

# NEWSLETTER

International Regulatory Developments

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## EUROPE

### Summary of Feedback to Euro 7/VII Roadmap Consultation

On 3 June 2020, the public consultation on the EU Commission Euro 7/VII roadmap for cars, vans, lorries and buses closed. In total, there were 68 contributions, including input from AECC (see AECC Newsletter May 2020). Below is a summary of some of the key responses, from the automotive and energy industries, NGOs, public authorities and others.

Industry associations in general said the European Commission should first assess the need for a new EU regulation against what the existing EU measures will deliver for improved air quality, in order to determine whether a new EU regulation is actually needed. They questioned why the final Euro 6d standard will not be taken into account, as the EC limits the baseline to 2019.

Public authorities supported the objectives of the Commission to improve urban air quality and protect citizens' health. Several stakeholders stated that further reduction of existing pollutants and limits for currently unregulated pollutants are required.

Although harmonisation of testing regimes and measurement metrics for light- and heavy-duty vehicles was supported as a concept, there was scepticism as to how practical it would be due to the different usage profiles. Simplification is another concept that is supported but treated with caution and should be applied only where there are clear benefits.

Public authorities in particular are keen to see vehicles complying with real-world driving limits for their whole life. Improved periodic exhaust emissions testing would help achieve this.

Automotive industry associations stressed the importance of taking into account the implications of the COVID-19 crisis when deciding the extent of air quality improvements that are needed.

The contributions to the Euro 7 roadmap consultation are at <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12313-Development-of-Euro-7-emission-standards-for-cars-vans-lorries-and-buses>.

### Extension of NRMM Transition Period due to COVID-19

On 2 June 2020, the European Commission adopted a proposal for a Regulation amending Regulation (EU) 2016/1628 as regards its transitional provisions in order to address the impact of COVID-19 crisis.

According to the transition periods provided in Article 58(5) and the dates laid down in Annex III to Regulation (EU) 2016/1628, manufacturers have until 30 June 2020 to produce NRMM fitted with transition engines of certain categories being NRE in the power range  $<56\text{kW}$  and  $\geq 130\text{kW}$ , NRG, NRSh, NRS, IWP and IWA in the power range  $19 \leq P < 300\text{kW}$ , SMB and ATS. They then have until 31 December 2020 to place these machines on the Union market.

The Commission accepts that the COVID-19 outbreak has caused complete interruptions in the supply of parts and components, leaving manufacturers with stocks of engines and unfinished products. The consequence of this disruption is that many engine and machinery manufacturers will not be able to meet the deadlines set out above without sustaining serious economic damage. In the light of this unforeseen disruption, the dates for producing and placing of the market of NRMM and tractors fitted with transition engines are postponed by twelve months. Postponement does not apply to transition engines covered by the dates specified in the second, third and fourth subparagraphs of Article 58(5).

The EC has justified the extension on the basis that this prolongation will have no environmental impact as the concerned transition engines have already been produced. This is coupled with the fact that it is difficult to predict the exact duration of the delays caused by the COVID-19 disruption. The extension of the relevant deadlines should be of 12 months.

The EU Commission proposal can be found at [www.europarl.europa.eu/docs\\_autres\\_institutions/commission\\_europeenne/com/2020/0233/COM\\_COM\(2020\)0233\\_EN.pdf](http://www.europarl.europa.eu/docs_autres_institutions/commission_europeenne/com/2020/0233/COM_COM(2020)0233_EN.pdf).

### Priorities for German Presidency of European Council

On 23 June 2020, Germany announced the priorities for its 6-months Presidency of the European Council starting from 1 July.

The German Government has stated that its core task – other than learning lessons from COVID-19 – will be to 'make mobility in Europe more modern, more innovative and more sustainable'. The approach will comprise three pillars: climate change mitigation, mobility and digital transformation. Germany welcomes the EC's proposal to 'increase the EU's greenhouse gas emission reductions target for 2030 to 50 to 55% compared with 1990 levels' and will 'work towards concluding... the draft of a new European Climate Law'.

The German government's statement says that for mobility to be shifted to climate- and environment-friendly technologies, a Europe-wide development of the refuelling and charging infrastructure is needed. Germany's intention is for the EU to lay the groundwork for the revision of the Alternative Fuels Infrastructure Directive. It also wants to reach a 'balanced compromise' on the Eurovignette Directive to support a changeover to climate-friendly vehicles.

The statement from the German government is at [www.bmvi.de/EN/The-Ministry/Germany-EU-Council-Presidency/germany-eu-council-presidency.html](http://www.bmvi.de/EN/The-Ministry/Germany-EU-Council-Presidency/germany-eu-council-presidency.html).

Germany launched a dedicated web site on its Presidency of the Council of the European Union under a 'together for Europe's recovery' theme at [www.eu2020.de/eu2020-en](http://www.eu2020.de/eu2020-en).

## Final Report on CO<sub>2</sub> Emissions from Cars and Vans in 2018

On 3 June 2020, the European Environment Agency (EEA) published its annual report on CO<sub>2</sub> emissions from passenger cars and vans in Europe.

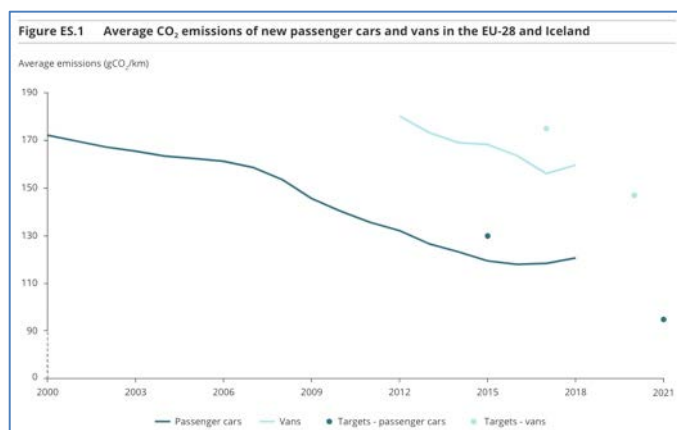
For the second consecutive year, the average CO<sub>2</sub> emissions from new passenger cars increased in 2018 and reached 120.8g CO<sub>2</sub>/km. After a steady decline from 2010 to 2016 by almost 22g CO<sub>2</sub>/km, average emissions increased in 2017 by 0.4g/km. The upward trend continued with an additional increase of 2.3g/km in 2018.

Petrol cars constituted the vast majority of new registrations (around 60%), while diesel cars accounted for more than 36%, a drop of 9 percentage points from 2017.

The average fuel efficiency of both diesel and petrol cars has worsened in the last year: diesel cars emitted on average 121.8g CO<sub>2</sub>/km (117.9g/km in 2017), while the average petrol car emitted 123.5g CO<sub>2</sub>/km (121.6g/km in 2017).

