

Section 4 - Gas

Key results show:

The most notable developments this quarter can be found in the trade data. Imports reached a new record high for Q1 in any year, rising 14 per cent to 193 TWh as imports from Belgium and the Netherlands more than doubled and pipeline imports increased by a fifth (**Chart 4.5**).

In contrast exports fell 40 per cent to the lowest level recorded this century, driven by lower pipeline exports to Belgium and the Netherlands. Subsequently net imports reached 184 TWh, the highest recorded volume for any quarter (**Chart 4.4**).

The increase in net imports was driven by strong demand of 312 TWh, up 7.4 per cent compared to Q1 2017 (**Chart 4.6**). Colder weather brought about in part by the 'Beast from the East' resulted in a 16 per cent increase in domestic gas use, which underpinned a 13 per cent increase in total final consumption. (**Chart 4.6**).

Demand for electricity generation fell against the previous year for the fourth quarter in a row in Q1 2018, down 1.9 per cent (**Chart 4.6**), because increased output from renewable energy has been displacing gas, as shown in Chapter 5.

Imports of LNG decreased by 14 per cent as its share of imports diminishes (**Chart 4.4**). Q1 2018 saw the first LNG cargoes from Russia to enter UK supply. These accounted for less than 1 per cent of imports over the three months (**Chart 4.5**).

Relevant table

4.1: Natural gas supply and consumption

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Contacts for further information:

