BRIEFING

Initial Appraisal of a European Commission Impact Assessment

European Parliament

Updating Euro emission standards (Euro 7)

Impact assessment (SWD(2022) 359 final, SWD(2022) 36 final (summary)) accompanying a Commission proposal for a Regulation of the European Parliament and of the Council on type-approval of motor vehicles and of engines and of systems, components and separate technical units intended for such vehicles, with respect to their emissions and battery durability (Euro 7) and repealing Regulations (EC) No 715/2007 and (EC) No 595/2009 (COM(2022)

This briefing provides an initial analysis of the strengths and weaknesses of the European Commission's impact assessment (IA) accompanying the above proposal, submitted on 10 November 2022 and referred to the Parliament's Committee on the Environment, Public Health and Food Safety (ENVI). Euro emission standards - used in the EU's general type-approval framework to test and approve new cars, vans, busses and lorries before they can serve on the EU market - aim to limit air pollutants emitted by vehicles' tailpipe (such as nitrogen oxides (NO_x), carbon monoxide (CO) and particulate matter (PM)[1]). The current standards were adopted in 2007 (Euro 6 for light-duty vehicles (LDVs)) and in 2009 (Euro VI, for heavy-duty vehicles (HDVs)) and entered into force in 2014 and 2013, respectively (IA, p. 2). To implement the Commission's Zero-Pollution Action Plan and Sustainable and Smart Mobility Strategy under the European Green Deal and take into account WHO air quality guidelines and the UN World Forum for Harmonisation of Vehicle Regulations, the present initiative aims to update, complete and simplify the current emission standards and to improve emission control (IA, pp. 3-4). The initiative was featured in the 2021 Commission's work programme and is part of the 2023 EU's Joint declaration on legislative priorities. It follows the recommendation of Parliaments Committee of Inquiry into emissions measurements to present a technology-neutral[2] Euro 7 proposal. The initiative is based on an external evaluation of Euro 6/VI, conducted 'back-to-back', i.e. in parallel with the IA (Annex 5). The reason for this approach is not entirely clear, given that the review of Euro 6/VI started already in 2018 with a first stakeholder conference, providing enough time to undertake an ex-post evaluation *before* starting the IA, to fully respect the 'evaluate first' principle. At the 2018 conference, the Advisory Group on Vehicle Emissions Standards (AGVES)[3] was set up to support the preparation of this initiative 'by joining all relevant expert groups working on emission legislation', as the IA puts it (Annex 1, p. 9).

Problem definition

The IA identifies clearly the following **three problems**, caused by three sets of three drivers each (IA, pp. 6-21). **First, the Euro 6/VI legislation is deemed too complex**, because current emission standards vary between vehicle types and are not technology-neutral, with different phasing-in application dates for pollutant limits and multiple, complex emission tests that lead to burdensome administrative and regulatory costs for vehicle manufacturers, technical services and type-approval authorities (IA, pp. 12-14). **Second, some vehicle pollutant limits are obsolete**: according to the IA, emissions could be further reduced if more pollutants were limited, including harmful by-products of existing emission control technologies from the tailpipe and, in particular, brake and tyre wear emissions, and if the latest emission reduction technologies were taken into account (IA, pp. 15, 18-19).[4] **Third,** the IA finds that **real-world vehicle emissions are insufficiently monitored,** as current emission requirements only monitor the vehicle's first 5 years, although the average lifetime of vehicles in the EU is around 10 years. Moreover, the IA explains that current on-road type-approval tests (Real Driving Emissions (RDE) and Portable Emission Measurement Systems (PEMS))

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do not sufficiently reflect real-world driving conditions (e.g. low ambient temperatures), and that the capacity of current On-Board Diagnostics systems is limited (IA, pp. 19-21).[5] Besides falling short of achieving the EU's air pollution reduction targets, the IA highlights four 'sub-consequences' of the problems: (i) negative effects of air pollution on human health and the environment; (ii) hampering of the free movement of goods and persons in the internal market by uncoordinated national or local level action to meet air pollution targets (such as zero-and low emission zones); (iii) loss of consumer trust in Euro emission standards; and (iv) a threat to the EU's automotive industry's competitiveness on key export markets, such as the US and China, noting that these competitors are already developing more stringent emission standards, expected to create higher regulatory costs for EU manufactures' exports (IA, pp. 17-21).