In Europe, one out of three cars newly registered in 2018 were SUVs. The majority of new SUVs sold were powered by petrol (53%), with average emissions of 133g CO<sub>2</sub>/km, which is around 14g/km higher than the average emissions of other new petrol cars. Forty-five percent of SUVs were diesel vehicles with average emissions of 129g CO<sub>2</sub>/km, around 13g/km higher than the average emissions of other new diesel cars.

The proportion of plug-in hybrid and battery electric cars doubled from 1.0% in 2016 to 2.0 % in 2018. The CO<sub>2</sub> emissions savings related to the deployment of plug-in electric vehicles reached 2.0g CO<sub>2</sub>/km in 2018.



For the first time in 2018, average CO<sub>2</sub> emissions from new light commercial vehicles registered in the EU were higher than in the previous year: 157.9g CO<sub>2</sub>/km in 2018 against 156.1g CO<sub>2</sub>/km in 2017. Between 2012-2017 average CO<sub>2</sub> emissions had decreased by 24g/km. The EU average emissions are, however, still 10% below the EU target of 175g/km and only 7% above the 2020 target. Many factors affected the increase in CO<sub>2</sub> emissions from new vans in 2018, including an increase in the mass, engine capacity and size of the vehicles.

The EEA report can be read in full at [www.eea.europa.eu/publications/co2-emissions-from-cars-and-vans-2018](http://www.eea.europa.eu/publications/co2-emissions-from-cars-and-vans-2018).

## Provisional Average CO<sub>2</sub> Emissions from New EU Cars and Vans in 2019

On 26 June 2020, the European Environment Agency (EEA) published provisional data on 2019 CO<sub>2</sub> emissions from new passenger cars and vans registered in the European Union, Iceland, Norway and the United Kingdom. Final data will be published in late 2020 or early 2021.

According to these provisional data, the upward trend of the previous two years continued in 2019 with an additional increase of 1.6g CO<sub>2</sub>/km, reaching 122.4 grams of CO<sub>2</sub> per kilometre. This remains below the target of 130g CO<sub>2</sub>/km that applied until 2019 but well above the EU target of 95g CO<sub>2</sub>/km that phases-in this year.

EEA states that two reasons for the increase in car emissions are the growing share of the sport utility vehicle (SUV) segment – now 38% - and the slow market penetration of electric cars.

The report says that the difference of 0.6g CO<sub>2</sub>/km between diesel and petrol cars is the lowest observed since the beginning of monitoring. The average mass of diesel cars is however more than 20% greater than that of petrol cars (1 613kg vs. 1 305kg). The average mass of electric cars is heavier than both at 1 744kg.

Vans registered in 2019 emitted on average 158.4g CO<sub>2</sub>/km, which is 0.5g/km more than in 2018. This remains well below the target of 175g CO<sub>2</sub>/km that applied until 2019 but is still 11g CO<sub>2</sub>/km higher than the EU target of 147g CO<sub>2</sub>/km that applies from this year on. Several factors affected this emission increase, including an increase in the average mass and only a limited increase of the share of plug-in electric vans from 0.8 % in 2018 to 1.3% in 2019.

The press release and EEA data dashboard are at [www.eea.europa.eu/highlights/average-co2-emissions-from-new-cars-vans-2019?campaign=Generic](http://www.eea.europa.eu/highlights/average-co2-emissions-from-new-cars-vans-2019?campaign=Generic).

## EEA Report on Compliance with Emission Reduction Commitments

On 30 June 2020, the European Environment Agency (EEA) published its 2020 briefing on Member States' status against the National Emission reduction Commitments Directive.

This confirms that the EU as a whole met the 2010 emission ceilings of the four main air pollutants; nitrogen oxides (NO<sub>x</sub>), non-methane volatile organic compounds (NMVOCs), sulphur dioxide (SO<sub>2</sub>) and ammonia (NH<sub>3</sub>). Since 2016, all Member States have been in compliance with their national emission ceilings for NO<sub>x</sub> and SO<sub>2</sub>.

The EEA briefing also assesses the reduction against 2018 emission levels required for Member States to meet their individual reduction commitments set under the EU's National Emissions reduction Commitments (NEC) Directive for 2020 and 2030.

The majority of Member States must make additional efforts to reduce emission levels to meet their 2020 reduction commitments and in particular, ammonia emissions which remain a problem. The slowdown in economic activity across Europe in 2020 associated with the COVID-19 lockdowns is expected to lower emissions of several pollutants and may result in more countries meeting their 2020 commitments. However, without additional efforts, EEA says that such COVID-19 related reductions might be reversed as the economy starts to recover.

All EU Member States will need to reduce their NOx emissions on 2018 levels to achieve the 2030 reduction commitments. Moreover, half of the Member States will need to reduce fine particulate matter (PM<sub>2.5</sub>) emissions by more than 30% to meet future commitments.

The briefing is available to read at [www.eea.europa.eu/highlights/eu-met-air-pollution-limits?campaign=Generic](http://www.eea.europa.eu/highlights/eu-met-air-pollution-limits?campaign=Generic).

## Parliament Adoption of Regulation on Sustainable Investment

On 18 June 2020, the European Parliament adopted legislation on sustainable investments. It lays down six environmental objectives and allows economic activity to be labelled as environmentally sustainable if it contributes to at least one of the objectives without significantly harming any of the others.

The objectives are: climate change mitigation and adaptation; sustainable use and protection of water and marine resources; transition to a circular economy, including waste prevention and increasing the uptake of secondary raw materials; pollution prevention and control; and protection and restoration of biodiversity and ecosystems.

Establishing clear European “green” criteria for investors is seen as key to raising more public and private funding so that the EU can become carbon neutral by 2050 as set out in the European Green Deal, as well as to prevent ‘greenwashing’.

Activities that are incompatible with climate neutrality but considered necessary in the transition to a climate-neutral economy are labelled transition or enabling activities. They must have greenhouse gas emissions levels corresponding to the best performance in the sector.

Solid fossil fuels, such as coal or lignite, are excluded, but gas and nuclear energy could potentially be labelled as an enabling or transitional activity in full respect of the “do no significant harm” principle.

This law will enter into force after publication in the Official Journal.

The press release is at [www.europarl.europa.eu/news/en/press-room/green-finance-parliament-adopts-criteria-for-sustainable-investments](http://www.europarl.europa.eu/news/en/press-room/green-finance-parliament-adopts-criteria-for-sustainable-investments).

## Leaked EC Communication on Hydrogen Strategic Outlook

On 18 June 2020, a document of the upcoming EU Hydrogen Strategy was leaked by *Euractiv*.

The leaked document provides a strategic outlook on hydrogen and how the Commission intends to build a hydrogen economy. The purpose of the draft Communication is to set out an integrated strategy for building a hydrogen economy in Europe, based on a whole value chain approach. It notes that a Clean Hydrogen Alliance will be launched simultaneously with the strategy.

