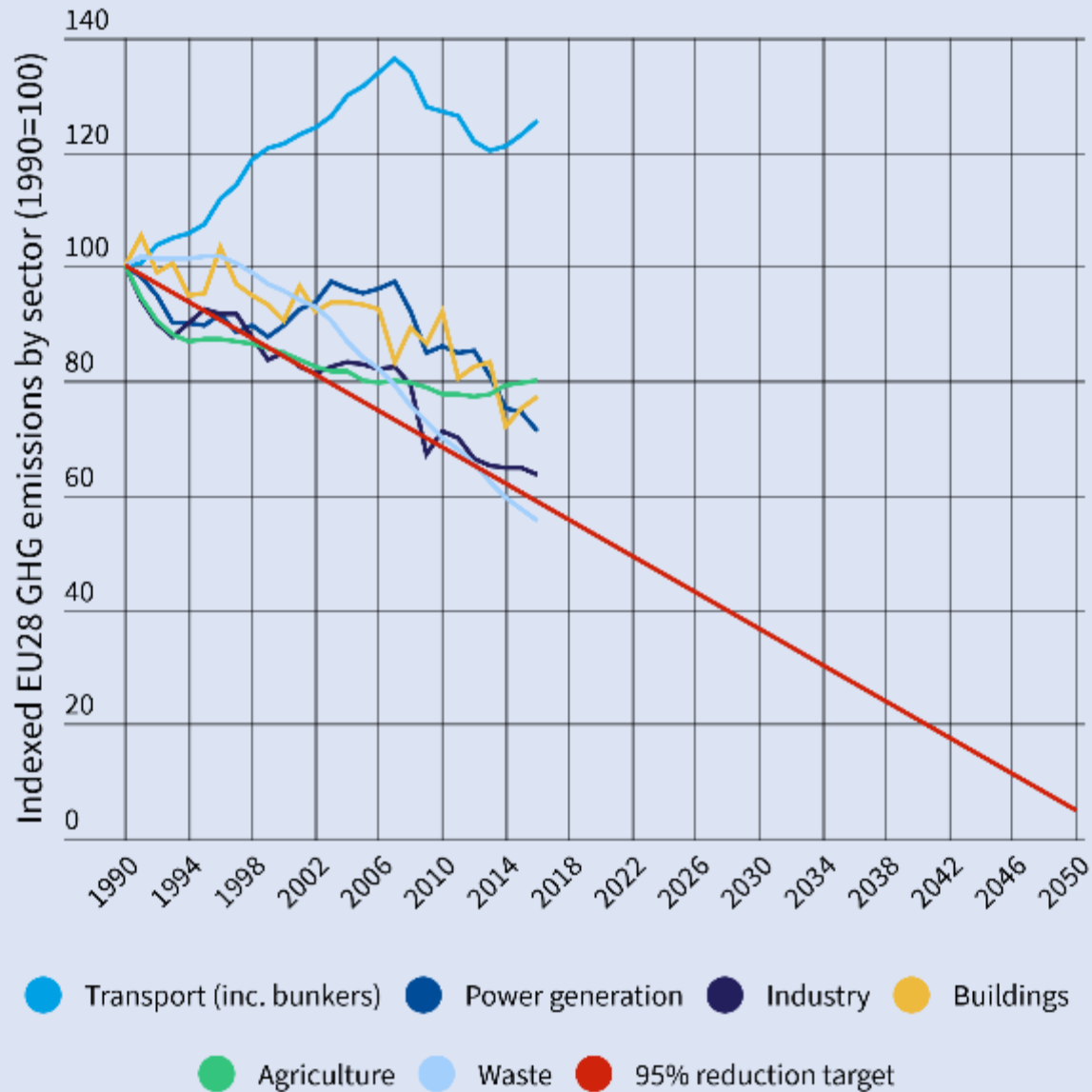


# **FUELLING TRANSPORT CNG, LNG, H2?**

**18.2.19  
JORI SIHVONEN**

# GHG emissions



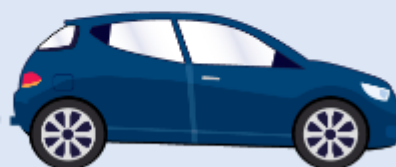
# Gas in transport: just another fossil fuel

