



Lesson for the European Union

from the Russian-Ukrainian natural gas crisis

Energy war or hurt bear screaming ?



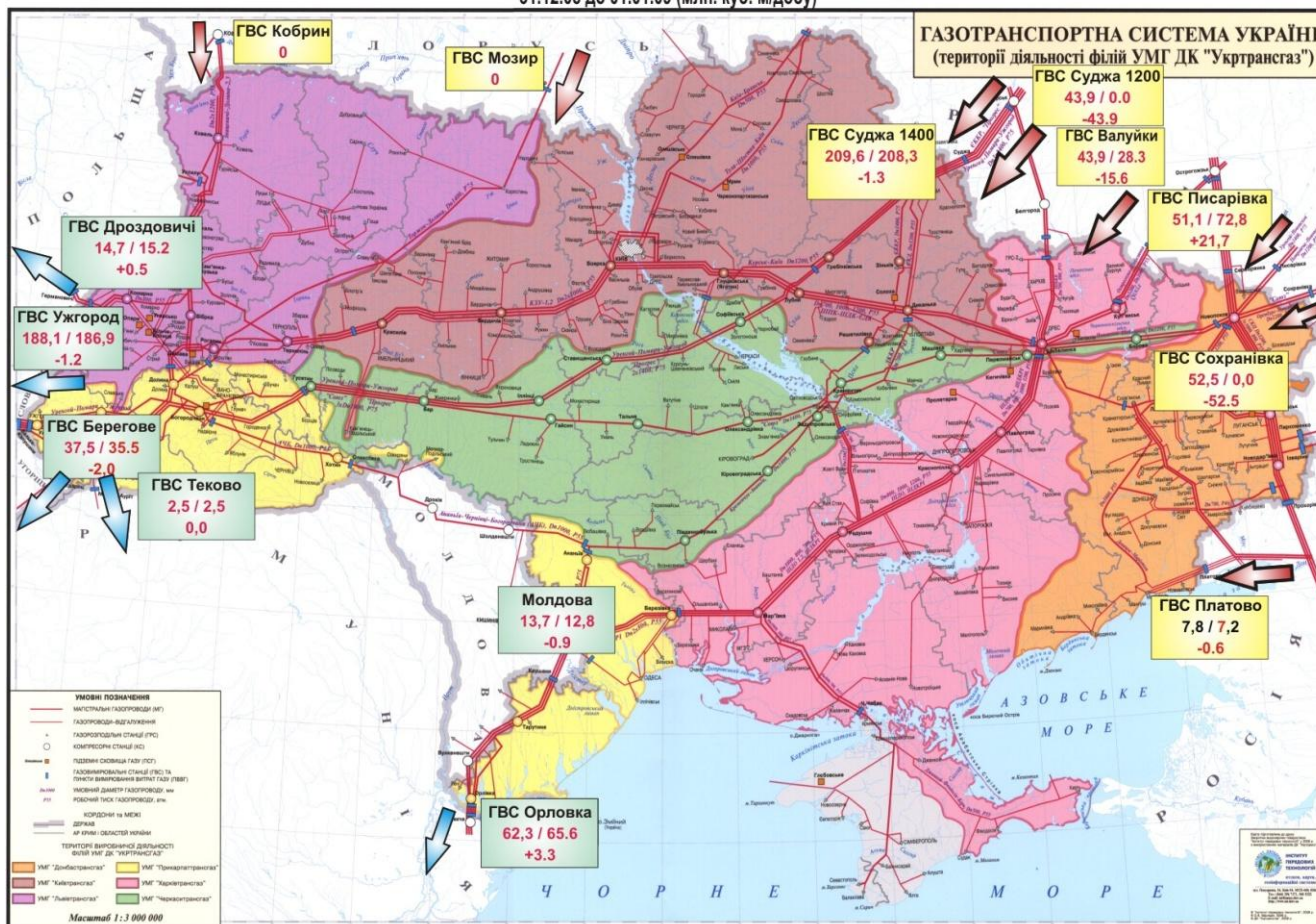
**Instytut
Studiów Energetycznych**

Andrzej Sikora

Cracow, May 18th, 2009

New Year's greeting cards you have probably received from UkrTransGaz

Зміна режиму роботи ГТС ДК "Укртрансгаз"
31.12.08 до 01.01.09 (млн. куб. м/добу)



