

NEWSLETTER

International Regulatory Developments

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EUROPE

Commission President outlines Recovery Plan for Europe

On 13 May 2020, European Commission President Ms Ursula von der Leyen spoke to the European Parliament and outlined the Commission's recovery plan for Europe.

Ms von der Leyen explained that recovery funds would be spent across three pillars. The first will focus on supporting Member States to recover from the crisis and incorporates a recovery and resilience tool. The focus of the second pillar is on kick-starting the economy and helping private investment. A new Strategic Investment Facility will help investments in key value chains crucial for the future resilience and strategic autonomy of Europe. The final pillar is about learning lessons from the crisis.

She concluded by saying that "We must boldly use this opportunity to build a modern, clean and healthy economy".

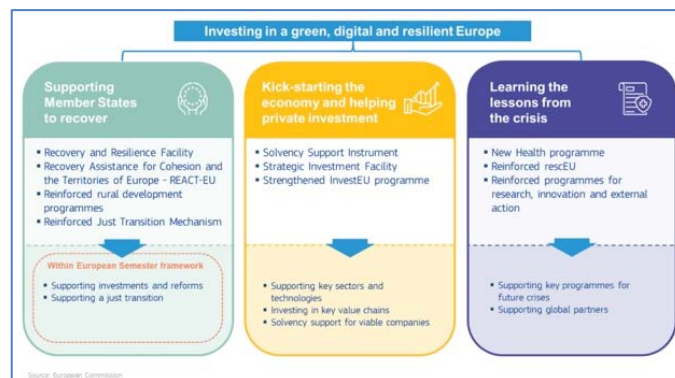
The EC press release and President's speech is at ec.europa.eu/commission/presscorner/detail/en/ac_20_889.

European Commission Green Recovery Announcement

On 27 May 2020, the European Union put forward its proposal for a plan to recover from the impacts of the coronavirus pandemic. To ensure the recovery is sustainable, even, inclusive and fair for all Member States, the European Commission is proposing to create a new recovery instrument, Next Generation EU, embedded within a revised long-term EU budget.

The money for Next Generation EU will be invested across three pillars. It will support Member States with investments and reforms, incentivise private investments in order to kick-start the economy, and will address 'the lessons of the crisis', including health and civil protection, along with research in health, resilience and the green and digital transitions.

A key policy fundamental of the recovery plan is to use the European Green Deal as the EU's recovery strategy. A major focus area is renewable energy projects, one part of which is to kick-start a clean hydrogen economy in Europe. The Commission has also identified cleaner transport and logistics are an area for investment, including installation of one million charging points for electric vehicles and a boost for clean mobility in European cities and regions.



As part of its communication package, the Commission issued an adjusted work programme. With regard to policy objectives within the European Green Deal, some of these, including the European Climate Pact, are delayed by one quarter, but the timeline for others, for example the strategy for sustainable and smart mobility, is maintained as the original plan.

The communication on Next Generation EU can be found at ec.europa.eu/commission/presscorner/detail/en/ip_20_940?utm_campaign=5c5c456318ec3c00010056dc&utm with the amended work programme at ec.europa.eu/info/publications/2020-commission-work-programme-key-documents_en.

At the press conference following release of the plan, Commission Executive Vice-President Mr Frans Timmermans included renewable energy and storage, clean hydrogen, batteries, carbon capture and storage and sustainable infrastructure as key technologies for the clean energy transition. Mr Timmermans said that committing to clean and more sustainable mobility will be key.

The link to Mr Timmermans' remarks is at ec.europa.eu/commission/presscorner/detail/en/SPEECH_20_964.

New Director-General for JRC

From 1 May 2020, Mr Stephen Quest assumed the role of Director-General of the European Commission's Joint Research Centre (JRC). He was previously Director-General of the Directorate-General for Taxation and Customs Union.

In an interview published on the EU Science Hub, Mr Quest said he sees the JRC having a key role to play in providing the knowledge, understanding and scientific underpinning to guide and support the EC's policy response to the challenge of climate change and the 'need for a green transformation'.

The interview can be found at ec.europa.eu/jrc/en/news/interview-new-jrc-director-general-stephen-quest.

Commission Confirmation of Support for European Battery Industry

On 19 May 2020, European Commission Vice-President for Inter-institutional Relations and Foresight, Maroš Šefčovič, confirmed actions that will be taken by the Commission following a meeting with the European Battery Alliance. Mr Šefčovič stated that the Commission will “continue to mobilise” industrial participants, Member States and the European Investment Bank in order to make progress in this area.

He outlined key activities including investment in major projects, the establishment of a fit-for-future regulatory framework to promote the competitive edge of the European industry, and building raw materials resilience to reinforce Europe’s strategic autonomy.

Full details of the statement are at ec.europa.eu/commission/presscorner/detail/en/STATEMENT_20_914.

Comments from Commissioner Simson at ITRE Meeting

On 19 May 2020, European Commissioner for Energy, Ms Kadri Simson, met with the European Parliament’s Industry, Research and Energy (ITRE) Committee to discuss how EU energy policy can drive a green recovery.

Ms Simson spoke about integration of the energy system; more digitalised, more decentralised, more focus on re-using waste and more reliant on renewable energy. She wants to see a system that allows for greater direct electrification of end-use sectors, saying that “As more cost-effective renewable electricity becomes available, we must move forward with electrification of transport”. She also wants to see more renewable and decarbonised fuels, including hydrogen, where electrification is not feasible.

Ms Simson went on to present the Commission’s strategic outlook for building a hydrogen economy in Europe. The strategy will look at how to facilitate the innovative use of hydrogen in a range of sectors, how to allow hydrogen production to reach a scale where it is competitive and how to accelerate research and development to reinforce European leadership.

