

VOLVO

Volvo Trucks Driving Progress

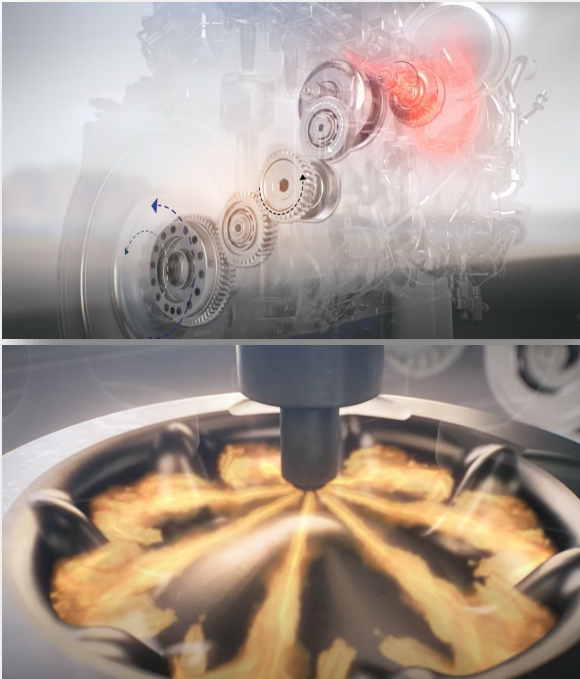
John Comer



Well-to-wheel decarbonisation

What are our options?

