

No (future) regrets

by Ewa Kočańska

In the wake of the Russian aggression on Ukraine, something that had been quite obvious even for a casual observer long before the attack has become an undeniable truth – the European Union's energy independence is fundamental to its security and longevity. With the December 2022 ban on 90% of oil imports from Russia swiftly approaching, Europe has to take aggressive steps to reduce its oil demand. The Transport & Environment's (T&E) *How Europe can cut a third of its oil demand by 2030* paper analyses the proposals included in RepowerEU, the European Commission's plan for energy independence from Russian fossil fuels, and the Fit for 55 (FF55) plan, EU's blueprint for a green transition. Additionally, T&E offers short-, medium-, and long-term measures to speed up the change, cut the demand, and ensure that the current energy crisis does not turn into an energy catastrophe.

Currently, Russia provides over a quarter of the EU's imported oil and around 40% of gas for roughly €400b annually. To help achieve the block's energy independence from the Kremlin's regime, the transportation sector and its users will have to take drastic steps to shift away from fossil fuels. At present, transport fuel needs account for two-thirds of oil consumption in the EU – and road transport alone takes care of 50% of all EU's oil. According to the T&E analysis, the fuel consumption in Europe will not significantly change by 2025, while the measures included in FF55 will not decrease oil demand in the short term.

Almost immediately

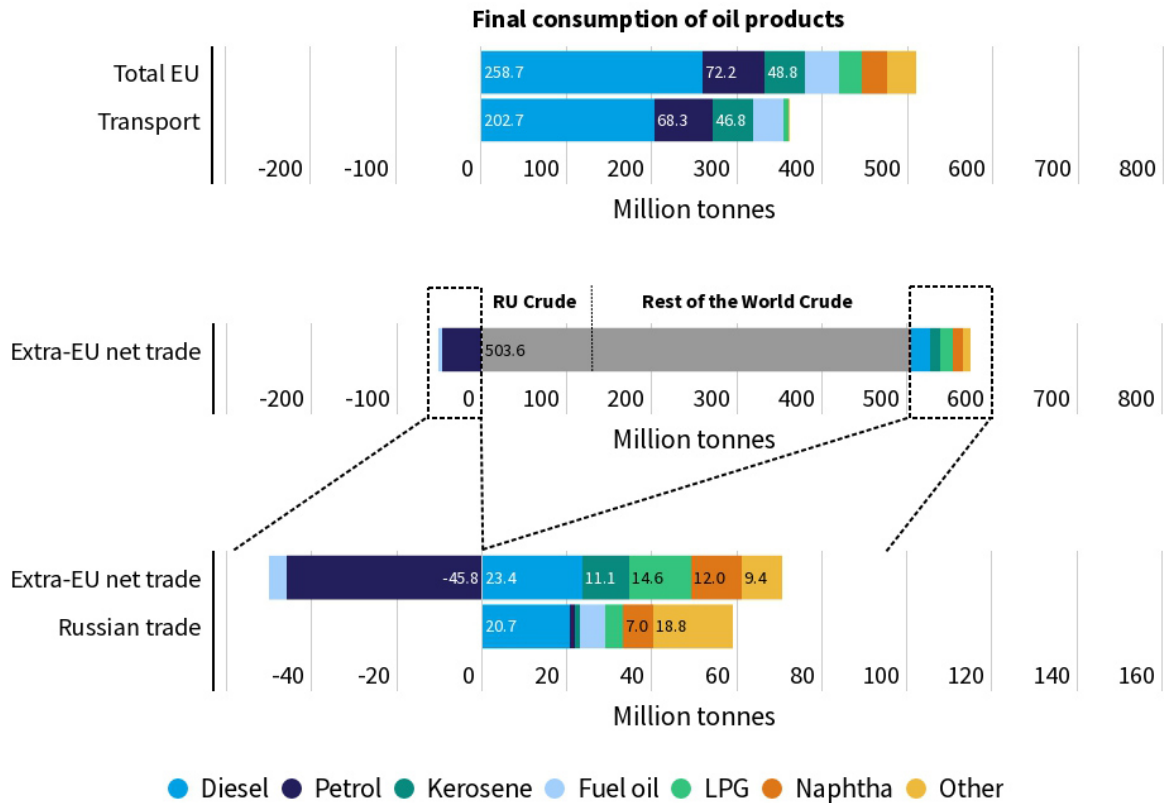
While citizens and companies can immediately reduce their unnecessary energy consumption (e.g., by lowering the temperature indoors in winter), fixing sector and industry inefficiencies will make the most tangible difference. In the transport sector, passenger cars are routinely driven with just one person inside; trucks often travel empty and rarely fully

loaded; airlines fly empty or almost empty aircraft to keep their airport slots; ships speed to get to their destinations only to queue outside the port; and next day deliveries force inefficient delivery routes and loading practices.