Ms Simson’s full statement can be found at ec.europa.eu/commissioners/2019-2024/simson/opening-remarks-commissioner-kadri-simson-session-itre-committee_en.

ENVI Committee Draft Report on European Climate Law Proposals

On 12 May 2020, the Environment (ENVI) Committee of the European Parliament published a Draft Report on the Commission’s proposal for a European Climate Law to establish the framework for achieving climate neutrality.

The document published by the Rapporteur, Jytte Guteland (S&D, SE), states that not only should the EU and Member States uphold their commitments under the Paris Agreement to reach net zero emissions by 2050, but that they should also implement and monitor intermediate climate reduction targets for 2030 and 2040.

The 2030 target should be set at 65% below 1990 levels in order to try and limit the global temperature increase to 1.5°C above pre-industrial levels. In addition to this, the report says that the Commission should also consider proposing a 2040 target of 80 to 85% below 1990 levels.

On a procedural point, the Rapporteur says that the Parliament and Council, in addition to the Commission, should be involved in a co-decision process to pass the European Climate Law.

The Draft Report can be found at www.europarl.europa.eu/doceo/document/ENVI-PR-648563_EN.pdf.

TRAN Committee Draft Opinion on European Climate Law

On 25 May 2020, the Transport and Tourism (TRAN) Committee of the European Parliament published a Draft Opinion on the European Climate Law. The rapporteur for the opinion is Tilly Metz MEP (Greens, LU).

Proposed amendments include achieving climate neutrality by 2040 instead of 2050, which means pursuing a goal of 65% greenhouse gas emissions reduction from 1990 levels by 2030. In order to achieve these targets, the opinion states that combustion engines should be phased out by 2030 at the latest.

The document can be found at www.europarl.europa.eu/doceo/document/TRAN-PA-650613_EN.pdf.

ENVI Committee Vote on RDE Conformity Factors Further Delayed

The Environment, Public Health and Food Safety (ENVI) Committee of the European Parliament is provisionally expected to vote on the Real Driving Emissions conformity factors proposal during a meeting to be held on 25 June 2020. The ENVI MEPs had scheduled the vote (already postponed from initially intended vote date of 18 March) for a meeting held on 27 or 28 May 2020.

You can find the draft report here: www.europarl.europa.eu/doceo/document/ENVI-PR-644883_EN.html?redirect, and the amendments here: www.europarl.europa.eu/doceo/document/ENVI-AM-646951_EN.html?redirect.

AECC and other Stakeholder Comments on Euro 7 Roadmap

On 6 May 2020, AECC responded to the European Commission's consultation on the Euro 7 roadmap.

AECC welcomed the initiative to prepare the next step in the emission standards for cars, vans, lorries and buses, but said that there remain areas where improved emission standards are required.

AECC commented that limiting the evaluation baseline proposed in the roadmap to 2019 will not consider important regulatory elements contained in Euro 6d and Euro VI-E and that this omission will prevent a full factual view on further pollutant emissions reductions expected from these steps.

AECC supports the approach of tackling three key issues: simplification; evaluation as to whether the current emissions limits represent the state-of-the-art emissions reduction technology; and further focus on actual real-world emissions. The policy options described in the roadmap could be introduced as different phases in a Euro 7 framework and not only considered as alternatives.

In total, there were 68 contributions received, including from energy and automotive industry business associations and organisations.

Some relevant contributions from the automotive industry came from the European Automobile Manufacturers' Association (ACEA) and the European Association of Automotive Suppliers (CLEPA), highlighting the need for future Regulation to be based on scientific evidence, including modelling of the effectiveness of existing and prospective regulations.

From the energy industry, FuelsEurope emphasised that the Commission should look carefully at the impacts on air quality while also assessing the social and economic impacts. FuelsEurope pointed out the benefits of renewable liquid fuels and called for an assessment of non-regulated air pollutants. This is in order to prioritise the pollutants that have an impact on health and to determine where solutions to improve the air quality are technically and economically viable.

The AECC response is available to read at www.aecc.eu/wp-content/uploads/2020/05/200414-AECC-position-on-Euro-7-roadmap-final.pdf and the public consultation contributions can be accessed at: ec.europa.eu/info/law/have-your-say/initiatives/12313-Development-of-Euro-7-emission-standards-for-cars-vans-lorries-and-buses.

AECC and other Comments on Deployment of Alternative Fuel Infrastructure Roadmap

On 4 May 2020, AECC responded to the public consultation on the deployment of the Alternative Fuel Infrastructure roadmap.

AECC supported the European Commission policy priority of accelerating the deployment of alternative fuel infrastructure to contribute to the EU's overall objective of significantly reducing CO₂ emissions from road and non-road transport and reducing the dependency on fossil fuel.

The revision of the Alternative Fuel Infrastructure Directive (AFID) should also be a unique instrument to reduce GHG emissions of the existing vehicle fleet through increased blending of renewable fuels in the existing European fuelling infrastructure. In this sense the AFID needs a direct link as an enabler to the Renewable Energy Directive objectives.

AECC pointed out that hybrid, petrol and diesel fuelled vehicles will continue to provide practical mobility solutions for the European Union in the foreseeable future. Required refuelling and recharging infrastructure to support the market penetration of new propulsion technologies must also be guaranteed in every part of the European Union, ensuring that appropriate choices are available to everyone, from big European cities to the countryside.

A shift from fossil fuel to more sustainable fuels for transport will enable internal combustion engine applications to continue contributing with a positive environmental impact. On the other hand, a big opportunity to decarbonise all of the existing fleet is opened through a robust charging and fuelling infrastructure and the broader deployment of alternative and sustainable low carbon fuels.

In total, there were 86 contributions received. Amongst these were energy, transport and automotive industry business associations and organisations.

