Eliminating the UK's Reliance on Russian Oil

March 2022

Summary

The UK is reliant on Russian diesel. Just under a fifth of the diesel we consume comes from Russia, and this costs the country over £3billion a year. Furthermore, the UK also sources 5% of its jet fuel supply from Russia. This has been the case for years, but what is new is the fact that our imports from Russia are now helping fund Putin's war in Ukraine. There is now a moral and energy security imperative, recognised by Government, to stop Russian imports as quickly as possible. This briefing paper sets out steps as to how this can be done.

Most of the diesel we consume is burnt in cars, vans and trucks, which can't be replaced quickly. But there are measures and policies the Government could put in place to quickly and permanently reduce the oil imports they burn. This briefing has split these measures into actions the Government could take immediately, and in the short, medium and long term. Where possible, the briefing has quantified the percentage reduction possible by the measures.

Immediate measures include running a public awareness campaign that makes individuals aware of actions they could take to reduce petrol/diesel consumption. Reducing the speed limit on motorways will also reduce petrol and diesel demand. Short term measures include requiring schools and large businesses to implement travel plans, whilst reducing the costs of cycling and public transport. Medium term measures include introducing a targeted scrappage scheme for diesel taxis, raising the purchase grants on offer for vans, and changing the VED tax system. Long term measures include introducing regulations around trucks, and using Government procurement to source UK-produced sustainable aviation fuel.

For the sake of Ukraine and the UK's energy security, these measures should be implemented quickly.

1. Overview of the Problem: the UK relies on Russian diesel

The invasion of Ukraine by Vladimir Putin has thrown the UKs reliance on Russian oil sharply into focus. It is clear that reducing our reliance on Russia is essential to the UKs security, and has become a political imperative. As the Prime Minister made clear: "We cannot go on like this".

The UK has been a net importer of crude oil and oil products since 2005 and 2013 respectively. This has always been an energy security concern, but the war in Ukraine has thrown this fact sharply into focus. Whilst the UK currently produces enough petrol to cover its needs, it is reliant on imports for diesel, importing 13.2 million tonnes or 56% of total supply in 2019. Of this, 33.5% came from Russia: 19% of overall diesel demand. Russian diesel costs the UK £3.3billion a year, meaning £3-£4 is destined for Russia every time an average tank of diesel is filled up.[1]

The UK is also a net importer of jet fuel from Russia, although this has been a much smaller share: 5% of total demand. In 2019 this cost the UK £350m.

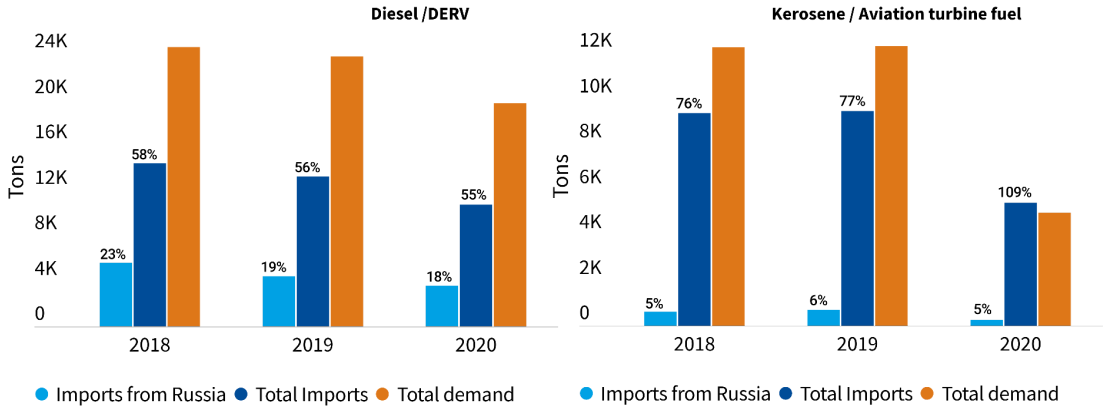


Figure 1: Tonnes of fuel imported vs demand. Sources: DUKES: Tables 3.2 and 3.9.

