

## 【欧州】 【Common】

Common - EU decarbonisation policy: European Commission recommends introduction of a 2040 GHG emission reduction target with a 90% net GHG emissions reduction compared to 1990 levels

Andrea Antolini Former Researcher JTTRI

### 【概要 : Summary】

The EU is committed to reach climate neutrality by 2050, based on the European Green Deal. Based on the European Climate Law, the EU also introduced a new, increased intermediate target of a 55% reduction in GHG emissions by 2030, which made revisions of climate relevant EU legislation necessary.

The European Commission annually assesses the EU's progress towards its 55% GHG emission reduction target of 2030 and the 2050 climate-neutrality objective. The annual report on the EU's progress towards the GHG emission reduction targets also highlights sector-specific challenges, including transport. However, despite an overall 32.5% reduction of GHG emissions in 2022 compared to 1990 levels, the EU still faces challenges major challenges to meeting the 2030 and 2050 targets.

Against this backdrop and in response to the European Climate Law's requests, the European Commission presented a recommendation to introduce a new milestone climate target of a 90% net GHG emission reduction by 2040 compared to 1990 levels. This new 2040 target aims to provide predictability for economic stakeholders and supports the transition to a climate-neutral economy by 2050.

The European Commission's communication COM (2024) 63 final on recommending the introduction of the 2040 target also emphasizes the necessity to fully implement the 2030 target and enabling frameworks for a transition towards the new 2040 90% GHG emission reduction target to ensure climate neutrality by 2050. The 2040 target also requires the deployment of carbon capture and storage technologies, utilizing captured carbon in industry, and to address the hard-to-decarbonise sectors.

The decarbonization of the transport sector will require a focus on sustainable alternative fuels, a combination of technological solutions, carbon pricing, digital solutions, green logistics and an efficient multimodal transport system to achieve the envisaged 80% GHG emissions reduction target for the transport sector by 2040. Moreover, the post-2030 policy framework will have to be put in place to deliver the 2040 target.

The Commission's recommendation on introducing a new 2040 milestone target is expected to lead to the presentation of a proposal on the 2040 target by the next European Commission, which will take office after the June 2024 European elections.

【記事 : Article】

## 1. Background of the new 2040 GHG emission reduction target

In 2023, global warming reached 1.48° C above pre-industrial levels, and ocean temperatures and Antarctic Ocean ice loss stand at record highs (European Commission 2024b). The EU's climate change related commitment under the European Green Deal envisages to reach climate neutrality by 2050 and also includes the target to reduce GHG emissions from transport by 90% (COM/2019/640 final). The European Climate Law (Regulation (EU) 2021/1119) incorporated the European Green Deal's goal into legislation, setting legally binding objectives ((European Commission n.d.a). With the adoption of the European Climate Law in 2021, the EU made a legal commitment to achieve the goal of reducing its GHG emissions by at least 55% by 2030 compared to 1990 levels and to reach net zero emissions by 2050 at the latest (Regulation (EU) 2021/1119). To deliver on the European Climate Law's targets, the European Commission adopted the key reform of its climate and energy related legislation through a series of measures proposed in 2021 in the "Fit for 55" package (ESABCC 2023).

The legislative measures include the revisions of the EU emissions trading system (EU-ETS) Directive, as well as the inclusion of maritime transport activities in the EU-ETS, a new, self-standing ETS for buildings, road transport and fuels for additional sectors (ETS2), the Social Climate Fund (SCF), a Regulation updating the CO<sub>2</sub> emission standards for cars and vans, the Alternative Fuel Infrastructure Regulation (AFIR), FuelEU Maritime, and the ReFuelEU Aviation, among others (SWD (2024) 63 final). The European Climate Law (Regulation (EU) 2021/1119) also required the EU to adopt a 2040 climate target, considering the advice from the European Scientific Advisory Board on Climate Change (ESABCC) (ESABCC 2023). Accordingly, the 2030 target of reduction the GHG emissions in

the EU by 55% compared to 1990 levels, must be followed by a new 2040 milestone climate target as next intermediate step on the path to climate neutrality in 2050 (European Commission n.d.a, European Commission 2023).

The 2040 climate target is expected to reaffirm the EU's determination to tackle climate change and it will shape the measures after 2030, to ensure the EU reaches climate neutrality by 2050 (European Commission n.d.a). Following a public consultation from 31 March to 23 June 2023, in February 2024, the European Commission presented its assessment for a 2040 milestone target climate target, recommending a reduction of the EU's net GHG emissions by 90% by 2040, compared to 1990 levels (European Commission n.d.a).