Benjamin Lucking

Upstream gas

Oil and Gas Statistics Team

Tel. 0300 066 5010

E-mail: Benjamin.Lucking@beis.gov.uk

James Halliwell

Downstream gas

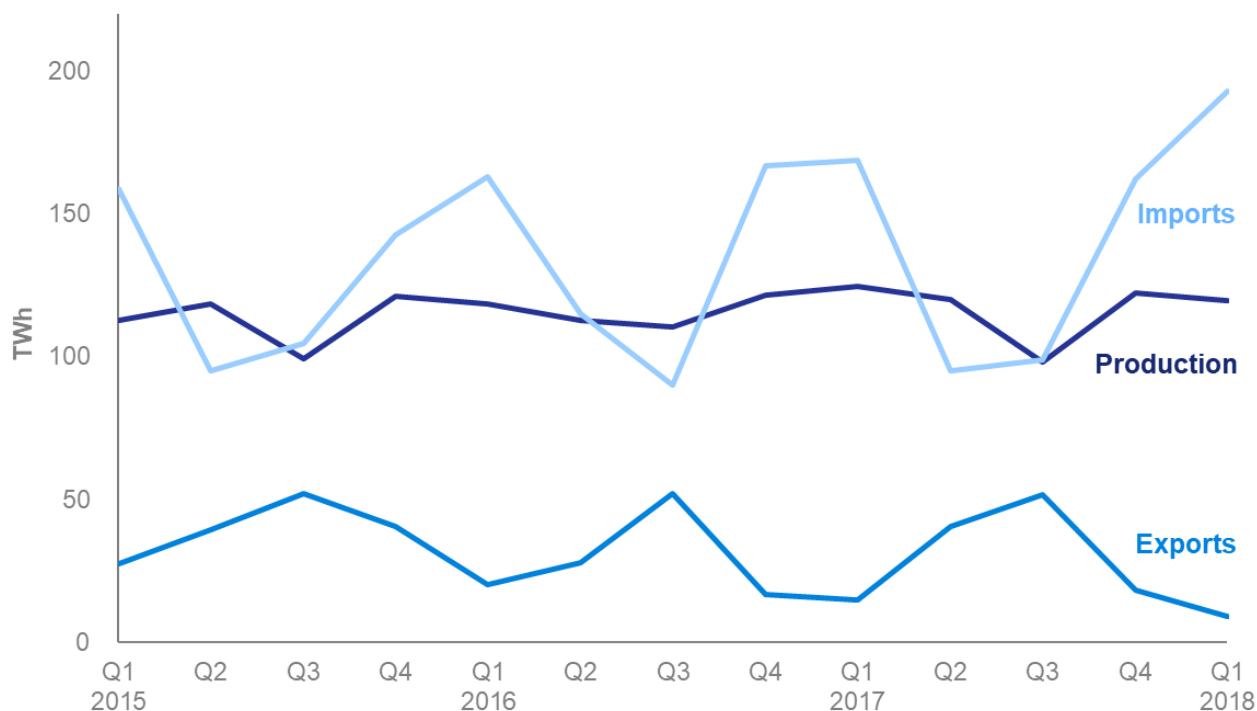
Oil and Gas Statistics Team

Tel. 0300 068 8121

E-mail: James.Halliwell@beis.gov.uk

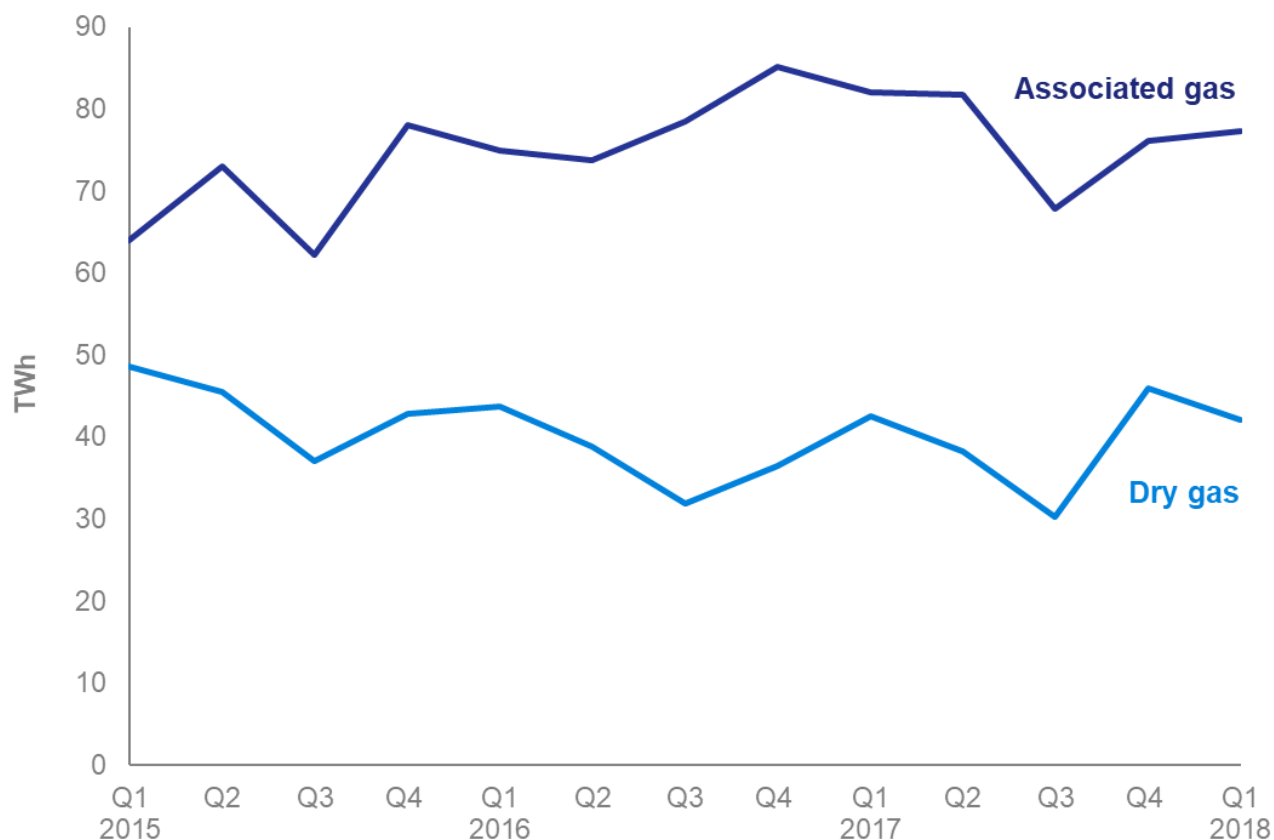
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Chart 4.1 Production and imports and exports of natural gas (Table 4.1)



Gross production of natural gas in Q1 2018 declined by 4.1 per cent following particularly strong production this time last year. Production remains around a third of peak levels seen in Q1 2000. The drawing down of reserves from the Rough facility before its closure continued adding to production this quarter.

