

NEW DYNAMICS IN THE NATURAL GAS SECTOR IN EUROPE

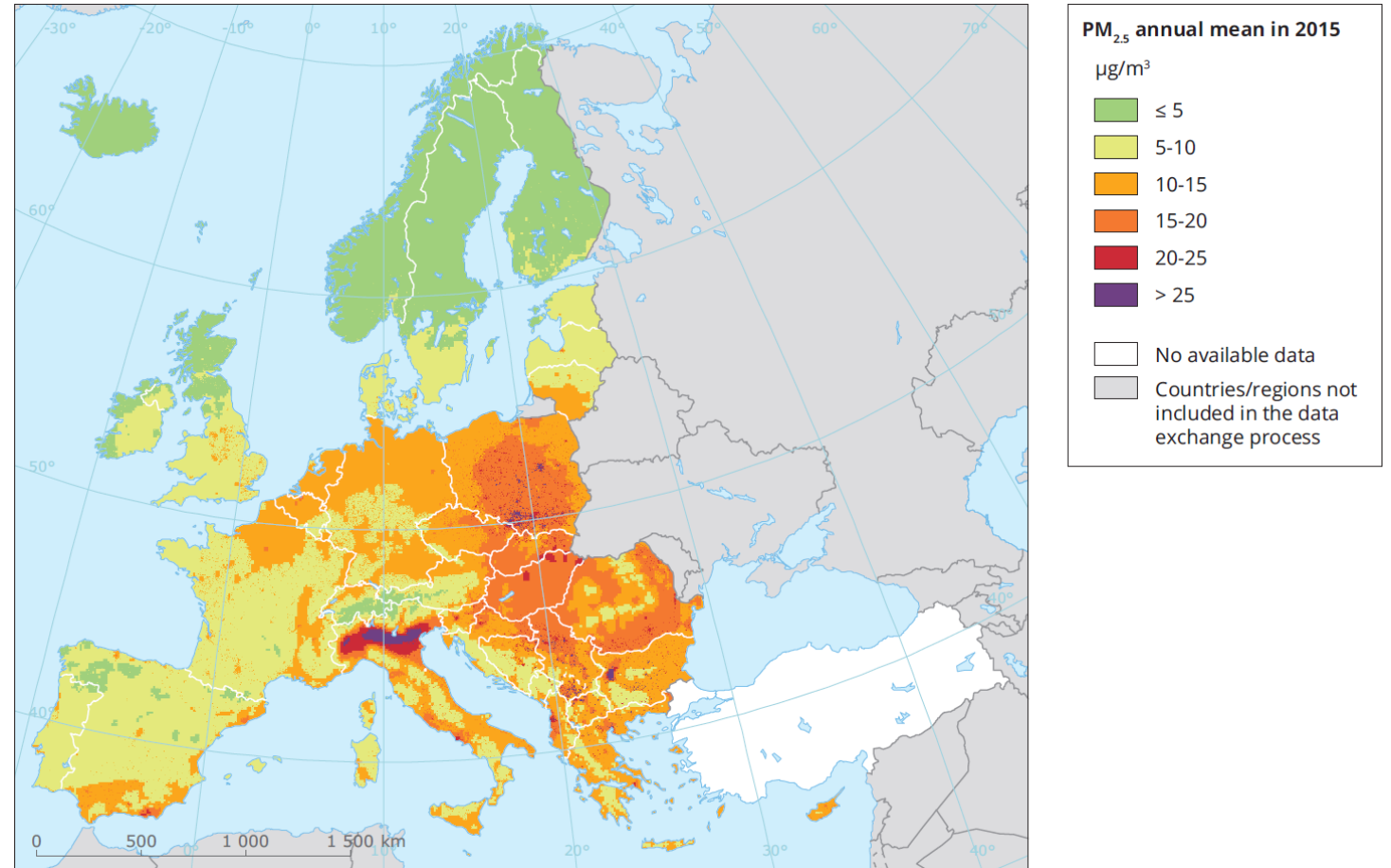
Sławomir Sieradzki
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AIR QUALITY IN CEE REGION

