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Research Briefing
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By Paul Bolton
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Imports of fossil fuels from Russia

Russia's 2022 invasion of Ukraine highlighted the importance of Russian exports of fossil fuels to the Russian economy and for the energy security of the countries that import these fuels. The UK and EU have introduced full or partial bans on Russian coal and oil. The UK banned imports of Russian gas from the start of 2023. The EU has not agreed a ban on Russian gas, but has introduced policies aimed at moving away from dependence on it.

How much does the UK rely on energy from Russia?

In 2021 imports from Russia made up 4% of gas used in the UK, 9% of oil and 27% of coal. In 2021, imports of gas, oil and coal from Russian to the UK were worth a combined **£4.5 billion**. This fell to **£2.2 billion** in 2022 and **£1.3 billion** in the year to January 2023.

The UK data in this briefing is from official trade statistics. It is based on the declared origin of fossil fuel imports. This does not track individual shipments from Russia or take account of any ship-to-ship transfers involving Russian Oil. The Centre for Research on Energy and Clean Air analysis of Russian fossil fuel exports attempts to do this. Some of their findings are included later in this section.

The UK Government committed to ending imports of oil and coal from Russia by the end of 2022 year and ending imports of gas from Russia "...as soon as

possible thereafter."[1] It recently legislated for a ban on Russian gas which will start on 1 January 2023.

In January 2023, the eleventh full month since the full-scale invasion, according to UK trade statistics, **the UK imported no coal, oil or gas from Russia**. This was the tenth month in a row with no Russian gas imports. In June 2022 the UK imported no fossil fuel of any type from Russia for the first time since 2000 (when this data is available back to).

Overall energy imports from Russia in the year to January 2023 were **£1.34 billion**, 76% of this was oil imports, 12% coal and 12% gas.

According to Eurostat, in 2020 imports from Russia made up 39% of the gas used in the EU, 23% of oil imports and 46% of coal imports. Reliance on Russian fossil fuel imports varies considerably across Europe as shown in the charts at the end of this paper.

Russia supplied 15% of EU gas imports[2] in the third quarter of 2022, down from 23% in the second quarter of 2022 and 40% in 2021. Russia also supplied 14% of EU oil imports in the third quarter of 2022, down from 26% in 2021.

While the UK relies on Russian energy to a lesser extent than many other European countries, it is still exposed to the disruption in energy markets due to the invasion of Ukraine. Gas and oil prices have increased sharply and are likely to remain high as many European countries look to other sources of energy.

This briefing presents the latest monthly data on UK imports of gas, oil and coal from Russia. It also includes data for Europe, although this is less up to date. The Library has published related briefings on:

Sanctions against Russia

Domestic energy prices

Alternatives to Russian oil: Saudi Arabia, the Gulf and Venezuela?

The International Energy Agency has published detailed information on the oil and gas markets and Russian supply on its Russian supplies to global energy markets pages. The Agency's Reliance on Russian Fossil Fuels Data Explorer gives statistics on how much fossil fuels OECD and EU countries import from Russia. It publishes monthly data on Reliance on Russian Oil for OECD Countries. In March 2022 it also published A 10-Point Plan to Reduce the European Union's Reliance on Russian Natural Gas and A 10-Point Plan to Cut Oil Use.

The Centre for Research on Energy and Clean Air (CREA) tracks detailed ship movements and pipeline flows of fossil fuels from Russia in its Russian Energy

1 BEIS, British energy security strategy (7 April 2022)

2 Imports from outside the EU only.

Exports Tracker. On 6 September they published their third report on energy imports from Russia since the invasion.[3] This found that in the first six months of the war Russia had exported €158 billion in fossil fuels; €85 billion of which had gone to the EU. These imports were estimated to have contributed €43 billion to Russia's federal budget. China was the largest single destination (€34.9 billion), followed by Germany, Turkey and the Netherlands. The UK was not in the top 20 largest destination by value.[4]

The value of exports fell in April and June, but these falls were cushioned by higher prices, even with the discounted prices for Russian oil. The value and volume of exports increased slightly in July and August, mainly due to higher oil exports. The global value of imports in July and August were 18% below the February-March average. The largest overall cut in the value of imports over this period was from Germany, followed by Poland, Italy, the US and Japan. The largest increase imports was to India followed by China, the UAE and Egypt.

The authors said that the 10 August EU coal ban had hit Russian exports as Russia had failed to find other buyers to replace EU demand. They concluded that only a small faction of the upcoming EU ban on Russian oil had been realised and other oil bans, such as those in the US, UK and Australia, needed better enforcement.

An update from CREA in early October found that the value of Russian global fossil exports fell by 14% between August and September. This drop was largely due to reduced gas exports to the EU and global crude oil exports. The EU coal ban (from 10 August) had cut these direct exports, but, according to CREA, EU member states had failed to provision which prohibits on EU-owned ships transporting Russian coal to third countries. Russia had increased coal exports to Turkey, much of which was transported by EU-owned ships.[5]

This data from CREA is now published in weekly snapshots which include analysis of the impact of the EU's ban on crude oil shipments and the price cap on Russian crude. Their Russia Fossil Tracker gives the latest data on imports by type and a country-by-country

The latest Oil Market Report from the International Energy Agency said that Russian oil revenues fell from a peak of £21.5 million in March 2022 to $12.8 billion in December 2022 and $13.0 billion in January 2023. These were the first monthly figures which were below the average monthly revenue in 2021.[6]

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3 CREA, Financing Putin's war: Fossil fuel exports from Russia in the first six months of the invasion of Ukraine (6 September 2022)

4 CREA, Russia fossil fuel tracker (accessed 21 September 2022)

5 CREA, September update on Russian fossil fuels: EU imports cross EUR 100 billion since the beginning of the invasion (4 October 2022)

