VOLVO LNG Vesa soppi – volvo trucks





Environmental care at the core





"We are part of the problem – and we are determined to be part of the solution"

- Pehr G Gyllenhammar



Volvo Trucks. Driving Progress

It's all tied together





Climate change is real

Scientist forecast the global average temperature will rise 5-6°C by 2100

Global warming is caused by the greenhouse effect, which is directly relevant to Volvo Trucks



Human activity adds to global warming

Since the beginning of the industrial revolution, the atmospheric concentration of CO_2 has increased by 40%

CO₂, water vapour and methane are examples of greenhouse gases that contribute to global warming



Replacing diesel with biofuels





Volvo Trucks. Driving Progress

EU's energy and climate policy framework for 2030

30% CO₂ emissions reduction from transport 2005–2030 Strategy for low emission mobility CO₂ regulations for trucks



Environmental vision

EMISSIONS FROM VOLVO TRUCKS





In Europe 80% of all the goods are transported on trucks

More than 70% of all truck transportation is longand inter regional haul*

Our challenge is to ensure that our trucks work in the most efficient, safe and environmentallyfriendly way possible.

*Source: Internal Volvo Total Market Forecast 2016 and Eurostat 2016



Natural gas reserves





LNG – CO₂ saving potentials





The heart of the Volvo LNG trucks

Two fuels are injected via the same injectors: vaporized LNG and a small amount of diesel are injected together

This dual fuel High Pressure Direct Injection technology makes the LNG trucks unique – and enables the power and energy efficiency of a diesel truck with a more sustainable fuel type







Diesel Substitution Factor **90-95% LNG**

Each injection contains a fuel mixture of approximately 90%– 95% LNG and 5%–10% diesel.





- When filled with LNG, the pressure in the tank is typically somewhere around 4–10 bar
- Our new intelligent fuel system contains a pump that pressurizes and vaporises the cold LNG
- That means there is no high pressure in the actual tank. Rather, it builds up in the pump
- At the pump outlet, before it's injected into the engine, the vaporized LNG holds approximately 300 bar pressure



lt's a Volvo

A Volvo-unique solution Diesel technology

Return to tank Avoid methane slip

Keep it cool! Maximizes the operating range and minimizes climate impact





