

# COMMENTS ON EU RENEWABLE ENERGY RULES – REVIEW

November 2021

On 14 July 2021, the European Commission published its proposal for amending the EU renewable energy rules. The European emissions control industry that AECC represents, welcomes the opportunity to comment on these proposed regulatory amendments.

AECC is fully committed<sup>1</sup> to the climate objectives of the EU aiming to have zero-emission transport by 2050, as laid out in the European Green Deal.

Sustainable renewable fuels can contribute substantially to the reduction of CO<sub>2</sub> emissions from road transport. This needs to be fully recognised in the Renewable Energy Directive (RED). Drop-in sustainable renewable fuels can be used in current and future hybrid ICE vehicles. These will contribute to transport CO<sub>2</sub> reduction in addition to the ongoing electrification of the European vehicle fleet. More sustainable renewable fuels are needed at the pump and thus, the greenhouse gas (GHG) intensity reduction target in road transport should be as ambitious as possible. The RED ambition level should align to the overall 'Fit for 55' ambitions and set a clear pathway to achieve 100% GHG intensity reduction of road transport. Ambitious GHG intensity reduction targets need to be set for 2030 and beyond. Emission control technologies fully operating in combination with these drop-in sustainable renewable fuels enable ultra-low pollutant emissions from ICEs while contributing to net-zero CO<sub>2</sub> emissions.

Greenhouse gas emissions (including CO<sub>2</sub>, N<sub>2</sub>O and CH<sub>4</sub>) contribute to global climate warming independently from their location of origin. GHG accumulation is to be minimised to stay within the limited available GHG budget to achieve the Paris Climate Agreement. Road transport, including cars, vans, trucks and buses, are responsible for around 20%<sup>2</sup> of total EU emissions of CO<sub>2</sub>. Electrifying the fleet is not enough as fleet renewal and renewable electricity ramp-up will take some time. Thus, a holistic approach is required.

Replacing fossil fuels with sustainable renewable fuels is key to reducing CO<sub>2</sub> emissions from road transport unlocking the benefit of existing fleet in addition to new vehicles. The Renewable Energy Directive (RED) is a fundamental part of this effort by setting ambitious targets for the greenhouse gas intensity reduction in road transport in the European Union. In addition, a truly technology neutral legislation allowing all available powertrain technologies – hybrid Internal Combustion Engine (ICE), Battery Electric Vehicle (BEV), Fuel-cell Electric Vehicle (FCEV), etc. – to contribute towards reducing these emissions, is needed.

## ➤ Hybrid ICE light- and heavy-duty vehicles: an opportunity to achieve ultra-low pollutant and CO<sub>2</sub> emissions

The upcoming Euro 7 Regulation is expected to become a world leading emission legislation for pollutant emissions in real-world operation<sup>3</sup>. The application of Euro 7 will allow hybrid ICE light-duty and heavy-duty vehicles - combining a conventional ICE with an electric propulsion system, including mild, full, and plug-in hybrids - to achieve ultra-low pollutant emissions in all driving conditions. These clean and efficient hybrid vehicles with modern emission controls will continue to be an important part of the powertrain mix.

Today, AECC's demonstration vehicles including state-of-the-art emission control technologies already demonstrate hybrid ICE technologies can achieve ultra-low pollutant emissions<sup>4</sup>.

## ➤ Sustainable and renewable fuels present a great opportunity to contribute to net-zero CO<sub>2</sub> emissions

Hybrid ICE light- and heavy-duty vehicles will be equipped with emission control technologies which fully operate in combination with drop-in sustainable renewable fuels. This enables at the same time ultra-low pollutant emissions and substantial reduction in CO<sub>2</sub> emissions in an objective Well-to-Wheel assessment<sup>5</sup>.

As mentioned above, existing road transport fleets should contribute to achieving GHG reduction by using drop-in sustainable renewable fuels. These fuels can use existing infrastructure and consequently avoid initial carbon investment emissions. This will preserve accessible and affordable mobility options for all.

