PRESS NOTICE

Department for Business, Energy & Industrial Strategy

Date: 30 March 2017

STATISTICAL PRESS RELEASE


Energy Trends and Energy Prices publications are published today 30 March 2017 by the Department for Business, Energy and Industrial Strategy. The publications cover new data for the fourth quarter of 2016 and thus provisional annual data for 2016. This press release focuses mainly on the 2016 annual data.

Energy Trends covers statistics on energy production and consumption, in total and by fuel, and provides an analysis of the year on year changes. Energy Prices covers prices to domestic and industrial consumers, prices of oil products and comparisons of international fuel prices.

The key points from 2016 are:

- Total energy production was 1.2 per cent higher than in 2015. This increase, which follows an increase of 9.6 per cent between 2014 and 2015, was due to rises in output from oil, gas, bioenergy and nuclear. Coal output fell to a record low level, whilst output from wind, solar and natural flow hydro also fell.

- Total primary energy consumption for energy uses was 1.5 per cent lower than in 2015. However, when adjusted to take account of weather differences between 2015 and 2016, primary consumption fell by 2.5 per cent.

- Final energy consumption (excluding non-energy use) was 1.1 per cent higher than in 2015, with rises in the domestic, transport and services sectors but with a fall in the industrial sector. On a seasonally and temperature adjusted basis it is estimated to have risen by 0.6 per cent.

- Of electricity generated in 2016, gas accounted for 42.4 per cent (an increase of 13 percentage points on 2015) and coal accounted for 9.1 per cent (a decrease of 13 percentage points on 2015). Nuclear’s share of generation increased by 0.4 percentage points on 2015, to 21.2 per cent.

- Renewable electricity generation was 82.8 TWh in 2016, a decrease of 1.0 per cent on the 83.6 TWh in 2015, with bioenergy up by 0.7 per cent and wind generation down by 7.0 per cent. Renewables’ share of electricity generation decreased to 24.4 percent in 2016, a fall of 0.2 percentage points on 2015. Renewable electricity capacity was 34.7 GW at the end of 2016, a 13.7 per cent increase (4.2 GW) on a year earlier.

- Low carbon electricity’s share of generation increased marginally from 45.4 per cent in 2015 to 45.6 per cent in 2016.
Average annual household energy bills (based on fixed consumption of 3,800 kWh per annum for electricity and 15,000 kWh per annum for gas) across all payment types in 2016 decreased by £61 (down 4.7 per cent to £1,236) compared to 2015. Average electricity bills were £2 higher, with gas bills down £63.

Other highlights from 2016 include:

- Imports in 2016 were 3.8 per cent lower than in 2015, whilst exports fell by 0.1 per cent. As a result, net import dependency fell back from 38.1 per cent to 35.6 per cent.

- Crude oil & NGL production was 4.8 per cent higher than in 2015, driven by new fields starting operation since 2014.

- Natural gas production was 3.6 per cent higher than in 2015, driven by less maintenance activity and the start up of the new large Laggan field. Gas exports were 23 per cent lower due to increased demand, whilst imports were 5.9 per cent higher; net imports rose 19.9 per cent on 2015.

- Coal production was 51 per cent lower than in 2015, and at a record low level, mainly due to the closure of a number of mines, including the closure of the last three remaining large deep mines in 2015 - Hatfield, Thoresby and Kellingley. Coal imports were 66 per cent lower as generators’ demand for coal fell by 59 per cent to a record low. Coal stocks fell and were 41 per cent lower, as a result of generators using more stocks for electricity generation while purchasing less coal from the UK and overseas.

- Gas demand was 12.6 per cent higher than in 2015, driven by increased use of gas (instead of coal) in electricity generation, whilst electricity consumption was broadly unchanged.

- Electricity generation in 2016 fell by 0.2 per cent, from 339.1 TWh a year earlier to 338.6 TWh, with a large fall in generation from coal, offset by an increase in gas.