Relevant comments from some stakeholders refer to turning the Directive into a Regulation, and for the AFID to be coherent with the RED II binding targets on renewable energy. Several stakeholders highlighted the need to introduce binding targets for member states for publicly accessible infrastructure as well as dense network of high-speed charging infrastructure along key road transport corridors, paying special attention to interoperability and to heavy duty fleet requirements.

Another important feedback was for the AFID to be brought in line with the National Energy and Climate Plans.

AECC's response can be found at www.aecc.eu/wp-content/uploads/2020/05/200504-AECC-position-on-AFID-roadmap.pdf.

and the public consultation contributions can be accessed at: ec.europa.eu/info/law/have-your-say/initiatives/2111-Evaluation-of-the-Alternative-Fuels-Infrastructure-Directive.

French Government Support for Auto Industry

On 26 May 2020, President Macron of France announced a package of support for the French automobile industry. Mr Macron said that the measures are to make the sector greener and more competitive.

A total support package of €8 billion will be made available in return for car manufacturers agreeing to relocate value-added production in France and to consolidate and maintain all of their industrial production on French sites.

In order to boost demand and renew the French car fleet, a bonus of €7 000 will be made available for electric cars, with €2 000 for plug-in hybrids. In addition, a 'conversion premium' of up to €5 000 will be in place to encourage up to 200 000 buyers from lower income households to buy some of the stocks of cars unable to be sold during the crisis.

At the same time, the deployment of electric charge points will be accelerated, with a target of 100 000 terminals by 2021. President Macron wants France to be the top nation producing clean vehicles, with more than a million electric, plug-in hybrid and hybrid vehicles per year within five years.

The full statement by President Macron is at www.elysee.fr/emmanuel-macron/2020/05/26/plus-verte-et-plus-competitive-notre-plan-de-soutien-a-la-filiere-automobile with a report in English at www.bbc.co.uk/news/business-52814074.

Legal Action on Air Quality against German Government

On 26 May 2020, ClientEarth announced that it is launching a legal challenge against the German government for 'its continued failures to clean up the country's toxic air'.

The environmental law firm acknowledges the role of agriculture as well as transport. ClientEarth has previously been successful in actions against other Member States and authorities.

ClientEarth's announcement can be found at www.clientearth.org/were-tackling-unseen-air-pollution-in-germany.

Trade Unions and Automotive Sector Call for Ambitious Recovery Plan

On 26 May 2020, a group of automotive sector trade associations and trade unions issued a call to the European Commission to provide support to the industry. The statement from IndustriAll Europe, Ceemet, ACEA, CLEPA, CECRA and ETRMA says that the industry can make a real contribution to the Green Deal and mitigating the climate emergency. Due to COVID-19 however, strong support from the national governments and the Commission is needed in order to help the sector to make the necessary investments in transitioning to decarbonisation while supporting European jobs.

Amongst other things, the industry group says it urgently needs temporary demand stimulus measures by vehicle renewal schemes that are coordinated on EU level and financially supported by the Commission. These measures should be eligible for latest technologies and in addition be differentiated according to safety and environmental performance based on certified CO₂ emissions.

It therefore requests that the EC accelerates the roll-out of charging and re-fuelling infrastructure for cars, vans and commercial vehicles in public, as well as private, places, and deliver at least 2 million charging points and refuelling stations across the EU for all vehicle types. In addition, it wants introduction and reinforcement of market incentives to promote the uptake of alternative powertrains, as well as increased investment in research and development as well in the production of batteries, hydrogen, and low carbon liquid fuels within the European Union.

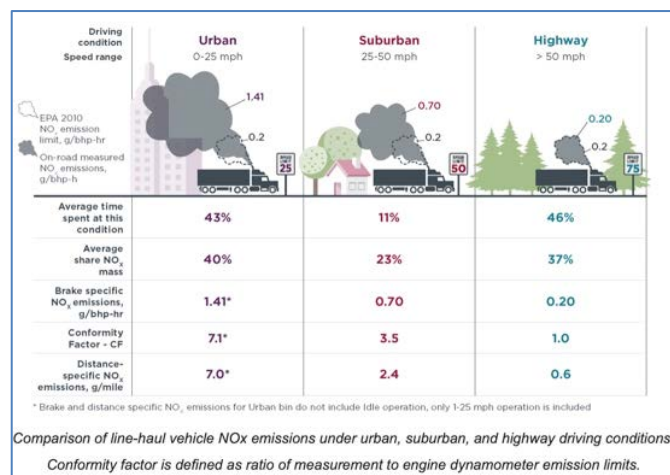
The press release is available at www.acea.be/press-releases/article/trade-unions-and-auto-sector-call-for-an-ambitious-recovery-plan.

NORTH AMERICA

ICCT Policy Note on Urban HDV NOx Emissions in USA

On 21 May 2020, the International Council on Clean Transportation (ICCT) published a policy note on NO_x emissions from heavy-duty vehicles (HDV) in urban areas of the USA. The note highlighted legislative actions that have been or are being taken by the US EPA and California Air Resources Board to control emissions from HDV.

ICCT points out that proposals at federal and state level are looking to limit NO_x emissions in low-load, low-speed operation. As the Not To Exceed (NTE) protocol employed by both U.S. and California regulations for in-use compliance testing excludes nearly all data collected outside of highway-type driving conditions, ICCT says that this disincentivises effective NO_x control in other conditions.



The NGO argues that the better NOx performance of European HDV (see AECC News of 8 May 2020) could be a result of the Moving Average Window test used in the European Union’s regulation. It says that addressing the ‘flawed’ NTE test is a key to real-world improvements in urban air quality in the United States.