The document describes the Commission’s plan to boost hydrogen demand and scale up the production of clean hydrogen. It states that there will be applications in industry and transport, mainly where the end uses have no (or only expensive) alternatives to decarbonise. In particular, the leaked document states that hydrogen is the most promising low emission fuel for transport with heavy polluting emissions such as heavy-duty vehicles, buses, coaches and special purpose vehicles.

On the key actions, the document states that the Clean Hydrogen Alliance will have six separate technology based sectorial CEO round tables representing the pillars of the hydrogen value chain (production, transmission, mobility, industry, energy, heating). It considers that the alliance will help scale up and roll out the production and use of hydrogen across the EU.

The document also describes how the Commission plans to design and enable the regulatory framework required in terms of market rule and infrastructure. It also proposes actions to promote research and innovation in clean hydrogen technologies.

In terms of the required investment, this document describes the current public support for hydrogen per capita and considers how different instruments could contribute and be used in order to increase this. Horizon Europe, Innovation Fund, Connecting Europe Facility, InvestEU and structural funds are given as examples. It also mentions that setting the right incentives in energy taxation can be part of this change.

Finally, the document refers to the international dimension and geopolitics of hydrogen. It describes actions required to promote clean hydrogen in bilateral energy dialogues and in international cooperation fora globally, as well as using hydrogen to promote investments as part of the neighbourhood policy and to promote a low carbon economy globally.

The communication on an EU Hydrogen Strategy is expected to be published on 8 July 2020.

You can find the leaked EU Hydrogen Strategy document at [www.euractiv.com/section/energy/news/leaked-europes-draft-hydrogen-strategy](http://www.euractiv.com/section/energy/news/leaked-europes-draft-hydrogen-strategy).

## European Parliament Video on European Green Deal

On 25 June 2020, the European Parliament released a useful video highlighting the European Green Deal and decisions to be made in the coming months. It wants the Green Deal to be at the core of the recovery from the COVID-19 pandemic.

It talks of the ambition amongst some MEPs to increase the 2030 CO<sub>2</sub> reduction target from 40% to 55%. The Environment (ENVI) Committee Chair Mr Pascal Canfin (FR, Greens/EFA) expresses his hope that a deal will be reached soon as “we cannot afford to waste time”.

The video can be viewed at [multimedia.europarl.europa.eu/en/parliament-and-the-european-green-deal\\_N01-PUB-200623-GREE\\_ev](https://multimedia.europarl.europa.eu/en/parliament-and-the-european-green-deal_N01-PUB-200623-GREE_ev).

## Committee of the Regions Support for Green Deal's Zero Pollution Ambition

On 2 July 2020, the European Committee of the Regions (CoR) confirmed its support for the European Commission's ambition for zero pollution set out in the European Green Deal communication.

The CoR says that fighting air pollution must be among the top priorities in the recovery plan. Accordingly, it encourages EU Member States to deliver and update their National Air Pollution Control Programmes as a matter of urgency.

CoR does not want the economic recovery to undermine the EU's zero pollution ambition. It suggests focusing more on emissions regulation to reduce emissions at source, ensuring that pollution is not simply shifted from one location to another.

The CoR's press release is at [cor.europa.eu/en/news/Pages/Zero-pollution-EU-local-and-regional-governments-urge-to-tighten-emissions-at-source.aspx](https://cor.europa.eu/en/news/Pages/Zero-pollution-EU-local-and-regional-governments-urge-to-tighten-emissions-at-source.aspx).

## Study on Potential Car Emissions Reduction from Retrofit Technologies

On 29 June 2020, the European Commission launched a call for retrofit emission control (REC) system providers to join a study testing emissions reduction technologies for cars and vans.

The Testing Retrofit Technologies (TRT) study will be conducted by CLOVE, the Consortium for Ultra Low Vehicle Emissions, and funded by the EU. It aims to test available retrofit exhaust after-treatment systems, either already on the market, under development or prototypes. It will then be able to verify the possibility of vehicle emissions improvement with retrofits and investigate whether the air quality in European cities can be improved by fitting retrofit systems to older vehicles, passenger cars and light commercial vehicles.

Following this, it will propose ways forward to establish the legal boundaries for suppliers of the retrofit systems and for vehicle owners, as well as investigate the possibility of an EU retrofit programme for passenger cars and light commercial vehicles.

Further details of the study are available at [ec.europa.eu/newsroom/growth/item-detail.cfm?item\\_id=681295](https://ec.europa.eu/newsroom/growth/item-detail.cfm?item_id=681295).

## German Government Stimulus Package

On 3 June 2020, Chancellor Angela Merkel announced a stimulus package including support for the automotive industry.

Measures include a 3% cut in the standard rate of VAT, intended to stimulate the economy overall, not only sales of cars. On top of this is an increased premium of €6 000 for buying an electric car. The government has not introduced a scrappage scheme as it did a decade ago but believes the current package will have a stronger impact on Germany than the measures taken after the previous financial crisis.

Videos and transcript of the press conference are at [www.bundesregierung.de/breg-en/search/konjunkturpaket-1757640](https://www.bundesregierung.de/breg-en/search/konjunkturpaket-1757640), and [www.bundesregierung.de/breg-de/konjunktur-krisenbewaeltigungspaket-und-zukunftspaket-1757642](https://www.bundesregierung.de/breg-de/konjunktur-krisenbewaeltigungspaket-und-zukunftspaket-1757642).

## Air Quality in German Cities

On 9 June 2020, the German Federal Environment Ministry (BMU) released the final data for nitrogen dioxide (NO<sub>2</sub>) in cities for 2019.

The report shows that NO<sub>2</sub> concentrations exceeded the air quality limit of 40 micrograms of NO<sub>2</sub> per cubic metre of air (µg/m<sup>3</sup>) per year in 25 cities. Last year there were 57 cities.

On average, the NO<sub>2</sub> values (annual mean values) at measuring stations close to traffic were around four micrograms per cubic metre below those of 2018. The declines are different for the individual measuring stations. The reasons for the decline are: Local measures such as speed limits, driving bans or the use of less polluting buses; nationwide measures such as software updates; funding under the immediate programme "Clean Air 2017-2020"; and the renewal of the vehicle fleet with vehicles that are also in real operation have low nitrogen oxide emissions and meteorological influences that affect the spread of air pollutants.

The BMU press release is available to read at [www.bmu.de/pressemitteilung/stadtluft-wird-sauberer-zahl-der-staedte-ueber-dem-no2-grenzwert-halbiert-sich-im-jahr-2019](https://www.bmu.de/pressemitteilung/stadtluft-wird-sauberer-zahl-der-staedte-ueber-dem-no2-grenzwert-halbiert-sich-im-jahr-2019).

## German Government adopts National Hydrogen Strategy

On 10 June 2020, the German government published its National Hydrogen Strategy, intended to create a coherent framework for the use of hydrogen in transport and other applications.

The strategy defines the steps necessary to contribute to achieving climate goals, to create new value chains for the German economy and to further develop international energy policy cooperation.