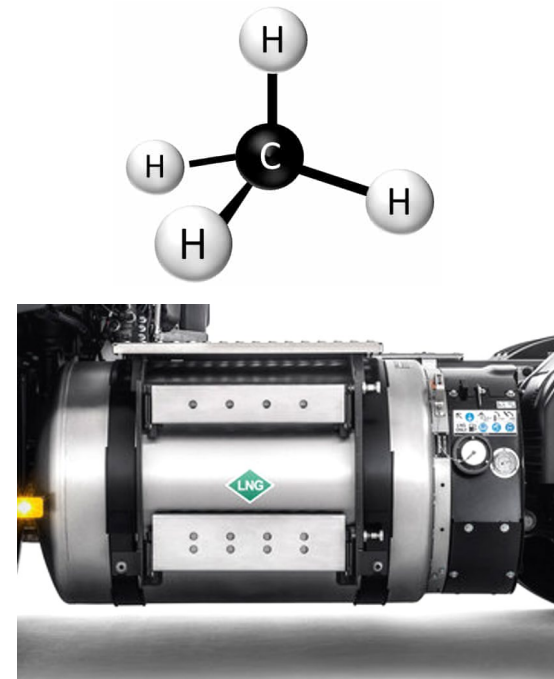
Improving current diesel technology



Renewable 'drop-in' fuels



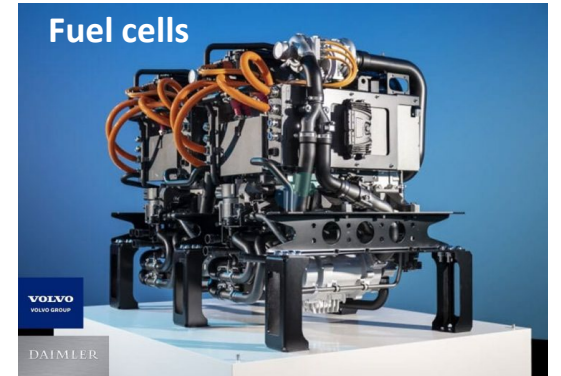
Liquified methane/biomethane



Electric



Fuel cells



The Current Offer – Range Anxiety

Volvo Trucks have a complete offer



Volvo FL 4x2 Rigid
Volvo FE 4x2 & 6x2 Rigid



Volvo FH, FM & FMX Tractors



Volvo FH, FM & FMX Rigid



2019

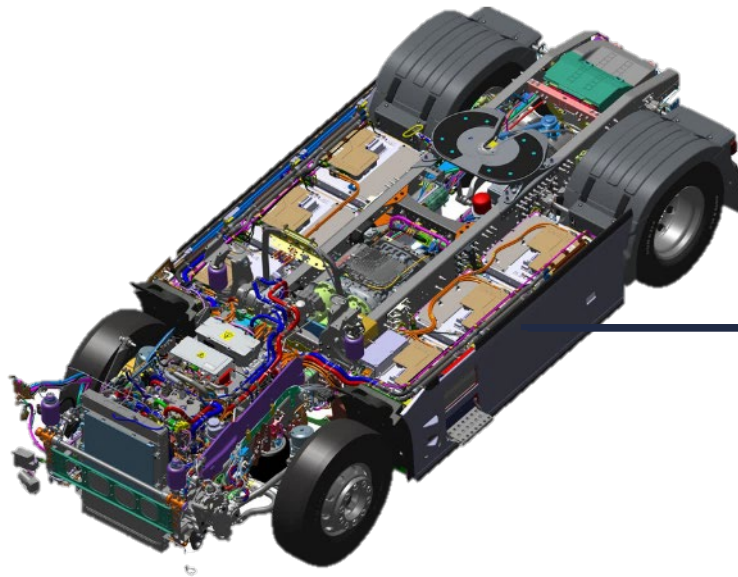
September 2022

March 2023

Scale Comparison

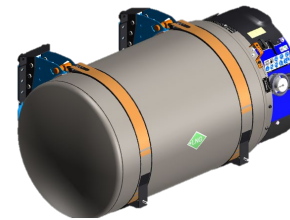
Energy Density

What's required for 300km of range?



