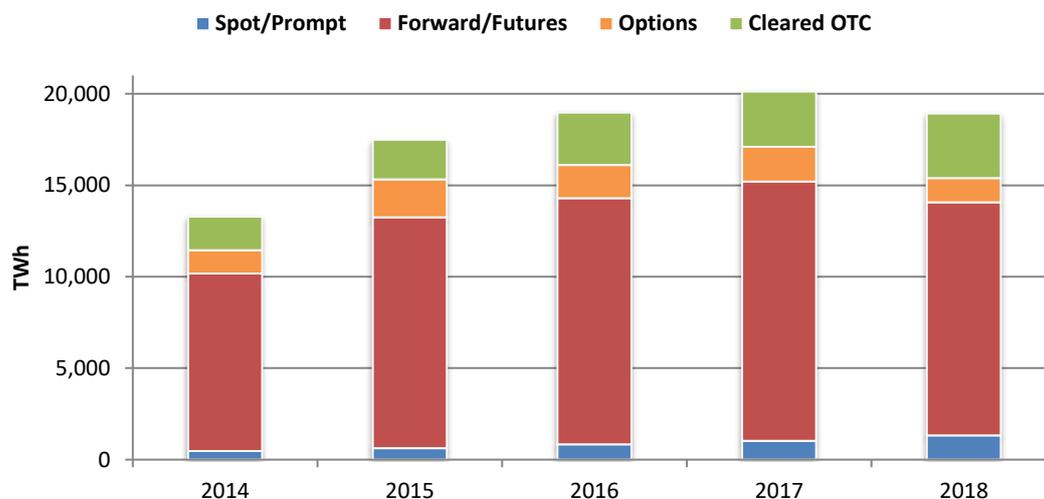
Although overall trading volumes were up in 2018, the volume of trading handled by exchanges fell by 6%. This reverses the trend of the previous five years, in which exchange trading volumes have grown quite strongly.

Most of the exchange trading activity in European natural gas involves futures contracts, either traded directly on the exchange or as cleared OTC trades. Options contracts and spot exchange trading make up a much smaller part of the market. Almost all of the futures and options trading occurs within the NBP and TTF markets.

The decline in exchange trading volume in 2018 is attributable entirely to a sharp drop in futures and options trading in the NBP market. Futures and options trading at TTF grew robustly. In early 2019, growth in exchange trading at TTF has outweighed the continued shrinkage at NBP and total European exchange volumes are growing again.

Exchange spot trading was once again the fastest-growing sector, extending a long run of continuous growth. The volumes here are small, as each trade is for only a small quantity of gas, but the number of trades is high.

Chart 2 Gas Exchange Trading Volumes by Contract Type, 2014 - 2018



Source: exchanges / Prospex Research

Two exchange operators, ICE and PEGAS, dominate exchange trading of European gas. In 2018, ICE handled essentially all NBP exchange trading and over 85% of TTF exchange trading but had very little presence at other hubs. ICE’s dominance of Europe’s two largest exchange markets gave it an annual trading volume of over 16,500 TWh in 2018, more than eight times the volume traded on its nearest rival, PEGAS.

PEGAS plays almost no role in the NBP market (although it does offer NBP products), but it handled 12% of TTF exchange trading and 78% of all exchange trading outside the NBP and TTF markets. PEGAS is particularly strong in exchange trading of gas for spot delivery (intra-day and day-ahead), with an 84% share of this market across Europe.

Report Structure

This 126-page report offers a comprehensive analysis of European gas trading volumes, markets, brokers and exchanges, regulatory issues and more. The market's dimensions and trends are profiled in 24 tables and 38 charts. The report is structured as follows:

- X **Chapter 1 – European Gas Markets Profile:** this chapter profiles the physical market for gas in Europe and its relationship to other world markets. It reviews the absolute and relative volumes and trends in gas produced and consumed in Europe, and Europe's main sources of external supply. It places these in the context of global production, flows and consumption of natural gas.
- X **Chapter 2 - Regulation:** This chapter outlines the legislative and regulatory framework within which European gas trading occurs. It reviews the EU regulations that created the competitive market for gas and established detailed rules for market operation. It also reviews European regulation of energy trading activity and the financial trading regulations that impact energy trading.
- X **Chapter 3 – Trading Activity:** This chapter reviews the development of trading volumes, including exchange and OTC activity, at Europe's gas trading hubs. It presents the overall performance of European gas trading during 2018 and the individual performance of each of the main trading markets. It provides analysis of trading volumes in comparison to physical gas consumption, and of the distribution of trading activity and growth or contraction between exchange and OTC trading sectors.
- X **Chapter 4 – Trading Markets:** This chapter reviews the trading venues for natural gas in Europe, covering the OTC markets, exchange spot, futures and options trading, and cleared OTC trading. It includes a detailed analysis of trading volumes in each of these sectors, and covers the characteristics, key features and performance of the exchanges on which gas can be traded.
- X **Chapter 5 – Gas Prices:** This chapter starts with a survey of the market events that drove gas prices during 2018 and 1H 2019. It presents analysis of the recent development of price volatility and price spreads that are key to trading profit. It discusses the linkages between international gas prices, as well as the main price drivers and the role of oil indexation in European gas.
- X **Chapter 6 - Definitions and Conversion Factors:** this chapter explains the units, unit conversion factors and currency conversions used in this report.

About the Author

Nigel Harris is an independent energy market consultant with around 30 years' experience of working with energy traders, providing analysis, training, information and technology services to companies engaged in the oil, gas and electricity markets.

Kingston Energy Consulting, which Nigel founded with Mary Jackson, is a consulting company that specialises in wholesale energy markets. It provides education, research and advisory services to companies that trade in the oil, gas and electric power markets and the support companies that serve them.

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About the Publisher

We research and report on Europe's wholesale markets for power, natural gas, coal and emissions allowances. Our work covers topics such as trading volumes, marketplaces and leading players. We also assess the commercial framework of energy trading operations, from market fundamentals to regulatory developments.

Our customers include energy traders and producers, exchange and OTC sector service providers, project developers, professional advisers, financial institutions, regulators, energy-intensive industry, trading technology companies, and energy equipment companies.

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