Institute for Energy and Finance

A gas option for Europe, a European option for gas

Alexey GROMOV

Director of Energy Department

Institute for Energy and Finance

Russia, Moscow

www.fief.ru

10th EDF Group Gas Workshop

Milan, 03th October 2013

1. Expert context of EU-Russia Gas Dialogue

2. European gas demand: Russian scenario's overview

3. Options for Russian gas in Europe: Russian scenario's overview

4. EU-Russia's gas relations: prospects for cooperation

Structure of the EU-Russia Energy Dialogue

Coordinators

A. NOVAK – Minister of Energy of the Russian Federation

G.H. OETTINGER – Commissioner for Energy

Delegated Coordinators

A. YANOVSKY - Deputy Minister of Energy of the Russian Federation

P. LOWE – Director General, DG Energy

Gas Advisory Council

Thematic group on energy markets and strategies

Thematic group on electricity

Thematic group on nuclear energy

Thematic group on energy efficiency and innovations

Subgroup on scenarios and forecasts

Subgroup on the Roadmap of the EU-Russia Energy Cooperation until 2050

Informal EU-Russia Consultations on Gas Issues

Partnership for modernization

Advisory bodies and mechanisms of partnership

Gas Advisory Council

(organized on the 17th October 2011)

Objectives of the GAC's activity

- assess the developments of gas markets in the Russian Federation and the EU
- evaluate the development of gas production, demand and transmission
- evaluate the development of supply prospects and consumption
- discuss aspects related to market structures and infrastructure

Membership

The GAC includes representatives from the gas industry, from academic and research institutions, international organisations as well as from EU Member States, the Russian Ministry of Energy and the European Commission.

The **Members of the Council are independent and are free** to take any position or recommendation they deem appropriate in relation to EU-Russia gas relations.

Structure of Gas Advisory Council

Gas Advisory Council

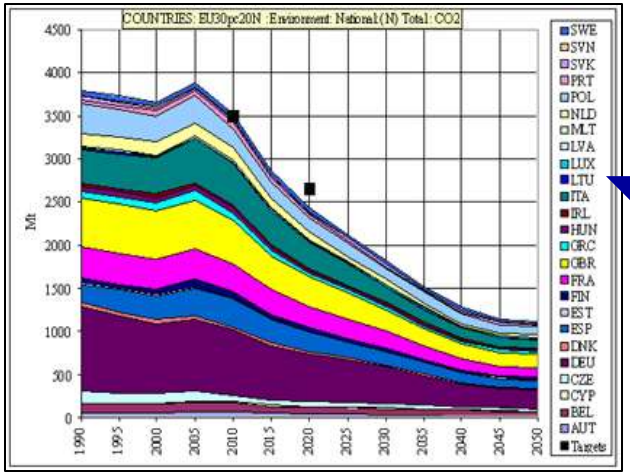
Co-Chair, Russia	Co-Chair, EU
V. FEIGIN, IEF	J. STERN , Oxford Energy Institute

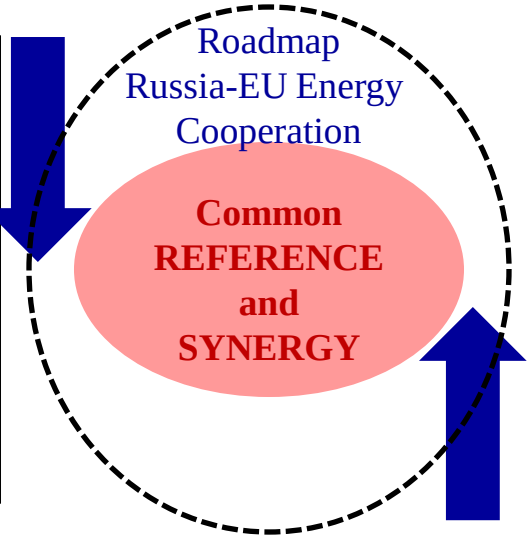
Work Stream 1	Work Stream 2	Work Stream 3
Long-term trends of EU-Russia gas relations	Gas markets issues	Gas infrastructure issues
FEIGIN (RUS)	KONOPLYANIK (RUS)	SHTILKIND (RUS)
STERN (EU)	BOLTZ (EU)	CAMPHUES (EU)

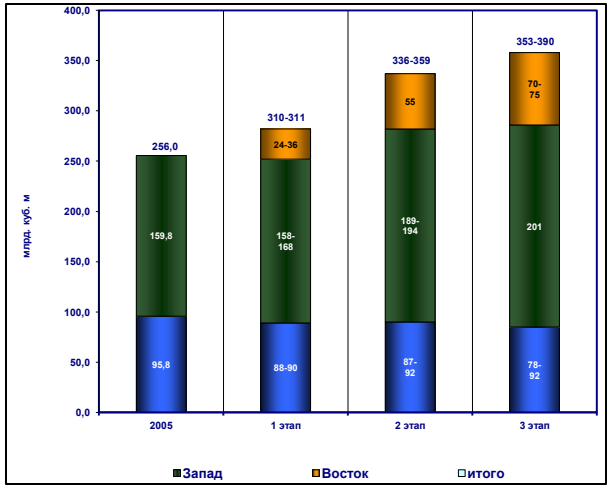
Main result of GAC activity – **Roadmap Russia-EU Energy Cooperation until 2050**

Objectives of the Roadmap

- **Analysis of different energy scenarios for the future and their impact on Russia-EU energy relations in the different sectors (oil, gas, electricity)**
- **Elaborate long-term opportunities and risks of the overall energy supply and demand situation**
- **Investigate the potential for long-term cooperation in the field of energy**







EU Low Carbon Energy Policy up to 2050

Russian Gas Export Expectations up to 2030

ROADMAP is…

Not ONLY the IDEOLOGY of cooperation but the concrete WAYS of cooperation

Not ONLY the DECLARATION but the LIVE DOCUMENT

Approach

- The EU and Russian energy policies are different, but there do exist such areas where these policies converge and thereby **mutually explored and mutually beneficial synergies** may arise
- The Roadmap should include **necessary milestones** and consider its practical realization issues
- The adopted Roadmap should provide for some kind of generalized **work plan of the EU-Russia Energy Dialog activities**

