Executive summary

Comments on proposal EURO 7

For more than 110 years, ANFIA has represented the Italian automotive industry (car designers, component manufacturers, light and heavy vehicle manufacturers, trailer manufacturers and bodybuilders), one of Italy's most important industrial sectors.

In line with European commitments to decarbonisation, climate neutrality and improved air quality, ANFIA member companies have always been committed to developing technologies that reduce pollutant and climate-changing emissions and are making significant investments to meet the increasingly stringent targets set by the EU and directly imposed on the automotive sector.

In this context, the **recent adoption of the regulation on CO_2 reduction targets for light vehicles and the forthcoming publication of new targets for heavy vehicles are already revolutionising the European production chain.** Historically a leader in internal combustion engine (ICE) technologies, Europe is now having to catch up with countries that dominate the electrification of vehicles (availability of raw materials, refining know-how, etc.) to avoid losing its competitiveness on a global scale.

The shift in production, strongly advocated by European institutions, will require massive investments from companies in the automotive sector within a very tight timeframe. It also envisages 'banning' the sale of internal-combustion-engine vehicles fuelled by gasoline or diesel by 2035.

The Euro 7 proposal, in particular concerning the timetable for implementation, the change in testing methodology for heavy-duty vehicles and specifically with regards to the envisioned emission limits for certain pollutants, seems inappropriate and highly restrictive to a sector that Europe has already asked to make a significant effort to contribute to the Union's shared objectives.

A general assessment of the EU COM proposal

After a thorough technical analysis, the Italian automotive value chain's overall assessment of the proposed regulation can only be highly critical since the proposal clearly appears to be **incomplete and approximate**.
Whole sections of the technical annexes have been left blank**. Several passages in the body of the text need to be completed** (e.g., the lack of a definition of small volume manufacturers of heavy-duty vehicles or the benefits expected from the introduction of the Euro 7+, Euro 7A, Euro 7G classes), **inconsistent or even contradictory. Some provisions**

(as in the case of tyres and batteries) **overlap with other EU regulations**, duplicating or complicating the regulation without adding value to the stated objectives.

In particular, the proposed timeframe for implementation (2025 for light vehicles and 2027 for heavy vehicles) seems implausible, given that the test methods still need to be defined and having in mind the time required to complete the legislative co-decision process.

The legislator's attention is also drawn to the fact that **some of the proposal's provisions will lead to significant increases in fuel consumption and will therefore be counterproductive in limiting CO_2 emissions.**

The technologies required to reduce certain pollutants (rapid catalyst heating, regeneration of particulate filters, etc.) require fuel as an energy source. In addition, seemingly innovative improvements, such as direct electrical heating of catalytic converters, involve even more consumption because they use Noble Energy derived from the fuel (with less than optimal efficiency) instead of primary heat energy.

The case of N_2O, a pollutant introduced by Euro 7 for HD vehicles, is a particularly striking example. As N_2O is produced at low and medium temperatures, it is necessary to ensure that the temperature of the catalytic converters is maintained at this level under all operating conditions, which requires a considerable amount of energy and consequently increases fuel consumption and CO_2 emissions.

Finally, it should be noted that the Commission's impact analysis needs to be more balanced and, therefore, cannot be accepted. As far as the environmental impact is concerned, the study published by ACEA[1] shows that the **Euro 7 adoption scenario, compared to non-adoption, will have an additional 4% reduction in NOx for cars by 2030, 2% for commercial vehicles and trucks, while for buses** there are no additional benefits; on the other hand the estimate of vehicle price increases (about 3%) is implausible because the enormous investments needed by manufacturers and component suppliers will undoubtedly be more significant than indicated and will obviously have different implications for the accessibility of mobility for consumers.

We believe that the proposal as it stands is not viable in terms of its structure (limits, application dates, authorisation procedures) because it is highly restrictive and, given the context, at the limits of feasibility, and that it must be thoroughly revised in the context of the co-decision procedure between institutions.

[1] https://www.acea.auto/news/impact-of-euro-7-on-nox-emissions-by-vehicle-type/

Technology neutrality and decarbonisation targets

The Euro 7 Regulation, with all the necessary and essential revisions, will only be able to support the achievement of its objectives if it is accompanied by a strong push towards the use and valorisation of Low Carbon Fuels (LCFs)[2] and it is therefore **essential that the new regulation contains provisions for type approval testing with renewable fuels, establishing specific test methods and emission calculations that consider the beneficial effect of fuels from renewable sources.**

To value and account for the important contribution to emission reductions, the CO_2-neutral part of the fuel should be subtracted from the total CO_2 emissions figures. In this way, the actual annual CO_2 emissions of the fleet marketed can be calculated in future years based on the percentage of LCF sold in the EU.

Such a mechanism, defined in the Euro 7 Regulation, would respond to the "recital" (9a) of the recently revised CO_2 regulation for passenger cars and vans, which foresees the possibility for the Commission to develop a proposal for the registration of vehicles using only CO_2 neutral fuels beyond 2035.