The problem definition is overall well elaborated and substantiated with **evidence** from the Euro 6/VI evaluation, stakeholder feedback and numerous extensive external studies. To illustrate the scale of the problem the IA cites, for instance, a 2020 study by the European Public Health Alliance estimating that inhabitants of European cities suffered a welfare loss equivalent to 3.9% of cities' earned income, due to the direct and indirect impacts of poor air quality (IA, p. 6). According to the IA, air quality is the single largest environmental health risk in Europe, to which road transport is a major contributor, causing about 70000 premature deaths in 2018 (EU-28), 40% of harmful NOx emissions and more than 70% of ultrafine particles in EU cities (IA, pp. 1,6). While the IA expects reductions of road transport emissions as a result of the increasing replacement of older vehicles by Euro 6/VI vehicles and of other interlinked legislation for better air quality[6], it emphasises that this air pollution reduction is counterbalanced by an ever-growing vehicle fleet (49% of which is still projected to have a combustion engine by 2040) and by an overall increase of HDV transport despite reduced traffic during the Covid-19 crisis (IA, pp. 7-8, Annex 7). For lorries (in particular 'long-haul transport of goods'), emissions are not expected to decrease because of their slower transition to zero-emission powertrains (IA, pp. 12, 2*)*. Overall, the problem definition could have been more explicit and precise when referring to the different emission types, vehicle categories, real-driving testing methods and emission reduction targets under each problem. Further, it is not clear from the IA whether all problems and/or drivers are equally relevant (aside the particular relevance of the lorries/bus segment noted above), nor how each of them affect specifically different stakeholder groups. Although the particular scale of the problems in urban areas is repeatedly highlighted, the territorial aspect of the problems is not further elaborated (IA, pp.1-2, 4, 10).

Subsidiarity / proportionality

The initiative maintains the legal base of the Euro 6/VI (Article 114 of the Treaty on the functioning of the EU, IA, p. 22). In line with the evaluation, the IA and the accompanying Subsidiarity Grid stress the transboundary nature of the problem and the added value of continued harmonised EU action for the functioning of the single market and the achievement of a high level of environmental and health protection (IA, pp. 12, 22). The IA addresses proportionality consistently throughout the assessment of the policy options and in a separate, comparative analysis of all options against the proportionality principle (see below; IA, pp. 66-70). The subsidiarity deadline for national parliaments was 6 March 2023. The Italian Chamber of Deputies issued a reasoned opinion, while the Czech Parliament sent a resolution to the Commission, in the framework of a political dialogue and important exchange of information.

Objectives of the initiative

The **two general objectives** of the initiative are **to ensure the proper functioning of the single market (**by setting more adequate, cost-effective and future-proof rules for vehicle emissions) and **to ensure a high level of environmental and health protection** in the EU by further reducing air pollutant emissions from road vehicles, 'as rapidly as possible'(IA, p. 22). **These objectives are broken down into three specific objectives**, deriving directly from the three defined problems, thereby demonstrating a clear intervention logic (see problem tree, IA, p. 13):

1. Reduce the complexity of the current Euro emission standards
2. Provide up-to-date limits for all relevant air pollutants
3. Improve control of real-world emissions

Additionally, the IA lists three **operational objectives**[7] in relation to the preferred option, as requested by the Better Regulation Guidelines (BRG); these appear, however, to be identical with the specific objectives, instead of providing clear deliverables. Thus, the objectives do not fulfil all S.M.A.R.T criteria of the BRG, according to which they should be specific, measurable, achievable, relevant and time-bound. This could make the future evaluation of their achievements challenging. The IA identifies five Sustainable Development Goals (SDGs), SDG 3 (Good health and well-being), SDG 6 (Clean water and sanitation), SDG 13 (Climate action), SDG 14 (Life below water) and SDG 15 (Life on land) and indicates how the preferred option would help achieving them (IA, p. 39).

