

An aerial photograph of a large blue and white LNG tanker ship docked at a pier at night. The ship is illuminated with bright lights, and its deck is visible. A long metal pier extends from the foreground towards the ship. In the background, a city skyline is visible across a body of water, with various industrial structures and cranes. The sky is dark with some clouds.

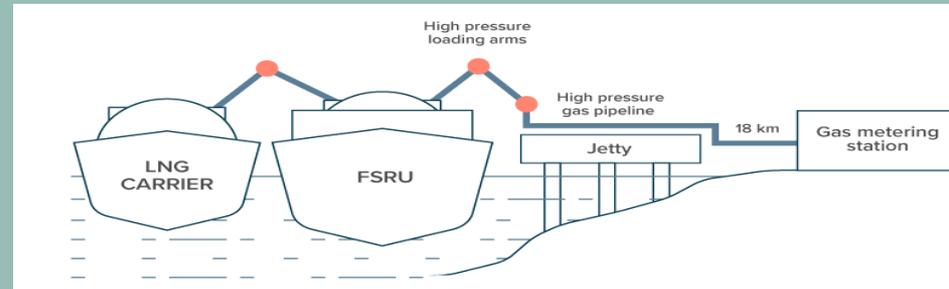
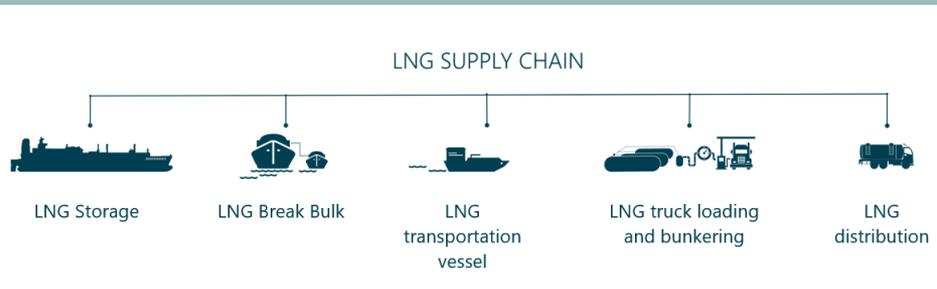
**„INDEPENDENCE“ STORY: WHY SHOULD EAP  
COUNTRIES TURN TO LNG?**

Arūnas Molis  
Director of Klaipėda LNG Terminal, Klaipėdos nafta  
2019, Klaipėda



# KEY CHARACTERISTICS OF KLAIPEDA LNGT

- 1) Is an actively used facility with 5 years of proven successful operation and effective regulation
- 2) Retains competitive LNG gas entry point to the Baltic Sea region, contributing to flexibility of supply, price competition, environment protection
- 3) Contributes the long term LNG import solution to the region: “LNG Terminal Operator, until 2024 12 24 at the latest, shall acquire under the ownership right the floating LNG storage facility and become its manager”



In Klaipėda, KN operates a liquefied natural gas distribution station – an above ground LNG terminal operated on the third-party access basis. It launched its activities in 2018, and it has 5 LNG tanks with the capacity of 1 000 m3 each.

We have created the value chain of Klaipėda LNG terminal for the Baltic Sea region, and we seek to earn maximum profit from additional activities.