Operational regime change Dec 31st 2008 - Jan 1st 2009

Source: UkrTransGas

Russia and Ukraine still have to face major political issues of the future gas transit through Ukraine

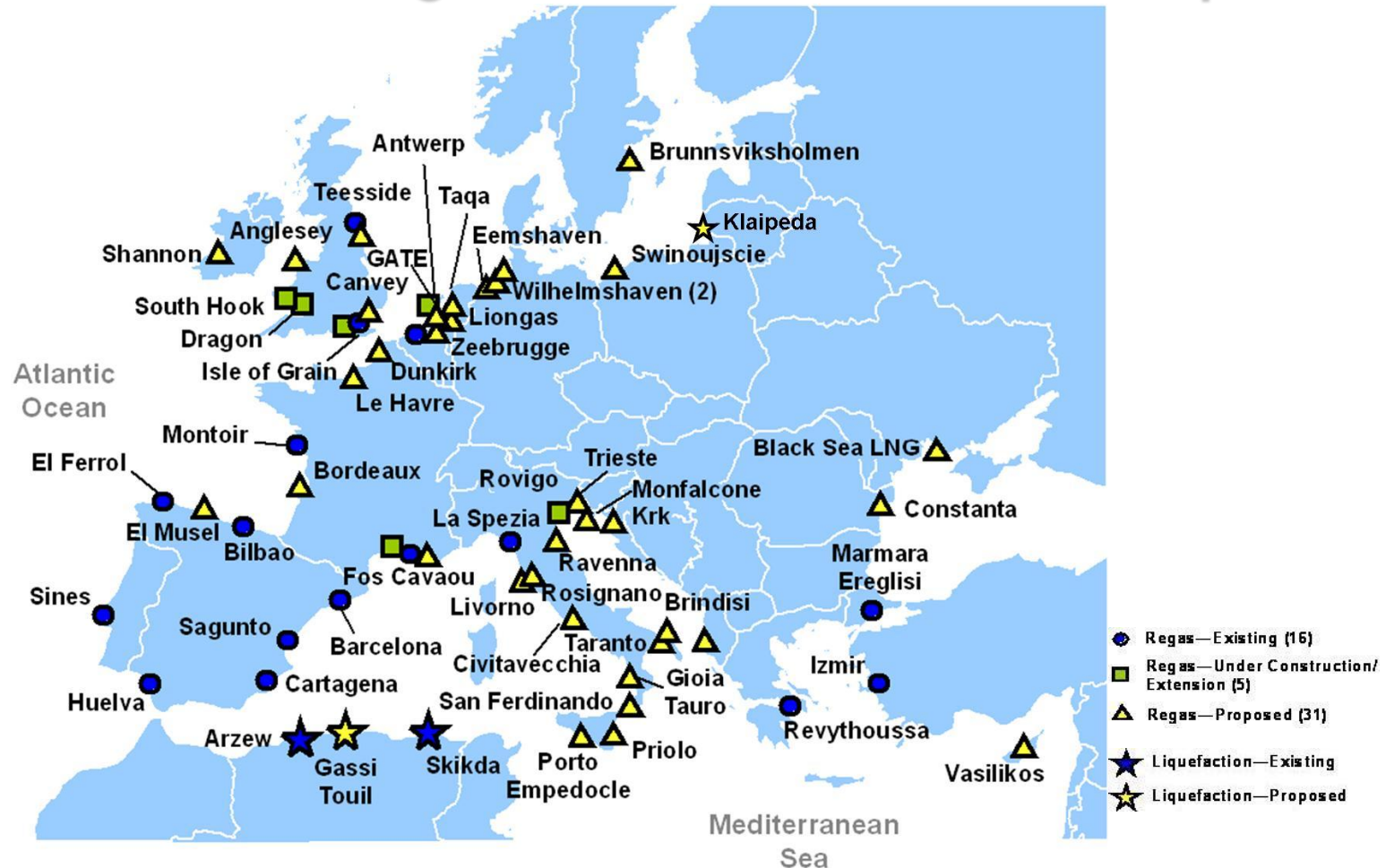
- There is no integrated EU natural gas supply system. We can see countries' "local" pipelines and gas storages caverns systems or hubs developed only in EU-15; no reversed interconnectors across EU, and mainly one direction gas flow. The recognised lack of an efficient infrastructure network is a key element to be addressed in the development of the EU-27, and especially integration into the internal market.
- Russia (Gazprom) will be a dominant natural gas supplier to the majority number of European countries in the nearest future.
- Separated and individual negotiations with Gazprom conducted by every country leads to a fall of the common EU policy.
- Is there a common EU Energy Strategy ?
Do we have "Natural Gas sub-strategy for EU" ?
Is our problem already addressed ?