For more detailed information on methodology, quality assurance and use of the data, please refer to the methodology notes available by energy sector on the BEIS section of the GOV.UK website at: www.gov.uk/government/organisations/department-for-business-energy-and-industrial-strategy/about/statistics
The March 2017 edition of Energy Trends also includes articles on:

- Domestic energy bills in 2016: The impact of variable consumption
- UKCS Capital Expenditure Survey 2017
- Mapping the UK’s oil stocks
- International comparisons of energy efficiency indicators
- Nuclear capacity in the UK
- Digest of United Kingdom Energy Statistics (DUKES) 2017 – proposed changes

The following statistics are also published today 30 March 2017, by the Department for Business, Energy and Industrial Strategy:

- Feed-in Tariff commissioned installations, February 2017

- Greenhouse Gas emissions, 2016 provisional figures

- Smart Meters installations, Q4 2016

- Solar Photovoltaics deployment, February 2017
Total energy production in 2016 was 126.0 million tonnes of oil equivalent, 1.2 per cent higher than in 2015. This increase, which follows an increase of 9.6 per cent between 2014 and 2015, was due to rises in output from most fuels, though coal production continued to fall to a record low level.

- Production of oil rose by 4.9 per cent due to strong production from fields that feed into the Flotta and Forties terminals, whilst gas rose by 3.6 per cent due to the start-up of the new Laggan field and less maintenance activity than in 2015.

- Production of bioenergy & waste rose by 2.0 per cent between 2015 and 2016.

- Primary electricity output rose by 1.1 per cent between 2015 and 2016, within which nuclear output rose by 2.0 per cent due to improved availability following outages in 2015, whilst output from wind, solar and natural flow hydro fell by 1.8 per cent due to less favourable weather conditions for renewable generation in 2016.

- Production of coal fell by 51 per cent, to a new record low, due to the closure of all large deep mines, and the remaining mines producing less coal as they come to the end of their operational life.

Total energy quarterly tables ET 1.1 – 1.3 are available on the BEIS section of the GOV.UK website at: www.gov.uk/government/statistics/total-energy-section-1-energy-trends
When examining seasonally adjusted and temperature corrected annualised rates:

- Total inland consumption on a primary fuel input basis was 192.9 million tonnes of oil equivalent in 2016, 1.5 per cent lower than in 2015.
- Between 2015 and 2016 coal consumption fell by 50 per cent, to a record low, as less coal was used in electricity generation, whilst gas consumption rose by 12.5 per cent, due to increased use for electricity generation; oil consumption rose by 1.3 per cent.
- Bioenergy and waste consumption rose by 3.2 per cent, whilst primary electricity consumption fell by 0.3 per cent.

Final energy consumption (excluding non-energy use) was 1.1 per cent higher than in 2015, with rises in the domestic, transport and services sectors but with a fall in the industrial sector. Domestic consumption rose by 3.4 per cent. On a temperature corrected basis, final energy consumption rose by 0.6 per cent, with domestic consumption up 0.8 per cent.

Total energy quarterly tables ET 1.1 – 1.3 are available on the BEIS section of the GOV.UK website at: www.gov.uk/government/statistics/total-energy-section-1-energy-trends
COAL: 2016

Coal production and imports

- Power stations
- Coke ovens & blast furnaces
- Final users

2016

<table>
<thead>
<tr>
<th></th>
<th>Million tonnes</th>
<th>Percentage change on a year earlier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal production</td>
<td>4.18</td>
<td>-51.4</td>
</tr>
<tr>
<td>Coal imports</td>
<td>8.29</td>
<td>-65.7</td>
</tr>
<tr>
<td>Coal demand</td>
<td>17.87</td>
<td>-52.3</td>
</tr>
<tr>
<td>- Power stations</td>
<td>12.06</td>
<td>-58.7</td>
</tr>
<tr>
<td>- Coke ovens &amp; blast furnaces</td>
<td>3.18</td>
<td>-38.9</td>
</tr>
<tr>
<td>- Final users</td>
<td>2.19</td>
<td>-16.7</td>
</tr>
</tbody>
</table>

- Provisional figures for 2016, as a whole, show that coal production fell to a new record low of 4.2 million tonnes, 51 per cent down on 2015. Deep mined production was down 99 per cent at 22 thousand tonnes, the lowest on record. This was due to the closure of the last three remaining large deep mines in 2015 - Hatfield, Thoresby and Kellingley. Surface mine production was down by 29 per cent to 4.2 million tonnes, also a record low. This was due to a number of collieries/companies closing, and some other mines producing less coal as they near the end of operation.

