

# Electrification of Heavy Duty Vehicles

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A EURELECTRIC statement

September 2017

***EURELECTRIC is the voice of the electricity industry in Europe.***

*We speak for more than 3,500 companies in power generation, distribution, and supply.*

***We Stand For:***

***Carbon-neutral electricity by 2050***

We have committed to making Europe's electricity cleaner. To deliver, we need to make use of **all low-carbon technologies**: more renewables, but also clean coal and gas, and nuclear. Efficient electric technologies in **transport and buildings**, combined with the development of smart grids and a major push in **energy efficiency** play a key role in reducing fossil fuel consumption and making our electricity more sustainable.

***Competitive electricity for our customers***

We support well-functioning, distortion-free **energy and carbon markets** as the best way to produce electricity and reduce emissions cost-efficiently. Integrated EU-wide electricity and gas markets are also crucial to offer our customers the **full benefits of liberalisation**: they ensure the best use of generation resources, improve **security of supply**, allow full EU-wide competition, and increase **customer choice**.

***Continent-wide electricity through a coherent European approach***

Europe's energy and climate challenges can only be solved by **European – or even global – policies**, not incoherent national measures. Such policies should complement, not contradict each other: coherent and integrated approaches reduce costs. This will encourage **effective investment** to ensure a sustainable and reliable electricity supply for Europe's businesses and consumers.

***EURELECTRIC. Electricity for Europe.***

## Electrification of Heavy Duty Vehicles

### *Technologies position themselves to Decarbonise Heavy Duty Transport*

Europe has entered the era of electro-mobility. With battery costs falling sharply (-80% between 2010 and 2016) and sales of electric vehicles (EVs) increasing<sup>1</sup>, important progress is also being made on the regulatory side. The European Commission has proposed to include EV charging infrastructure in new and significantly renovated buildings in the context of the Clean Energy Package and is also working on the revision of the Clean Vehicles Directive for increased public procurement of low-emission vehicles, as well as tighter CO<sub>2</sub> emission standards for passenger cars and light duty vehicles.

At the same time, many utilities are already embracing the new opportunities that come along with the electrification of transport: investing in the installation of EV charging infrastructure and the proper set-up of charging stations in order to minimise the effect on the local grid.

On heavy duty, long haul transport, things are also beginning to move. With trucks, buses and coaches representing less than 5% of road vehicles in the EU, but producing about 25% of CO<sub>2</sub> emissions from road transport in the EU<sup>2</sup>, the Commission has set out a strategy to address CO<sub>2</sub> emissions from these Heavy-Duty Vehicles (HDVs) over the coming years.

The European Commission is preparing a monitoring and reporting system for emissions from HDVs (which did not previously exist) as well as plans to propose emission standards for 4 out of 17 HDV types in early 2018. These emission standards would be expected to reduce emissions based on improvements of the internal combustion engine and vehicle design, for which there is still quite some potential<sup>3</sup>, rather than promoting a switch to alternative fuels. While these are, without doubt, potential positive improvements, they are not the long-term solution to address emissions from heavy duty transport.

As the EU undertakes efforts to achieve its Paris Agreement commitments with a view to limiting global warming to well below 2°C, the sectors of the economy which do not fall under the EU ETS, including road transport, must be at least well on their way to complete decarbonisation by 2050<sup>4</sup>. This will be accompanied by the decarbonisation of the European electricity sector, which is committed to achieving carbon neutrality by 2050<sup>5</sup>.

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<sup>1</sup> In 2016, Europe an increase of sales of plug-in cars and light duty vehicles of 14% compared to 2015, and [chances are good that sales will increase by more than 50% from 2016 to 2017](#).

<sup>2</sup> DG CLIMA: [Reducing CO<sub>2</sub> emissions from Heavy Duty Vehicles](#), last update July 2017.

<sup>3</sup> Transport & Environment: [New technology can cut big trucks emissions by a third](#), June 2017.

<sup>4</sup> Assuming no overshooting is allowed – with net negative emissions after 2050, an emission reduction in the non-ETS sectors of between 57% and 75% compared to 2005 levels would be acceptable. See: Oeko-Institut: [Targets for the non-ETS sector in 2040 and 2050](#), December 2016.

<sup>5</sup> EURELECTRIC report: [A Bright Future for Europe](#), April 2017.

Electrifying heavy duty transport can do the trick. MAN, one of Europe's leading manufacturers of commercial vehicles, presented its e-Truck in February 2017<sup>6</sup>, and has announced that it will make test vehicles available by the end of 2017. Tesla is expected to present its battery electric truck in September 2017<sup>7</sup>. In combination with high-power charging infrastructure along motorways, these models may significantly advance road transport decarbonisation.

Other technologies may also provide viable options; e.g. electric highways with overhead lines or wireless charging via inductive currents in the road. In early 2017, Germany and Sweden signed a joint innovation agreement where electric highways feature prominently<sup>8</sup>. While Sweden has already equipped a 2km segment of a motorway as a test bed, Germany announced in January 2017 to develop two test 12 km motorway segments near Lübeck and Frankfurt, to be finalised by end 2018<sup>9</sup>.

The IRU, the global industry association for road transport, has stated that it sees a big potential for the electrification of European long haul road transport. In its Commercial Vehicle of the Future report, the IRU states that in the context of a road transport emission reduction of 60% by 2050, it expects 40-45% of long-haul road transport to be powered by electricity<sup>10</sup>.

The recently published legislative proposal by the European Commission to revise the 'Eurovignette' Directive, which sets rules for EU Member States can charge heavy goods vehicles for the use of certain roads, has huge potential to support developments aimed at decarbonising the HDV sector. Introducing differentiation of road charges according to CO2 emissions can be a significant and important measure which will incentivise and support the shifter to cleaner HDVs by reducing the operational costs of such vehicles. The Commission's proposal includes a 75% discount on infrastructure charges to be granted to zero emission vehicles<sup>11</sup>. Such a measure provides a positive subsidy-free means to support further investment and deployment of clean, low-emission technologies, by applying the polluter pays principle.

EURELECTRIC has warmly welcomed the Commission's proposal<sup>12</sup> on the Eurovignette Directive, and we look forward to further development and deployment of electrified heavy duty transport. We are ready to contribute actively to this discussion and to accompany these exciting developments with all our expertise on the electricity system. We therefore welcome a comprehensive and inclusive stakeholder dialogue on how to best realise the vast decarbonisation potential of electrification in heavy duty road transport.

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<sup>6</sup> MAN: [MAN and CNL to bring eTrucks on our roads](#), February 2017.

<sup>7</sup> Electrek: <https://electrek.co/guides/tesla-semi/>, August 2017.

<sup>8</sup> Government of Sweden: [Innovation and cooperation for a sustainable future](#), January 2017.

<sup>9</sup> Frankfurter Allgemeine Zeitung: [Oberleitungs-LKW bald auf zwei Autobahnen](#), January 2017.

<sup>10</sup> IRU: [Commercial Vehicle of the Future](#), January 2017.

<sup>11</sup> European Commission: [Proposal for a Directive of the European Parliament and of the Council amending Directive 1999/62/EC on the charging of heavy goods vehicles for the use of certain infrastructures](#), May 2017.

<sup>12</sup> EURELECTRIC: [Electricity to play a key role in decarbonising European transport](#), June 2017.

EURELECTRIC pursues in all its activities the application of the following sustainable development values:

Economic Development

▶ Growth, added-value, efficiency

Environmental Leadership

▶ Commitment, innovation, pro-activeness

Social Responsibility

▶ Transparency, ethics, accountability



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