February 2023

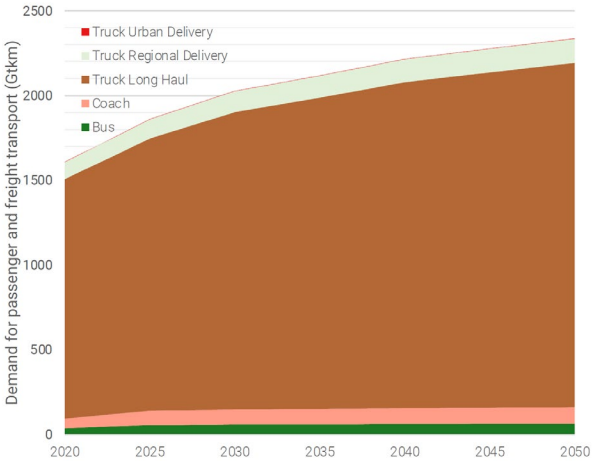
BLOG

How hard is it to reduce emissions in the EU transport sector? 5 facts on heavy-duty transport

The European Green Deal aims to reduce greenhouse gas emissions (GHG) by more than half by 2030 and reach net-zero by 2050. These are ambitious targets that will require major changes in the transport sector - the only European economic sector where emissions continue to grow. Achieving climate neutrality will require a 90% reduction in transport emissions, only possible with bold policies and a rapid phase-out of fossil fuels in all sectors. Experience has shown us that reducing transport emissions is difficult. Road transport is one of the main sources of GHGs in Europe, and heavy-duty vehicles (HDVs) are responsible for about a quarter of these emissions. It is therefore critical to understand what heavy-duty transport is, and how it can contribute to the European Green Deal targets.

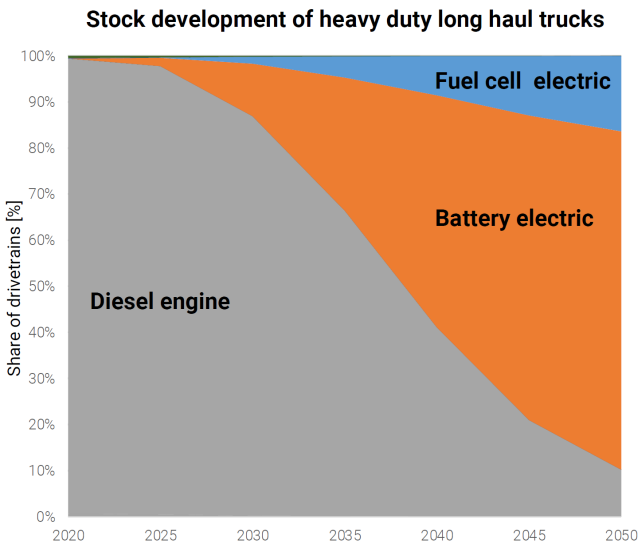
1. HDVs are road vehicles designed and used for the transport of heavy loads or a large number of passengers. The HDV fleet is very heterogeneous and includes trucks heavier than 3.5 tonnes, as well as buses and coaches, defined as passenger vehicles with more than nine seats.

2. Demand for passenger and especially heavy-duty transport like trucks and coaches - today mainly powered by diesel and kerosene, with only around 5% renewable - is expected to steadily increase until 2050 (see graph 1).



Graph 1: Demand for transport from EU 2020 Reference Scenarios. To enable mutual comparison, passenger transport is translated to freight transport, ~ proportional to the fuel consumpion in 2020.

3. Heavy-duty transport will rely on multiple powertrains, with electricity playing a key role in the long term. However, switching to electric HDVs will not be sufficient to reach the EU climate goals. Moreover, road transport electrification will not happen overnight, with today's buses, trucks, and cars set to remain on Europe's roads for decades. This is especially true for long-haul trucks (graph 2) as their charging requires more flexibility and planning, the infrastructure is not yet available everywhere in Europe, and their fleet is much larger.



Graph 2: Main assumptions: In 2030, 50% of the sales of all trucks is battery electric, first in urban and regional distribution, then in long haul. From 2040 no more sales of internal combustion engine vehicles in the heavy duty road segment

4. In the meantime, all alternative fuels such as biodiesel (HVO and FAME) will continue to play a role to accelerate HDVs decarbonisation. Sustainable biodiesel is already helping lower emissions significantly: every ton of biodiesel replacing fossil fuel saves over three tons of direct CO2 emissions. It can be blended with fossil diesel, or fully replace it, without needing to change existing infrastructure or engines.

5. In mid-February 2023, the European Commission is expected to release a proposal on the revision of the EU Regulation on HDVs CO2 emission standards. This regulation will be crucial in ensuring a continued role for renewable liquid fuels such as biodiesel, especially if it supports the development of low-carbon vehicles, does not discriminate against any GHG reduction technology or energy source, and avoids setting a 100% CO2 reduction target for HDVs. Stakeholders are looking forward to the proposal and hope it will be another step towards accelerating the decarbonisation of the commercial transport sector and delivering on the Green Deal targets.