In particular, it will establish hydrogen technologies as core elements of the energy transition in order to decarbonise production processes with the help of renewable energies. It will also create the regulatory requirements for the market ramp-up of

hydrogen technologies, as well as secure and shape the future national supply of CO<sub>2</sub>-free hydrogen.

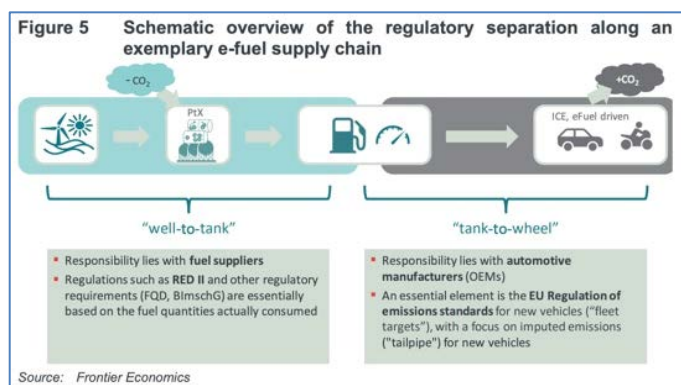
The strategy can be found at [www.bmwi.de/EN/Pressemitteilungen/2020/20200610-securing-a-global-leadership-role-on-hydrogen-technologies.html](http://www.bmwi.de/EN/Pressemitteilungen/2020/20200610-securing-a-global-leadership-role-on-hydrogen-technologies.html).

## German Report on Crediting System for Renewable Fuels

On 20 May 2020, Frontier Economics and Flick Gocke Schaumburg published a report on a crediting system for renewable fuels in EU vehicle emission standards, for the German Federal Ministry for Economic Affairs and Energy.

The main objective was to amend the EU fleet regulation to establish a level playing field, thereby reducing road transport sector emissions effectively and efficiently.

The report says that the EU legislative framework on fleet targets for new road vehicles focuses on tailpipe emissions in a so-called 'tank-to-wheel' approach, which does not differentiate between fossil fuels and synthetic and advanced alternative fuels (SAAF). For SAAF, the CO<sub>2</sub> tailpipe emissions are bound during the production of the fuels. The report states that in an extended well-to-wheel cycle view, this fuel would be climate-neutral.



The European Commission (EC) is therefore asked to review the scope to credit the climate neutrality of SAAF in EU emissions performance standards for new vehicles. A crediting system is proposed, based on four main principles. Firstly, the system should be aligned with the existing sustainability certification scheme for transport fuels under the Renewable Energy Directive (RED/RED II). There should also be a level playing field among emission reduction options for road transport. Any crediting system must furthermore contribute to additional CO<sub>2</sub> reductions in the transport sector and must offer affordable individual mobility, offering a low emission option for drivers.

The report proposes a range of 'building blocks' of the system, including general design features, plus actions to be taken in the areas of origin and use.

The report can be found at [www.bmwi.de/Redaktion/DE/Downloads/C-D/crediting-system-for-renewable-fuels.pdf?\\_\\_blob=publicationFile&v=4](http://www.bmwi.de/Redaktion/DE/Downloads/C-D/crediting-system-for-renewable-fuels.pdf?__blob=publicationFile&v=4).

## Spanish Stimulus Package to support Automotive Industry

On 15 June 2020, the Spanish government announced a €3.7 billion stimulus package to support the automotive industry.

Part of the package is a scrappage scheme whereby drivers will receive up to €4 500 for a new, cleaner car when they scrap a 20-year old vehicle. Dealerships will add up to €1 000 of discounts.

The government itself will upgrade official vehicles and is allowing regional authorities to use budget surpluses to upgrade their fleets.

In addition to these moves, the industry will receive grants for research and development as well as employee training programmes. Cheap loans and guarantees will be provided for manufacturers to modernise plants and for companies to renew their fleets.

Details of the Spanish government package are at [www.lamoncloa.gob.es/serviciosdeprensa/notasprensa/transportes/Documentos/2020/15062020\\_PlanAutomocion2.pdf](http://www.lamoncloa.gob.es/serviciosdeprensa/notasprensa/transportes/Documentos/2020/15062020_PlanAutomocion2.pdf) with a report in English at [www.reuters.com/article/spain-autos-factbo/factbox-spains-4-2-billion-aid-plan-to-support-the-auto-industry-idUSKBN23M2EZ](http://www.reuters.com/article/spain-autos-factbo/factbox-spains-4-2-billion-aid-plan-to-support-the-auto-industry-idUSKBN23M2EZ).

## French Government Agency to detect Emissions Fraud

On 11 June 2020, the French Ministry of Ecological and Solidarity Transition announced that it has created a new transport inspection agency to help detect fraudulent emissions, following an EU directive issued in the wake of 'Dieselgate'. The Market Surveillance Service for Vehicles and Engines, or SSMVM, will initially have a budget of €5 million and expects to perform 100 tests per year. It will be overseen by the climate and energy ministry.

The scope of the testing programme includes non-road mobile machinery as well as road vehicles. Violators would be subject to progressively more severe sanctions, beginning with a warning and ranging from market recall and fines of up to €300 000 for each non-compliant engine and €1 million per non-compliant vehicle.

The announcement is available to read at [www.ecologique-solidaire.gouv.fr/creation-du-service-surveillance-du-marche-des-vehicules-et-des-moteurs](http://www.ecologique-solidaire.gouv.fr/creation-du-service-surveillance-du-marche-des-vehicules-et-des-moteurs) and in English at [www.fr24news.com/a/2020/06/france-created-the-agency-to-detect-emissions-of-fraud.html](http://www.fr24news.com/a/2020/06/france-created-the-agency-to-detect-emissions-of-fraud.html).

## UK Report on Impacts of Net Zero Pathways on Future Air Quality

On 24 June 2020, the UK's Air Quality Expert Group (AQEG) published a report on the *Impacts of Net Zero Pathways on Future Air Quality in the UK*.

AQEG says that the implementation of net zero policies will lead to some immediate improvements in certain primary air quality

parameters. However, due to non-linear formation, large reductions in ambient concentrations of secondary pollutants, especially particulate matter (PM) and ozone (O<sub>3</sub>) may not be fully realised until towards the end of the Net Zero transition.

The report goes on to say that decarbonisation of the road and rail transport fleet will bring very significant air quality benefits, reducing NOx and volatile organic compounds in cities. However, whilst primary PM emissions from engine and vehicle exhausts will decrease, PM from friction and abrasion (e.g. tyre and brake wear and resuspension of dust) will remain. These could plausibly increase if overall vehicle-miles driven were to increase, or if increases in emissions resulting from any greater average vehicle mass were not offset by decreases derived from regenerative braking and new mitigation technologies.

The view of the expert group is that hydrogen used at industrial scales and in fuel cells are very clean options from an air quality perspective. However, the direct combustion of hydrogen in domestic gas boilers or in engines would likely lead to similar (or lower) NOx emissions than current fossil fuel combustion. AQEG acknowledges that hydrogen would have to be burnt in a highly lean combustion environment, coupled with exhaust gas recirculation and selective catalytic reduction to control NOx.

