



EVOLVING LNG DISTRIBUTION AND BUNKERING INFRASTRUCTURE IN THE BSR – KN CASE



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KN – an oil product and LNG terminal operator

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 transport and bunkering vessel project for the Baltic Sea



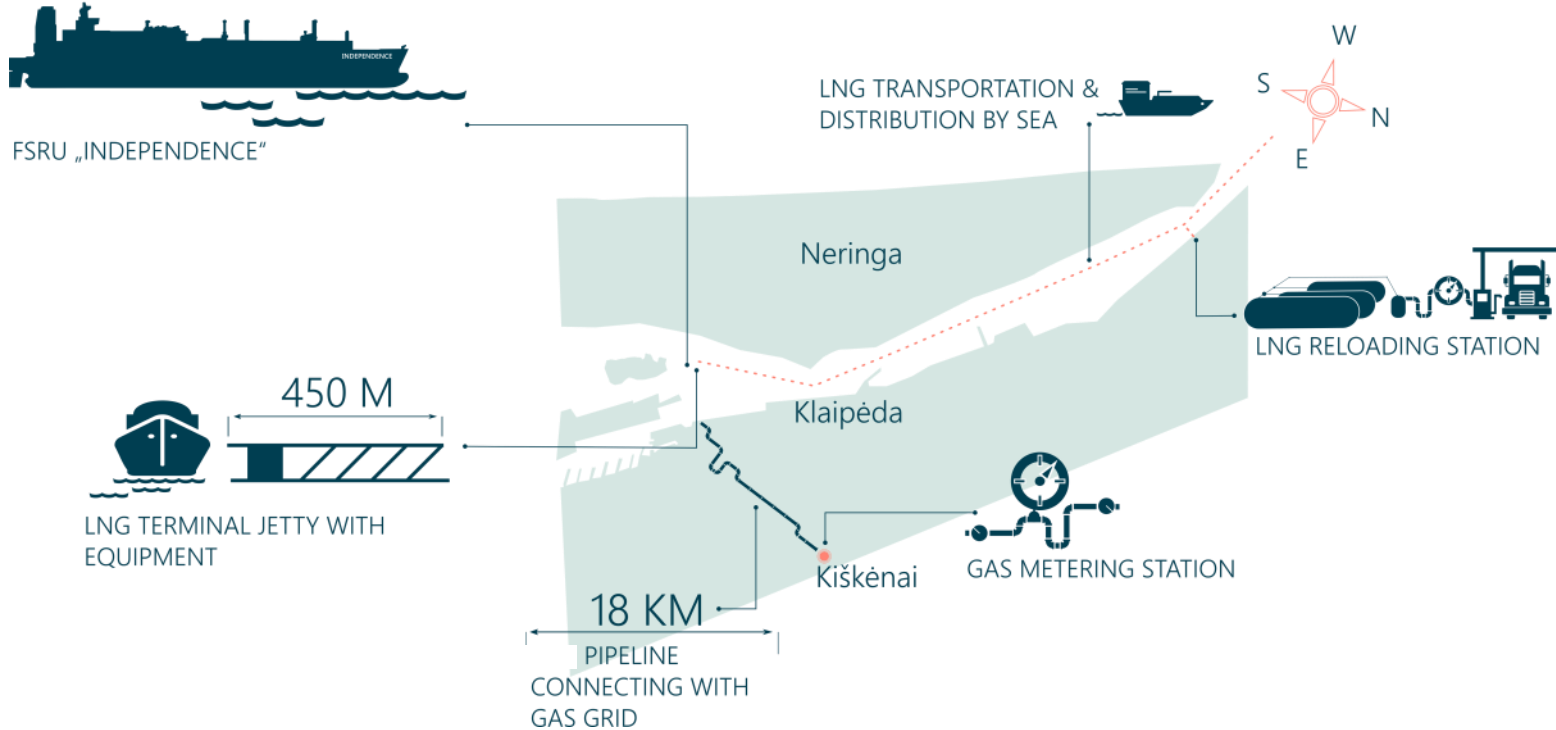
LNG reloading and bunkering station in Klaipeda



