



European
Automobile
Manufacturers
Association



To:

Mr **Frans Timmermans**, Executive Vice-President for the European Green Deal

Ms **Adina Vălean**, Commissioner for Transport

Mr **Thierry Breton**, Commissioner for Internal Market

Ms **Kadri Simson**, Commissioner for Energy

Copy to:

Mr **Kurt Vandenberghe**, European Green Deal Adviser to the Commission President Ursula von der Leyen

Mr **Filip-Alexandru Negreanu-Arboreanu**, Deputy Head of Cabinet of Commissioner Adina Vălean

Mr **Daniel Mes**, Member of Cabinet of Executive Vice-President Mr. Frans Timmermans

Mr **Cristian-Silviu Buşoi**, European Parliament Chair of ITRE Committee

Ms **Karima Delli**, European Parliament Chair of the TRAN Committee

Mr **Pascal Canfin**, European Parliament Chair of the ENVI Committee

Mr **Ismail Ertug**, European Parliament, member of the TRAN Committee

Mr **Nuno Brito**, Portuguese Permanent Representative

Mr **Iztok Jarc**, Slovenian Permanent Representative

Brussels, 13 April 2021

Subject: Making AFID fit for zero-emission heavy-duty vehicles

Dear Vice-President Timmermans, Commissioner Vălean, Commissioner Breton and Commissioner Simson,

Climate change is the most fundamental challenge of our generation, with greenhouse gases from fossil fuels being the main cause of the problem. To achieve climate neutrality, the European Green Deal states that the transport sector needs to cut its greenhouse gas emissions by 90% by 2050 compared to 1990. Road freight transport, especially with heavy-duty vehicles, undoubtedly plays a crucial role given its share of 26% of road transport CO₂ emissions.

In December 2020, the CEOs of Europe's commercial vehicle manufacturers expressed their commitment to a fully carbon-neutral road freight transport sector by 2050 at the latest. Action to effectively bend the emissions curve is clearly needed today.

We, the signatories, are writing to ask for your urgent support for the roll-out of the necessary re-charging and hydrogen re-fuelling infrastructure suitable for zero-emission heavy-duty vehicles. This must be addressed in the review of the alternative fuels infrastructure directive (AFID).

An increasing offer of zero-emission heavy-duty vehicles

Reliable and efficient zero-emission vehicles are already beginning to hit the market; their numbers and range will increase rapidly over the next few years. Indeed, all heavy-duty vehicle manufacturers have either already started or are ramping up the series production of zero-emission trucks and buses. New powertrain technologies will fast become the backbone of road transport, with battery-electric and hydrogen-powered vehicles being the key zero-emission technologies for heavy-duty trucking. However, the re-charging and hydrogen re-fuelling infrastructure that is suitable for heavy-duty vehicles and indispensable for their operation is still largely missing.

The Sustainable and Smart Mobility Strategy aims for 80,000 zero-emission lorries in circulation in the EU by 2030. In stark contrast to this, our assessments indicate that the number of battery-electric lorries in operation will be three to six times higher.

What should AFID deliver?

The undersigned call for the following under the review of the Alternative Fuels Infrastructure Directive (AFID):

- **Make AFID compatible with the ambition level of the Green Deal and the CO₂ targets for heavy-duty vehicles, with a focus on zero-emission technologies**, namely battery electric and hydrogen-powered vehicles.
- **Propose a regulation rather than a directive** for a swift implementation.
- **Extend the scope of the framework to areas operated by private players**, like logistic hubs, distribution centres etc.
- **Address all re-charging and hydrogen re-fuelling needs of heavy-duty vehicles**: at the depot, at destination when loading and unloading, at public sites in urban areas and along highway corridors.

- **Set dedicated and binding infrastructure targets on European and member state level** to create a clear and harmonised pathway for infrastructure deployment, independent of national agendas.

A revised AFID regulation is key to ensure that infrastructure roll-out and the deployment of zero-emission vehicles go hand-in-hand, as well as to ensure an EU-wide infrastructure network for seamless cross-border operations. This would grant confidence to all stakeholders in the value chain, from vehicle manufacturers to transport operators and infrastructure providers.

We are therefore calling for the EU-wide deployment of 11,000 charging points for heavy-duty vehicles no later than 2025 and 42,000 charging points no later than 2030.