EU transport needs to be zero greenhouse gas emissions by 2050



Diesel

-7% to +6%



Gas



Best-in-class Diesel

-2% to +5%

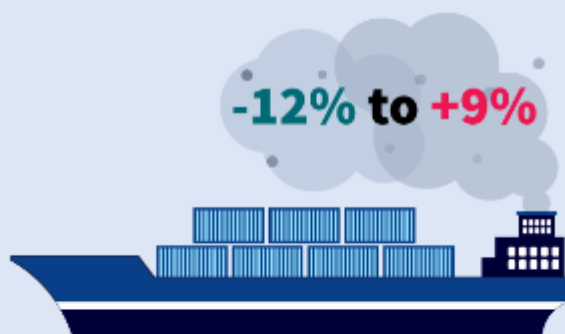


Gas



Marine fuel

-12% to +9%



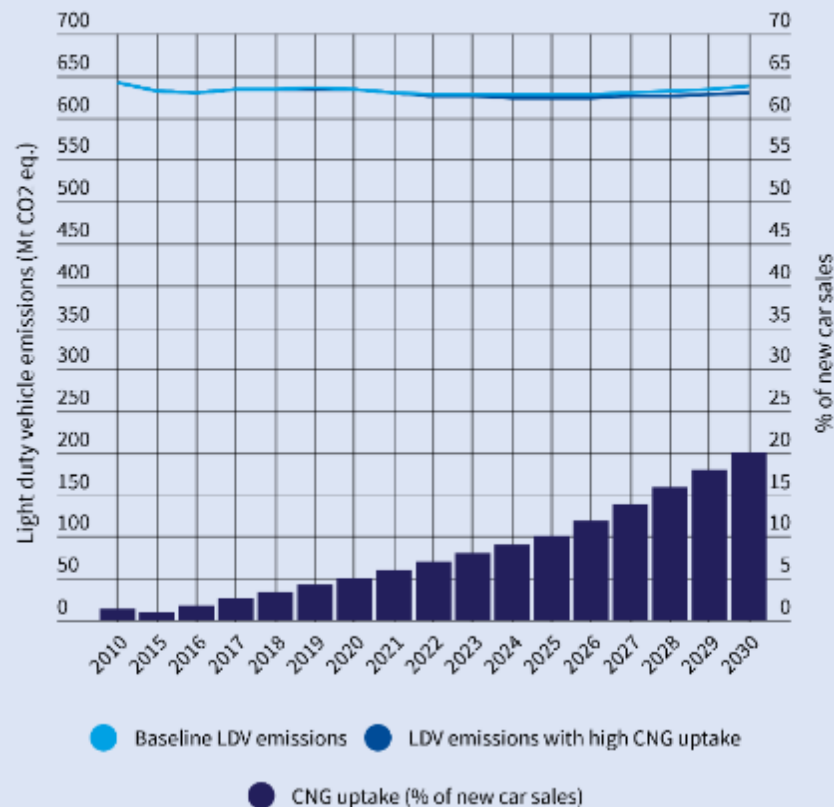
Gas

Notes: Compared to diesel cars, CNG cars emit -7% to +6% GHG versus best-in-class Diesel trucks, CNG/LNG trucks emit -2% to +5% and in comparison to Marine Gas Oil (MGO) ships, LNG ships emit -12% to +9%. The well-to-wheel GHG savings are assumed with medium well-to-tank emissions of fossil gas.