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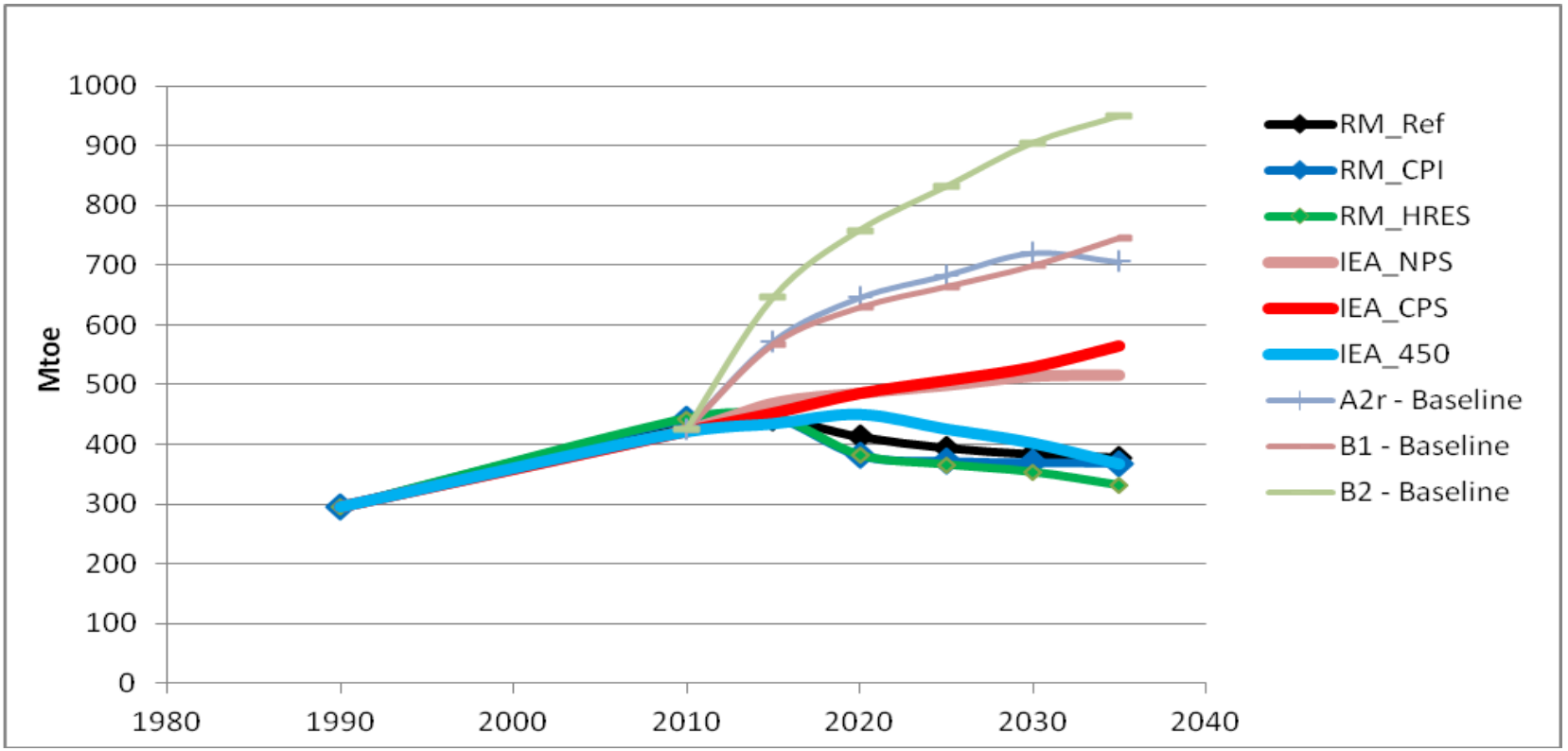
INCERTAINTY FOR THE FUTURE…

Gas Consumption Forecast in EU according to Various Scenarios



RM – EU Roadmap 2050 scenarios; IEA – scenarios of IEA; A2r, B1, B2 – IIASA scenarios

Source: TEMAPLAN GmbH

EU ENERGY ROADMAP 2050 SCENARIOS

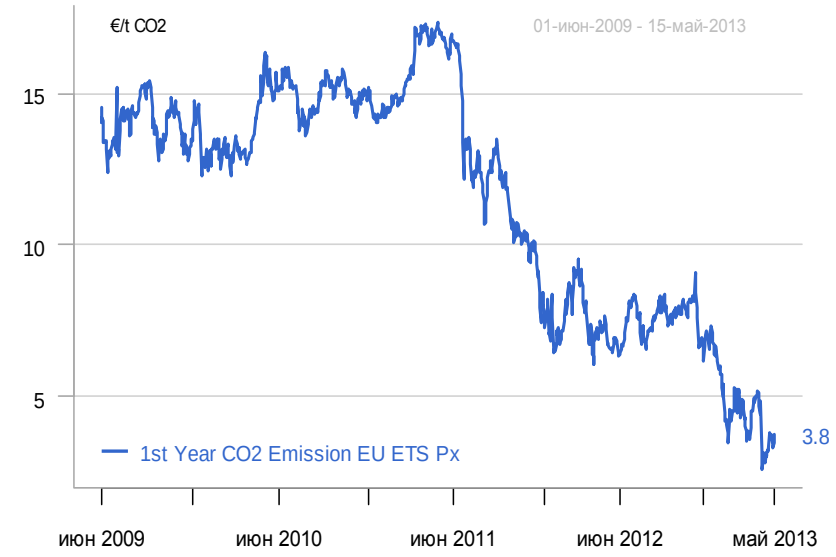
Mtoe		2000	2010	2020	2030	2040	2050
Scenarios							
CPI	GIC	1723	1752	1700	1629	1618	1615
	Gas	393	443	372	369	364	**354**
Energy Efficiency	GIC	1723	1753	1644	1452	1269	1084
	Gas	393	443	365	348	315	**257**
High RES	GIC	1723	1752	1679	1510	1317	1134
	Gas	393	443	382	354	286	**210**

In all scenarios GAS is not the priority of European long-term Energy Policy…

EU Energy Policy's paradoxes: return of coal and growing RES subsidies

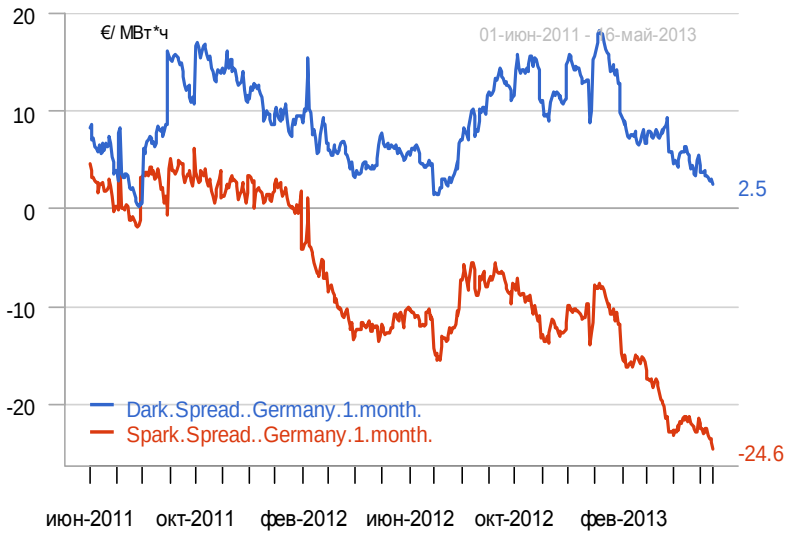
Growing RES with subsidies, low ETS prices damage gas position at the power sector

