

LNG FACILITY OPERATOR'S PERSPECTIVE

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POLSKIE LNG

Owner and operator of the LNG Terminal in Świnoujście

Providing services based on TPA principle

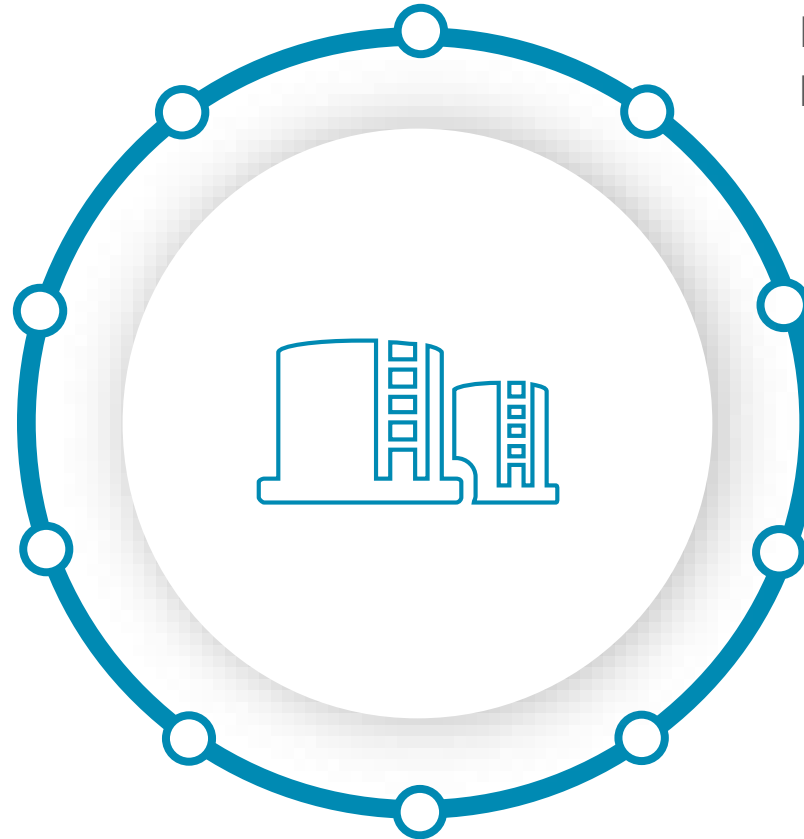
Well-established and reliable business partner

Extensive cooperation with domestic and international Oil&Gas organisations

Tariff – based regulated income

Company asset value - PLN 3,0 bln

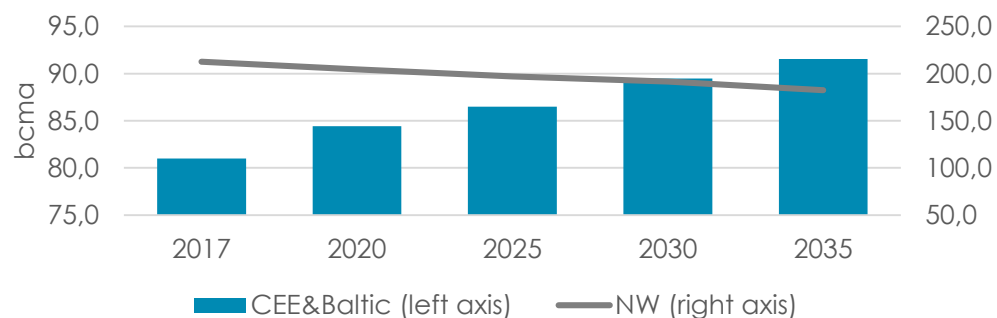
In charge of the operation and expansion of the LNG terminal in Świnoujście



NATURAL GAS MARKET IN THE CEE & BALTIC REGION

FORECASTED DEMAND BY 2035

- ▶ Current natural gas demand in the CEE and Baltic regions amounts to approx. 81 bcma
- ▶ Expected increase in demand up to 91 bcma in 2035