Imports in Q1 2018 were up 14 per cent on the same quarter in 2017 to a record high, driven by the increase in gas demand which was met primarily with pipeline imports. In contrast, exports decreased by nearly 40 percent over the same period, reaching the lowest levels for any quarter since the late 1990s. This led to a 20 per cent increase in net imports to 184 TWh, a record high for any quarter. For more detail on trade see Charts 4.4 and 4.5.

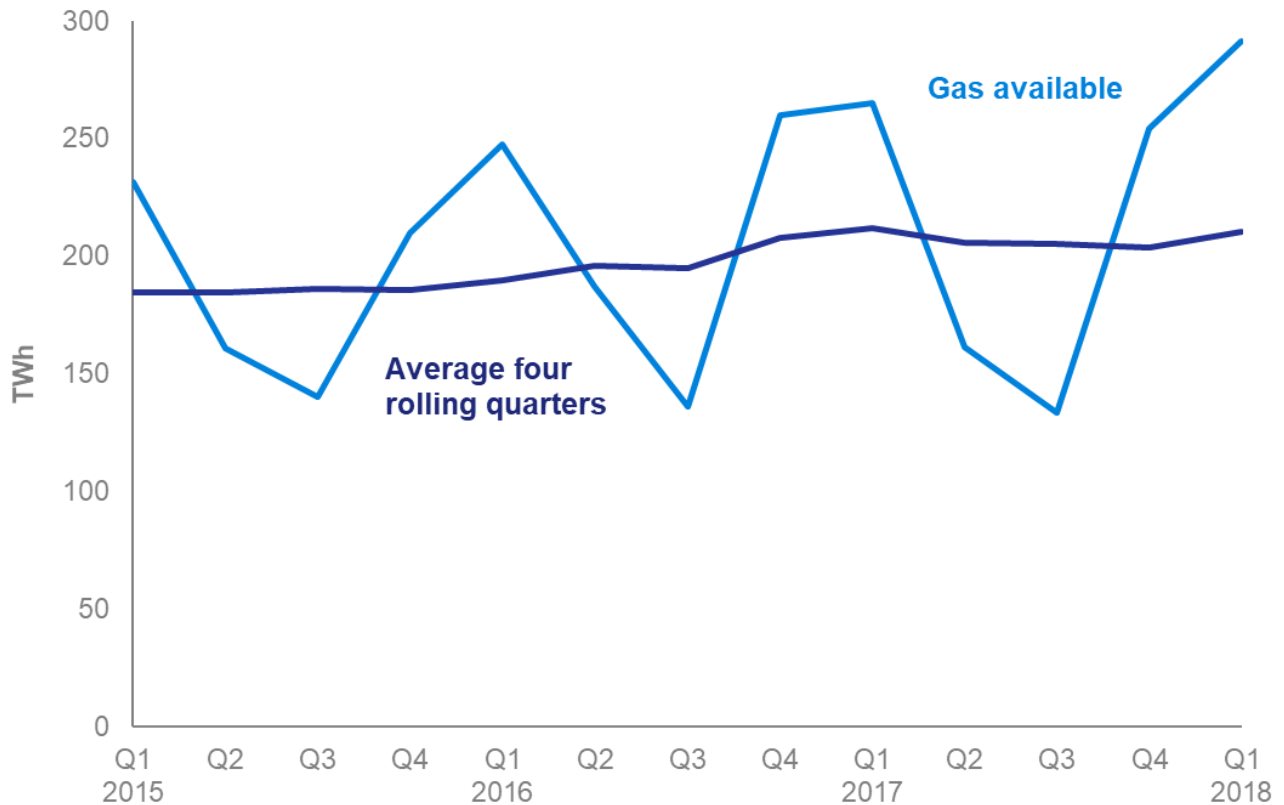
Chart 4.2 Production of dry gas and associated gas (not shown in published tables)

Production of associated gas (natural gas produced from oil fields) in Q1 2018 fell by 5.7 per cent against Q1 2017, from 82 TWh to 77 TWh.

