

Section 4 - Gas

Key results show:

The most notable development this quarter relates to trade. Whilst imports were down by 17.3 per cent, exports increased 49 per cent to 41.8 TWh – the highest quarterly figure since 2011 (**Chart 4.4**). The quarter also saw the continued contraction of Liquefied Natural Gas (LNG) imports on last year's volumes, down 27 per cent (**Chart 4.5**).

UK production of natural gas in Q2 2017 was 6.5 per cent higher in comparison to the same quarter last year, in line with recent upwards trends, following the start-up of the Laggan gas field in mid-2016 and the Cygnus gas field in December 2016. Within this, production of associated gas was 10.9 per cent higher whilst dry gas production was 2.0 per cent lower (**Charts 4.1 & 4.2**).

Demand for natural gas in Q2 2017 fell by 7.6 per cent compared to last year to 174 TWh, the first substantial decrease since Q4 2015 (**Chart 4.6**).

Demand for gas for electricity generation fell by 5.3 per cent in comparison to the same quarter last year, contrasting with the recent sustained period of quarter-on-quarter growth as gas has displaced coal in electricity generation (see Chapter 5 for more details). (**Chart 4.6**).

Similarly final consumption was down 12.2 per cent, with domestic use and other final users down 15.7 and 12.0 per cent respectively, driven by warmer weather in Q2 2017 when compared with the same period last year (**Chart 4.6**).

Relevant table

4.1: Natural gas supply and consumption

Page 45

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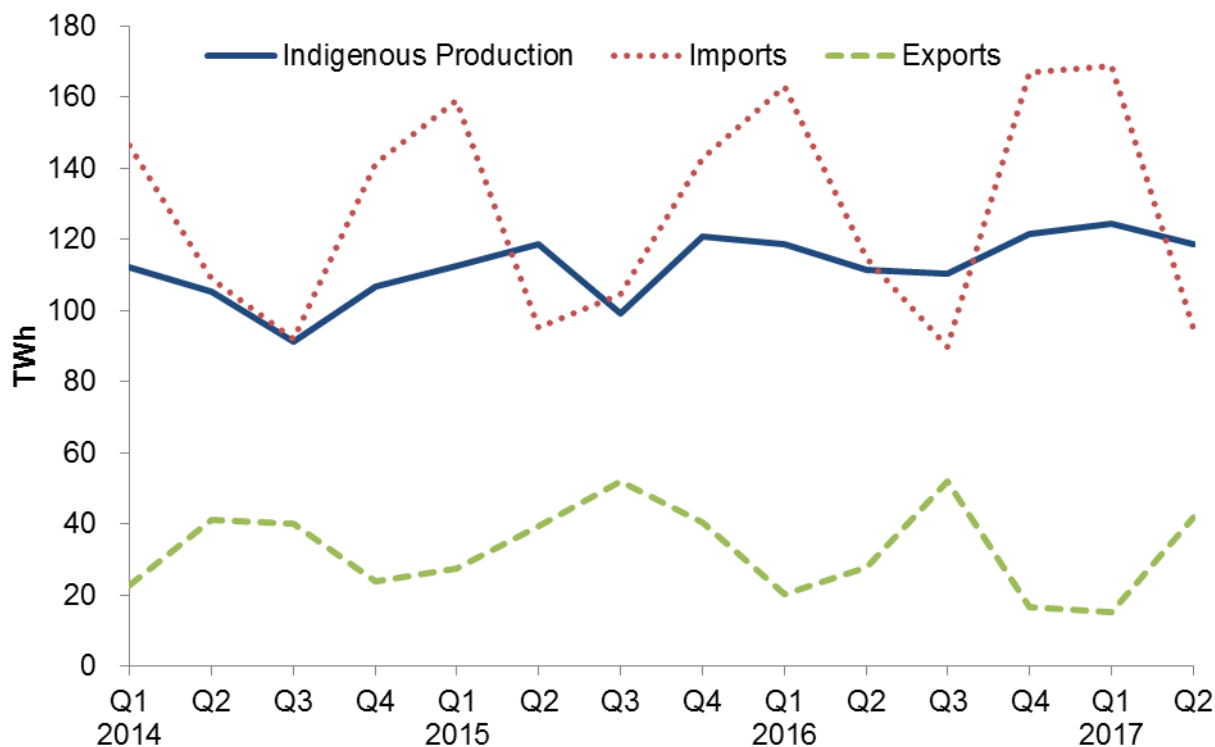
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Gas