Source: ENTSOG

MAJOR GROWTH FACTORS

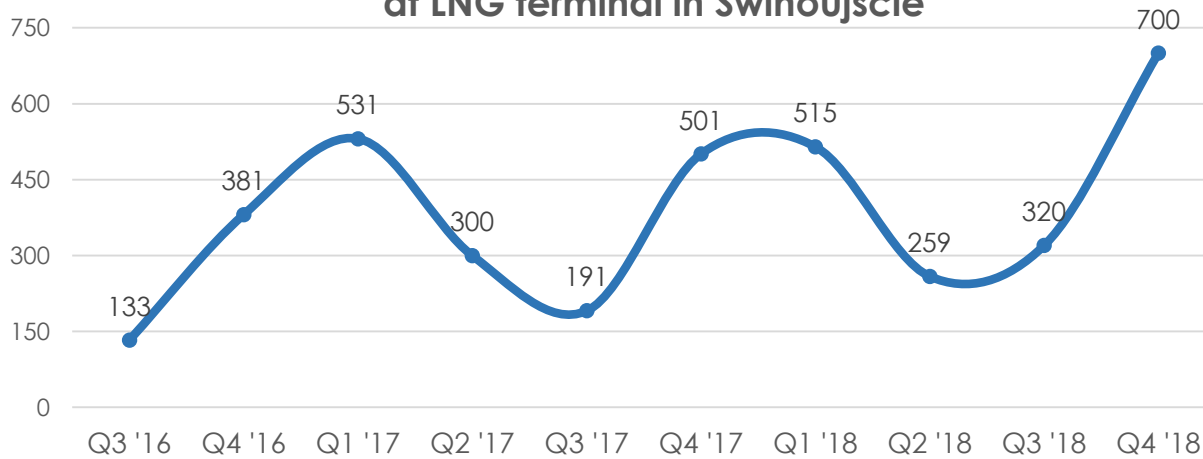
- ▶ Enhanced competitiveness compared with other energy sources available
- ▶ Climate and environmental considerations – switch to low-emission fuels
- ▶ Natural gas utilised in power generation
- ▶ Transport and shipping industry (LNG as an alternative fuel)



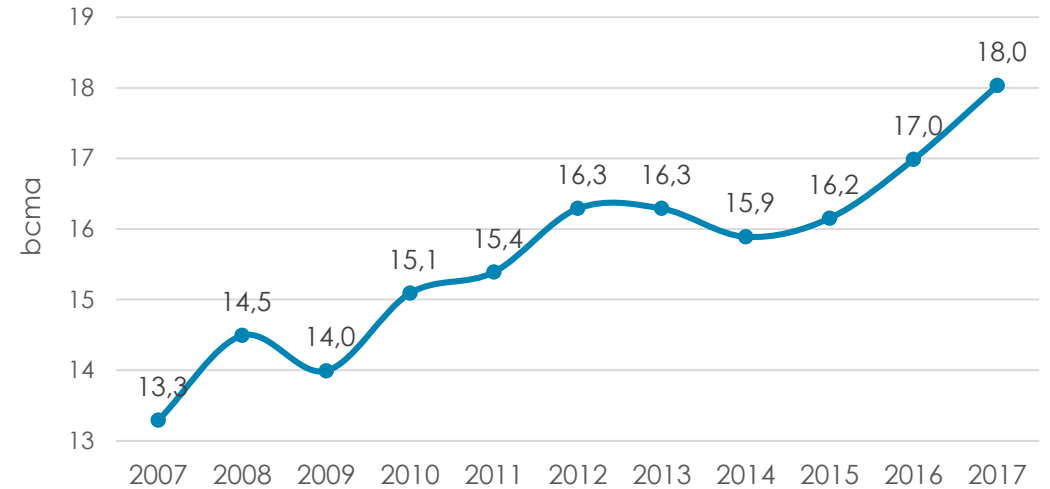
NATURAL GAS MARKET IN POLAND

- ▶ Natural gas consumption in Poland in 2017 amounted to 18,0 bcm (growth by 6% YTY)
- ▶ Northern Gateway Project to propel natural gas market development in Poland
- ▶ Stable and incremental growth of natural gas market in Poland
- ▶ Approx. 42% of the territory without gas supply network