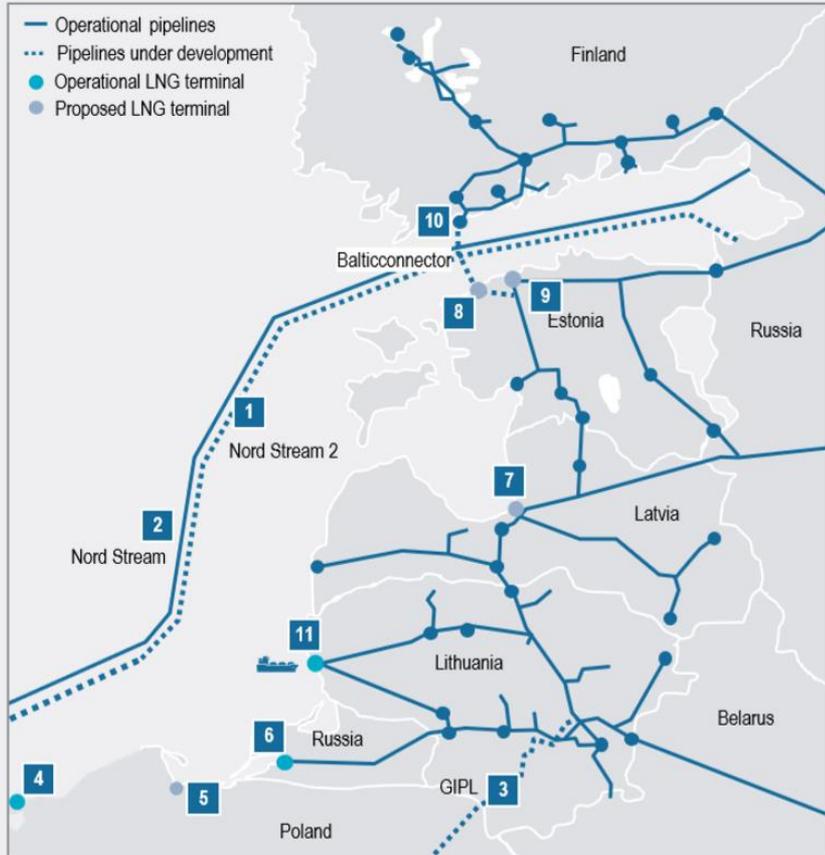
LNG RELOADING STATION SERVICES





# Market overview- regional tendencies

# SUPPLY INFRASTRUCTURE (CURRENTLY PLANNED OR UNDER DEVELOPMENT)



- 1 Nord Stream 2 [under development]  
55.0 bcm/a from Russia to Germany

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- 2 Baltic Pipe [under development]  
10.0 bcm/a from Norway to Denmark and Poland, or 3 bcm/a from Poland to Denmark

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- 3 Gas Interconnection Poland Lithuania (GIPL) [under development]  
2.4 bcm/a from Poland to Lithuania and 1.9 bcm/a from Lithuania to Poland<sup>1)</sup>

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- 4 Swinoujscie LNG terminal expansion [operational, but extension proposed]  
Additional storage capacity of 180,000 cu m and 2.5 bcm/a throughput

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- 5 Gdansk LNG terminal [proposed]  
Storage capacity uncertain and 4.1 to 8.1 bcm/a throughput

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- 6 Kaliningrad LNG terminal [operational]  
Storage capacity of 174,000 cu m and 2.7 bcm/a throughput

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- 7 Skulte LNG terminal [proposed]  
No storage capacity planned due to usage of Inčukalns UGS<sup>2)</sup> and 1.5 bcm/a throughput

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- 8 Paldiski LNG terminal [proposed]  
Storage capacity of 160,000 to 320,000 cu m and at least 2.5 bcm/a throughput

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- 9 Tallinn LNG terminal [proposed]  
Storage capacity of 50,000 to 320,000 cu m and 4 bcm/a throughput

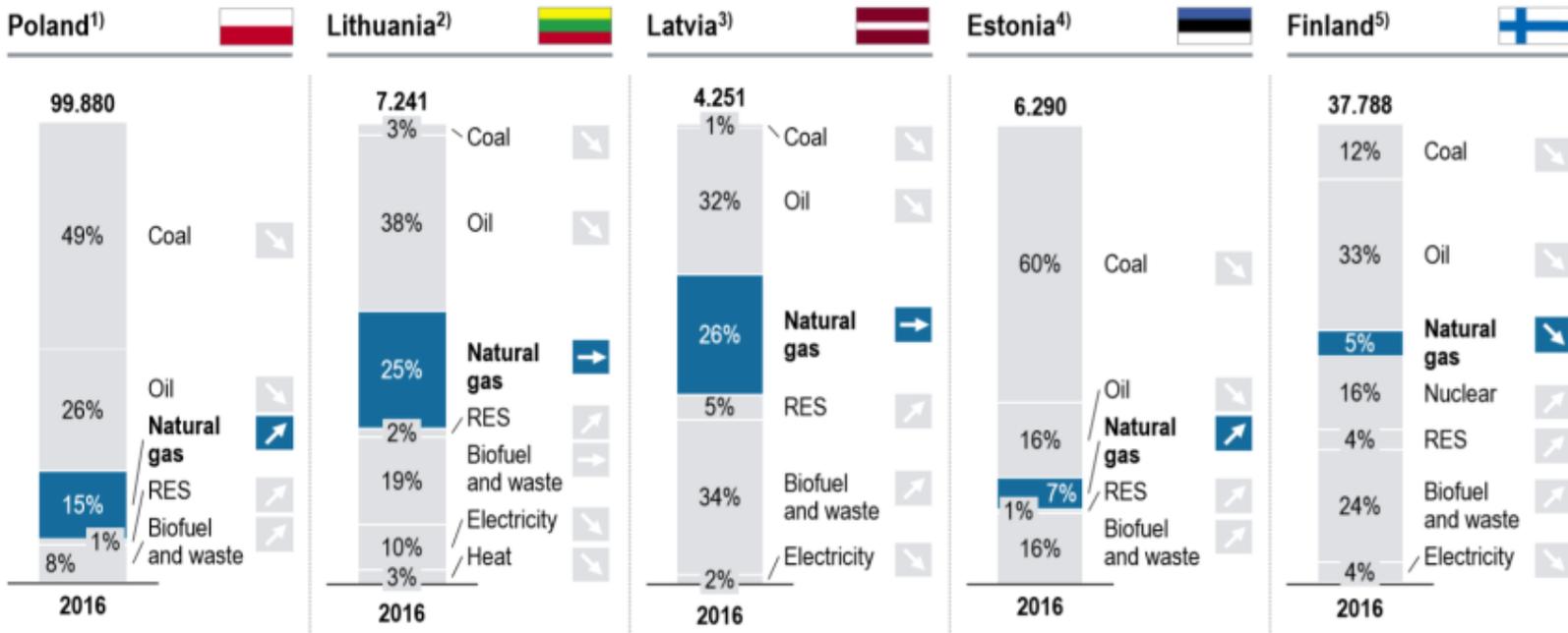
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- 10 Balticconnector [under development]  
2.6 bcm/a from Finland to Estonia and vice versa