The UK also imports oil and oil products from the Netherlands, some of which are also of Russian origin.[2]

[1] Presuming the average wholesale price of diesel is 30 - 40p/l ex duty, and that an average tank is 55l
[2] Additionally, around 3% of UK biodiesel uses Russian used cooking oil as its feedstock.

1.1. Breakdown of road transport fuel by source (2019)

The table above shows where the bulk of our diesel consumption lies. Cumulatively, cars are the biggest diesel consumer, followed by HGVs, then LGVs. The amount currently used by buses and coaches is negligible. There are 12m diesel cars, 4.4m vans and half a million HGVs in the UK.

	Petrol (million tonnes)	Diesel (million tonnes)
Motor Cycles	0.2	-
Cars and taxis	11.3	10.7
Light Goods Vehicles (LGVs)	0.2	5.8
Heavy Goods Vehicles (HGVs)	-	6.3
Buses and Coaches	-	1.0
Totals	*11.7*	*23.8*

Source: DUKES 2020

In response to Russia's aggression, the Government has announced that the UK will stop using Russian oil (and gas) by the end of 2022. However, simply sourcing oil from different countries would have no effect on world markets: at the time of writing, most countries of the world are still prepared to buy diesel from Russia. This means if we simply swapped Russian imports for imports from a third country, another country would buy the Russian oil originally destined for us. In fact, due to the higher prices partly caused by the announcements of embargoes, it could be argued that this policy is actually helping Russia, by increasing its oil revenues. In other words, we have simply moved the problem around, and not eliminated it. The only way to cause Vladimir Putin economic pain is to reduce UK diesel and kerosene demand by the same amount as the UK imports from Russia, and to do so as quickly as possible.

1.1.1. Not just an immediate problem: UK Oil Output is dwindling

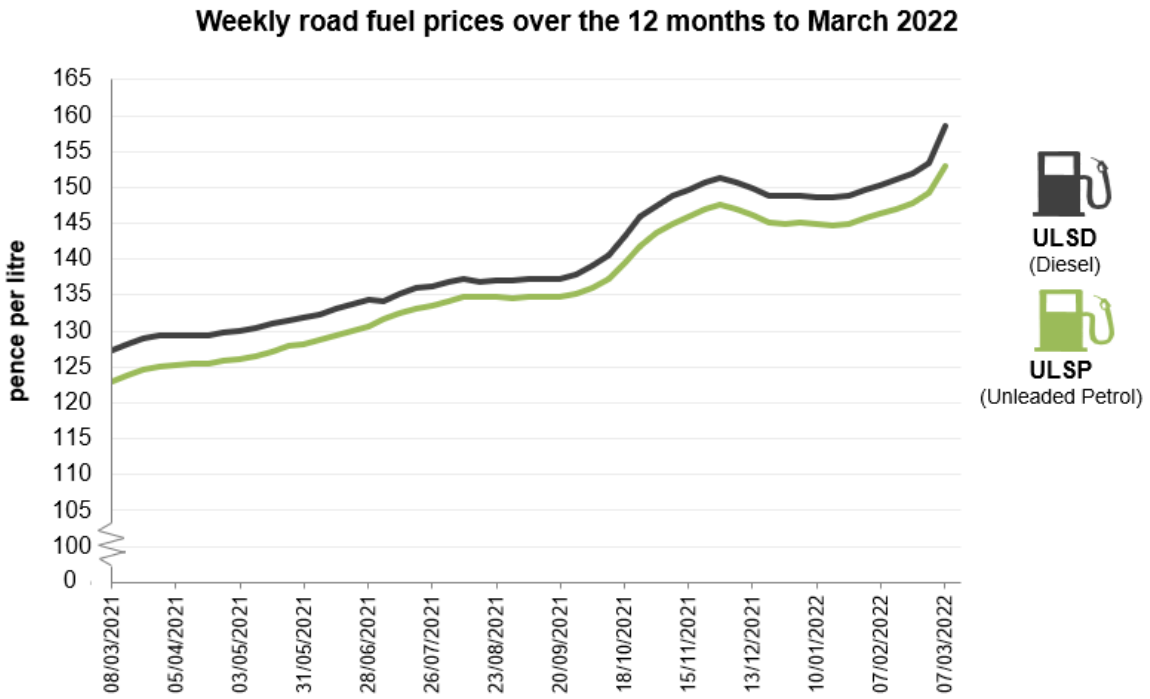
Whilst this paper focuses on diesel, it should be noted that North sea oil output has been declining for years, and will continue to decline. The Oil and Gas Authority estimates that crude oil production will fall to 30.5m tonnes in 2026, down from 49.34m tonnes in 2019. This means that the UK is likely to become a net importer of petrol at some point in the next decade as well, which will be an additional energy security concern. This briefing therefore includes measures that would reduce demand for all types of oil products. Measures to boost North Sea oil production are expected to take around a decade to increase supplies, which will then be sold on international markets. Increasing North Sea production will not address UK energy security issues in time.