Range of options considered

The IA describes a well-developed, dynamic **baseline scenario,** built on the evaluation of the current legislation. It takes into account a higher share of Euro 6/VI vehicles (as a result of the implementation of the Euro 6/VI standards), reduced road transport and fuel consumption during the COVID-19 pandemic and the increased promotion of public transportation (IA, pp. 23-27; Annex 4, pp. 71-76; Annex 7). While it expects a reduction of 87% of NO_x emissions between 2015 and 2050 and a steady decrease in tailpipe emissions, tyre and brake emissions are expected to remain high for all vehicle types, including plugin hybrid and battery electric vehicles (not covered by Euro 6/VI, IA, p. 27). The IA highlights in particular the slow transition of long-haul lorries to zero-emission powertrains(IA, pp. 25-26). The baseline assumes the phasing-out of ICE LDVs until 2035 (which was agreed in the interinstitutional negotiations, but is currently discussed again in Council).

To address the problems, the IA presents **four options**, based on different combinations of separate modules, which tackle the three problems with varying degrees of ambition. This is in line with the BRG's minimum requirement of two options in addition to the baseline (even though there are some overlaps, e.g. the identical simplification measures under all options, and option 3a is a combination of option 2a with new digital elements, rather than a separate alternative). The important technical details of the options are provided in Annex 6, but could have been presented in a less scattered manner to allow non-experts to fully grasp the different components and combinations in relation to different vehicle categories, testing and durability requirements and emission types. Notably, the IA states, without further discussion, that an application of the options would be possible by 1 January 2025 'for all new registrations', since 'the policy options are built on existing emission control and sensor technology' (IA, p. 28). This was not maintained in the proposal, which contains separate application dates for LDVs and HDVs (2025 and 2027, respectively, see last section below).

The IA considers **voluntary** measures, but justifies **discarding** them based on recent experience that suggests the industry would not introduce any additional measures voluntarily, regardless of their availability (IA, pp. 1, 32). The IA reports that 22 other 'technology driven' policy options were discarded at an early stage (16 policy variations for LDVs and 6 for HDVs), because only the measures as seen under the four retained options were compatible and technically feasible without 'restricting driving habits' within the 'expected timeline of Euro 7' (which the IA sets, as noted above, without further discussion at 1 January 2025 IA, pp. 28, 31). In addition, an option 3b (high green and high digital ambition) was discarded, because it relied on future sensor technologies not available on the market before 2035. The IA considered alternative module combinations, for instance high ambition real-driving conditions for options 2a and 3a, but found, all else being equal, they would not be more effective and efficient than the four retained policy options, while requiring 'high investment costs...which would not be recuperated until 2035' (IA, p. 32).

The broad lines of the options retained for further analysis are the following (IA, pp. 27-31; Annex 6):