Number of LNG-to-truck reloading operations at LNG terminal in Świnoujście



Natural gas consumption in Poland



Source: GUS

- ▶ Fleet of LNG propelled vessels on Baltic sea planned (i.a. Polferries)
- ▶ LNG in public transport (e.g. Warsaw)
- ▶ 49 Small Scale LNG regasification plants
- ▶ 3 LNG refuelling stations currently in operation
- ▶ LNG bunkering ships ordered

2018 HIGHLIGHTS

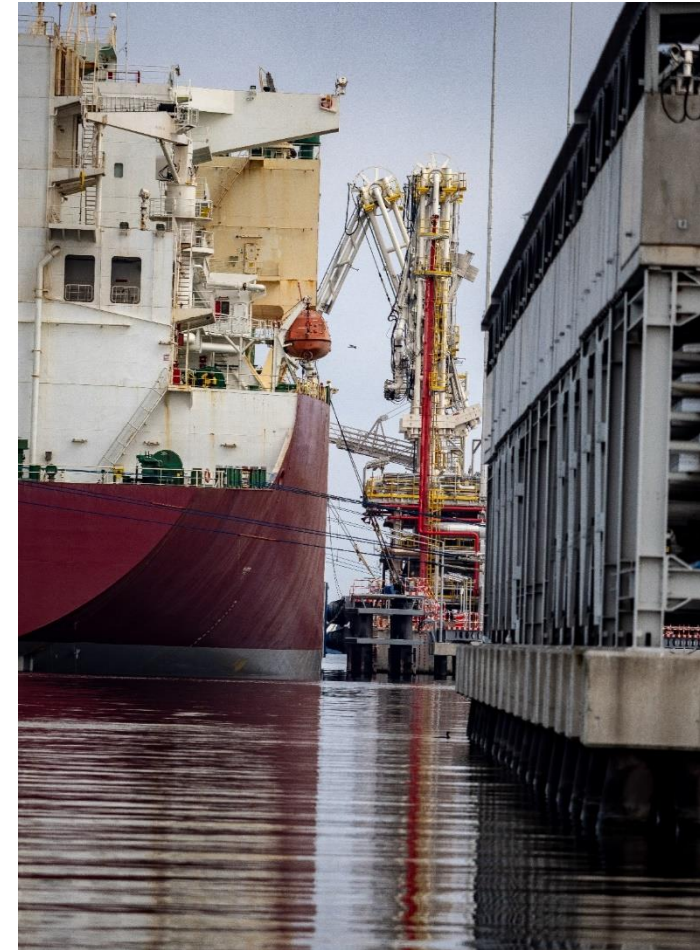
52 – overall number of LNG cargos delivered to LNG terminal to date. **23** operations in 2018

Over **5 bcm** – volume of LNG regasified since the beginning of Terminal operation

1794 – number of LNG trucks filled

20 September 2018 – first ISO container loaded

24 LNG trucks – record number of LNG trucks loaded in one day



TRENDS



Anticipated **growth in demand for natural gas** in Central and Eastern Europe and in the Baltic Sea region.



Expansion of the natural gas transmission system and interconnectors provides an opportunity for **regional market integration**.



European climate and environmental regulations driving the process of transformation towards low emission fuels.



Increasing use of natural gas for **power and heat generation**.



Accessible Road vehicle and Marine & Inland waterway bunker fuel



Prospects for improving the results of economies in the region by reducing the price of energy and **boosting competition** among natural gas suppliers.



LNG Expansion Programme



DRUGIE NABRZEŻE
SECOND JETTY

Budowa drugiego nabrzeża z odpowiednią infrastrukturą przeładunkową zapewni nowe usługi dla klientów związane z:

1. załadunkiem i rozładunkiem metanowców LNG małej i średniej skali
2. przeładunkiem LNG z LNGC przy planowym rozładunkowym dla jednostek małej i średniej skali, znajdującym się przy drugim nabrzeżu
3. bunkrowaniem z ładu na statki
4. załadunkiem LNG na statki bunkrujące

The construction of a second jetty with relevant reloading infrastructure of LNG Terminal in Świnoujście will provide the new services to customers related to:

1. loading and unloading small and medium scale LNG tankers
2. transshipment of LNG from LNGC connected to arms of unloading berth to small scale tankers located at second jetty
3. shore - to - ship bunkering
4. LNG loading to bunkering vessels

TRZECI ZBIORNIK LNG
THIRD LNG TANK

Budowa trzeciego zbiornika LNG o pojemności 180 000 m³ LNG zapewni większą elastyczność operacyjną i pojemność magazynową terminalu.

