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Evading the sanctions: UK imports EUR 660 mn of oil products made from Russian crude

Key findings

Sanctions imposed by the UK and EU on Russia prohibit the importation of Russian crude oil and oil products. There is a loophole in the sanctions however that enables those countries that are not imposing sanctions on Russia (e.g., India, China and the UAE) to legally import Russian crude oil, refine it into oil products, and export those petroleum products to the UK and EU. This loophole in the sanctions enables higher sales of Russian crude oil, pushing up the selling price, and the funds sent to finance the Kremlin's war chest.

- We estimate that more than **3% of all petroleum products imported by the UK were produced from Russian crude oil** in the 12 months since the ban was introduced. The value of these imports is **approximately EUR 660 mn**.
- The UK imported oil products derived from seaborne Russian crude from 12 identified refineries. 19.7% of jet fuel imported by the UK from the 12 refineries, worth EUR 510 mn, was estimated as being produced from Russian crude oil.
- In the 12 months after the EU/G7 sanctions and crude oil embargo entered into force, the **UK's imports of oil products derived from Russian crude sent EUR 165 million in tax revenues to the Kremlin**, equivalent to 28% of the humanitarian aid it has so far provided to Ukraine.

How much Russian oil ends up in the UK?

Total oil products imported by UK using Russia crude oil

Billion EUR of oil products imported by UK by crude origin | December 2022 to November 2023 inclusive



Source: CREA analysis using Kpler and Eurostat.



The UK's renewed and constant support for Ukraine amidst the Russian invasion has been lauded in most quarters, at a time when questions are being asked of [wavering support in the West](#). Before the turn of the year, responding to a new wave of devastating attacks by Russia, the UK committed a fresh military assistance package in the form of air defence systems to aid the military resistance in Ukraine. Since Russia's invasion of Ukraine, [the UK's aid has amounted to EUR 13.27 bn](#), the third highest after the EU and the US. Unfortunately, the aid notwithstanding, the UK's efforts to curb the invasion fall flat because of policies that are indirectly bolstering the Russian military budget.

CREA's investigation has found that since the start of the G7's ban on the importation of Russian crude and the imposition of the oil price cap, the UK's imports of oil products derived from Russian crude have sent EUR 165 mn in tax revenue back to the Kremlin war chest¹ — equivalent to [28% of the humanitarian aid it has so far provided to Ukraine](#).

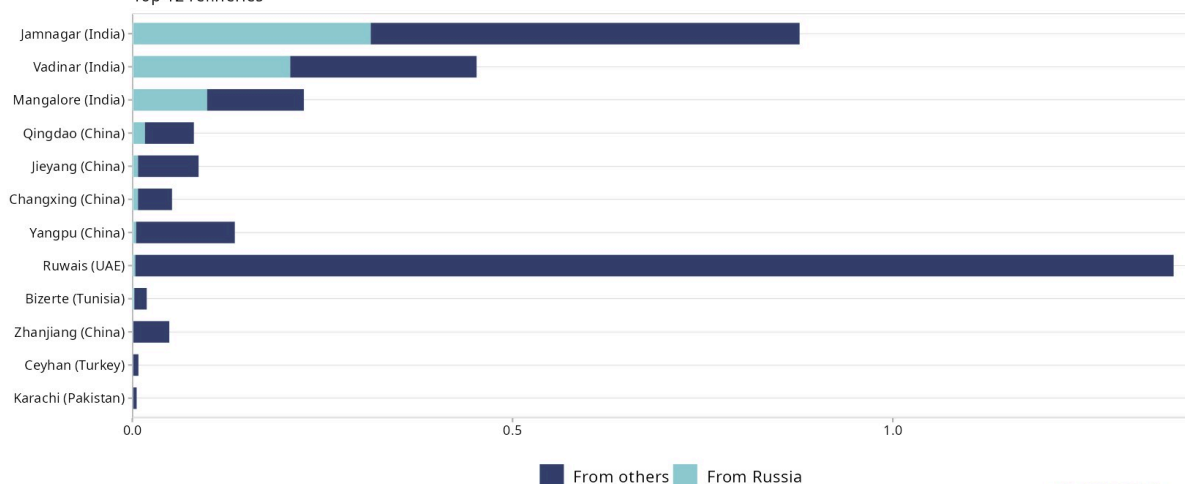
To conduct the analysis, CREA identified 12 refineries that were importing Russian crude and exporting oil products to the UK since the implementation of the ban on Russian crude oil. Between December 2022 and November 2023, these refineries imported Russian crude oil worth EUR 23 bn. In the same period, 3% (EUR 660 mn) of the UK's total imports of oil products worldwide were estimated as derived from Russian crude. The Russian crude used to make these products was, in itself, estimated at EUR 304 mn.

