

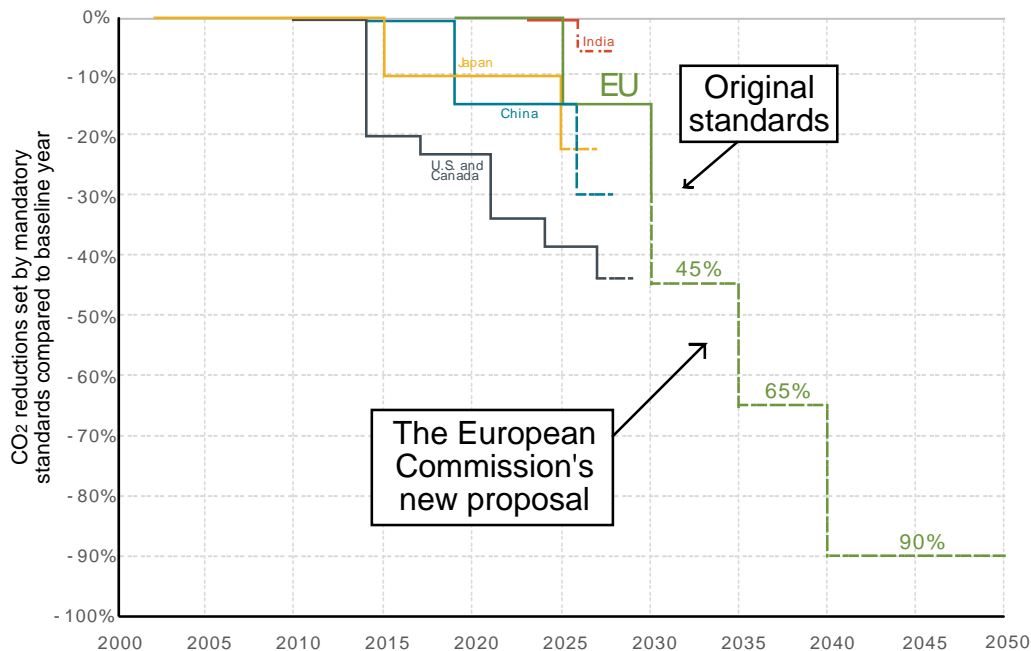
An analysis of Europe's CO₂ standards proposal for trucks and buses

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Europe's new heavy-duty CO₂ standards

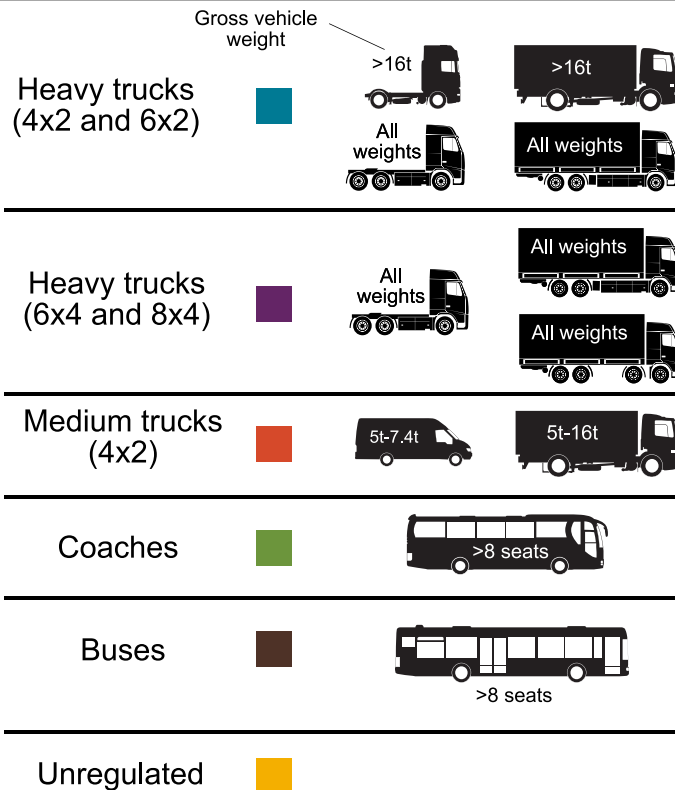
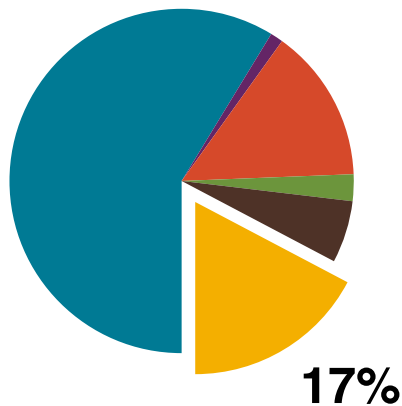


