



Questions and Answers - Sustainable transport, infrastructure and fuels

Brussels, 14 July 2021

1. How will transport contribute to meeting the EU's target of at least -55% emissions reduction by 2030 and climate neutrality by 2050?

The transport sector's greenhouse gas emissions currently represent as much as a quarter of the EU's total emissions and unlike other sectors, emissions are still on the rise. By 2050, emissions from transport need to decrease by 90%. The transition to a greener and smarter mobility system has already begun, but it needs to be accelerated in order to guarantee clean, accessible and affordable transport and logistics solutions to all Europeans, connecting rural and remote regions. A successful green transport transition will provide new economic opportunities, and generate social and environmental benefits, including the reduction of air and noise pollution and their negative impacts on our health, in addition to cutting greenhouse gas emissions.

The success of the [European Green Deal](#) depends on our ability to make the transport system as a whole more sustainable. Each mode needs to play its part and contribute its fair share to the targets set in the [European Climate Law](#). In order to achieve this, the Commission proposes today:

- A [revision of the CO₂ standards for cars and vans](#) to accelerate the production and sales of low and zero emissions vehicles and put road transport on a firm path to zero-emission mobility in 2050. CO₂ standards are an effective tool to ensure that more, and more affordable, zero-emission cars and vans enter the market.
- A new EU Regulation on [RefuelEU Aviation](#), supporting a swift transition from fossil fuels towards sustainable fuels in air transport. The proposal will make air travel greener and will allow EU citizens to enjoy the benefits of flying in a more responsible way. It will ensure that increasing levels of **sustainable aviation fuels** will be available at EU airports, and will require all airlines to uplift those fuel before departure. The proposal contains ambitious mandatory targets and focuses on the most innovative and sustainable aviation fuels, notably synthetic fuels, which can achieve as high as 80% or 100% emissions savings compared to fossil fuels.
- A new [FuelEU Maritime](#) proposal, to stimulate the uptake of sustainable maritime fuels and zero-emission marine propulsion technologies by setting a maximum limit on the greenhouse gas content of energy used by [ships](#) calling at European ports.
- A proposal for an [Alternative Fuels Infrastructure Regulation](#), replacing the current Directive, to ensure that the greening of our transport fleets is supported by adequate **recharging and refuelling infrastructure**. This will allow drivers to easily charge or refuel their electric or hydrogen-fuel cell vehicles across the EU. It will also ensure that aircraft, ships and barges have access to electricity supply in major ports and airports. In addition, hydrogen refuelling stations will be deployed for light, but also for heavy duty vehicles. This Regulation will guarantee that in each Member State, sufficient public charging capacity will be in place to meet the demands of the bigger fleet of zero emission cars that will come to market, including under the revised CO₂ standards. It will also ensure EU-wide coverage of charging infrastructure at fixed intervals along major transport corridors. The [Renovation Wave](#) and the upcoming proposal on energy performance of buildings will further boost the supply of private chargers at home or at work.
- The Commission is also proposing to apply [emissions trading](#) to new sectors where stronger reductions are needed to reach the 2030 target. Under the proposal, emissions from maritime activities will be included in the EU ETS. In order to boost the sustainability of air travel, the ETS for aviation will be strengthened. Allowances allocated to airlines for free will be phased out over time. The EU will also apply the International Civil Aviation Organization (ICAO)'s scheme, the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) to international flights, thereby offsetting aviation emissions which go beyond 2019 levels. Emissions from road transport fuels will be covered by a new, separate emissions trading system incentivising fuel producers to provide cleaner fuels for cars and trucks, including

internal combustion engine cars that will stay on the roads. To address the social impact arising from this new emissions trading on roads, the Commission has also presented a proposal for a [Climate Action Social Facility](#).

- Other measures in the overall package also support the shift to clean mobility. The [revision of the Renewable Energy Directive \(RED\)](#) increases the mandatory share of renewable transport fuels. With the increased emission reduction objective under the [Effort Sharing Regulation](#), Member States will have to do more at national level to decarbonise transport. Through the revision of the [Energy Taxation Directive](#), transport fuels will be taxed to remove obstacles for the deployment of renewables and current exemptions for fossil fuels that amount to effective subsidies will be removed.

ROAD

2. What new CO₂ emission standards are proposed for cars and vans?

By 2050, nearly all cars and vans on the roads will need to be zero-emission vehicles. The CO₂ emission standards for cars and vans are key drivers for reducing CO₂ emissions in the road transport sector. In 2020, despite the shrinking overall market for new cars due to the COVID-19 pandemic, the total number of electric cars registered tripled, reaching for the first time over 1 million a year. More and more affordable electric car models are coming to market. With the increased supply of zero emission car models, they should become more affordable still.