This target includes both public and destination – or semi-public – charging (eg charging at logistic hubs, distribution centres etc) but excludes overnight public charging. In the Annex to this letter, we suggest a methodology to set binding targets per member state and show concretely what these should be.

In addition, the revised AFID should set a target of around 300 hydrogen re-fuelling stations suitable for heavy-duty vehicles by 2025 and of around 1,000 hydrogen re-fuelling stations no later than 2030.

The revision should also ensure geographic coverage, by addressing key use cases (regional-delivery and long-distance operations), and locations (urban node areas and along highways). It should distinguish between public and destination charging, and establish three power categories for heavy-duty vehicle charging (eg below 350 kW, between 350 kW and 500 kW and above 500 kW). Adequate measures should ensure access and availability of highway charging points, for example via a reservation system which allows advance booking.

A mid-term review should be initiated in 2024 in order to provide a sound reality-check with the actual market situation, the infrastructure roll-out and allow the adjustment of heavy-duty specific technical requirements and targets.

Locations for charging points and re-fuelling stations

1. **Urban node areas:** Deploying charging infrastructure in medium and large urban areas will enable the decarbonisation of urban and regional delivery trips thanks to a growing and maturing battery-electric truck market. As part of the revision of the TEN-T Regulation, authorities and industry should jointly identify urban nodes, which are hot spots for road freight activity and where the deployment of charging infrastructure

would maximise the benefits of the roll-out of the initial charging network. Accordingly, the revision of the AFID should set targets for the deployment of public charging at urban nodes for 2025 and 2030 (at least 350 kW). Deployment of public charging at urban nodes should further be incentivised in the first half of the 2020s to meet the demand of the early adopters. The most relevant charging locations for buses, namely interurban coaches, for example at airports and bus terminals, should be covered. For destination charging, all medium and large logistics hubs should have at least one opportunity charger (350 kW or higher) from 2025.

2. **Highway coverage:** Long-haul operations account for the majority of heavy-duty related emissions and the revision of the AFID is essential for the deployment of the adequate recharging and hydrogen refuelling infrastructure along the TEN-T core network.
 - High-power charging (at least 350 kW, but focussing on megawatt charging, MCS): With long-haul battery-electric trucks expected to hit the market in the first half of the 2020s, it is crucial that these trucks will be able to do long-distance journeys and stop to charge during the drivers' mandatory breaks (ie typically 700 - 800 kW for long-haul trucks). The revised AFID should require **at least one high-power charging station with a minimum of 4 charging points every 100 km by 2025** and **at least one site every 50 km by 2030 on the TEN-T Core Network**. At least one charging point per station has to be accessible for coaches.
 - Public overnight charging: Long-haul battery electric trucks, when travelling long distances, will not always come back to the depot overnight. The revised AFID should set targets for the deployment of lower power (100 kW) public overnight chargers at truck parking areas along the highways, with at least 40,000 overnight public chargers in 2030.
 - Hydrogen re-fuelling stations: With hydrogen-powered trucks hitting the road from mid-decade, the revised AFID should set a target of one hydrogen re-fuelling site every 200 km on the TEN-T Core network in 2030. A hydrogen re-fuelling station for trucks should have a daily capacity of at least 6 tonnes of H₂. Compressed hydrogen at 350bar and 700bar as well as liquefied hydrogen refuelling technology should be considered.

Beyond AFID, what is required?

1. The EU should provide an **effective financial framework** to accelerate the infrastructure roll-out for zero-emission vehicles. As regards charging infrastructure, especially in this early stage, meaningful incentives should be provided to support investments in public, publicly-accessible (destination) and private charging stations for trucks and coaches.

Support should also be granted to help transport operators adjust their operations to zero-emission trucking. The different instruments of the Connecting Europe Facility (CEF) programme should be adapted to zero-emission technologies, and member states should prioritise the uptake of zero-emission trucks and the deployment of the associated infrastructure (notably for overnight depot charging, not covered in AFID) in their national Recovery and Resilience Plans, in line with the Recharge and Refuel Flagship.