Carbon price (EU ETS Px) fell by 5 times during the period of 2009-2013…



Source: EEX

Spark Spread and Dark Spread in Germany

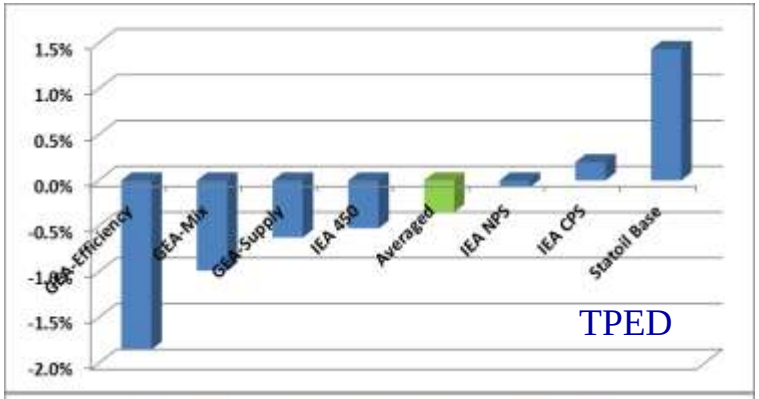


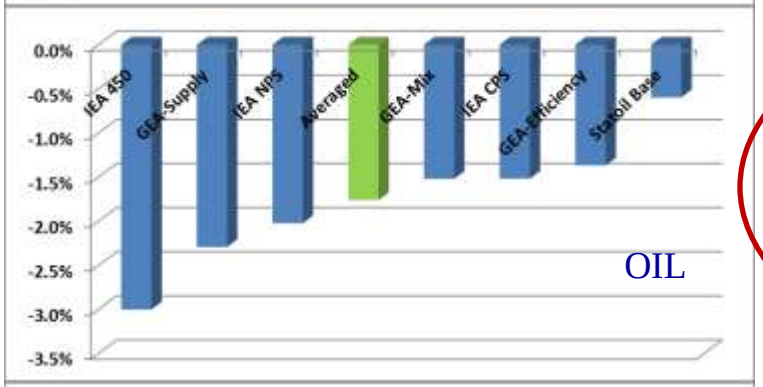
Source: Bloomberg, IEF

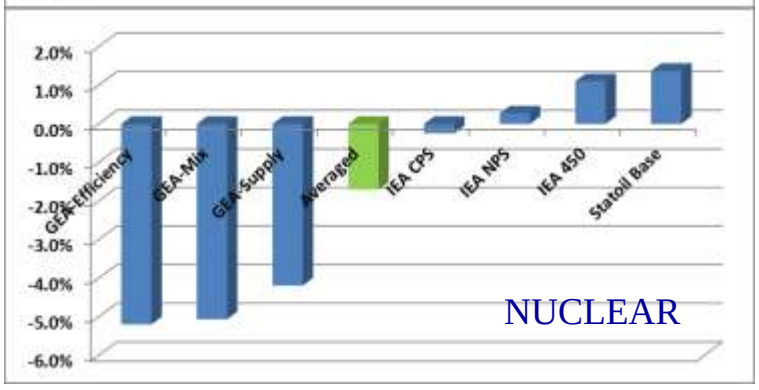
- In 2012 gas consumption in EU decreased by 6%
- At the same time coal consumption grew by 1,6%...

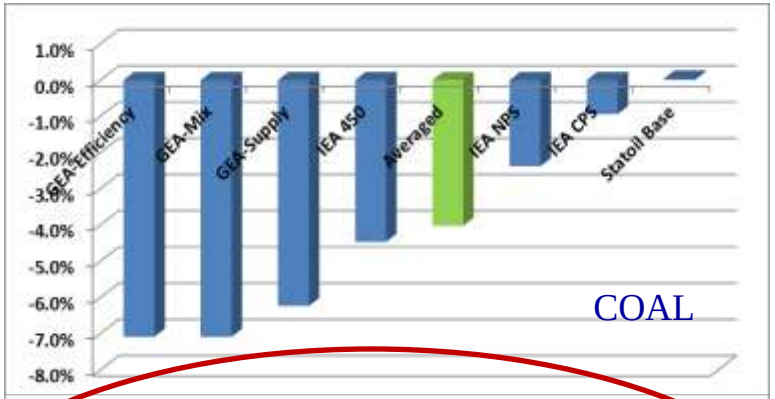
- Since February 2012 gas electricity production is unprofitable and loses the competition to coal generation
- Coal and RES (due to subsidies) are the "winners"

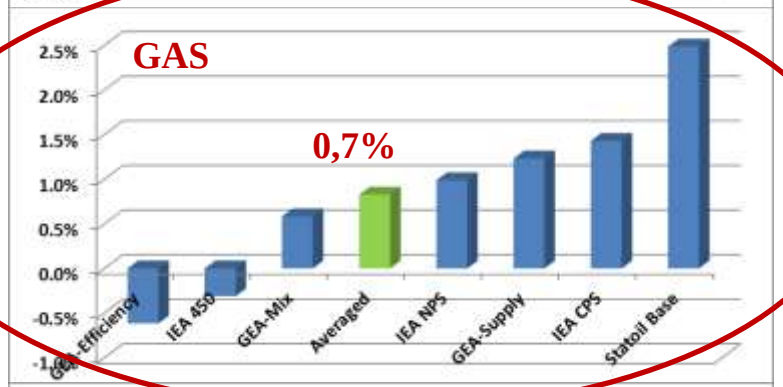
EU ENERGY RATES OF GROWTH

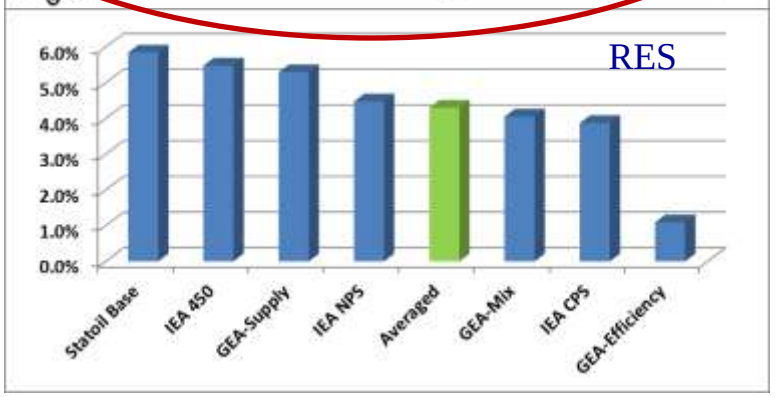












SOME CONCLUSIONS…

- Prospects for natural gas in the EU are modestly bright
- Revival of coal is a short-term phenomena which is likely to change with a new binding international environmental agreement or changing European regulation
- Gas is the optimal load balancing fuel (for RES)