- Imports of coal in 2016 as a whole were 66 per cent down on 2015 at 8.3 million tonnes (lowest value for 33 years). This was due to lower demand for coal overall.

- Total demand for coal in 2016 was 17.9 million tonnes, 52 per cent lower than in 2015, with consumption by electricity generators down by 59 per cent (-12.1 million tonnes).

- Total stocks at the end of the fourth quarter of 2016 were 8.2 million tonnes (a new record low). This was an 11 per cent decrease when compared to the third quarter of 2016 and 41 per cent lower than the fourth quarter of 2015 (14.0 million tonnes).

Coal quarterly tables ET 2.1 – 2.4 are available on the BEIS section of the GOV.UK website at: www.gov.uk/government/statistics/solid-fuels-and-derived-gases-section-2-energy-trends
Indigenous production of primary oils (crude, NGLs and feedstocks) increased by 4.8 per cent (2.8 million tonnes) compared with 2015. Despite increases in North Sea production over the last two years, oil production stands at just under 48 million tonnes, just over a third of the peak production recorded in 1999.

Overall demand for primary oils in 2016 was 1.8 per cent lower than 2015 as refinery production of petroleum products was 2.0 per cent. During 2015 maintenance was postponed to early 2016.

Net imports of petroleum products were 10.8 million tonnes in 2016.

Transport final demand increased by 1.4 per cent, driven by an increase in demand for road diesel and a small contraction in demand for petrol, likely due to lower prices.

Oil quarterly tables ET 3.1 – 3.7 are available on the BEIS section of the GOV.UK website at: www.gov.uk/government/statistics/oil-and-oil-products-section-3-energy-trends
GAS: 2016

Production and trade of natural gas

- In 2016, gross production of natural gas was 3.6 per cent higher than in 2015, continuing the upward trend that began in 2014 (Chart 4.1). This is due in part to higher volumes of gas following the start-up of the relatively large Laggan field towards the middle of 2016, alongside limited maintenance activity throughout the year.

- Gas imports were 5.9 per cent higher than in 2014, yet LNG imports decreased by 20.0 per cent in this time as pipeline imports rose by 17.9 per cent year-on-year. Exports of gas decreased by 22.7 per cent as a result of increased demand and Irish exports failing due to production from the new Corrib gas field. Net imports increased by 19.9 per cent on 2015, driven by the low exports figures.

- Gas demand in 2016 was up significantly on last year at 12.6 per cent, the highest it has been since 2011. This increase has been driven by the 38.8 per cent rise in gas (instead of coal) used in electricity generation, as well as a 5.1 per cent increase in gas used for domestic uses, caused by a colder winter in 2016 than in 2015.

Gas quarterly table ET 4.1 is available on the BEIS section of the GOV.UK website at: www.gov.uk/government/statistics/gas-section-4-energy-trends
ELECTRICITY: 2016

Electricity generated

2015

<table>
<thead>
<tr>
<th>Source</th>
<th>2015 TWh</th>
<th>2016 TWh</th>
<th>Percentage change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal</td>
<td>30.7</td>
<td>14.8</td>
<td>-52.1</td>
</tr>
<tr>
<td>Nuclear</td>
<td>71.7</td>
<td>16.4</td>
<td>-75.7</td>
</tr>
<tr>
<td>Gas</td>
<td>143.4</td>
<td>202.3</td>
<td>+41.3</td>
</tr>
<tr>
<td>Renewables</td>
<td>82.8</td>
<td>81.3</td>
<td>-1.8</td>
</tr>
<tr>
<td>Total</td>
<td>338.6</td>
<td>335.8</td>
<td>-0.8</td>
</tr>
</tbody>
</table>