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



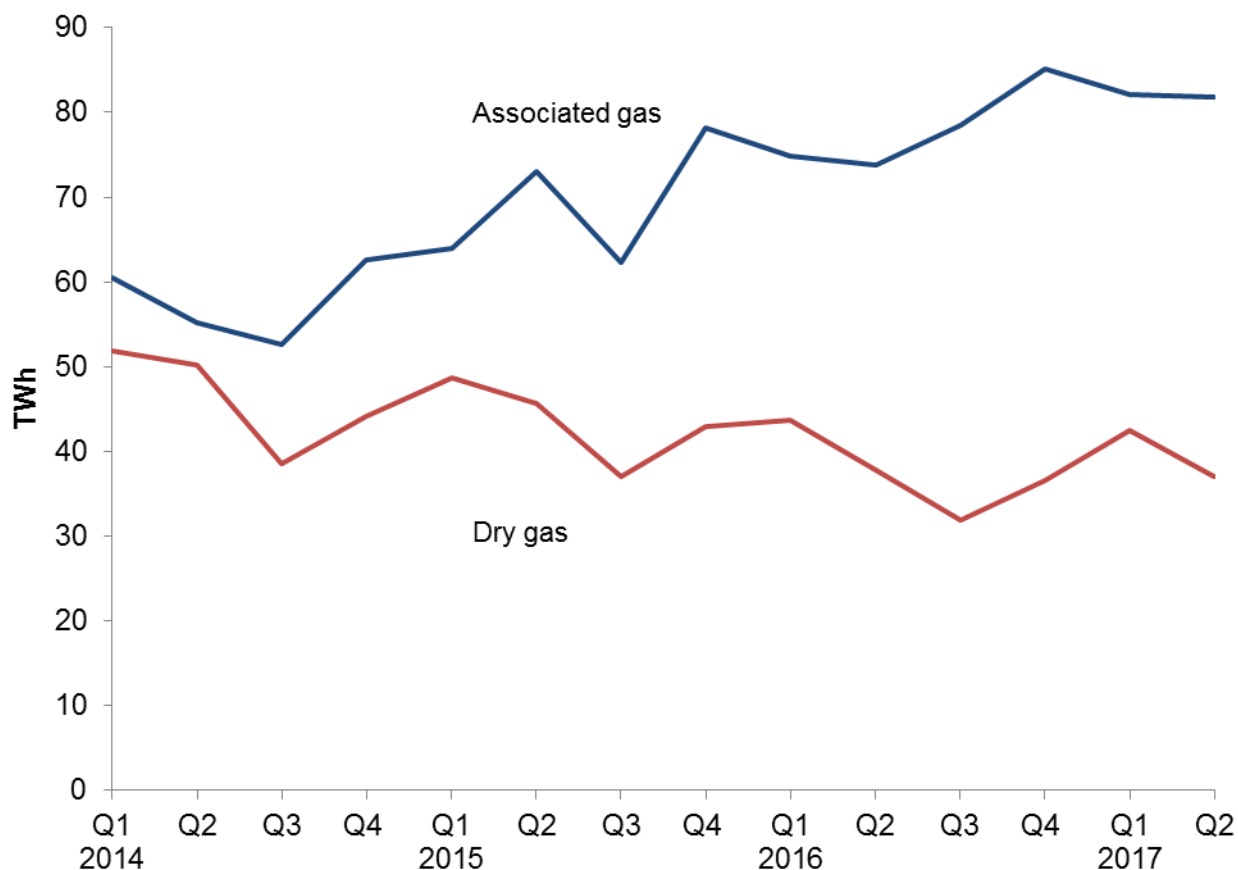
Gross production of natural gas was up by 6.5 per cent in Q2 2017, in line with recent upward trends, but less than 40 per cent of the average quarterly production in 2000 when gas production peaked. The recent increases are due in part to the start-up of two large gas fields, the Laggan gas field in mid-2016 and the Cygnus gas field in December 2016, alongside continued strong production across much of the UK's Continental Shelf.

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). See Map 4.1 for an illustration of trade flows.