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- 11 Klaipeda LNG terminal [operational]  
Storage capacity of 170,000 cu m and 3.8 bcm/a throughput

# Total primary energy sources, 2016 [ktoe] and outlook



NG demand will increase as part of national strategy to diversify primary energy sources

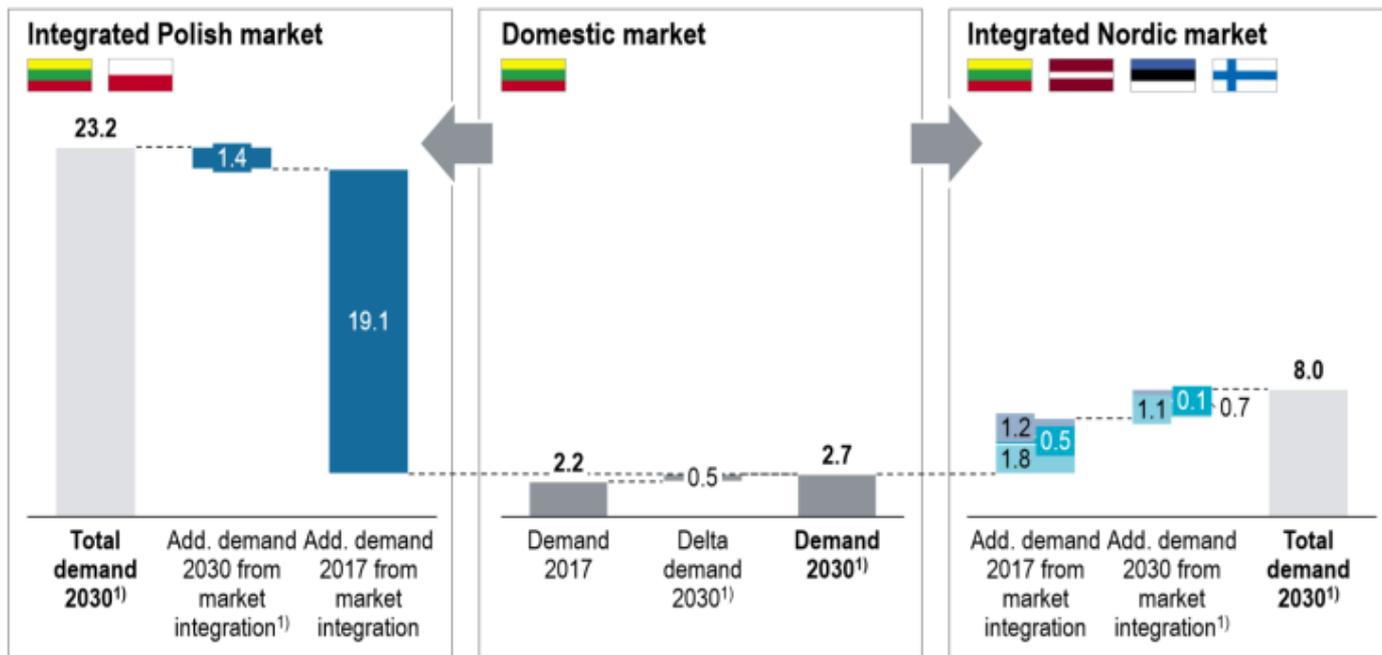
NG demand will slightly increase until 2030, then remain with a constant share in the energy mix