2016

<table>
<thead>
<tr>
<th>Source</th>
<th>2016 TWh</th>
<th>Percentage change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal</td>
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<tr>
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</tr>
<tr>
<td>Total</td>
<td>335.8</td>
<td>-0.8</td>
</tr>
</tbody>
</table>

- Generation from coal in 2016 fell by 59 per cent and gas increased by 43 per cent compared with a year earlier. Generation from renewables was down 0.9 per cent, mainly due to a fall in average wind speeds and average rainfall compared to 2015.

- In 2016, coal accounted for 9.1 per cent of generation. Gas’s share increased to 42.4 per cent. Nuclear’s share increased to 21.2 per cent, with renewables accounting for 24.4 per cent of generation.

- Low carbon generation (including renewables) accounted for 45.6 per cent of generation in 2015, compared to 45.4 per cent in 2015.

- Total electricity generated in 2016 was 0.2 per cent lower than a year earlier, whilst imports made up 5.2 per cent of electricity supplied.

- Fuel used by generators in 2016 was 4.0 per cent lower than in 2015.

- Final consumption of electricity increased slightly by 0.1 per cent in 2016. Domestic use fell slightly by 0.1 per cent.

Electricity quarterly tables ET 5.1, 5.2 & 5.6 are available on the BEIS section of the GOV.UK website at: [www.gov.uk/government/statistics/electricity-section-5-energy-trends](http://www.gov.uk/government/statistics/electricity-section-5-energy-trends)
Renewable electricity generation was 82.8 TWh in 2016, a fall of 1.0 per cent on the record 83.6 TWh recorded in 2015. Offshore wind generation fell by 5.8 per cent and onshore wind by 7.8 per cent, with average wind speeds (at 8.3 knots) 1.0 knots lower than the high wind speeds of 2015 (the highest in the last fifteen years). Generation from solar photovoltaics increased by 36 per cent, to a record 10.3 TWh, due to increased capacity. Hydro fell by 15 per cent compared with 2015’s record level, to 5.4 TWh, with average rainfall (in the main hydro areas) down by 19 per cent on a year earlier. Generation from bioenergy was up slightly on 2015, with additional capacity being partially offset by maintenance outages at the converted Drax biomass units and the closure of Ironbridge in late 2015.

Renewables’ share of electricity generation fell from 24.6 per cent in 2015 to 24.4 per cent in 2016.

Renewable electricity capacity was 34.7 GW at the end of 2016, a 14 per cent increase (4.2 GW) on a year earlier.

Renewable transport: liquid biofuels accounted for 4.4 per cent of petrol and diesel consumed in road transport in 2016, a 0.2 percentage point fall on the share in 2015.

Renewables quarterly tables ET 6.1 – 6.2 are available on the BEIS section of the GOV.UK website at: www.gov.uk/government/statistics/energy-trends-section-6-renewables
MAIN POINTS FOR THE FOURTH QUARTER OF 2016

Electricity generated

- Total energy production was 1.8 per cent lower than in the fourth quarter of 2015.

- Total primary energy consumption for energy uses rose by 3.7 per cent. However, when adjusted to take account of weather differences between the fourth quarter of 2015 and the fourth quarter of 2016, primary energy consumption fell by 0.4 per cent.

- Final energy consumption (excluding non-energy use) rose by 6.8 per cent compared to the fourth quarter of 2015, with domestic consumption up 18.0 per cent reflecting the colder weather in November and December 2016, on a seasonally and temperature corrected basis it is estimated to have risen by 0.6 per cent, with domestic consumption down 1.5 per cent.

- Of electricity generated in the fourth quarter of 2016, gas accounted for 45.2 per cent, whilst coal accounted for 9.3 per cent. Nuclear generation accounted for 20.3 per cent of total electricity generated in the fourth quarter of 2016.