When it comes to actions from national governments, they can sometimes be detrimental even if well-meaning; for instance, as fuel prices rise, tax exemptions and emergency tax withholding at the pump only increase the demand for fuel. Instead, the report suggests a more effective policy would be direct cash payments to households. Additionally, since 23% of the energy use in the European transport sector comes from urban mobility, actions from cities that encourage citizens to switch from a vehicle to active travel (on foot, bike, or scooter) can significantly decrease fuel consumption. Changes such as widening the pavements, increasing the number of bike lanes, and changing car lanes into bus-only to ensure public transport is more efficient and keeps to schedule, can be easily implemented short-term.

Non-passenger road transport is also a significant challenge in reducing fuel demand. The report points out that lowering highway truck speed limits reduces fuel use and can be introduced by governments almost immediately. This solution also helps increase road safety and reduce road casualties and injuries. A trailer modernisation programme would be another easily enacted short-term measure. Aerodynamic devices are hardly ever used in the EU, even though they can save up to 6% of fuel on typical long-hauls. Additionally, mandatory use of high-performing tyres should be enforced, as some of the best-performing models can save up to 8% on fuel. Checking and monitoring proper tyre pressure also optimises fuel economy. Moreover, the report pointed out that according to findings in the 2021 ICCT meta-analysis, eco-driving saves an average of 5-30% in fuel consumption; governments could introduce a requirement for transport companies to introduce eco-driving programmes within one year. Lastly, reducing the frequency of home deliveries, particularly next-day ones

Fig. 1. Final consumption and net trade of oil products in the EU in 2019



Sources: Eurostat, FuelsEurope

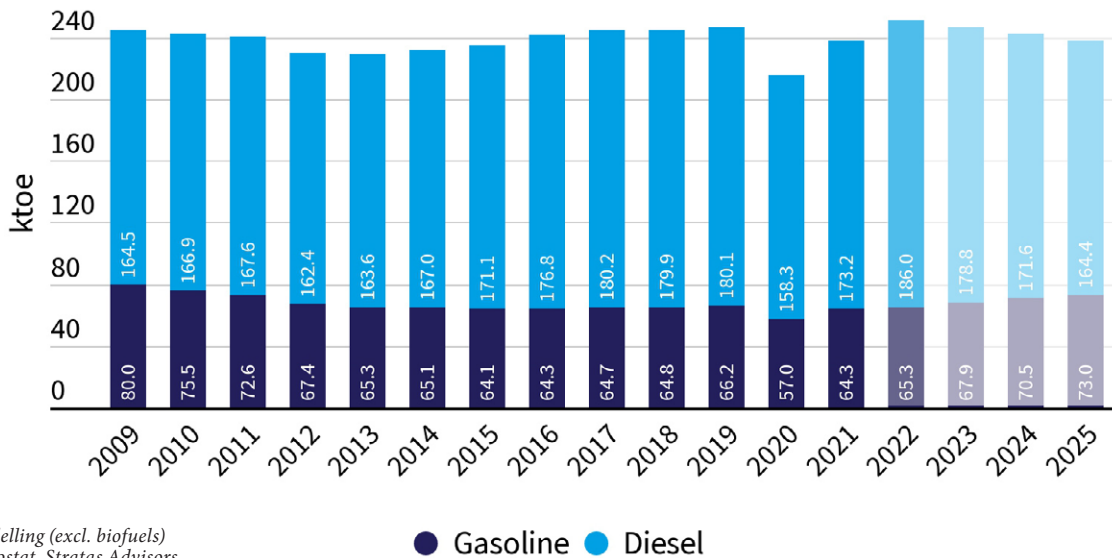
where vehicles are sub-optimally loaded with inefficient routing, would have a significant impact. T&E recommends that national governments install a next-day delivery surcharge to disincentivise it.