2. Cutting Russian Oil

Following the Government's announcement, and taking into account the fact that the UK will (relatively) shortly be a net importer of petrol, as well as other oil products, the UK should introduce measures quickly that reduce oil consumption. This briefing gives suggestions as to what can be done in the very short (immediately), short-medium (over the next 6 months), medium (six months to two years) and longer (two year plus) time frames.

2.1. Price Rises

The obvious effect of the recent events is that pump prices have risen sharply over the last few weeks. This follows a gradual upward trend that has occurred over the last year.



Source: BEIS[3]

This is mirrored in the European price of jet fuel, which is now over 23% higher than it was a month ago,[4] and this has led to Ryanair CEO Michael O'Leary warning that air fares this summer will be "materially higher" (although it should be noted that Ryanair is 80% hedged against fuel price rises this year, meaning its costs won't be affected in the short term).

In the past week, global oil prices have fallen back from their recent highs, but the danger of continued high prices is clearly evident - indeed, the International Energy Agency has suggested there could be "the biggest supply crisis in decades". Furthermore, the agency specifically warned that Russian diesel exports

[3] Information correct as of 10th March 2022
[4] Information correct as of 11th March 2022.

would be difficult for (global) refiners to replace: there simply isn't enough spare global diesel capacity in the short-term.

These price rises by themselves will result in less demand for diesel and petrol: at a minimum they are expected to deliver a 5% reduction in use.

2.2. Immediate Measures

In the very short term, measures are very dependent on individual actions. There are three short-term actions that individuals can start doing straight away and which can be encouraged by government intervention:

