

Position

# Key framework conditions for the successful ramp-up of electric vans

Challenges and solutions



# 1 Summary

The decarbonization of transport and the associated achievement of climate targets in the transport sector require the use of electric vehicles. The automotive industry not only offers locally emission-free passenger cars but is also making an active contribution to climate protection through the electrification of the light (N1) and heavy (N2) van segments. In addition to applications in craftsmanship, field service, service and city logistics, these vehicles are also relevant for commercial freight transport.

In order not to jeopardize a successful ramp-up of electric vans, a legal framework is needed that ensures for zero-emission vehicles the same competitive conditions as they apply to vehicles with a conventional combustion engine.

In order to create the necessary framework conditions, it is particularly necessary to:

- **Promptly adopt the revision of the Driving License Directive and swiftly transpose it into national laws**

The increase of the weight limit for category B driving license from 3.5 t to 4.25 t gross vehicle weight (GVW) for alternatively powered light commercial vehicles creates an important prerequisite for the acceptance of these vehicles by customers. The fastest possible adoption and implementation of the revision is necessary in order not to jeopardize the ramp-up of electrified vans.

- **Abolish the compulsory fitting of tachographs and speed limiters in electric vans between 3.5 t and 4.25 t gross vehicle weight (GVW)**

Due to the weight of the traction battery, the vehicle weight and GVW of electric vans increases. With up to 4.25t GVW, they will offer customers the same payload as today's 3.5t combustion vehicles. When switching from combustion vehicles to electric vans, neither the payload nor the intended use of the vehicles will change. However, the electric vans between 3.5t and 4.25t GVW are subject to the obligation to be equipped with tachograph (in case of commercial goods transport) and speed limiters. This significantly worsens its competitive position compared to N1 vans with combustion engines.

- **Accelerate the development of public charging infrastructure and to expand the electricity grids in a future oriented way**

The availability of use case-oriented and connected charging infrastructure is the basic prerequisite for the acceptance and use of electromobility, the associated vehicle ramp-up and thus for achieving climate targets. In particular, High-Power Charging (HPC) on highways for freight transport and inner-city fast-charging hubs for city logistics are essential preconditions for the successful daily operation of electric vans.

- **Set up or continue subsidy programs for the purchase of electrically powered light and heavy commercial vans as well as for their charging infrastructure**

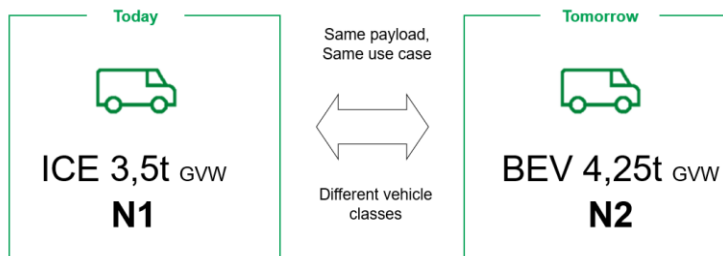
In the commercial sector, investment decisions are made under the aspect of economic efficiency. In order to mitigate the cost disadvantage of electric vans that still exist today and to significantly support the electrification of commercial fleets, positive incentives for companies are still needed to drive purchasing decisions. The programs must be designed for the longer term in order to give customers planning security. Ideally, the purchase of the associated charging infrastructure will also be supported.

## 2 Electrification leads to less favorable competitive conditions for electric vans compared to those for vans with combustion engines

In order to offer customers the same payload for electric vans in the future as for today's combustion engines, an increase in the gross vehicle weight (GVW) to up to 4.25 t is necessary due to the battery weight. This does not change the payload or the intended use of the vehicles. Only the conventional drive is replaced by an electric one.

However, the higher gross vehicle weight leads to a different vehicle classification: electric vans between 3.5t and 4.25t GVW are classified as N2 vehicles and no longer as N1 (GVM $\leq$ 3.5t).

In the future, the majority of today's conventional N1 vans (ICE) will fall into the N2 vehicle class as electrified variants (BEVs):



Being classified as N2 vehicles, these electric vans will face different legal requirements than N1 vehicles. This puts electrified vans at a disadvantage in competition with conventionally powered vans. In order not to jeopardize the ramp-up of electric commercial vehicles, further supporting measures are needed to improve the legal framework.

## 3 Recommendations to support the market ramp-up of electric vans

### Scope of application of the driving license category B

With its proposal for the revision of the Driving License Directive, the EU Commission wants to expand the scope of application of the category B driving license (GVW <3.5t). In the future, vehicles with up to 4.25 t GVW will also be allowed to be driven with it if they are powered alternatively. Until now, a class C driver's license was required. The Commission is taking into account the higher vehicle weight due to the traction battery. Both EU-Parliament and EU-Council endorsed the extension to 4.25 tonnes in their positions. The legislative process will continue after the reconstitution of the EU Parliament as part of the trilogue negotiations. Once the new Driving License Directive has been adopted, it will have to be transposed into national law by the Member States. The states have 2 years time to do this.