Aviation is a very well-known pollutant with rapid growth: +67% between 2005 and 2019. Its emissions are expected to increase from 2019 to 2050 by 38%, even

with aircraft improvements in efficiency. Pricing in the sector is among the chief culprits: aviation taxes are among the lowest among all transport modes, with no VAT nor excise duty paid for kerosene. FF55 deals with the issue of fuel excise, but the report suggests that governments should impose “an emergency ticket tax levy on all flights, based on distance and

travel class.” Since wealthy citizens use this transport mode, the price changes will not affect low-income households, and the revenues could help transition to greener fuels. At the same time, a decrease in demand would lower emissions. Another issue is corporate travel, which usually stands for flying. The pandemic illustrated how corporations, businesses, and

Fig. 2. Petrol and diesel consumption in the EU 27 with projection¹



¹ T&E's modelling (excl. biofuels)
Sources: Eurostat, Stratas Advisors

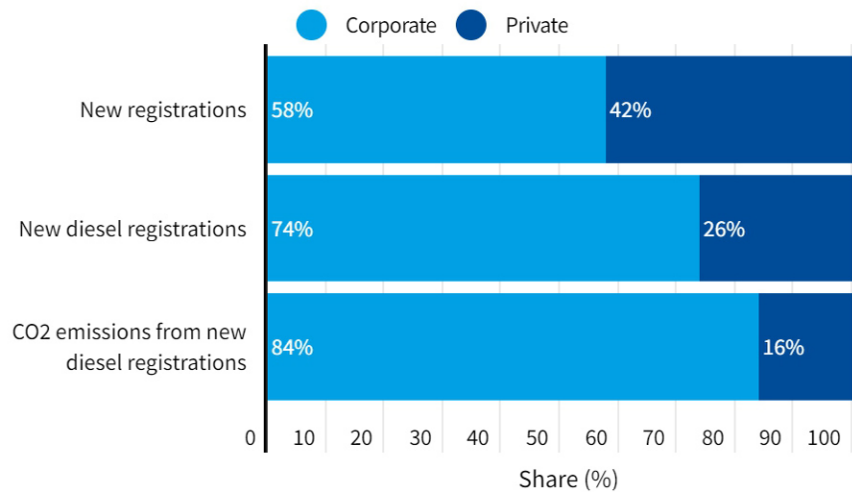
media industries could get work done and even increase productivity and revenues without travelling the world far & wide. Therefore, the report suggests that corporations should adopt targets for absolute reductions in their flying to half or less of pre-pandemic levels by replacing it with either high-speed rail or opting for virtual meetings and communications. Also, employers could offer extra leave days for low-carbon vacation travel for workers who select medium-to-long-distance trains instead of flying.

Making the difference

Building on the above, the medium-term measures taken by the EU and its Member States must be well thought out and deliberate. Since passenger vehicles consume 30% of the oil imported into the EU from Russia, there should be an action plan to accelerate all vehicle electrification in 2022-2025. The T&E report calls for a more aggressive goal of electrifying the car fleet, from just 15% of battery electric vehicles (BEVs) sales by 2025 to 50%. National governments can use tax incentives and regulations to encourage high-mileage vehicles (such as corporate cars, taxis, or delivery vehicles) to switch to electric. There should also be governmental aid for low-income households and businesses to replace low-fuel economy vehicles with BEVs and a zero-emission vehicle government mandate for corporate fleets.

Additionally, the report states that the FF55 proposals regarding the emission reductions for cars and vans, as well as heavy-duty and lighter trucks, trailers, buses and coaches, do not go far enough. More far-reaching changes can be mandated and are possible due to innovation in the electric vehicle market and vehicle producers' commitments. Moreover, recent years have illustrated that government incentives can make a difference in BEV uptake. The report recommends installing a bonus-malus system (that adjusts the premium paid by a customer according to their individual claim history) to encourage BEV sales. It would go along with the vehicle registration taxation process, combined with a €6,000 subsidy for zero-emission vehicle purchases at the point of the first sale (some governments have already enacted similar incentives with great success). Also, corporate fleets, which are in existence thanks to tax allowances in national fiscal policies, are affected by changes in these policies; therefore, disincentivising high- and incentivising zero-emission vehicles can

Fig. 3. Corporate and private car registrations and CO₂ emissions¹



¹ New passenger car registrations in 2021; calculated based on Worldwide Harmonized Light Vehicles Test Procedure emissions
Source: Dataforce (2022)

be particularly successful when targeting corporate fleets.

