

# CO<sub>2</sub> emissions standards for cars and vans: a powerful instrument for new clean vehicle fleets

## Recommendations

Hydrogen Europe would like to present the following recommendations regarding the recent proposal on the review of the CO<sub>2</sub> Emission Performance Standards for cars and vans:

- 1) Maintain the positive aspects of the proposal, such as the level of ambition for the personal cars segment.
- 2) Ensure correct differentiation between the personal cars and light commercial vehicles (vans).
- 3) Change the method of accounting to the Well-to-Wheel accounting system from 2035 onwards.
- 4) Give an option for manufacturers to take part in a voluntary crediting mechanism for renewable fuels of non-biological origin, which would be linked to an obligation to invest into zero-emission vehicles.
- 5) Introduce a method to include aspects of system efficiency in the CO<sub>2</sub> calculation.
- 6) Ensure that the ambition of CO<sub>2</sub> Standards do not exist in a vacuum but are rather as a part of the Fit for 55 Package – ensure a roll out of adequate refuelling network via the Alternative Fuels Infrastructure Regulation, exploit synergies between TEN-E and TEN-T incentivize decarbonisation of existing vehicle fleets through the EU ETS in road transport, and provide ambitious targets and incentives through REDII and ETD.
- 7) Require that excess emissions premiums are allocated to support re-skilling, up-skilling and other skills training and reallocation of workers in the automotive sector.

## Context

Hydrogen Europe considers the revision of the Regulation setting CO<sub>2</sub> emission performance standards for new passenger cars and new light commercial vehicles (vans)<sup>1</sup> to be a pivotal legislative initiative to help the EU deliver upon its 2030 climate targets and to reinforce its global leadership in clean vehicles, particularly hydrogen-fuelled vehicles.

Consequently, we welcome the proposal and praise the Commission for the increase of the 2030 and 2035 targets. In particular, the 2035 target is a major victory for clean mobility and it will also serve as a beacon for further ambition worldwide.

Moreover, Hydrogen Europe also welcomes that the proposal does not seek to amend the 2025 targets for cars and vans, showing an understanding for the automotive industry development pathways. We also agree with proposal's views that zero- and low-emission vehicles (ZLEV)

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<sup>1</sup> Regulation (EU) 2019/631 of the European Parliament and of the Council of 17 April 2019 setting CO<sub>2</sub> emission performance standards for new passenger cars and for new light commercial vehicles, and repealing Regulations (EC) No 443/2009 and (EU) No 510/2011 (recast)

mechanism has to continue until 2030, maintaining manufactures' trust and confidence that all vehicles below 50g CO<sub>2</sub>/km will continue to be incentivised.

**Despite the highly commendable ambition of the Commission's proposal, the revised Standards should be improved in some key ways.** In particular, Hydrogen Europe notes that the vans segment is not sufficiently differentiated from the cars segment, that a holistic accounting for the 2035 targets onwards is not ensured, and that the accounting does not include system efficiency in the calculation.

**We also underscore that other proposals of the Green Deal will be essential in supporting this proposal.** Particularly, this should be done by driving up the decarbonisation of the existing vehicles market through the new ETS in road transport system, by making sure that the CO<sub>2</sub> standards' ambition is met by an appropriate deployment of hydrogen refuelling stations (HRS) via the Alternative Fuels Infrastructure Regulation, and through a synergy between TEN-T and TEN-E Regulations. Lastly, the use of **excess premiums should also fund the clean transition** towards the future of light duty vehicles, upskilling and reskilling, and uptake of alternative infrastructure.

### **Ambitious but appropriate targets that recognise the difference between segments**

The revision of the CO<sub>2</sub> Standards for cars and vans, while certainly very ambitious, does not fully recognise the crucial differences between the cars and vans segments. **Hydrogen Europe calls on the European co-legislators to truly recognise the differentiation by softening the trajectory of the vans targets and providing the segment further time to adjust to the level of ambition envisaged.**

**Vans are a specific vehicle segment with different missions from passenger cars:** they are key players of the logistics chain and represent the main working tool for many Small and Medium Enterprises, with many crucial delivery roles in urban areas. Vehicle manufacturers consider hydrogen-powered vans to be a promising technology as they offer similar operational flexibility to conventional vans. **On the infrastructure side, these types of vehicles are expected to be the enabler of hydrogen refuelling stations business cases.** These vans will be refuelled often and are expected to use the same stations, hence ensuring certainty on the daily amount of hydrogen used there.