Table 1 – Simplified overview of options assessed in the IA

Specific objectives	Option 1 (*low* green ambition)	Option 2a (*medium* green ambition)	Option 2b (*high* green ambition)	**Option 3a (*medium* green (option 2a + digital ambition)** ***preferred option***
(1) Reduce the complexity of Euro emission standards	**Simplifies** by, inter alia, merging Euro emission standards for all vehicle categories in one regulation (while keeping separate obligations for emission testing for LDVs and HDVs), introducing a single application date and aligning Euro 7 with UN regulations, e.g. on battery durability.	Same simplification measures as option 1.	Same simplification measures as option 1.	Same simplification measures as option 1.
(2) Provide up-to-date emission limits for all relevant air pollutants	Maintains **Euro 6/VI emission limit standards (60mg/km NOx for cars etc.**)*, but makes them technology-neutral (all ICE technologies)	Increases technology-neutral restrictions on emissions (**30 mg/km NOx etc.**)* and **adds new pollutants** namely formaldehyde, nitrous oxide and particles from brakes[8]	The same pollutant restrictions as options 2a/3a, but with **more stringent limits (20 mg/km NOx etc.)***	As in option 2a (**30 mg/km NOx etc.)***
(3) Improve the control of real-world emissions	Introduces **low-ambitious real-driving testing boundaries** (e.g. trip length, temperatures); Vehicle durability requirements as in Euro 6/VI (up to 160.000 km or 8 years).	**Medium-ambitious real-driving testing boundaries** (e.g. adding short trips) and an **increase in** vehicle **durability** (up to 200.000 km or 10 years for LDVs, 875.000 km for HDVs).	**High-ambitious real driving testing boundaries** (e.g. adding high speed and altitude) and increased vehicle durability (up to 240.000km or 15 years for LDVs, 1.050. 000 km for HDVs).	**Medium-ambitious real-driving testing boundaries** as in option 2a, with an additional new requirement for **continuous emission monitoring (with available sensors)** for all vehicles.

Source: Author, based on the IA. *Proposed emission limits for different vehicle types are in Annex 6.

Assessment of impacts

The IA assesses and benchmarks the options against the baseline scenario in terms of their economic, social and environmental impacts, as requested by the BRG. For each option, a thorough qualitative assessment is supported by model-based quantitative estimates for emission reduction and overall efficiency (net benefits). The impacts are assessed separately for LDVs and HDVs, assuming, as noted, the application date of 1 January 2025 under all options and for all vehicle types.

Economic impacts are assessed in terms of regulatory costs for the EU automotive industry (costs for equipment, implementation and administrative costs), effects on its competitiveness in international trade, on the single market and on SMEs (IA, pp. 34-38, 41-45, 49-52). The analysis of **environmental impacts** is supported by estimations of emission savings for the tailpipe, brake and tyre pollutants (IA, pp. 38, 45-46, 52 and Annex 4, pp. 45-52). Expected **social impacts**, namely public health and environmental benefits, include, among others, a reduction of medical treatment costs, of productivity losses due to illness or death and a reduction of buildings' damage and biodiversity loss. The IA also considers effects on **employment and skills** (a (limited) creation of new jobs[9]), on the **affordability of new vehicles** for consumers (depending on the passing on of regulatory costs by the manufacturers**)** and on **consumer trust** (IA, pp. 39-41, 47-49, 53-55 and Annex 4). Annex 3 presents the **direct and indirect benefits** and **the one-off and recurrent annual costs** (cumulative totals for LDVs and HDVs) under all options (not only for the preferred option, as is normally the case). It outlines how manufacturers (including component suppliers), national type-approval authorities and citizens/consumers would be affected by each option. The IA discusses the **digital transformation and innovation** in the framework of the zero-pollution ambition, as well as the aim to develop a future-proof regulation in the context of option 3a, IA, pp. 1-2, 18, 27, 29-31, 49-55). Fundamental rights implications are not mentioned, nor is the new 'do no harm' principle. As noted above under the problem definition, a closer look at impacts in urban areas could have been useful to pinpoint territorial differences of impacts, e.g. in urban and rural areas.

The IA compares the **effectiveness, efficiency, coherence** and **proportionality of the options**, identifying **option 3a as preferred option** (IA pp. 55-73). However, the choice could have been better explained, since the other options are also expected to entail positive effects on emission reduction (with gradually increasing negative effects in terms of regulatory costs and affordability of vehicles for SMEs and citizens). While the IA seems to doubt a direct correlation between regulatory costs and price increases, it concedes that cumulative impacts with the new CO2 standards would lead to higher vehicle prices (it considers them proportionate to achieve the zero-pollution targets of the European Green Deal, IA, pp. 40, 49, 54-55, for both LDVs and HDVs, Annex 4, pp. 66-67, 79). According to the IA, options 2a and 2b imply the same or slightly bigger environmental/health benefits, but option 3a's overall effectiveness, proportionality and additional continuous emission monitoring would benefit the HDV segment even after the proposed end-date of ICE LDVs in 2035 (IA, p. 71). Overall, the IA anticipates **total health and environmental benefits** for citizens by reduced air pollution of €189.3 billion under the preferred option (€55.8 billion for LDVs and €133.6 billion for HDVs, 2025-2050) and finds it most coherent with the Green Deal objectives (IA, pp. 70-73, Annex 3).