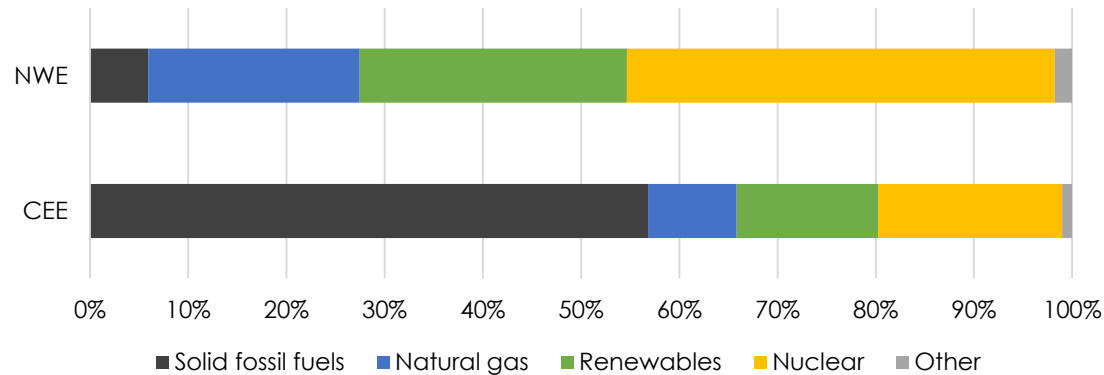
Air quality in Poland and the CEE region

- ▶ Concentrations of air pollutant emissions **above the EU limit values**
- ▶ Air pollution resulting from **burning high emission and low-quality fuels**, especially in the winter period
- ▶ **Significant negative impact on the health and economy.**
- ▶ Mitigation of air pollution with a wider use of natural gas in households, **the heating and the power generation sectors**
- ▶ **Natural gas as an affordable, time- and cost efficient solution**

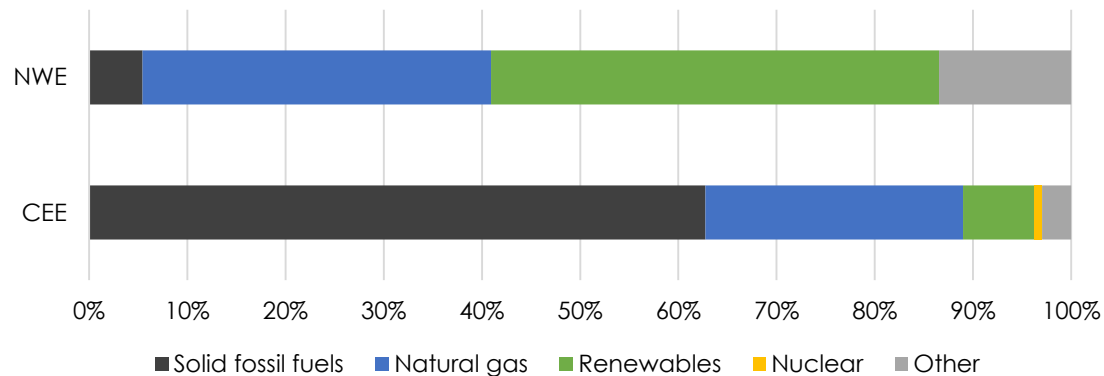


ELECTRICITY AND HEAT GENERATION IN EUROPE

Electricity generation



Heat generation



NWE: BE, DK, FR, IE, NL, LU, SE. CEE: CZ, HU, PL, SK.