The construction of the third LNG tank with the volume of 180 000 m³ LNG will provide higher operational flexibility and storage capacity of the terminal.

REGAZYFIKATORY SCV
SCV

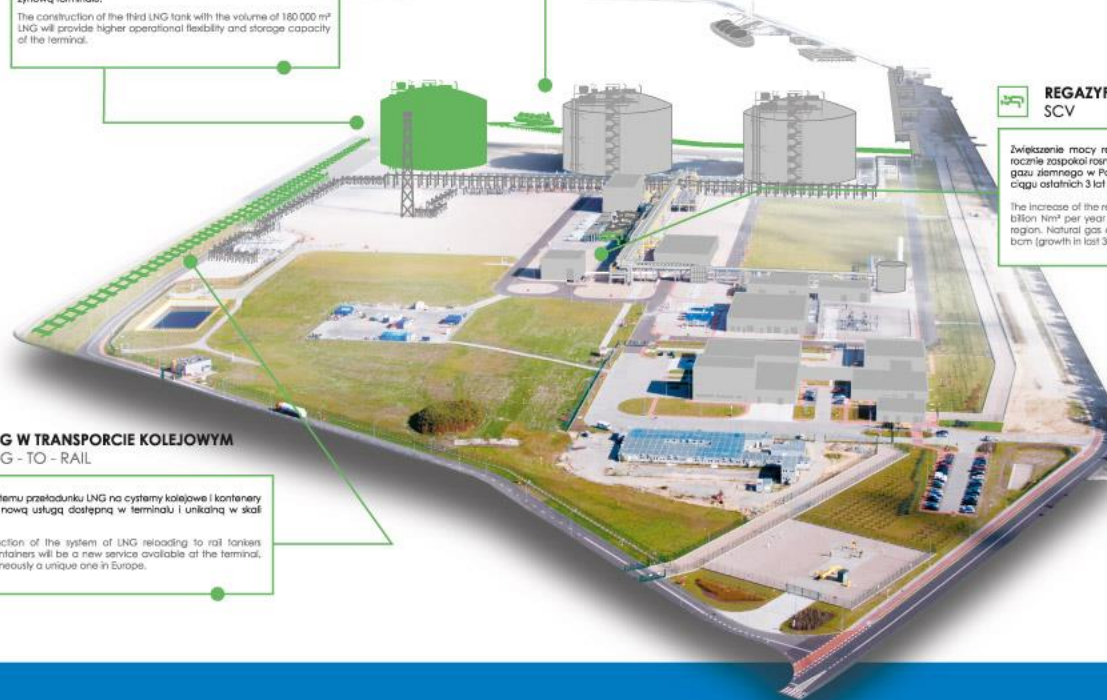
Zwiększenie mocy regazyfikacyjnych terminalu z 5 do 7,5 mld Nm³ rocznie zaspokoi rosnące zapotrzebowanie w Polsce i regionie. Zużycie gazu ziemnego w Polsce w 2017 roku wyniosło 19,1 mld m³ (wzrost w ciągu ostatnich 3 lat z 17 mld m³).

The increase of the regasification capacity of the terminal from 5 to 7.5 billion Nm³ per year will meet the increasing demand in Poland and region. Natural gas consumption in Poland in 2017 amounted to 19.1 bcm (growth in last 3 years from 17 bcm).

LNG W TRANSPORCIE KOLEJOWYM
LNG - TO - RAIL

Budowa systemu przeładunku LNG na cysterny kolejowe i kontenery ISO będzie nową usługą dostępną w terminalu i unikalną w skali Europy.

The construction of the system of LNG reloading to rail tankers and ISO containers will be a new service available at the terminal, and simultaneously a unique one in Europe.