9% of HDV emissions remain uncovered

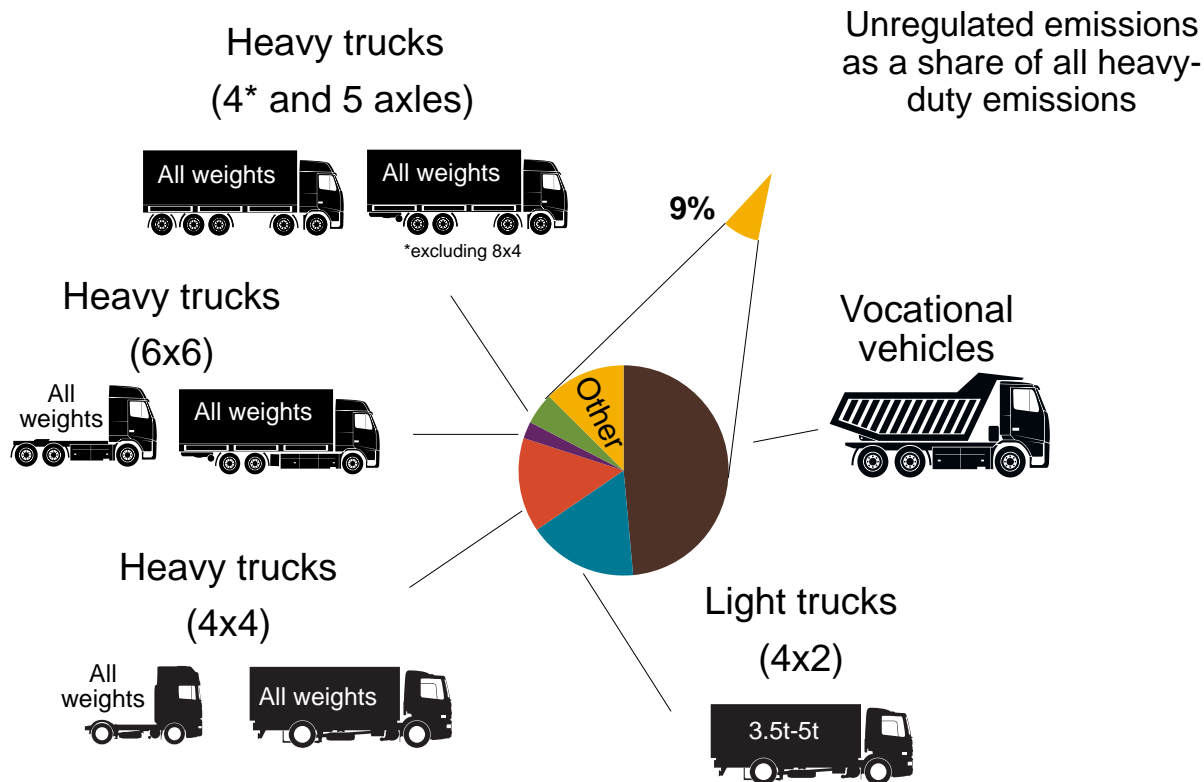
Annual emissions (2020)



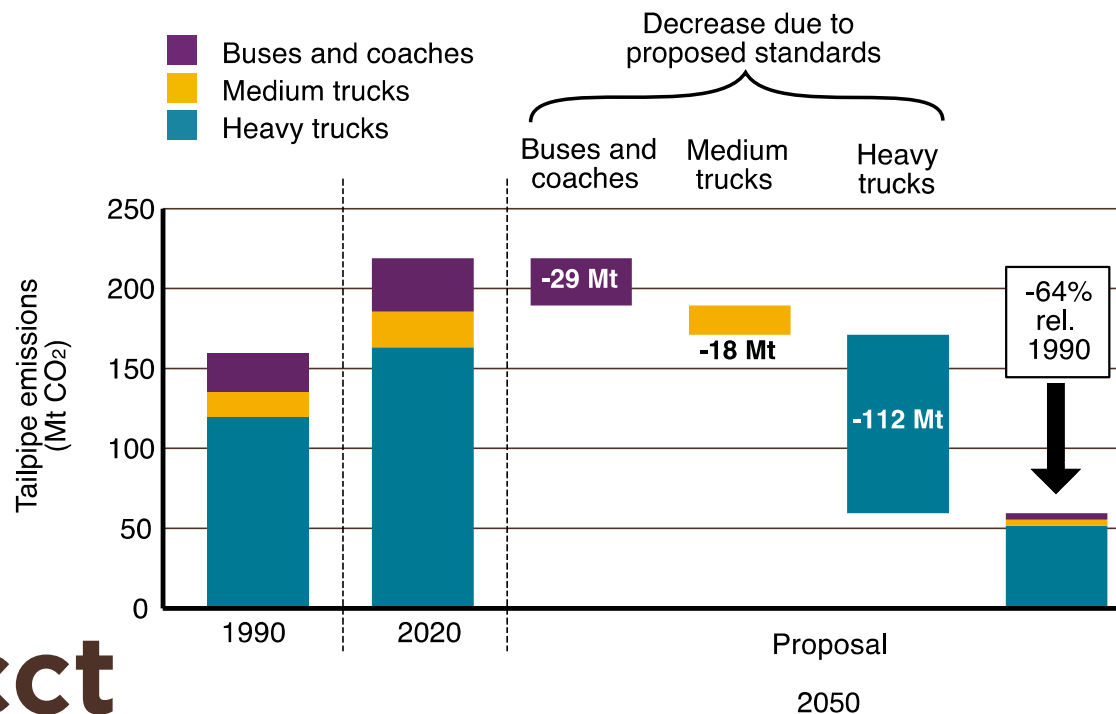
Annual sales (2020)