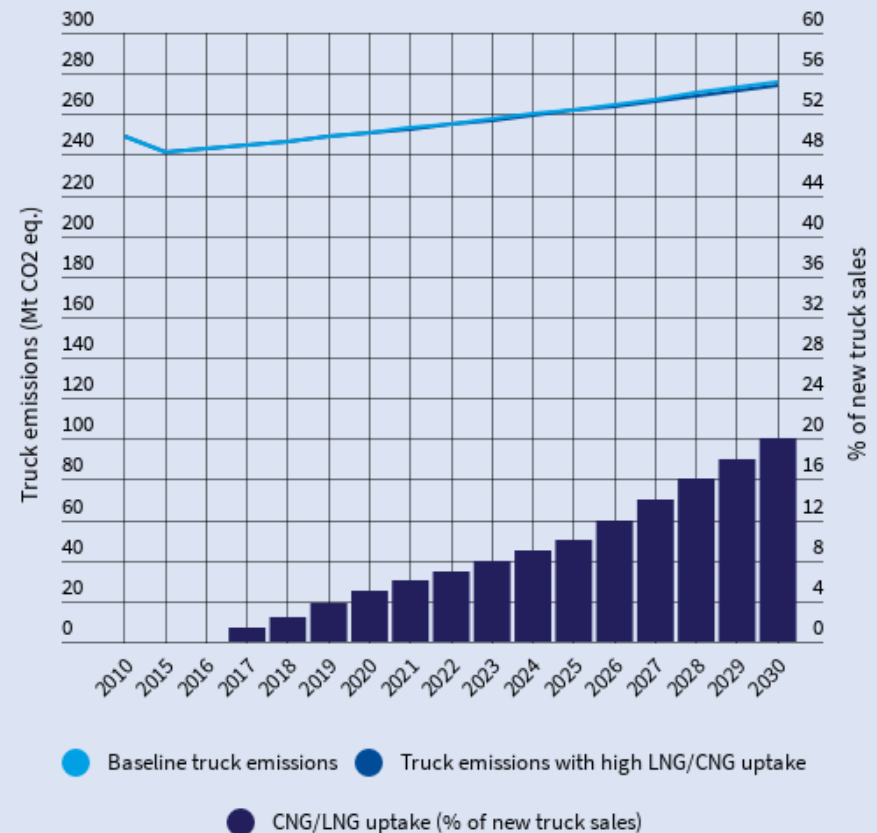
Source: Transport & Environment (2018) *CNG and LNG for vehicles and ships - the facts*

# FLEET EMISSIONS

## CNG cars impact on WTW emissions

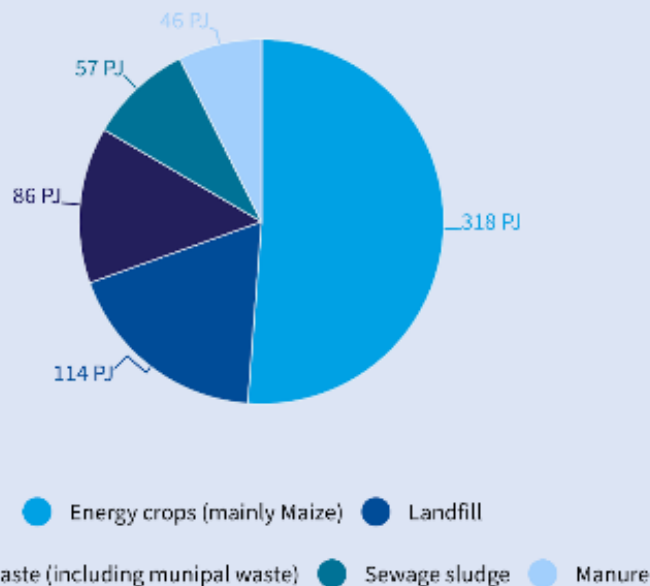


## Gas trucks impact on WTW emissions



# RENEWABLE GAS

## Biomethane composition in EU (2014)



Source: CE Delft et al. (2016): Optimal use of biogas from waste streams - An assessment of the potential of biogas from digestion in the EU beyond 2020

## Current situation

- 4% of gas use is biogas
- 0.5% of gas grid is renewable (biomethane)
- Less than 1% of all biogas is used in transport

## Sustainability

- Biofuels problems

## Future potential?

- If all waste biomethane is used in transport, the maximum potential is 10% of current transport energy use (assumes no biomethane for other sectors)
- PtG?

# Cars: Battery electric most efficient by far