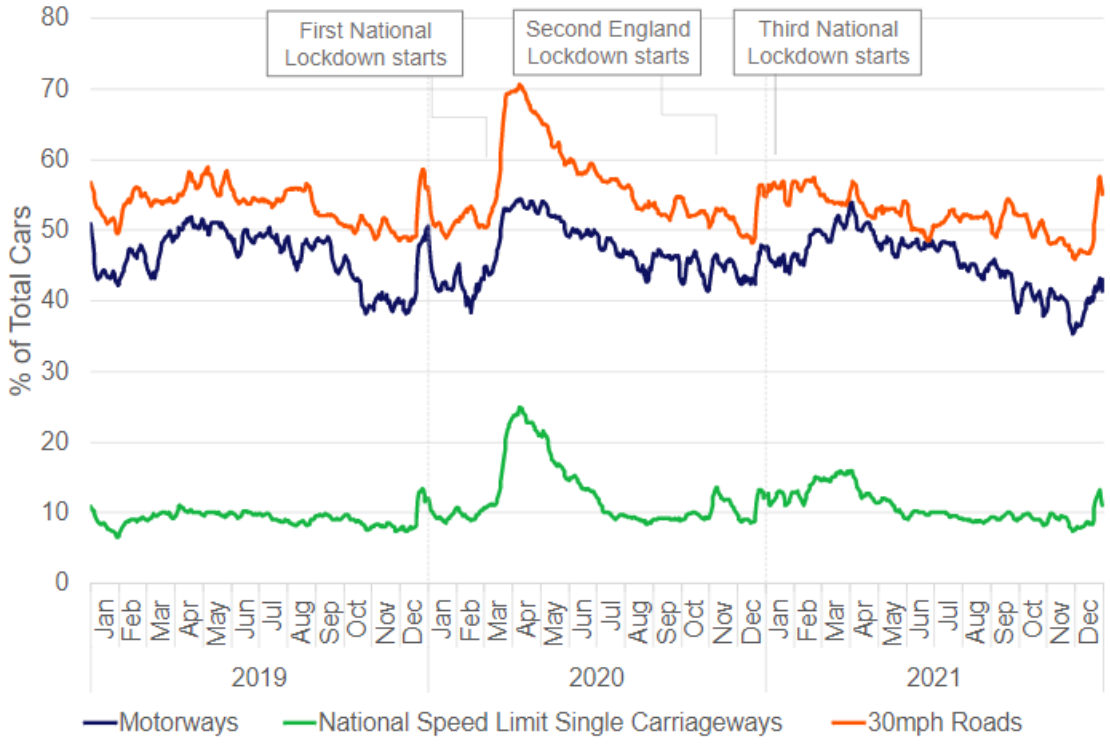
- Drive less
- Drive slower
- Drive more efficiently

Drive Less

Whilst many car trips are essential, many others are not: the journey could be achieved by other means. 7% of car journeys are less than one mile, 24% are under two miles, and well over half are under five miles. Whilst the data does not show what these journeys are for, it is probable that a significant number of them could have been taken on foot, by bike or by public transport. In total, these journeys accounted for 18% of total miles traveled by all UK cars: a significant amount. If just a quarter of journeys under two miles are swapped to other means, UK diesel demand would be reduced by 0.5%.

Drive Slower

As a nation, the UK has a poor track record of sticking to the speed limit. The latest vehicle speed compliance statistics show that, in October-December 2021, 42% of cars broke motorway speed limits, 9% of cars did on 60mph single carriageway roads, and an incredible 50% of cars did on 30mph roads.



Source: Vehicle Speed Compliance Statistics

Simply enforcing the existing law would therefore achieve significant cuts in fuel use. As the pandemic demonstrated the British public also has a considerable willingness and ability to change behaviour in a crisis. The Government should, at least temporarily, reduce the speed limit on different types of roads and importantly enforce this rigorously. T&E analysis suggests that cutting the speed limit on motorways alone to 60mph would reduce diesel demand by 1.5%. A much bigger 11% reduction in fuel use could be achieved by reducing speed limits everywhere by 10mph for all vehicles.

Drive More Efficiently

Finally, being more efficient in how the UK's drivers drive would make a difference. The International Energy Agency previously suggested that fuel savings of 5-10% could be saved by adopting more efficient driving habits. Removing excess weight from our cars, inflating tyres to their correct levels, upshifting through gears quickly, accelerating smoothly and maintaining even speeds are all easy measures that any driver could adopt straight away. A driver awareness campaign could reduce both fuel use and help address the cost of living crisis.

The choice for the Government therefore is to what extent should it facilitate the above measures? A public information campaign that shows the effects of individual actions, akin to the Coronavirus campaign the Government undertook should be immediately undertaken.

2.3. Short-Term Measures

Clearly the Government could also go beyond just informing the public of the benefits of their actions, and a) require both schools and large businesses to implement travel plans, whilst b) making other methods of transport more desirable.