Compared to the same quarter in 2017 dry gas production (natural gas composed mainly of methane) decreased by 0.8 per cent to 42 TWh.

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Chart 4.3 Gas availability (Table 4.2)

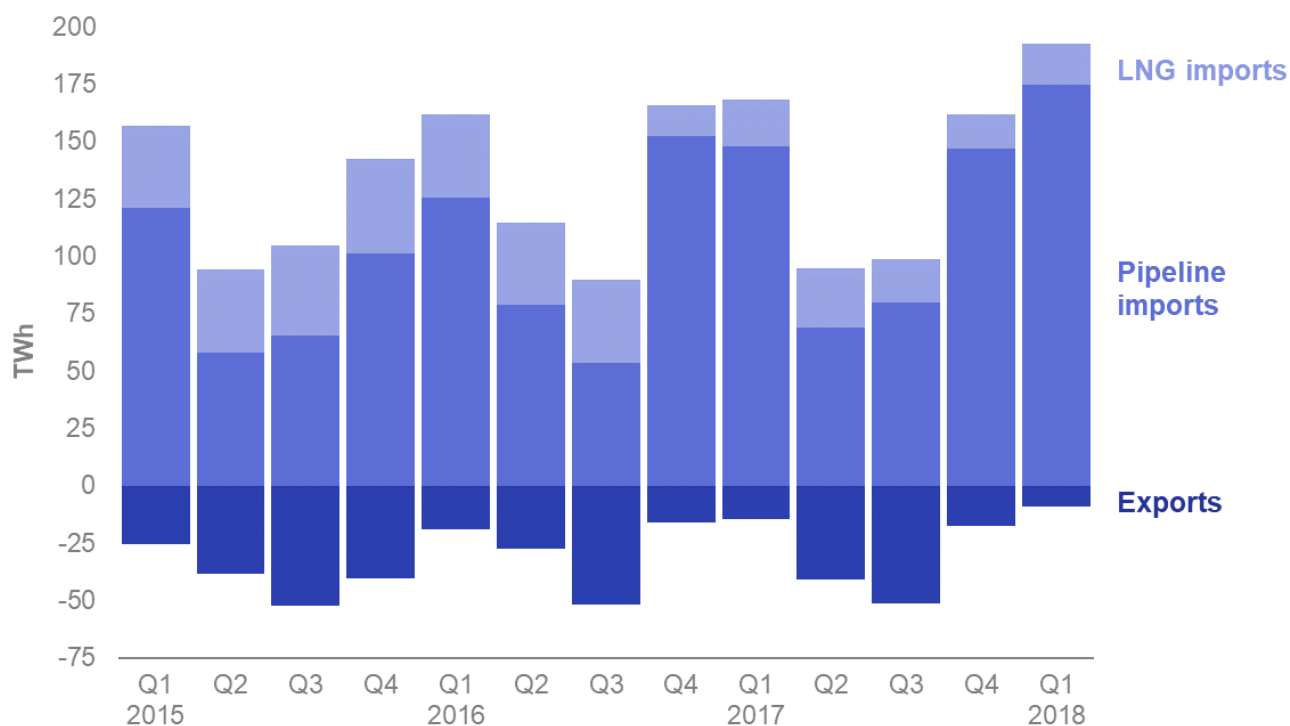


Gas available at terminals is equal to the gross gas production minus producers own use, plus net imports.

Gas availability is seasonal, mirroring gas demand, and peaks during Q1 and Q4 each year. There was a particular peak in demand in Q1 this year meaning gas availability increased to 291 TWh, up 9.9 per cent. The strong demand reflected the notably colder temperatures brought over during the 'Beast from the East' and consequent increase in heating degree days in this period. The high demand was met with the increase in net imports.

The long-term picture shows that the average availability of gas over 4 rolling quarters has been gradually rising since the start of 2015 reaching volumes close to 2012/2013 levels in 2017, after figures had decreased in 2014.