In view of the already ongoing and accelerating ramp-up of electrified vans, **the revision of the Driving License Directive should be completed as soon as possible, followed by a swift transposition into national law of the Member States.**

This ensures the necessary planning security for customers with regard to the purchase of new electric vehicles, ensures the successful launch of new electric models on the market and avoids further negative effects with regard to the prevailing shortage of drivers.

## Tachographs and speed limiters

Electric vans between 3.5 t and 4.25 t gross vehicle weight (GVW) must be equipped with a speed limiter (90 km/h) and a tachograph in the case of commercial freight transport as a result of the classification as N2 vehicles.

With up to 4.25t GVW, they will offer customers the same payload as today's 3.5t combustion vehicles. When switching from combustion vehicles to electric vans, neither the payload nor the intended use of the vehicles will change. However, a tachograph and speed limiter obligation puts electric vans between 3.5 t and 4.25 t GVW in a significantly worse competitive position compared to N1 vans, as these requirements represent an obstacle to the ramp-up of electric vans and as a consequence a noticeable reluctance on the part of customers to buy these vehicles is to be expected.

A legal framework must be created quickly in which the same competitive conditions apply to electric vans as to comparable combustion vehicles. **The obligation to equip vans with tachographs and speed limiters must be adapted or abolished for electric vans between 3.5 t and 4.25 t GVW.**

This recommendation is fully in line with other EU legislation that takes into account the higher vehicle weight of electric vehicles or their battery mass to ensure a level playing field between the different types of propulsion.

For example, the European legislator has already recognized the problem and ensured that in some legislations electric vans up to 4.25t GVW are treated in the same way as N1 vans with combustion engines, i.e. the effects of the higher drive weight (battery) are compensated.

These regulations include:

- **CO<sub>2</sub> fleet legislation for N1:** Zero-emission vehicles of category N, whose reference mass exceeds 2,840kg, are nevertheless included in the N1 fleet average calculation if the excess reference mass is only due to the mass of the energy storage system.
- **Eurovignette Directive:** Member States can exempt zero-emission vehicles with a GVW of up to 4.25 tonnes from the toll requirement, thereby putting them on an equal footing with toll-free N1 vehicles with combustion engines.
- **'Extended Vehicle' under Euro7:** The 'Extended Vehicle' option allows vehicles weighing up to 5 t (N2) to be tested in accordance with the requirements for light commercial vehicles (N1), e.g. to determine the electric ranges under WLTP for electric vans.
- **Revision of the Driving License Directive (not yet completed):** The category B driving license (driving motor vehicles up to 3.5 t GVW) shall also be valid for alternatively powered vehicles up to 4.25 t GVW in all EU member states in the future.

## 4 Public charging infrastructure for freight transport, craft and city logistics

We are currently experiencing a ramp-up in electric mobility for passenger cars in Europe. For the market to develop from a niche to a mass market, an adequate charging infrastructure must be provided.

To achieve the ambitious climate protection targets, manufacturers are also striving for a substantial ramp-up in the field of electric vans (N1 and N2) by 2030, which must be stabilized. For this, it is of utmost importance to build up the appropriate charging infrastructure in advance. For at least a third of the vehicles (according to FAT publication series 342, Fraunhofer IAO), there is a need to charge them close to the driver's home, as they only rarely have a home charging option. This use case is particularly relevant for vehicles of trade, field service, service or delivery operations. For this purpose, the vehicle length of the vans must also be considered when planning the parking spaces at the charging points.

To enable the ramp-up and effective operation of electric vans, a rapid development of public HPC charging infrastructure along the main transport routes and at inner-city charging hubs is imperative. In addition, there is the provision of infrastructure services by the municipalities (including land provision and usage concepts) and a forward-looking expansion of the electricity grids.

The availability of a use case-oriented and connected charging infrastructure for freight transport, for craftsmen and for urban deliveries (city logistics) is a basic prerequisite for the operation of electric vans and thus for the acceptance of electromobility.

## 5 Subsidies for the purchase of vehicles and their charging facilities

The past has shown that subsidies for electric cars can compensate for a higher purchase price and have a positive effect on the sales of these vehicles. Since investment decisions in the commercial sector are made under the aspect of the total cost of ownership (TCO) and therefore subsidy programs are particularly suitable here to mitigate existing cost disadvantages of electric vans.

It is necessary to set up or reintroduce programs that promote the purchase of electrically powered light and heavy vans and their charging infrastructure. Regarding the charging infrastructure, these programs should also cover the need for basic consultancy services (raising awareness), concept development and implementation for semi-public and private charging infrastructure at depots (depot charging).

This would create positive incentives for companies to make purchase decisions. The programs must be designed for the longer term to give customers planning security. The creation of the legal prerequisites to be able to offer charging infrastructure as a necessary component for the operation of the vehicle in operational leasing must also be examined.

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