The full AQEG report is at [ukair.defra.gov.uk/reports/2006240802\\_Impacts\\_of\\_Net\\_Zero\\_pathways\\_on\\_future\\_air\\_quality\\_in\\_the\\_UK.pdf](http://ukair.defra.gov.uk/reports/2006240802_Impacts_of_Net_Zero_pathways_on_future_air_quality_in_the_UK.pdf).

## NORTH AMERICA

### US EPA Proposed Changes to Clean Air Rules

On 4 June 2020, the United States Environmental Protection Agency (US EPA) released a proposed rule, *Increasing Consistency and Transparency in Considering Benefits and Costs in the Clean Air Act Rulemaking Process*, overhauling how major clean air rules are written. This will change the cost-benefit analysis process and will affect the stringency of future regulations.

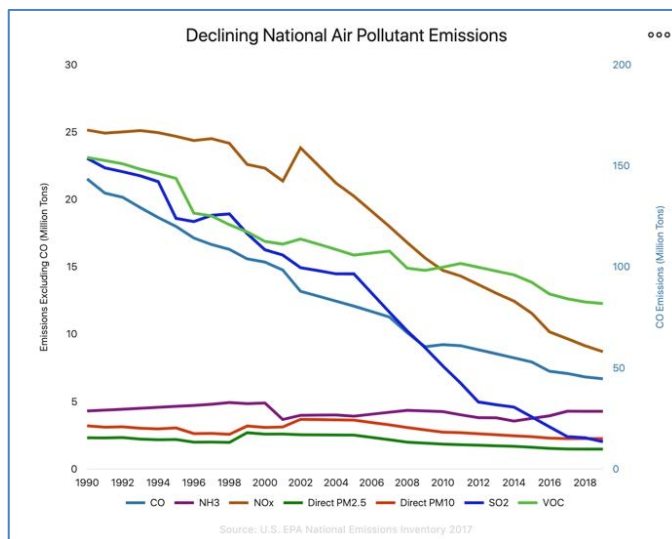
The new proposed cost-benefit analysis process would focus on weighing only the direct economic impact of a proposed rule without taking into account possible co-benefits, such as multiple air pollutants, public health or climate change, etc., to justify expanding regulations as has been historically done under the Clean Air Act.

More information, including a fact sheet and pre-publication version of the proposed rule are at [www.epa.gov/air-and-radiation/proposed-rule-increasing-consistency-considering-benefits-and-costs-clean-air-act](http://www.epa.gov/air-and-radiation/proposed-rule-increasing-consistency-considering-benefits-and-costs-clean-air-act).

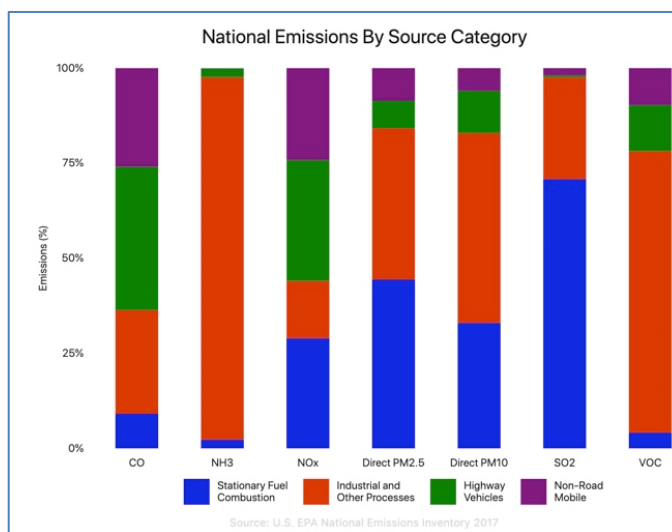
### US EPA Annual Report on Air Quality

The United States Environmental Protection Agency (US EPA) has released its annual report on air quality, tracking progress up to 2019. The report shows continued improvement for major pollutants.

It says that since the Clean Air Act was implemented in 1970, the combined emissions of criteria and precursor pollutants have dropped by 77%. The fall of these emissions since 2017 was 7%.



Sources of emissions are shown in the report, with on- and non-road sources contributing more than 50% of total NOx and carbon monoxide emissions but less than 20% of particulate emissions.



The report can be found at [gispub.epa.gov/air/trendsreport/2020/-sources](https://gispub.epa.gov/air/trendsreport/2020/-sources).

### California Advanced Clean Trucks Regulation

On 25 June 2020, the California Air Resources Board (CARB) approved the Advanced Clean Truck (ACT) Regulation that would mandate truck manufacturers selling a certain percentage of zero emission trucks each year.

The rules, which would not take effect until 2024, will require at least 40% of all tractor trailers, 55% of all medium-duty pick-ups, and 75% of all delivery trucks and vans sold in California to be zero emission by 2035. By the time it is fully implemented, the Board

estimates at least 15% of the 1.2 million trucks on the road would run on electricity.

Full details on CARB's ACT rule can be found at [www2.arb.ca.gov/our-work/programs/advanced-clean-trucks](http://www2.arb.ca.gov/our-work/programs/advanced-clean-trucks).

## ASIA PACIFIC

### Revision of Rules on Hybrid Vehicles in China

On 22 June 2020, it was reported the Chinese Ministry of Industry and Information Technology reclassified petrol-hybrid vehicles, giving them more favourable treatment than petrol-only or diesel cars under the country's clean vehicle rules.

The revised regulations are likely to mean that more hybrids and proportionally fewer electric vehicles are made. Manufacturers will be able to claim 'points' to contribute to the efficiency calculation of their fleets.

A report on this change is available at [www.autoblog.com/2020/06/22/china-easing-green-rules](http://www.autoblog.com/2020/06/22/china-easing-green-rules).

## MIDDLE EAST & AFRICA

### Israel Programme to Reduce Pollution from Diesel Vehicles

On 16 June 2020, the Israeli Ministry of Environmental Protection announced that its programme to reduce air pollution from old diesel vehicles had reduced emissions of 'respiratory particles' by 25% since November 2018.

The diesel programme included requiring owners of old, polluting diesel vehicles to install particulate filters and providing subsidies for the installation; providing grants for the scrapping of old, polluting diesel vehicles; and giving all vehicles a pollution rating during their annual tests. Vehicles defined as "polluting" have to be marked with a sticker and are prohibited from entering low emission zones in Israel.

Approximately 7 600 particulate filters were installed in polluting vehicles (4 300 of those were old, heavy vehicles). A total of 1 250 vehicles were scrapped.

More details on the programme can be found at [www.gov.il/en/departments/news/reducing\\_air\\_pollution\\_from\\_diesel\\_vehicles](http://www.gov.il/en/departments/news/reducing_air_pollution_from_diesel_vehicles).