Imports in Q2 2017 were down 17 per cent on the same quarter in 2016, and were driven by a 27 per cent decrease in LNG imports.

The UK exports natural gas primarily to Belgium (60 per cent of total exports in 2016) and Ireland (20 per cent of total exports in 2016). Exports increased in Q2 2017 by 49 per cent, to reach the highest quarter 2 figure since 2011.

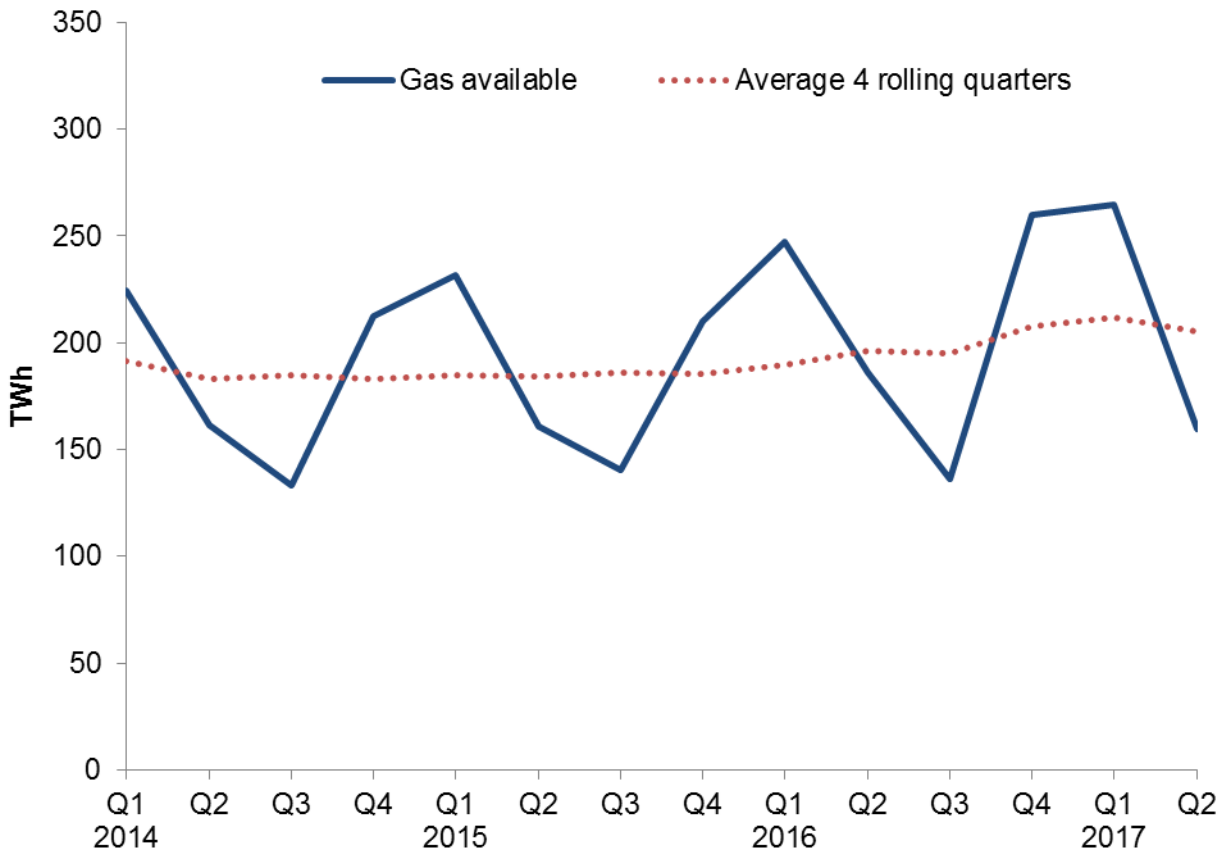
The increase in exports was driven by gas exported to Belgium more than doubling in Q2 2017 than in comparison to Q2 2016 (most notably in April and June 2017), even with the annual 2 week maintenance shutdown on the BBL interconnector in June 2017. These figures have been affected by the suspension of gas injections into the Rough storage facility (which accounts for around 70 per cent of the UK's gas storage capacity).

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 Q2 2017 was up 11 per cent compared to the same quarter last year, from 74 to 82 TWh. This increase partly reflects the steady production of a number of relatively new condensate fields in the North Sea. In comparison dry gas production (natural gas composed mainly of methane) fell by 2.0 per cent in Q2 2017 on last year.