6 IEA, Oil Market Report February 2023

1 Restrictions on imports of energy from Russia

UK

In April 2022 the UK Government committed to ending imports of oil and coal from Russia by the end of the year and ending imports of gas from Russia "…as soon as possible thereafter." The British energy security strategy said to reduce reliance on Russian fossil fuels, the UK is:

> committing to phase out the use of Russian oil and coal by the end of 2022, and end imports of Russian liquefied natural gas as soon as possible thereafter.[7]

The Government said on oil specifically:

> The phasing out of imports will not be immediate, but instead allows the UK more than enough time to adjust supply chains, supporting industry and consumers. The government will work with companies through a new Taskforce on Oil to support them to make use of this period in finding alternative supplies.[8]

The ban on coal came into force on 10 August to coincide with the equivalent EU ban. The UK ban on imports of Russian oil and oil products and ancillary services in respect of these products, such as insurance and financing their transport, came into force on 5 December 2022.[9] This is the same day the EU partial ban on Russian crude imports was introduced.

At the end of October the Government laid regulations which will ban the import and acquisition of Liquefied Natural Gas (LNG) from 1 January 2023. Technical assistance, financial services and brokering services related to the import of Russian LNG or LNG consigned from Russia will also be banned from the same date.[10]

EU sanctions

The European Commission has published a series of frequently asked questions on its energy sanctions on Russia

The EU agreed to ban imports of coal from Russia on 8 April 2022.[11] From this date there will be a four-month 'winding down period' for existing contracts.[12]

In early June 2022 the EU adopted its sixth package of sanctions against Russia. This included a complete import ban Russian on seaborne crude oil

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7 BEIS, British energy security strategy (7 April 2022)
8 BEIS press release 8 March 2022, UK to phase out Russian oil imports
9 BEIS, UK ban on Russian oil and oil products (Updated 2 December 2022)
10 The Russia (Sanctions) (EU Exit) (Amendment) (No. 15) Regulations 2022
11 European Commission press release 8 April 2022, Ukraine: EU agrees fifth package of restrictive measures against Russia
12 European Commission, Question and answers on the fifth package of restrictive measures against Russia (8 April 2022)

and petroleum products which make up 90% of current EU oil imports from Russia. There is a 'temporary' exemption for pipeline imports, but no date for when this might end. The ban on seaborne imports has transition periods[13] of sixth months for crude oil and eight months for petroleum products. The ban on crude came into force on 5 December 2022, the ban on products began on 5 February 2023. This package of sanctions also included a ban on insuring and financing the transport (including shipping) of Russian oil to third countries. This ban has a six month 'winding down' period and is also to be introduced in the UK.[14] The European Commission said this would:

> ...make it particularly difficult for Russia to continue exporting its crude oil and petroleum products to the rest of the world since EU operators are important providers of such services.[15]

On 6 October 2022 the EU agreed its eighth package of sanctions against Russia which included the first phase of introducing the G7's oil price cap.[16] At the start of December the EU, G7 and Australia approved a $60 price cap on Russian seaborne crude oil. This came into force on 5 December, the same day as the EU ban on importing Russian seaborne crude. The cap allows European companies to transport, insure and finance shipments of Russian oil to third countries.

A similar price cap on petroleum products from Russia was introduced on 5 February 2023 (when the ban on EU imports of these products came in).[17] It has been set at $45 per barrel for petroleum products traded at a discount to crude and $100 per barrel for products traded at a premium to crude.[18]

The Centre for Research on Energy and Clean Air published a new oil sanctions tracker on the same day the EU ban and price cap were introduced (5 December 2022). This aims to look at the impact of these measure on where Russia exports oil and oil products to and what prices they receive.

In mid-October it was reported that the London-based International Group of Protection and Indemnity Clubs, which represents the world's biggest shipping insurers, had been criticised by a Ukrainian government agency for allowing some of its Greek member companies to transport Russian oil earlier in the year.[19]

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13 These are for execution of existing contracts and spot market transactions.

14 Financial Times, UK and EU hit Russian oil cargoes with insurance ban (31 May 2022)

15 European Commission, Russia's war on Ukraine: EU adopts sixth package of sanctions against Russia (3 June 2022)

16 European Commission, Ukraine: EU agrees on eighth package of sanctions against Russia (6 October 2022)

17 European Commission, G7 agrees oil price cap: reducing Russia's revenues, while keeping global energy markets stable (3 December 2022)

18 Council of the European Union, EU agrees on level of price caps for Russian petroleum products (4 February 2023)

19 The Guardian, London body in row with Ukraine over insuring Russian oil-carrying ships (14 October 2022)

Russia stopped exporting gas to some EU states in early summer including Poland, Bulgaria and Finland. It reduced exports of gas to Europe through the Nord Stream 1 pipeline to around 20% of capacity in Early August and stopped these exports completely at the start of September. The IEA has said:

> Russia's strategic behaviour of using natural gas as a political weapon has become increasingly obvious since September 2021.[20]

A large increase in imports of liquefied natural gas (LNG) via tankers has partially offset the loss of Russian supply to Europe.

EU measures to reduce demand for gas

On 8 March 2022, the Commission proposed an outline plan, REPowerEU, which aimed to reduce EU demand for Russian Gas by two thirds before the end of the year and to make Europe independent from Russian fossil fuels "well before 2030".[21] In June 2022 the European Commission agreed measures to cut gas demand. In mid-September 2022 it published proposals to cut peak and overall electricity demand, cap revenue for some power producers and use the proceeds to help reduce bills. The European Council agreed these measures on 30 September. They include a voluntary overall electricity reduction target of 10%, a mandatory reduction of 5% in peak hours a revenue cap of €180/MWh for generators using 'inframarginal' technologies such as renewables, nuclear and lignite and a temporary 'solidarity levy' on the taxable profits of the fossil fuel sector which have increased by more than 20% since 2018.[22]

There is still no EU agreement on a ban on Russian gas imports. The EU is said to be considering a cap on gas prices.

