Total Energy

Section 1 – UK Total Energy
January to March 2020

Key results show:

Total energy production was 1.8 per cent higher than in the first quarter of 2019, with rises in gas, bioenergy and waste, wind, solar and hydro output offset by falls in coal, oil and nuclear output. (Charts 1.1 & 1.2)

Total primary energy consumption for energy uses fell by 0.9 per cent. However, when adjusted to take account of weather differences between the first quarter of 2019 and the first quarter of 2020, primary energy consumption fell by 1.0 per cent. (Chart 1.3)

Final energy consumption (excluding non-energy use) rose by 0.7 per cent compared to the first quarter of 2019. Domestic consumption rose by 4.5 per cent reflecting the cooler weather in February and March 2020, along with a shift to increased home working in March 2020. Consumption by other final users (mainly from the service sector) rose by 4.8 per cent, whilst industrial consumption fell by 2.8 per cent and transport consumption fell by 3.7 per cent as demand for fuels dropped sharply in the last week of the quarter. (Charts 1.4 & 1.5)

On a seasonally and temperature adjusted basis, final energy consumption rose by 1.0 per cent, with rises in the domestic and other final users sectors but falls in the industrial and transport sectors. (Chart 1.5)

Net import dependency was 34.4 per cent, down 4.6 percentage points from the first quarter of 2019. (Chart 1.6)

Fossil fuel dependency was 77.6 per cent, down 2.3 percentage points from the first quarter of 2019. (Chart 1.7)

Relevant tables

1.1: Indigenous production of primary fuels
1.2: Inland energy consumption: primary fuel input basis
1.3: Supply and use of fuels, and Seasonally adjusted and temperature corrected final energy consumption

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Total production in the first quarter of 2020 stood at 34.6 million tonnes of oil equivalent, 1.8 per cent higher than in the first quarter of 2019.

Production of oil fell by 5.5 per cent compared to the first quarter of 2019, with NGL production falling by 13 per cent due to maintenance work at the Mossmorran NGL processing plant in Fife, whilst production of natural gas rose by 3.6 per cent due to strong output at several terminals across the UK.

Primary electricity output in the first quarter of 2020 was 9.4 per cent higher than in the first quarter of 2019, within which nuclear electricity output was 5.8 per cent lower as an outage was completed at Heysham 1 while outages continued at Dungeness B, Hunterston B and Heysham 2 and started at Hinkley Point B. Output from wind, solar and natural flow hydro was 35 per cent higher and at a record quarterly high due to record levels of wind generation in February 2020 when extreme wind conditions were experienced during Storms Ciara and Dennis.

Production of bioenergy and waste was 19 per cent higher compared to the first quarter in 2019 due to increased capacity and higher load factors compared to the same period last year.

Coal production fell by 26 per cent compared to the first quarter in 2019 due to falling demand for coal for electricity generation and mine closures.
In the first quarter of 2020, the annual growth rate of UK production was +1.8 per cent, down 1.0 percentage points from the fourth quarter of 2019 but up 1.3 percentage points compared to the first quarter of 2019, with rises in gas, bioenergy and waste, wind, solar and hydro output offset by falls in coal, oil and nuclear output.
Total inland consumption on a primary fuel input basis (temperature corrected, seasonally adjusted annualised rate), was 185.7 million tonnes of oil equivalent in the first quarter of 2020, 1.0 per cent lower than in the first quarter of 2019. On an unadjusted basis inland consumption was 0.9 per cent lower, with the average temperature in the first quarter of 2020 being 6.6 degrees Celsius, 0.3 degrees Celsius higher than the same period a year earlier, with temperatures in January 2020 being noticeably warmer than January 2019. Consumption levels in March 2020, mainly demand for transport fuels, were also affected by the Covid-19 pandemic lockdown which came into effect from 23 March 2020.

Between the first quarter of 2019 and the first quarter of 2020 (on a seasonally adjusted and temperature corrected basis) coal and other solid fuel consumption rose by 5.6 per cent as Fiddlers Ferry power station burnt remaining stocks before closing on 31 March 2020.

Also, on a seasonally adjusted and temperature corrected basis, between the first quarter of 2019 and the first quarter of 2020, oil consumption fell by 2.6 per cent driven mainly by a drop in aviation demand. Natural gas consumption fell by 5.8 per cent as electricity generators favoured renewable sources.

On the same basis, bioenergy and waste consumption rose by 13 per cent between the first quarter of 2019 and the first quarter of 2020, whilst primary electricity consumption rose by 7.3 per cent. The rise in primary electricity consumption was due to an increase of 36 per cent from wind, solar and hydro, resulting in a record quarterly high due to higher wind speeds and increased offshore wind capacity, which more than offset falls of 5.6 per cent from nuclear consumption and 4.1 per cent from net imports.
Total final consumption rose by 0.5 per cent between the first quarter of 2019 and the first quarter of 2020.

Domestic sector energy consumption rose by 4.5 per cent, reflecting the cooler weather in February and March 2020 compared to a year earlier and some shift towards home working in March 2020 because of the COVID-19 pandemic.

Service sector energy consumption rose by 4.8 per cent.

Industrial sector energy consumption fell by 2.8 per cent.

Transport sector energy consumption fell by 3.7 per cent as the demand for fuels fell sharply as a result of the Covid-19 pandemic. This is due in the main to the drop in aviation demand during March 2020.
Total unadjusted final energy consumption (excluding non-energy use) rose by 0.7 per cent between the first quarter of 2019 and the first quarter of 2020.

On a seasonally and temperature adjusted basis final energy consumption (excluding non-energy use) rose by 1.0 per cent between the first quarter of 2019 and the first quarter of 2020.

Unadjusted domestic consumption rose by 4.5 per cent over the same period and was up 7.0 per cent on a seasonally and temperature adjusted basis.
In the first quarter of 2020, imports fell by 7.8 per cent, whilst exports fell by 2.3 per cent. As a result, net import dependency fell 4.6 percentage points from the first quarter of 2019 to 34.4 per cent.

The net import dependency of oil was 26.6 per cent in the first quarter of 2020, up 1.3 percentage points from the first quarter of 2019, whilst the net import dependency of gas was 50.4 per cent, down 5.3 percentage points.
In the first quarter of 2020 fossil fuel dependency was 77.6 per cent, down 2.3 percentage points on the same quarter of 2019.