## 2. The European Commission's Climate progress report

Every year, the European Commission publishes an annual report, the EU Climate Action Progress Report (CAPR), to assess progress with the EU 2030 climate target. The report covers actual GHG emissions and makes projections on future emissions for every EU Member State (European Commission n.d.b). In 2023, for the first time, the report also includes the assessment of progress towards the EU 2050 climate-neutrality objective, the progress on adaptation, and an analysis of the consistency of national and EU measures with climate objectives as required under the European Climate Law (European Commission n.d.b).

In 2022, the EU was able to steadily decrease its GHG emissions since 1990, reaching a total decrease of -32.5% compared to 1990 levels (European Commission n.d.b). The COVID-19 pandemic and related lockdown measures in 2020 caused an unprecedented fall in GHG emissions, followed by a rebound of GHG emission levels in 2021 and 2022. However, overall, the GHG emissions continue to fall below the 2019 level (European Commission n.d.b). Nevertheless, based

on Member States' projections, the EU is currently not on track to reach its 2030 objective of removing 310 million tonnes of CO<sub>2</sub> from the atmosphere per year (European Commission n.d.b). Accordingly, the EU and its Member States need to significantly increase their implementation efforts and accelerate GHG emissions reduction to stay on track to reach the -55% net GHG emission reduction target by 2030 and climate neutrality by 2050 (European Commission n.d.b).

Regarding the GHG emissions from transport, they increased by over 2% in 2022 compared to 2021, underlining the existing gap between the 2030 objectives and the projected future GHG emissions (European Commission 2023).

Regarding the GHG emissions in aviation and maritime transport, the Commission's progress report underlines that maritime transport is a substantial CO<sub>2</sub> emitter, generating around 3-4% of total EU CO<sub>2</sub> emissions (European Commission 2023). In 2022, CO<sub>2</sub> emissions of maritime transport, as collected under the Monitoring, Reporting and Verification Regulation, increased by 7% compared to the previous year, as the sector recovered from the COVID-19 pandemic's impact (European Commission 2023). In May 2023, as part of the revised EU-ETS Directive, the EU Maritime MRV Regulation was amended to extend its scope to cover non-CO<sub>2</sub> emissions (CH<sub>4</sub> and N<sub>2</sub>O) as well as new ship types and sizes. The EU-ETS for maritime transport will therefore cover CO<sub>2</sub> emissions from large ships of more than 5,000 t, calling at EU ports as of 2024 and non-CO<sub>2</sub> emissions as of 2026 (European Commission 2023). At international level, the EU successfully supported the increase in ambition of the 2018 International Maritime Organization (IMO)'s GHG reduction strategy, which now sets a goal of net zero emissions from ships "by or around, i.e. close to, 2050" (European Commission 2023).

Regarding GHG emissions from aviation, they are covered by the EU-ETS for aviation, but there is no monitoring of the aviation sector's non-CO<sub>2</sub> emissions (European Commission 2023). As of 1st January 2025, the revised EU-ETS Directive tasks aircraft operators to monitor and report the non-CO<sub>2</sub> emission effects per flight on a yearly basis and by 31 December 2027 the European Commission is expected to present a legislative proposal to mitigate the non-CO<sub>2</sub> emissions from aviation by expanding the scope of the EU-ETS (European Commission 2023).

### 3. The new 2040 climate target: Reducing net emissions by 90% by 2040

For the period between 2030 and 2050, the European Climate Law (Regulation (EU) 2021/1119) requires the EU to establish a 2040 milestone target to "…provide predictability and confidence for all economic actors, including businesses, workers, investors and consumers, to ensure a gradual reduction of greenhouse gas emissions over time and that the transition towards climate neutrality is irreversible…" (Regulation (EU) 2021/1119). To further support the transition to a climate-neutral economy, the next European Commission, to be established after the European elections in June 2024, is expected to present this intermediate 2040 target in a legislative proposal, taking into account inputs and evidence from scientific sources, including the advice of the European Scientific Advisory Board on Climate Change (ESABCC) (European Commission 2024b, ESABCC 2023). According to the ESABCC, the EU will have to aim for a near-total reduction of GHG emissions by 2040 if it wants to meet its 2050 climate neutrality goal (Elissaiou 2023, ESABCC 2023). The proposal for the 2040 target is expected to be presented within 6 months of the first Global Stocktake of the Paris Agreement, which took place in December 2023 (European Commission 2024c).