Gas

Chart 4.3 Gas availability (Table 4.2)

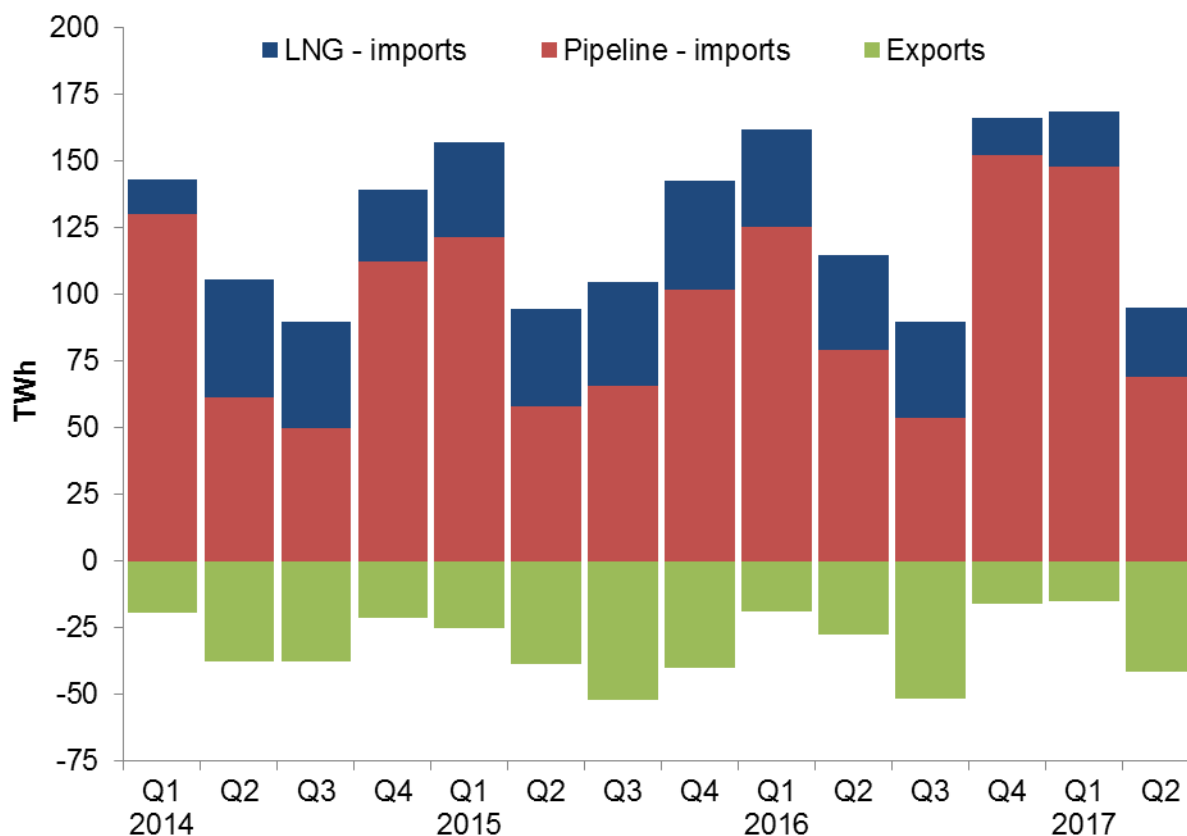


Gas available at terminals is roughly equal to gross gas production minus producers own use, plus net imports.

Gas availability is seasonal, mirroring gas demand, and peaks during Q1 and Q4 each year. Gas availability in Q2 2017 decreased by 14 per cent compared to Q2 2016 to 159 TWh, and was driven by increases in net imports and UK production.

The long-term picture shows that the average availability over four rolling quarters had remained fairly constant since the start of 2012 before increasing slightly since the start of 2015.

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



Net Imports during Q2 2017 were down by 39 per cent in comparison to the same quarter in 2016. This increase has been driven by the higher export figure, a result of a lower demand and increased production in Q2 2017.

As noted in Chart 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).