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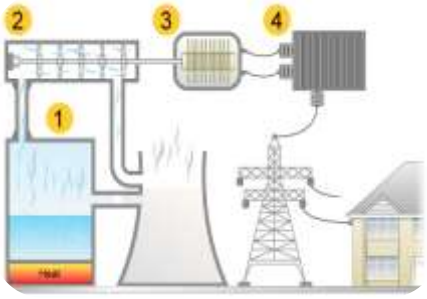
Russian priorities in the natural gas export: diversification & safety

Long-term stability and reliability of deliveries

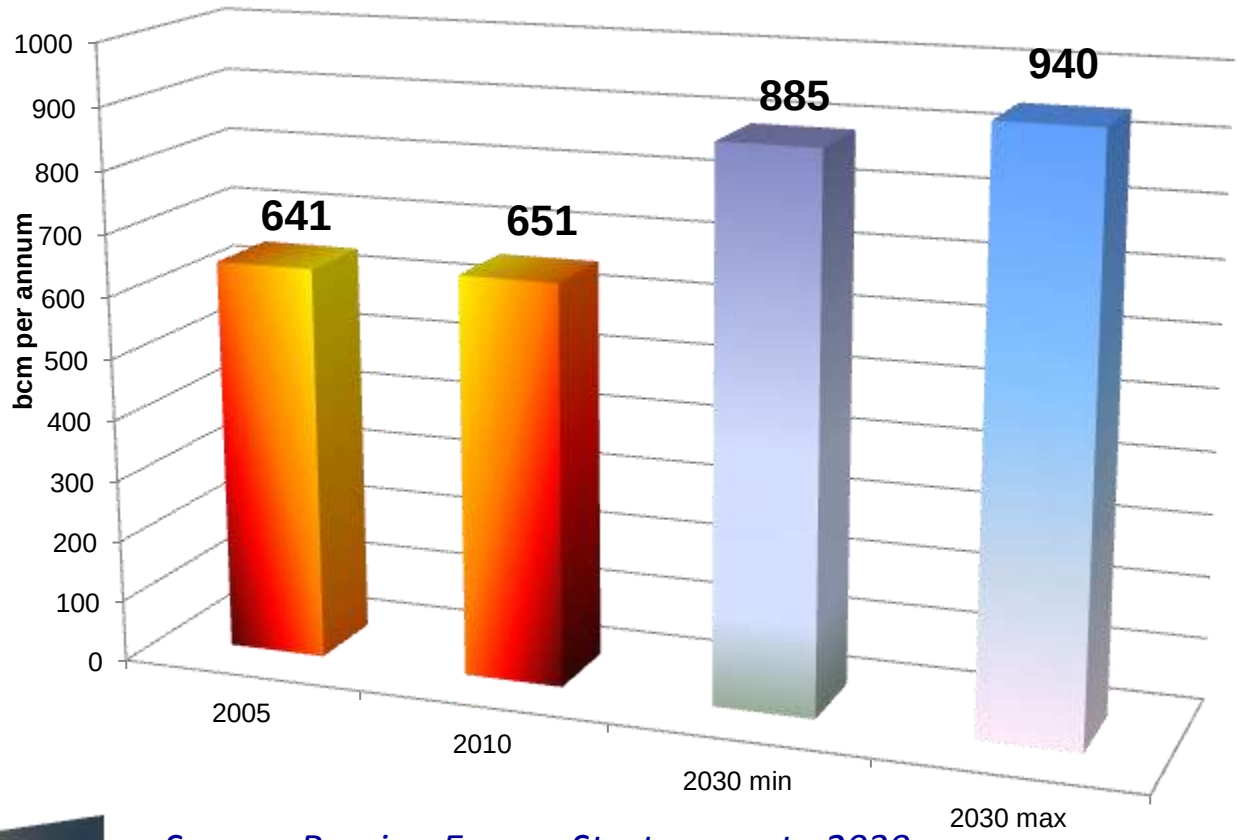
Entering the new markets (China, South Korea, India etc.)



Access to the final buyers of natural gas and electricity produced by gas generation

Decrease of the dependence on transit countries (Ukraine, Byelorussia etc.)

