



No more Russian oil

How Europe could cut 35% of its transport oil demand

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Summary

Russia is the 2nd biggest oil exporter in the world and Europe is its biggest customer. Russia currently supplies one out of every four barrels of oil consumed in Europe, two thirds of which is used in transport. The UK has announced a ban on Russian oil imports and the European Union has announced a phase out of Russian oil imports by the end of 2022.

This paper assesses how, and to what extent, the EU could end imports of Russian petroleum by reducing oil demand instead of creating new dependencies on other authoritarian, human rights abusing oil producers such as Saudi Arabia or Iran.

Our analysis finds a programme of energy savings coupled with a rapid electrification programme could cut oil demand by 38.8 Mtoe by 2023, equivalent to 48% of Russian oil used in Europe's transport (or 12% of total EU transport demand). There would be a temporary need to secure the remaining 52% from other suppliers. By 2030 EU oil demand could be fully 35% lower than in 2019, fully replacing Russia's market share.

A focus on energy savings and electrification would ensure Europe's near term energy security strategy would align with the EU's climate commitments, but it would also help lower global oil prices.

Energy savings programme (short term measures)

The theoretical potential for immediate transport efficiency improvements is vast. For example average car occupancy is 1.6 people per car and a fifth of trucks are running empty. But even a much more modest demand reduction programme including measures such as homeworking twice a week, reducing car and truck speeds and restricting corporate air travel would yield savings of 26.8 Mtoe, or around 8.1% of transport oil demand.

It is essential that governments do not artificially lower fuel prices. The €14 billion fuel tax cuts announced by 18 European countries since March have caused 3.3 Mtoe of additional oil consumption

already. If extended they'll cost €52 billion and add 12.9 Mtoe of oil consumption by the end of 2022. The oil price should be allowed to rise, and targeted income support, preferably a monthly cash allowance, should be provided to low and middle income families instead.

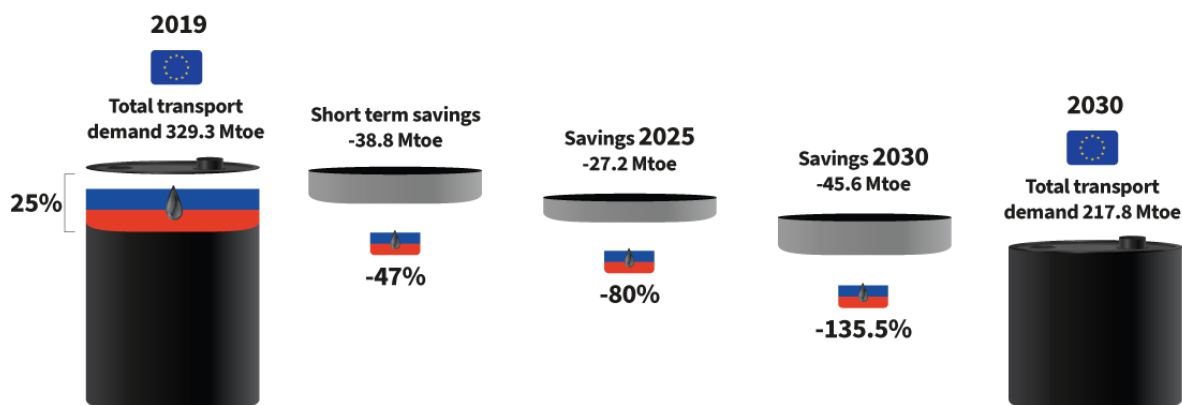
Together with the immediate demand reduction measures, that is equivalent to reducing 11.8% in transport fuel consumption.

Rapid electrification (medium term measures for 2025 and 2030)

Measures to shift vehicles fully away from oil take a little longer to have an impact on EU oil demand but are irreversible and become the main driver for demand reductions once they achieve scale. Measures including requiring carmakers and truck makers to sell more affordable electric vehicles (through more ambitious car and truck CO₂ standards) and action to electrify high mileage vehicles, would cut oil demand by another 27.2 Mtoe by 2025.

It is important to emphasise the contribution high mileage vehicles can make to displacing Russian oil demand. Company cars, taxis, buses, delivery vans and trucks represent 8% of the total vehicle fleet but consume 19% of transport oil. Electrifying company cars yields 2.25 times higher oil savings than electrifying private vehicles in the near term.