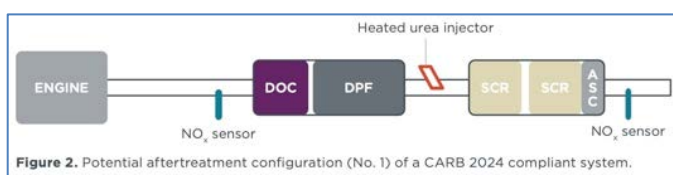
Estimated Cost of Emission Control Technologies for CARB NOx Standards

On 29 May 2020, the International Council on Clean Transportation (ICCT) published analysis of estimated costs of diesel emission control technology to meet future California low NOx standards in 2024 and 2027.

The ICCT points out that California Air Resources Board (CARB) regulators have announced their intention to improve the state’s heavy-duty vehicle (HDV) engine emission standards, phasing in introduction of lower NOx emissions, with long-term targets set 90% below current limits. A low-load cycle (LLC) is proposed to supplement the traditional federal test protocol (FTP) and ensure NOx emissions compliance under urban low-speed operating conditions. Changes to durability requirements are also proposed to better reflect HDV operating life in the United States and ensure long term real-world emissions control.

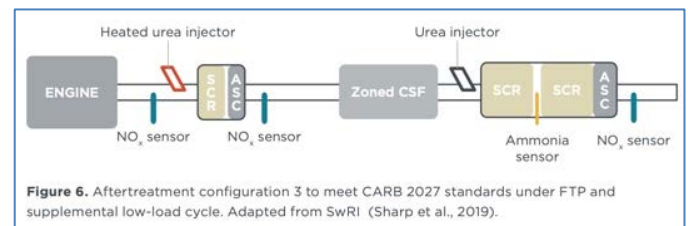
ICCT’s view is that the emissions targets and the other regulatory requirements can be met with improvements to current emission control systems and adoption of new hardware components. According to their calculations, the costs of meeting EPA 2010 standards in 2019 have declined significantly compared with previous cost estimates. Costs of aftertreatment needed to meet the EPA 2010 standard have dropped by about 25%. Total direct and indirect manufacturing costs in 2019 are estimated in this analysis to be \$2 800 (€2 522) for a class 6-7 HDV with a 7.0 litre engine and \$4 400 (€3 964) for a class 8 HDV with a 13.0 litre engine.

ICCT says that meeting the expected CARB 2024 targets would require very modest increases in technology complexity and costs. Changes are expected to occur in the urea dosing system of current system architectures, meaning that the incremental cost of achieving a 75% reduction in NOx emissions under the FTP and meeting new LLC standards is estimated to range between \$100 (€90) and \$1 000 (€900) for a class 6-7 vehicle and between \$100 (€90) and \$1 100 (€991) for a 13.0 L class 8 HDV.



Meeting the likely CARB 2027 targets would require significant changes in current technology and costs. The technology changes are assumed to be improvements in

thermal management and increased NOx reduction efficiency and durability. Emission control system changes would include the addition of a close-coupled SCR and changes to the urea dosing system. Higher useful life would be addressed with changes to catalyst volume and wash coat formulations, and sensor replacement. Corresponding costs are estimated to be increased by \$1 800 - \$2 600 (€1 622 to €2 342) and \$2 200 - \$3 200 (€1 982 to €2 883) for the class 6-7 and class 8 HDVs respectively.



The ICCT white paper is available at theicct.org/sites/default/files/publications/HDV-emissions-compliance-cost-may2020.pdf.

The National Renewable Energy Laboratory (NREL) also released a report in May analysing the potential engine and emission control technology costs of diesel as well as natural gas and gasoline engines to meet possible CARB standards.

Three diesel technology packages were intended to bracket potential cost ranges across two engine displacement levels of 6–7 and 12–13 litres. In addition, incremental cost bracketing included model year (MY) 2023 versus 2027 introduction, U.S. versus California-only implementation, and current full useful life (FUL) versus extended FUL and warranty. NREL surveyed original equipment manufacturers (OEMs), Tier 1 suppliers, and trade organisations.

The average incremental cost for the 6–7 L diesel engines for MY 2023 introduction with current FUL ranged from \$3 685 to \$5 344 (€3 318 – 4 812), but the absolute low and high bounds were between \$2 000 (€1 801) and more than \$9 000 (€8 104). Extending FUL and warranty moved the average incremental costs to a range of \$15 370 to \$16 245 (€13 841 – 14 629), with tighter low and high bounds (constrained in part by the limited number of responses).

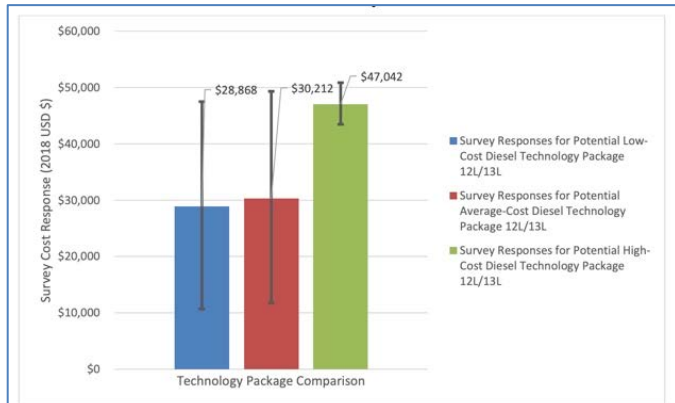


Figure 6. Summary of 12–13-L potential technology packages for MY 2027 with extended FUL and warranty

The average incremental cost for the 12–13 L diesel engines for MY 2023 with current FUL ranged between \$5 340 and \$6 063 (€4 809 – €5 460), but the absolute low and high bounds were from \$3 000 (€2 701) to greater than \$10 000 (€9 005). Extending FUL and warranty moved the average incremental costs to a range of \$28 868 to \$47 042 (€25 996 – €42 361), with much wider low and high bounds (driven in part by the limited number of responses).

