

Brussels, February 2023

NGVA Europe welcomes the adoption of the proposal of the new Euro 7 regulation as a next step toward reducing vehicle pollution. We are keen to transmit some considerations in order to improve the technical content and the effectiveness of the Euro 7 regulation during the discussion with the Council and Parliament.

More reasonable time is needed for the industry to develop and approve new vehicles

We believe that the timing for implementation is too strict and overlaps with the latest Euro 6e stage. Considering that the most important implementing measures describing test procedures and methodologies are not fully defined within the Commission proposal and will be developed during 2023, manufacturers will have only one year to develop, homologate and put on the market new M1 and N1 vehicles before the 1st of July 2025. The date for heavy-duty vehicle measures should be postponed as well, due to the introduction of relevant new test methodologies never performed in the past (the most relevant is the RDE test at vehicle level), which require sufficient time to collect data and information from the field. Finally, the implementing dates will be unique for both new approvals and new registrations. This means that all Euro 6/VI approvals will become obsolete and that all vehicles put on the market shall comply with Euro 7 regulation. For these reasons we suggest to review the implementing dates, ensuring a minimum lead time (for example three years for light duty vehicles and four years for heavy duty vehicles) after the completion of the implementing acts, allowing manufacturers to upgrade all existing Euro 6/VI approvals to Euro 7. This approach also would be consistent with the United Nations Economic Commission for Europe (UNECE) practice of allowing *transitional provisions* in its regulations, so vehicle manufacturers and equipment suppliers have an opportunity to improve their technologies without suffering negative economic consequences.

Coordination with CO₂ regulations needs to recognise the role of renewable and synthetic gas

Renewable gas is an immediate solution to decarbonize the transport sector. Existing natural gas vehicle technologies allow the use of renewable gas replacing vehicles powered with fossil liquid fuels, obtaining real and immediate benefits in terms of Well-to-Wheel (WTW) and Tank-to-Wheel (TTW) CO₂ emission reductions. By definition, the use of renewable and synthetic gas releases (respectively) biogenic and recycled CO₂, therefore, the net balance at the tailpipe should be considered as zero CO₂ emissions.¹

The new Euro 7 regulation, therefore, should be coordinated with CO₂ regulations for both light and heavy-duty vehicles, to recognise the importance of renewable fuels. We appreciate that the current Euro 7 draft includes a proper recital aiming at the development of a methodology to register after 2035 vehicles powered with CO₂ neutral fuels. It is imperative, however, that this recital be translated into a binding article applicable to both light and heavy-duty vehicles. We strongly believe that the heavy-duty sector ultimately will include a

¹ Directive 2018/2001/EU (RED II) recognizes in par. 13 of Annex V that the “emissions of the fuel in use ... shall be taken to be zero for biofuels and bioliquids” and in par. 13 of Annex VI that the “emission of CO₂ from fuel in use ... shall be taken to be zero for biomass fuels”.

mix of technologies, with renewable fuels being amongst them. It is necessary and urgent to extend the possibility to register vehicles powered by CO₂-neutral fuels also to the heavy-duty sector.

Our studies show that, in the future, 18% of the heavy-duty fleet could be powered by renewable gas, requiring only 10% of the potential production. This will allow a reduction of greenhouse gas (GHG) emissions on the level of 40 million tons of CO₂ per year. As such, any de-facto generic ban of internal combustion engines would be a severe mistake, because the TTW measurement methodology penalizes only certain technologies, delaying or even jeopardizing the achievement of CO₂ reduction targets by eliminating the potential for *all* renewable fuels both gaseous and liquid.

A future improvement of the CO₂ and the emission regulations should be the adoption of the WTW approach and the full Life Cycle Analysis (LCA), which will consider the whole value chain of the fuels and the vehicles.

CH₄ Limit for heavy-duty vehicles needs to be combined with N₂O

For heavy-duty vehicles there are separate limits for CH₄ and N₂O emissions. In reality the CH₄ limits target methane emissions from gas vehicles only, penalising this specific technology. State-of-the-art gas engines already have extremely low CH₄ emissions under Euro VI, and achieving the stricter limits proposed in Euro 7 is at the limit of technological feasibility (especially regarding cold-starting). For gas engines, achieving the proposed Euro 7 limits for CH₄ will likely require some undesired trade-offs with thermal efficiency, CO₂ and total tailpipe GHG, an outcome that is contradictory to the goal of reducing total GHG emissions.

Given that CH₄ and N₂O are both greenhouse gases, it is strongly recommended to revise the Euro 7 CH₄ individual species limit (retain current Euro VI limit of 500 mg/kWh) and add a second limit of a combined CH₄+N₂O in units of CO₂ equivalency, using 100-year global warming potential (GWP) of CH₄ and N₂O. This would allow manufacturers to meet the intended goal of minimising total GHG without impacts of fuel efficiency and CO₂.

The right balance between costs and benefits needs to be achieved

The text adopted by the Commission contains a lot of differences and new methodologies not currently included in Euro 6/VI regulation, such as: new regulated pollutants; smaller sized particles; a new on-board monitoring (OBM) concept; Real Driving Emissions (RDE) for heavy-duty vehicles; reduced emission limits applicable to all fuels; RDE with 'any, worst case and random' trip conditions; and extended durability. For vehicle manufacturers, each measure leads to additional burdens in terms of time and cost. It is extremely unlikely that all measures, taken together, lead to vehicle costs increasing by only 2-3%, as estimated in the Commission's Impact Assessment in which the costs of development are only partially compensated by cost savings achieved in the new type approval procedure.

It is important to take into account the total costs of different regulatory initiatives. The obligations to reduce CO₂ emissions of new vehicles increase manufacturers' costs massively. Euro 7 increases costs even more, especially for diesel vehicles. The total cost incurred by vehicle manufacturers is bound to weaken their capabilities to invest in other environmentally beneficial renewable fuels and technologies, including renewable and synthetic gas, biodiesel and 'green' hydrogen.