## UNITED NATIONS

### UN promotes 170 Actions to combat Climate Change

On 5 June 2020, the United Nations launched a publication *170 Actions to Combat Climate Change*, to help raise the profile of World Environment Day.

This lists ten daily actions for each of the 17 Global Sustainable Development Goals. For example, one of the actions under Goal 3 (Good Health and Wellbeing) is to 'Reduce CO<sub>2</sub> emissions in order to decrease pollution levels'. One of the actions in Goal 9 (Industry, Innovation and Infrastructure) is to invest in 'innovative green

technologies', and active travel as well as using public transport is also encouraged.

The list of actions can be found at [www.un Geneva.org/site/170actions/climate/index.html](http://www.un Geneva.org/site/170actions/climate/index.html).

## GENERAL

### Report on Fuel Efficiency and Climate Impacts of Soot-free HDD Engines

On 3 June 2020, the International Council on Clean Transportation (ICCT) published a report on the fuel efficiency and climate impacts of soot-free heavy-duty diesel (HDD) engines.

The report says that although much progress has been made in the global uptake of soot-free HD engine emission standards—44 countries have implemented or adopted such standards as of July 2019—more countries will need to follow suit in order to meet the target of a 75% global reduction in black carbon (BC) emissions from 2010 to 2030.

The paper analysed the technological development of HDD engines used in the United States and the European Union in response to increasingly stringent emission standards and the impacts of this technological development on fuel efficiency and climate pollutant emissions. HDD engine designs in the US and the EU have converged on a similar package of design elements in order to meet EPA 2010 and Euro VI emission standards. In isolation, some of these technologies, specifically EGR and DPF systems, can negatively impact engine efficiency, resulting in a fuel consumption penalty. On the other hand, the introduction of SCR systems to soot-free engine designs has allowed designers to calibrate engines for more efficient operations and thereby offset some of the penalties associated with other control technologies.

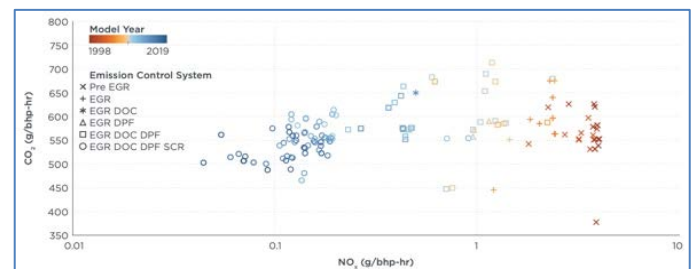


Figure 6. U.S. EPA heavy-duty diesel engines certification levels comparing NO<sub>x</sub> and CO<sub>2</sub>. Note log scale used for horizontal axis.

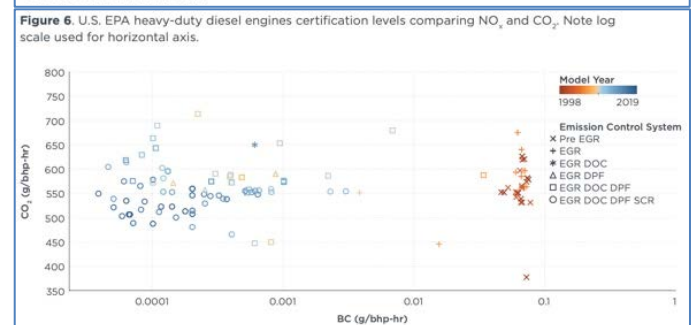


Figure 7. U.S. EPA heavy-duty diesel engines certification levels comparing BC and CO<sub>2</sub>. BC emission rates are calculated using reported PM certification levels along with assumed BC to PM mass emission ratios reported in the EPA MOVES model. Note log scale used for horizontal axis.



Comparisons of soot-free HDD engines and vehicles with engines and vehicles certified to prior emission standards indicate that improvements in emission control did not come at the detriment of fuel consumption. Furthermore, overall decreases in non-CO<sub>2</sub> climate pollutant emissions, in particular BC, have improved the overall climate emissions performance of modern HDD engines compared to older diesel engines.

The ICCT report can be found at [theicct.org/sites/default/files/publications/Soot-free-HD-Diesel-engines\\_jun2020.pdf](https://theicct.org/sites/default/files/publications/Soot-free-HD-Diesel-engines_jun2020.pdf).

## ICCT Post on NO<sub>x</sub> and CO<sub>2</sub> Emissions from Trucks

On 11 June 2020, the International Council on Clean Transportation (ICCT) published a blog post on the trade-off between NO<sub>x</sub> and CO<sub>2</sub>.

It comments that some opposition to new (lower) NO<sub>x</sub> emission standards is falsely based on the argument that higher CO<sub>2</sub> emissions will result. The blog examines the background to this argument and explains some vehicle and engine simulation work carried out by ICCT to assess its validity.

The simulations show that, even in the 'worst case' thermal management strategy, there is only a marginal fuel consumption impact over the cycles used for assessing compliance with CO<sub>2</sub> regulations. Achieving a 25°C increase in the average exhaust temperature over California Air Resources Board's proposed Low Load Cycle - deemed sufficient to achieve a faster light-off of the SCR system - increases the fuel consumption by around 0.9%, over the combined cycles used in U.S. EPA's GHG Phase 2 standards. Over the combined cycles used in the EU's HDV CO<sub>2</sub> standards, ICCT simulations indicate an increase in fuel consumption of about 0.7%.

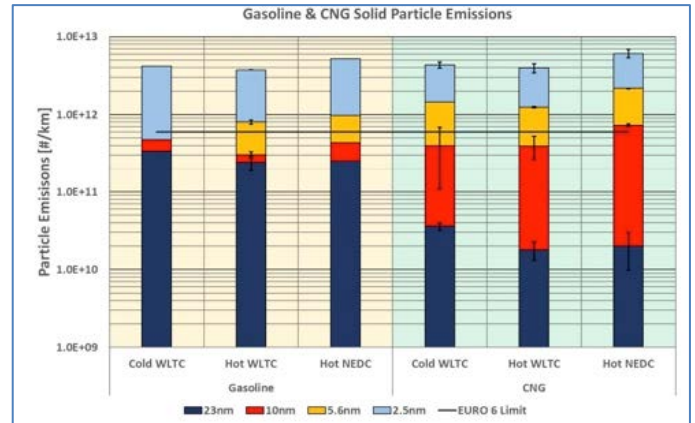
ICCT goes on to say that technologies are commercially available to simultaneously reduce NO<sub>x</sub> and CO<sub>2</sub> emissions, or to at least eliminate the small fuel consumption penalty from thermal management. Such technologies include cylinder deactivation, close-coupled SCR systems, heated urea injectors, and mild hybridisation. The NGO estimates that deployment of such a technology package would increase the price of heavy-duty trucks by approximately 2%, while achieving a 90% reduction in NO<sub>x</sub> emissions and having a slightly positive impact on CO<sub>2</sub> emissions.