Chart 4.4 Import and exports (Table 4.3 and Table 4.4)



As shown in Map 4.1, the UK imports natural gas primarily from Norway (predominantly via the Langeled, Tampen Link and Gjoa/Vega pipelines). Smaller volumes are imported from Belgium (via the UK-Belgium Interconnector) and the Netherlands (via the Balgzand to Bacton line).

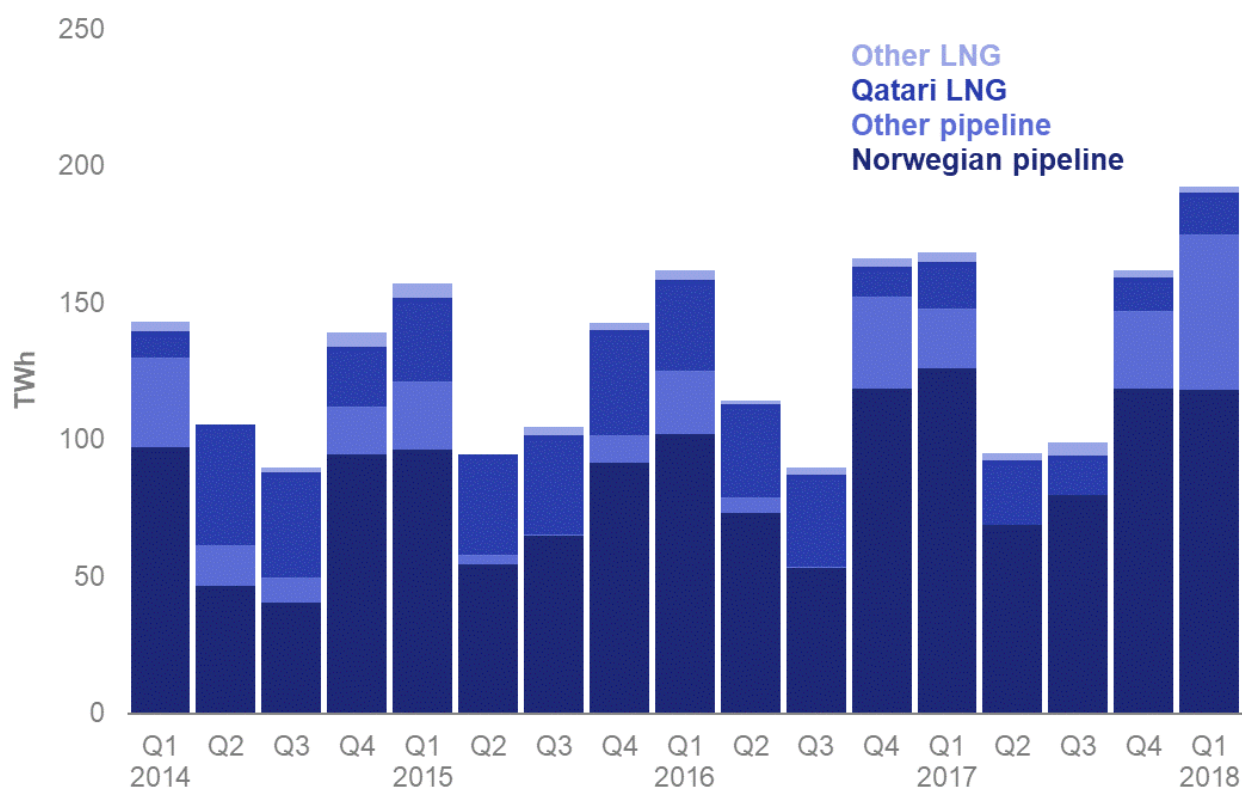
Net imports during Q1 2018 reached a high of 184 TWh, a record level for any quarter and up one-fifth on last year. While exports dropped sharply (down 40 per cent) total imports reached the highest levels of the first quarter of any year, increasing by 14 per cent on the same period in 2017 to meet strong demand.

Pipeline imports were up by 18 per cent, with imports from the Netherlands and Belgium both more than doubling (and a decrease in exports to these countries drove the 40 per cent fall as pipelines were used to supply the UK). Imports of LNG decreased by 14 per cent on Q1 2017 and now account for only nine per cent of total imports as volumes remain muted.

