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Ruhrgas

United Nations Economic Commission for
Europe
Committee on Sustainable Energy

**The global economic crisis and its
impact on energy security in Europe**

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Geneva, November 18th 2009

Two years ago, gas supply was tightening and barely capable of satisfying demand

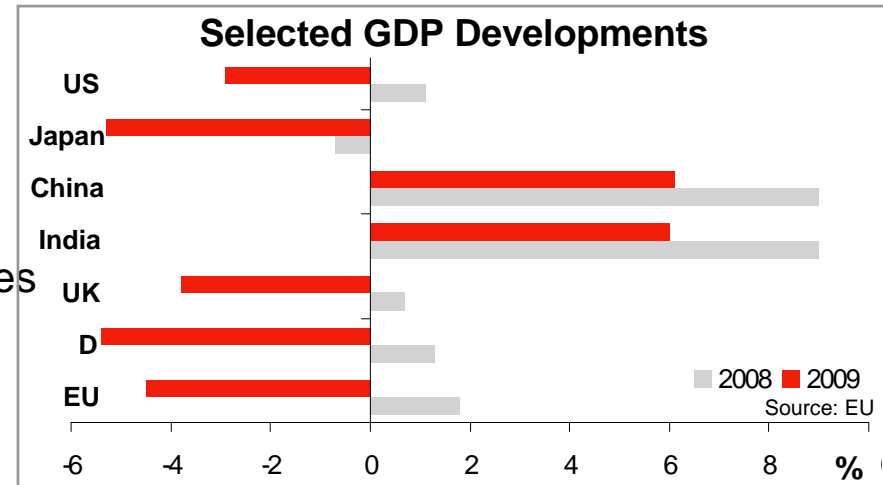
- Term of the year 2007: “Transatlantic Arbitrage”
- Term of the year 2008: “US Unconventionals”
- Globalisation of gas markets within reach
- Manufacturing/engineering capacities fully utilised
- Industry experts forecasted an oil price of more than 200 USD/bbl
- Near-oil-parity contracts becoming the price benchmark for LNG



In 2009, we are facing a “Global Economic Force Majeure“

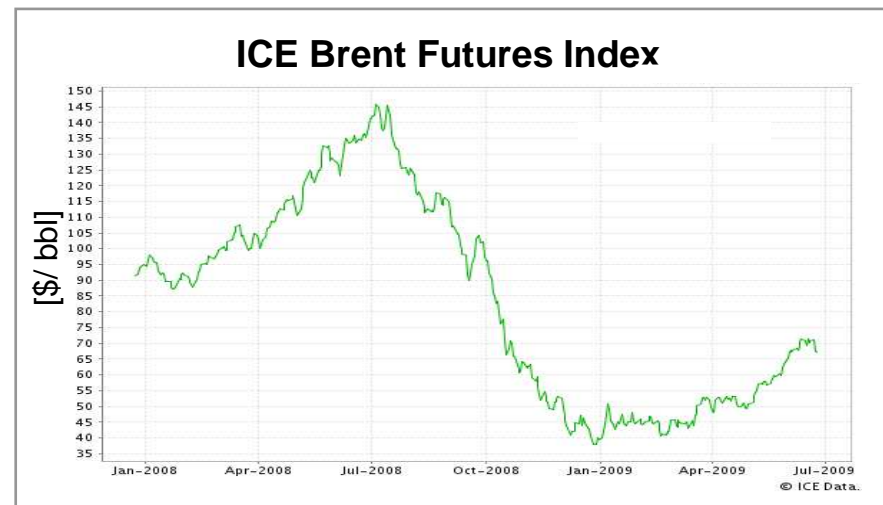
Strong GDP decrease

- All over the world, economies suffer from a global financial and economic crisis
- Developed countries in recession (EU forecast: -4% GDP), developing countries with strong downturn
- Strong decline in industrial production (Germany – 18% in Q2/09 est.)



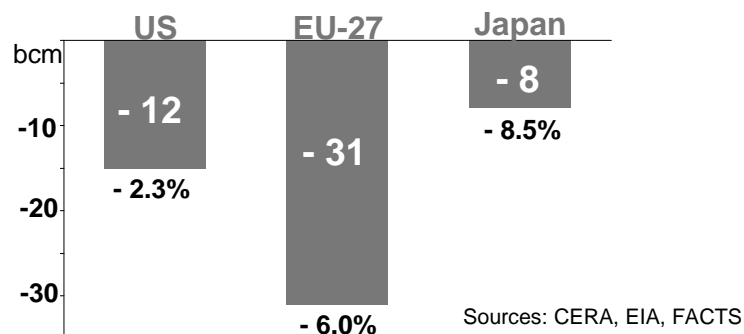
Collapse of energy prices

- Oil prices collapsed from 145 to 40 USD/bbl within 6 months
- Hub gas prices followed swiftly
- Investments in future production projects under scrutiny