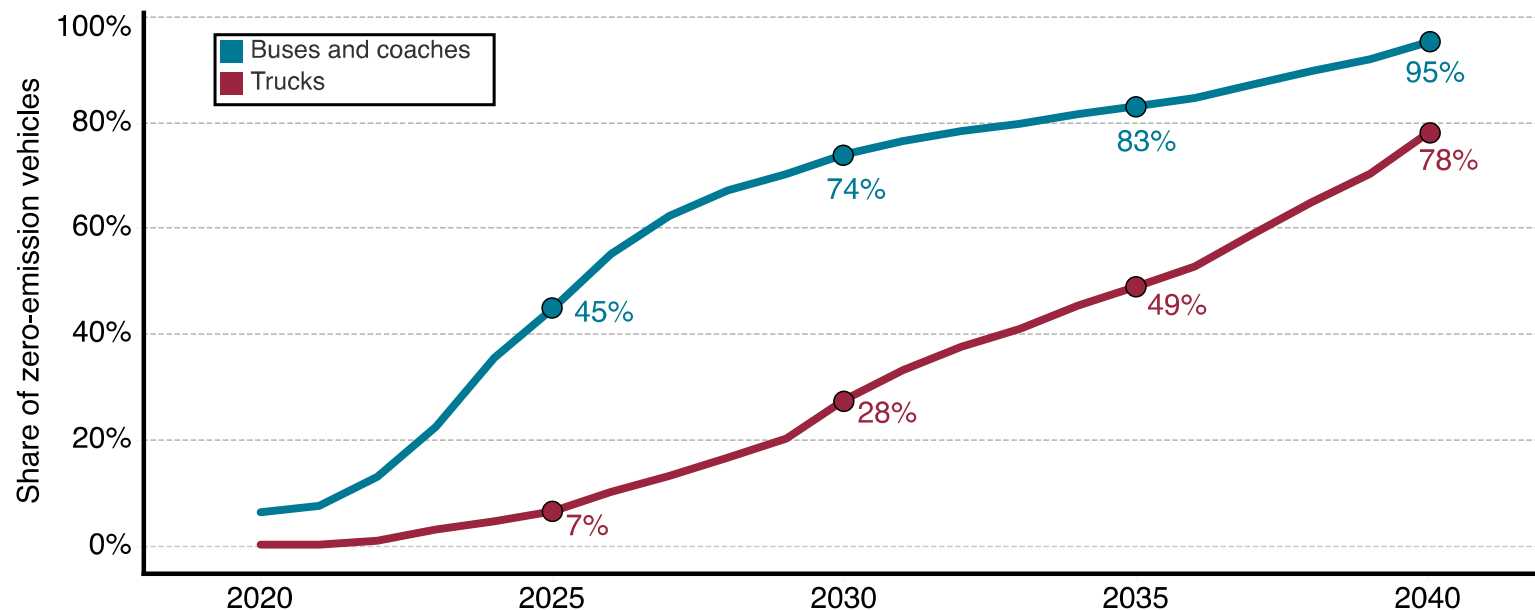
Vocational vehicles make up half of all unregulated emissions