Russian gas production up to 2030

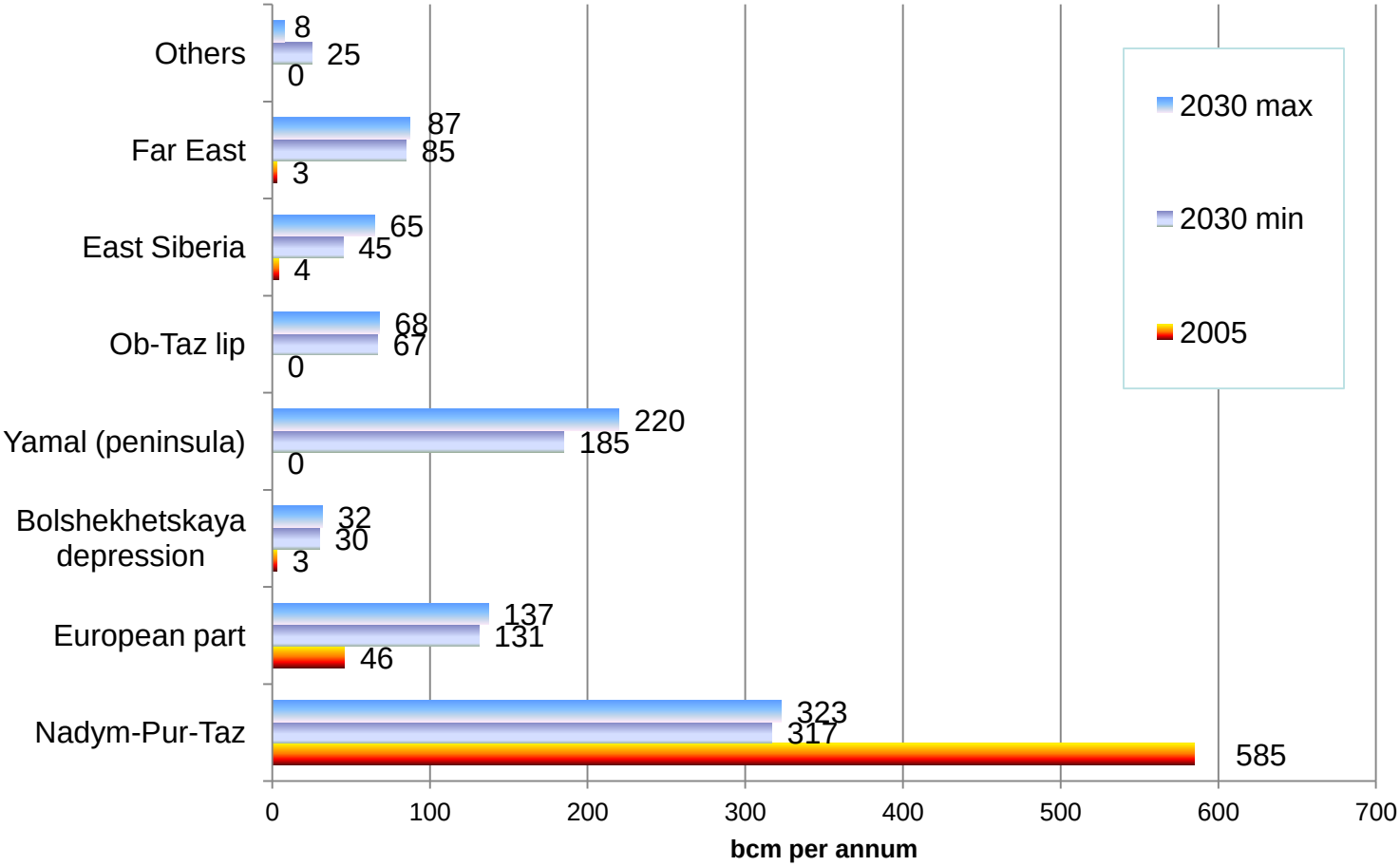


Source: Russian Energy Strategy up to 2030

Potential gas production is sufficient to meet any demand

Changes of Russian gas production map

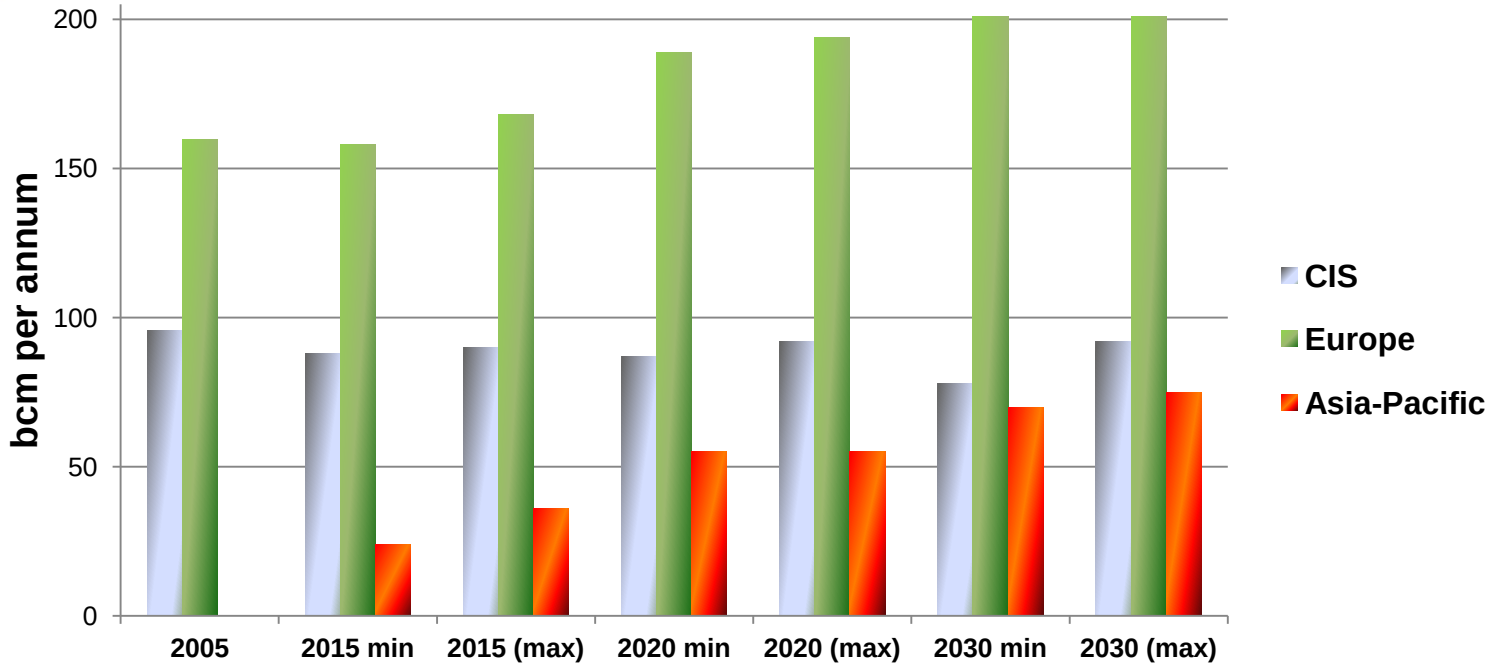
new areas

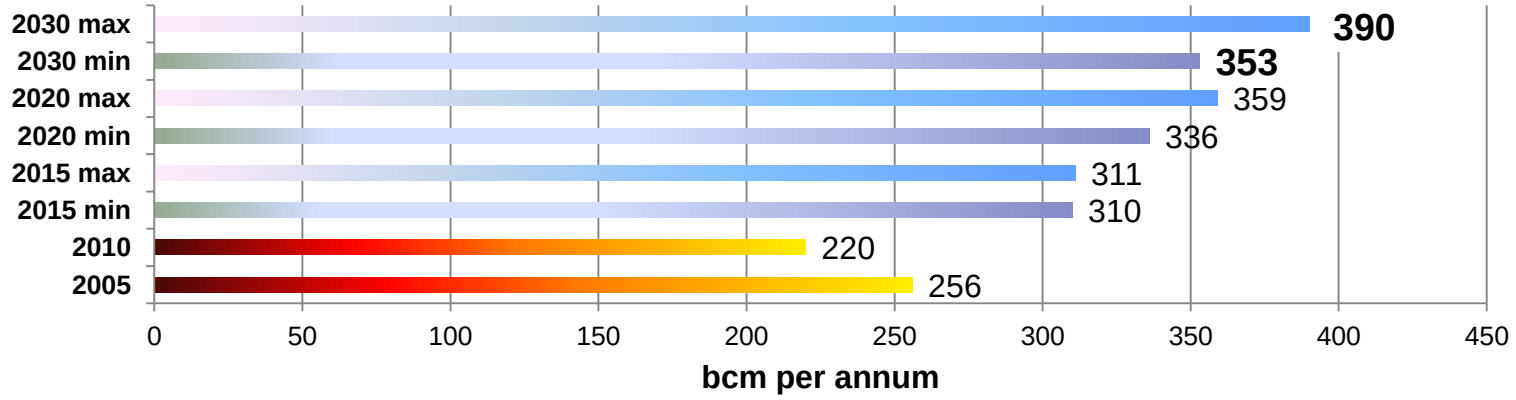


Source: Russian Energy Strategy up to 2030

New areas (Yamal, Eastern Siberia and Far East) will provide more than 40% of Russian gas production up to 2030