Commuting and business travel account for 28% of total UK car mileage. The pandemic demonstrated that many people could comfortably work from home, and the Government could recommend that companies encourage their employees to do so, again, for a limited time period. If people that have worked from home previously do so for half the week, and spend the other half in the office, there would be a 16% reduction in car commuting miles. Requiring larger companies to compose and implement travel plans would save 14% of associated journeys. This would reduce UK diesel demand by 2%. School travel plans will also reduce UK diesel demand. Previous research concluded that a quarter of cars in the school run could be avoided if plans are implemented.

Making other modes of transport more appealing would also reduce both petrol and diesel demand. The Government could encourage more cycling by implementing an immediate VAT reduction for all bikes, bike products and e-bikes.[5] It can offer grants for e-bikes that greatly increase the carbon saving potential of cycling by increasing the range of trips undertaken. It could also immediately offer local authorities money to purchase secure cycle storage facilities and install them in town and city centres and close to places of work.

The Government can also subsidise rail fares, for a limited time period. Regulated rail fares have just increased by 3.8%, but could be reduced back down - and the reduction could be by more than the 3.8%. Reducing bus fares is more complex, as in most of the country (excluding London and, in the near future, Greater Manchester) these are set by commercial operators. However, the Government could provide grants to operators that stipulate that the money can only be used for fare reductions. This would follow the lead of the New Zealand Government, that is halving public transport fares in response to the oil crisis. Fare reduction has also been initiated in Cornwall. If 5% of overall car trips were switched to public transport, UK diesel demand would be reduced by 2.5%.

[5] In addition to reducing oil use, subsidising e-bikes could potentially lead to more than £2billion in health benefits

2.4. Medium-Term Measures

2.4.1. Cars

In the medium term, there are a range of further actions that can permanently reduce diesel demand within a few years. These need to be focused on reducing the number of long journeys made by diesel vehicles as just 2% of car journeys account for 28% of the total miles travelled by all UK cars. Many of these journeys are "one-offs", e.g. people going away for a long weekend or an annual holiday, and could be substituted by coaches or rail.

Targeted measures aimed at high mileage diesel cars (notably taxis or company cars) could make a disproportionate influence. For example, a national scrappage scheme for diesel taxis where the money received can only be used to buy an electric vehicle could be considered. Similar scrappage schemes have also been successful in London for diesel vans. For regular diesel drivers, scrappage schemes offering mobility credits have been trialled in Coventry and could help to reduce diesel use.[6]

The Government could also change the VED system, to disincentivise the sale of new diesel cars (although it should be noted that demand for new diesels has consistently fallen since 2017). Currently, VED rates for new diesel cars are differentiated by the CO2 emissions / km the car emits. The first annual payment is a maximum of £2245, which then drops to £155 for all subsequent payments. These rates could easily be increased, to actively discourage future diesel purchases that are typically for high mileage vehicles.

The company car tax system could similarly be reformed to discourage diesels. The benefit-in-kind (BIK) tax bands are already exceptionally low (1%) for electric vehicles, and high (37%) for the highest-polluting vehicles. However, the difference between an electric vehicle and the most efficient combustion vehicles could be increased (1% vs 14%) and a premium of 5% could be added to the diesel rate compared to the petrol equivalent to discourage diesel car purchases. Increasing BIK rates on all combustion vehicles would instantly make electric vehicles look more attractive to business users, and would further incentivise their purchase and use.

2.4.2. Vans

Light-goods vehicles are largely diesel and an area of particular opportunity. A shortly-to-be-published T&E study will show that, on a four year total cost of ownership basis, new electric vans are already cheaper to run than new diesel vans. But supply constraints are slowing the shift to electric models. The government should ensure its zero emission vehicle mandate commences in 2024 with an initial target that 20% of van sales should be electric, with high penalties for failing to meet targets. This will require vanmakers to prioritise the supply of vans to the UK market. The Government recently committed to extending the electric vehicle purchase grant of £2500 for small vans, and £5000 for larger vans. It should consider introducing a purchase tax on new diesel vans to encourage businesses to shift once the supply constraints are addressed.

[6] Residents in Coventry have been able to take part in a mobility credits trial, where locals scrapping an older vehicle have been able to exchange this for £3000 that can be spent on train and bus fares, cycle and car club hire, and bus-on-demand journeys.