Transport oil savings



TRANSPORT & ENVIRONMENT transportenvironment.org

Source: Transport and Environment (2022)

Oil demand and the oil price

Europe is the second biggest oil importer in the world. An EU phase out of Russian oil would mean some supplies would simply be shifted around, and Russia would start offering its oil at discount prices in other parts of the world. For example, India and China would import more Russian and less Saudi oil which

would become available to the EU market. However, part of Russian oil (e.g. the oil being transported through pipelines) could not easily or quickly be redirected to new buyers. This may create disruption and price spikes in an already tight global oil market. In that context, reducing demand for oil is the single most effective measure (European) nations can take to lower the global oil price and the inflationary pressures related to it.

Policy recommendations

The EU can and should phase out Russian oil, preferably by introducing a gradually increasing tariff or tax on Russian oil exports into Europe. If the EU wants to avoid creating new dependencies on authoritarian, human rights abusing states such as Saudi Arabia and Iran they must accompany the phase out with an energy savings and rapid electrification programme.

The EU's RepowerEU strategy is an opportunity to create EU level regulation and support mechanisms to lower oil demand in the near term. Key measures include:

1. More stringent car, van and truck CO2 standards to -30% (up from -15%) from 2025 to require auto makers to sell higher shares of all-electric vehicles by 2025;
2. A new EU regulation to require large fleets (more than 20 cars) to rapidly electrify new corporate registrations (50% electric by 2025) with a view to achieving a 100% zero emission sales in 2030; alternatively the same could be achieved by via the Energy Efficiency Directive to require member states to achieve similar fuel savings from corporate fleets.
3. An EU level truck modernisation programme to accelerate the uptake of aerodynamic devices on the sides and rear of trucks. The programme should both include subsidies (similar to an existing German programme) and a legal requirement to equip trucks operating in the EU with aerodynamic devices and the most fuel efficient tyres by 2025. It should also update EU law to set truck speed limiters at 80km/h.
4. The inclusion of shipping in the Energy Efficiency Directive, requiring ships to reduce energy use by 41% by 2030. The Commission should also introduce an amendment requiring 6% of shipping fuel and 2% of aviation to be green hydrogen based e-fuels by 2030.
5. An EU strategy to support member states seeking to deal with high fuel prices. This should include guidance on how to best find alternatives to fuel duty cuts (e.g. cash allowances); and guidance on how to tax the excess profits of oil companies. It should also strongly encourage member states to avoid burning food crops for fuel and provide for flexibility in EU law to enable this.

Annex

Here we show the impact of a vast array of measures. Note that the measures within a mode cannot be directly added to each other. Some measures (for example medium term measures for car fleets) cannot be combined at all, as the policy measures used to achieve the savings are mutually exclusive. More detail will be provided in our upcoming publication on short, medium, and long term measures to reduce and rapidly eliminate oil consumption in transport.

Summary of short term measures

Mode	Measure	Level*	Mtoe oil savings; 2023 vs 2019 (% within mode)	Details
Road	Replace the fuel duty cuts with income support measures.	N	12.9 (5.1%)	Calculated based on national cuts to fuel taxes implemented over a full year.
Cars	Reduction from increased teleworking	N/C	5.0 (3.3%)	Savings from IEA 10-point plan, scaled to EU oil consumption
Cars	Shift to public transport, cycling, walking	I/L/N	3.7 (3.3%)	Savings from IEA 10-point plan, scaled to EU car oil consumption.
Cars	Lowering speed limits on highways to 100 km/h	N	5.0 (3.3%)	Savings from IEA 10-point plan, scaled to EU car oil consumption.
Cars	30 km/h speed limits in cities	L/N	-	A second order measure to ensure that driving in cities is safer, quieter, and to dissuade unnecessary car use to avoid rebound
Trucks	Lowering speed limits	N/C	2.5 (4.3%)	80 km/h for heavy duty vehicles and 100 km/h for vans on highways
Trucks	Aerodynamic fittings to trailers	EU	2.0 (3.4%)	Assuming that (on average) all trucks and trailers are fitted with at least one of the following aerodynamic devices: side skirts, boat tails, and cab roof fairing.
Trucks	Eco-driving	C	1.5 (2.5%)	Assuming half of the truck drivers are trained for eco-driving training including eco-driving performance management system
Trucks	Efficient tyres and pressure monitoring	EU/C	1.5 (2.5%)	Assuming a quarter of the trucks are equipped with low rolling resistance tyres with tire pressure monitoring and adjusting system.
Aviation	50% reduction in corporate travel	C	6.0 (12.4%)	Up to 13.0 Mtoe saved in 2050 compared to business-as-usual.
Aviation	Emergency aviation ticket tax	EU	[2.13,4.26] (4.4%, 8.8%)	[€10,€20] tax on intra-EEA flights, [€50,€100] tax on extra-EEA flights.