¹ These estimates of Russia's tax revenues received from crude oil exports are based on calculations made from December 2022 to November 2023 data. The data was collected from Mineral Extraction Tax and Export Duties after the crude oil was sold to the 12 identified refineries that have imported Russian crude and exported a proportion of the products to the UK.

Major refineries exporting Russian oil to the UK

UK imported oil products from refineries that imported Russia crude

Billion EUR of oil products exported to UK by proportion Russia crude | December 2022 to November 2023 inclusive
Top 12 refineries



Source: CREA analysis using Kpler and Eurostat.



While sanctions prohibit the import of crude and oil products directly from Russia, this has led to the building up of a new market, where third countries (those not imposing sanctions) import Russian crude and subsequently export products partially derived from it to EU/G7 countries imposing the sanctions. A prior investigation from CREA has highlighted the [role these countries play in establishing a legal 'laundromat' for Russian oil](#), and their role is equally magnified in the case for the UK.

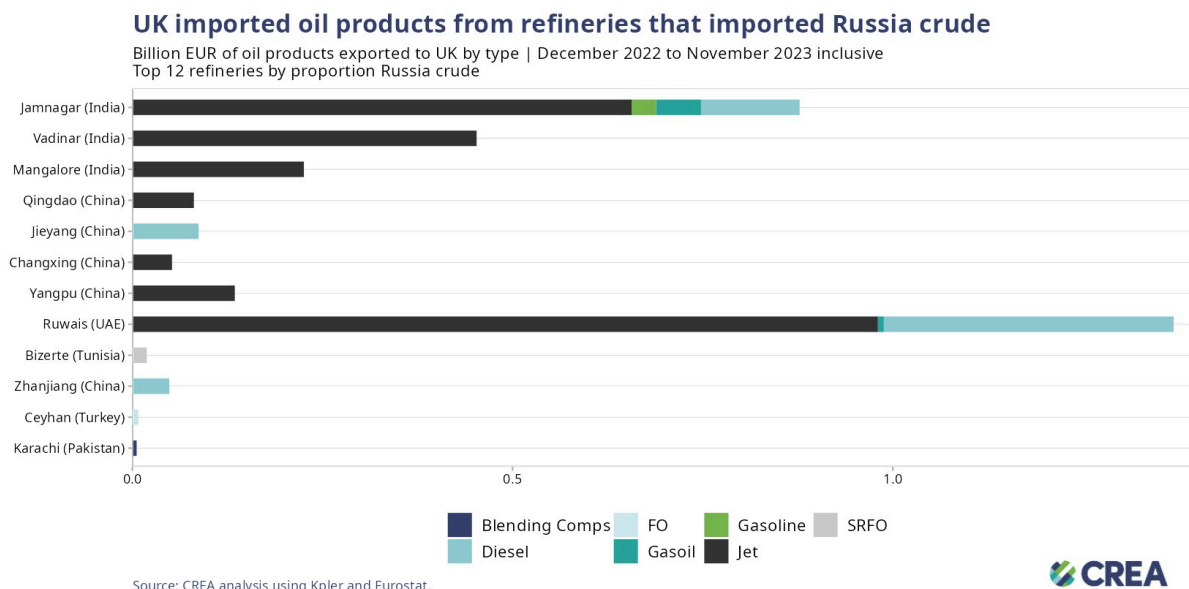
Countries imposing sanctions on Russia must close these loopholes that enable higher sales of Russian oil on the global market and reduce the impact of the sanctions in achieving their aim to diminish flows to the Kremlin's war chest. Sanctioning countries such as the UK should ban imports of oil products from refineries that are running on Russian crude.

The bulk of the UK's imports of oil products from refineries processing Russian crude comes mainly from three in India — Jamnagar, Vadinar and New Mangalore. These three refineries exported EUR 1.6 bn of oil products to the UK, of which EUR 619 mn was derived from Russian crude. The Jamnagar refinery is the highest exporter of oil products derived from Russian crude by volume to the UK. The refinery exports oil products worth EUR 778

million to the UK of which 33% (EUR 313 mn) is estimated to be derived from Russian crude since sanctions were implemented until the end of November 2023.

The second largest refinery exporting oil products to the UK that are estimated as being produced from Russian crude, Vadinar Oil Refinery, is owned by Nayara Energy Limited. Russian energy giant Rosneft — who are on the [UK list of investment ban targets](#) — holds a [49.1% share in Nayara Energy Limited](#). Profits made from the export of oil products from this refinery to the UK will therefore partially flow back to the Kremlin.

What oil products is the UK importing?



CREA’s analysis found a huge proportion of the oil products imported by the UK from these refineries comprised jet fuel. The UK imported jet fuel worth EUR 2.5 bn from these refineries, all of which partially rely on and import Russian crude for their operations. 19.7% (EUR 510 mn) of jet fuel imported from these 12 refineries was estimated as being produced from Russian crude oil. This lies upon the assumption that jet fuel exported to the UK from these refineries is produced from the same proportion of Russian feedstock as for all oil product types.

