

BIOMETHANE IN ROAD TRANSPORT

Availability & sustainability

Biomethane can be used as a transport fuel as replacement for traditional fuels such as natural gas, gasoline or diesel.



Since biomethane is produced exclusively from waste, it closes open biological cycles and is therefore a solution to multiple environmental long-term challenges.

80 %

CO₂ savings compared to gasoline vehicles

34 bcm

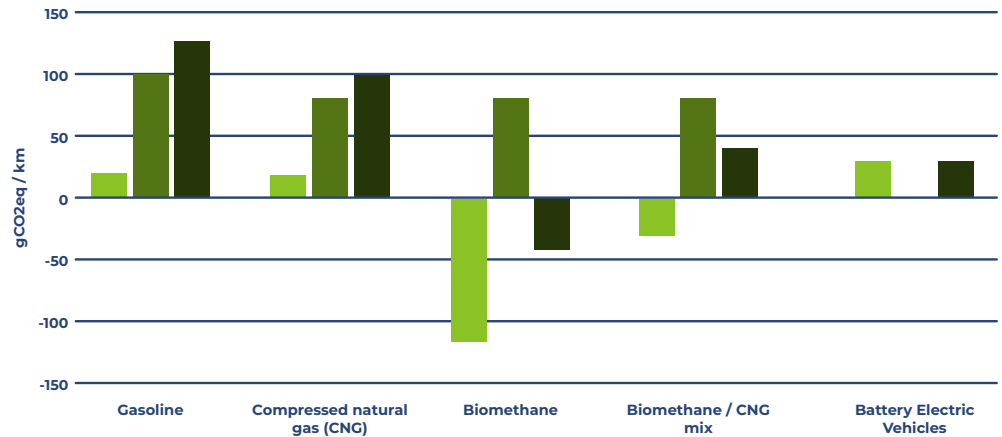
billion cubic meters of sustainable biomethane can be reached by 2030

40 %

of all gas-powered vehicles in the EU could run on biomethane by 2030

Well to Wheel approach

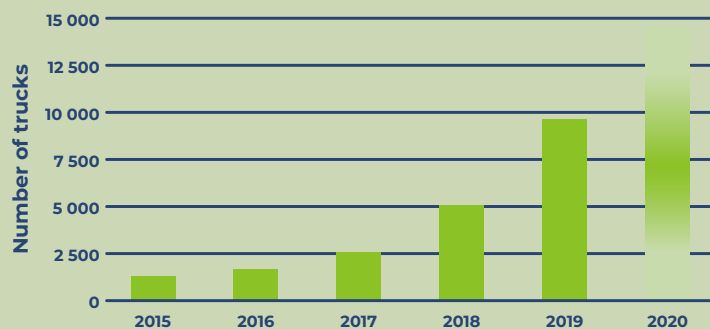
Biomethane results in the least amount of CO₂ emissions per kilometer (and even negative emissions) if counting the transport fuels' emissions from the moment of producing the fuel/energy carrier (well-to-wheel).



Three types of CO₂-emissions per energy carrier in grams of CO₂ per kilometer:

Well to Tank (WTT) Tank to Wheel (TTW) Well to Wheel (WTW)

Source: Frontier Economics (2021), CO₂ Emission Abatement Costs of Gas Mobility and Other Road Transport Options

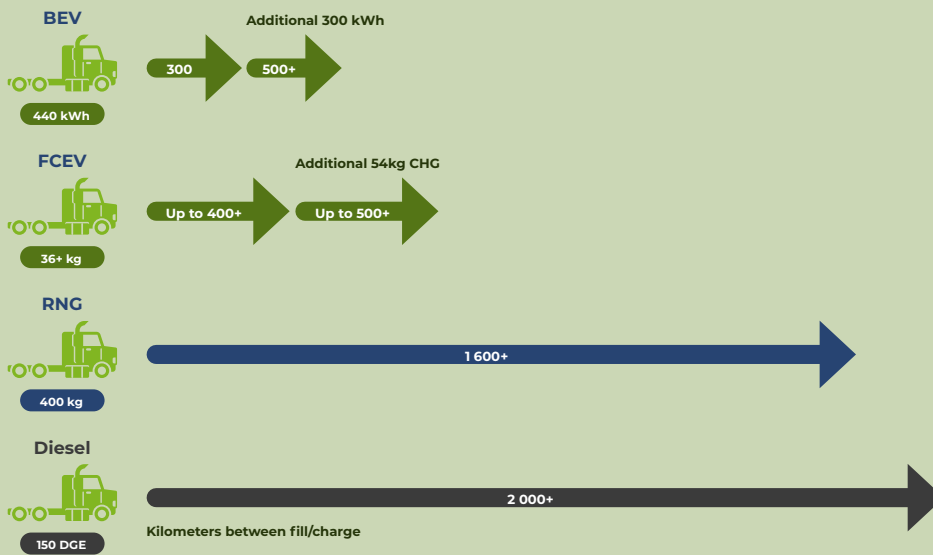


Source: NGVA (2020), BioLNG in Transport: Making Climate Neutrality a Reality. Evolution of LNG vehicles in Europe

Bio-LNG trucks in the EU fleet

The decarbonisation of long-distance vehicles will require renewable and low-emissions fuels such as bio-CNG and bio-LNG, suitable refueling infrastructure and vehicles that are able to utilize these sustainable fuels.

These renewable fuels are available immediately.



BEV - Battery Electric Vehicles; FCEV - Fuel Cell Electric Vehicles; RNG - Renewable Natural Gas

Source: EBA (2022), Fuelling clean mobility with bio-LNG, pg. 9

Achievable ranges with different propulsion technologies

The total electric vehicle fleet in the EU consists mostly of passenger cars. Heavy-duty road transport is harder to electrify because it is dependent on powerful engines for long distances and heavy cargo.

Recommendations



New Regulations should be technology-neutral creating a level playing field for all fuels and engine systems to enable the deployment of all possible solutions;



An approach based on life-cycle assessments (LCA) ensures a holistic analysis of the carbon footprint of vehicles and GHG emissions, from well-to-wheel;



Further deployment of CNG and LNG refuelling infrastructure across the EU is needed for increasing the uptake of bio-CNG and bio-LNG.

For more information visit www.biomethane4europe.eu

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an initiative of the Zürich 5 Coalition