Targets of gas export: shift to the East



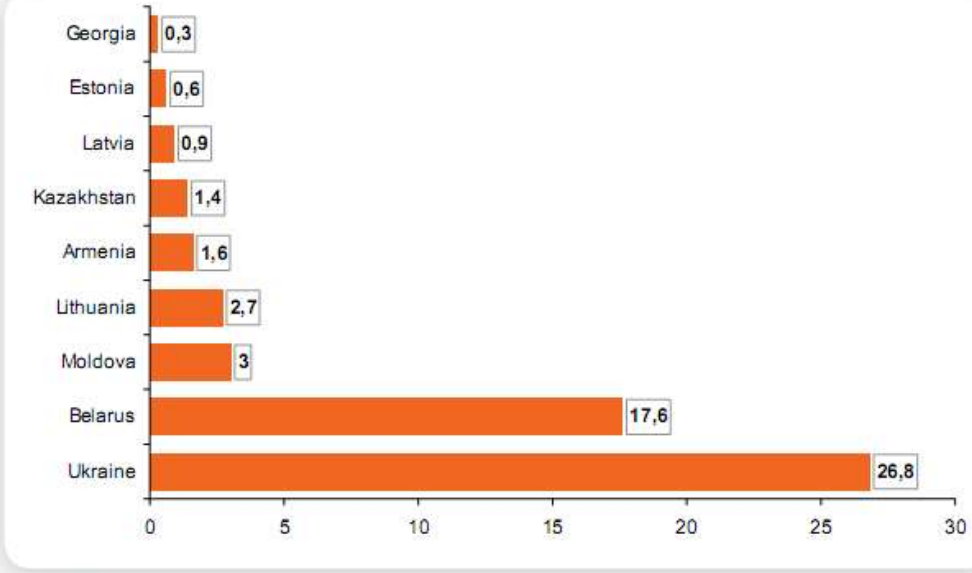


Source: Russian Energy Strategy up to 2030

Europe is still and will be the main export destination for Russian GAS

Source: Gazprom

Export of Russian gas to Europe by country, 2012

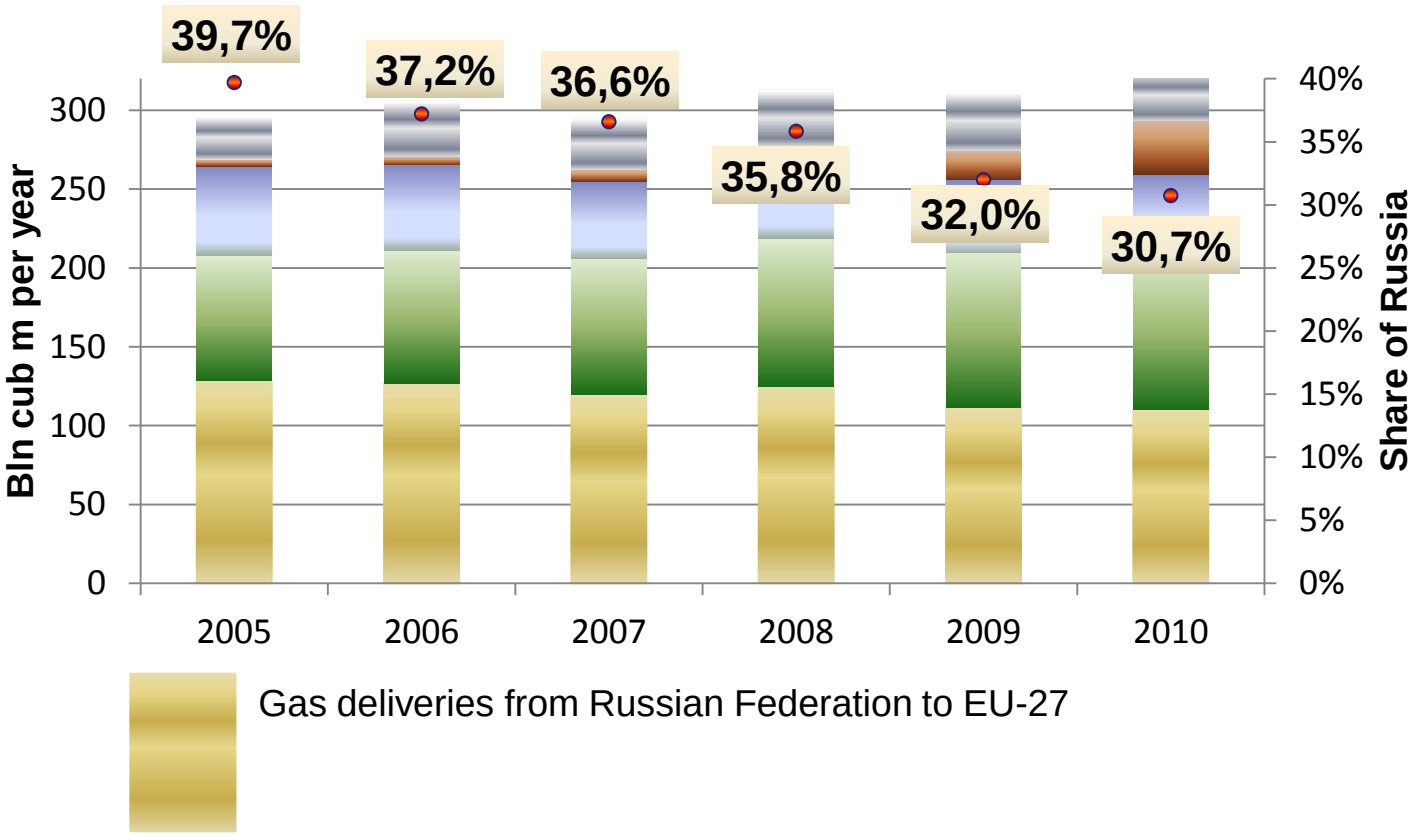


Source: Gazprom

Export of Russian gas to the CIS by country, 2012

- **Germany, Turkey, Italy, France and Poland accounted for 60% of Russian gas export to Europe**
- **Ukraine and Belarus are dominated in the CIS region**