Moreover, recent studies show that the most effective measures to decrease car use in European cities have been: congestion charges (a.o., charging to enter the city); taking away car spaces to make more room for green transport modes like buses and bikes; and limiting thru-traffic zones (e.g., creating resident access areas only). Zero-emission zones, which can be enacted as supplementary solutions, have also been successful. These measures can reduce city car traffic from 10% to over 30%.

The shipping sector is another significant polluter and consumer of energy. The report advises mandating the fuel efficiency of ships in the Energy Efficiency Directive. There are numerous emission reducing improvements in shipping that should be required, such as slow steaming, propeller and hull optimisation, and engine and boiler improvements. The report proposes to mandate national or regional "energy efficiency standards that define maximum permissible energy consumption per tonne nautical mile (MJ/t-nm) per ship type and size."

Furthermore, T&E states that the FuelEU proposal, a regulation for setting greenhouse gas intensity fuel targets in the EU, does not put enough pressure on sustainable fuel uptake. The report advises moving targets by five years so that 2035 goals are achieved by 2030. Additionally, the shoreside electrification (SSE) goals in FuelEU for shipping are insufficient. The SSE mandate only covers passenger and container ships and is supposed to start in 2030, even though the technology is available now. "T&E recommends that

the FuelEU zero emission berth mandate applies to all passenger ships starting from 2025 and be followed by container ships, tankers and refrigerated-bulk carriers from 2030," says the report adding that all other ships would have to be covered by 2035. And while FF55 proposes to include shipping in the European Union Emissions Trading System (EU ETS), the report suggests using some of these revenues for zero-emission fuels and technologies. There is also particular concern about the increase in liquefied natural gas (LNG) use in shipping (especially Russian LNG); to deal with that, T&E recommends mandating green hydrogen uptake in the FuelEU Maritime Regulation. "Hydrogen is a future-proof technology for shipping. Hence, it is a no-regret option," says the report.

Next, it is worth noting that logistics optimisation and better capacity utilisation are crucial to decreasing fuel needs in Europe. The report names the following levers for increasing road freight efficiency: load optimisation and consolidation, reducing the number of empty runs, modular packaging and boxes, open transport networks and warehousing, pooling/sharing shipments, reducing demand for very short delivery times, and using double floors (with load volume or floor space determining how many trucks are required instead of weight). With the proper measures in place, T&E expects a 10% increase in the average truckload.

Some additional recommendations for reduction measures in aviation include the EU integrating air travel into requirements for corporate climate transition plans and reporting, national governments pausing or cancelling planned