TODAY

TOMORROW



KEY DRIVERS FOR LNG MARKET EVOLUTION

➤ Regulatory conditions

MARPOL, The Sulfur Directive

Lowering the level of sulfur in the fuel used in vessels in the SECA area, embracing Baltic Sea up to 0.1%

Alternative fuels Directive (DAFI)

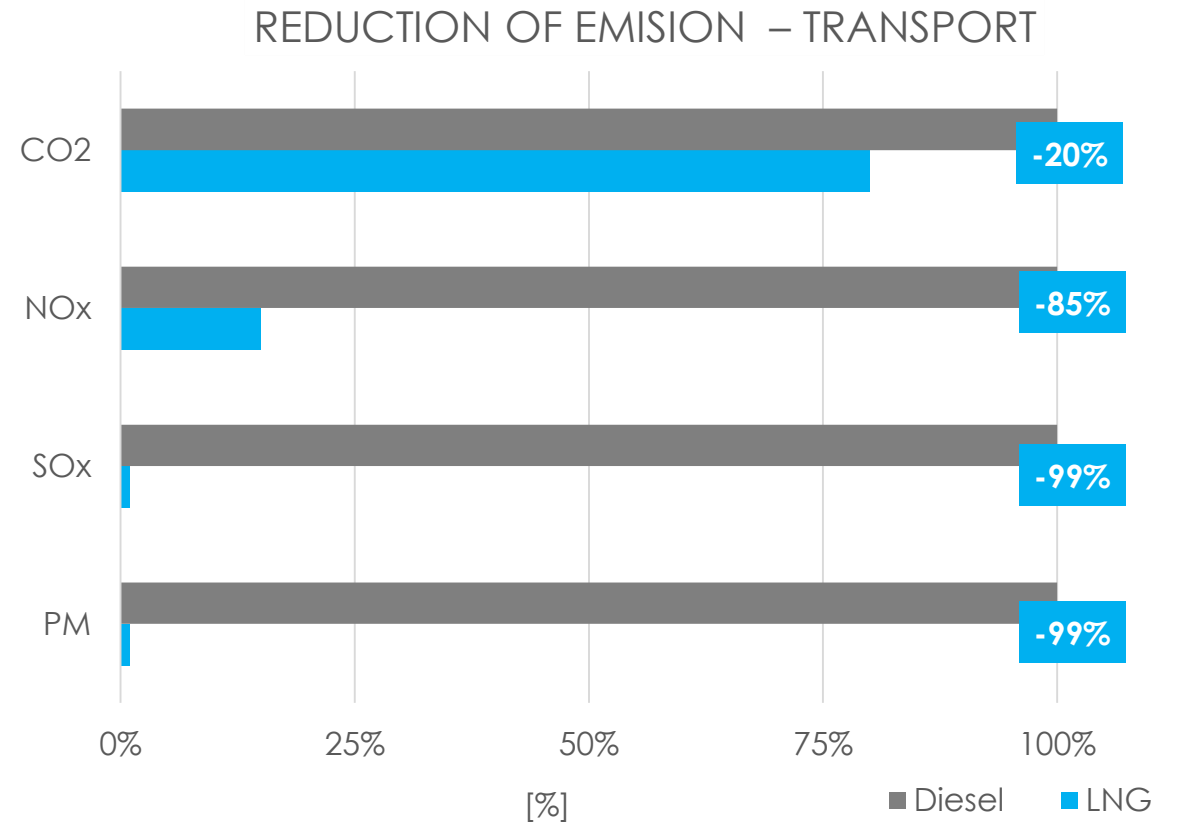
Framework for the development of alternative fuels infrastructure in the EU, as well as minimum requirements for the development of alternative fuels infrastructure, including charging points for electric vehicles and natural gas refueling points (LNG and CNG) as well as hydrogen

➤ Environmental requirements

➤ Increase of price competitiveness of CNG and LNG (zero excise tax rate in Poland)

PROSPECTIVE AREAS OF LNG UTILISATION

- ▶ LNG as a fuel:
 - Marine sector
 - Road transport
- ▶ Electricity and heat production
- ▶ LNG cold recovery (food industry, storage)
- ▶ Small Scale LNG infrastructure: off-grid & peak shaving
- ▶ Food processing (cryoconcentration, freeze-drying ...)