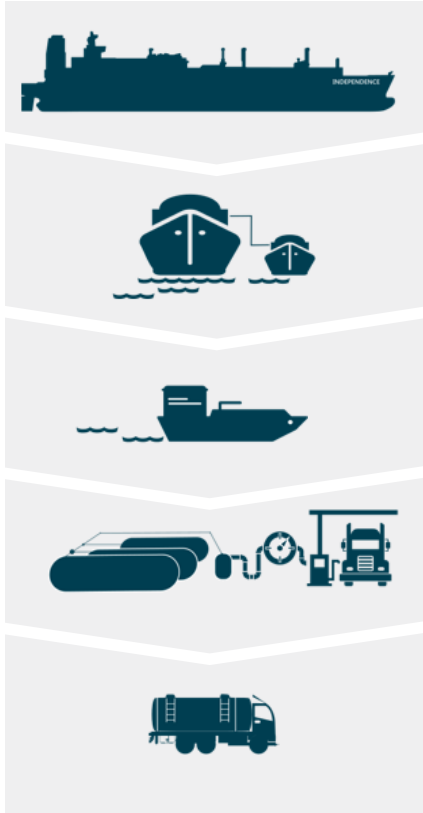
LNG terminal development and Advisory services

Natural gas supply chain in Klaipeda

LNG TERMINAL INFRASTRUCTURE



The small Scale LNG supply chain



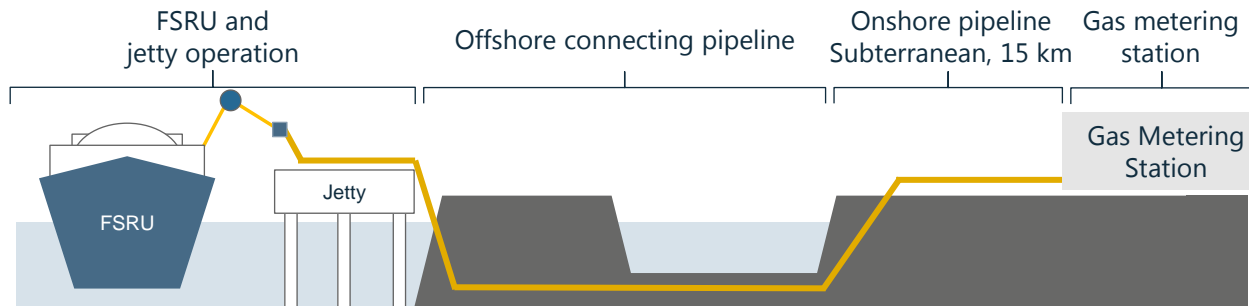
- Deliver internationally traded LNG to FSRU Independence
- Break bulk conventional LNG cargoes to small scale LNG vessels
- Deliver to the LNG Reloading Station and regional small scale LNG terminals / bunkering stations
- Store LNG in pressurized tanks and
 - bunker LNG vessels
 - load to trucks
- Distribute to off-grid customers, supply as fuel



Klaipeda LNG terminal Infrastructure

Key facts

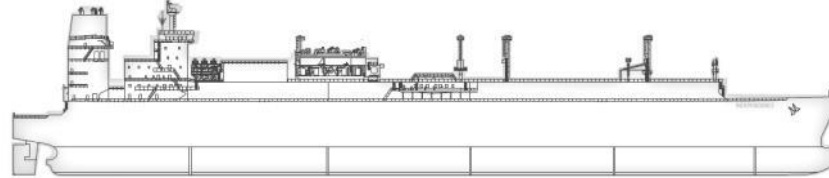
- Terminal commissioned by KN in Dec 2014
- 170.000 m³ of LNG storage
- 4 bcm/year regasification capacity
- Third party access
- So far
 - 40 large scale operations
 - 5 small scale operations



Services of Klaipeda LNG terminal

Services

Started from the 1st of January, 2015



LNG regasification

LNG regasification tariff – 0,10
EUR/MWh (2017)

Capacities allocated before and during the Gas Year (October – October)

Minimum send-out ensures constant operational availability
All services are on a transparent third party access basis

LNG reloading

LNG reloading tariff – 1,14 EUR/MWh
(until 2019)

LNG regasification for Lithuanian consumers

LNG regasification tariff – 425,19
EUR/(MWh/day/year) (2018)

