Transport: Heavy Vehicles - Hydrogen

This lever controls the sub-levers listed in the table, and ambition levels are for the end year shown on the right-hand side.

Market trends suggest natural gas fuelled heavy goods vehicles (HGV) are becoming more popular. Fuelling these vehicles with hydrogen is a natural next step towards eliminating tailpipe emissions in heavy vehicles as an alternative to electrification.

Fuel cells are one way to eliminate tailpipe emissions in articulated HGVs and have some advantages over batteries, such as quicker refuelling times which means range is not an issue.

However, the challenges for widespread H2 vehicle adoption are the high upfront costs of vehicles and producing enough low carbon hydrogen of sufficient purity if fuel cells are to be used. A lack of hydrogen refuelling infrastructure, including storage, also poses a challenge.

Key interactions

The carbon intensity of H2 production would need to be significantly reduced for example using carbon capture, in a scenario in which H2 vehicles play a large part in reducing Kenya`s CO2 emissions.

Level 1
Efforts to increase uptake of hydrogen vehicles are abandoned and the share remains at current levels, zero.

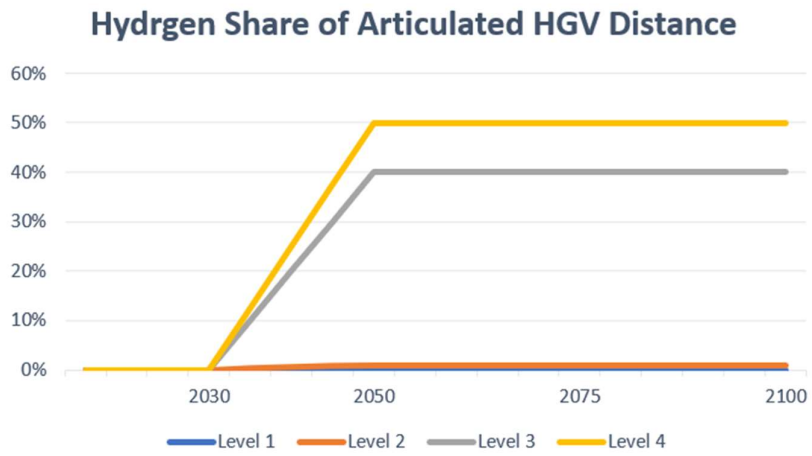
Level 2
1% of articulated HGVs and 20% of buses are fuelled by hydrogen.

Level 3
40% of articulated HGVs and 30% of buses are fuelled by hydrogen.

Level 4
50% of all articulated HGVs and buses are powered by hydrogen.

Default Timing Start year: 2020, End year: 2050

Sub-Lever	Units	2015	Level 1	Level 2	Level 3	Level 4
HGV Articulated	share	0.0	0	0.01	0.4	0.5
Bus	share	0.0	0	0.2	0.3	0.5



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