Focal Topic Of The 22\textsuperscript{nd} IBC Annual General Meeting

“Natural Gas – Paving The Way To Ecological Economy”

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CHAIRMAN OF Industry, Innovations and Prospective Development COMMITTEE;
MEMBER OF THE GAZPROM MANAGEMENT COMMITTEE, HEAD OF DEPARTMENT
CLIMATE POLICY

COP21 DECISION (on adoption of the Paris Agreement on Climate Change):
countries are required to prepare by 2020
2050 LONG-TERM LOW GHG EMISSION DEVELOPMENT STRATEGY

NATIONALLY DETERMINED CONTRIBUTIONS

NEW REGULATIONS

FUTURE OF ENERGY
COUNTRIES’ GHG EMISSION REDUCTION TARGETS

**EU**
- 40% by 2030 (to 1990 levels)

**CHINA**
- REACHING PEAK EMISSIONS by 2030
- Carbon intensity - 65% by 1% of GDP to 2005 levels

**JAPAN**
- 25.4% by 2030 (to 2005 levels)

**USA**
- 26-28% by 2025 (to 2005 levels)

**CANADA**
- 30% by 2030 (to 2005 levels)
28 NOVEMBER 2018
The European Commission presented 8 scenarios:
2 are to reduce emissions by 100%,
6 - by 80-95%

9 MAY 2019 – the EU vision for a climate neutral Europe by 2050 will be considered by the European Council

Energy consumption by various scenarios
PROBLEMS WITH RES

1. DEPENDANCE ON RARE EARTH METALS EXTRACTION
   (THE SHORTAGE OF CONSIDERABLE RESERVES IN THE EU)
   - Monopoly position of some countries
   - Risks of non-compliance with environmental standards
   - Social conflicts in extraction areas

2. DEPENDANCE ON ENERGY STORAGE SYSTEMS
   - NO CONTINUITY OF ELECTRICITY GENERATION
   - COMPARABLE TO THE ELECTRICITY GENERATION SYSTEM
   - THE NEED FOR AN UNMANAGEABLE POWER GRID SYSTEM
     (the refusal of land owners)

3. DEPENDENCE ON CLIMATE CHANGE
   - CLIMATE CHANGE – SHAKY FOUNDATIONS FOR RES
   - MORE EXTREME WEATHER EVENTS
   - MORE BLACKOUTS
ADVANTAGES OF NATURAL GAS OVER RES

GAS-FIRED POWER GENERATION

CONSUMPTION OF MATERIALS AND VALUABLE CHEMICAL ELEMENTS

IMPACT ON ECOSYSTEMS

ENERGY RETURN ON ENERGY INVESTED

Sources:

RENEWABLE ENERGY

22 %

140-353 %

61-127 %

* over the world energy balance

28

2

100 %
TOTAL GHG EMISSIONS IN THE EU, 2016

4.3 BMT CO₂eq.

- 13-18 %: THE SWITH FROM COAL POWER GENERATION AND PETROLEUM MOTOR FUELS TO NATURAL GAS
- 25-35 %: THE USE OF METHANE-HYDROGEN FUEL IN ENERGY AND TRANSPORT W/O COSTLY INFRASTRUCTURAL CHANGES

Rapid reduction of GHG emissions

Achieving the EU’s 2030 climate targets based on the existing gas infrastructure

Transition to hydrogen energy based on efficient low-emission technologies of hydrogen production from methane

~80 %

The feasibility of the EU’s challenging 2050 targets

Ex. LULUCF

SUSTAINABLE DEVELOPMENT GOALS

1. Good Health and Well-Being
2. Affordable and Clean Energy
3. Sustainable Cities and Communities
4. Climate Action
5. Life on Land
6. Life Below Water
7. Responsible Consumption and Production
8. Innovation & Partnership

- Availability, Reliability, Continuity of Supply
- Toxic Emissions Reduction
- GHG Emission Reduction in Energy and Transportation
- Minimum Impact on Ecosystems
- Minimum Consumption of Valuable Materials

GHG EMISSION REDUCTION IN ENERGY AND TRANSPORTATION

GHG EMISSION REDUCTION IN ENERGY AND TRANSPORTATION
OUTLOOK FOR NATURAL GAS DEMAND

INCREASE IN NATURAL GAS CONSUMPTION FOR ALL MAIN SECTORS OF THE ECONOMY

1.6% ANNUAL INCREASE IN DEMAND FOR NATURAL GAS*

* for New Policies Scenario

SHORT-TERM OUTLOOK FOR NATURAL GAS DEMAND, 2017-2023

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The 22nd IBC Annual General Meeting

NATURAL GAS – PAVING THE WAY TO ECOLOGICAL ECONOMY

30-31 May 2019, BONN (GERMANY)