This increasing market share coincides with the phase in of stricter CO₂ emissions standards for cars as of 1 January 2020. Today, the Commission proposes to further strengthen the current standards. The fleet of newly registered cars has to reduce emissions by 55% by 2030 and by 100% by 2035 compared to 2021. For new vans, the reduction targets are 50% and 100%, respectively.

These strengthened CO₂ emission standards will incentive the deployment of significantly more zero-emission vehicles on the Union market. Therefore, the regulatory incentive mechanism for zero- and low-emission vehicles (ZLEV), whose objective is to support early market uptake, would no longer serve its original purpose and is removed as of 2030. All car and van manufacturers will have to contribute to the reduction of CO₂ emissions, therefore the derogation for small volume manufacturers – those selling between 1,000 and 10,000 new cars or 22,000 new vans in a calendar year - is removed as of 2030.

Stronger CO₂ standards are not only beneficial from a decarbonisation point of view, but will also provide benefits for citizens through lower energy expenditure and better air quality. At the same time, they provide a clear and long-term signal to guide both the automotive sector's investments in innovative zero-emission technologies, as well as the rollout of recharging and refuelling infrastructure. Innovation in zero-emission mobility is key for maintaining the leadership of the EU industry in automotive technology, as well as for stimulating employment into new technologies.

The Commission's impact assessment shows that also due to fuel savings, zero emission cars bring benefits in all income groups, including and especially low income households for whom fuel cost is a relatively large monthly household cost.

3. What are the targets for the development of recharging and refuelling infrastructure for light and heavy duty vehicles?

The rollout of electric charging infrastructure needs to accelerate commensurate to the expected electric vehicle fleet on EU roads, which by 2030 is projected to reach at least 30 million cars. Fleet-based targets will ensure that for each battery electric car registered in a Member State, 1 kW in charging capacity is installed. This should also be in line with the earlier infrastructure goals as set out in the [Sustainable and Smart Mobility Strategy](#) of the Commission as it is expected to deliver more than 1 million recharging points by 2025 and approximately 3.5 million by 2030.

To ensure full connectivity across the [TEN-T network](#) of European highways at least 300 kW capacity provided by fast recharging points (with at least one of a capacity of 150 kW) will have to be installed per 60 km stretch of the TEN-T core network by 2025 and 600 kW capacity by 2030. On the TEN-T comprehensive network those targets have to be achieved by 2030 and 2035 respectively.

For hydrogen refuelling, one refuelling station will have to be available every 150 km along the TEN-T core network and in every urban node serving both light duty vehicles including passenger cars and heavy duty vehicles.

For electric heavy duty vehicles, recharging points need to be provided along the TEN-T core network every 60 km at least 1400 kW power output has to be provided by 2025 and 3500 kW by 2030. On

the TEN-T comprehensive network those targets have to be achieved every 100 km by 2030 and 2035 respectively. Equally, recharging points have to be provided on safe and secure parking and in major cities and agglomerations on the European trans-European transport network (urban nodes) to allow in particular for recharging of urban delivery trucks. Gaps in LNG refuelling infrastructure for trucks will be filled until 2025.

4. How will applying emissions trading in road transport work?

Despite EU legislation applicable since 2010 and the transport sector being included in Member States' targets under the [Effort Sharing Regulation](#), emission reductions have not been fast enough in this sector. While CO₂ emissions standards bring new and cleaner cars to the market, it is important to decarbonise transport fuels which serve the existing fleet. The Commission therefore proposes to create a new EU-wide emissions trading system for the fuel supply industry, which will put a price on carbon emissions from road transport (and heating) fuels. This system will not apply at the level of the individual transport user, but at the level of the fuel supplier as the entity with control over the fossil carbon content of the fuel (see Memo on the ETS proposal [here](#)).

AVIATION

5. Why do we need a new initiative on Sustainable Aviation Fuels?

Contrary to the road transport sector, zero emission aircraft are not yet available on the market, and will not be widely in use before 2035 for short-haul flights. Options to decarbonise aviation are limited. It is necessary to decarbonise aviation fuels as they will remain the norm to power aircraft in the decades to come. SAF have the potential to deliver significant emission reductions. ReFuelEU Aviation will boost SAF production and uptake already in the short-term and provides a long-term signal to the market, to encourage investments. Further contributions to the emissions reductions will come from market-based measures related to the revision of emissions trading system, CORSIA and energy taxation.