CEE

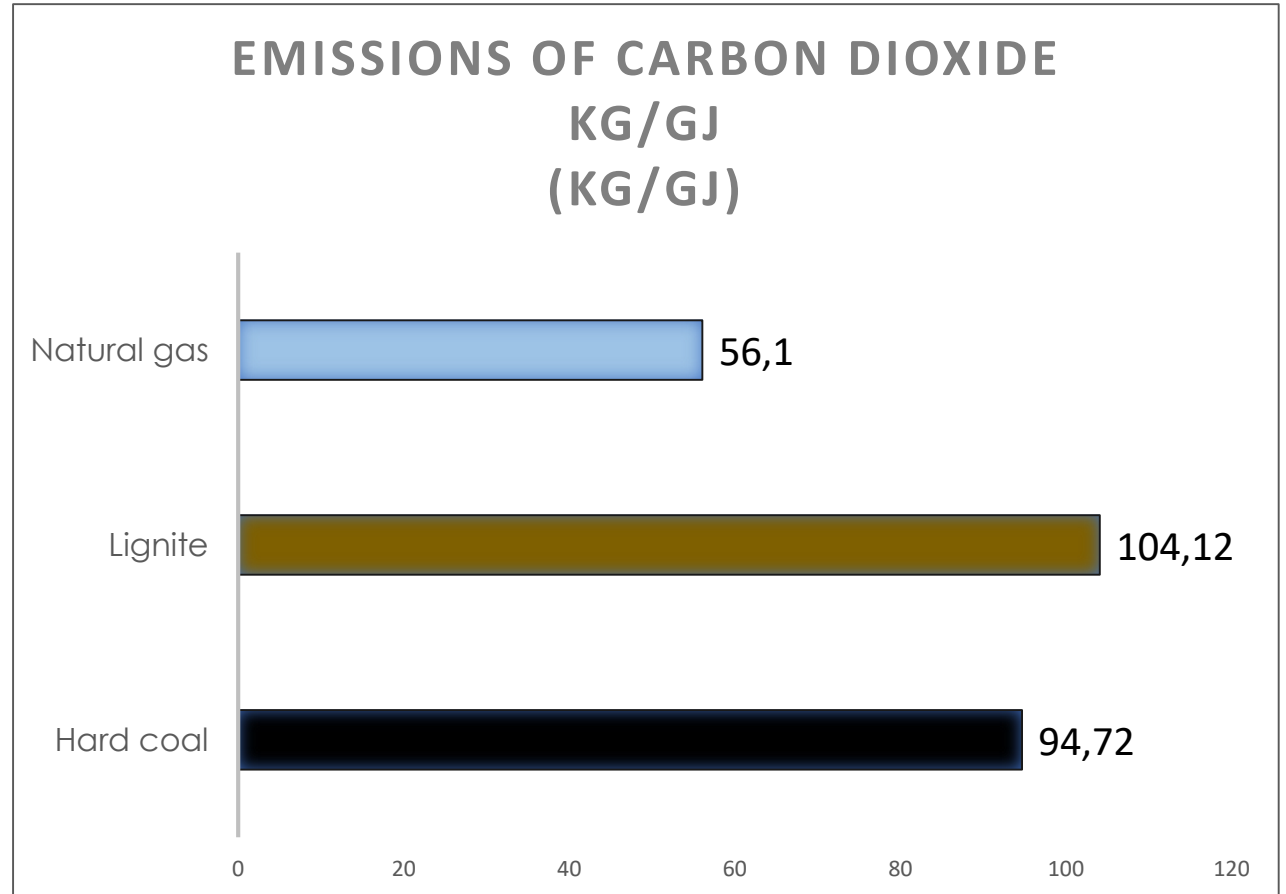
- ▶ **Coal and lignite as the primary sources in the electricity and heat generation.**
- ▶ 57% of electricity produced from solid fuels in CEE. Limited but increasing role of RES (14%) and natural gas (9%).
- ▶ Solid fuels generate 63% of the heat in CEE. Natural gas with a share of 26%.

North-West Europe

- ▶ Completely different outlook in North-West Europe:
- ▶ Marginal role of solid fuels, zero-emission sources (RES, nuclear) are well-developed and supported by low emission natural gas.

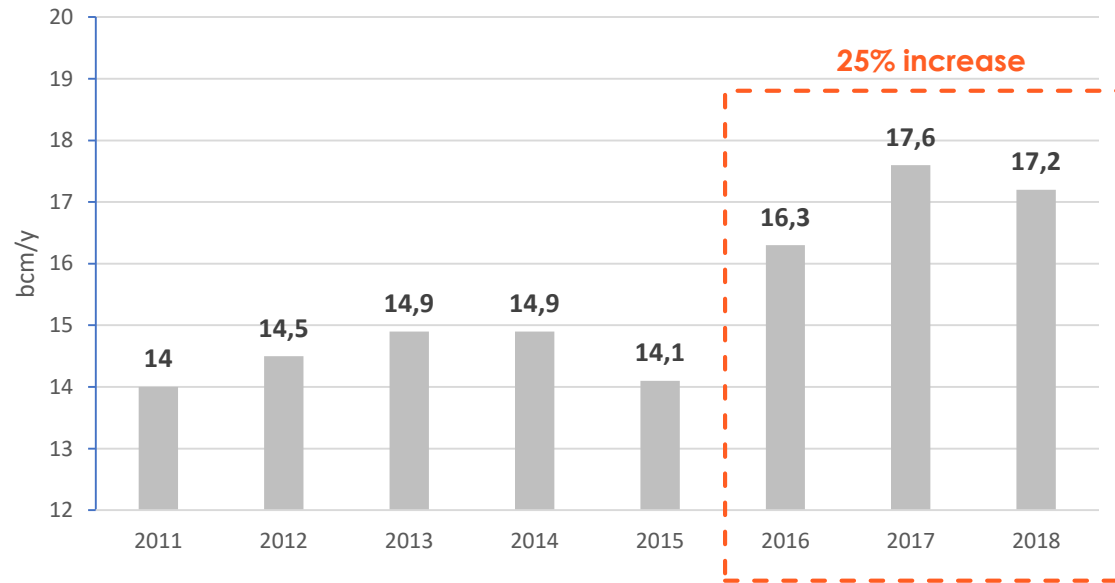
NATURAL GAS: SOLUTION FOR LOW CARBON ENERGY MIX