Finally, the Government should aim to tackle the numbers of vans and HGVs on the road. Consideration should be given to relaxing competition rules to allow haulage and delivery companies to collaborate. This would reduce empty running, increase load factors and reduce the number of vans serving the same areas for home deliveries. A reduction of just 2.5% in the number of truck and van movements would cut the UK's diesel fuel use by the same amount. In addition, the already-established mode-shift revenue support scheme (due to close in 2025) should be extended to assist companies with the operating costs associated with running rail or inland water transport. The Government could simply increase the amount of support on offer to companies to use rail and water transport more.

2.4.3. Encouraging public transport

Finally, in the medium term the Government can look at encouraging changes in bus and train use. Great British Railways, a new independent government body, is being set up to manage various aspects of the rail network and one of its duties will be managing fares and ticketing. This means the Government will be able to choose appropriate ticket prices. In the last decade the cost of motoring has fallen whilst fares have risen above the rate of inflation. More train use, particularly for longer leisure trips would have a disproportionate benefit for reducing diesel use.

In London, public transport is run as a network, and this is reflected in the zonal fares structure. Crucially, this allows easy interchange between bus, train, tram and tube services. Outside London, this simply is not the case, and means that costs and complexities for passengers are increased. The Government could reverse this in the metro mayor regions, and give these regions the opportunity to install a London-style approach. There is good evidence that simplification of fares drives business. When National Rail fares were added to the London Oyster system, rail operators saw a 3.8% growth in journeys. The introduction of a simple all-operator "My ticket" offer for young people in Merseyside saw a patronage growth of 168%. This would simply build on a trend that is starting to happen anyway: Greater Manchester has ambitions to turn its public transport into a London style model, and Cornwall Council has set up the Transport for Cornwall partnership, which has simplified both bus and train fares within the county.

2.5. Long-Term Measures

In the long-term, the proposed Zero Emissions Vehicles (ZEV) Mandate will significantly accelerate the number of electric vehicles on the road. Powering these with UK-produced renewable electricity will make the UK more energy secure. Under the ZEV Mandate, car manufacturers will be required to sell a minimum proportion of zero emission cars and vans beginning in 2024, rising to 100% by 2035. To reduce oil demand the target for 2024 should be at least 25%, rising to 75% by 2027 and 90% by 2030. A similar mandate (with different targets) should be introduced for trucks.

Long term measures to encourage a shift to electric and public transport should be complemented by planning policies that require new homes to be built with access to public and active transport, and the creation of 15 minute cities that greatly reduce the need for travel.

Aviation

Thus far, specific measures to reduce jet fuel consumption have not been mentioned in this paper. This is mainly because in the immediate, short and medium term as defined by this paper, the only way to reduce kerosene demand is to fly less: that has happened due to the pandemic anyway. However, in the longer term the Government is already considering measures that would incentivise UK sustainable aviation fuel production. T&E published a policy paper in January 2022, which suggested a kerosene tax should be applied from 2025, and that the Government borrow against this future income to fund measures that increase UK sustainable aviation fuels production and use more quickly. The Government is already a major purchaser of jet fuel (the Ministry of Defence used 472m litres between April 2019 and April 2020), and should announce a tender to supply SAF to itself. Part of that tender should stipulate that the fuel has to be produced in UK facilities. Finally, Government support could be offered quickly to UK SAF plant developers that are already in contact with the Department of Transport, to ensure their plants are built and supplying jet fuel by 2026.

3. Conclusions

This briefing shows that it is possible to implement policies that will quickly and permanently reduce demand for Russian oil products. Relatively simple short-term options could be undertaken that would have a significant impact within a year. Within a few years significant structural cuts in fuel use are possible and in the longer-term a complete shift away from fossil fuels is possible before 2040. For the sake of Ukraine, and for the sake of the UK's future energy security, these measures should be quickly implemented.

Further information

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