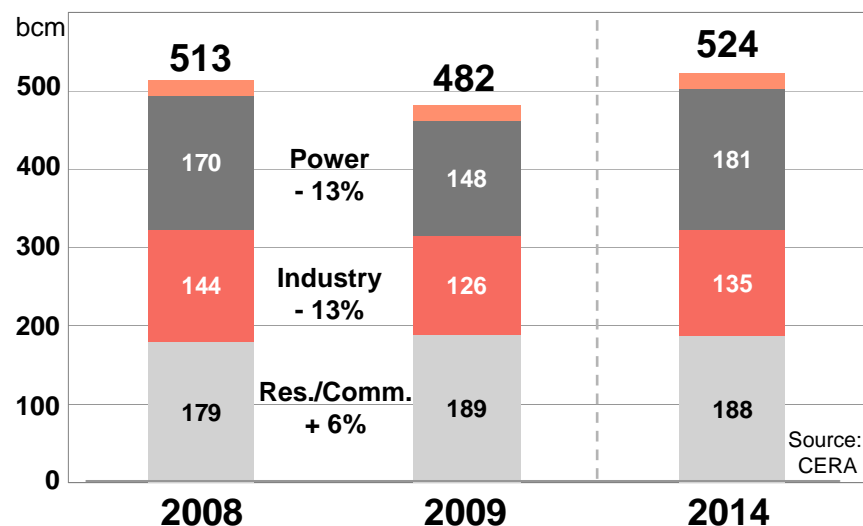
Drop in gas demand across all regions followed...

Recent demand forecasts for 2009



- Worldwide: -5%; approx. 150 bcm in just 6 months
- Europe and Japan suffering most
- India and China remain the bright spots, but represent still relatively small gas markets

Gas demand 2009 by sectors in EU-27



- Biggest drop (absolute terms) in power generation demand, followed by industry
- Time and shape of recovery uncertain

...and resulted in an extraordinary constellation for the European gas industry

Supply side

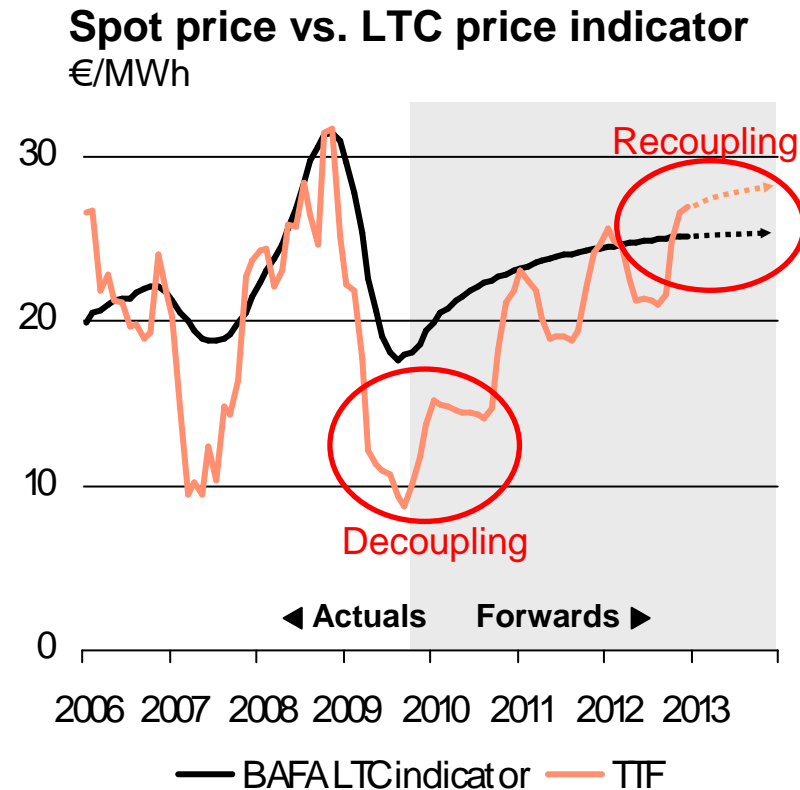
- Unconventional gas in US and additional LNG capacities
→ LNG cargoes diverted to Europe
- Increased liquidity of spot gas markets

Market effects

- Temporary oversupply
- Decoupling of spot gas and LTC prices
- Markets expect recoupling of spot gas and LTC prices