CREA's analysis found that a large proportion² of the crude oil used by the Ruwais refinery comes from domestic supply via pipeline. To calculate the proportion of Russian feedstock used by the Ruwais refinery, we have estimated that the refinery's capacity is around 860,000 barrels per day³. 71% of the refinery's oil products exports to the UK consisted of jet fuel (EUR 980 mn). Diesel (27% worth EUR 381 million) was the Ruwais refinery's second highest export product to the UK.

Of Jamnagar's exports to the UK, 74% (EUR 656 mn) was jet fuel, followed by diesel (15%), gasoil (7%) and gasoline (4%). The entirety of Vadinar (EUR 452 mn), Mangalore (EUR 226 mn) and Yangpu (EUR 134 mn) oil products exports to the UK consisted of jet fuel.

How can the UK curb Russian oil revenues?

The first and most important step for the UK would be to ban the importation of oil products produced from Russian crude oil to enhance the impact of sanctions. This ban would disincentivize third countries from importing large amounts of Russian crude — a proportion of which is turned into oil products for export to sanction imposing countries — and help cut Russian revenues.

The low reliance (3%) of the UK on oil products produced from Russian crude means that if the UK banned these imports, it would have no significant inflationary pressure on domestic oil prices.

By banning the importation of oil products into the UK from refineries that run on Russian crude oil, this would also drop the price of Russian oil, which has remained above the price cap of USD 60 per barrel from [July until end of November 2023](#). CREA's analysis of the one-year impact of the crude oil price cap found that immediately after the sanctions came into force, prices of Russian oil dropped due to them having to heavily discount their oil to attract new buyers and maintain similar export volumes that previously went to sanctioning countries. Russia has [consistently traded oil using Western owned or insured tankers above the price cap](#), as Russia has found new and consistent buyers, prices have

² Ruwais imported an average of 30,659 barrels of crude per day via sea (between December 2022 and the end of November 2023). If we make the assumption that the Ruwais refinery operates at full capacity 365 days a year, processing 860,000 barrels per day, it receives 4% of total feedstock crude via sea. This provides a conservative estimate of the refinery's reliance on Russian crude oil imported via sea.

³ Capacity taken from <https://www.adnoc.ae/en/adnoc-refining> and assumed to operate at 100% capacity over the period.

risen. Higher export prices for Russian oil paired with evidence that trades have taken place above the cap with limited enforcement of sanctions significantly negates the impact of the price cap.

The movement towards the implementation of [tighter shipping measures are encouraging](#), but more needs to be done to tackle violations and disincentivize those doing so. The UK and Price Cap Coalition⁴ should require maritime insurers to verify via bank statement that the oil price was paid below the cap to avoid fraudulent attestation documents being used to attain Western insurance; this could significantly improve compliance with the policy.

Vessels owned or insured by G7 countries have persisted in loading Russian oil at all ports within Russia during periods when prices remain above the price cap. These occurrences serve as compelling evidence of violations against the price cap policy. Yet there is very little [information](#) on enforcement agencies implementing penalties against shippers, insurers or vessel owners in the public domain. The UK Office of Financial Sanctions Implementation (OFSI), must investigate UK entities and insurance firms that have provided services to facilitate the maritime transportation of Russian oil above the oil price cap. CREA's recent publication discovered that [33% of all Russian oil \(by volume\) was transported on tankers insured in the UK](#) since the sanctions were implemented until early November 2023. Penalties must be implemented on firms that violate sanctions and facilitate Russia to increase their oil export earnings above the price cap used to fuel the war on Ukraine.

Penalties for entities caught as violating the oil price cap are inadequate. The UK and sanctioning countries should ban maritime services in perpetuity for vessels used to transport Russian crude without complying with the price cap. The current ban of 90 days, prohibiting vessels from attaining EU maritime services following a violation of sanctions, is far too weak. The UK's monitoring and enforcement agency can impose [fines](#) of around GBP 1 million for breaches of the oil price cap or 50% of the value of the breach. These fines are too weak which therefore does not sufficiently dissuade risk taking entities to violate the cap in pursuit of lofty profits.

The UK and Oil Price Cap Coalition should introduce a spill insurance verification program for vessels that travel through their waters. Sanctioning countries could mandate that tankers travelling through their waters must provide compliant spill liability insurance under international maritime law. This could exclude “shadow” tankers without spill

⁴ [Price cap coalition countries](#) consist of the EU, G7 and Australia. [Norway](#) and [Switzerland](#) also implement the oil price cap policy.

insurance from travelling through their most travelled route from Baltic ports whilst reducing the risk of environmental catastrophe. If this policy excluded many “shadow” tankers from transporting oil from the Baltic ports it could increase Russia’s reliance on legally insured vessels and increase the leverage of the oil price cap policy.

