

Hydrogen for Transportation: Don't Bet on It



What are the issues?

Hydrogen has very little future in the transportation sector. By the time proposed hydrogen production projects are built, the adoption of battery electric vehicles (BEVs) will have expanded substantially, weighing against most vehicular uses of hydrogen, even in the trucking industry.

Hydrogen is not a clean fuel, since 95% of hydrogen made in the U.S. is from fossil fuels.

Alexander Vlaskamp, CEO of the second-largest truckmaker in Europe, MAN, told Austrian paper der Standard with regard to BEV trucks that, "The technology is mature and most efficient. In our estimation, 80[%] or even 90% of logistics trucks will be electrically driven."

Hydrogen Insight. 'Far too expensive' – Europe's second-largest truckmaker says hydrogen will not be a major road freight fuel. June 23, 2023

Doesn't a market for hydrogen already exist in the transport sector?

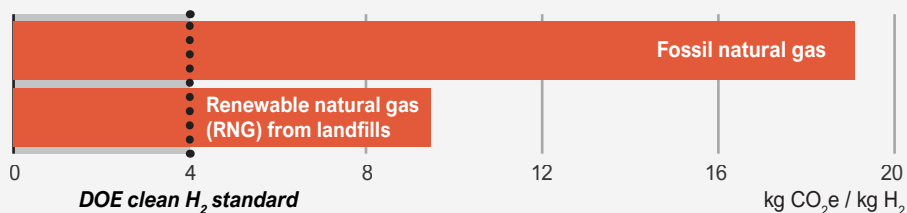
No. [Argonne National Labs](#) reports that in 2023 only 2,978 hydrogen fueled vehicles were sold in the U.S. while more than 1.4 million battery electric and plug-in hybrid electric vehicles were sold, a ratio of 471:1. The hydrogen vehicle market is tiny.

Hydrogen is cleaner than fossil fuels, right?

No. Today's hydrogen is produced from fossil natural gas (methane) and is very dirty. Methane, emitted in the production and transport of natural gas from a well or a landfill (RNG), is a powerful greenhouse gas more than 80 times as potent as CO₂ over 20 years. Small, modular site-based hydrogen production facilities could release more than 19 tons of CO₂ equivalent for every ton of hydrogen.

Emissions will be much higher than the DOE clean hydrogen standard, according to IEEFA estimates

Emissions from small, modular site-based hydrogen production facilities without carbon capture and storage (CCS)



IEEFA's research makes clear that the hype related to hydrogen produced from methane will result in the funding of projects that exacerbate climate change and extend our reliance on fossil fuels for decades.