Liquefied Natural Gas 'reloads' started in late 2014 and have continued since with the UK exporting to countries including Brazil, Pakistan and the United Arab Emirates.

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Chart 4.5 Imports by origin (Table 4.4)

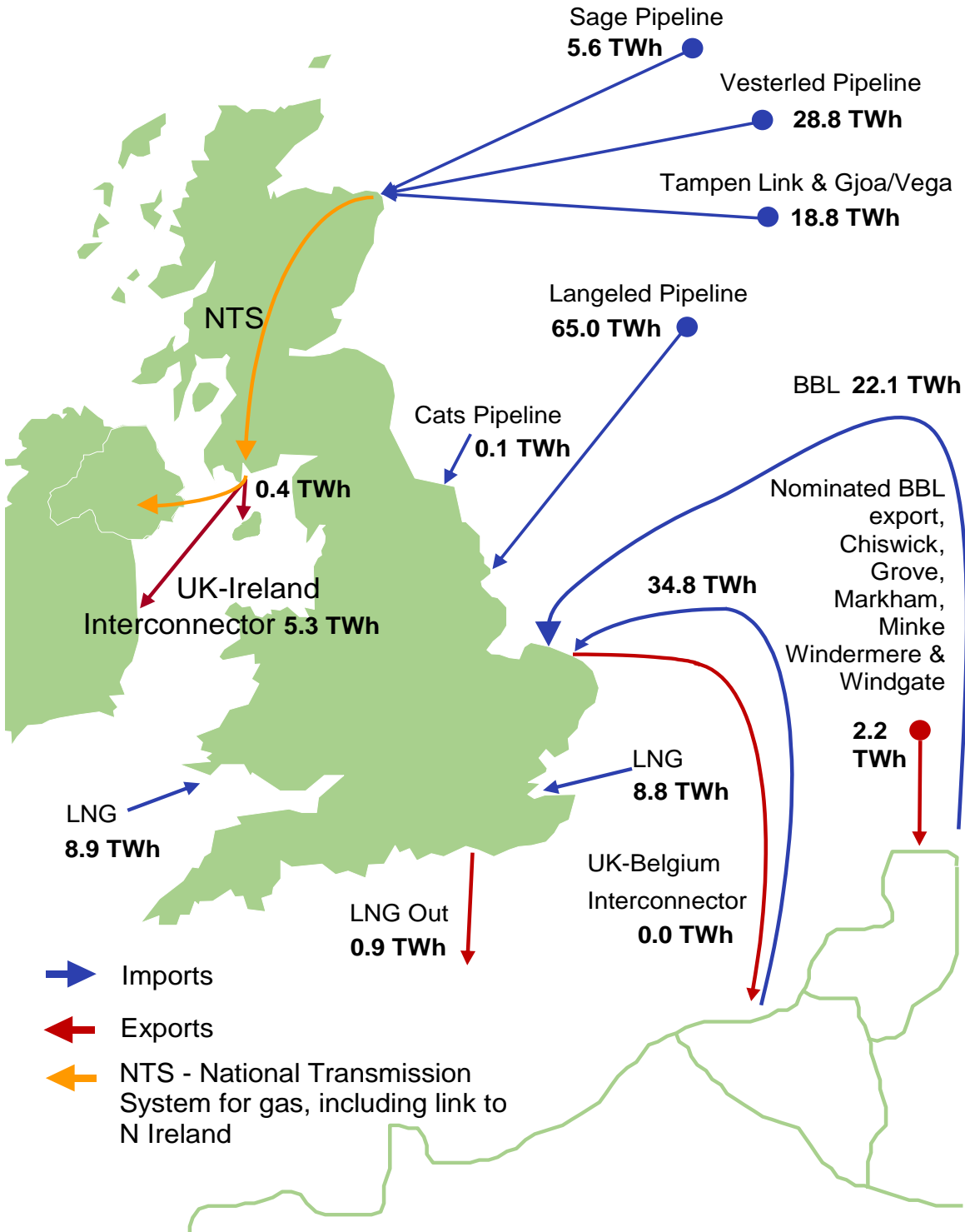


Pipeline imports increased significantly in Q1 2018, up 18 per cent on the previous year and predominantly a result of the increase in flows from Belgium and the Netherlands - the UK imported more gas from each of these countries in the first quarter of 2018 alone than in all of 2017. However, despite these high levels, while pipeline imports from Norway decreased 6.2 per cent they still made up more than 60 per cent of total imports this quarter.