The most important way to cut Russia’s export revenues though will be to drive down the oil price cap and use their reliance on G7/EU insurance to do so. Lowering the price cap would be deflationary, reducing Russia’s oil export prices and inducing more production from Russia to make up for the drop in revenue.

A price cap of USD 30 per barrel would have slashed Russia’s revenues by EUR 4.9 bn or 41% in November 2023 alone. If this price cap had been established in December 2022 and paired with full enforcement, when the sanctions were originally implemented, Russia’s oil export earnings would have been reduced by 40% (EUR 56 bn).

Methodology and assumptions

Editor’s note: The detailing of our methodology in this analysis was updated on 15 April 2024. The earlier version did not explicitly convey the methodology we had employed to derive the amount of Russian crude consumed to make products for sanctioning countries. We apologise for any inconvenience.

Assumptions

We look at locations that have exported oil products to the UK and conclude that these are refineries. We assume that refineries perfectly mix the crude imported over the period of analysis, December 2022 to November 2023.

Data sources

CREA analysis is based on an array of different data sources including: Kpler, Eurostat, Comtrade, Equasis, P&I providers, Global Energy Monitor.

Estimated crude consumption capacity and oil product output by refinery

For most refineries (except Ruwais, as discussed in the *Limitations and Challenges* section), we estimated crude consumption capacity based on whichever is higher: the total crude oil imported in tonnes, or the estimated crude required to export the products. This would produce a more conservative estimate of the refinery's reliance on Russian crude as a proportion of the total oil feedstock.

We estimated the oil product output to be the refinery capacity multiplied by a processing gain constant (106.3%)⁵. The processing gain is the output of oil products compared to the input of feedstock to a facility⁶. As a result of adding chemicals to produce the refined final petroleum product or due to the higher density of refined oil compared to crude, this can result in the volume of oil products being higher than the feedstock crude oil. We are assuming that the processing gain is constant across refineries and products too.

We assumed the refinery's consumption of domestic or pipeline crude oil is the difference between the capacity and the total seaborne crude imported. We assumed domestic consumption of oil products is the difference between the capacity (multiplied by the processing gains) and the total seaborne oil products exported.

Estimated value of oil products using Russian crude for export to the UK

For each refinery, we take the percentage of seaborne Russian crude oil coming into the facility as a percentage of the capacity. To estimate the value of products sold to the UK that were produced from Russian crude, we multiply this percentage by the total value of products exported to the UK by each refinery.

Estimated Russian crude consumed to make products for UK

We assume that all feedstock crude oil is perfectly mixed by refineries over the analysis period. For each refinery, we apply the percentage of the feedstock crude oil that is of

⁵ Processing gain taken from <https://www.eia.gov/energyexplained/oil-and-petroleum-products/refining-crude-oil-inputs-and-outputs.php>

⁶ https://energyeducation.ca/encyclopedia/In_a_barrel_of_oil

Russian origin to the exported oil products to attribute products as from Russian crude origin. For example, if 30% of a refinery's feedstock crude is of Russian origin, and the refinery exports 100 tonnes of jet fuel, we assume that 30 tonnes of the jet fuel comes from Russian origin crude.

Limitations and challenges

We cannot guarantee that crude imported into a port near a refinery will be used at that refinery or that oil products exported were generated by that specific refinery. In these cases, we aggregate multiple refineries into one location. This means that the estimated values for each refinery may include crude oil consumed or products produced by other nearby refineries. However, this does not affect the percentage consumption of Russia crude oil, the percentage of the products created using Russian crude oil, and the totals of these values exported to the UK.

As we don't know the exact capacity for most refineries, we estimate this based on the seaborne imports of crude oil and exports of oil products. This estimate is only accurate if the refinery does not receive crude via other means, for example, by pipeline or by road. This could lead to an inaccurate estimation of Russian crude oil used by these refineries. To mitigate this, we have checked and modified the methodology by identifying pipelines to the refineries:

- For those refineries that heavily rely on domestically produced feedstock or other sources of crude oil, we have identified the UAE Ruwais Refinery as the only refinery that imports crude from Russia and attains high volumes of domestically produced pipeline crude oil. We are assuming the refinery is constantly running at full capacity to take a more conservative approach when calculating the reliance on Russian crude.
- For refineries that could be reliant on Russian crude oil via pipeline, we have checked the top 10 refineries that export products to the UK (together these provide a significant proportion of the oil consumed by the UK) and our research shows that none of these refineries appear to have a crude oil pipeline from Russia.

Kpler's installations may be separated by import and export of products. Therefore we use ports instead of installations. This may aggregate multiple refineries into a single entity or include storage facilities.



We are using the average processing gain for US refineries and applying this across the world. This may not be accurate for other countries' refineries due to differences in methodology or technology.