2. Adequate medium-term **planning of the deployment of the electricity grid and upgrades** will be essential to limit system costs and accelerate the deployment of charging infrastructure. In particular, the EU should ensure that when a truck parking site is built or renovated, notably along the highways, the grid connection is future-proof and sufficient for future heavy-duty vehicle charging demand. The revision of the TEN-E network will need to be coordinated with TEN-T investments in charging infrastructure. Moreover, all activities and preparations aimed at setting up charging stations for passenger cars should be aligned with and wherever possible include an extension to heavy-duty vehicles and their respective infrastructure requirements. If suitable charging locations are publicly co-funded, it should be mandatory to consider a later stage extension and/or upgrade to also cover heavy-duty vehicles (from CCS to MCS).

On behalf of the signatories, we urge the Commission to make a proposal for the review of the AFID fit for zero-emission heavy-duty vehicles, with ambitious provisions for re-charging and hydrogen re-fuelling infrastructure, thereby honouring the commitments under the EU Green Deal strategy.

We remain at your disposal for any questions.

Yours sincerely,

ACEA



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ANNEX

Overall assessment

Based on the respective assessments and joint discussions, both ACEA and T&E estimate that the number of heavy-duty vehicle charging points needed in 2030 is around 50,000 for the EU27 + UK, including both public and destination charging. However, there are diverging views on the number of battery electric trucks in the fleet that could operate with such a network; according to ACEA's use-case calculation method, the corresponding fleet of battery-electric trucks in 2030 would be 270,000 units in 2030 (all trucks above 3.5t, EU27+UK), whereas T&E scenarios indicate up to 520,000 units in 2030. The table below summarises the findings (excluding UK):

Charging points and battery electric truck fleet (EU27 only)

	2025	2030
Charging points*	11,000	42,000
Fleet		
Battery electric trucks (ACEA)	33,000	230,000
Battery electric trucks (T&E)**	85,000	470,000

*Covers both public and destination charging points. According to ACEA a fixed split between the two cannot be set as it highly depends on the use case, and the framework conditions. T&E calculated that destination chargers would account for at least half of the charge points.

**T&E vehicle estimates exclude non-regulated trucks above 16t

Member state targets

The revised AFID should set binding targets per member state to ensure that the 11,000 charging points in 2025 and 42,000 charging points in 2030 are met EU-wide. The recommended member state targets are show in the table below. This is based on a methodology for a fair, simple and transparent allocation of the national targets proposed by ACEA and T&E.

Member state	2025	2030
Belgium	300	1,100
Bulgaria	10	50
Czech Republic	250	850
Denmark	250	900
Germany	3,750	14,350
Estonia	10	50

Member state	2025	2030
Ireland	100	300
Greece	10	50
Spain	750	2,950
France	1,500	5,800
Croatia	20	100
Italy	900	3,350
Cyprus	1	5
Latvia	50	200
Lithuania	250	900
Luxembourg	100	300
Hungary	150	600
Malta	1	5
Netherlands	900	3,400
Austria	400	1,450
Poland	550	2,050
Portugal	100	300
Romania	50	300
Slovenia	100	450
Slovakia	150	550
Finland	100	350
Sweden	300	1,200

Methodology

The number of public charging points per member state (PCP_i) is defined as follows for both 2025 and 2030:

$$CP_i = \alpha_i \times T$$

where:

T is number of charging points needed in the EU27 in 2025 and 2030 as calculated by T&E and ACEA: 11,000 in 2025 and 42,000 in 2030.

α_i is the allocation key of Member State i, defined as:

$$\alpha_i = \frac{\frac{R_i}{R_{total}} \times GDPfactor_i \times \frac{VM_i}{VM_{average}}}{\sum_{i=1}^{27} \frac{R_i}{R_{total}} \times GDPfactor_i \times \frac{VM_i}{VM_{average}}}$$

with:

R_i are the number of trucks newly registered in country i ,
 R_{total} is the total number of trucks newly registered in the EU,
GDPfactor is 1 when the GDP per capita in a country is between 0.75 and 1.25 of the average
GDP per capita, 1.25 when it is above 1.25 of the average GDP per capita and 0.75 when it is
below 0.75 of the average,
 VM_i is the average vehicle mileage in country i ,
 $VM_{average}$ is the average vehicle mileage in the EU,
 α_i is average over the period 2015-2019 for more robustness.