In June 2022 Centre for Research on Energy and Clean Air published a new report which looked at the actions taken in EU countries in response to the Russian invasion of Ukraine and resultant supply disruption and higher prices for fossil fuels. It found that 19 had accelerated their decarbonisation, their latest plans were for a 63% renewable share of electricity generation (up from 55% under previous plans) and they collectively planned to cut fossil fuel power generation by 31% by 2030 compared to 2019 plans.

The energy think tank Ember has published a 2030 targets tracker which illustrates how 2030 targets for electricity generation from renewables, overall low-carbon and fossil fuels have changed and how they compare to current levels.

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20 IEA, Gas market report Q4 2022

21 European Commission, REPowerEU: Joint European action for more affordable, secure and sustainable energy (8 March 2022)

22 Council of the European Union, Council agrees on emergency measures to reduce energy prices (30 September 2022)

The EU-wide 2030 targets, set out in REPowerEU, increased renewable power target from 32% to 45% and the cut in energy consumption from 9% to 13%.[23]

In early December 2022 the IEA published How to Avoid Gas Shortages in the European Union in 2023 which showed how the supply-demand gap for gas could be closed with additional actions on a range of areas including energy efficiency, renewables, more heat pumps and energy savings.

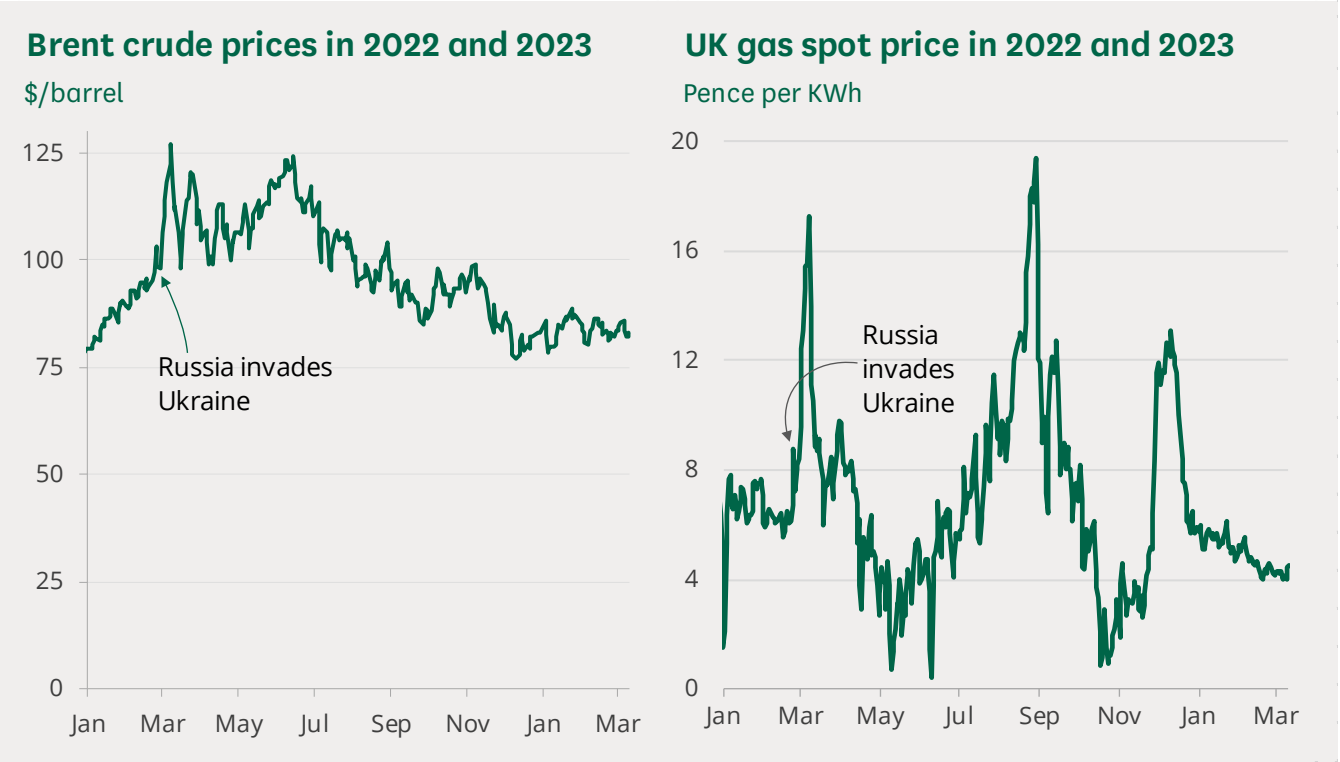
2 Impact on international energy markets

Prices of gas and oil increased during the second half of 2021 largely due to supply not keeping pace with strong demand as economies came out of lockdown. Prices continued to increase in early 2022 as a build-up of Russian forces close to the border with Ukraine led to concerns about a possible invasion and disruption to supply.

Russia launched its full-scale invasion of Ukraine on 24 February 2022. On the day of the invasion, Brent crude prices exceeded $100 a barrel for the first time in more than seven years. Gas prices in Europe increased by 50% on 24 February to $4.40 therm (around 11 p/kWh).[24] Gas prices continued to increase rapidly up to early March. Oil prices increased more steadily to mid-June, but have fallen back since then and are now similar to their early 2022 levels.[25]

UK wholesale gas prices fell in April and May partly due mainly to a 'glut' of gas in the UK at the time. These are spot prices for immediate delivery and forward prices did not show the same downward trend.[26] Spot prices for gas increased from mid-June reaching new record levels towards the end of August. They fell rapidly in September and October to below their January 2022 levels, before spiking again in early December. The spike was short live and prices have been stable or falling since late December.

