

# Matthews International transport LTD

## Carbon reduction strategies.

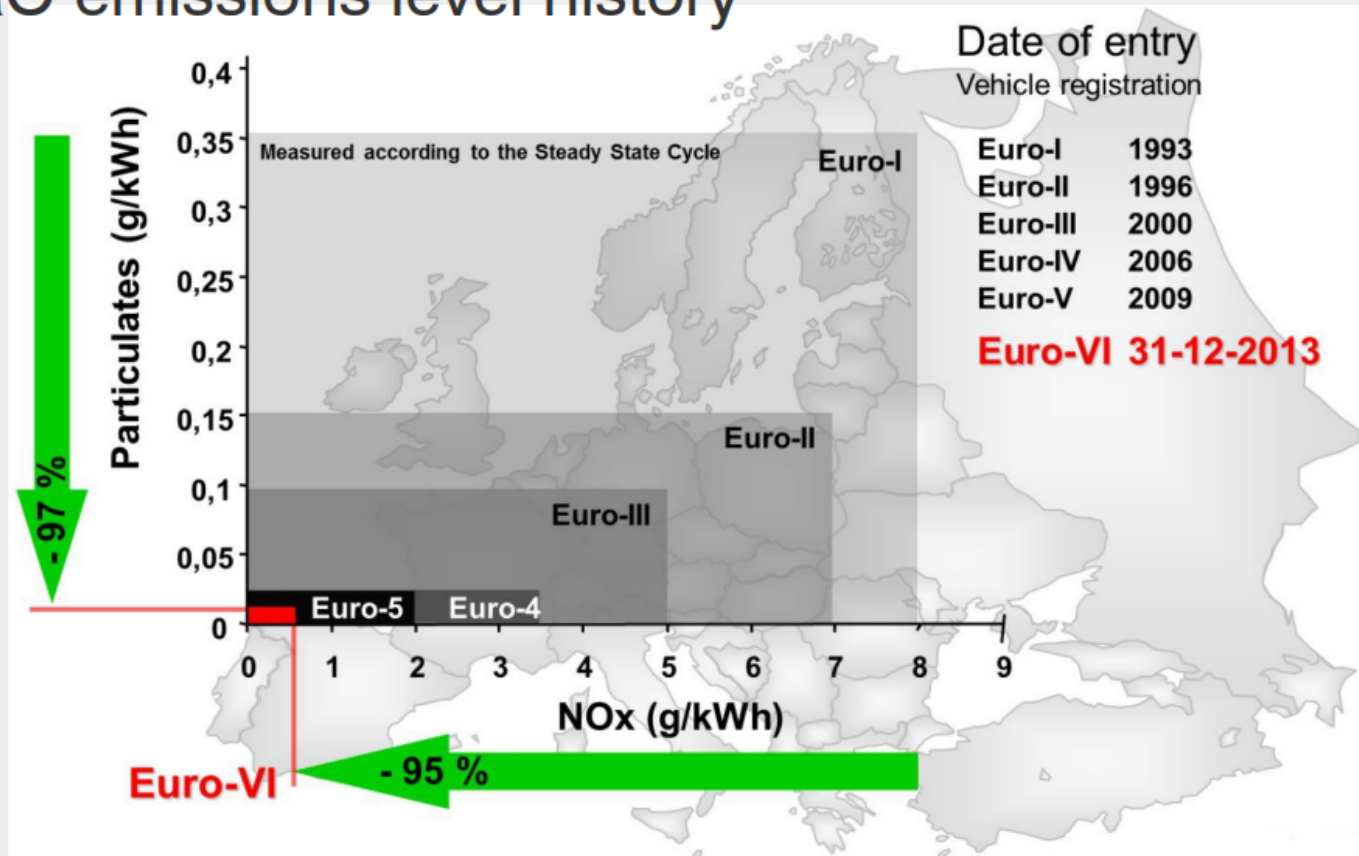