- Renewables’ share of electricity generation fell to 26.2 per cent from the record high 26.8 per cent share in the fourth quarter of 2015, due to poor weather conditions for renewables generation. Renewable electricity generation was 20.6 TWh in the fourth quarter of 2016, a fall of 13.0 per cent on the 23.7 TWh in the fourth quarter of 2015.

Quarterly tables are available on the BEIS section of the GOV.UK website at: www.gov.uk/government/organisations/department-for-business-energy-and-industrial-strategy/about/statistics
DOMESTIC PRICES: QUARTER 4 2016

Fuel price indices in the domestic sector in real terms

<table>
<thead>
<tr>
<th>Consumer price index fuel components in real terms (1) 2010=100</th>
<th>2016 Q4</th>
<th>Percentage change on a year earlier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid fuels</td>
<td>103.6</td>
<td>-2.2</td>
</tr>
<tr>
<td>Gas</td>
<td>111.1</td>
<td>-7.2</td>
</tr>
<tr>
<td>Electricity</td>
<td>115.3</td>
<td>-2.9</td>
</tr>
<tr>
<td>Liquid fuels</td>
<td>78.6</td>
<td>17.6</td>
</tr>
<tr>
<td>Total domestic fuel</td>
<td>112.8</td>
<td>-4.1</td>
</tr>
</tbody>
</table>

(1) Deflated using the GDP implied deflator. The original source of the indices is ONS.

- The price paid for all domestic fuel by household consumers fell by 4.1 per cent in real terms between Q4 2015 and Q4 2016, and by 0.1 per cent between Q3 and Q4 2016.
- Domestic electricity prices, including VAT, in Q4 2016 were 2.9 per cent lower in real terms than in Q4 2015.
- The price of domestic gas, including VAT, fell by 7.2 per cent in real terms between Q4 2015 and Q4 2016 and by 0.7 per cent between Q3 and Q4 2016.
- All six of the major domestic energy suppliers decreased gas prices at the beginning of 2016 reflecting falls in wholesale gas prices. There were no price changes from the six major domestic energy suppliers for electricity customers in 2016. Overall, the changes reflect an average decrease in gas prices of around 7 per cent reflecting the price decreases and a fall in fixed term deals tariffs, while overall electricity prices fell by around 3 per cent.

Switching levels

- Switching rates amongst consumers rose by 29 per cent for electricity and by 26 per cent for gas between Q4 2015 and Q4 2016. For both electricity and gas, these transfers represent around 4.5 per cent of domestic customers.

Domestic prices tables are available on the BEIS section of the GOV.UK website at: www.gov.uk/government/collections/domestic-energy-prices
### DOMESTIC ENERGY BILLS: 2016

#### Average domestic gas and electricity bills (cash terms)

![Diagram showing combined average bill in cash terms for gas and electricity from 2006 to 2016.]

<table>
<thead>
<tr>
<th>Year</th>
<th>Gas (3)</th>
<th>Electricity (4)</th>
<th>Total (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>£714</td>
<td>£583</td>
<td>£1,297</td>
</tr>
<tr>
<td>2016</td>
<td>£650</td>
<td>£586</td>
<td>£1,236</td>
</tr>
</tbody>
</table>

**Percentage change, cash terms**

- Gas: -8.9%
- Electricity: 0.4%
- Total: -4.7%

**Percentage change, real terms (2)**

- Gas: -10.6%
- Electricity: -1.5%
- Total: -6.5%

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**Notes:**

1. Average annual bills for domestic customers weighted by the proportion of customers on the different payment methods, which include standard credit, direct debit and pre-payment meter. Bills relate to the total bill received in the calendar year and are in cash terms.

2. To estimate the percentage change in real terms bills were deflated using the GDP (implied) deflator.

3. Gas bills are based on an annual consumption of 15,000 kWh.

4. Electricity bills are based on an annual consumption of 3,800 kWh.

5. The average total gas and electricity bill presented should be taken as broadly indicative only. It is not based on individual customers, but is simply the sum of the averages for electricity and gas.