SMEs / Competitiveness

The IA identifies **35 SMEs** potentially affected by the options in the LDV segment ('some' SME vehicle manufacturers and (mostly) suppliers of equipment), none for the HDV segment (IA, pp. 37, 45, 52). It considers the indirect 'medium negative' impact on vehicle affordability most relevant for SMEs (the expected price increase of LDVs and small lorries used for transport or logistics services, vehicle rental etc., assuming that costs would be passed on by manufacturers, IA pp. 37, 45, 52). The IA used a refined method to estimate price changes for vehicles of different sizes, concluding that the smaller the vehicle, the bigger the projected price increase (Annex 4, pp. 53-54, 67). At the same time, it points out that SMEs are often supported by research facilities of large manufacturers, which could limit their costs in this respect. According to the IA, between 2025 and 2050, the two largest

EU manufacturing groups (Volkswagen and Stellantis) would need to invest between €5.1-5.7 billion each under the preferred option, whereas for all other manufacturers, total investment would be €0.6-2.8 billion, depending on their size (IA, pp, 50-51). The IA finds these investment costs 'small' compared to those expected from proposed CO2 targets, estimated at around €19 billion between 2021 and 2040 (Annex 4, p. 81), or compared to costs for electrification, connectivity and automation, estimated at around €59 billion for each manufacturer (the timeframe is not specified). Finally, the IA identified the threat to the EU's automotive industry's **competitiveness** in global markets as one consequence of the problems (see above p. 2). It anticipates positive impacts on the industry's **competitiveness** and on the access to key markets by the updated emission limits and the **innovation incentives** under option 3a (IA pp. 36-37, 43-44, 51-52; see Annex 4, pp. 80-82).

Simplification and other regulatory implications

The need to simplify the current Euro standards is reflected in one of the IA's three specific objectives.[10] All options contain simplifying measures, and the IA's cost-benefit analysis has a focus on regulatory costs and savings (even though the 'One in, one out' approach is not mentioned in the IA, probably owing to the fact that work on the IA started years before the formal introduction of this approach in 2022). The coherence with numerous other related EU initiatives to reduce emissions is well explained (and cumulative impacts with proposed CO_2 emission reductions are taken into account, see above).

Monitoring and evaluation

To address the lack of monitoring indicators identified in the evaluation, the IA presents **five specific indicators** for the preferred option 3a, in relation to three operational objectives (which do not, however, define clearer deliverables than the specific objectives IA, pp. 73-74). Moreover, the IA defines **five general indicators** to evaluate the effectiveness and efficiency of the preferred option's implementation later on. No precise evaluation date is indicated, as it would be carried out with the mid-term evaluation of the 'fit-for-55' initiatives. Whereas the evaluation indicators rely on existing data sources (annual reports from Member States and the Commission), the IA does not specify how data for the monitoring indicators (e.g. 'proof of improved control of emissions', 'costs during implementation phase') would be collected or by whom. The provisions and indicators are incorporated in the proposal**.**