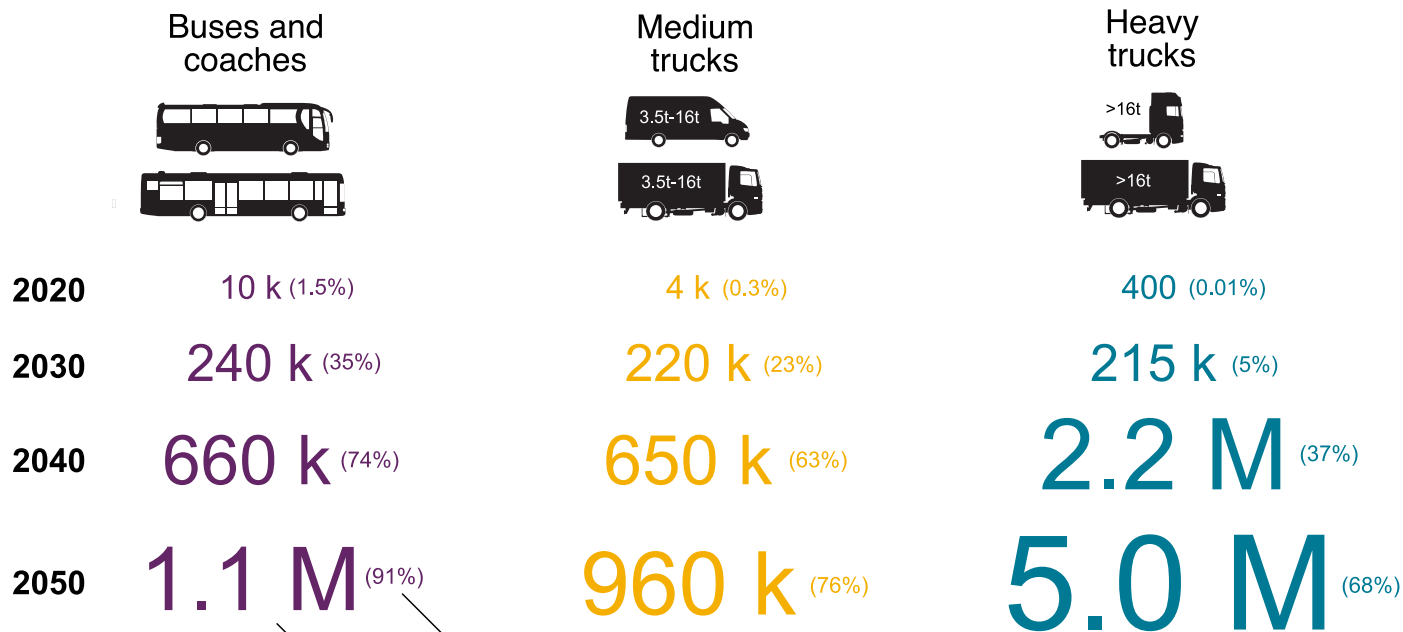
1.8 billion tons of CO₂ emissions avoided



Zero-emission shares through 2040 under proposal



Rapid rise in stock of ZE-HDVs under proposal

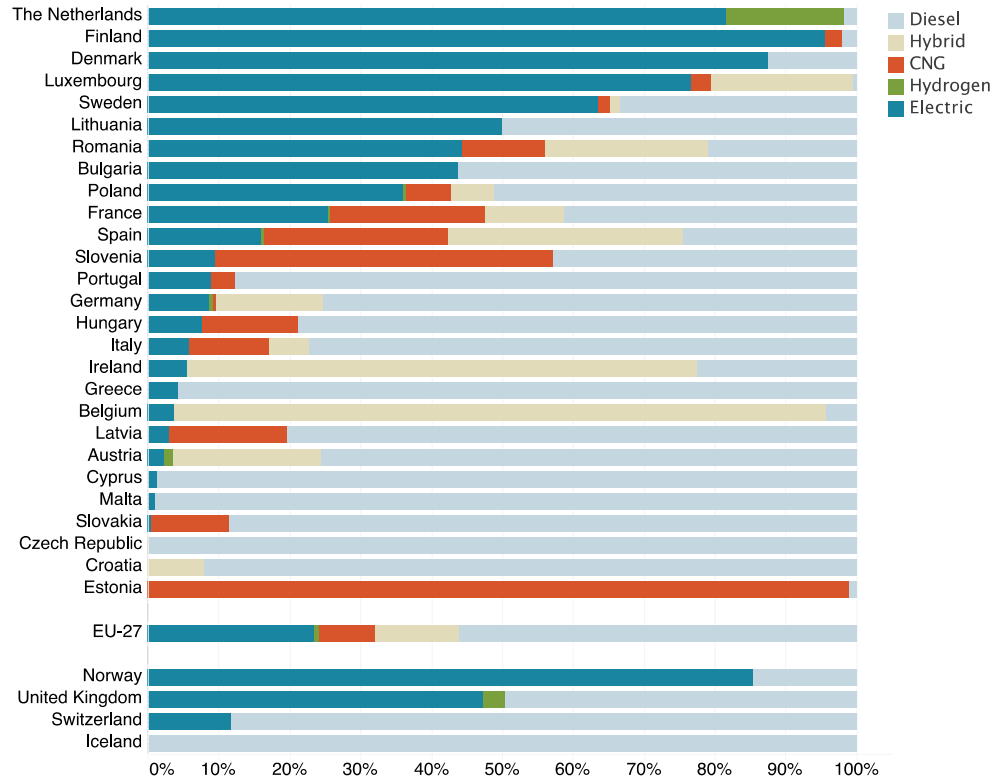


Number of zero-emission vehicles on the road

As a share of total stock

Zero-emission urban buses have reached mass adoption in several Member States

- Nearly 100% zero-emission urban bus sales in the Netherlands and Finland in 2022
- More than 50% share in Denmark, Luxembourg, Sweden, and Lithuania