EU natural gas supply system and natural gas flow directions



Source: www.inogate.com

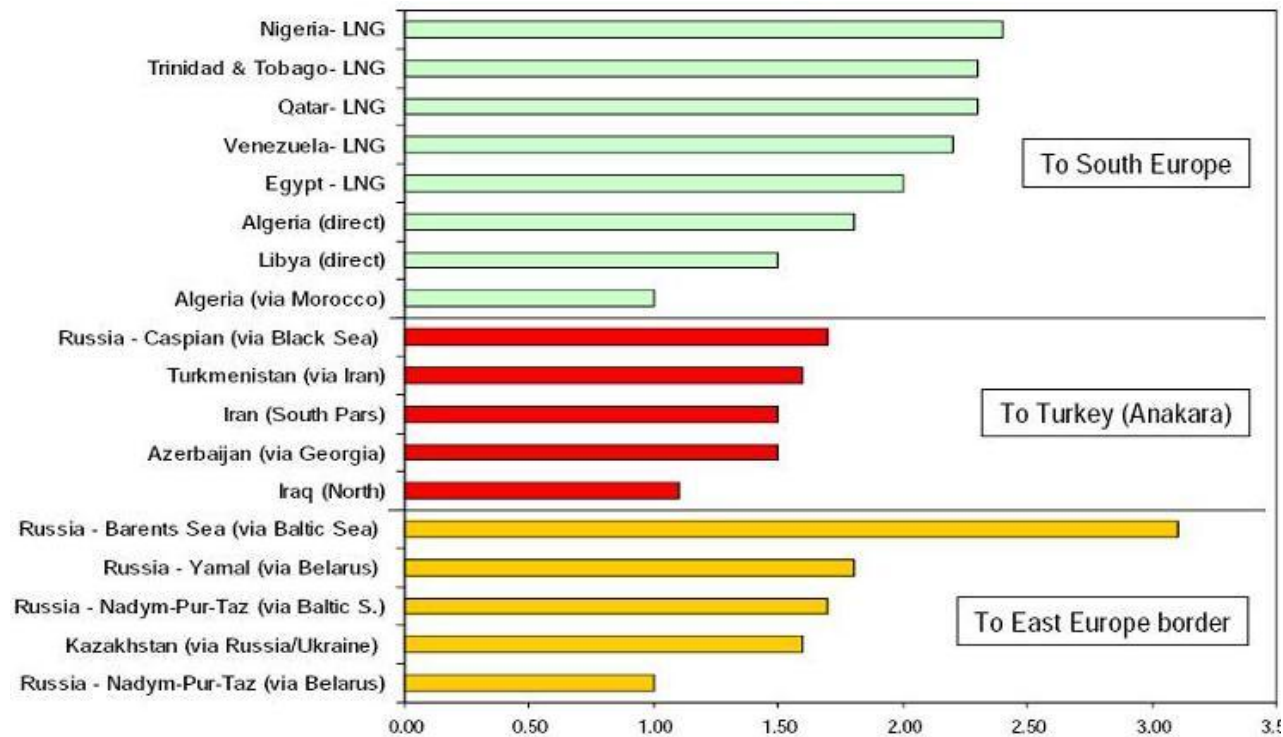
Potential locations for new LNG regasification terminals in Europe



Source: King & Spalding International LLP, „LNG in Europe An Overview of European Import Terminals”; own data.