However, **the development of hydrogen-powered van segment will be gradual, given the lower volumes compared to passenger cars,** the specific technological performances, the longer development cycles, the impact on customer Total Cost of Ownership (TCO), as well as the specific missions. Hence, this will require a differentiated approach to be set out on the European level.

### **Accounting emissions holistically through the Well-to-Wheel assessment**

The current legal framework is based on a tank-to-wheel (TTW) approach, which measures emissions solely at tailpipe. This system has proven to not account emissions in a holistic view unlike in the well-to-wheel (WTW) approach. Although the 2025 and 2030 targets should continue to be accounted based on the TTW approach, maintaining the clear system that was set for automobile manufacturers in the 2019 Regulation, the addition of the 2035 target presents an opportunity for a new beginning for holistic accounting of emissions.

**Instead, Hydrogen Europe calls on the European institutions to acknowledge of the advantages of the WTW system by setting the new 2035 target at a WTW approach.** This would force the automobile sector to decarbonise not only its end products, but also its entire supply chain. Additionally, the EU should **establish greater clarity on the accounting for internal combustion technologies** that produce minimal CO<sub>2</sub> emissions per kilometre, such as **hydrogen-fuelled internal combustion engines.**

Furthermore, the co-legislators **could also consider a voluntary crediting system between fuel suppliers and OEMs**, provided that it takes into account clearly defined responsibilities between the two sectors and that such a system is fully compatible, avoiding all forms of double counting, with both the RED requirements as well as the CO<sub>2</sub> emission reduction standards. While the details of such a system remain to be defined, Hydrogen Europe generally supports a **voluntary crediting system under the main condition that it does create an obligation to invest in zero-emission vehicles**.

The voluntary scheme should **focus solely on renewable fuels of non-biological origin (RFNBOs)**, as defined in the Renewable Energy Directive, including using renewable hydrogen as an intermediary product in the production of conventional fuels<sup>2</sup>. The introduction of this **voluntary crediting mechanism could help accelerate transport's transition towards climate neutrality by 2050 by incentivising value chains that will be needed for fuelling other transport sectors**, such as the waterborne and aviation sectors.

### **An ambitious regulatory framework based on synergies to unlock hydrogen vehicles uptake**

Although the targets established under the revised CO<sub>2</sub> standards will provide a strong push towards the uptake of clean mobility, the revised proposal needs to be placed into a fully synergetic framework that reinforces its goals of the EU Green Deal. This can be achieved through a holistic view of infrastructure policy and demand/supply-side measures that incentivize the roll-out of hydrogen fuelled vehicles, such as an ambitious **Renewable Energy Directive** and **Energy Taxation Directive**.

**On the infrastructure side, ensuring a sufficient ambition in the Alternative Fuels Infrastructure Regulation will be instrumental to match the ambition of the CO<sub>2</sub> Standards**. While we greatly appreciate the clear and binding targets for hydrogen refuelling stations (HRS) set by the new instrument, **Hydrogen Europe believes that these targets should be seen as the minimum starting point for the roll out of HRS in road transport**. More specifically, the **distance between HRS deployed along the TEN-T core and the TEN-T comprehensive network should be reduced from 150km to 100km** to guarantee an adequate coverage for hydrogen vehicles. Moreover, an additional target should be set in a shorter term for the TEN-T core network, for instance a 100km limit between HRS along the core network already by 2027; this would give confidence to both OEMs and customers. According to Hydrogen Europe's calculations, for a total H<sub>2</sub> fleet of more than 2 million Fuel Cell Electric Vehicles, **approximately 1700 HRS in 2030 would be needed to satisfy the corresponding 2030 fleet mix**. This assessment shows that the **current HRS targets are just a minimum that may provide a policy signal to make the necessary investments**.

In addition, the synergies between the **Trans-European Transport Networks (TEN-T) and the Trans-European Networks for Energy (TEN-E)** should be explored further to make a direct link between the fuel source, the optimisation of the production, use and transport of large quantities of hydrogen and the increase of hydrogen demand for the transport sector through the development of hydrogen infrastructure network. Furthermore, cross-references to TEN-T and TEN-E interlinks should be added to the revised TEN-T and TEN-E guidelines and geographically aligned.

On an equally important point, **the decarbonisation of existing fleets produced before 2035 will be key to achieve the European goals of reducing transport emissions by 90 percent**. To put this into context, the **average age of cars and vans on the European market is approximately 11.6 years**, with

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<sup>2</sup> Article 25.1 (a) Directive (EU) 2018/2001 on the promotion of the use of energy from renewable sources

Central and East European countries seeing average lifetimes much higher than that.<sup>3</sup> Thus, conventional internal combustion vehicles put will continue to be placed on the European market until 2035 and remain in use well after, which means European co-legislators need to provide legislative solutions that could effectively reduce the net emissions of these fleets close to zero.