Aggregated, representative average life-cycle costs for the Mid-Cost scenario were estimated to be \$12 700 (€11 531) for the 6 L diesel engine and \$13 200 (€11 887) for the 12 L diesel engine. The total life-cycle costs to California vehicle owners for the MY 2027 vehicles were estimated to range between \$92 (€83) million and \$1.2 (€1.08) billion, depending on the scenario (Low-Cost or High-Cost).

The sensitivity analysis indicated that the manufacturing volume may be the most important parameter impacting the life-cycle cost, however, limited data were received from the external stakeholders surveyed. The next most important parameter was the assumption of extended FUL and extended warranty, as the increase in aftertreatment lifetime may not exceed the vehicle’s travel requirement, which results in larger replacement costs over the vehicle’s life.

The NREL report can be found at www.nrel.gov/docs/fy20osti/76571.pdf.

ASIA PACIFIC

Analysis of Passenger Car Fuel Consumption in India

On 20 May 2020, the International Council on Clean Transportation (ICCT) published a report analysing the fuel consumption of new passenger cars in India in the 2018-19 fiscal year.

The paper evaluates the performance of new vehicles sold in 2018–19 against the current and future standards, and also considers the impact of flexibility mechanisms on manufacturers’ compliance. The analysis is based on

information from a combination of independent and manufacturer data. Additionally, the authors compare the results with the summary compliance report published by the Ministry of Road Transport and Highways (MoRTH).

ICCT says that manufacturers have already made significant progress toward compliance with India’s 2022–23 standards, which are much less stringent than the European Union’s 2021 standards. Assuming that the fleet average curb weight remains the same as 2018–19, the new passenger car fleet will need to reduce CO₂ emissions/fuel consumption by only 9.8% in the next four years, or about 2.55% annually.

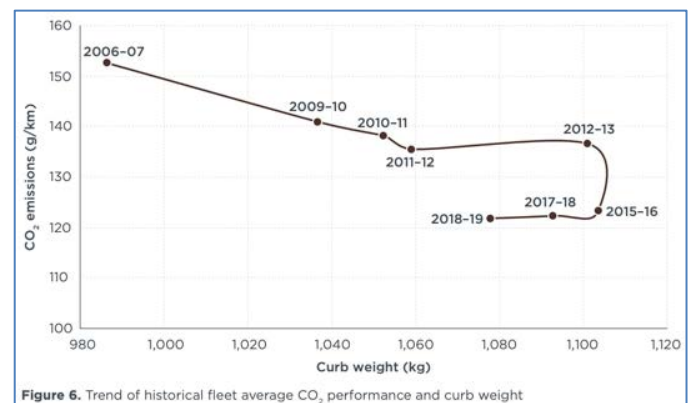


Figure 6. Trend of historical fleet average CO₂, performance and curb weight

Given this, ICCT proposes that MoRTH should start to develop significantly more stringent post-2022–23 standards. Moreover, although the impact of super credits for CO₂-reducing technologies is currently minimal, as it grows, MoRTH should publish detailed compliance information to make their impact more transparent. ICCT says this would allow for discussion about whether technologies that reach wide commercialisation could be removed from the list of those qualifying for the credits.

The report, including detailed analysis by manufacturer, is available at theicct.org/sites/default/files/publications/India-PV-fuel_consumption-052020.pdf.

GENERAL

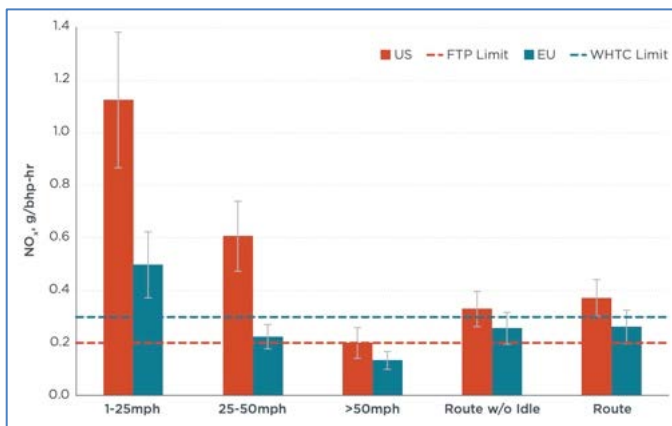
ICCT in-use NOx Emissions Compliance Evaluation for HDVs in Europe and USA

On 4 May 2020, the International Council on Clean Transportation (ICCT) published a report evaluating NOx emissions and compliance of modern heavy-duty vehicles in Europe and the USA.

The report presents a comparison of real-world NOx emissions from heavy-duty vehicles (HDVs) certified under U.S. and European emission programmes and provides an analysis of the regulatory tools employed by each programme to determine in-use compliance. In total it reports data on 11 HDVs designed to meet the EPA 2010 NOx standard and 5 HDVs designed to meet Euro VI.

The vehicles have similar characteristics. The 16 vehicles are categorised N3 in Europe (Class 8 in U.S.), and engine displacements for the EU and U.S. trucks were, on average, 12.4 L and 12.8 L, respectively. The average engine rated power for European trucks was 449 hp, and 439 hp for U.S. trucks. Even though ICCT reports on the engine model year, the report does not specify what Euro VI step the vehicles were homologated for.

All of the vehicle data was used to make the emissions comparison, however only five vehicles (two from EU and three from U.S.) were analysed following the current regulatory in-use evaluation protocols as defined by the U.S. Not-to-Exceed (NTE) and the European moving average window (MAW) protocols.