Changes in definition: Zero-emission vehicles

Currently:

$$\leq 1\text{gCO}_2/\text{kWh}$$

(0.2% of the emissions of a standard tractor-trailer)

Proposal:

Trucks

$$\leq 5\text{gCO}_2/\text{tkm}$$

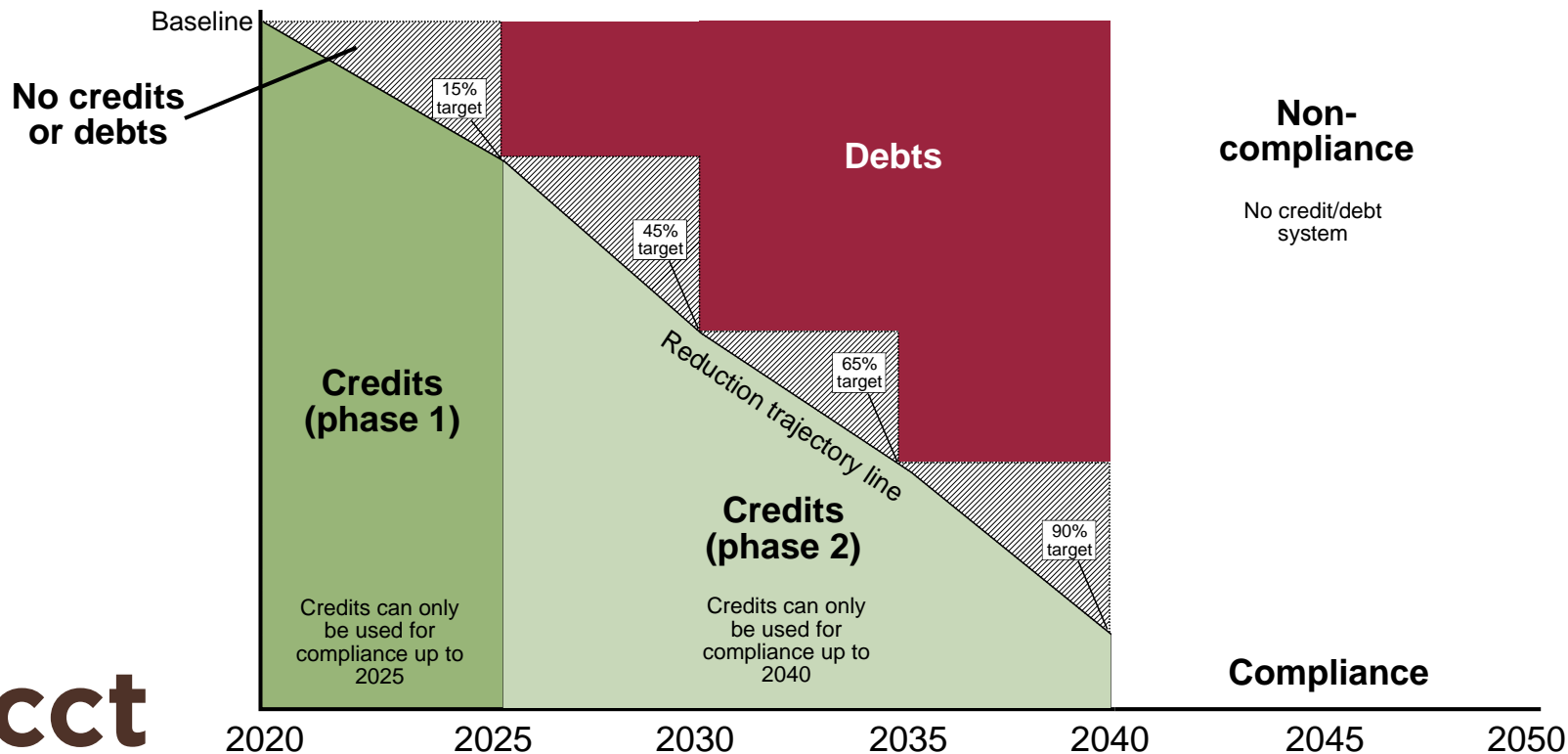
(10% of the emissions of a standard tractor-trailer)

Buses and coaches

$$\leq 5\text{gCO}_2/\text{pkm}$$

(20-30% of the emissions of a bus/coach)

