

Hydrogen Europe feedback to the Weights and Dimension call for evidence

Hydrogen Europe welcomes the European Commission's decision to update provisions on the maximum weights and dimensions admissible for trucks and buses. It is a much-needed update for the road transport sector, as new zero emission technologies are becoming increasingly common and need to be scaled up to reach climate neutrality and Sustainable and Smart Mobility Strategy goals in Europe.

The Commission should keep in mind that a hydrogen tractor unit is, on average, 2 tons heavier than a diesel equivalent, bringing the total weight from 18 to 20 tons. Moreover, two more tons on the tractor unit would put additional pressure on the kingpin which, in turn, would require an additional axle to comply with the weight limits. As a consequence, the additional axle would reduce the payload. In short, adding hydrogen tanks behind the cabin would require significant redesign of the whole tractor unit, and consequences on the vehicle's driving behaviour should be assessed (e.g. evaluation of turning radius). Considering the crucial role that hydrogen will play in the long-haul heavy-duty sector, this is an issue that cannot be overlooked. Therefore, current maximum weights and dimensions limits have to be raised to accommodate specific characteristics of hydrogen fuelled truck and trailer combinations.

When it comes to hydrogen storage onboard, the most obvious location of the tanks is behind the cabin; the containing frame would take up to a meter of length. Hydrogen-powered tractor units fitted with a night cabin would not be able to comply with the current requirements, since the zero-emission powertrain would cause the wheelbase to be longer than the maximum allowed limit. Coupled to a standard trailer, the combination would also exceed the maximum length limit.

When proposing the new limits, the European Commission should also consider different storage solutions on board. Research has shown the possibility of storing hydrogen tanks in the trailer, which would allow for more fuel capacity and thus increased range, understandably, at a cost of increased weight.