23 CREA, Shocked into action (2 June 2022)
24 IEA, Gas Market and Russian Supply (accessed 4 March 2022)
25 The drop in prices has been smaller in Sterling terms due to its weaker value against the US Dollar
26 Sky News, The surreal, but also real, problem of Britain's gas glut (17 May 2022)



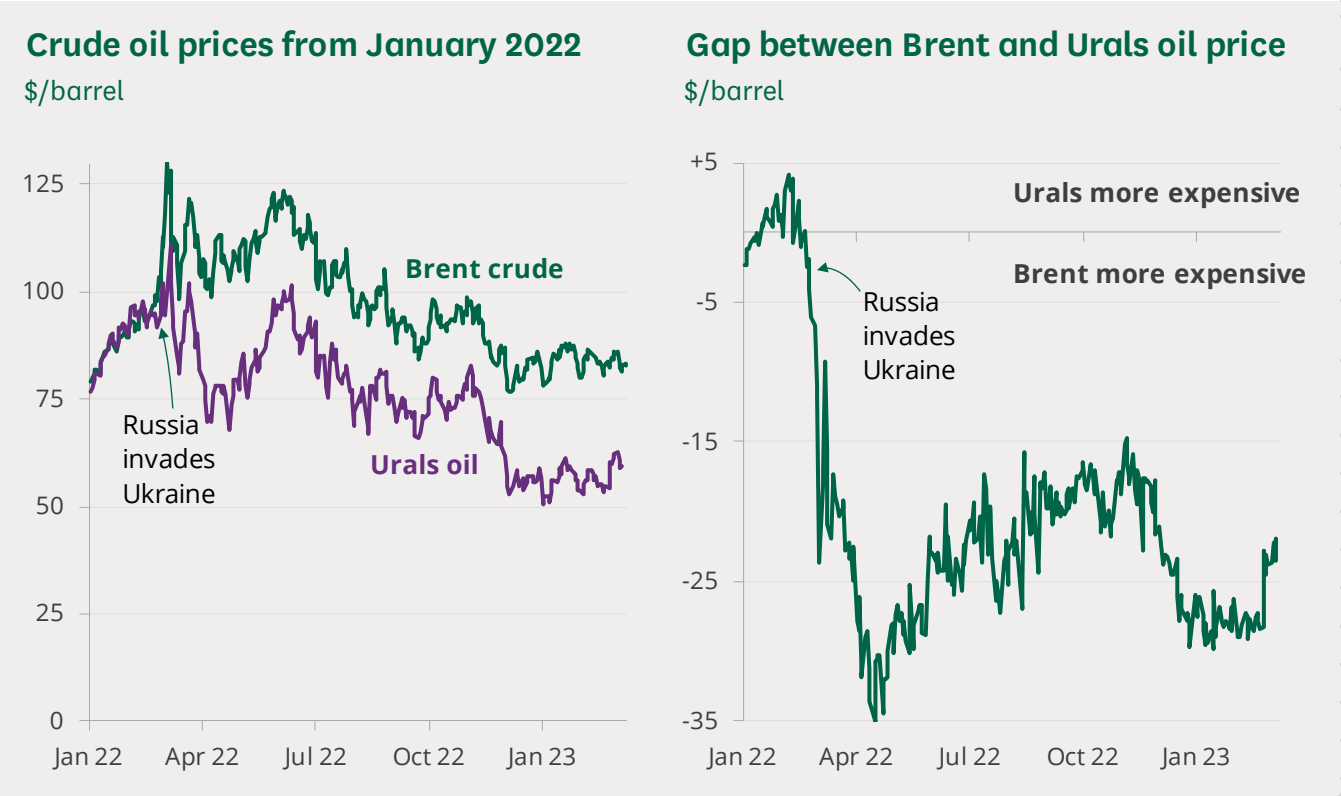
Sources: Financial Times; HoC Library electronic holdings; nationalgrid.com Prevailing View tool (system average price)

Prices for Russian oil

Headline crude oil prices tend to be for Brent crude. The chart on the previous page gives daily Brent crude prices. However, Brent crude is one of many oil 'brands' and refers to oil from various fields in the North Sea. It is the main international benchmark oil and is used as a reference for more contracts than any other brand. Urals oil is the brand used to price Russian oil exports.

Brent oil price rises immediately before and after the invasion of Ukraine have grabbed the headlines, but it is the price of Urals oil which is a much better indicator of the value of Russian exports per barrel.

The following charts show that the price of the two brands were very similar up to the invasion, but Brent became much more expensive immediately afterwards. This gap grew to over $30 per barrel in mid-April. The price of both types of oil fell from mid-May and the reported gap fell to around $20 per barrel in autumn 2022. The G7's $60 per barrel price cap and the EU's ban on imports of seaborne crude oil came were introduced in early December 2022. The price of Urals oil fell faster than Brent crude immediately before and soon after the cap was introduced and has been below $60 per barrel ever since apart from a brief period in early March 2023. In early/mid-March 2023 the price gap was around $23 per barrel and Urals oil was selling for $20-25 less per barrel than at the start of 2022.