The post is available to read at [theicct.org/blog/staff/nox-co2-emissions-trucks-jun2020](https://theicct.org/blog/staff/nox-co2-emissions-trucks-jun2020).

## T&E Report on CNG Vehicles

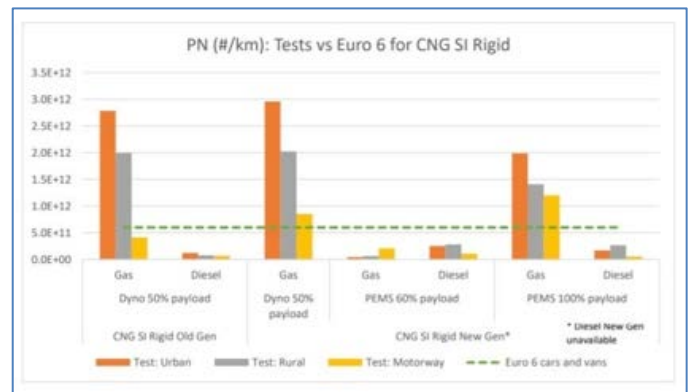
On 16 June 2020, Transport & Environment (T&E) published a report stating that compressed natural gas (CNG) vehicles are not a clean solution for transport.

This study focuses on particle emissions from CNG trucks and vans and concludes that both vehicle types produce a large number of particles. They claim that especially large numbers of ultrafine particles are emitted, with the number of particles doubling if the measurement range is extended from 23nm down to 10nm.



T&E also says that CNG vehicles can emit large amounts of ammonia, a contributor to particle pollution. On-road testing of Euro 6 CNG cars and vans has shown that these vehicles can emit up to 20 mg/km and 66 mg/km of ammonia, respectively.

These results lead T&E to call on the EU to not classify CNG as a clean vehicle technology or sustainable transport fuel. They should also not be counted, labelled or marketed as a 'cleaner, low emission' option for Low Emission Zones, tolls, taxes or public procurement policies across Europe.



The report says that a particle number emission limit must be introduced for light-duty CNG vehicles in the future post-Euro 6 emission standards. This limit must be set at a low enough level to ensure particle filters are mandatory for all CNG vehicles. The implementation date of the on-road particle number limit for heavy-duty CNG vehicles (part of EURO VI Step E) should be brought forward and aligned with the implementation date for diesel heavy-duty vehicles. T&E states that the current provisions give CNG HD vehicles an unfair regulatory advantage by giving CNG an additional two years to comply, compared to diesel vehicles.

T&E also adds some recommendations for all vehicles, saying that vehicle emissions testing should include all particles, as measurement capability is now much better for smaller sizes. An ammonia emission limit should also be introduced for all light-duty cars and vans.

The report is available at [www.transportenvironment.org/sites/te/files/publications/2020\\_06\\_TE\\_CNG\\_particle\\_report.pdf](http://www.transportenvironment.org/sites/te/files/publications/2020_06_TE_CNG_particle_report.pdf).

## FuelsEurope 2050 Carbon Neutral Strategy

On 15 June 2020, FuelsEurope published its long-term strategy for contributing to the EU's climate neutrality ambitions.

The document says that low-carbon liquid fuels have a strategic role to play in the transition to a climate-neutral economy by 2050, in particular in sectors such as aviation, maritime and heavy-duty transport where no equivalent technological alternatives currently exist. These low carbon liquid fuels are sustainable fuels from non-petroleum origin with no or very limited CO<sub>2</sub> emissions during their production and use.

It claims that this pathway could enable emissions reductions from transport in 2035 by up to 100Mt CO<sub>2</sub>/year and contribute to EU's climate neutrality ambition by 2050. FuelsEurope says that there can be benefit from the creation of lead markets in road transport, where existing policy frameworks may be readily adapted, and where increasingly efficient road vehicles will help them to be affordable for customers.

FuelsEurope is outlining a set of policy principles, which it believes is central to delivering the industry's climate-neutral ambition, with these points serving as a start for discussion with policymakers, supply chain partners and customer groups.

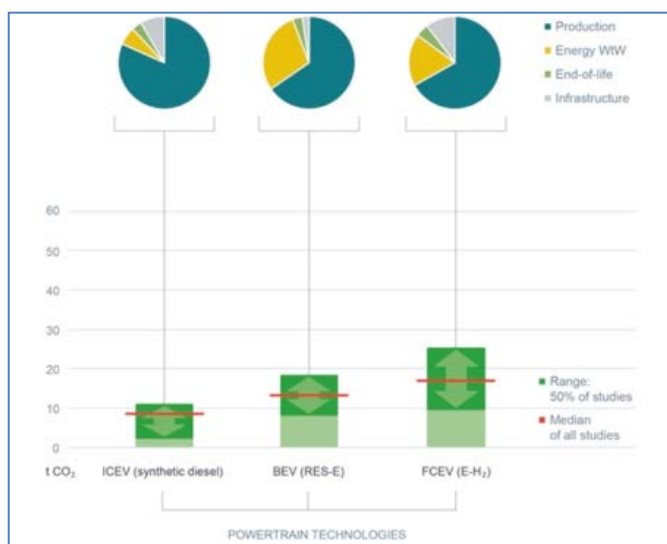
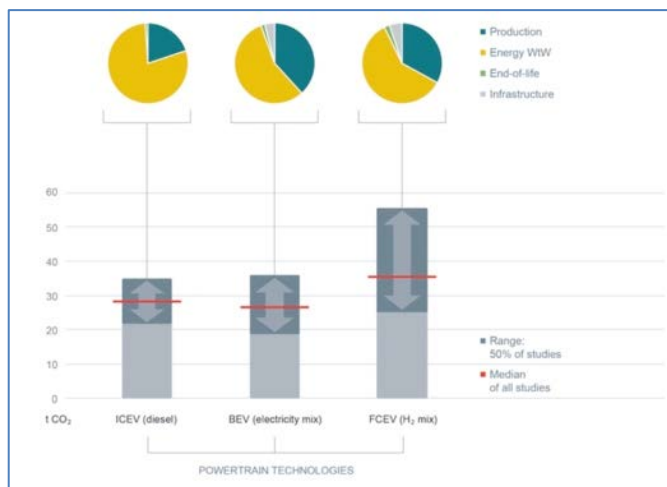
The strategy and press release can be found at [www.fuelseurope.eu/clean-fuels-for-all](http://www.fuelseurope.eu/clean-fuels-for-all).

## Meta-Analysis of Life Cycle Studies

On 15 June 2020, the Research Association for Combustion Engines (FVV) published a meta-analysis of life cycle analysis (LCA) studies on alternative powertrain technologies.

According to FVV, the study shows that in a global energy and carbon system, various technology options are available from a climate perspective. There is not one single solution for CO<sub>2</sub> neutrality in the mobility sector. The key to sustainable mobility lies in fair technology competition and the defossilisation of energy production.