LNG imports decreased by 14 per cent and the LNG share of imports fell to 9.1 per cent. The majority comes from Qatar, accounting for 86 per cent of LNG imports in Q1 2018, although January 2018 saw the arrival of the first LNG cargo to enter UK supply from Russia. Russian LNG accounted for less than one per cent of imports over the last three months.

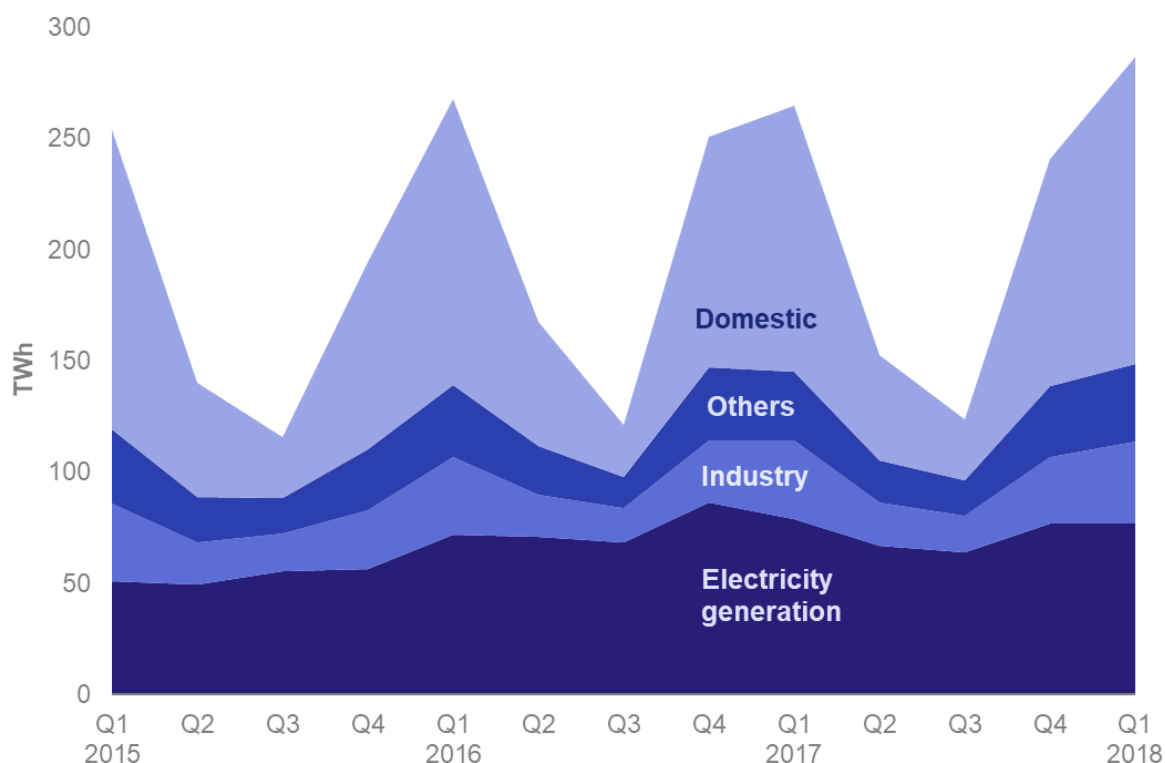
A complete country breakdown for physical pipeline and LNG imports is provided in Energy Trends Table 4.4 - *Supplementary information on the origin of UK gas imports*.

Map 4.1: UK imports and exports of gas Q1 2018



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Chart 4.6 UK demand for natural gas (Table 4.1)



UK demand for natural gas in Q1 2018 reached 312 TWh, up 7.4 per cent on last year. Colder temperatures brought over by the 'Beast from the East' resulted in more heating degree days and a subsequent increase in demand for gas in the domestic sector. Domestic use was up 16 per cent, as was demand from other final users, driving an increase of 13 per cent in final consumption this quarter.