Accordingly, based on its impact assessment and in preparation of a legislative proposal of the next European Commission, the current European Commission presented a recommendation in Communication COM(2024) 63 final on a new intermediate 2040 GHG emission target (European Commission n.d.a). The Communication entitled “Securing our future. Europe’s 2040 climate target and path to climate neutrality by 2050 building a sustainable, just, and prosperous society” as well as a detailed impact assessment on possible pathways to reach the European Green Deal’s target of climate neutrality by 2050 were presented by the departing Commission on 6 February 2024 (COM(2024) 63 final, European Commission 2024a). This “2040 target” of a 90% reduction of net GHG emissions will be necessary to put the EU on a firm path to climate neutrality, while the 2040 target will highly depend on the full implementation of the 2030 climate and energy framework as well as on the development of a post-2030 policy framework (European Commission n.d.a). Defining the 2040 target in good time will enable the EU to put in place the necessary policies and investments to ensure a transition to climate neutrality and at the same time to achieve a strong and stable economy, and competitive industry in Europe that is expected to be more resilient against future crises and price shocks and a strong, sustainable, and prosperous society in Europe (European Commission 2024c). This recommendation intends to open the political debate and dialogue with all stakeholders in the process, while the political and legislative decision on the 2040 target will need to be taken by the next Commission (European Commission 2024b). The recommendation to setting the target of reducing net GHG emissions by 90% by 2040 and the detailed impact assessment will ensure to inform the incoming European Commission, which will take

office after the June 2024 European elections, in a timely manner (European Commission n.d.a). It will enable the incoming Commission to soon present a proposal on the 2040 target to create predictability for citizens, businesses, and investors, and enable the EU to lead in developing the clean technology markets of the future and make Europe more resilient while strengthening its strategic autonomy towards the 2050 climate neutrality target (European Commission n.d.).

According to the European Commission, setting a 2040 climate target will send important signals to the European industry on how to invest and plan effectively for the longer term, minimising the risks of stranded assets (European Commission 2024b).

The Commission’s communication COM(2024) 63 final on recommending a new intermediate 2040 GHG emission target also sets the necessary policy conditions regarding the full implementation of the agreed 2030 framework (European Commission 2024b). The building blocks include a resilient and decarbonised energy system for transport and the transition towards a hydrogen-based energy system (European Commission 2024b). It will also be necessary to invest in clean technologies to accelerate the deployment of renewables and remove carbon from the atmosphere to store and use in industrial processes (European Commission 2024b).

#### **4. Establishing the conditions for achieving the 2040 target in the transport sector**

Achieving the 90% recommended target will require GHG emissions reductions with the full implementation of the existing legislation to reduce emissions by at least 55% by 2030 as a starting point (European Commission 2024b). It will also require targeting the hard-to-abate sectors where alternatives to carbon intensive energies are less economically or technically viable. Carbon removals will also have to

generate negative emissions after 2050. (European Commission 2024b). In this context, the European Green Deal needs to become an industrial decarbonisation deal that builds on existing industrial strengths, like wind power, hydropower, and electrolyzers, to increase domestic manufacturing capacity. Europe will also need to mobilise the right mix of private and public sector investment to make our economy both sustainable and competitive (European Commission 2024b).

In the transport sector, for both passenger and freight transport, decarbonisation should be achieved by a combination of technological solutions and carbon pricing, as well as with an efficient and interconnected multimodal transport system (European Commission 2024b, 2024c). Transport emissions are projected to decrease by close to 80% by 2040, relative to 2015 (European Commission 2024c, COM(2024) 63 final). However, the projected CO<sub>2</sub> emissions vary greatly across transport modes. Higher use of rail-based transport with an increase in railway infrastructure capacity, and an interconnected multimodal transport system for both passengers and freight supported by the multimodal Trans-European Transport Network (TEN-T), could significantly contribute to reducing the transport sector's overall GHG emissions (COM (2024)63 final). Based on the legislation on CO<sub>2</sub> standards, the CO<sub>2</sub> reduction from road transport is expected to accelerate over time as the shares of battery-electric and other zero-emission vehicles are projected to rise to over 60% for passenger cars, and to over 40% for vans as well as to close to 40% for heavy-duty vehicles by 2040 (COM (2024)63 final). As the deployment of zero emission vehicles and the electrification of the sector is expected to quadruple over the decade 2031-2040, this development is also expected to benefit the air quality in cities. The transformation in the transport sector will be possible, also based on investments in

infrastructure and the full integration of the sector in the electricity grid, the development of critical raw materials supply chains and an increase of a skilled workforce (COM (2024)63 final). In parallel, the decarbonisation of the stock of existing vehicles already on the roads will be enabled by carbon pricing and updated fuel policies (COM (2024)63 final).