6. What obligations are set for the uptake of Sustainable Aviation Fuels in the ReFuelEU Initiative?

The ReFuelEU Aviation initiative proposes EU-wide harmonised rules for sustainable aviation fuels (SAF) that will apply to fuel suppliers and airline operators and therefore create a level-playing field. Airlines will be obliged to uplift SAF-blended aviation fuel when departing from EU airports. ReFuelEU also obliges fuel suppliers to include more SAF into jet fuel from 2030 to 2050:

- 2% by 2025
- 5% by 2030;
- 20% by 2035;
- 32% by 2040;
- 38% by 2045;
- 63% by 2050.

The proposal promotes first and foremost advanced biofuels and synthetic fuels produced from green electricity and in line with the sustainability requirements under the revised [Renewable Energy Directive \(RED\)](#). Those fuels are promising in terms of emissions savings, innovation potential, and scalability to meet future needs.

For sustainability reasons, crop-based biofuels are not included in the RefuelEU initiative. Hydrogen and electricity are also not included. They are promising options to decarbonise aviation further, but are expected to be available only for short-haul flights, and after 2035.

7. What changes are being proposed to the taxation of aviation fuels in the Energy Taxation Directive?

The revised Energy Taxation Directive (See [Memo](#)) introduces minimum tax rates applicable to aviation fuels used on intra-EU flights. This will allow to better take into account the environmental cost of fossil fuels, and stimulate the use of more sustainable aviation fuels, such as advanced biofuels or e-fuels. It will also encourage airlines to use more efficient and less polluting aircraft. The proposed tax rates on aviation fuel will increase gradually over a ten year period to reach a minimum rate of €10.75/GJ EU-wide. Sustainable and alternative aviation fuels will benefit from a zero minimum tax rate.

8. How will the EU Emissions Trading System reform incentivise the decarbonisation of

the aviation sector?

Significant emissions reductions in the aviation sector are needed to reach our 2030 climate targets. The Commission is proposing to revise the ETS aviation rules to strengthen the price signal incentivising costs-effective aviation emission reductions and help ensure that the sector accelerates its decarbonisation and contributes its fair share to the EU's climate objectives. In particular, ETS allowances allocated to airlines for free will be phased out over time (see the Memo on emissions trading [here](#)).

9. How will stationary aircraft emissions be reduced?

In order to reduce greenhouse gas emissions, pollution and noise from stationary aircrafts, the proposal for the Alternative Fuel Infrastructure Regulation introduces the obligation to provide electricity supply to all stationary aircraft in TEN-T core and comprehensive network airports instead of jet fuel. This obligation will apply to all gates, as of 2025, and to all outfield posts, as of 2030. In addition, by no later than 2030 Member States will need to ensure that all electricity supplied to stationary aircraft comes directly from the electricity grid or from on-site generated renewable energy.

Furthermore, in order to promote alternative fuels and develop the relevant infrastructure, the national policy frameworks that Member States have to develop in response to the new Regulation for Alternative Fuels Infrastructure must be future-proof and will need to include detailed long-term decarbonisation strategies focusing on the deployment of infrastructure for low and zero emission aircraft.

10. How will the level playing field be maintained in the air transport market?

The Commission has carefully assessed the cumulative effects of this package as a whole, and has paid particular attention to the impact on the competitiveness of the air transport industry. It is essential to ensure that all aviation actors operating to, from or within the EU single aviation market can rely on sound rules and benefit from equal opportunities. The transition towards sustainable aviation fuels must be embraced by all airlines operating at EU airports, regardless of their nationality. This will allow us to unleash the decarbonisation potential of sustainable aviation fuels to the fullest, while ensuring that all the extra fuel costs are evenly shared. As the price of sustainable aviation fuels is expected to decrease over time, thanks notably to economies of scale, airlines will also benefit from financial incentives to use such fuels under the EU ETS and CORSIA.

EU ETS rules apply to all flights within the EEA, regardless of the operator's country of origin. Therefore, airlines operating on a given route are treated equally under the EU ETS rules to avoid market distortions.

CORSIA rules require both the country that a flight is departing from and the country of destination to be included in CORSIA for any offsetting requirements to apply. This ensures that operators on the same route are treated equally under CORSIA rules.

The Energy Taxation Directive proposes to remove the mandatory fuel tax exemption for fuel used on intra-EU flights. However, considering that a high market share of cargo-only flights are operated by certain third country carriers in intra-EU flights which cannot be taxed due to the international agreements, the Directive proposes to exempt cargo-only flights from fuel tax. This will preserve the level playing field between EU and third country cargo-only carriers.

MARITIME

11. How will maritime transport become greener?

The maritime sector relies nowadays almost entirely on highly polluting and carbon intensive liquid hydrocarbons, such as heavy fuel oils, marine diesel oil or gas oil. It is important to rapidly change this trend to align maritime transport with the European Green Deal targets.

With these proposals, our objective is to ensure that the maritime transport sector duly contributes its fair share to the increased EU climate effort, while coordinating our action at global level, notably at the International Maritime Organisation (IMO) and ensuring fair competition and the proper functioning of the EU maritime transport market.