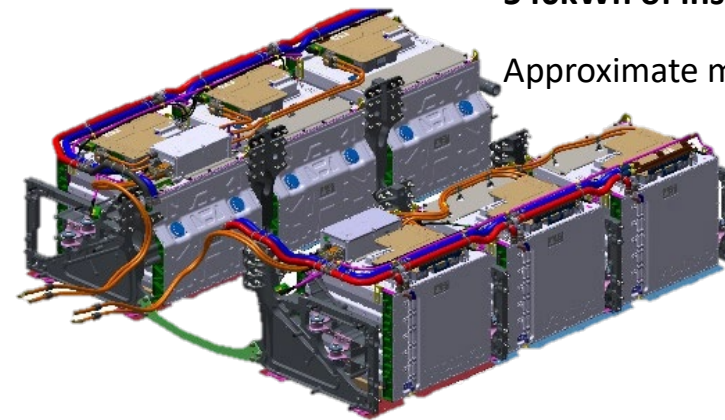
100 litres of diesel + tank

Approximate mass = 130kg



70kg LNG + tank

Approximate mass = 150kg



**x6 Energy Storage Systems
540kWh of installed energy**

Approximate mass = 3000kg

Medium Duty – Distribution, Construction, Waste & Municipal

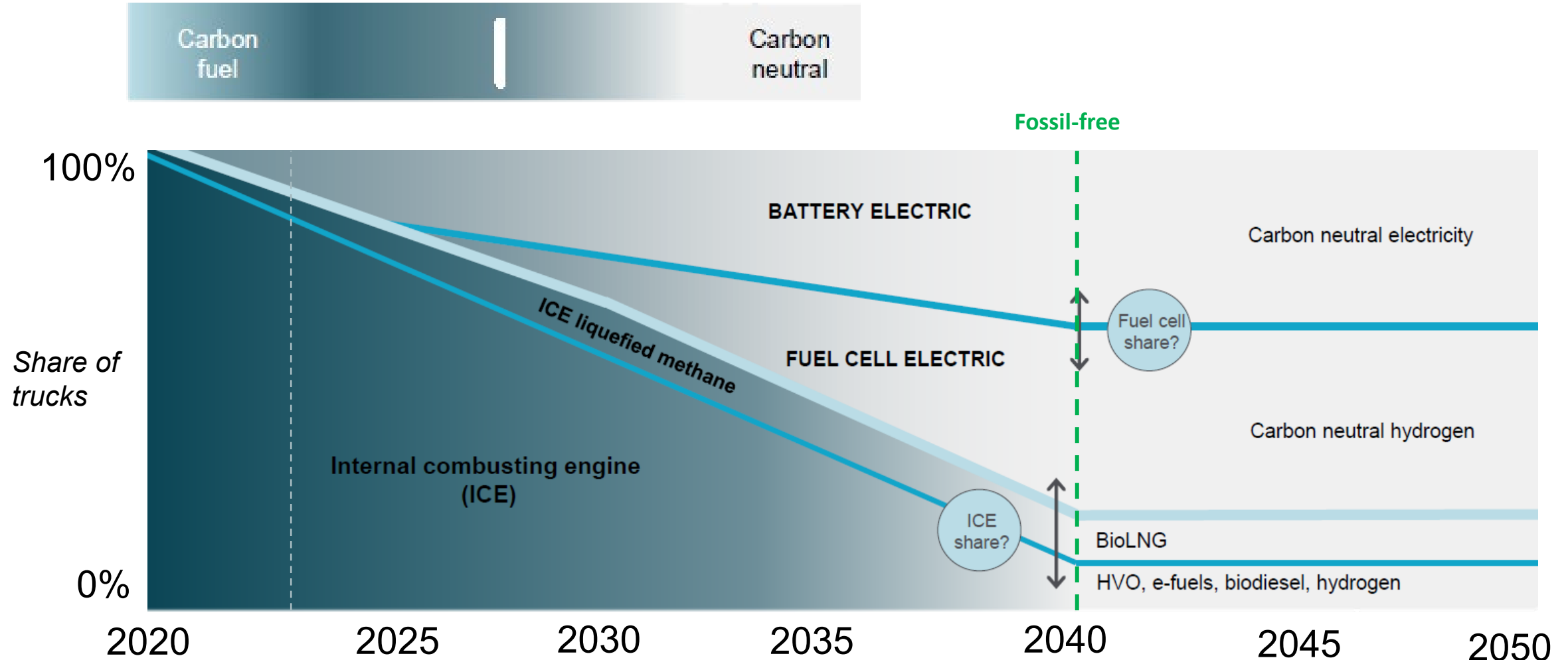


Heavy Duty – Distribution, Construction, Waste & Municipal



FILM OF TRUCK IN SERVICE

The Volvo Roadmap



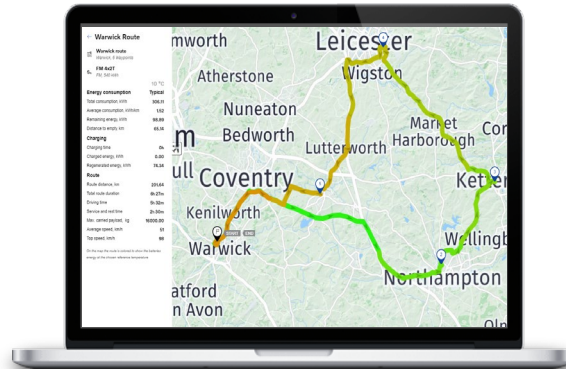
Key Enablers for the Transition

AN EFFICIENT TRANSPORT SYSTEM

RANGE

PAYLOAD

CHARGING



SUBSIDIES FROM GOVERNMENTS

PURCHASE OF
VEHICLES

INFRASTRUCTURE

TAXES

Early
adaptation

Elevated
adaptation

Broad
adaptation

Image driven
customers

Financial Logic
Selected Segments
& Markets

Financial Logic
Wide-spread

VOLVO



Plug-In Vehicle Grant



FL 4x2 Rigid



FE 6x2 Rigid



Electra e-Compact
Electra e-Star 27-350
DAF CF Electric Tractor
Dennis Eagle E-Collect
Renault D-Range
Volvo FL 4x2
Volvo FE 6x2



FM 4x2 Tractor



FH 4x2 Tractor



For more detail click here

www.toll-collect.de

Introduction of CO2-based tolls

The law was approved by the Federal Cabinet on June 14th 2023.

- Introduction of a CO2-based toll from December 2023
- Based on the Directive 1999/62/EC on road user charging of vehicles on the use of road infrastructures.
- Massive toll increase for diesel trucks, i.e. in some cases > 80%
- Full toll exemption for Zero Emission Vehicles ZEV:
 - BEV battery
 - FCEV fuel cell
 - H2-ICE hydrogen combustion engine



December 2023

Introduction of CO2 emission classes that, based on VECTO, enable limited toll reductions for vehicles with particularly low CO2 emissions