Stakeholder consultation

The IA consistently refers to stakeholder views, from the problem definition to the policy options to the assessment of impacts and the selection of the preferred option (IA, pp. 9, 13-17, 31-55, 41-49, 72). Already in October 2018, the Commission organised a stakeholder conference and set-up the Advisory Group on Vehicle Emission Standards (AGVES) (IA p. 33, Annex 2, pp. 9-12). An open public consultation ran for 18 weeks, between 6 July and 9 November 2020 (six weeks longer than the minimum mandatory period set by the BRG). It received a total of 233 contributions from citizens, Member States and national authorities, the automotive industry and civil society groups. In addition, targeted consultations included two 14-week consultations (for the evaluation of Euro 6/VI and for the development of Euro 7), with questionnaires and follow-up interviews (Annex 2). The IA reports that a majority of stakeholders supported the proportionate limitation of emissions of the preferred option (manufacturers raised strong concerns about higher emission limits and the ambitious implementation timeframe), while views on the introduction of the 'completely new' continuous emission monitoring seemed more mixed (rejected by manufacturers, but deemed 'socially acceptable', based on citizens' feedback (IA, pp. 33, 59, 71-73; Annex 2 pp. 18-19).

Supporting data and analytical methods used

The IA is based on a broad range of extensive internal and external expertise, particularly the evaluation study of Euro 6/VI and the Euro 7 impact assessment support study. It draws on data from multiple sources, such as the World Health Organisation, the European Environment Agency, OECD,

the Joint Research Centre (JRC), Eurostat and several stakeholder consultations. The qualitative assessment of impacts is supported by estimations based on well-established modelling (SIBYL and COPERT); according to information available on the Commission modelling inventory and knowledge management system(MIDAS), these models are owned by one partner of the consortium that conducted the above studies. The IA admits a lack of data and some uncertainties with respect to cost estimations and is also transparent as regards the methodologies and main assumptions underlying each stage of the analysis (Annexes 1, 4 and 8, for instance on the use of the Bloomberg New Energy Finance study and the Commission's Handbook on the external costs of transport). The IA repeatedly highlights that cost-benefit estimates were validated by stakeholders and experts, both independent and from the JRC. Moreover, the robustness of (efficiency) quantifications was tested by using alternative assumptions on emission levels and vehicle durability (see Annex 8) and by varying the levels of statistical confidence when calculating each regulatory cost category and health/environmental benefits (Annex 4, pp. 68-71). All in all, ample methodological information is provided in the annexes to ensure transparency, but the presentation of the highly technical issues at hand, namely the details entailing different impacts under the options, could have been made clearer for non-expert policy makers. In the same vein, the varying reference timeframes for (cumulative) comparative cost categories (e.g. 2021-2030, 2021-2040, 2025-2035, 2025-2050) do not facilitate a clear overview (even though the cost/benefit summary in Annex 3 does refer consistently to the 2025 - 2050 timeframe).

Follow-up to the opinion of the Commission Regulatory Scrutiny Board

The Regulatory Scrutiny Board (RSB) issued a first negative opinion on the draft IA on 7 July 2021, followed by a second opinion ('positive with reservations') on 6 December 2021. The IA explains in Annex 1 how the RSB's comments (from both opinions) were addressed in the final IA (Annex 1, pp. 4-9). The RSB's recommendations appear to have been partially addressed, including, inter alia, the need to reflect the difference in scale of the problems between LDVs and HDVs and to provide more information on stakeholder views and on discarded options. As indicated in this briefing, other issues, for instance the technical details of the problems and the options, the relevance of issues for different vehicle types and the selection of the preferred option could have been presented in a more coherent and accessible manner.

Coherence between the Commission's legislative proposal and IA

The proposal is in line with the findings of the IA, while partially readjusting the preferred option 3a. This is justified by the changed geopolitical and economic circumstances since 2021 (when the bulk of the IA work was conducted, as can be deduced from the date of the two RSB opinions), namely the rise in costs for energy and raw materials, which 'accelerated dramatically' and affects both the automotive industry and consumers, and which comes on top of the efforts to implement the EU's ongoing green transformation (Explanatory memorandum, pp. 11-12). For LDVs, the proposal combines tailpipe emission limits of option 1 with the provisions of option 3a for brake and tyre emissions and battery durability limits (to 'avoid disproportionate investments for vehicles that will no longer be sold after 2035'). For HDVs, the preferred option 3a is fully retained. According to the proposal, the mixed requirements are expected to bring 'significant reduction of emissions' whilst 'significantly reducing product development costs for industry'. The latter seems confirmed by the IA's estimations of investment needs under option 1 (IA, p. 35, Annex 3). The proposal features two dates of application (1 July 2025 for LDVs and 1 July 2027 for HDVs), whereas the IA mentions, as noted above, only 1 January 2025, without discussing alternative dates (IA, p. 28).