Flexibilities – The credit and debt system



A good standard, with room for improvement

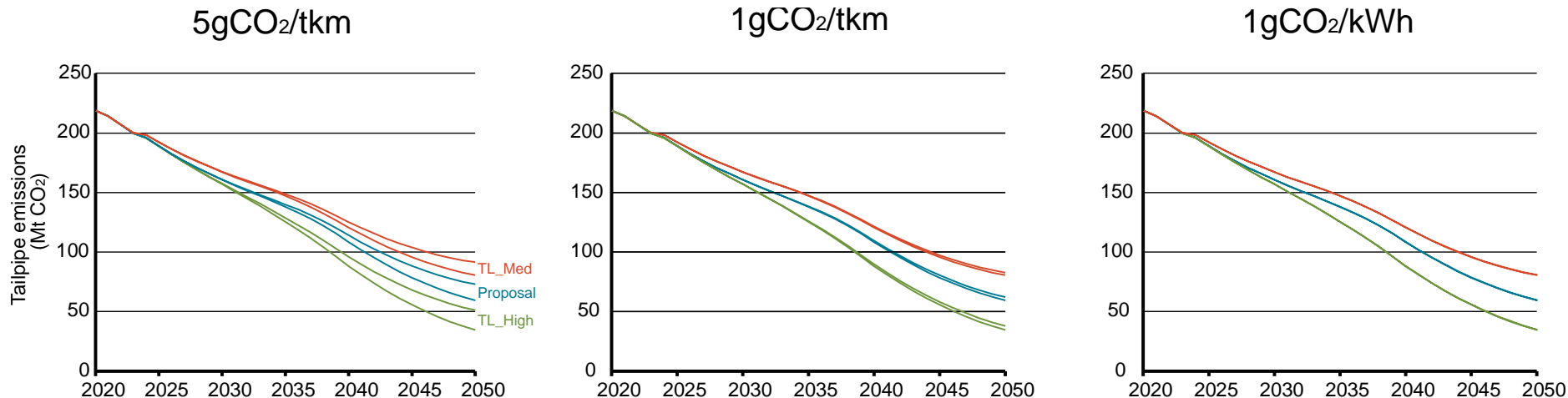
1. The targets do not align with the European Climate Law
2. The scope can be extended further
3. The new threshold for zero-emission vehicles should be revised
4. The credit lifetime should be shortened from 2025

Questions?
Contact e.mulholland@theicct.org



THE INTERNATIONAL COUNCIL
ON CLEAN TRANSPORTATION

New definition for zero-emission vehicles increases uncertainty

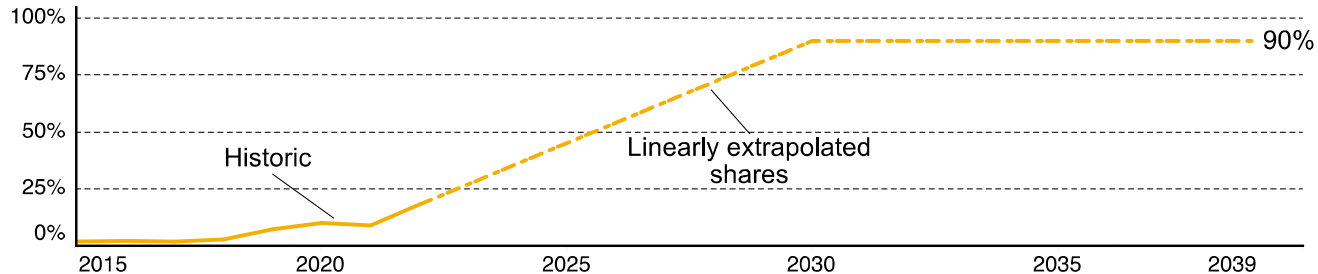


The definition of a zero-emission vehicle has been increased to 5gCO₂/tkm (previously 1gCO₂/kWh)

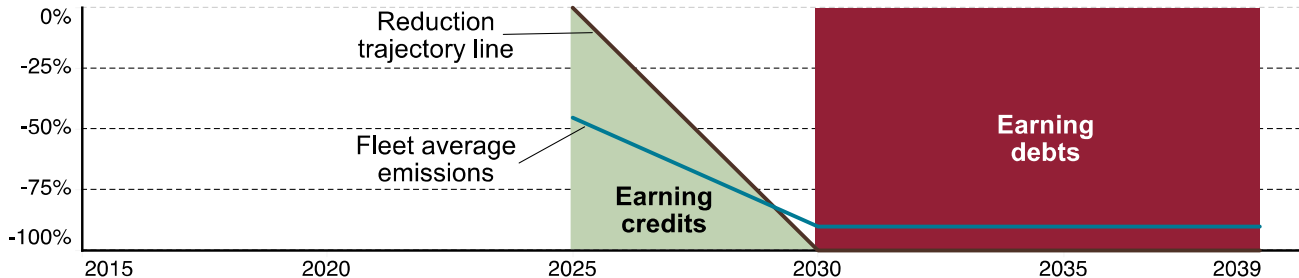
This opens the door to H₂ ICE vehicles which use diesel as a pilot fuel and risks increases cumulative emissions by 100-170 Mt