Source: uk.investing.com (Crude Oil Urals Europe CFR Spot and Brent Oil WTI Futures - Aug 22)

These figures should be treated with caution as sanctions now mean that much trade in Urals oil goes unreported. In April the International Energy Agency (IEA) said that spot dealing in Urals had stalled and most transaction were now undisclosed. They added that Indian refineries had become a major destination for Russian oil with some more modest increase in imports to China.[27] In May the IEA said that major trading houses were winding down contracts for Russian oil ahead of a ban. This had forced the state-controlled oil company Rosneft to perform its own deals. Dealing with a sanctioned company and Rosneft's own conditions, such as payment in Roubles, was said to have off potential bidders.[28] With sales shifting away from the international trading houses the IEA has more recently said that trade in Urals is "obscure".[29]

The IEA reported even lower prices for Urals oil in North West Europe in early February 2023 of $47 per barrel, down around $30 on early November prices. The weighted average price for all Russian crude oil was estimated at around $57 per barrel in early February 2023. This average is higher than prices in North West Europe because of higher prices for Russian oil sold from its eastern ports.[30]

27 International Energy Agency, Oil Market Report April 2022
28 International Energy Agency, Oil Market Report May 2022
29 International Energy Agency, Oil Market Report June and July 2022
30 IEA, Oil Market Report February 2023 (pp46-47)

3 Data on Russian energy reliance

The following three pages summarise the latest data on UK imports of gas, oil and coal from Russia. The final page looks at how much European countries relied on Russian energy in the decade to 2020.[31] These pages use the following definitions unless stated otherwise:

Net imports: Gross imports minus gross exports

Total energy supply: Domestic production plus net imports minus fuel used in international 'bunkers', plus or minus changes to stocks

Import dependency: Net imports of a fuel as a percentage of total energy supply of that fuel.

Reliance on Russian imports: Net imports of a fuel from Russia as a percentage of total energy supply of that fuel.

Gas: Natural gas including Liquefied Natural Gas (LNG).

Oil: Includes crude oil and petroleum products, such as petrol, diesel and heating oil

Coal: Includes coal, other solid fuels including peat and manufactured solid fuels such as coke

Import dependency can be over 100% if a country imports more than it consumes. This can happen for different reasons including where it builds up stocks, uses imports for international 'bunkers'[32] or where some is reexported.

The monthly data for the UK is taken from trade figures. These are given in final values and mass units (kg). Official energy statistics use units of energy and are included in the annual data, but the trade figures are included here because they give more up-to-date figures on imports from specific countries. The monthly trade data is shown from 2019 onwards to include a full year of imports before the pandemic. There is a seasonal pattern to some imports, so the charts include a 12-month moving average to illustrate underlying trends.

The increased prices for fuels from the second half of 2021 onwards are reflected in the charts of the value of Russian energy imports. These can show the value of imports going up, even where the mass imported has not increased.

Sources for the data included in the following pages are given at the end of this briefing paper.

31 Monthly data on imports of Russian gas to EU countries in 2021 and 2022 can be found at Eurostat

32 Fuel used for international shipping/aviation

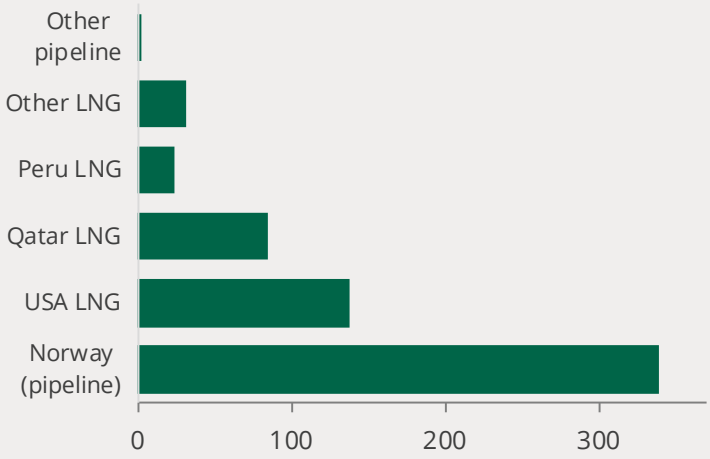
Gas

Provided 41% of UK energy needs in 2021

Import dependency in 2021 57%

Reliance on Russian imports in 2021 4%

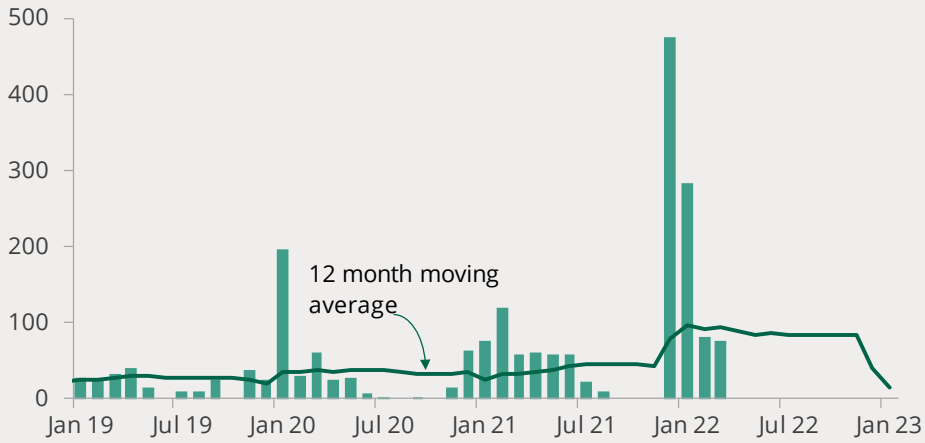
Sources of UK gas imports in 2022 (TWh)



Imports of gas from Russia fell by 84% in 2022 which made it the ninth most important source. The UK gets just over half of its gas imports from Norway.

'Other pipeline' imports come directly from continental Europe and may include some gas which originally came from Russia.