The Commission mobilised considerable time and resources to prepare this initiative, in an extensive 'back to back' (ex post evaluation and ex ante impact assessment) process that started in 2018 with the set-up of the Advisory Group on Vehicle Emission Standards. The IA draws on numerous external studies, stakeholder consultations, relevant data sources and approved modelling tools (SYBIL and COPERT). In spite of some weaknesses in the definition of the problems and objectives, the intervention logic of the IA is clear. The options are built on modules, whose

highly technical details could have been presented in a more coherent and clear manner to increase accessibility for non-expert policy makers. In the same vein, the complex comparison of the options' impacts could have better illustrated all factors that have to be counted in (vehicle types and sizes, testing conditions, durability requirements etc.), to make the selection of the preferred option more convincing. This seems important given that for all options gradual positive effects on emission reduction are expected, and given that the proposal diverts partially (for cars and vans) from the preferred option of the IA: For LDVs, it combines tailpipe emission limits of option 1 with the other provisions of option 3a, to take into account the increased challenges the EU automotive industry faces in the geopolitical and economic context since 2021/2022 and in the midst of the EU's ongoing green transformation.

ENDNOTES

1 Euro 6/VI air pollutant emission limits cover nitrogen oxide (NOx), particulate matter (PM), particle number (PN), total hydrocarbons (THC) and non-methane hydrocarbons (NMHC) and, for heavy-duty vehicles methane (CH_4) and ammonia (NH_3) (IA p. 3).

2 Regardless of technology (e.g. spark-ignition (petrol), compression-ignition (diesel) or electric (IA, p. 17).

3 It brings together over 200 experts from the auto industry, NGOs, academia and Member States.

4 New pollutants covered by this initiative include formaldehyde (HCHO), nitrous oxide (N_2O), NH_3 for cars and vans and particles from brakes and tyres (on the latter see also endnote 8).

5 Real Driving Emissions (RDE) are on-road, normal driving condition tests introduced 2015 after the 'Dieselgate' scandal. On-Board Diagnostics monitor the functioning of powertrain systems and emission control technologies, in order to identify possible areas of malfunction during the life of the vehicle (IA, p.19).

6 The IA refers, inter alia, to the proposed amendment of the CO_2 emission performance standards with the planned phasing-out of internal combustion-engine (ICE) cars and vans, the Clean Vehicles and Fuel Quality Directives, the proposed revision of the Air Quality Directive and the Directives on periodic roadworthiness tests for motor vehicles and their trailers.

7 Operational objectives are: 1) Simplify the Euro emission standards; 2) Provide appropriate air pollutant limits for road transport and 3) Enhance emission control over vehicles' lifetime (IA, p. 73).

8 The IA explains that tyre emissions were not assessed because technologically, they cannot yet be tested or limited; the IA suggest introducing a review clause in the regulation in this respect (Annex 6, p. 9; featured in the proposal).

9 The IA anticipates an increase of around 9000 jobs in 2030 in the LDV segment under option 3a (new business opportunities and quality jobs created in the field of sensor technology, IA, p. 54).

10 Based on the evaluation, the IA deplores for instance that 'Euro 6/VI implementing Regulations span a total of more than 1.300 pages to define properly laboratory testing and on-road testing procedures for granting type-approval, Conformity of Production and In-Service Conformity' (IA, p. 14).

This briefing, prepared for the ENVI committee, analyses whether the principal criteria laid down in the Commission's own Better Regulation Guidelines, as well as additional factors identified by the Parliament in its Impact Assessment Handbook, appear to be met by the IA. It does not attempt to deal with the substance of the proposal.

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