A long credit life is particularly risky for buses

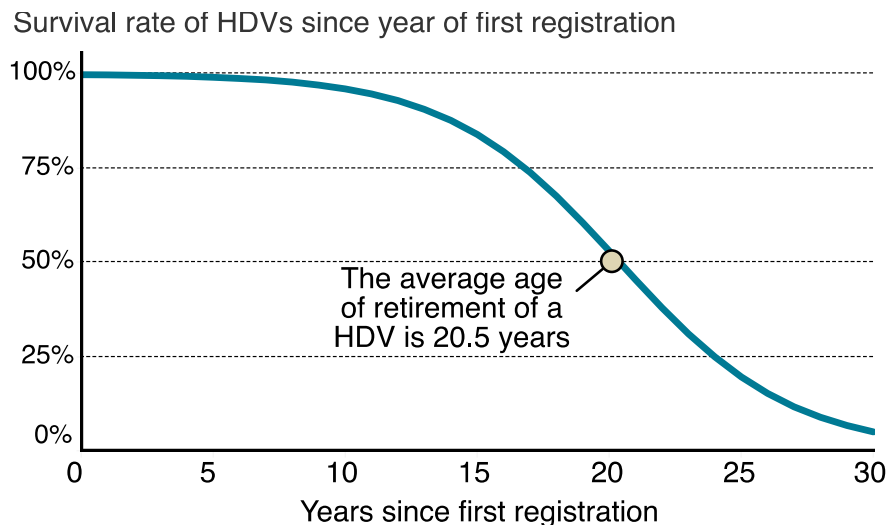
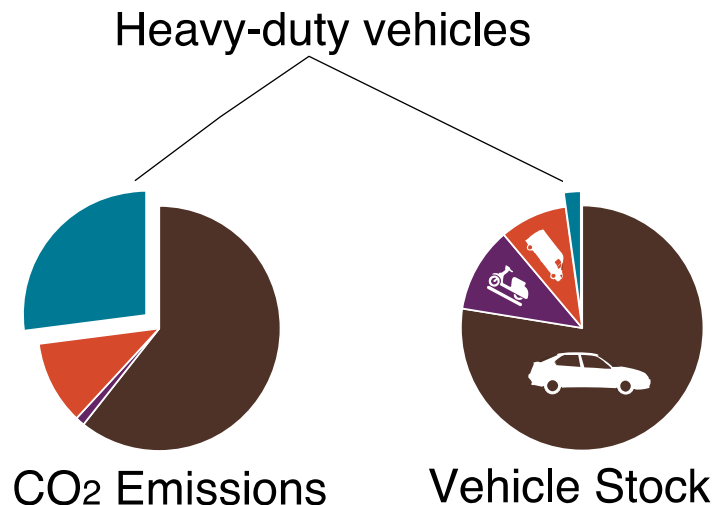
Share of zero-emission buses



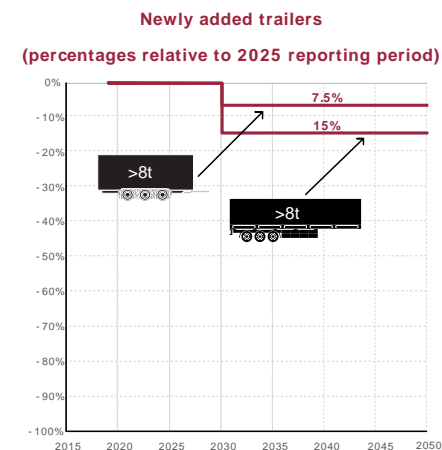
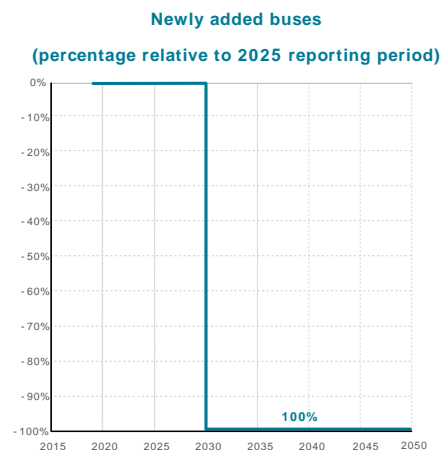
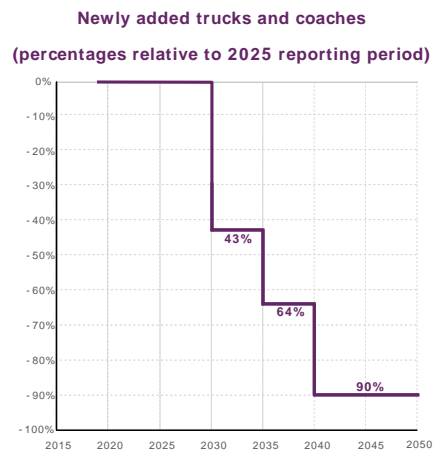
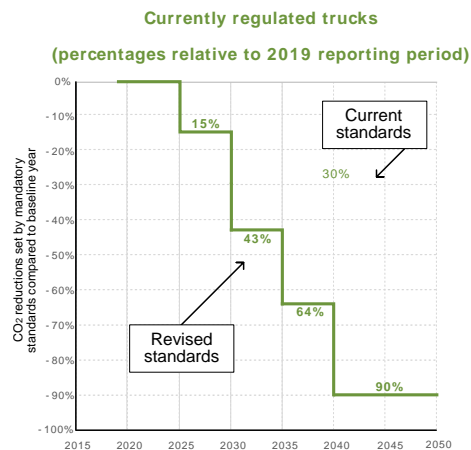
Fleet average emissions relative to the reduction trajectory