The U.S. HDVs emitted on average 1.4 times more NO_x per unit of work than the European vehicles. In urban driving conditions, work-specific NO_x emissions of U.S. HDVs almost quadrupled compared to total route emissions. NO_x emissions from the European HDVs were more consistent across the full range of speeds. In urban driving, work-specific NO_x emissions from EU trucks were twice the total route emission values.

The full report and fact sheet can be downloaded at theicct.org/publications/inuse-nox-hdvs-us-eu.

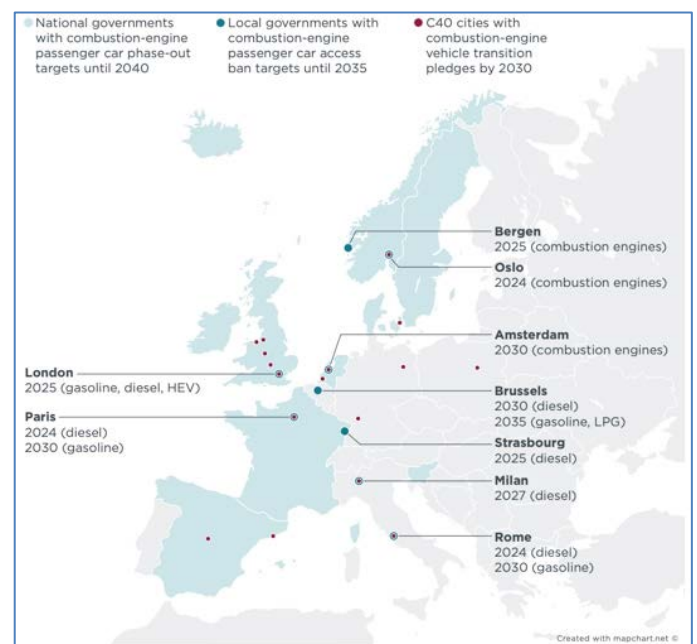
ICCT Overview of Combustion Engine Phase-out Announcements in Europe

On 10 May 2020, the International Council on Clean Transportation (ICCT) published a briefing on announcements in Europe regarding the possible phase-out of vehicles with combustion engines.

The briefing note identifies countries that have made announcements on plans for introducing phase-outs, providing detail of proposals relating to timing, which vehicles will be covered, and what implementation measures will be taken. ICCT stresses that no European nations have yet implemented enforceable legislation making the targets binding.

ICCT also identifies cities around Europe that have made phase-out announcements, setting targets and measures to prohibit combustion-engine vehicles from driving in cities. It says that in contrast to national governments, local targets usually include all vehicle types and both new and second-hand vehicles on the road. In general, many European cities have implemented measures to prohibit combustion-engine vehicles from entering or driving in certain city areas, partly in response to European Union air quality standards, with the objective of improving local air quality and protecting human health. Typical regulatory measures include urban vehicle access regulations such as car-free city centres, congestion charging, or low emission zones (LEZs).

The report points out that as of October 2019, 35 cities of the global C40 network had pledged to ensure that “a major area of our city is zero emissions by 2030” as formulated in the C40 Fossil-Fuel-Free Streets Declaration. Among the 35 cities are 17 in Europe. Measures to meet the 2030 goal include a reduction in the number of polluting vehicles on streets and a transition away from vehicles powered by fossil fuels.



The ICCT also reviews phase-out targets of car manufacturers, saying that a growing number of them have made announcements to electrify their vehicle product portfolio until the end of 2030.

Car manufacturer	Year	Announcement
Volkswagen Group (Volkswagen, Skoda, Audi, Seat, Porsche, others)	2020-2024	• €33 billion investment in electric mobility from 2020 to 2024
	2023	• 1 million electric cars to be produced by the end of 2023
	2025	• 1.5 million electric cars to be produced in 2025
	2026	• Last product launch based on a combustion-engine vehicle platform
Ford	2022	• More than 50% of passenger vehicle sales in Europe to be electrified (BEVs, PHEVs, MHEVs, HEVs)
	2024	• 17 electrified vehicles to be launched in Europe including BEVs, PHEVs, MHEVs, HEVs
	2021	• 14 new electric vehicle models by 2021 (7 fully electric models, 7 PHEVs)
	2025	• More than 50% of group sales in the European market to be electric vehicles
PSA Group (Peugeot, Opel/Vauxhall, Citroën, DS Automobiles)	2025	• 100% of models marketed by the group worldwide in an electric version
	2022	• Range of 8 BEVs and 12 electrified models (PHEVs, HEVs)
	2022	• 20% of group sales to be fully electric and 50% electrified
Renault Group (Renault, Dacia, Lada, Alpine)	2021	• 25% of all vehicles sold in Europe to be electrified
	2025	• One-third of sales in the European market to be electrified
	2030	• 50% of sales in the European market to be electrified
BMW Group (BMW, Mini)	2025	• More than 40% of Mercedes-Benz vehicles delivered to customers in an electric version in the European market
	2030	• More than 50% of Mercedes-Benz global car sales to be electric (BEVs, PHEVs)
Daimler (Mercedes, Smart)	2025	• More than 40% of Mercedes-Benz vehicles delivered to customers in an electric version in the European market
	2025	• 15% to 25% of total unit sales to be fully electric
	2030	• More than 50% of Mercedes-Benz global car sales to be electric (BEVs, PHEVs)
Fiat Chrysler Automobile (FCA) Group (Fiat, Jeep, Lancia/Chrysler, Alfa Romeo, others)	2022	• €700 million for construction of production line for Fiat 500 BEV
	2022	• €9 billion group investment in electrification of vehicle portfolio until 2022
	2022	• Launch of new BEVs, PHEVs, and HEVs across all group brands
Toyota Group (Toyota, Lexus)	2025	• 10% of new vehicles sold in Europe to be BEVs/FCEVs, 10% PHEVs, 70% HEVs
	2025	• 40 new or updated electrified models, including at least one PHEV a year
Hyundai Motor Group (Hyundai, Kia, Genesis)	2025	• Sale of 670,000 electric vehicles annually by 2025 (560,000 BEVs and 110,000 FCEVs)
	2025	• 23 BEV models
	2030	• Most models in key markets including Europe to be electrified (BEVs, FCEVs, PHEVs, HEVs)
Volvo	2020	• 1 BEV model to be launched every year through 2025
	2025	• 50% of global sales to be fully electric cars