A regulated LNG terminal activity
The price is set by NRA every year
for the upcoming year



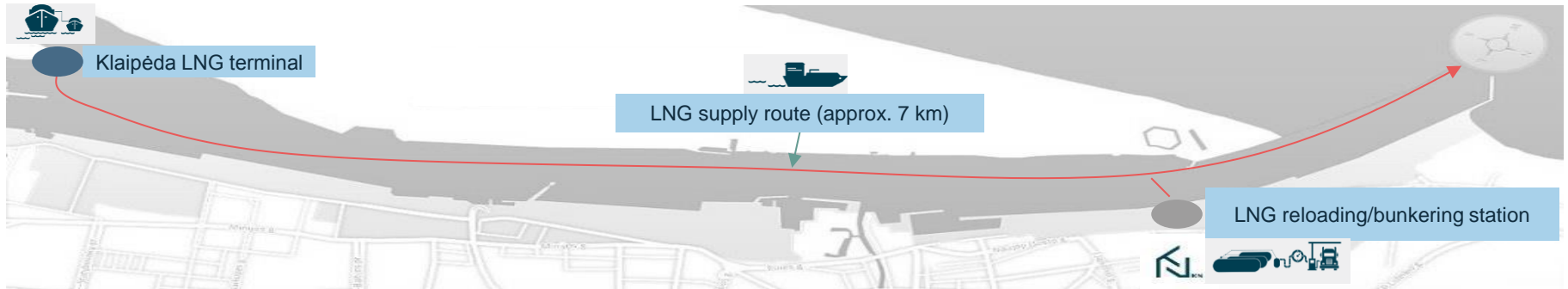
Klaipeda LNG Terminal in its 3rd year of Operations

	2015	2016	Forecast	
	2015	2016	2017	2018 / 2021
Natural gas supplied, bcm	0.5	1.3	1.1	N/A
Capacity utilization	10% - 15%	30%	>25%	
Terminal users		 	 New users	Multiple users
Access to regas markets	 	 	 	
LNG suppliers			 	Multiple suppliers
Operational regime	Energy security	Energy security Commercial regas	Energy security Commercial regas Commercial reloading	Energy security Commercial regas Commercial reloading Commercial truck loading



Joint venture by Nauticor (DE) and Klaipėdos Nafta (LT) establishes a new LNG vessel by the end of 2018, which

- Secures a flexible LNG transport service to the LNG reloading station of Klaipėdos Nafta
- Offers further services regarding LNG, e.g. transporting it to small-scale terminals at the Baltic and North Sea



* KN to have access to 10% of vessel capacity, Nauticor – 90%

LNG Reloading Station to be launched by January 2018

Some of the technical parameters of the LNG reloading station

Volume of LNG storage tanks	5 x 1.000 m ³
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Station's annual technological capacity	225.000 m ³
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Truck loading bays	2 bays
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Maximal number of LNG loaded trucks per day	24 trucks
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Length of the jetty	250 m
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LNG bunkering rate	250-500 m ³ /hour
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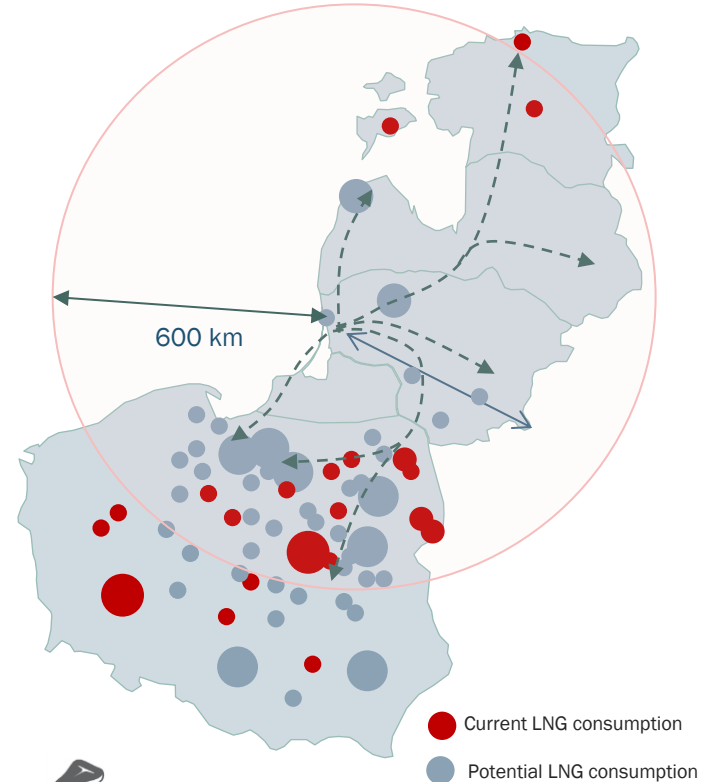