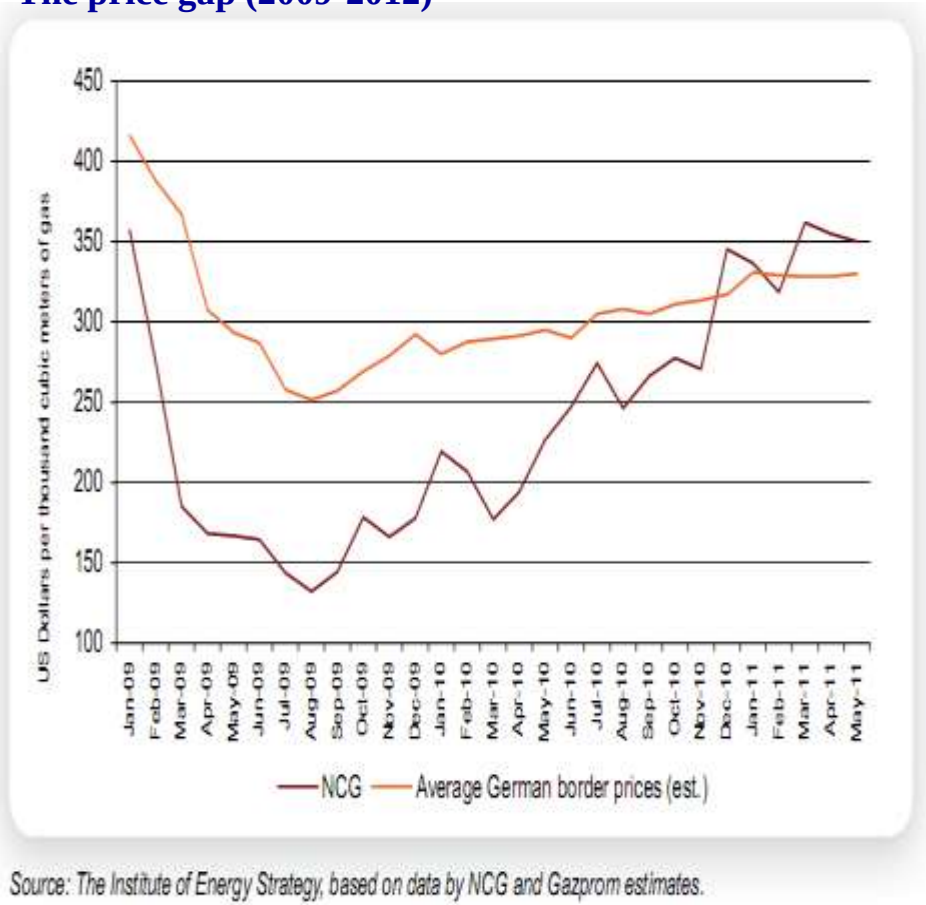
But the Russian share in EU gas market is declined…



Source: IEF

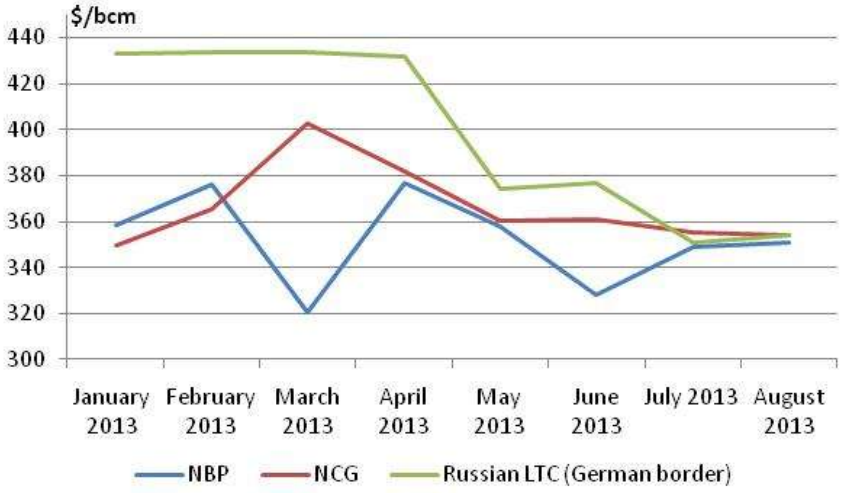
The price gap between EU spot prices and prices of Russian LTC (German border) is disappeared in 2013…

The price gap (2009-2012)



Source: The Institute of Energy Strategy, based on data by NCG and Gazprom estimates.

The price gap (january-august 2013)