To fully grasp the benefits that sustainable renewable fuels can bring, the obligation to decrease the carbon intensity of transport included in the proposal is a good way forward. However, increasing the ambition level of greenhouse gas intensity reduction in road transport to only 13% in 2030 is not ambitious enough. For example, for light-duty hybrid ICE applications to fully contribute to the proposed 100% CO<sub>2</sub> reduction target for cars and vans in 2035<sup>6</sup>, the aim of the RED should be to have a substantial GHG intensity reduction of the road transport fuels by 2035 in line with the ambitions set in the 'Fit for 55' package. The RED must guarantee all available technological pathways in transport to contribute towards achieving the ambitious goals set by this package.

There is a clear statement in the RED proposal that current EU renewable energy target for 2030 set in the RED II needs to be increased to 38-40% according to the Climate Target Plan (CTP). Therefore, the RED should aim to increase the GHG intensity reduction in road transport to at least 40% by 2030. Besides increasing the 2030 ambition level, a clear pathway to achieve 100% GHG intensity reduction for road transport is needed to support the net-zero road transport by 2050 target. Investments are based on certainty and a clear business case, so targets after 2030 are necessary to incentivise sustainable renewable fuels production in view of achieving 100% carbon neutral liquid fuels in 2050.

The greater the share of sustainable renewable fuels at the pump, the greater the rate of CO<sub>2</sub> reduction of the European transport fleets. These benefits can also be achieved in the short term while these fuels slowly increase their share in the European fuel network.

AECC's vision<sup>7</sup> for clean, efficient, convenient and affordable mobility and its commitment to the European Green Deal are fully aligned with the European Commission's objective on climate. The climate is changing. GHGs are contributing to the warming of our planet and road transport is a contributor to this. The Renewable Energy Directive is a unique opportunity to lower the GHG contribution of the road transport sector.

AECC would like to confirm its commitment to work with the European legislators on the revision of the Renewable Energy Directive. AECC will continue to provide robust scientific data and facilitate informed discussions on how to improve the local and global air quality whilst maintaining the competitiveness of the European automotive industry through the integration of modern emission control technologies within the vehicle powertrain system.

## References:

<sup>1</sup> AECC open letter on European Green Deal communication

<https://www.aecc.eu/wp-content/uploads/2020/08/200124-AECC-open-letter-on-Green-Deal.pdf>

<sup>2</sup> EC Commissions web page - Road Transport: Reducing CO<sub>2</sub> emissions from Vehicles

[https://ec.europa.eu/clima/eu-action/transport-emissions/road-transport-reducing-co2-emissions-vehicles\\_en](https://ec.europa.eu/clima/eu-action/transport-emissions/road-transport-reducing-co2-emissions-vehicles_en)

<sup>3</sup> AECC position on Euro 7 emissions standards

<https://www.aecc.eu/wp-content/uploads/2021/06/210628-AECC-position-on-Euro-7-final.pdf>

<sup>4</sup> "Ultra-low Emissions of a 48V Mild-Hybrid Gasoline Vehicle with Advanced Emission Control Technologies and System Control", J. Demuyne, et al.; SAE 2021-24-0070, 09/2021

<https://www.aecc.eu/wp-content/uploads/2021/09/210912-AECC-presentation-SAE-2021-24-0070-website-1.pdf>

<sup>5</sup> "Improving Air Quality and Climate Through Modern Diesel Vehicles", J. Demuyne, et al.; MTZ, Issue 9/2020

<https://www.aecc.eu/wp-content/uploads/2020/09/200901-modern-diesel-MTZ.pdf>

<sup>6</sup> European Commission CO<sub>2</sub> emission performance standards for new passenger cars and new light commercial vehicles proposal

<https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A52021PC0556>

<sup>7</sup> AECC 2025 vision for clean, efficient, convenient and affordable mobility

<http://www.aecc.eu/wp-content/uploads/2020/02/200203-AECC-Vision-Document-Web.pdf>

*AECC is an international non-profit scientific association of European companies operating worldwide in the research, development, testing and manufacture of key technologies for emissions control. Their products are the ceramic substrates for catalysts and filters; catalysts (substrates with catalytic materials incorporated or coated); adsorbers; filter-based technologies to control engine particulate emissions; and speciality materials incorporated into the catalyst or filter. Members' technology is*

*integrated in the exhaust emissions control systems of cars, commercial vehicles, buses, non-road mobile machinery and motorcycles in Europe. More information on AECC can be found at [www.aecc.eu](http://www.aecc.eu) and [www.dieselinformation.aecc.eu](http://www.dieselinformation.aecc.eu).*

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