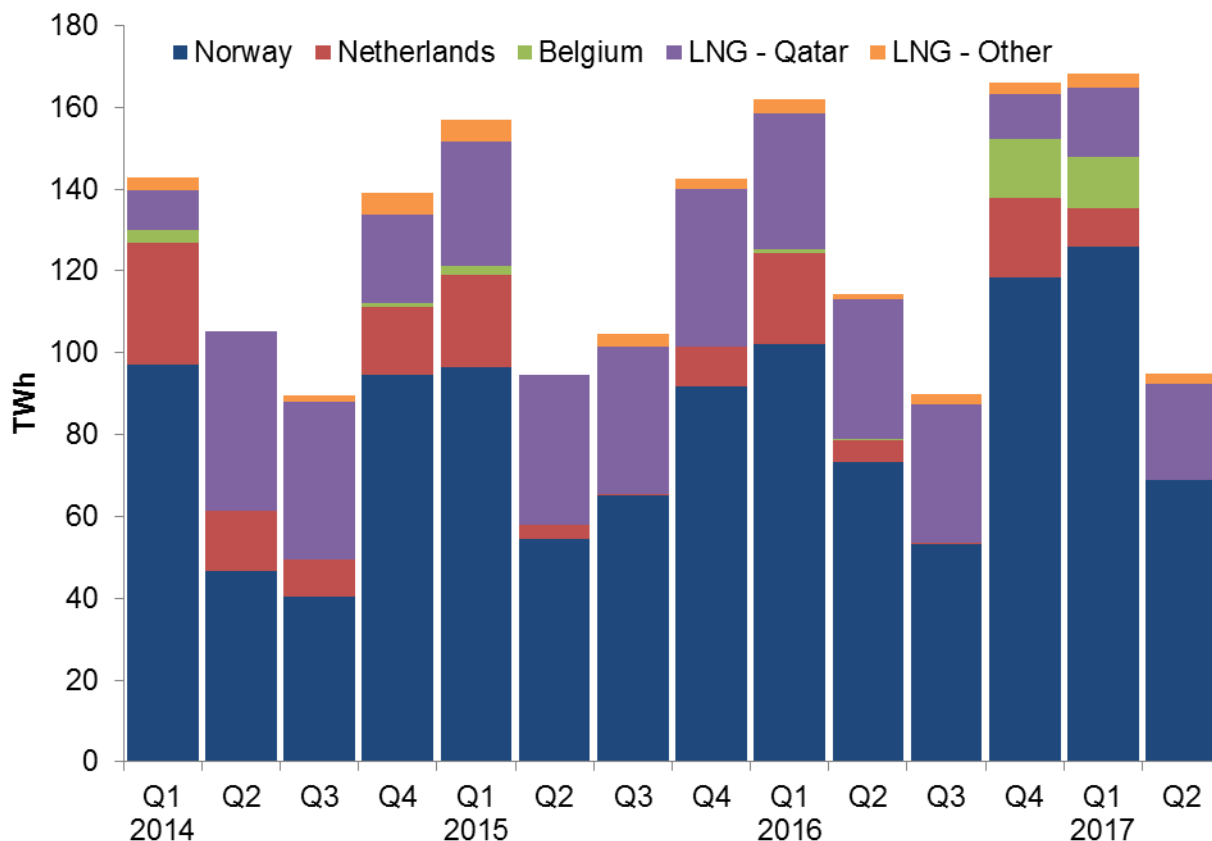
Pipeline imports were down by 13 per cent, with imports from Norway down 6.1 per cent and imports from the Netherlands decreasing from 5.5 TWh to 0.1 TWh, driving an overall 17 per cent decrease in imports. Similarly imports of LNG have decreased by 27 per cent, meaning LNG only accounted for 27 per cent of total imports compared to 31 per cent in the same quarter last year.

Exports increased by just under 50 per cent over the same timeframe, driven by exports to Belgium more than doubling in Q2 2017 in comparison to Q2 2016. These figures have been affected by closure of the Rough storage facility (which accounted for around 70 per cent of the UK's gas storage capacity) and the lower gas demand experienced in the quarter.

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. Unusually there were no LNG 'reloads' in this quarter.

