

Why the UK is using less energy, but importing more - and why it matters



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The UK is in the midst of an energy revolution. Since the late 1990s the Government has committed to using cleaner energy, and using less of it.

Billions of pounds have been invested in renewable energy sources that generate electricity from the wind, waves and plant waste.

At the same time the UK has managed to cut its energy use by almost a fifth as households and businesses have steadily replaced old, inefficient appliances and machinery with products that use far less energy to run. Energy demand has also fallen due to the decline of the UK's energy-intensive industries, such as manufacturing and steel-making.

But Government data shows that the UK's reliance on energy imports is at its highest since the energy crisis of the late 1970s, raising serious questions over where the UK sources its energy and what a growing dependence on foreign energy means for bills and for security.

In a leaner, greener energy system, why is the UK more dependent on foreign energy sources than it has been in more than 30 years?

The end of the North Sea heyday

Imports accounted for just under 40 per cent of UK energy supplies last year. The country's largest energy imports are crude oil, natural gas and petroleum products such as petrol and diesel.

The last time the UK exported more electricity than it imported was the winter of 2009/10 - since then it has consistently been a net importer of power through giant sub-sea cables to France and the Netherlands.

It's a far cry from three decades ago, when Britain's North Sea reserves made it a major energy player.

The discovery of North Sea oil and gas in the late 1960s ignited a fossil fuel bonanza for the UK, which roared through the oil market boom years of the 1970s and continued to bring billions in revenue in the decades since.

But with the North Sea now running dry, the UK's dependence on imports is on the up, according to the Office for National Statistics.

"The UK is consuming less energy than it did in 1998 and more of the energy we are consuming is coming from renewable sources. However, at the same time, the decline in North Sea oil and gas production has meant the UK has become increasingly dependent on imports of energy," the ONS says.

Norway has typically played a key role as an oil import partner but in recent years the proportion of crude imports has begun to lean towards imports from the Organisation of Petroleum Exporting Countries, ruled by de facto leader Saudi Arabia.

In 2015 50 per cent of the Britain's crude imports came from Norway and 35 per cent came from Opec, with less than 10 per cent of crude imported from Russia, which is the world's largest non-Opec oil producer.

But what about all the wind farms?

The UK may be increasing its use of renewables, but far from securing British-made energy, the strategy coincides with our declining energy independence.

The country's bet on renewable energy began in earnest at the turn of the century as climate change concerns rose up the political agenda under Tony Blair's government.

In 2003 renewable energy made up less than 2 per cent of the UK's total energy use. Since then the country has seen an explosion of wind turbines and solar panels dotting the country and coastal waters, but the ONS says they still contribute less than 10 per cent of total energy and 25 per cent of electricity.

Government's official target is to meet 20 per cent of the UK's total energy demand from renewable energy sources by 2020, which translates into a 30 per cent target for electricity generation.

Although the rise of renewables has been considerable the gains have not been enough to keep the UK's electricity system from becoming worryingly tight when demand is high; the number of older, larger power plants closing down has far outstripped the amount of renewable projects being built.

With so little slack in the system, the threat of a power shortfall is increasing, raising the risk of blackouts while making electricity more expensive on the wholesale power markets.

Does our dependence on foreign imports matter?

Imported energy can be cheaper than what we can produce at home. But what are the implications for our security?

The tensions between Ukraine and Russia over gas payments stands out as a cautionary tale for European countries that rely too heavily on a particular energy source.

Russia cut gas off the supply of gas to Ukraine in January 2006 after it emerged that it was using the gas instead of sending it through its gas transport network to Russia's European customers.

A similar dispute erupted in January 2009 and again in the summer of 2014.

Although Britain doesn't receive gas directly from Russia, it is closely connected to European gas markets through two sub-sea pipelines to the Netherlands and Belgium, which in turn are closely linked to Germany, a large importer of Russian gas.

Ofgem has warned that the UK's growing import dependence means that our gas market is increasingly affected by geopolitical events and the fluctuations of global demand. This affects both our security of supply and the cost of wholesale gas coming to us.

The Government argues that a diverse range of import options across the energy spectrum means that the country is protected if one source fails to deliver. For example, the UK sources its oil and gas mostly via pipelines from Norway and shipping tankers from the Middle East, but we also import European gas and Algerian oil as part of the total portfolio.

The UK is not alone in this strategy - all 28 EU countries imported more energy than they exported in 2014 with the UK coming in as the [12th most dependent](#) on foreign sources of energy.

The ONS says that in 2014 the UK's import dependency was below the EU average and it was the least dependent on foreign sources of energy out of the top five EU countries by energy use: Germany, France, Italy, Spain and the UK.

But just because we are faring better, relatively speaking, than our EU stablemates doesn't mean the problem has gone away.