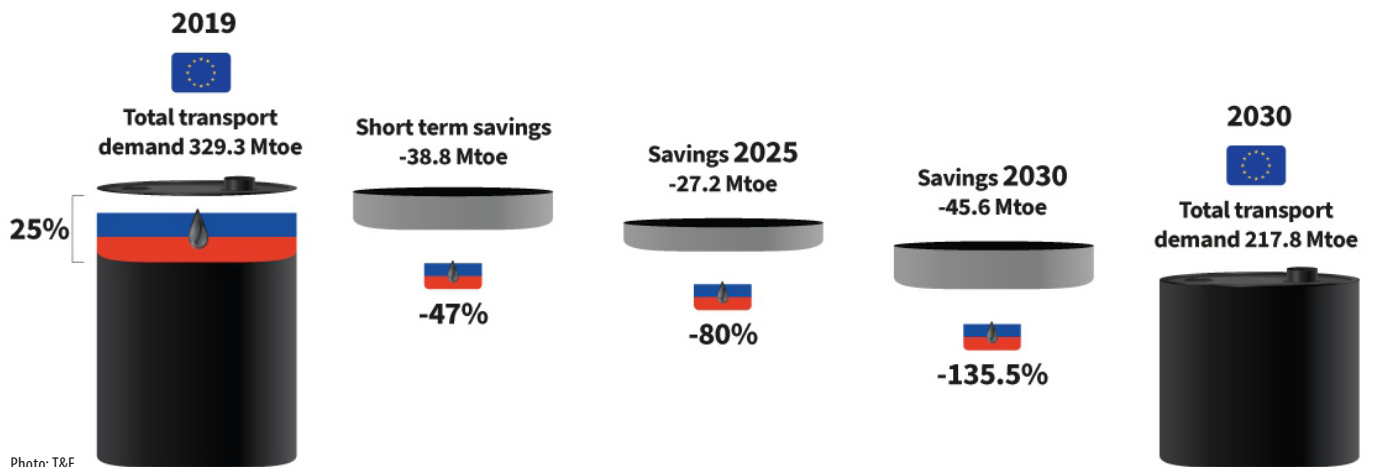


Photo: T&E

airport expansion plans, and including the sector in national climate and energy plans and carbon budgets. For road vehicles, the availability of public charging infrastructure will play a vital role in the zero-emission transition. While the charging infrastructure network expansion for cars is expected to keep up with the uptake of private electric vehicles, the public charging infrastructure for lorries needs additional action from the EU. “The EU should set binding targets for electric truck chargers from 2025 onwards, at least along the main highways (TEN-T Core Networks),” says the report.

Putting an end

While the short- and medium-term measures are a solid strategy to start on the right track, the long-term solutions will ensure that governments, corporations, and citizens are given enough time to change laws and behaviours to begin developing a sustainable transport sector for the future. These include phasing out the sales of most internal combustion vehicles by 2035, including all vans, buses, and trucks, with the exemption of difficult-to-electrify trucks such as construction vehicles (which can go to 100% zero-emission in 2040). Also beneficial would be increasing the share of rail and inland waterway freight, shifting it away from European roads. The report calls for the EU to remove barriers to make that possible by completing the TEN-T and ensuring its capabilities are maxed out; supporting and funding programmes that encourage relevant investments (such as public tenders); offering incentives for rail and waterway cargo transportation; ensuring that all infrastructure, like electric recharging points and hydrogen refuelling points, are in place to electrify all

rail; and putting an effective framework for intermodal transport in place.

Lastly, greening the grid is necessary for the electrification of transport to make sense. The REpowerEU proposal already sets a higher 2030 target for the Renewable Energy Directive (RED) to 45% (from 40%). The EU should also plan and invest in green fuels for shipping and aviation, where direct electrification will not happen in most situations. Green hydrogen and e-fuels still need much action from governmental bodies to make them feasible.

All the measures, government efforts, and changes in behaviour have their own price point. According to the estimates, the European green transition will cost an additional €480b in investments annually (almost three times the EU’s yearly budget). The additional funds will have to be raised from private finance institutions where greenwashing is “rampant” and green investments lack science-based standards (which has allowed for an increase in fossil fuel investments since the Paris Agreement). Therefore, the report highlights that the EU Taxonomy Regulation (and next year’s reform of sustainability-environmental-social-governance ratings), a classification system established to determine which investments are environmentally sustainable and to prevent greenwashing, is essential to safeguard. The regulation can put an end to damaging practices such as defining gas as a “clean” and desirable replacement for coal and oil, leading to Europe’s dependence on gas imports and allowing for funds meant for renewables to be redirected towards gas turbines.

Also, T&E recommends boosting national mitigation through the Effort Sharing Regulation, which sets annual targets for the sectors in the EU that fall

outside of the EU ETS. Those industries account for as much as 60% of the block’s total domestic emissions. Other helpful measures include electrifying the leasing market via the Sustainable and Smart Mobility Strategy 2020; focusing actions by the European Investment Bank on measures that increase the use of zero-emission vehicles (such as supporting leases of these for low-income families); and requiring public authorities to purchase from 2025 zero-emission vehicles only.

The report also advises businesses and governments to share the costs of sustainable and shared mobility (a.o., funding electric bikes and public transport incentives). Two measures are necessary to boost car sharing: loans and grants for this type of business model development and a fund to the local administrations for relevant support and preparation. The report also recommends a direct subsidy for bike repairs and a fund to local administrations to develop bike lanes to boost bicycle use.

No choice

Russia’s aggression on Ukraine highlighted the already hotly debated issue in Europe – reliance on unstable, unreliable, and unethical regimes for something as crucial to everyday modern life as energy. This is particularly concerning when that reliance pertains to a country that has routinely terrorised its neighbours while hinting, with the grace of a bear in a china shop, at its nuclear arsenal in response to any resistance.

Finding itself in this particular corner, the EU has no choice but to change its energy sources, boost its energy efficiency, and shift to renewable energy technologies, all the while manipulating its demand-side measures to ensure tangible energy savings. And do it really fast. ■