DEVELOPING THE LNG INFRASTRUCTURE IN KLAIPEDA

2018 09 11
Traditional business

- 50+ years of oil product terminal operations
- State fuel reserves terminal

Focus for strategic expansion – development, construction and operations of LNG terminals

- Klaipeda LNG terminal based on FSRU Independence
- LNG reloading and bunkering station
- LNG transport and bunkering vessel project for the Baltic Sea
- LNG terminal development and Advisory services

KN – AN OIL PRODUCT AND LNG TERMINAL OPERATOR
FSRU INDEPENDENCE SINCE 2014 10

LNG RELOADING STATION SINCE 2017 10
MARKET BENEFITS BROUGHT BY THE FSRU INDEPENDENCE

– Ended the 100% reliance on monopoly supplier
  – Transparent third party access mechanism

– Effective price cap
  – Baltic gas users have access to international LNG markets

– Near-complete ability to supply the gas market need
  – Combined with Incukalns UGS for seasonality

– Access to clients with limited size portfolios
  – Joint use of LNG in the terminal
FRSU TERMINAL ENABLED SMALL SCALE MARKET OPPORTUNITIES TO DEVELOP

- **Single-user LNG terminal**: 2015
- **Multi-user LNG terminal**: 2016
- **Break-bulking LNG terminal**: 2017
- **Full regional LNG value chain**: 2018

- **Designated supplier**
- **Commercial gas suppliers**
- **Truck loading**
- **Small-scale break bulk**
- **Bunkering and feeding satellite terminals**

**2015 - 2018**
BREAK BULKING

- LNG load rate up to 5000 m³/h
- Reduced port fees for LNG exports
- LNG quality control with sampling and chromatographs
- Operational 24/7

- 12 reloading operations
- Exports to 3 different countries
- Supplying the Reloading station
NEW SMALL SCALE LNG VESSELS DELIVERED EVERY YEAR

- **Norgas Unikum**
  - Volume: 12 000 m³
  - Status: Operational

- **Pioneer Krutsen**
  - Volume: 1 100 m³
  - Status: Operational

- **Stolt-Nielsen Gas**
  - Volume: 7 500 m³
  - Expected: 2019 Q3

- **Cardissa**
  - Volume: 6 500 m³
  - Status: Operational

- **Coral Methane**
  - Volume: 7 500 m³
  - Status: Operational

- **Engie Zeebrugge**
  - Volume: 5 000 m³
  - Status: Operational

- **Coral Energice**
  - Volume: 18 000 m³
  - Expected: 2018 Q1

- **Coralius**
  - Volume: 5 800 m³
  - Status: Operational

- **Seagas**
  - Volume: 170 m³
  - Status: Operational

- **Nauticor / KN**
  - Volume: 7 500 m³
  - Expected: 2018 Q4

- **JS Ineos Insight**
  - Volume: 27 500 m³
  - Status: Operational

- **Coral Energy**
  - Volume: 15 600 m³
  - Status: Operational
LNG BUNKERING VESSEL

- Under joint venture with Nauticor
- Construction in Hyundai Heavy Industries, planned COD - 2018
- Storage arrangement: 7,500m³, two tanks
- LNG bunkering
- LNG shipping to LNG reloading station
- LNG shipping to other satellite terminals
BUNKERING AND TRUCK LOADING

- 5 x 1,000m³ tanks
- Third party access
- LNG swap model
- No BOG allocation to users

- Multi-service and most flexible small scale terminal
SIMPLIFIED SCHEME: LNG RELOADING STATION

- **Bunkering**
- **LNG tanks**
- **BOG**
- **Electricity**
- **Boiler house**
- **Truck loading bays**
- **Reloading to the station**

Diagram shows the process of LNG reloading, including bunkering, LNG tanks, BOG, electricity, and boiler house, with truck loading bays.
2 TRUCK LOADING BAYS
MARKET BENEFITS BROUGHT BY LNG RELOADING STATION

- LNG delivery by road to off grid customers
  Supplying existing demand in northern Poland and Baltic States

- Bunkering from trucks in Baltic sea ports
  All major ports in Baltic states within 600 km radius

- Enabling new infrastructure developments
  Druskininkai off-grid distribution network

Usage possibilities for LNG
Example
## KLAIPEDA LNG TERMINAL HUB IN ITS 4TH YEAR OF OPERATIONS

<table>
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<th>2015</th>
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<th>2018 / 2022</th>
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