**Hydrogen Europe views the revision of the EU ETS to include transport emissions as a crucial instrument.** Unfortunately, the **ETS system for road transport does not currently perform the function of adequately incentivising renewable fuels (RFNBOS)**, due to a lack specific emission factor for these kinds of fuels which would recognise their Well to Tank (WTT) benefits. This lack of clear emission factors for RFNBOS hampers the fuel suppliers in making business decisions to gradually decarbonise their fuel supply with progressively higher blends of renewable carbon-neutral fuels. We draw your attention to **Hydrogen Europe's position paper on road transport aspects of EU ETS**,<sup>4</sup> which develops the solutions to enable the uptake of renewable fuels under the EU ETS.

### System efficiency and technology neutrality as underlying principles for a revised regulation

Importantly, the overall **system efficiency** should also be considered in CO<sub>2</sub> emissions calculations. **When making investments for a technology or an energy carrier, the analysis can no longer be viewed as leading down to a single energy pathway** (i.e., conversion loss for hydrogen vs pure electric efficiency in battery electric vehicles) **as the shift in the way we use energy must also be based on whether it is the best for the whole energy system** - e.g. transporting hydrogen via pipelines is up to 15 times cheaper than transporting electricity, the costs linked to building additional electricity grids must be taken into account; and similar operational flexibility compared to conventional technology should be ensured for vehicles operators.

**The adverse mixed effects of favouring one technology** will only have to be considered over a whole life cycle approach, such as the **raw materials dependency (i.e. cobalt and lithium) and limited availability and the recyclability of key components**. The EU's dependence on raw materials and battery cell technology is expected to increase. Critical raw materials are highly concentrated in a small number of countries, as recently stated again by an IEA study<sup>5</sup>. China, for instance, holds a large part of the world's battery production materials.

Reaching carbon neutrality by 2050 requires massive investments in renewable energy. In addition to investing in domestic renewable energy, the EU needs an **import strategy** to harness the world's best spots for all forms of clean hydrogen<sup>6</sup> supporting the pathway to net zero for the exporting countries at the same time. With the help of renewable hydrogen, **energy carriers can be produced in regions with more favourable renewable conditions and be transported across long distances to meet the EU's rising demand for renewable energy**.

### Allocating excess emissions premiums for the clean transition of the automotive industry

Hydrogen Europe finds it a missed opportunity that the revision has maintained the current approach which states manufacturers whose average specific emissions of CO<sub>2</sub> exceed their specific targets should pay excess emission premiums. While this is a correct mechanism to help push the automotive industry towards adopting new ZLEVs, Hydrogen Europe **regrets that these excess emission**

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<sup>3</sup> [ACEA Report Vehicles in Use](#)

<sup>4</sup> Shared as part of Hydrogen Europe's to the feedback of the European Commission on the Fit for 55 package.

<sup>5</sup> The role of critical materials in the energy transition, May 2021, IEA

<sup>6</sup> Hydrogen Europe defines this as either hydrogen with 90% GHG reductions or renewable hydrogen. *Hydrogen Act* [https://www.hydrogeneurope.eu/wp-content/uploads/2021/04/2021.04\\_HE\\_Hydrogen-Act\\_Final.pdf](https://www.hydrogeneurope.eu/wp-content/uploads/2021/04/2021.04_HE_Hydrogen-Act_Final.pdf)

premiums continue to be considered as revenue for the general budget of the Union, without a specific destination for the spending of the recovered premiums.

In our June [Policy Paper on CO2 Standards](#), we have strongly underscored that **excess emission premiums should be clearly allocated to support re-skilling, up-skilling and other skills training and reallocation of workers in the automotive sector**. The excess emission premiums should **also support the deployment of refuelling infrastructure**, in complementarity to the Connecting Europe Facility.

European companies provide leading hydrogen technology solutions, e.g., in fuel cell and storage technologies and hydrogen internal combustion engines. In addition, an FCEV has many components requiring maintenance - thus jobs. Europe must stay at the forefront of this development to enable European players to retain global market shares and jobs in the sector. A study<sup>7</sup> has **foreseen that the European hydrogen industry would employ more than 1 million people in 2030**, of which 350,000 jobs would be associated with specialised components such as fuel cell systems. **By securing a competitive position in FCEVs, the European automotive industry with its infrastructure, production capacities, and capabilities will be retained in Europe, keeping the EU's industrial leadership.**

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<sup>7</sup> Hydrogen Roadmap, 2019