**Matthews**  
Established 1971



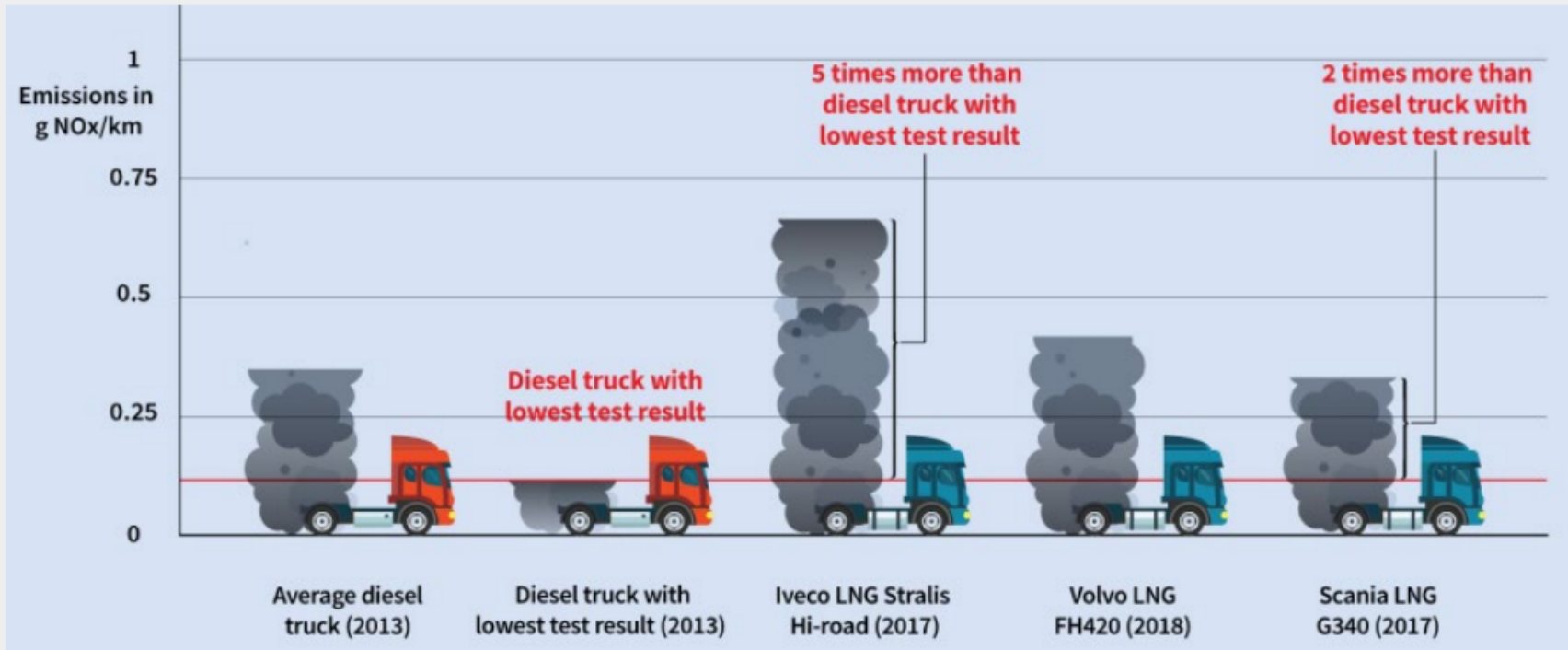
Committed to driving down a reduction in the carbon footprint.