July 2024

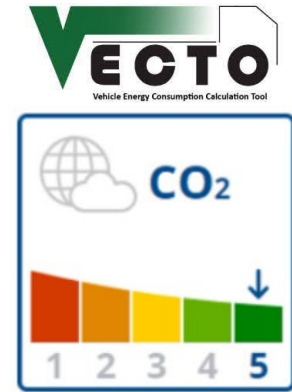
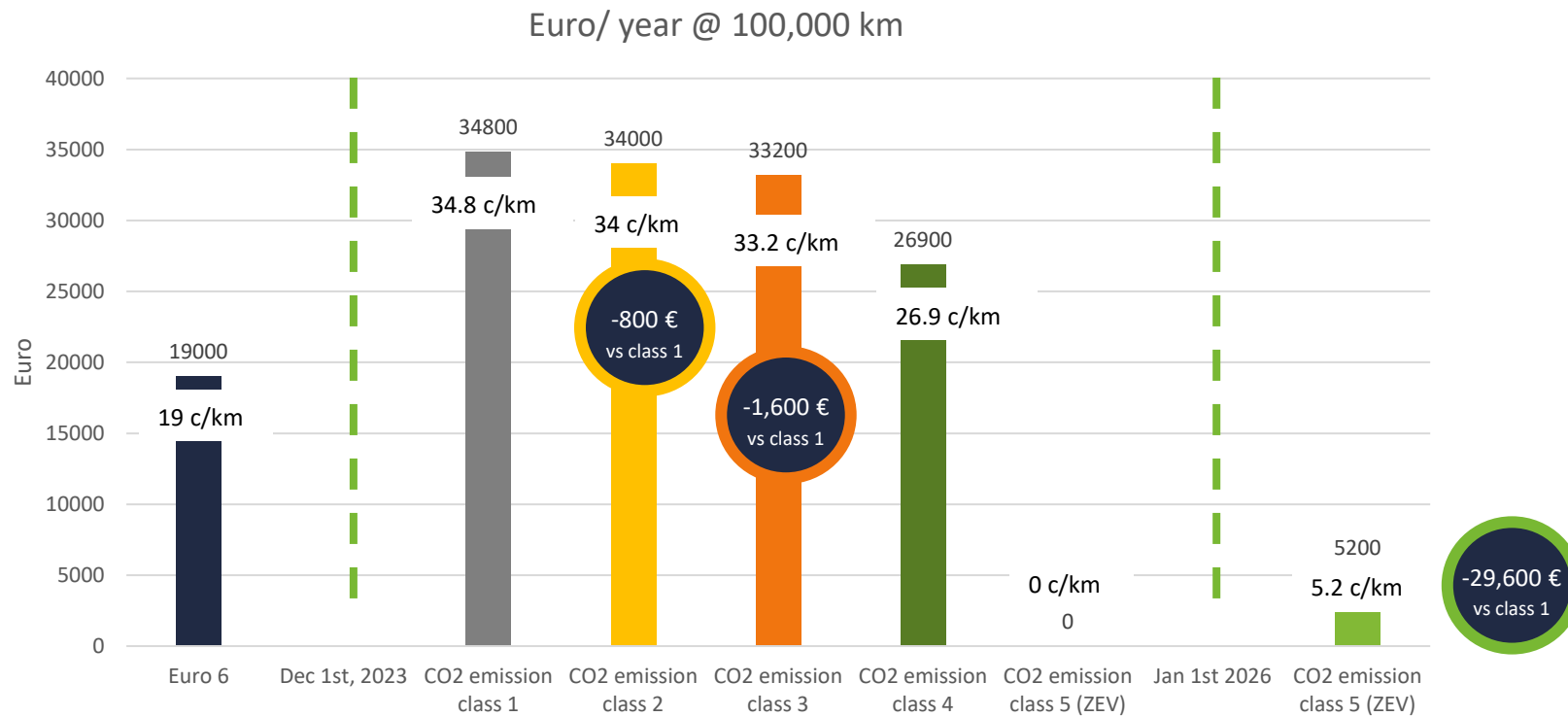
Expansion of the toll to vehicles >3.5t (from today >=7.5t) from July 2024

January 2026

Introduction of a greatly reduced basic toll rate for ZEV- infrastructure, air pollution and noise pollution costs - from January 2026

European VECTO Incentives: German Maut increase from Dec 1st 2023

Euro 6 >18t from 5 axles



Diesel
Class 1-3



Gas-powered
Class 2-3



Electric
Class 5

Summary

- Volvo leading the change
- Trucks on the road and ordered
- Established service and dealer network
- Positive incentive to change
- Growing infrastructure



V O L V O