Table 1: Summary of short term measures. *Levels: I=individuals; C=companies, institutions, organisations, universities; L=local/city authorities; N=national government; EU=EU implemented

Summary of medium term measures

Mode	Measure	Level*	Mtoe oil savings; 2030 vs 2019 (% within mode)		Details of T&E measure
			EC	T&E	
Car fleets	EED obligation for large fleets of cars	EU	14.4 (48%)	20.7 (69%)	Obligation in the EED that fleets with more than 20 light-duty vehicles should cut their fuel consumption compared to 2021 levels by 20% by 2025 and 50% by 2030. <i>*All fleet calculations include the savings as vehicles enter the private fleet.</i>
Car fleets	ZEV mandate for large fleets of cars	EU	14.4 (48%)	27.3 (90%)	A mandate on fleets with more than 20 light-duty vehicles to reach 50% zero-emission vehicles of their new registrations by 2025 and 100% by 2030.
Car fleets	Strengthening tax measures	N	-	6.6 (29%)	National governments adopt from the leading fiscal policy incentives including a phasing out of depreciation write-offs and VAT reductions for polluting cars and steeply increasing benefit-in-kind taxation for company cars based on vehicle emissions.
Cars	Increased CO2 standards	EU	13.6 (8%)	30.6 (19%)	Reduction targets of 30% in 2025, 45% in 2027 and 80% in 2030
Vans	Increased CO2 standards	EU	3.3 (12%)	7.4 (26%)	Reduction targets of 25% in 2025, 45% in 2027 and 80% in 2030
Trucks	Increased CO2 standards	EU	1.5	10.9	Reduction targets of 15% in 2025, 30% in 2027 and 65% in 2030
Trucks	Logistics efficiency	C/N	-	7	Swift and ambitious road pricing reforms and standardisation of data and information with mandatory use of digital software and booking platforms (Assuming payload increase by 10% on average)
Aviation	Tax aviation fuels, prevent airport expansion	N	-	Up to 6.3*	These would be some of the measures to prevent growth in passenger numbers. <i>*Savings refer to a 2030 baseline, assuming leisure traffic levels are kept to 2019 levels.</i>
Aviation	Shifting short haul flights to HS rail	EU/N/C	-	2.3	Substantial improvements in connection, speed, and pricing of high speed rail
Shipping	Technical and operational efficiency measures	EU	-	7.5 (25.9%)	Engine improvements, hull and propeller optimisation, wind assist and a 20% reduction in speed. Additional oil consumption due to the increase in shipping demand is deducted from the savings.

Mode	Measure	Level*	Mtoe oil savings; 2030 vs 2019 (% within mode)		Details of T&E measure
			EC	T&E	
Shipping	Shore side electrification	EU	1.0 (3.2%)	2.0 (6.6%)	Zero emission berth mandate applied to all passenger ships starting from 2025, then containerships, tankers and refrigerated-bulk carriers from 2030 and finally all remaining ships by 2035.
Shipping	Clean fuel uptake	EU	1.3 (4.4%)	3.5 (12.3%)	Values assume no speed reduction or efficiency measure, since no proposal has been made in that direction. Note that savings include waste-based biofuels and that LNG is not counted as “oil saving” as it is still fossil fuel. EC scenario compared with shifting targets forward 5 years and 86PJ e-fuels sub-target.
Shipping	CCfD from the shipping ETS	EU	-	2.3 (8.0%)	An explicit mechanism for shipping is legislated

Table 2: Summary of medium term measures. *Levels: I=individuals; C=companies, institutions, organisations, universities; L=local/city authorities; N=national government; EU=EU implemented. EC refers to European Commission Fit for 55 proposals, T&E refers to T&E recommendations on the Fit for 55 proposals or other regulatory levels.