Gas

Chart 4.5 Imports by origin (Table 4.4)

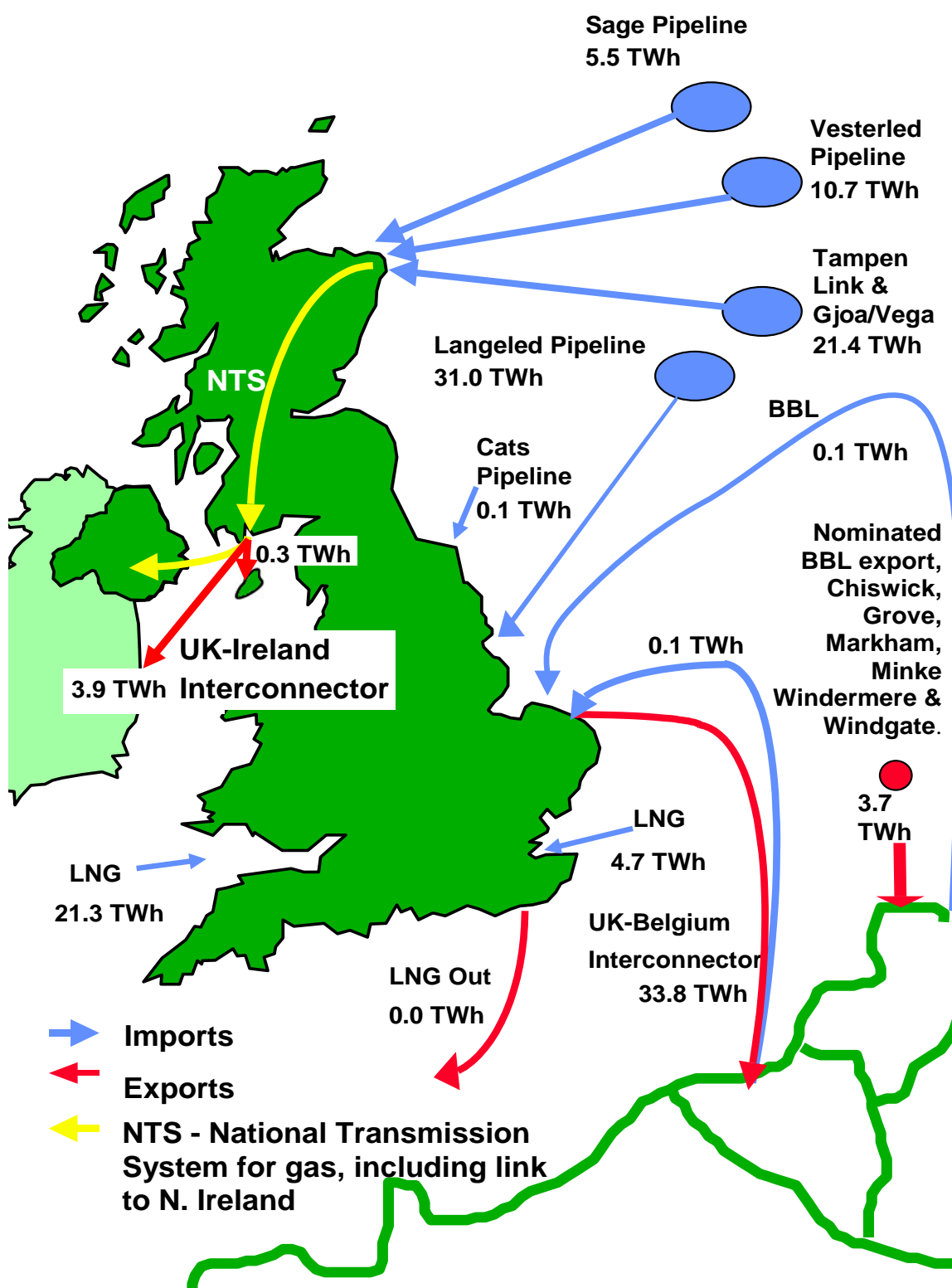


The main development in Q2 2017 is the overall reduction in the amount of imports into the UK, both pipeline and LNG imports. Pipeline imports were down 13 per cent on Q2 2016. Norway imports remain the principal source of UK gas imports (at over three-quarters of total imports in Q2 2017 compared to half in 2010) and has seen a 6.1 per cent decrease. Imports from the Netherlands have notably decreased in comparison to the same quarter last year, down 98 per cent from 5.4 TWh to 0.09 TWh.