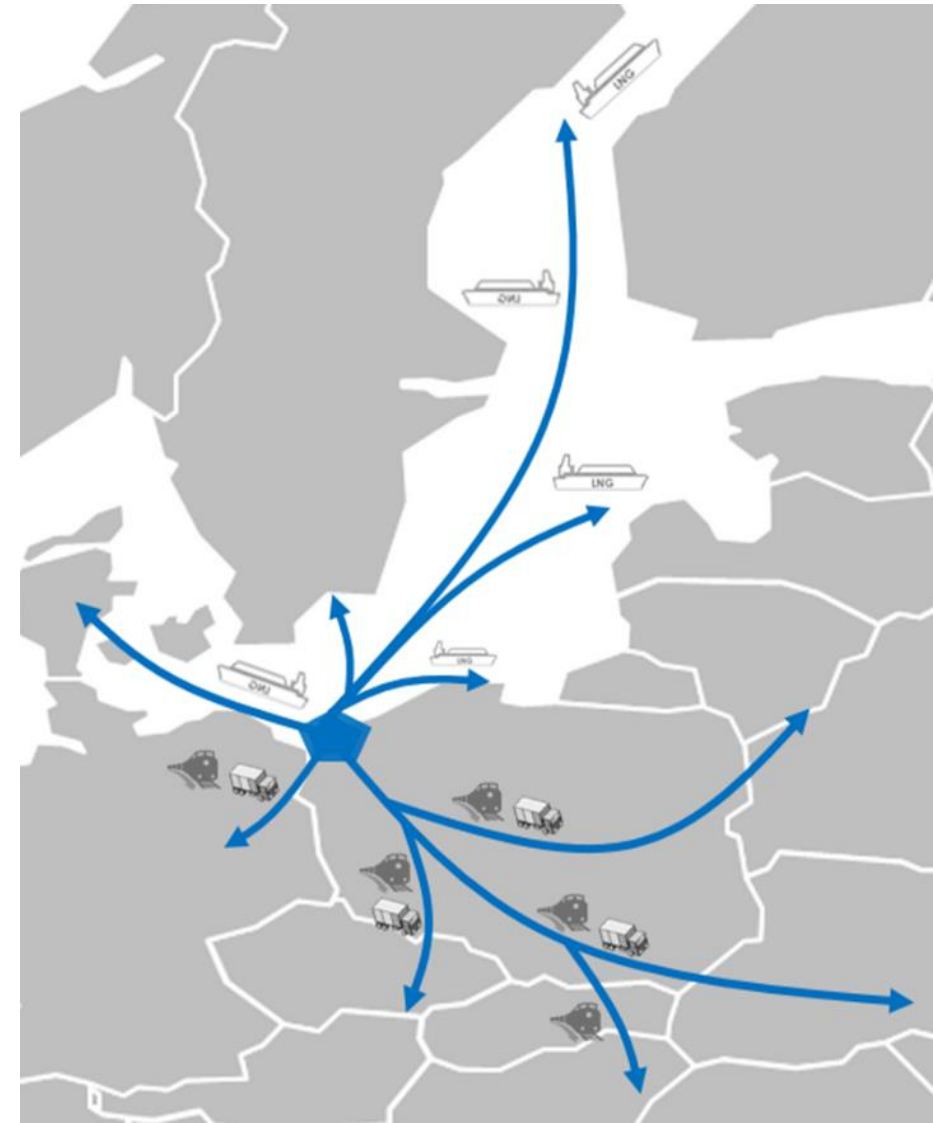
NEW SERVICES TO OPEN A NEW MODES OF LNG TRANSPORT

▶ Rail and intermodal transport of LNG

- ▶ Capacity of up to 1700 tonnes of LNG per day
- ▶ Possibility of intermodal transport utilization
- ▶ ISO containers and cryogenic railcars loading capability

▶ Small Scale LNG vessels and inland barges

- ▶ Max loading capacity of 5600 cm of LNG per hour
- ▶ 2nd jetty designed for fitting the small scale LNG carriers
- ▶ Utilization of inland waterways system potential
- ▶ Bunkering services to be boosted within the Region