However, the decarbonisation of transport and improved mobility will require significant investments in both, new assets like zero and low emission vehicles, aircraft, vessels, rail equipment as well as in infrastructure for refuelling and recharging (COM(2024) 63 final). At the same time, the renewable and low-carbon fuel costs should not be underestimated, and they remain a key factor for the competitiveness of transport operators, in particular in the maritime and aviation sectors (COM(2024) 63 final). The associated investment needed for the transition in the transport sector will need an intensified discussion with Member States, the European Investment Bank and financial institutions on how innovative EU finance tools could de-risk strategic investments in a technology neutral manner to enable the transition towards a sustainable transport sector.

Regarding maritime and air transport emissions, they will be reduced through the combined effect of the “Fit for 55” package related measures including the targets set out in FuelEU Maritime (Regulation (EU) 2023/1805) and ReFuelEU aviation (Regulation (EU) 2023/2405) as well as by deploying renewable and low carbon fuels and of zero-emission aircraft and vessels (COM (2024)63 final). The EU will put a carbon price on CO<sub>2</sub> emissions from these sectors through the EU-ETS, which is expected to stimulate the uptake of zero-emission technologies as well as renewable and low carbon fuels and energy efficiency solutions in aviation and shipping (COM (2024)63 final).

Furthermore, the barriers to the deployment of alternative low- and zero-emissions fuels, including e-fuels and advanced biofuels, in aviation and maritime transport must be addressed and these sub-sectors will have to get priority access to these fuels over other sectors that have access to other decarbonisation solutions, such as direct electrification in road transport (COM (2024)63 final). According to COM (2024)63 final, significant investments will be required in the energy system to replace fossil fuels with renewable and low-carbon fuels to power the transport sector. Ensuring that a sufficient feedstock of sustainable alternative fuels is made available through dedicated measures is key to reaching the set ambition (COM (2024)63 final, European Commission 2024c). Moreover, the deployment of different models based on mobility as a service, multimodality, digital solutions, and optimised green logistics for freight will support the modernisation and decarbonisation of the transport sector (COM (2024)63 final). Promoting sustainable and affordable urban mobility as well as supporting a wider use of public transport as well as active mobility like walking and cycling for short distance trips will benefit both, the climate and people's health (COM (2024)63 final). The next Commission taking office after the EU's June 2024 election will have to prepare and present the legislative proposal on the 2040 milestone target of reducing the GHG emissions by 90%, and it will have to ensure that the appropriate post-2030 policy framework is in place to deliver on the 2040 target in a fair and cost-efficient manner (European Commission n.d.a). Preparations for a post-2030 policy framework will begin once the legally binding GHG emission reduction target for 2040 is adopted. Ultimately, the measures taken in the current decade will shape the path toward achieving climate neutrality by 2050 (European Commission 2024c).

## 5. Conclusion

The Commission's Communication COM (2024)63 final on the recommendation to present a proposal on introducing a 90% GHG emission reduction target by 2040 is expected to set a new important milestone on the way to reach the climate neutrality target by 2050.

Regarding the decarbonisation of transport, the proposal should also introduce a milestone target of reducing the transport sector's GHG emissions by 80% by 2040 and to improving mobility. To achieve this target, it will require significant investments in both, in new assets like zero and low emission vehicles, aircraft, vessels, rail equipment as well as in infrastructure for refuelling and recharging (COM(2024) 63 final). At the same time, the renewable and low-carbon fuel costs should not be underestimated, as they remain a key factor of transport operators' competitiveness, in particular in the maritime and aviation sectors. The recommendation to introduce a 2040 milestone of reducing the GHG emissions by 90% will be presented in a legislative proposal after the new Commission will take office after the EU elections in June 2024.

The next European Commission will have the responsibility to make this legislative proposal and to ensure a balanced and cost-effective contribution of all sectors to the GHG emission reductions and carbon removals. This will also require the deployment of carbon capture and storage technologies. Once the new Commission will present the proposal on the 2040 target, preparations will begin for a post-2030 policy framework to deliver the 2040 target in a fair and cost-efficient manner.

The new 2040 GHG emission reduction milestone and all related measures taken during this decade will decide if the EU will be able to ultimately reach the 2050 carbon neutrality target.

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