Close decisions on starting new transport routes construction

Forecasts of transportation costs for natural gas to Europe 2010-15
[USD/MBTU]



Source: EFMA GAS Group, www.emfa.com

Close decisions on starting new transport routes construction (2)

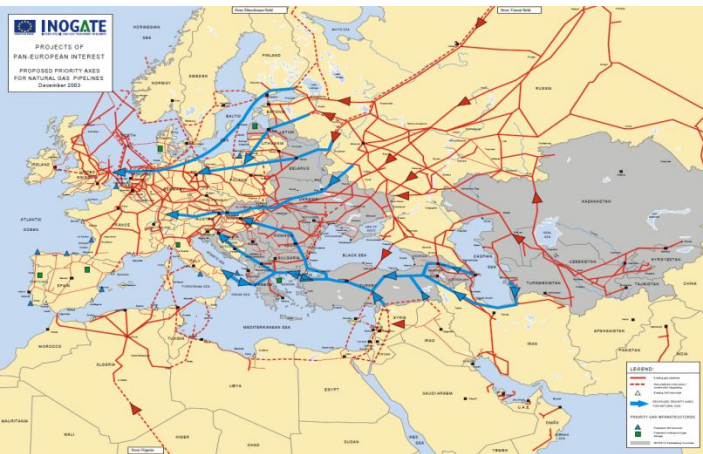
- Europe's upstream gas production is declining.
- LNG suppliers will be abundant for the next several years and investment in new LNG projects has abruptly been delayed (like in Poland) or ceased (now one can estimate the delay in Poland for min. 2 years).
- We can't expect that yesterday's LNG oversupply will likely be followed by a longer period of time.
- Development of alternative energy sources is now problematic - fuel fossils price is rather low - and ETS scheme seems to be problematic with 9€ per CO₂ tone.
- Consequently, Europe's dependence on imports by pipeline will continue to grow (France, Great Britain, the Netherlands, Germany, Italy and Belgium) and the consequences of any future interruption could be far more serious.
- Measures now seem likely to be taken to reinforce west-east flows for the Czech Republic Poland and Slovakia and to strengthen cross-border connections between Austria and Slovenia, Hungary and Romania, Poland/Slovakia and Hungary or Poland and Germany.

Possible idea for connections and new routes for natural gas transportation to Poland



Source: www.rynekgazu.pl

Close decisions on starting new transport routes construction (3)



New Lifelines

Final capacity of selected planned pipelines, in cubic meters per year

Nord Stream pipeline (Baltic Sea)

55 bln m³

Value based on current European market price for Russian gas (around €320 per 1,000 cubic meters) **€17.6 bln**

Nabucco pipeline

31 bln m³

€9.9 bln

South Stream pipeline (Black Sea)