A snapshot of trucks and buses in Europe

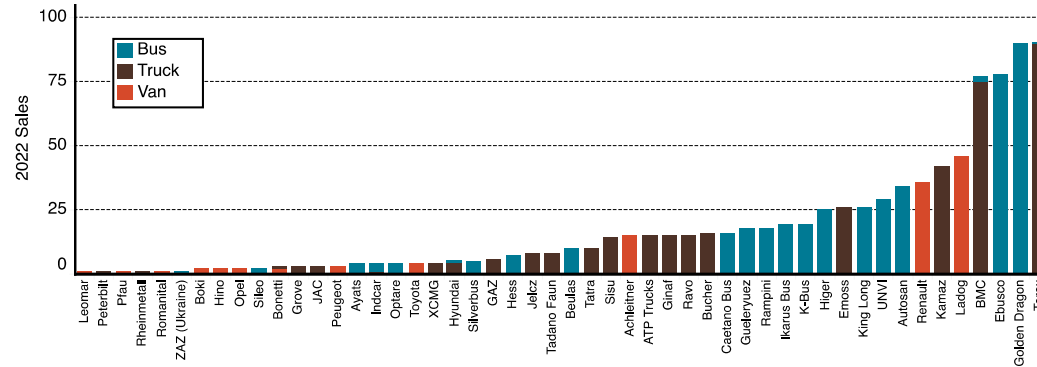


The new targets by vehicle type

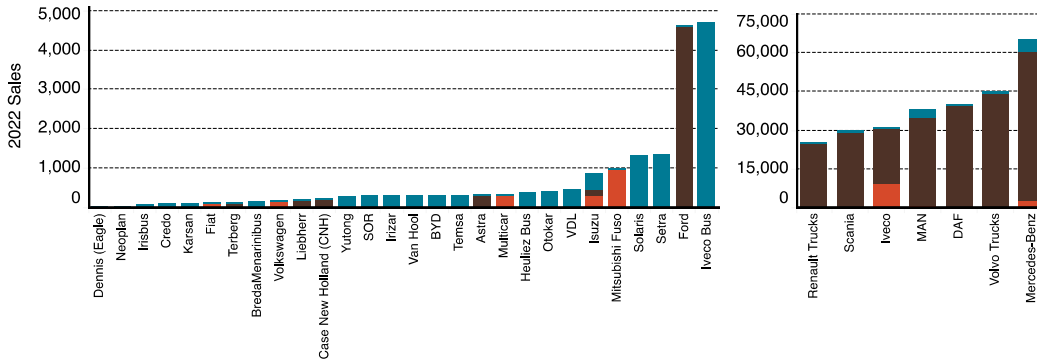


The 100 vehicle exemption exclude ~50 manufacturers (but only 0.3% of all HDV sales)

Excluded manufacturers based on 2022 sales



Regulated manufacturers based on 2022 sales



98% reduction is needed to align with Europe's climate commitment

The European Green Deal COM(2019) 640 final:

"To achieve climate neutrality, a 90% reduction in transport emissions is needed by 2050"

Sustainable and Smart Mobility Strategy:

"By 2050 nearly all cars, vans, (...) will be zero emission" COM(2020) 789 final

Fit for 55 Proposal:

"(...) renewable and low carbon fuels should represent between 6% and 9% of the international maritime transport fuel mix in 2030 and between 86% and 88% by 2050" COM(2021) 562 final

"(...) sustainable aviation fuels should account for at least 5% of aviation fuels by 2030 and 63% by 2050" COM(2021) 561 final