First ever truck loading at the LNG Reloading Station (17.10.2017)



Benefits delivered by small scale LNG delivery

- LNG delivery by road to off grid customers
 - Supplying existing demand in northern Poland
- Enabling supply to new developments in Baltic states
 - Tallink LNG ferry and Druskininkai off-grid distribution network
- Bunkering from trucks in Baltic sea ports
 - All major ports in Baltic states within 600 km radius
- Cleaner burning fuel for commercial vehicles
 - Enabling LNG as fuel for road transport – delivering on national strategies and environmental targets

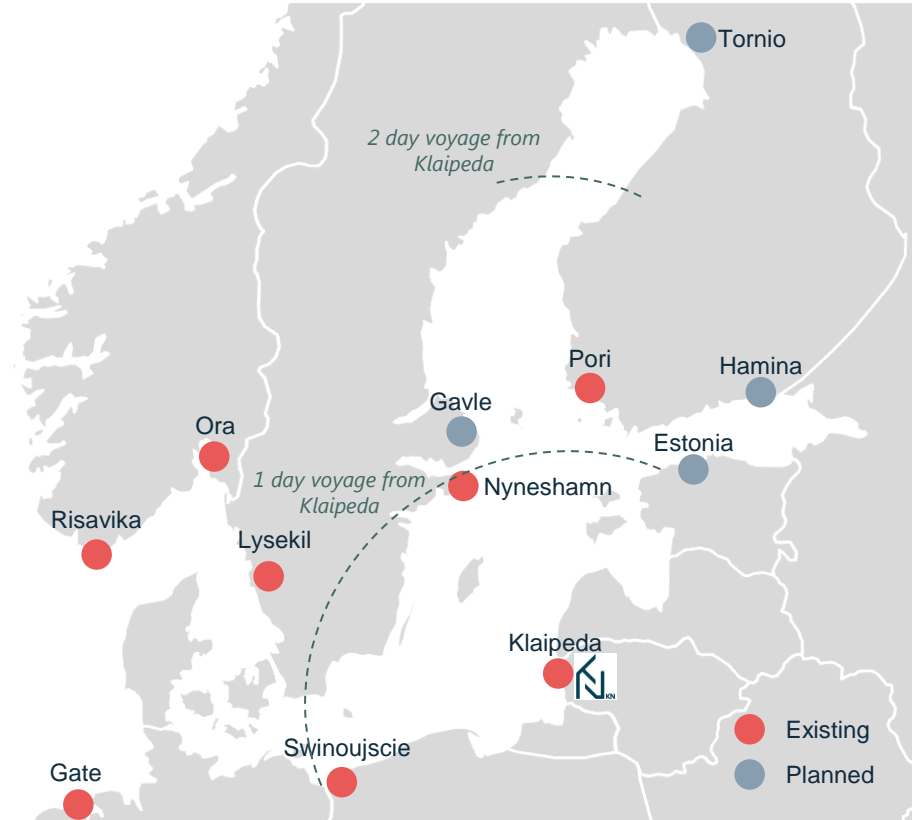


Usage possibilities for LNG



Klaipeda LNG terminal – Small Scale LNG Enabler

- Klaipeda LNG terminal enables further small scale LNG developments in the Baltic Sea region
- Small scale LNG reloading station completion in Klaipeda
 - 5.000 m3 LNG storage capacity
 - Truck loading and vessel bunkering
- LNG bunkering transportation vessel to be launched in 2018
 - Ice-class multi purpose vessel
 - 7.500 m3 capacity





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