Value of UK gas imports from Russia, £ million

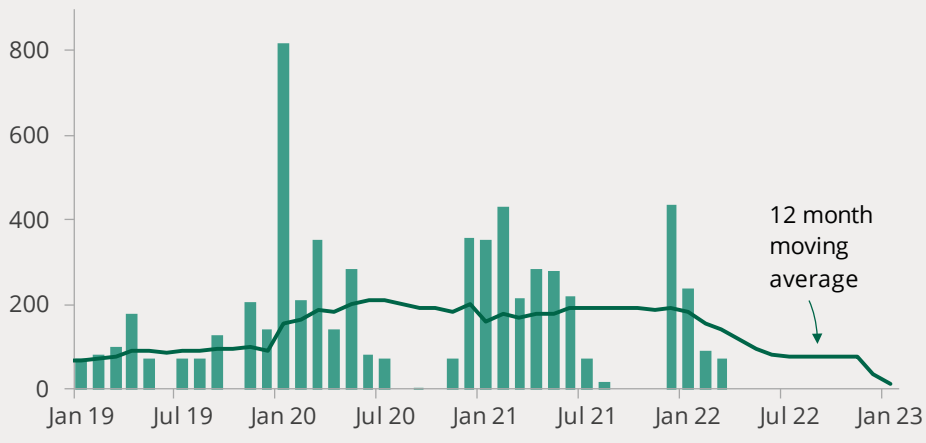


£0.16 billion of imports in year to January '23

-100% January '23 v January '22

0% of all gas imports in January '23

Mass of gas imports from Russia, thousand tonnes



0.2 million tonnes of imports in year to January '23

-100% January '23 v January '22

0% of all gas imports in January '23

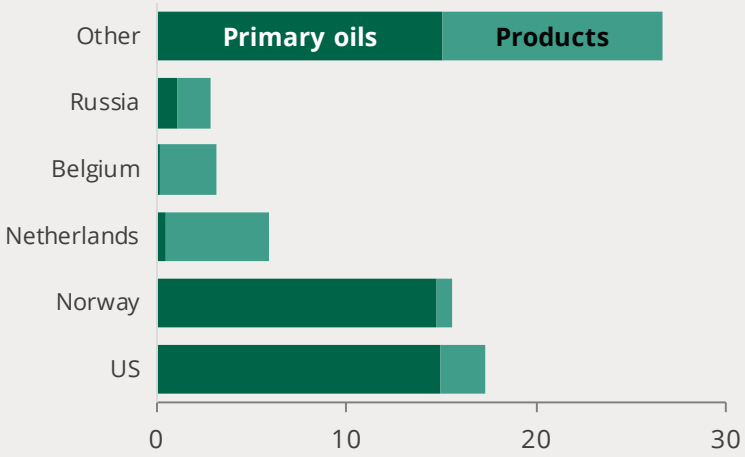
Oil

Provided 34% of UK energy needs in 2021

Import dependency in 2021 26%

Reliance on Russian imports in 2021 9%

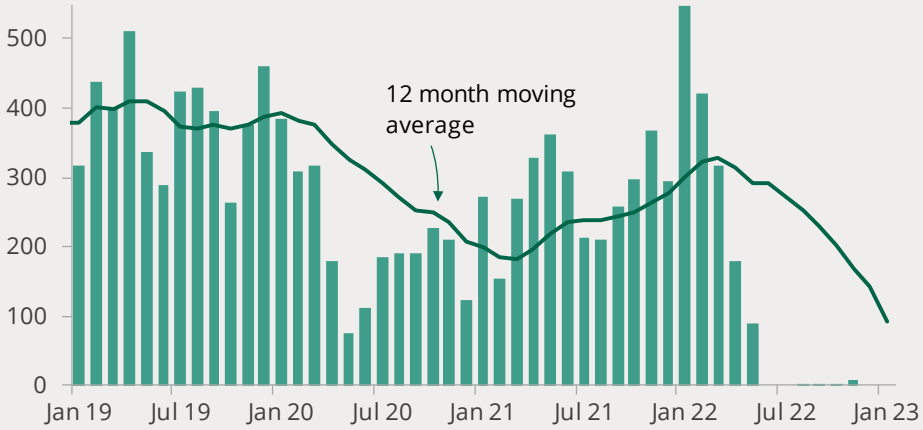
Sources of UK oil imports in 2022 (million tonnes)



Imports of Russia oil and oil products fell by 68% in 2022, from the third to the fifth most import source.

Russia was the second most important source of refined petroleum products in 2021 and supplied 34% of UK diesel imports. In 2022 it fell to the eighth most important source of products and supplied 11% of UK diesel imports.