30 bln m³

€9.6 bln

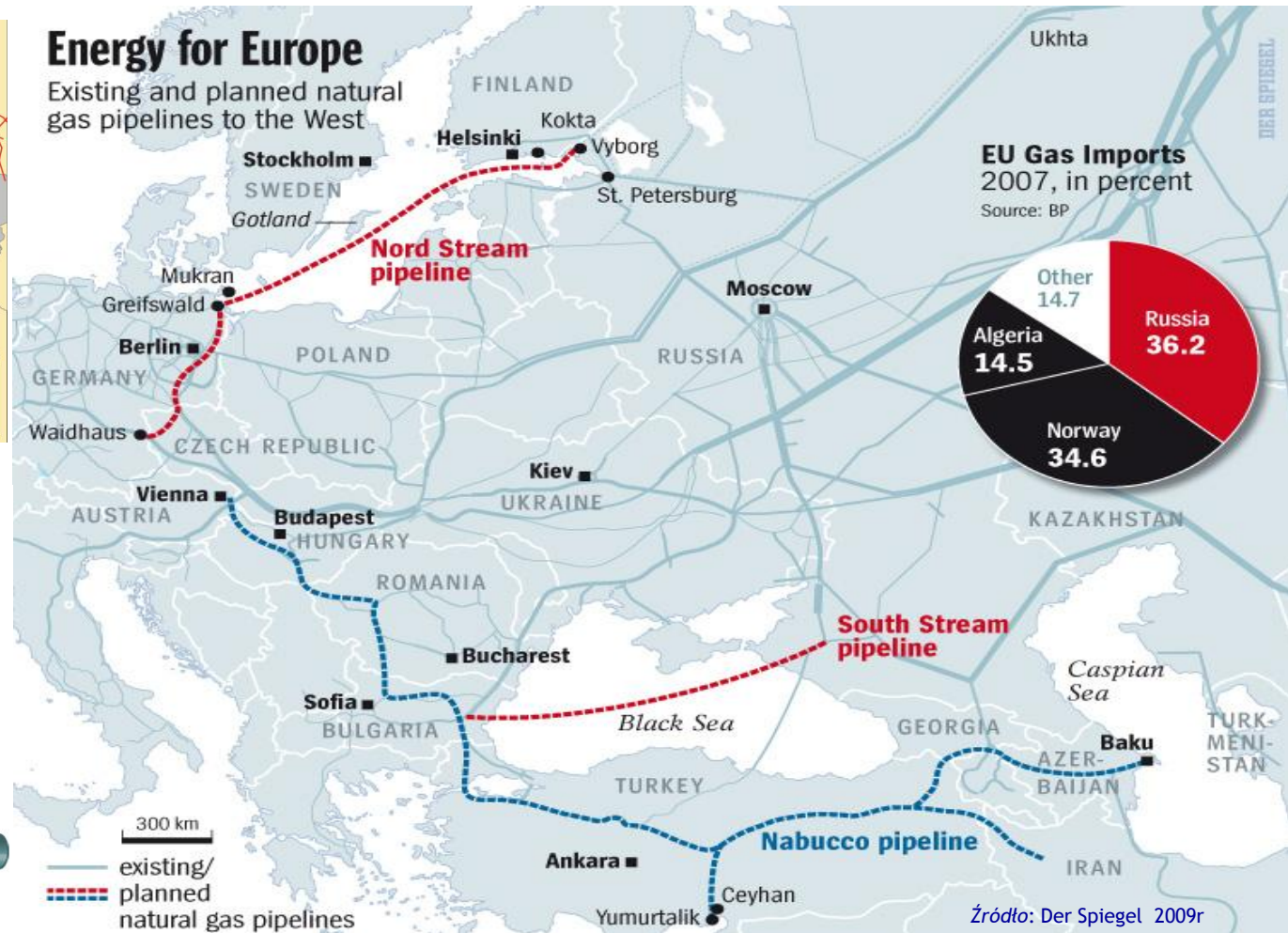
For comparison: existing pipelines ... through Ukraine