Demand for gas used for electricity generation fell on the previous year for the fourth consecutive quarter, by 1.9 per cent. As before, this is a result of increased low carbon electricity generation.

A complete breakdown for gas demand is provided in Energy Trends table 4.1 - *Natural gas supply and consumption*.

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Table 4.1. Natural gas supply and consumption

	GWh												
	2016	2017 p	per cent change	2016 1st quarter	2016 2nd quarter	2016 3rd quarter	2016 4th quarter	2017 1st quarter	2017 2nd quarter	2017 3rd quarter	2017 4th quarter	2018 1st quarter p	per cent change ¹
SUPPLY													
Indigenous production	463,364	464,929r	+0.3	118,637	112,599	110,387	121,740	124,552r	120,091r	98,110r	122,175r	119,490	-4.1
Imports	534,740	524,890	-1.8	162,960	114,908	89,950	166,923	168,861	94,995	98,857	162,177	192,805	+14.2
of which LNG	122,310	80,144r	-34.5	36,505	35,591	36,351	13,863	20,477	26,008	18,876	14,783r	17,617	-14.0
Exports	116,862	125,629r	+7.5	20,163	27,979	51,985	16,735	15,062r	40,777r	51,590r	18,200r	9,056	-39.9
Stock change ²	16,242	11,955r		31,688	-9,551	-6,797	901	12,725r	947r	-1,004r	-713r	7,886	
Transfers ³	1,575	2,603		238	345	457	535	562	631	681r	729r	718	
Total supply	899,058	878,747r	-2.3	293,361	190,322	142,013	273,363	291,638r	175,888r	145,054r	266,167r	311,842	+6.9
Statistical difference	-2,576r	3,917		-1,285	397	-498	-1,189	1,458	745	374r	1,341r	83	
Total demand	901,635r	874,829r	-3.0	294,646r	189,925r	142,511r	274,552r	290,180r	175,143r	144,680r	264,827r	311,759	+7.4
TRANSFORMATION													
Electricity generation	297,643	285,550r	-4.1	71,854	71,180	68,295	86,314	78,642r	66,659r	63,487r	76,761r	77,130	-1.9
Heat generation ⁴	29,404r	30,090r	+2.3	9,015r	6,621r	5,556r	8,212r	9,117r	6,603r	5,907r	8,463r	9,117	-
Energy industry use	57,589r	57,024r	-1.0	15,968r	14,051r	13,867r	13,703r	15,183r	14,390r	13,526r	13,925r	13,997	-7.8
Losses	7,139r	6,744r	-5.5	1,728r	1,760r	1,901r	1,750r	1,934r	1,464r	1,552r	1,794r	1,965	+1.6
FINAL CONSUMPTION													
Iron & steel	4,084r	3,854r	-5.6	1,143r	972r	955r	1,014r	1,174r	989r	866r	826r	1,073	-8.6
Other industries	93,661r	97,055r	+3.6	33,893r	17,919r	14,928r	26,922r	34,450r	18,508r	15,632r	28,465r	35,510	+3.1
Domestic	311,375r	297,035r	-4.6	128,890r	55,589r	23,098	103,797r	119,678r	47,624r	27,599r	102,135r	138,274	+15.5
Other final users	95,631r	92,522r	-3.3	30,878r	20,555r	12,634r	31,564r	28,763r	17,668r	14,872r	31,219r	33,454	+16.3
Non energy use ⁴	5,109	4,956r	-3.0	1,277	1,277	1,277	1,277	1,239r	1,239r	1,239r	1,239r	1,239r	-

1. Percentage change between the most recent quarter and the same quarter a year earlier.

2. Stock change + = stock draw, - = stock build.

3. Natural gas used in the manufacture of synthetic coke oven gas and biomethane injections into the grid from installations certified under the Renewable Heat Incentive (RHI).

4. For heat generation and non energy use, the 2018 figures currently shown are the 2017 figures carried forward - these will be updated in June 2019.