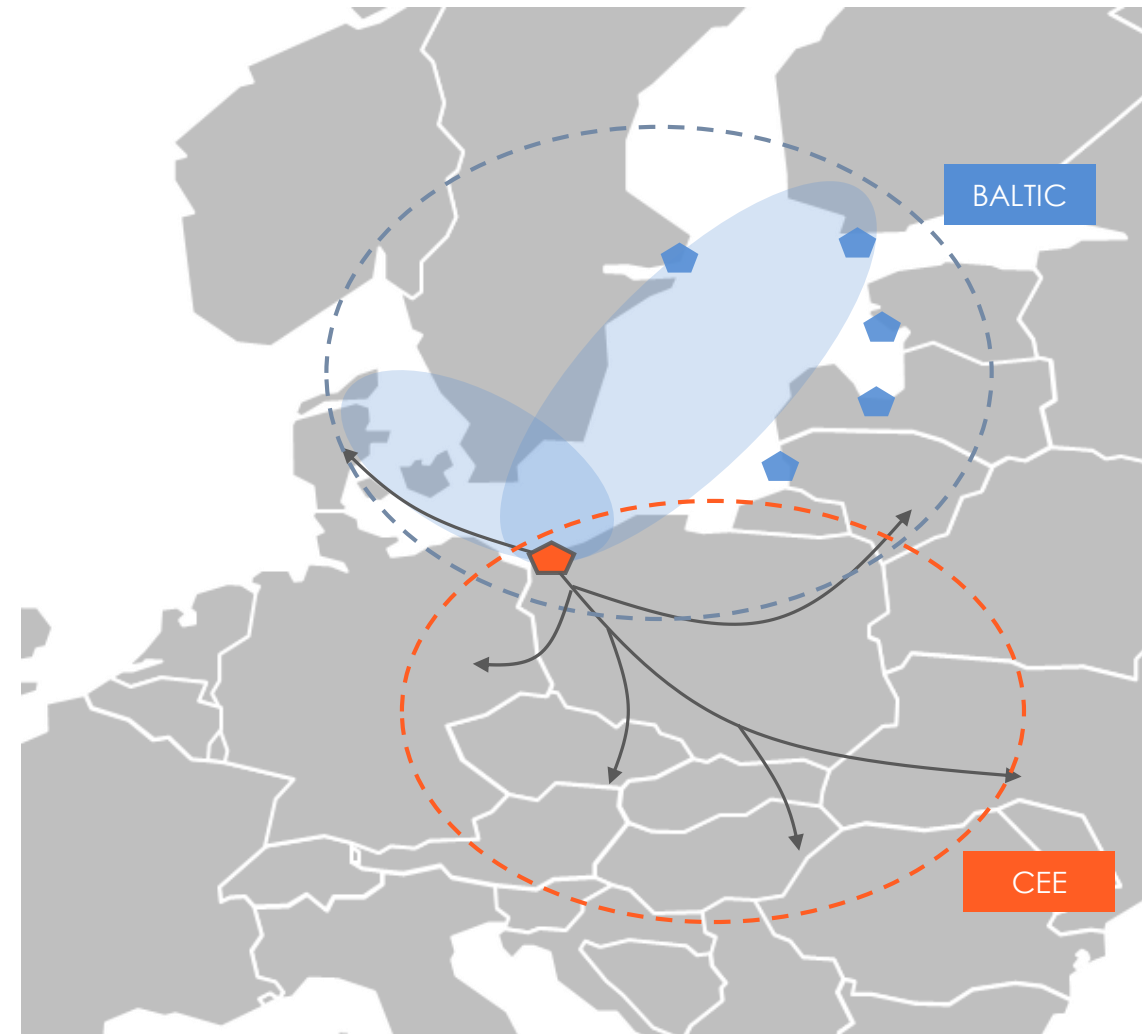
NEW SERVICES AT LNG TERMINAL IN ŚWINOUJŚCIE

▶ **Baltic region**

- ▶ LNG bunkering
- ▶ LNG loading onto bunkering vessels
- ▶ LNG loading onto smaller vessels
- ▶ LNG transshipment

▶ **CEE region**

- ▶ LNG intermodal transport
- ▶ LNG road transport
- ▶ LNG as a fuel
- ▶ LNG peak shaving and satellite regasification



THANK YOU FOR YOUR ATTENTION