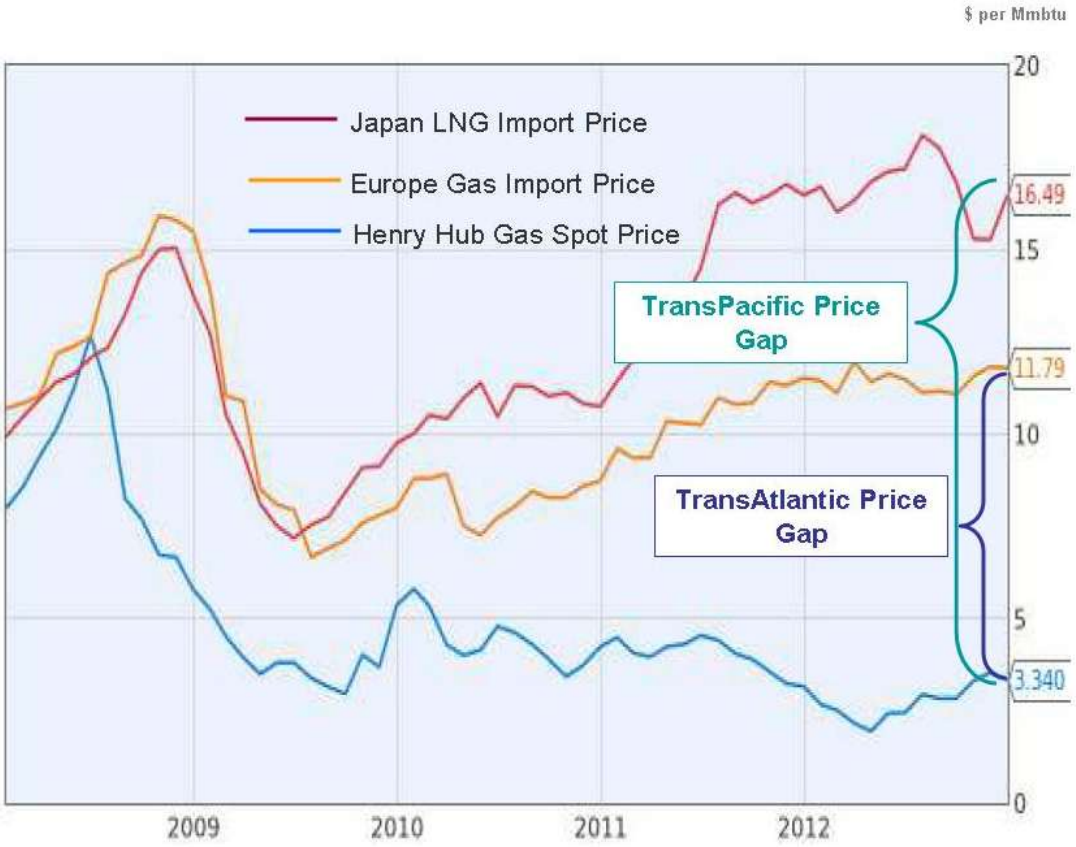


Source: IEF

Today, there are favorable conditions to return Russian gas in Europe…

But for the long-term period there is still a high level of uncertainty…

Uncertainty #1 Gas PRICES

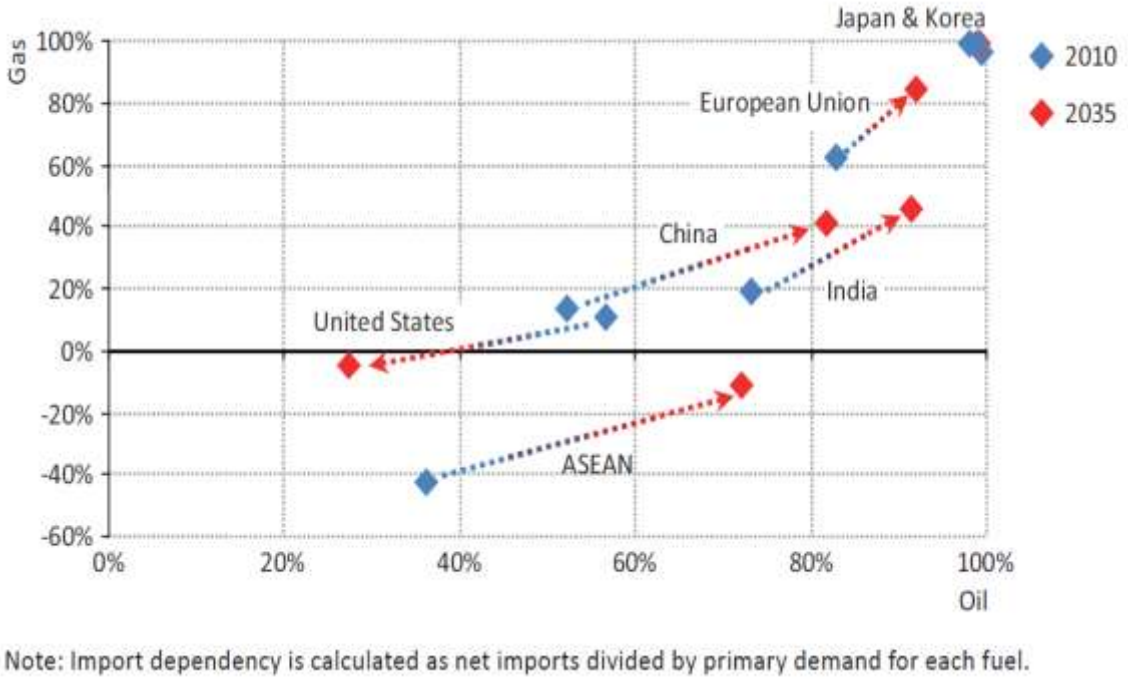


- Natural gas expensive in Europe
- Spot prices often below long-term contracts
- Gas market liberalization and emergence of an EU-wide integrated gas market
- More gas trade across European borders
- Oil price-indexed gas prices and contracts on a bilateral basis: a thing of the past?
- Stepped-up LNG competition from abroad
- Uncertain carbon prices

Source: Alboran Research

But for the long-term period there is still a high level of uncertainty…

Uncertainty #2 Energy Security



Note: Import dependency is calculated as net imports divided by primary demand for each fuel.

Source: WEO 2012, New Policy Scenario

- Dependence on gas imports rising
- Share of Russian gas steadily declining
- Changing EU gas market structure & policies
  - ✓advance the integration and liberalization of the internal European gas market by 2014
  - ✓ensure all EU member states are connected to a Europe-wide gas grid by 2015
  - ✓better coordinate external energy policies

But for the long-term period there is still a high level of uncertainty…

Uncertainty #3 Production Cost for Russian gas vs European gas prices

Average gas prices in EU 27, $/bcm (current prices)		Average production cost (extraction + transport) of Russian gas (German border)		
2005-2012	**253**			
2010-2012	**355**		Yamal	105-120
2013-2020 (expected)	**260-280**		Yamal	170-190
			Shelf of the Kara sea	**240-260**
			Gydansky Peninsula	**210-230**
2021-2030 (expected)	**340-370**		Yamal	270-310
			Shelf of the Kara sea	**390-420**
			Gydansky Peninsula	**340-370**

Russian gas from new gas fields will be more expensive than the average price level in EU for the long-term period

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EU-Russia's gas relations: prospects for cooperation

Cooperation pathway

- Developing a Pan-European gas infrastructure
- Building open, transparent, efficient and competitive gas markets
- Removing any artificial trade barriers and discriminating rules both for producers (including Russia) and consumers of gas, at any delivery point (entry) at a fair price

Main drivers of cooperation

- compliance with international law obligations
- improvement of international law base for energy cooperation on the grounds of the principle of mutual benefit
- ensuring the short- and long term reliability of gas supply and demand
- secure and non-discriminatory investments on both sides
- economically viable and safe gas production, treatment, transportation and consumption

EU-Russia's gas relations: prospects for cooperation

Common areas of cooperation

- exchange of information and **support for infrastructure projects of mutual interest** (PMI)
- **approximation of market rules influencing EU-Russia gas trade**
- **coordinated and secure functioning of gas infrastructure**

Next Tasks for Russia-EU Energy Dialogue

Key Infrastructure and Regulatory Risks

- **Lack of opportunities for Russian side to deliver gas to EU customers due to the external limitations on the current terms and conditions**
- **Transportation of Russian gas under existing contracts will cost more** under a new regulatory framework than under the current one
- **Environment for large scale investments in gas infrastructure will remain too uncertain**, and that some infrastructure investments may become "stranded"
- **Possible new EU imports needs could not be accommodated by existing infrastructures** but sufficient new infrastructure is not built

Tasks for Russia-EU Energy Dialogue

- **External limitations on non-EU supplies due to changing architecture of EU internal gas market, BUT not internal incapability of Russian side to invest & to produce gas**
- **Registration in both zones, tariffs, mandatory reservation of 20% of capacity for short-term, etc…**
- **Joint development of procedure based on Art.13.2 and EU-wide coordinated "open season"** (market demand for the capacity) which will exclude the risk for TSO to face "stranded assets"

What's next?

Roadmap as a BRIDGE of Cooperation between EU and Russian Energy Policies

Thank you for your attention