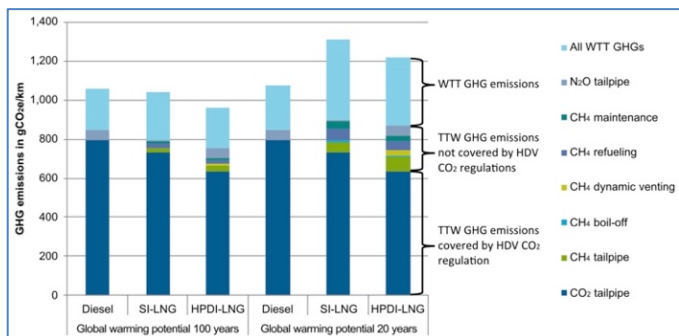
It concludes by saying that the growing number of announcements by local and national governments to phase out combustion-engine vehicles over the next 20 years is an important signal to car manufacturers to align their vehicle production around electric power. ICCT also states that these announcements are important signals to the European Union to put in place a comprehensive phase-out strategy at EU level via the coming revision of the EU car CO₂ standards.

The ICCT briefing is available to read at theicct.org/sites/default/files/publications/Combustion-engine-phase-outs-EU-May2020.pdf.

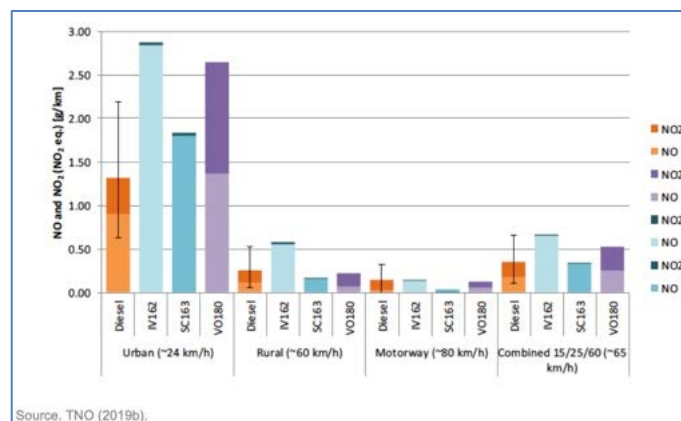
ICCT Report on LNG Truck Climate and Pollutant Emissions

On 12 May 2020, the International Council on Clean Transportation (ICCT) published a report on the climate and pollutant emissions from trucks running on liquefied natural gas (LNG).

The study found that on a well-to-wheel basis, most trucks running on LNG emit about the same amount of greenhouse gases (GHG) as diesel trucks, despite the lower carbon content of natural gas. This is mainly attributed to the methane emissions that occur during the extraction, transportation and use of LNG.



As far as air pollutant emissions are concerned, the report says that the 'prevailing notion that natural gas engines are cleaner than diesel' is no longer valid. Advances in diesel emission control systems, new combustion concepts for natural gas engines such as HPDI, and a better understanding of ultrafine particulate emissions of unfiltered spark ignition engines 'challenge the established narrative that natural gas engines produce fewer pollutant emissions than diesel'. The study found no clear advantage of diesel or LNG technology in terms of air quality impact.



Regarding fuel supply, the report says that Europe's gas supply cannot be transformed into a fully renewable resource in the coming decades. Biogas will only deliver GHG benefits if it is produced from low carbon feedstocks, such as wastes and sustainable residues, but ICCT says there is not enough of this to meet demand. Power-to-gas, although it does not have feedstock limitations, faces economic constraints.

ICCT concludes that to better capture the climate impact of LNG trucks in the European CO₂ regulations, it would be necessary to account for direct methane and nitrogen oxide (NO_x) emissions at the vehicle level in the certification methodology. It therefore proposes that 'stringent limits for methane and NO_x as part of pollutant emission standards could improve the GHG performance of LNG and diesel trucks.' Other policy proposals from ICCT are that road tolls should take into account all GHG emissions of trucks to avoid inadequate incentives for LNG vehicles, and that policy instruments aimed at subsidising LNG trucks (e.g., purchase, road-toll exemption, energy taxes) are inefficient and can even be counter-productive.

The ICCT report can be found at theicct.org/sites/default/files/publications/LNG-in-trucks_May2020.pdf.

ICCT Report on European Passenger Car CO₂ Values under WLTP

On 19 May 2020, the International Council on Clean Transportation (ICCT) published analysis of European passenger car CO₂ values measured on the Worldwide harmonised Light Vehicles Test Procedure (WLTP) and compared with the New European Driving Cycle (NEDC).

ICCT's report says that WLTP type-approved vehicles from 2018 have a 'significantly more realistic indication' of actual emissions, emitting on average 14% more CO₂ under real driving conditions than when tested. This compares with a gap of approximately 40% on the NEDC test.

Based on its findings, ICCT says that monitoring should continue, as the 2018 fleet that it analysed is not necessarily representative of future years. It also proposes that correction mechanisms are implemented in case intentional inflation of the WLTP-NEDC CO₂ ratio by manufacturers is observed.

ICCT goes on to say that the timeline for the European Commission to assess fuel consumption meters and to consider adjustments to manufacturers' average CO₂ emissions should be expedited as this would contribute to the success of the European Green Deal.