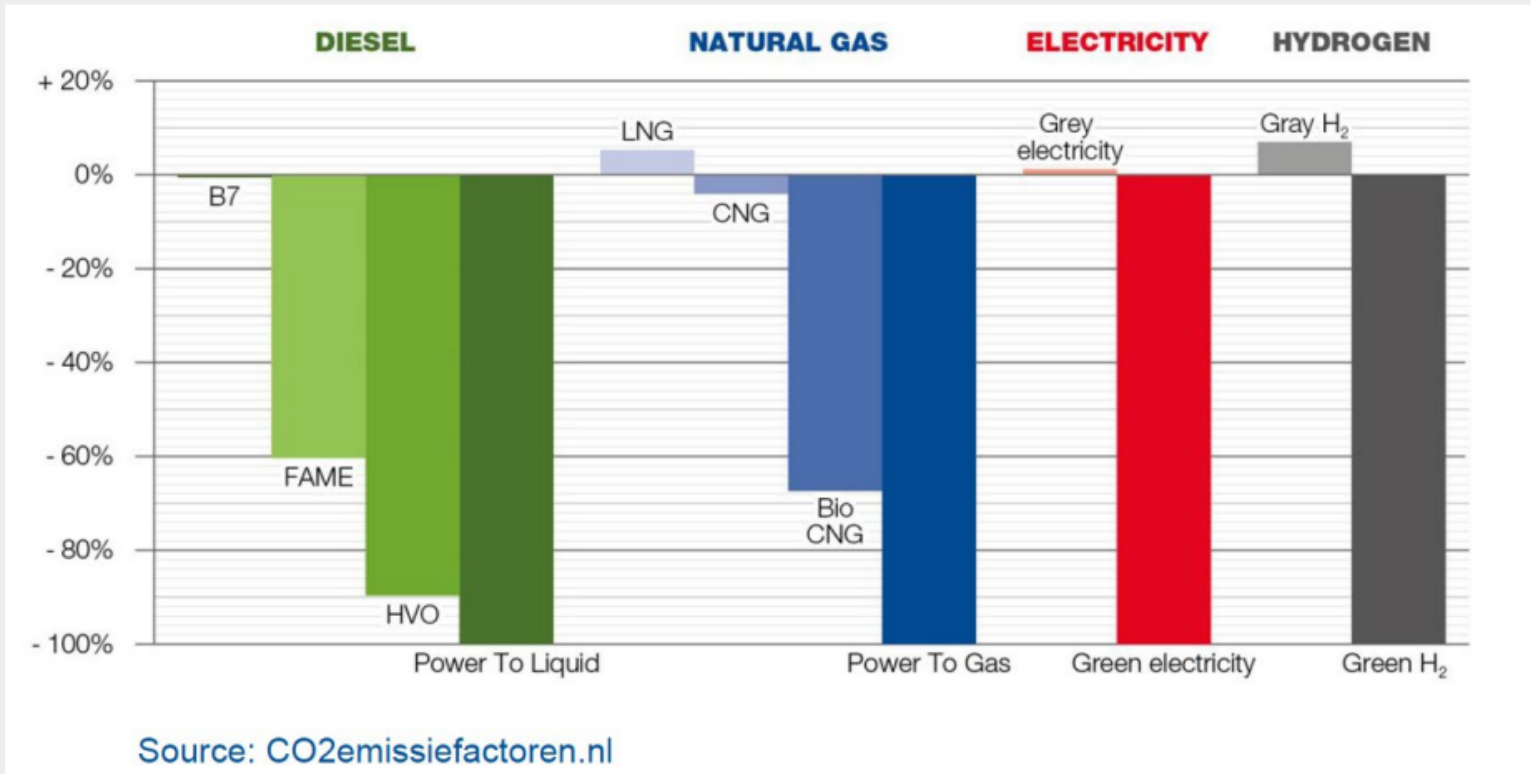
# EURO emissions level history



# Tailpipe emissions – local air quality (No<sub>x</sub>)



# Well-to-Wheel CO<sub>2</sub> reductions by fuel type



# HVO – DROP IN SOLUTION TODAY

- 90% well-to-wheel CO<sub>2</sub> reduction
  - Over pump diesel
- Completely drop in solution
  - Zero additional maintenance needs
- Stable
  - Hydrophobic
- 99% reduction in aromatics
  - Paraffinic compounds which cause sooting



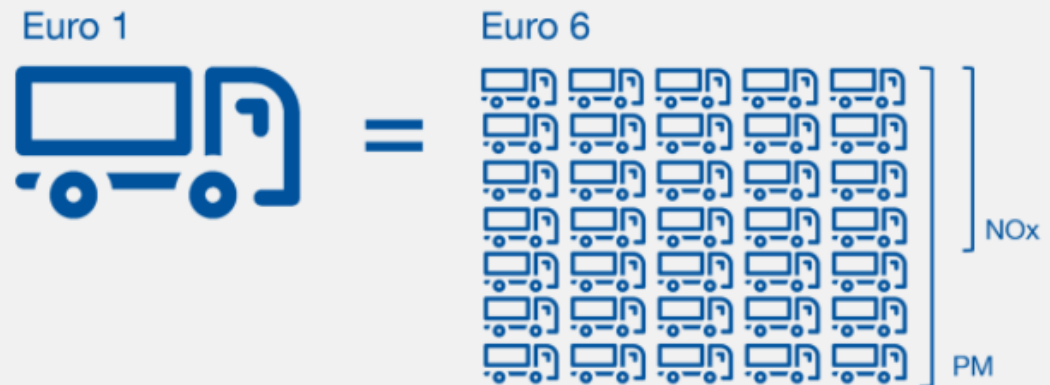
## Huge reductions in NOx and soot emissions

It is useful to stop every now and then to consider the impressive achievements that have already been accomplished with regard to trucks and emissions. The nitrogen oxide emissions of a modern truck with a Euro 6 diesel engine are an incredible 95% lower than those of a similar truck 25 to 30 years ago. And particle emissions have fallen even more – 97% – in the same period.

### In other words:

A single Euro 1 truck built in 1994 produces the same amount of NOx as 20 modern-day trucks.

And in terms of particle emissions: one Euro 1 truck from 1994 is as polluting as 35 trucks built today.



### And what about CO<sub>2</sub> ?

The most recent generation of DAF trucks are no less than 20% more efficient than their predecessors 20 years ago. And in this case, 20% less fuel consumption translates directly into a 20% reduction in CO<sub>2</sub> emissions.

Our investment into **LNG**  
(Liquid Natural Gas)

**20% LOWER  
CO2 EMISSIONS**

100% Lower CO2 when using Liquefied bio-LNG and Synthetic (HVO) tank-to-wheel





# Matthews

Established 1971



In addition to our commitment to cleaner vehicles we drive down our CO2 footprint further by the strategic use of double decked trailers.

This amounts to an approx annual saving of **3,312 Tonnes** of CO2 across the fleet.



# Planned further investments into the New Generation DAF

New Generation DAF are estimated to have 10% CO2 reduction.



Efficiency of the future



***Matthews***  
*Established 1971*