Value of UK oil imports from Russia, £ million

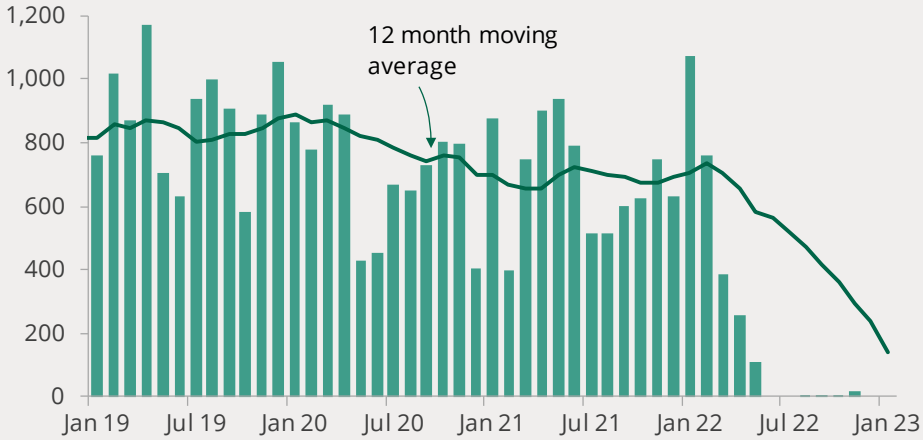


£1.02 billion of imports in year to January '23

-100% January '23 v January '22

0% of all oil imports in January '23

Mass of oil imports from Russia, thousand tonnes



1.6 million tonnes of imports in year to January '23

-100% January '23 v January '22

0% of all oil imports in January '23

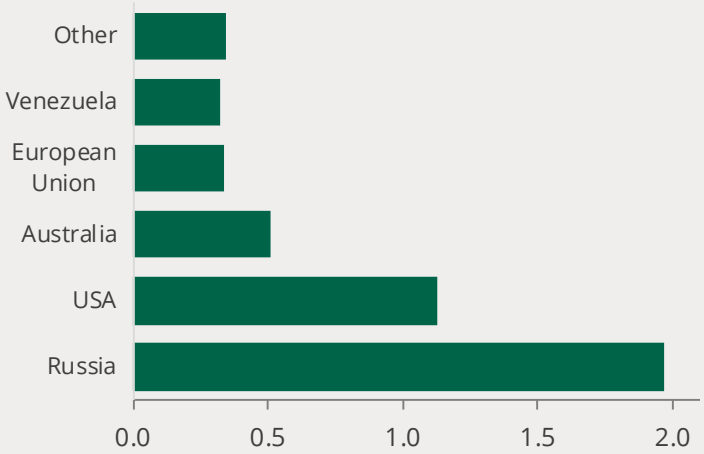
Coal

Provided 3% of UK energy needs in 2021

Import dependency in 2021 55%

Reliance on Russian imports in 2021 27%

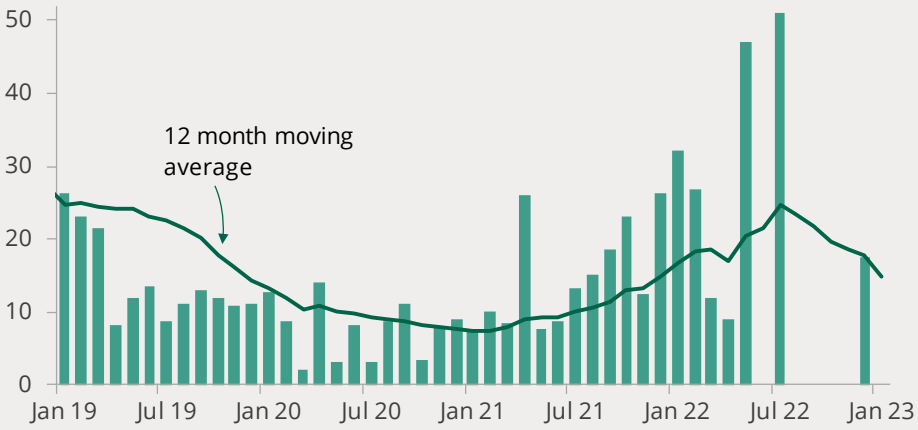
Sources of UK coal imports in 2021 (million tonnes)



Russia is the largest single course of imported coal. The amount the UK imported from RUssia increased by 21% in 2021. Most of this is 'steam coal' used in power generation.

The data opposite only includes coal not manufactured solid fuels, total imports of which were 1.1 million tonnes in 2021. This was mainly coke for steel production.