The ICCT report can be found at theicct.org/sites/default/files/publications/On-the-way-to-real-world-WLTP_May2020.pdf.

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FORTHCOMING CONFERENCES

Automotive 48V Power Supply Systems

9-10 June 2020, Online

www.automotive-iq.com/events-innovations-in-48v-technology-online/

POSTPONED Sustainable Internal Combustion Engine Symposium

16-18 June 2020, Stuttgart, Germany

www.sustainable-ic-engine.com/en

The Sustainable Internal Combustion Engine Symposium discusses and debates the future of gasoline, diesel and alternative-fuel IC engines. This conference is about how the traditional automotive powertrain has a long future ahead of it when it is developed and advanced beyond its current brief and design constraints.

ONLINE Cambridge Particle Meeting

19 June 2020, Cambridge, England

www.cambridgeparticlemeeting.org

CANCELLED 24th ETH-Conference on Combustion Generated Nanoparticles

22-25 June 2020, Zürich, Switzerland

www.nanoparticles.ch

The ETH Conference on Combustion-Generated Nanoparticles serves as an interdisciplinary platform for expert discussions on all aspects of nanoparticles, freshly emitted from various sources, aged in ambient air, technical mitigation aspects, impact of particles on health, environment and climate and particle legislation. The conference brings together representatives from research, industry and legislation.

CANCELLED 14th International AVL Symposium on Propulsion Diagnostics

23-24 June 2020, Baden-Baden, Germany

www.avl.com/web/de/-/14th-international-avl-symposium-on-propulsion-diagnostics

ONLINE 8th International Conference of the Fuel Science Center

23-25 June 2020, Aachen, Germany

www.fuelcenter.rwth-aachen.de/cms/Fuelcenter/Austausch/Internationale-Konferenz/~dcsks/8-Internationale-Konferenz/lidx/1/

POSTPONED 4th Real Driving Emissions Forum

30 June-1 July 2020, Prague, Czech Republic

bisgrp.com/event/real-driving-emissions-conference-berlin-2/

ONLINE CO₂ Reduction for Transport Systems Conference

7-8 July, Turin, Italy

conferences.ata.it

6th International Conference Diesel Powertrains 3.0

8-9 July 2020, Turin, Italy (changes expected due to COVID-19)

www.fev.com/en/coming-up/fev-conferences/fev-conference-diesel-powertrains-30/introduction.html

Despite the ongoing public discussion, the modern Diesel engine represents a highly attractive powertrain. The latest developments demonstrate, that Diesel-powered vehicles are among the cleanest vehicles available in the marketplace, while maintaining their superior fuel economy compared to other propulsion systems. Its high efficiency positions the Diesel engine as an attractive element for future powertrain line-ups, even under more tightened regulatory boundary conditions and simultaneously altering market conditions. The conference is for the first time integrating heavy-duty On-/Off-Highway themes into the programme.

48th European Transport Conference

9-11 September 2020, Milan, Italy

aetransport.org/

International Transport and Air Pollution Conference

15-16 September 2020, Graz, Austria

www.tapconference.org

The main topics of the 24th TAP Conference include energy consumption and GHG emissions from vehicles, open issues for pollutant emissions, such as tampering, retrofits of software and hardware and non-regulated pollutants, emissions from non-road mobile machinery and other transport modes and measurements and simulation of traffic related environmental impacts and air quality.

11th VERT Forum

17 September 2020, Dübendorf, Switzerland (postponed from March)

www.vert-certification.eu

Future of Biofuels

22-23 September 2020, Copenhagen, Denmark (postponed from June)

fortesmedia.com/future-of-biofuels-2020,4,en,2,1,5.html

SAE Powertrains, Fuels and Lubricants

22-24 September 2020, Krakow, Poland

www.sae.org/pfi

FVV 2020 Autumn Conference

24-25 September 2020, Würzburg, Germany

www.fvv-net.de/en/events

Decarbonisation of Heavy Transport and the Role of Hydrogen

1 October 2020, Brussels, Belgium

www.politico.eu/event/decarbonize-heavy-transport/

29th Aachen Colloquium

5-7 October 2020, Aachen, Germany

www.aachener-kolloquium.de/en

IRU World Congress

19-21 October 2020, Berlin, Germany

www.iruworldcongress.com

Ricardo Motorcycle Conference 7.0

2 November 2020, Milan, Italy

i.emlfiles4.com/cmpdoc/9/8/9/9/1/1/files/65919_mcc-7.0_callforpapers_v3.pdf?dm_i=2KL1,1LHJG,372FEM,5EVQY,1

SIA Powertrain & Energy

3-4 November 2020, Rouen, France (postponed from June/September)

www.sia.fr/evenements/193-sia-powertrain-energy-rouen-2020

4th International FEV Conference: Zero CO₂ Mobility

10-11 November 2020, Aachen, Germany

www.fev.com/en/coming-up/fev-conferences/fev-conference-zero-co2-mobility/introduction.html

2020 Annual POLIS Conference

2-3 December 2020

www.polisnetwork.eu/2020-annual-polis-conference

The Polis Annual Conference provides an opportunity for cities and regions to showcase their transport achievement to large audience of mobility experts, practitioners and decision makers.

Call for speakers opens in March 2020

9th AVL Large Engines Techdays

21-22 April 2021, Graz, Austria

www.avl.com/large-engines-techdays

8th International MinNOx Conference

16-17 June 2021, Berlin, Germany (postponed from September 2020)

www.iav.com/en/events/minnox

SAE Heavy-Duty Diesel Emissions Control Symposium

5-6 October 2021, Gothenburg, Sweden (postponed from October 2020)

www.sae.org/attend/heavy-duty-diesel-emissions-control-symposium