120 bln m³

... through Poland

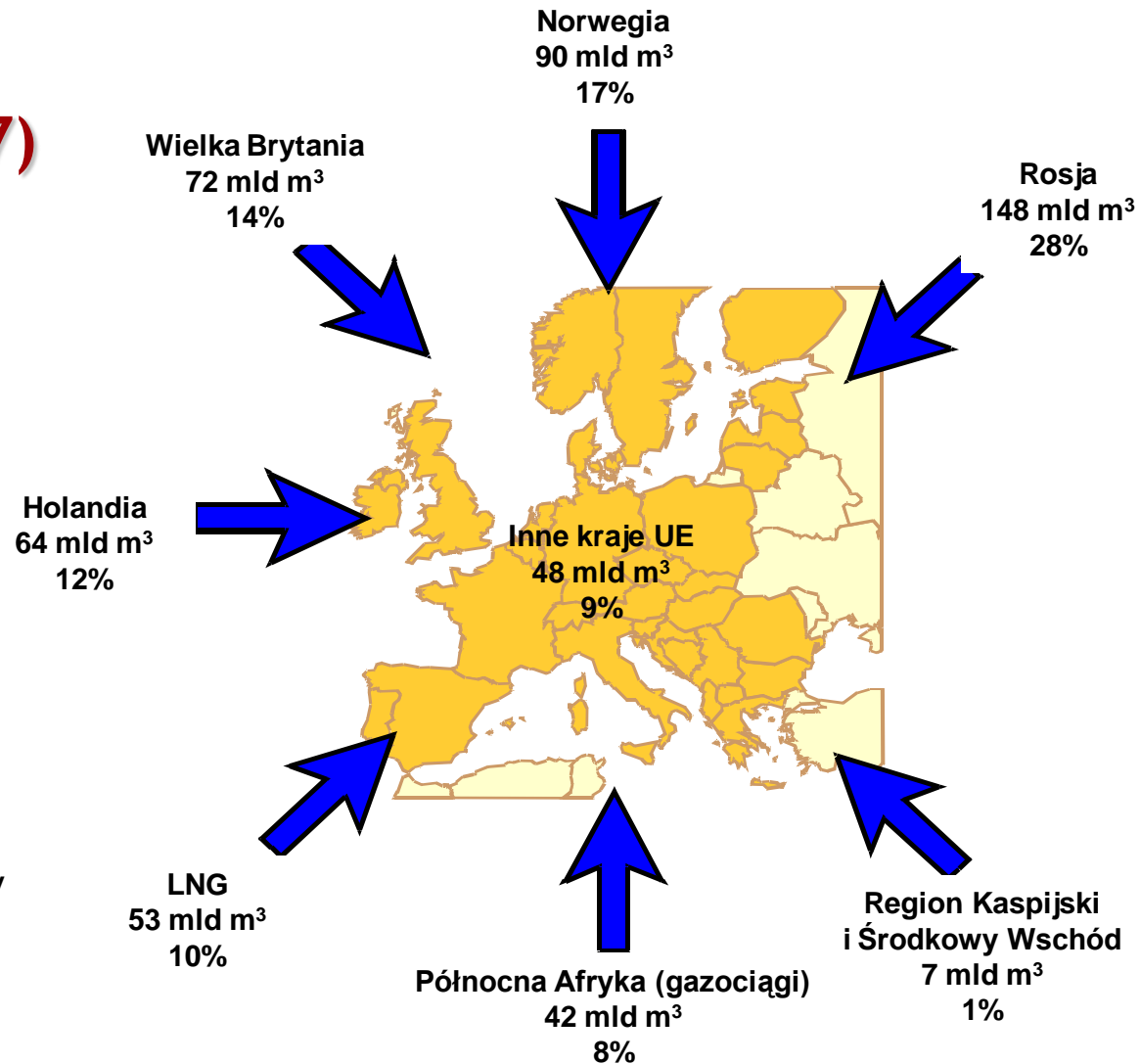
30 bln m³ 67 bln m³ after expansion

DER SPIEGEL



Sources for natural gas deliveries to Europe (2007)

- In Europe there is a strong obligation on the “new entrants” with Bulgaria and Romania as an EU member to help to correct the weakness in the energy supply system.
- Several European gas companies (BASF, E.ON Ruhrgas, ENI, GASUNI, GdF) have developed strong business relationships and financial partnerships with Gazprom in both upstream and downstream activities. Other European companies are also heavily engaged in Russia and President Medvedev will now undoubtedly seek to strengthen these bilateral partnerships.
- Most of EU countries’ gas markets are more or less regulated, non-liberalized, hardly available for new participants, so can’t be described as a free markets. This situation improves Gazproms’ domination and additionally strengthen its negotiation position as a main gas supplier to European Union.



Source: Own calculations based on BP Statistical Review of World Energy 2008



Questions ?



Thank you very much 😊



andrzej.sikora@ise.com.pl



**Instytut
Studiów Energetycznych**