Constant NG demand due to regional gas market, with less imports from beyond the region

Usage of NG expected to grow together with new import / interconnection capacities

10% of NG planned to be replaced by biomass-based solutions to reduce import need of gas

1) Nat. Energy Policy 2040 2) Nat. Energy Independence Strategy 2018 3) Long-Term Strategy 2030 4) Nat. Development Plan of Energy Sector 5) Nat. Energy and Climate Strategy for 2030



■ Lithuania ■ Latvia ■ Estonia ■ Finland ■ Poland

1) According to TYNDP 2018 Sustainable Transition Scenario

Source: EC, ENTSO-G, The Baltic Course, Ambergrid, Gaz-system, Roland Berger

## Lithuanian market integrated with Poland

Map



Market demand

- > Polish market increases from 19 to 21 bcm/a in 2030
- > Integrated market 23 bcm/a in 2030

Wholesale price

- > No cross-border tariffs, Polish and Lithuanian prices adjust
- > New price expected to be higher than Lithuanian price before

Risk

- > New import infrastructure can decrease LNG competitiveness without partnering

## Lithuanian market not integrated with any market



Market demand

- > Lithuanian market increases from 2 to 3 bcm/a in 2030

Wholesale price

- > Cross-border tariffs between Lithuania and its neighbors
- > Lithuanian price remain the same, ceteris paribus

Risk

- > Other integrated markets decrease competitiveness of LNG via KN LNG terminal

## Lithuanian market integrated with other Baltics and Finland



Market demand

- > Latvian, Estonian, Finish market increase from 4 to 5 bcm/a in 2030
- > Integr. market 8 bcm/a in 2030

Wholesale price

- > No cross-border tariffs, Baltics and Finish prices adjust
- > New price expected to be lower than Lithuanian price before

Risk

- > New import infrastructure can decrease LNG competitiveness, but chance for add. terminal low



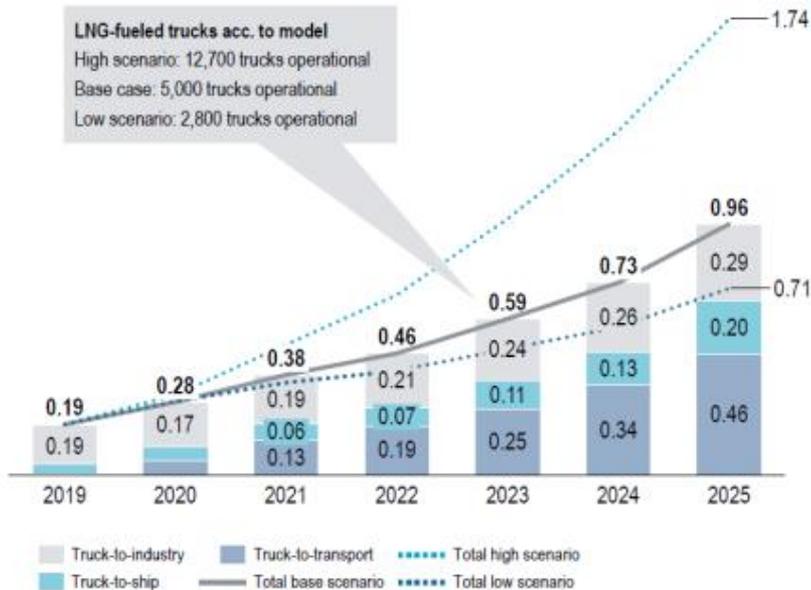
# Market overview – small scale potential



