LNG Hub in Klaipėda

Mindaugas Aleška
Head of Business Development Division
SC Klaipėdos Nafta
Agenda

1. Introduction to SC Klaipėdos Nafta
2. Regional Drivers for Small-Scale
3. LNG Hub for the Baltic Sea
1. Introduction to SC Klaipėdos Nafta

A Diversified Oil Product and LNG Terminal Operator

40+ years of oil product terminal operations

Successful fast track LNG terminal project implementation

State fuel reserves

LNG reloading and bunkering station project

LNG bunkering vessel project

LNG terminal consulting projects
A New LNG Terminal Started Operation From the 1\textsuperscript{st} Of January

- **Commissioning cargo**
  Delivered 28\textsuperscript{th} of October 2014

- **Commercial operations**
  First commercial send-out from 1\textsuperscript{st} of January 2015

- **First commercial cargo**
  Delivered 23\textsuperscript{rd} of December 2014

- **FSRU Independence**
  Arrived on the 27\textsuperscript{th} of October 2014
LNG regasification/ pipe markets

LNG ship reloading markets

LNG trucking markets

Markets accessible starting the 1st of January, 2015

Markets accessible after regional interconnections are finished

Markets accessible after on-shore LNG reloading station is finished

Small & Mid-scale LNG terminals (5,000-30,000m3; operational and under development)
### 2. Drivers for Small Scale

**An Environmental Solution for Bunkering**

<table>
<thead>
<tr>
<th></th>
<th>SOx</th>
<th>NOx</th>
<th>CO2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>-100%</strong></td>
<td><strong>-90%</strong></td>
<td><strong>-25%</strong></td>
</tr>
</tbody>
</table>

Emission reduction when LNG is used as fuel in comparison to HFO
2. Drivers for Small Scale

A Flexible Energy Source for a Wide Range of Applications

Market Segments

- Industrial applications
- Transportation
- Residential
- Agriculture
- Air, Nitrogen, Oxygen, Argon
3. Regional LNG Hub

Reloading Station – a Truck Loading and Bunkering Facility

- FSRU Independence
- LNG bunkering vessel
- LNG reloading/bunkering station

Klaipėda LNG terminal

LNG supply route (approx. 7 km)

Existing oil product terminal

LNG reloading/bunkering station

Co-financed by the European Union
Trans-European Transport Network (TEN-T)
3. Regional LNG Hub

Reloading Station – a Truck Loading and Bunkering Facility

LNG reloading (bunkering) to ships

LNG loading from small-scale carrier (1,000 m³/h)

LNG storage 5x1,000 m³

BOG management unit

Gas fired heating boilers

LNG reloading to trucks (2 loading bays)

LNG pumps

Base electricity supply

Co-financed by the European Union
Trans-European Transport Network (TEN-T)
3. Regional LNG Hub

Concept of LNG reloading station

- Boil-off gas is used up in the boiler plant
- Jetties can hold additional equipment
- Powerful fire-prevention equipment
- Existent electricity and air supply
- Qualified personnel
- Sufficient safety measures
- Hydrocarbons are being loaded into trucks
- Safe distance from neighbours
3. Regional LNG Hub
Concept of LNG reloading station

The territorial diagram does not include:
- A. Gas-fired boiler house
- D. Power generator
3. Regional LNG Hub

Reload Station – a Solution for Off-Grid Locations

- Current LNG consumption
- Potential LNG consumption

Ferry to Karlsham
3. Regional LNG Hub

Partnership with Bomin Linde LNG
Summary

Unique Team Competence Covering Full Scale of LNG Solutions
Thank You for Your Attention