


19th OSCE economic and environmental forum

Natural gas – cleaner and better energy for the future

Dr. Thomas Jung, VP Gas Supply E.ON Ruhrgas
 Vienna, 7-8 February 2011



Despite hit on demand outlook, European gas market has significant potential – hub gas prices on sustainable level for 2011

European demand outlook 2015

[bcm]

-65 bcm

2008 2010 2015

Pre-crisis outlook
 Post-crisis outlook

European LNG supplies 2008 vs. 2010

+30 bcm

2008 2010 2015

Capacity
 Utilisation

Development of competitive pricing concepts

Oil Renewables CO2 Power Coal

Spot gas LTC gas

€/MWh

2011

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec


— Latest TTF Forward
 Latest BAFA indicator
 ■ Historic 5Y TTF corridor
 ■ Historic 5Y BAFA corridor

Sources: IEA 2008/2010, E.ON Ruhrgas

Source: E.ON Ruhrgas

Decarbonisation of European economy is challenging natural gas as a green future energy...


**-80%
GHG**



2050

- EU aims at GHG-reduction of 80%-95% by 2050
- Uncertain gas demand outlook for 2030
 - Eurogas 620 bcm
 - IEA 450ppm 460 bcm Δ 160 bcm

**>50%
RES***



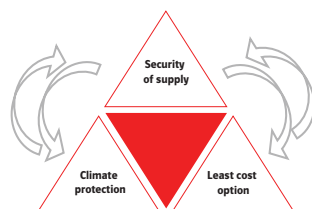
2050

- German energy concept with road map until 2050
- Huge investments in renewables and energy efficiency
- Role of natural gas not appropriately dealt with

* Share Renewable Energy Sources in Primary Energy Demand

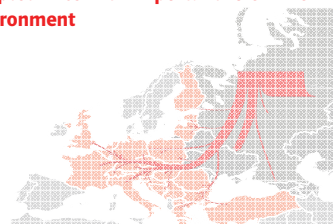
... but gas has the potential to secure climate-friendly energy supplies

Secure long-term gas supplies



- Natural gas balances the triangle of energy policy
- Further diversification of routes and sources (e.g. Nord Stream) needed
- LTCs should remain the basis for future gas supplies to Europe

Adapted LTCs with important role in new environment



- Efficient sales channel for producers of large volumes
- Security of investments in upstream and transport sectors
- Traditional LTC pricing needs to be adjusted to new market conditions

E.ON Ruhrgas is committed to cleaner & better gas supplies – market development and integration of power & gas systems

Systematic product placement

- Replacement of old heating systems (oil & gas)
- Market implementation of clean gas technologies (micro-CHP, CNG)
- Development of biomethane as renewable energy



Integration of power & gas systems

Gas-to-Power



Point-of-use cogeneration
e.g. large scale & micro-CHP

Power storage
e.g. power to methane



Note: selected technologies only