- ✓ Carbon dioxide emissions from natural gas are about 40-45% per cent lower than coal as a result of higher performance and efficiency of gas-powered facilities.
- ✓ Increasing costs of carbon emission allowances in EU - as a result of relatively high costs of energy, coal dependent regions may **lose their competitiveness**.
- ✓ Natural gas, due to its **low emission coefficients compared to solid fuels**, should be considered as a fuel that **can contribute to a significant reduction of greenhouse gas emissions**



Data: KOBIZE

POLAND AS THE BIGGEST AND GROWING REGIONAL MARKET



Source: GAZ-SYSTEM S.A.

- ▶ Positive outlook for gas demand in Poland in recent years
- ▶ Significant increase in demand since 2015 (25% increase)
- ▶ Poland plans gas-based power and heat generation development to be one of the driving forces of the Polish energy transformation.

It is expected that in the next 10 years perspective the demand for natural gas in Poland may increase by more than 50%. In terms of transition from coal to lower emitting sources **gas could be a major driver to meet the market demand as well as climate and environmental requirements.**

PROVIDING NEW POSSIBILITIES TO THE CEE/BALTIC REGION

BALTIC PIPE (2022)

Ongoing design phase, construction works as of 2020

3 bcm/y towards DK
10 bcm/y towards PL

LNG TERMINAL (2023)

Ongoing tendering for the construction works

Capacity upgrade: 7,5 bcm/y

PL-SK INTERCONNECTION (2022)

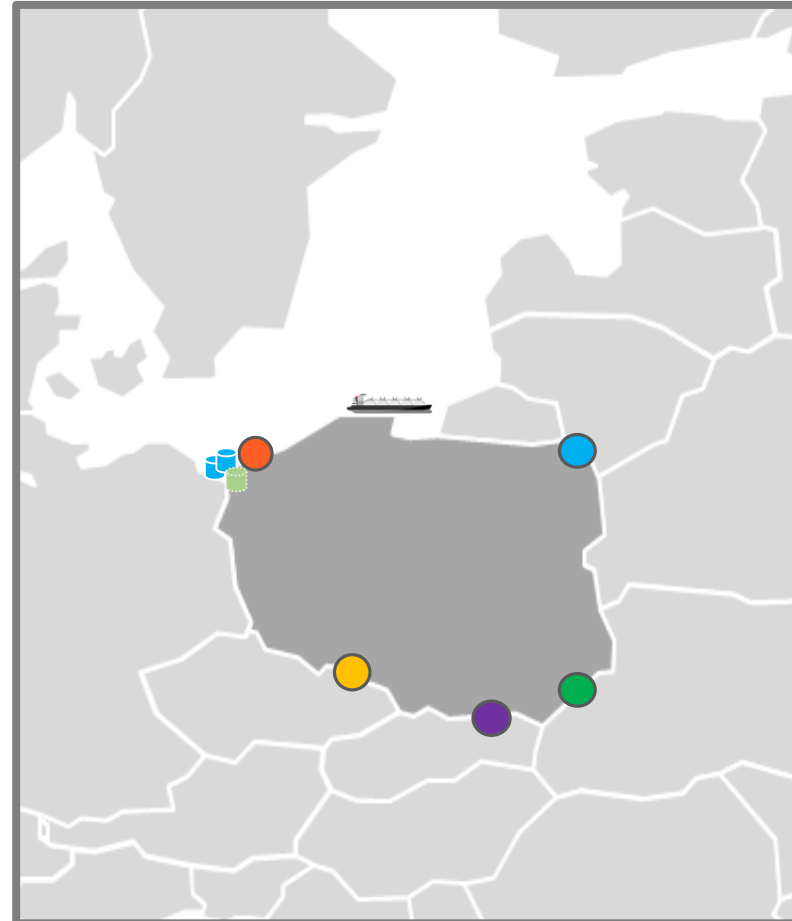
Under construction

4.7 bcm/y towards SK
5.7 bcm/y towards PL

PL-LT INTERCONNECTION (2021)