The extension of the EU Emission Trading System to the maritime sector will ensure that for the first time emission from shipping will also fall under the general cap and will create a price signal to drive decarbonisation. In addition to emissions trading, FuelEU Maritime will increase the use of sustainable alternative fuels in shipping and at European ports.

Both proposals will build on the existing system for monitoring, verification and reporting of greenhouse gas emissions from the sector. They will also share the same geographical scope, namely intra-EU traffic, plus half of international voyages (meaning half of the incoming leg and half of the outgoing leg). This approach will help to ensure a level playing field, keep short-sea shipping competitive vis-à-vis other modes of transport, and avoid carbon leakage.

Moreover, the revision of the Energy Taxation Directive will also support GHG emission reduction by putting forward minimum rates of taxation on the relevant fuels used for intra-EU ferry, fishing and freight vessels.

Finally, to support the use of clean fuels at berth, the new Alternative Fuels Infrastructure Regulation requires TEN-T maritime ports to install electricity supply to serve the demand of at least 90% of container and passenger ships calling at that port. One shore side electricity installation must be provided at every TEN-T inland waterway port.

At the same time, the proposals will stimulate R&I and help bring EU companies at the forefront of the transition that the maritime sector is embarking on.

This package will also maintain a level playing field for ship operators and shipping companies, which is critical to a well-functioning EU market for maritime transport.

12. What targets are set for the use of sustainable fuels under the FuelEU Maritime Initiative?

The proposal establishes limits on greenhouse gas intensity of the energy used on-board. Targets are determined against a reference value reflecting the fleet average greenhouse gas intensity of energy used on-board by ships in 2020, and reduced by the following percentages:

- 2% by 2025;
- 6% by 2030;
- 13% by 2035;
- 26% by 2040;
- 59% by 2045;
- 75% by 2050.

In addition, passenger ships and container ships are required to use onshore power supply unless they can demonstrate use of another zero-emission technology. Favouring a technological neutral approach, the proposal accommodates all renewable and low-carbon fuels in maritime transport, such as liquid biofuels, e-liquids, decarbonised gas (including bio-LNG and e-gas), decarbonised hydrogen and decarbonised hydrogen-derived fuels (including methanol, and ammonia), as well as electricity. While some of these fuels are already technologically mature, their application in the maritime sector remains to be broadly tested and deployed and has been so far extremely limited without clear targets providing investor certainty.

13. How will maritime transport be included in the ETS?

To ensure that the maritime transport sector contributes to the EU's climate ambitions, the Commission is proposing to extend the scope of the EU's Emissions Trading System to cover CO₂ emissions from large ships (above 5000 gross tonnage). For details on the ETS extension to maritime transport, please see the Memo on the ETS revision [here](#).

14. What is the EU doing at international level to ensure a level playing field?

The EU is working actively in the context of the IMO to reduce greenhouse gas emissions from shipping. In particular, we are looking to develop common guidelines for assessing the life-cycle performance of alternative fuels, and, in line with our Sustainable and Smart Mobility Strategy, we will put forward a proposal on a market-based measures for shipping at the IMO in 2022.

However, we cannot afford to wait if we are to meet our climate targets, which is why we are taking action at EU level now already. We will pay utmost attention to the possible impact of our legislation on third countries, but because the maritime transport sector operates in an environment of open markets and intense international competition, we also need to ensure a level playing field and avoid carbon leakage. This is why our measures must apply equally to ships of all flags trading in EU ports.

Experience has shown that ambitious regional action can help speed up climate action in third countries and at international level. Going forward, we will certainly consider aligning EU legislation

with future developments at international level, as appropriate.

15. **Will maritime transport fuels be covered by the Energy Taxation Directive?**

Fuel supplied for use in shipping is currently exempt from taxation under the current Directive. Today's proposal (See [Memo](#)) puts forward minimum rates of taxation that encourage a switch to more sustainable fuels. In practice, the new rules introduce a minimum excise duty rate on the relevant fuels used for intra-EU ferry, fishing and freight vessels.

These minimum tax rates will reflect the extent to which the sector is at risk of potential carbon leakage. To limit the higher risk of bunkering, whereby vessels used for intra-EU voyages are filled with fuel outside the EU, shipping fuels will be subject to the same lower tax rate as that applied to the agriculture sector. These low rates also reflect the importance of maritime transport in reaching the EU's most remote and peripheral regions and islands.

At the same time, to encourage the use of cleaner energy, in line with the FuelEU Maritime initiative, sustainable and alternative fuels will enjoy a minimum zero tax rate for a transitional period of 10 years when used for waterborne navigation.

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