Frontier Economics, a specialist economics consultancy conducting the study, calculated that there is a relatively narrow band of total emissions over the lifetime of all combinations of powertrains and energy sources/alternative fuels. The average value over all studies ranges from 25 to 30 tonnes of CO<sub>2</sub> per vehicle, provided that fossil fuels are still used proportionately for the production of electricity, hydrogen or synthetic fuels. If, on the other hand, only regeneratively produced energy sources are used in operation, the average value is between nine and 16 tonnes of CO<sub>2</sub> for the entire service life of the vehicle. The remaining emissions then result mainly from the production of the vehicles, the production facilities and the infrastructure for the distribution of the energy sources.



The report says that it is important to avoid the emissions from operations allocated to the transport sector being reduced by allocating additional emissions to the energy or industrial sector. Using a sample calculation, the study points out that if electric mobility were to be introduced on a broad scale without accompanying measures, 90% of the cumulative CO<sub>2</sub> savings from individual mobility could reappear in other sectors and regions by 2030 and would therefore be of little benefit to climate protection.

The report concludes that a valid life-cycle analysis allows an objective assessment of technological options and that all technology options providing comparable CO<sub>2</sub> benefits should be equally supported and promoted.

A summary of the report can be found at [www.primemovers.de/en/science/taking-stock](http://www.primemovers.de/en/science/taking-stock).

## European Space Agency launches Global Air Pollution Maps Platform

On 11 June 2020, the European Space Agency announced that it has launched a new online platform that allows for the tracking of air pollution worldwide.

The maps, which use data from the Copernicus Sentinel-5P satellite, show the averaged nitrogen dioxide concentrations using a 14-day moving average. The maps not only show changes over time on a global scale, but also provide the possibility for users to zoom in to areas of interest, for example any city or region over Europe.

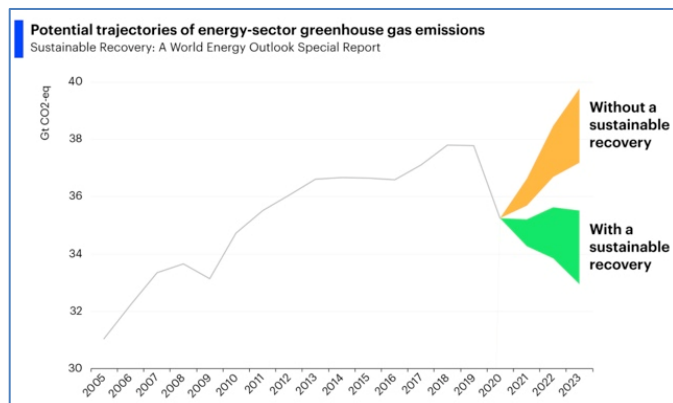
The averaged maps also reflect the effects of the COVID-19 lockdown – with drastic reductions of nitrogen dioxide concentrations visible over many areas. These effects can now be easily explored across the globe.

The portal can be accessed at [maps.s5p-pal.com](https://maps.s5p-pal.com).

## IEA Comments on Sustainable Recovery

On 18 June 2020, Dr Fatih Birol, Executive Director at the International Energy Agency (IEA) commented on the need for governments to take immediate action to ensure the recovery from the coronavirus crisis is as sustainable and resilient as possible.

IEA has assessed the impact of the downturn on all major fuels and is identifying the most effective measures available to governments. Dr Birol shows potential trajectories of greenhouse gas emissions from the energy sector.



Ministers from countries representing over 80% of global energy demand will be discussing what actions can be taken at the IEA Clean Energy Transitions Summit in July.

Dr Birol's blog can be found at [www.linkedin.com/pulse/sustainable-recovery-within-our-reach-governments-act-fatih-birol/](https://www.linkedin.com/pulse/sustainable-recovery-within-our-reach-governments-act-fatih-birol/).

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## FORTHCOMING CONFERENCES

### ONLINE CO<sub>2</sub> Reduction for Transport Systems Conference

7-8 July, Turin, Italy

[conferences.ata.it](http://conferences.ata.it)

### ONLINE 6<sup>th</sup> International Conference Diesel Powertrains 3.0

8-9 July 2020, Turin, Italy

[www.fev.com/en/coming-up/fev-conferences/fev-conference-diesel-powertrains-30](http://www.fev.com/en/coming-up/fev-conferences/fev-conference-diesel-powertrains-30)

*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.*

### ONLINE 48<sup>th</sup> European Transport Conference

9-11 September 2020, Milan, Italy

[aetransport.org](http://aetransport.org)

### Future of Biofuels

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

[fortesmedia.com/future-of-biofuels-2020](http://fortesmedia.com/future-of-biofuels-2020)

### ONLINE SAE Powertrains, Fuels and Lubricants

22-24 September 2020, Krakow, Poland

[www.sae.org/pfi](http://www.sae.org/pfi)

### Driving the Green Deal: how can biofuels help decarbonise EU transport?

24 September 2020, Brussels, Belgium

[events.euractiv.com/event/info/driving-the-green-deal-how-can-biofuels-help-decarbonise-eu-transport](http://events.euractiv.com/event/info/driving-the-green-deal-how-can-biofuels-help-decarbonise-eu-transport)

### ONLINE FVV 2020 Autumn Conference

24-25 September 2020, Würzburg, Germany

[www.fvv-net.de/en/events](http://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](http://www.politico.eu/event/decarbonize-heavy-transport)

### ONLINE 29<sup>th</sup> Aachen Colloquium

5-7 October 2020, Aachen, Germany

[www.aachener-kolloquium.de/en](http://www.aachener-kolloquium.de/en)

### POSTPONED IRU World Congress

19-21 October 2020, Berlin, Germany

[www.iruworldcongress.com](http://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](http://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](http://www.sia.fr/evenements/193-sia-powertrain-energy-rouen-2020)

## 4<sup>th</sup> International FEV Conference: Zero CO<sub>2</sub> Mobility

10-11 November 2020, Aachen, Germany

[www.fev.com/en/coming-up/fev-conferences/fev-conference-zero-co2-mobility](http://www.fev.com/en/coming-up/fev-conferences/fev-conference-zero-co2-mobility)

## 2020 Annual POLIS Conference

2-3 December 2020

[www.polisnetwork.eu/2020-annual-polis-conference](http://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.*

## 11<sup>th</sup> VERT Forum

25 March 2021, Dübendorf, Switzerland (postponed from March 2020)

[www.vert-certification.eu](http://www.vert-certification.eu)

## International Transport and Air Pollution Conference

30-31 March 2021, Graz, Austria (postponed from September 2020)

[www.tapconference.org](http://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.*

## 9<sup>th</sup> AVL Large Engines Techdays

21-22 April 2021, Graz, Austria

[www.avl.com/large-engines-techdays](http://www.avl.com/large-engines-techdays)

## 8<sup>th</sup> International MinNO<sub>x</sub> Conference

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

[www.iav.com/en/events/minnox](http://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](http://www.sae.org/attend/heavy-duty-diesel-emissions-control-symposium)