Similarly in Q2 2017 LNG imports decreased by 27 per cent, with LNG's share of total imports decreasing to 27 per cent in 2017 compared to 31 per cent in Q2 2016. The majority of LNG imports are sourced from Qatar (around 90 per cent of total LNG imports in Q2 2017), and these volumes fell by nearly one-third in comparison to the same period last year, to 23.6 TWh. The fall in LNG was largely driven by a notably low import volume in May 2017, which coincided with high demand from the Asian market for Qatar gas along with other European countries, coupled with the general contraction of demand in the UK during the quarter.

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.*

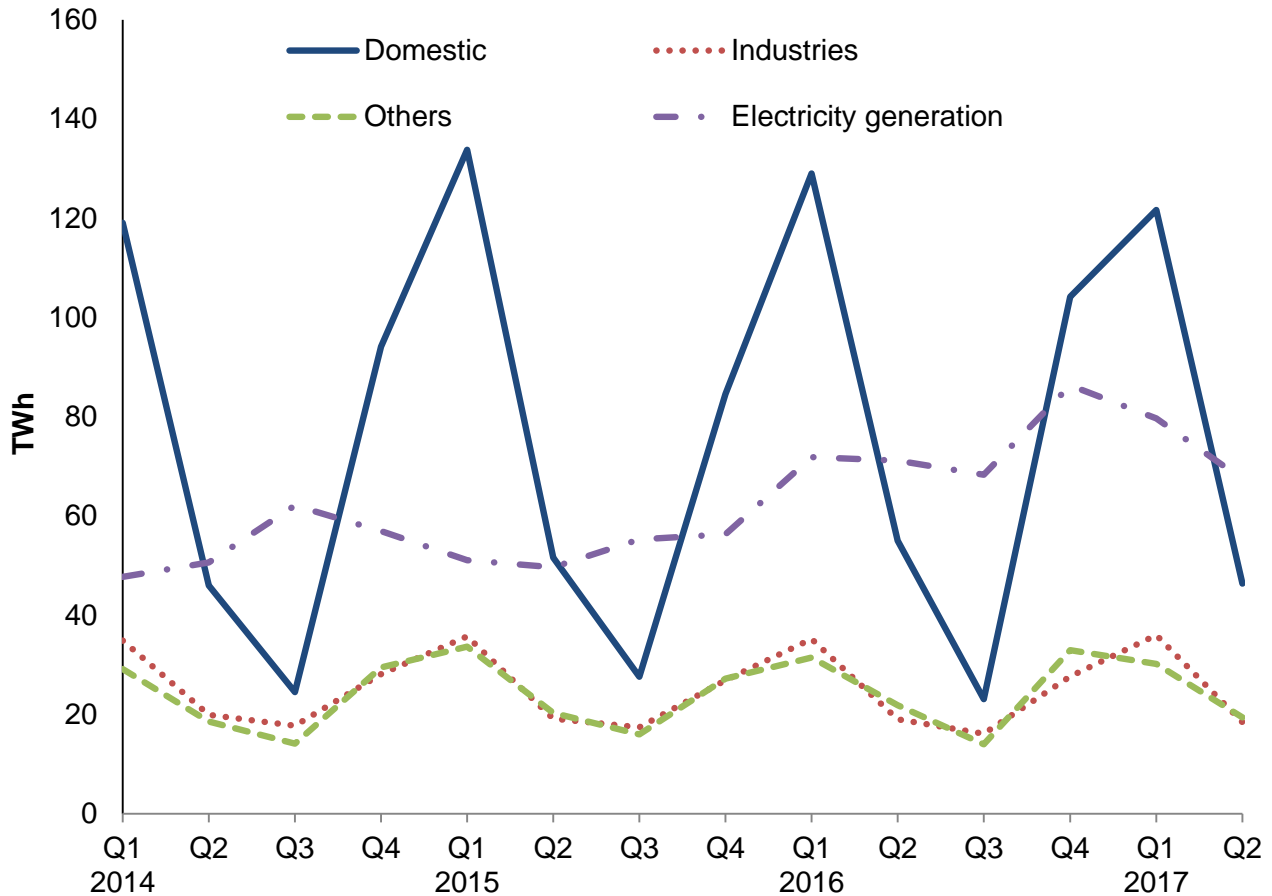
Map 4.1: UK imports and exports of gas Q2 2017*



*Please note that imports and exports in this map uses nominated flows through the UK-Belgium Interconnector and BBL pipeline as in Table 4.1. The figures here will differ from those in ET Table 4.3 which uses actual physical flows through the Interconnector.