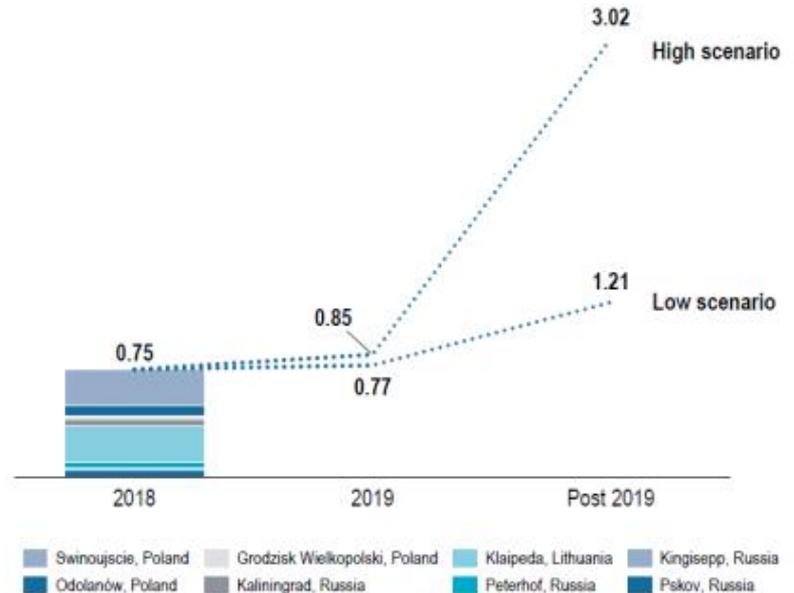


# Regional demand and supply are forecasted to grow, though the growth rates remain significantly uncertain

### Regional ssLNG demand [mcm]



### Regional ssLNG supply capacity [mcm]

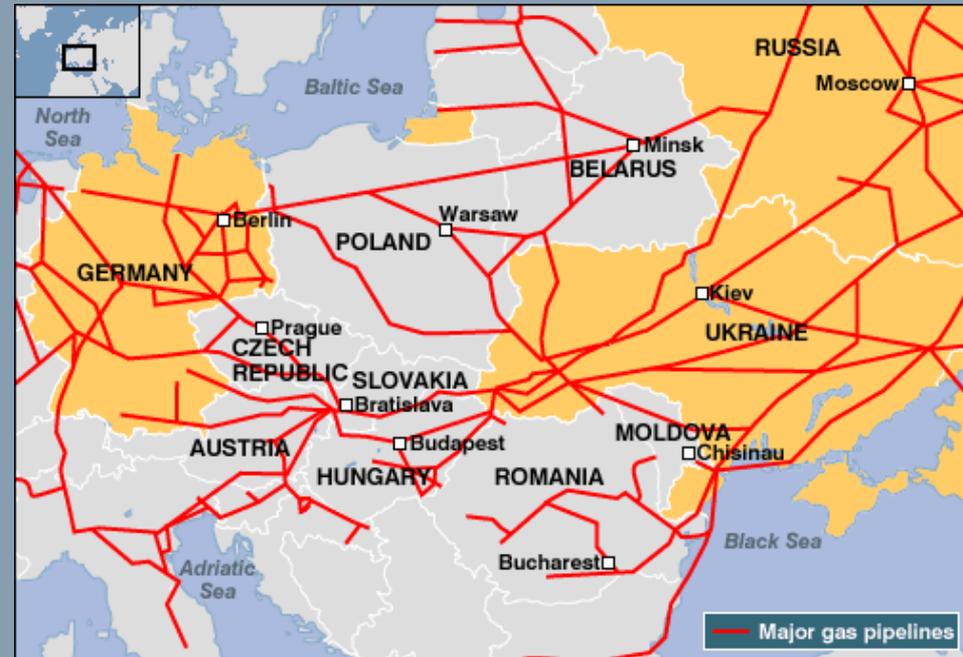


“Region” consists of Estonia, Latvia, Lithuania and Poland



## COOPERATION OPTIONS WITH EAP COUNTRIES

- Alternative large scale supply option
- Small scale supply option to off grid, transport
- Sharing know-how on:
  - terminal project development
  - setting proper regulation
- O&M services, co-investment
- Promotion and employment of EU LNG strategy





# Lithuanian LNG Cluster

- Established in April 2016.
- Founders: AB „Klaipėdos nafta“, AB „Vakarų laivų gamykla“ (BLRT grupė), Klaipėda Science and Technology Park, Klaipėda University.
- DNV GL, SGS, Emerson, Schneider Electric – international partners;
- 16 members;
- LNG cluster aims at:
  - establishing Lithuania as LNG technology and distribution center in BSR;
  - ensuring effective cooperation in the fields of energy, science and business.
- Projects:
  - Using LNG’s cold energy for refrigerated terminals;
  - LNG use for rail logistics;
  - Geothermal power use for LNG regasification;
  - Smart LNG shipping container.

<http://www.lngcluster.eu>



KLAIPĖDA FREE ECONOMIC ZONE



DNV GL



STEVEDORING COMPANY



Schneider Electric





THANK YOU FOR YOUR ATTENTION

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