Russia and new Challenges in the Baltic Sea Region

Natural Gas, LNG and the Baltic Sea

Carolin Oebel
Director

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IGU represents more than 95% of the global gas market.

Founded in 1931
www.igu.org

81 Charter members
40 Associate members

Status as per March 2013
The global energy future

Impacting the global framework:
- Rising population – from ca. 7 to 9 billion in 2050
- Human strive for a better life
- Technological progress
- Air quality & climate change concerns

The world needs:
- More energy
- Cleaner energy
- Safe energy
- Affordable energy
The Pathway towards a sustainable future

Meeting future global energy needs – whilst addressing air quality and climate change concerns

Global Emissions Trajectory Base Case

- Other
- Residential and Commercial
- Industrial
- Transport
- Power Generation
- Pathway

Vision Pathway highlights various CO2 abatement options and technology choices

Calculation for 2050

Natural gas is a low carbon and clean-burning fuel

Natural gas in the power sector

Carbon dioxide emitted during electricity generation by fuel

NOx and SOx content by fuel

Ad *: Power generation efficiencies assumed: Natural gas 55%, crude oil 37%, coal 39%

Wide range of usage options of natural gas

- Electricity generation
- Residential & commercial
- Industrial
- Transportation
- Ideal partner for variable renewables
Gas-fired generation technology directions:
- Capture carbon through retrofit technology
- Partnership with renewables
- Greater inclusion of carbon-neutral biogas

Gas pipeline and storage systems provide future options for:
- CO₂
- Biogas
- Hydrogen

Investment in gas infrastructure does not predetermine future energy landscape
Natural gas resources are abundant

Technology – driving supplies

Gas resources for more than 250 years (IEA)

Proven conventional

Unconventional

Coal bed methane

Tight gas

Shale gas

Volume
Major gas trade movements- Pipeline & LNG

Major trade movements 2011
Trade flows worldwide (billion cubic metres)

Source: Includes data from Cegigaz, CISSstat, GIIGNL, Poten, Waterborne.
BP Statistical Review of World Energy 2012
Baltic Sea region:
Primary Energy Consumption Mix 2011 (MTOE)

Estonia

Total: 5,6

Latvia

Total: 4,5

Lithuania

Total: 7,3

Finland

Total: 33,2

Source: Eurogas statistical Report 2012, in million tons of oil equivalent (mtoe)
Gas for a sustainable energy future

Requirements

• Energy efficiency & savings

• Use more gas in power generation and transportation

• Renewable energy and gas as partners

• Develop Carbon Capture and Storage & utilisation technology

• Support innovation – without predetermining future technologies

• Realise synergies of integrated energy concepts