Producer's response

- Future projects suffer from uncertainties on demand side



In the long run, security of supply will remain a major issue

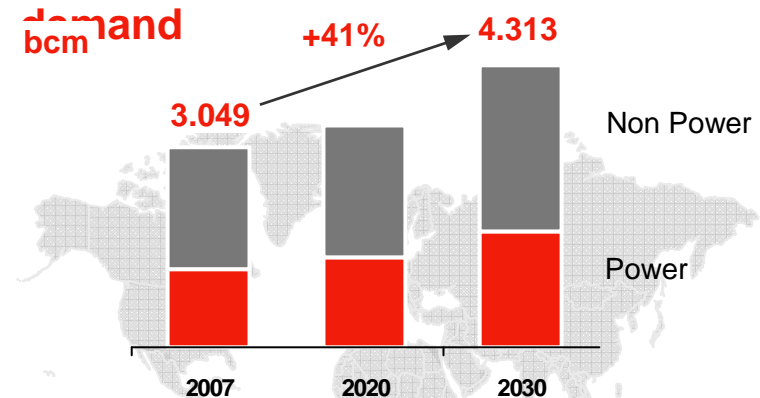
Investments needed today for future demand

- Well diversified supply portfolio contractually secured already
- Decline in European indigenous production foreseeable
- Rising import demand even without demand increase
- Today's actions needed to avoid another supply squeeze in the future

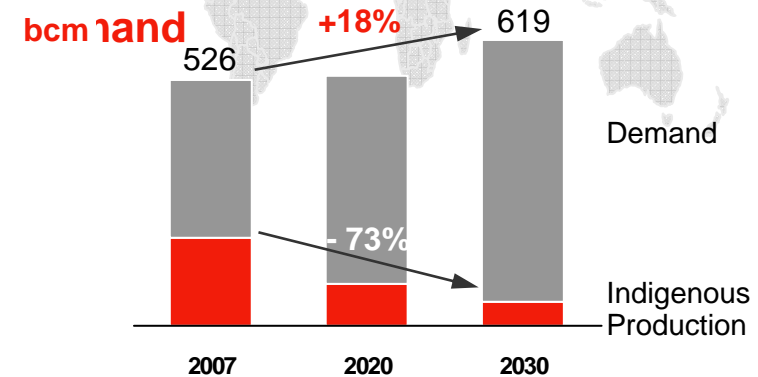
LTCs as backbone of European gas supply

Long term "take or pay" obligations as prerequisite for financing new investment projects

Development of total world gas demand



Development of Europe's gas demand



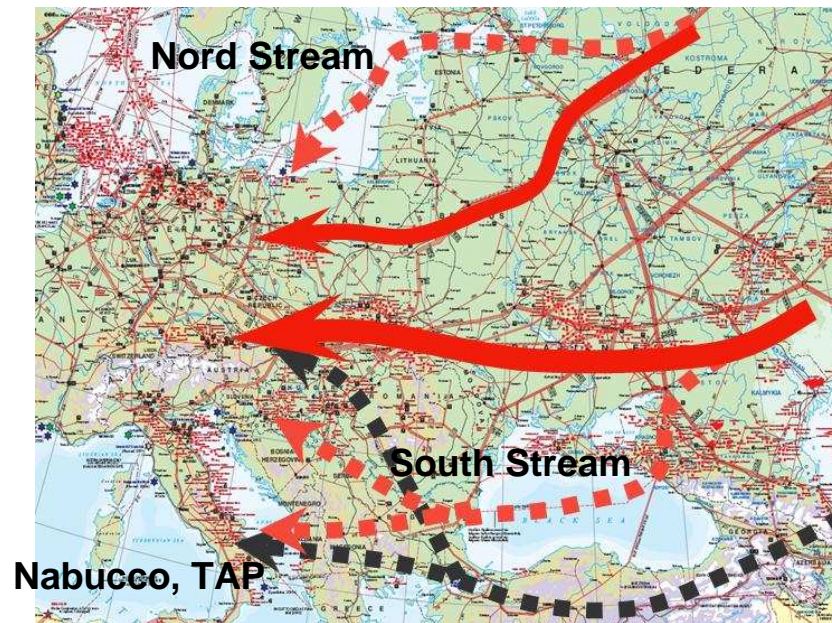
Source: IEA World Energy Outlook 2009, Reference Case.

Rising demand and diversification needs trigger new supply routes

Europe's current mindset

- An increase in Russian exports will require expansion measures
- Sluggish economic climate tends to postpone investment decisions for mega projects
- Medium-sized projects ('debottlenecking') could create additional capacity in a cost effective manner
- A "Fourth Corridor" could bring gas from the Caspian region
- Infrastructure and LNG supply contracts enable flexible supply from new regions

New supply routes to Europe



The European gas industry in turbulent times

- ▶ **Global economic crisis has hit the European gas sector hard.**
Extraordinary constellation of supply/demand balance and prices.
- ▶ **The next years will be characterized by oversupply and price volatility**
All market participants need to develop solutions for the upcoming years.
- ▶ **In the long run, security of supply remains a major challenge.**
Investments are needed today to meet rising demand in the future.

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