Vos Logistics in LNG: a sustainable solution in road transport

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Activities, facts & figures

**Capacity**

- M² warehousing $\uparrow$ 12%
  - 190,000 m²
- Loading units $\uparrow$ 200
  - 3,200
- Trucks $\uparrow$ 30
  - 1,000

**CO₂ emission reduction**

- 2009: 54%
- 2015: 20%

**Employees**

- Total FTE end of year 2014: 1,822
- Total FTE end of year 2015: 1,920 $\uparrow$ 98%
  - Direct: 1,419 / Indirect: 393
  - Total training hours: 2014 17,072 / 2015: 18,854
  - Direct: 17,072 / Indirect: 7,737 / Total training hours: 2015: 6,800
Our strategy

Quality  Sustainability  Innovation  Efficiency
Ethical Principles

- Respect for human life and dignity
- Respect for diversity
- Respect for the environment
- Integrity

Safety
Agility
Customer Care
Values of Service
Sustainability
Professionalism

How we work
Environmental impact

Sustainability: Integrated reporting in KPI dashboards
Ecocombi

- Loading capacity 160m³
- Maximum 60 tonnes
- Length 25.25 meters

Ecocombi XL

- Two 13.66 m. trailers
- On selected routes in Sweden

LNG (Liquefied Natural Gas) Truck

- Reduced emissions CO2, NOx, SOx, PM
- Quiet (71 dB)
Focus on LNG

LNG vs Diesel

History

Market developments

- trucks on the market
- refueling stations
- customers/business
LNG vs Diesel: the ratio

- Sustainable fuel: CO2 emission reduction 15% (over 70% with bio LNG); low fine particles emissions
- Noise reduction 50% (71dB)
- Competitive range (650 km single tank; 1300 km with two large tanks)
- Stable and low price level
- Favorable consumption
- Admittance in inner cities; environmental zones and during limited access windows
- Demonstration of sustainable and innovative character
2007  →  first LNG Truck RAI (Amsterdam)

2010  →  development & opening refueling station in Oss, the Netherlands
       →  start pilot with three MB Econic trucks

2012  →  expansion fleet with MB Econic trucks
       →  formation of LNG Project Team

2014  →  expansion fleet with Iveco Stralis euro 5 LNG trucks
       →  first LNG truck on Polish license plate;
           additional Iveco Stralis LNG euro 5 trucks in fleet

2015  →  expansion with Iveco and Scania euro 6 LNG trucks
       →  expansion with 5 low deck Iveco euro 6 LNG trucks

2017  →  further expansion international fleet planned (additional low
doek solutions anticipated)

over 7.5 million kilometers experience on LNG
LNG trucks on the market

Scania: 330 hp Euro 6 standard and low deck chassis

Iveco: 400 hp Euro 6 standard chassis

Volvo: 460 hp Euro 6 Diesel Methane expected 2017

**main challenges for OEM’s:**
- more power
- low deck with more range
- sales strategy: focus shift
Refueling stations developments: NL-B

- currently 18 LNG stations open in NL-B
- another 10 stations to be opened in 2016/2017 in the Netherlands and Belgium
- overall: very positive outlook
European refueling network to be built; currently mainly national networks (Sweden, UK, Spain, France, NL and Belgium)

Germany: lagging behind… no fixed public stations opened yet

European Directive aims at an LNG station every 400km along the corridors

LNG Blue Corridors project: 14 stations to be built along corridors in 2014-2016

Connect2LNG project (5 stations)

LNG Motion Project (40 stations)
We bring together the full LNG value chain in our project, from a demand driven and sustainability perspective.

And we are open for others to join our initiative!
CONNECT2LNG
UNLOCKING POTENTIAL

Industry wide collaboration 5 fueling stations on Core Network
125+ LNG trucks on the road Research + Monitoring
Industry Dissemination

Co-financed by the European Union Connecting Europe Facility
Market developments: customers/business

- innovative thinking and acting
- partnerships – team effort
- connect with all parties in the LNG chain
- specific equipment
- transition to LBG
Thank you for your attention!

Please visit us at www.voslogistics.com