6. In Q4 2015 a £12 Government rebate was applied to electricity bills for all customers in Great Britain. This is included in the figures above.

- The average domestic electricity bill in 2016, based on a fixed consumption level of 3,800 kWh/year, increased by £2 to £586. Bills for customers paying by standard credit averaged £703. For those paying by direct debit, it was £559, and on pre-payment, £623.

- For domestic gas, the average 2016 annual bill, based on a fixed consumption level of 15,000 kWh/year, fell by £63 to £650. For customers paying by standard credit the average bill was £703. For those paying by direct debit, it was £614, and for those on pre-payment, £712.

- For the period July to December 2016, prices for medium domestic gas and electricity consumers, including tax, were the third and the sixth lowest in the EU15 respectively.

Domestic prices tables are available on the BEIS section of the GOV.UK website at: [www.gov.uk/government/collections/domestic-energy-prices](http://www.gov.uk/government/collections/domestic-energy-prices)
Industrial fuel price indices in real terms including the Climate Change Levy

<table>
<thead>
<tr>
<th>Fuel</th>
<th>Index 2010=100</th>
<th>2016 Q4</th>
<th>Percentage change on a year earlier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal</td>
<td>85.0</td>
<td>-8.2</td>
<td></td>
</tr>
<tr>
<td>Heavy fuel oil</td>
<td>77.6</td>
<td>+17.4</td>
<td></td>
</tr>
<tr>
<td>Gas</td>
<td>96.5</td>
<td>-7.7</td>
<td></td>
</tr>
<tr>
<td>Electricity</td>
<td>110.6</td>
<td>-2.5</td>
<td></td>
</tr>
<tr>
<td>Total fuel</td>
<td>102.4</td>
<td>-1.8</td>
<td></td>
</tr>
</tbody>
</table>

(1) Deflated using the GDP implied deflator. Includes estimates of the average Climate Change Levy (CCL) paid.

- Average industrial gas prices, including CCL, were 7.7 per cent lower in real terms in Q4 2016 compared to Q4 2015, whilst prices excluding CCL were 7.9 per cent lower.
- Average industrial electricity prices were 2.5 per cent lower including CCL and 3.2 per cent lower excluding CCL, in real terms, in Q4 2016 compared to Q4 2015.
- Average coal prices were 8.2 per cent lower in real terms including CCL and 8.5 per cent lower excluding CCL in Q4 2016 compared to Q4 2015. Heavy fuel oil prices were 17 per cent higher in real terms than a year ago.
- For the period July to December 2016, UK prices for medium industrial electricity consumers including taxes were generally were the third highest in the EU15. UK industrial gas prices including tax were the second lowest in the EU15.
Crude oil prices, the key driver of petrol and diesel prices, increased through 2016, and have averaged around $55 per barrel in recent months.

In mid-March 2017, a litre of unleaded petrol was on average 119.8 pence per litre, 18 per cent higher than a year earlier and 15 per cent lower than the high of April 2012.

In mid-March 2017, diesel was on average 122.8 pence per litre, 20 per cent higher than a year earlier and 17 per cent lower than the high of April 2012.

In February 2017, the average UK retail prices for petrol were the ninth highest in the EU. UK diesel prices were the second highest in the EU.

Since the dip in February 2016, diesel prices have remained consistently higher that petrol and in March 2017 the price difference between diesel and petrol was just under 3 pence per litre.

Road transport fuel prices tables are available on the BEIS section of the GOV.UK website at: www.gov.uk/government/collections/road-fuel-and-other-petroleum-product-prices
Notes to editors

1. More detailed figures of United Kingdom energy production and consumption and of energy prices, for the fourth quarter of 2016 and 2016 as a whole are given in the March 2017 editions of ENERGY TRENDS and ENERGY PRICES respectively, the Department's statistical bulletins on energy, published on 30 March 2017.


3. Articles featured in Energy Trends are also available on the BEIS section of the GOV.UK website at: www.gov.uk/government/collections/energy-trends-articles