Value of UK coal imports from Russia, £ million

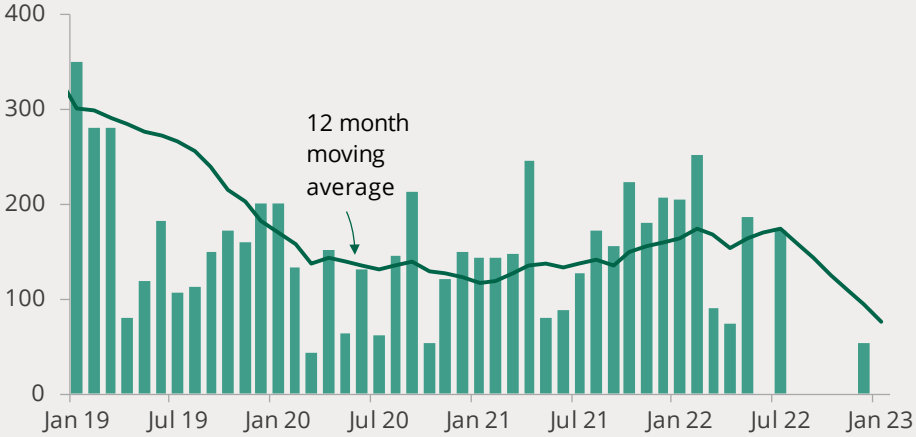


£163 million of imports in year to January '23

-100% January '23 v January '22

0% of all coal imports in January '23

Mass of coal imports from Russia, thousand tonnes

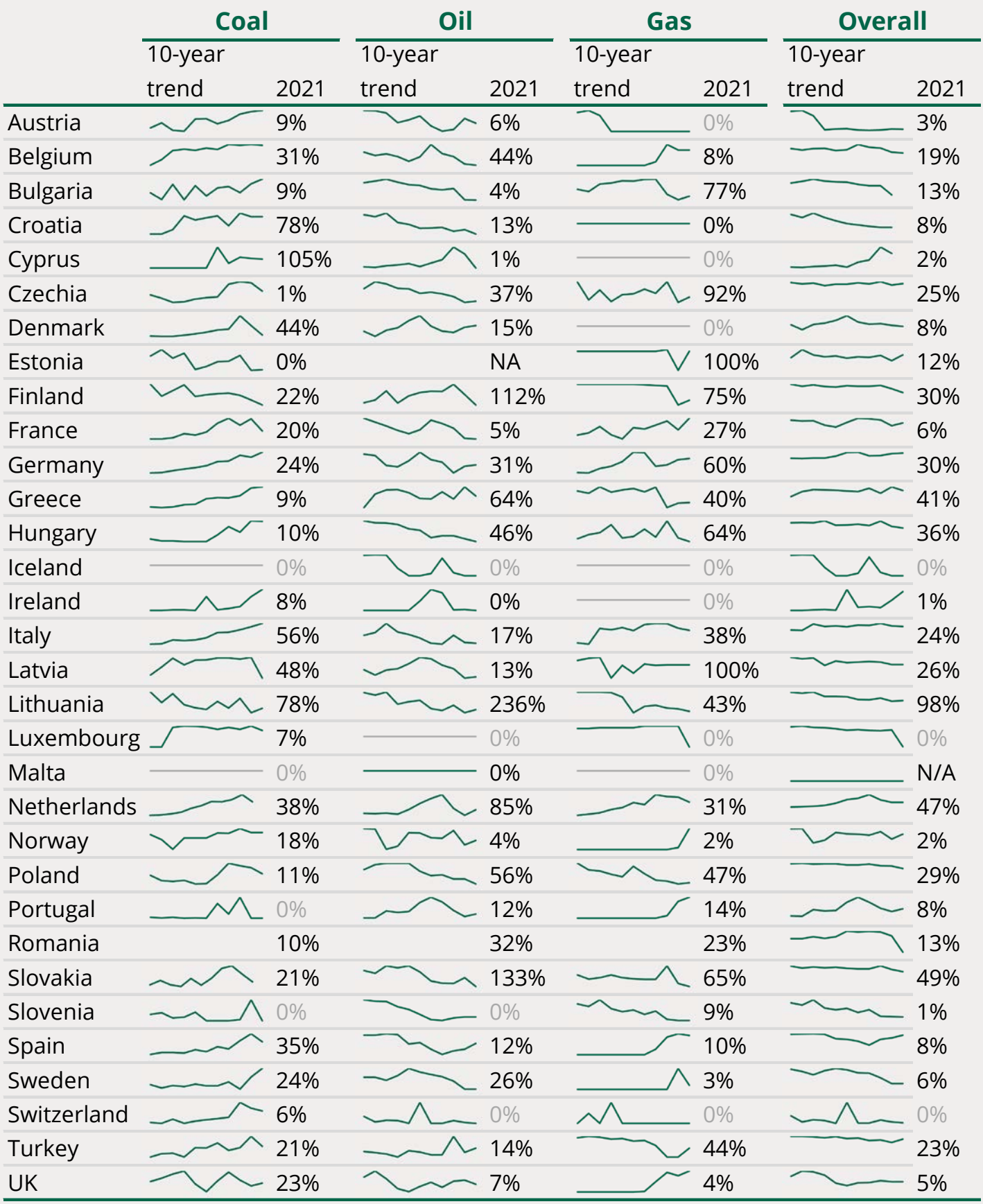


0.8 million tonnes of imports in year to January '23

-100% January '23 v January '22

0% of all coal imports in January '23

European reliance on imports of fossil fuels from Russia



	Coal		Oil		Gas		Overall	
	10-year trend	2021	10-year trend	2021	10-year trend	2021	10-year trend	2021
Austria		9%		6%		0%		3%
Belgium		31%		44%		8%		19%
Bulgaria		9%		4%		77%		13%
Croatia		78%		13%		0%		8%
Cyprus		105%		1%		0%		2%
Czechia		1%		37%		92%		25%
Denmark		44%		15%		0%		8%
Estonia		0%		NA		100%		12%
Finland		22%		112%		75%		30%
France		20%		5%		27%		6%
Germany		24%		31%		60%		30%
Greece		9%		64%		40%		41%
Hungary		10%		46%		64%		36%
Iceland		0%		0%		0%		0%
Ireland		8%		0%		0%		1%
Italy		56%		17%		38%		24%
Latvia		48%		13%		100%		26%
Lithuania		78%		236%		43%		98%
Luxembourg		7%		0%		0%		0%
Malta		0%		0%		0%		N/A
Netherlands		38%		85%		31%		47%
Norway		18%		4%		2%		2%
Poland		11%		56%		47%		29%
Portugal		0%		12%		14%		8%
Romania		10%		32%		23%		13%
Slovakia		21%		133%		65%		49%
Slovenia		0%		0%		9%		1%
Spain		35%		12%		10%		8%
Sweden		24%		26%		3%		6%
Switzerland		6%		0%		0%		0%
Turkey		21%		14%		44%		23%
UK		23%		7%		4%		5%

Notes: 2021 data are estimates or latest outturn figures where these are not available

Source: IEA (2022), Reliance on Russian Fossil Fuels Data Explorer, IEA, Paris https://www.iea.org/reports/reliance-on-russian-fossil-fuels-data-explorer

4 Sources

Trade data

UK Trade Info tables on energy imports from Russia and energy imports in total.

UK energy data

BEIS, Energy Trends UK: Gas, tables 4.1 and 4.4

BEIS, Energy Trends: UK total energy, table 1.3

BEIS, Energy Trends: UK oil and oil products, tables 3.4 and 3.14

BEIS, Energy Trends: UK solid fuels and derived gases, tables 2.1, 2.2 and 2.4

EU data

IEA (2022), *Reliance on Russian Fossil Fuels Data Explorer*, IEA, Paris https://www.iea.org/reports/reliance-on-russian-fossil-fuels-data-explorer

Eurostat, Energy database (trade by partner country tables)

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