Ongoing tendering for the construction works

2.4 bcm/y towards LT
1.9 bcm/y towards PL



PLANNED EXPANSION OF INFRASTRUCTURE

FSRU IN PORT OF GDAŃSK (2025)

Ongoing design phase

Capacity (I stage): 4,5 bcm/y

PL-CZ INTERCONNECTION

Design phase completed in Poland

Project under evaluation, ongoing incremental process

PL-UA INTERCONNECTION

Design phase completed in Poland

Project under evaluation

GAS INTERCONNECTION POLAND-SLOVAKIA

An essential part of the North-South gas corridor (NSI East Gas), which is intended to integrate gas systems of Central and Eastern European countries.

New gas sources for CEE: LNG and Norway (Baltic Pipe)

Recognized as a **Project of Common Interest**

Member states: Poland, Slovakia

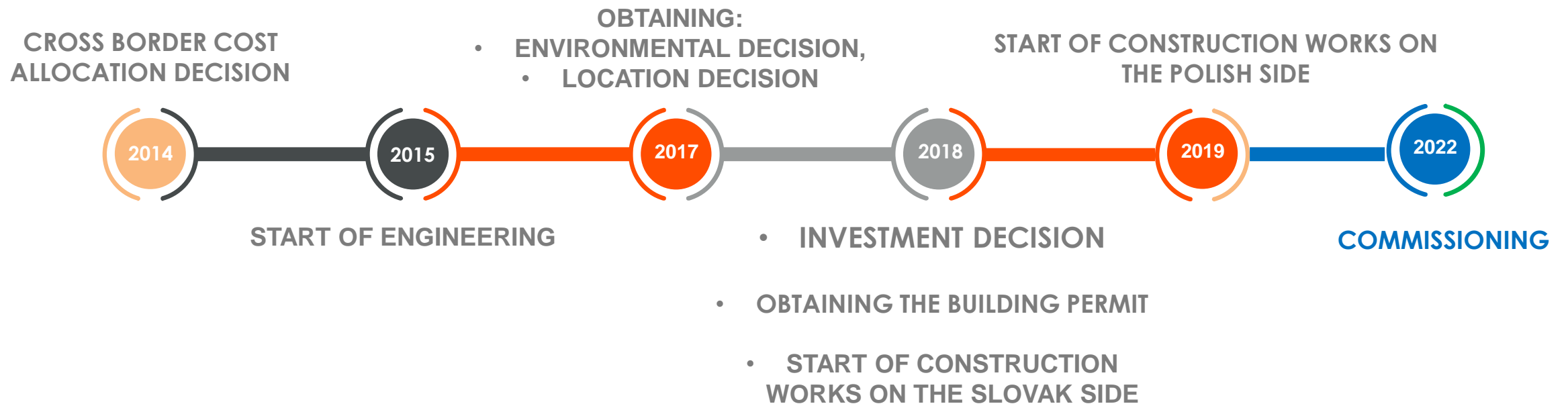
Project partners: GAZ-SYSTEM (PL), EUSTREAM (SK)

Status: FID, ongoing construction works

Capacity: PL-> SK: 5.7 bcm/y
SK-> PL: 4.7 bcm/y



GAS INTERCONNECTION POLAND-SLOVAKIA



INAUGURATION OF THE CONSTRUCTION OF THE POLISH PART OF THE POLAND-SLOVAKIA GAS INTERCONNECTION

06.09.2019



NATURAL GAS INFRASTRUCTURE CONTRIBUTING TO EU OBJECTIVES



SECURITY OF SUPPLIES

Guaranteeing
secure and
affordable energy
supplies



ENERGY EFFICIENCY

Targeted gas
investments to
complete a
competitive
market



EMISSION REDUCTION

Energy
transformation
in region.
Natural gas in
power &
heating
generation



CLEAN AIR

Available
infrastructure to
achieve EU climate
targets