Gas

Chart 4.6 UK demand for natural gas (Table 4.1)



UK demand for natural gas in Q2 2017 is down 7.6 per cent in comparison to Q2 2016 (to 174 TWh), the first substantial reduction since Q4 2015.

Demand for gas for electricity generation fell by 5.3 per cent in comparison to the same quarter last year, contrasting with the recent sustained period of quarter-on-quarter growth as gas displaced coal in electricity generation (see Chapter 5 for more details).

Similarly final consumption was down 12 per cent, with domestic use and other final users down 16 and 12 per cent respectively, driven by warmer weather in Q2 2017 when compared with the same period last year.

4 GAS

Table 4.1. Natural gas supply and consumption

	<i>GWh</i>												
	2015	2016	<i>per cent change</i>	2015 2nd quarter	2015 3rd quarter	2015 4th quarter	2016 1st quarter	2016 2nd quarter	2016 3rd quarter	2016 4th quarter	2017 1st quarter	2017 2nd quarter p	<i>per cent change¹</i>
SUPPLY													
Indigenous production	451,437	462,307	+2.4	118,539	99,296	121,031	118,637	111,542	110,387	121,740	124,643r	118,818	+6.5
Imports	501,563	534,740	+6.6	95,206	104,648	142,788	162,960	114,908	89,950	166,923	168,807	94,995	-17.3
<i>of which LNG</i>	152,406	122,310	-19.7	36,581	39,207	41,001	36,505	35,591	36,351	13,863	20,424	26,008	-26.9
Exports	159,517	116,862	-26.7	39,356	52,184	40,459	20,163	27,979	51,985	16,735	15,417r	41,758	+49.2
Stock change ²	3,515	16,242		-11,042	-15,919	-4,024	31,688	-9,551	-6,797	901	13,185	1,697	(-)
Transfers ³	559	1,575		135	182	190	238	345	457	535	562r	631	
Total supply	797,558	898,002	+12.6	163,481	136,023	219,526	293,361	189,265	142,013	273,363	291,780r	174,383	-7.9
Statistical difference	779	1,476		471	-135	443	626	859	24	-34	-461r	363	
Total demand	796,779	896,527	+12.5	163,010	136,158	219,083	292,735	188,406	141,988	273,397	292,241r	174,019	-7.6
TRANSFORMATION	237,682	323,763	+36.2	55,292	60,220	62,975	79,870	77,013	73,250	93,629	87,706r	73,233	-4.9
Electricity generation	212,289	297,643	+40.2	49,655	55,277	56,289	71,854	71,180	68,295	86,314	79,690r	67,400	-5.3
Heat generation ⁴	25,393	26,120	+2.9	5,637	4,942	6,687	8,016	5,833	4,955	7,315	8,016	5,833	-
Energy industry use	58,645	57,773	-1.5	15,512	13,115	15,326	16,014	14,096	13,913	13,749	15,594r	15,423	+9.4
Losses	6,469	5,396	-16.6	1,115	1,833	2,082	1,154	1,393	1,636	1,212	1,085r	1,141	-18.1
FINAL CONSUMPTION	493,983	509,596	+3.2	91,090	60,990	138,699	195,697	95,903	53,189	164,806	187,856r	84,222	-12.2
Iron & steel	5,374	4,155	-22.7	1,476	1,253	1,118	1,161	990	973	1,032	1,212	1,024	+3.5
Other industries	93,825	93,842	-	17,680	16,140	25,793	34,033	18,017	15,166	26,625	34,797r	17,417	-3.3
Domestic	297,582	311,375	+4.6	51,606	27,617	84,549	129,040	55,039	23,098	104,197	121,675r	46,399	-15.7
Other final users	91,935	95,115	+3.5	19,012	14,664	25,923	30,186	20,580	12,674	31,676	28,895r	18,104	-12.0
Non energy use ⁴	5,267	5,109	-3.0	1,317	1,317	1,317	1,277	1,277	1,277	1,277	1,277r	1,277	-

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 2017 figures currently shown are the 2016 figures carried forward - these will be updated in June 2018.