In this context, we reiterate the need for coordination between the CO_2 (both for LD and HD) and Euro7 regulations. This will ensure that only the proportion of CO_2 emitted by fossil fuels is taken into account in exhaust emissions[3]. It is also hoped that **the new regulation will also make provisions for hydrogen fuelling** (with its **zero CO_2 emissions**).

Timeframe for publication of implementing measures.

Given the industrial cycles and development plans that characterise the automotive sector, **the implementing measures for the regulation must be adopted quickly.**

Manufacturers must start their certification and homologation processes for each vehicle type/variant/version well in advance: the current scenario of uncertainty does not allow the industry to prepare and exposes it to significant risks when starting development.

Other completely new elements, such as on-board monitoring and data transmission, can be considered a second priority, without prejudice to the possibility for manufacturers, in

[2] At the same time, the switch to R33 or R40 fuels coincides with the entry into force of Euro 7, with a subsequent switch to R100 for new engines by 2035.
[3] It is desirable to arrive as soon as possible at a concrete and agreed proposal at the European level on tackling this critical problem (there are already some working hypotheses using the so-called **Carbon Correction Factor - CCF**).

the event of delays in definition, to type-approve and market their vehicles within a "limited" Euro 7 range.

The current testing requirements should be retained in the new regulation. Alternatively, we believe that priority should be given to measures central to the principle and that replace elements already present in the protocols and test procedures of the current Euro 6 and Euro VI regulations.

Proposal summary

1. Euro 7 'exhaust' for passenger cars and vans (LDV)

- For **N1 light commercial vehicles**, it is necessary to **maintain the system of the Euro 6 regulation currently in force** concerning the limits on the most impactful pollutants and the **distinction between vehicle classes based on Reference Mass**.
- It is necessary to maintain the current type-approval test system by adopting the Euro 6 test procedures and updating the RDE tests in a way that will ensure to avoid taking into account unrealistic driving conditions.

→ Euro 7 for heavy-duty vehicles **should be in force at least 2 years** after all implementing and delegated acts are published while **Light commercial vehicles should have an additional year**, as in previous regulations.

2. Euro 7 'exhaust' for trucks and buses (HDV)

- Given the uncertainty in measurements, **a NOx emission limit value of 180 mg/kWh is proposed, representing a reduction of more than 50% compared to the current Euro VI limit values,** and an adjustment of the limit values in cold conditions as presented.
- It is proposed to **adopt the limit on PN10 at $6*10^{11}$ #/kWh.**
- It is reiterated the proposal to maintain the current system of type-approval testing by transposing the Euro VI test procedures.

→ Euro 7 for **heavy-duty vehicles** should be in force **at least four years after all implementing and delegated acts are published.**

3. . Small Volume Manufacturers (SVM)

- It is reiterated the need for coordination between the CO2 (both for LD and HD) and Euro7 regulations. For **Small Volume Manufacturers** (sales in Europe of less than 10.000 units per year), **alignment of regulations to 2035 should be considered.**

4. Euro 7 'non-exhaust' - braking systems

- The proposed regulation on brake emissions is a 'first' and it could be a real opportunity to improve air quality. It would be appropriate **to discuss the different emission sources separately**, with the **provision of a separate timeline for entry into force**.
- Retrofitting registered vehicles: a standard should be considered that, for example, **from 2028 will only allow low-dust emission replacement parts for braking systems (brake discs, brake pads and brake drums) to be sold on the EU market.**

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5. Euro 7 'non-exhaust' - tyres

- It is necessary an **overall consistency with United Nations tyre Regulations**
- It is proposed to **place the tyre-related obligations directly upon the tyre producer**, rather than the vehicle manufacturer.

The Italian automotive sector in figures

Automotive Industry
(manufacturing and production)

5,528 companies

273,600 Production employees

8.5 Bn€ wages

86,2 Bn€ Turnover

9.9% of **manufacturing sector**

5.2% of **GDP**

The industrial sector with **the highest value added multiplier**

Automotive Sector
(manufacturing and production + service industry)

1.25 million employees

25.8 Bn€ wages

299 Bn€ Turnover

18,1% of **GDP**

76.3 Bn€ 2019 Fiscal burden

- ✓ **60 Bn€ Use**
- ✓ **9.6 Bn€ Purchase**
- ✓ **6.7 Bn€ Ownership**

Components Sector[1]: 2,200 companies
168,000 employees
54,3 Bn€ turnover

2021 Trade Balance **5.8 Bn€**

[1] Source: Osservatorio della componentistica automotive italiana - 2022 Ed.

The Italian Components industry in Italy - Facts & figures

2,202 companies

- ✓ **Export: 21.7 bn €**
- ✓ **Import: 15.9 bn €**
- ✓ **Trade balance: +5.8 bn €**

168,000 employees

54.3 billion € turnover

- ✓ **export oriented**
- ✓ **recognized leadership at global level**
- ✓ **over 20 years of positive trade balance**

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