The Role of LNG – RWE's Experience

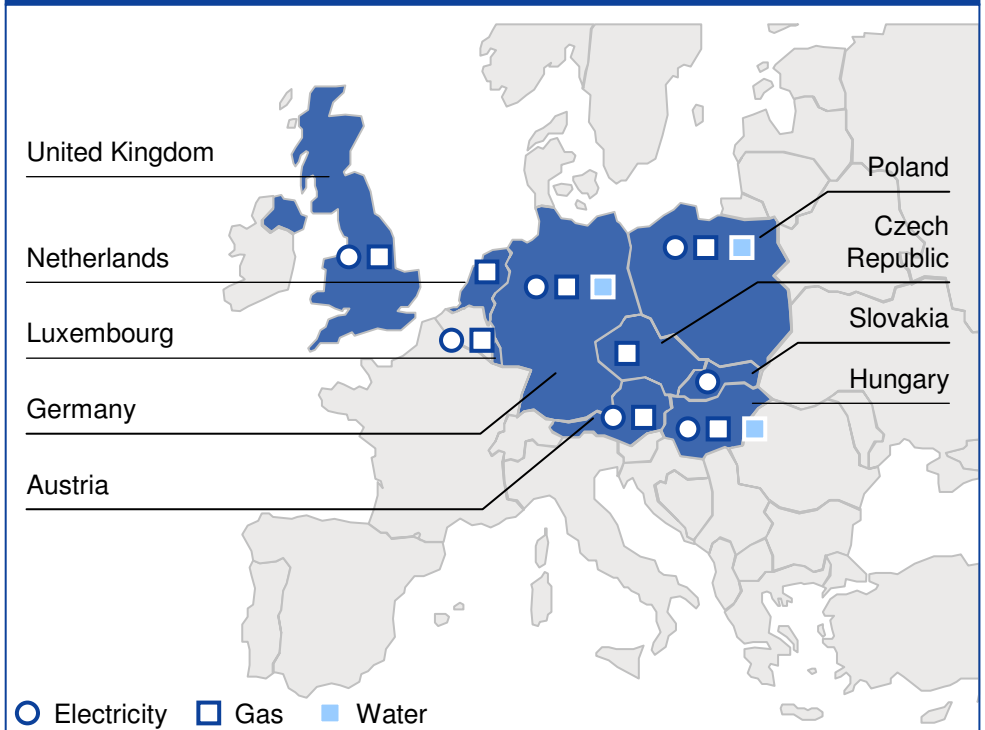
Thomas Birr
Vice President Group Strategy, RWE AG

The energy to lead

Venice, April 15th 2010

RWE Group – Who are we?
One of the Top 5 European Utilities…

RWE Core Markets

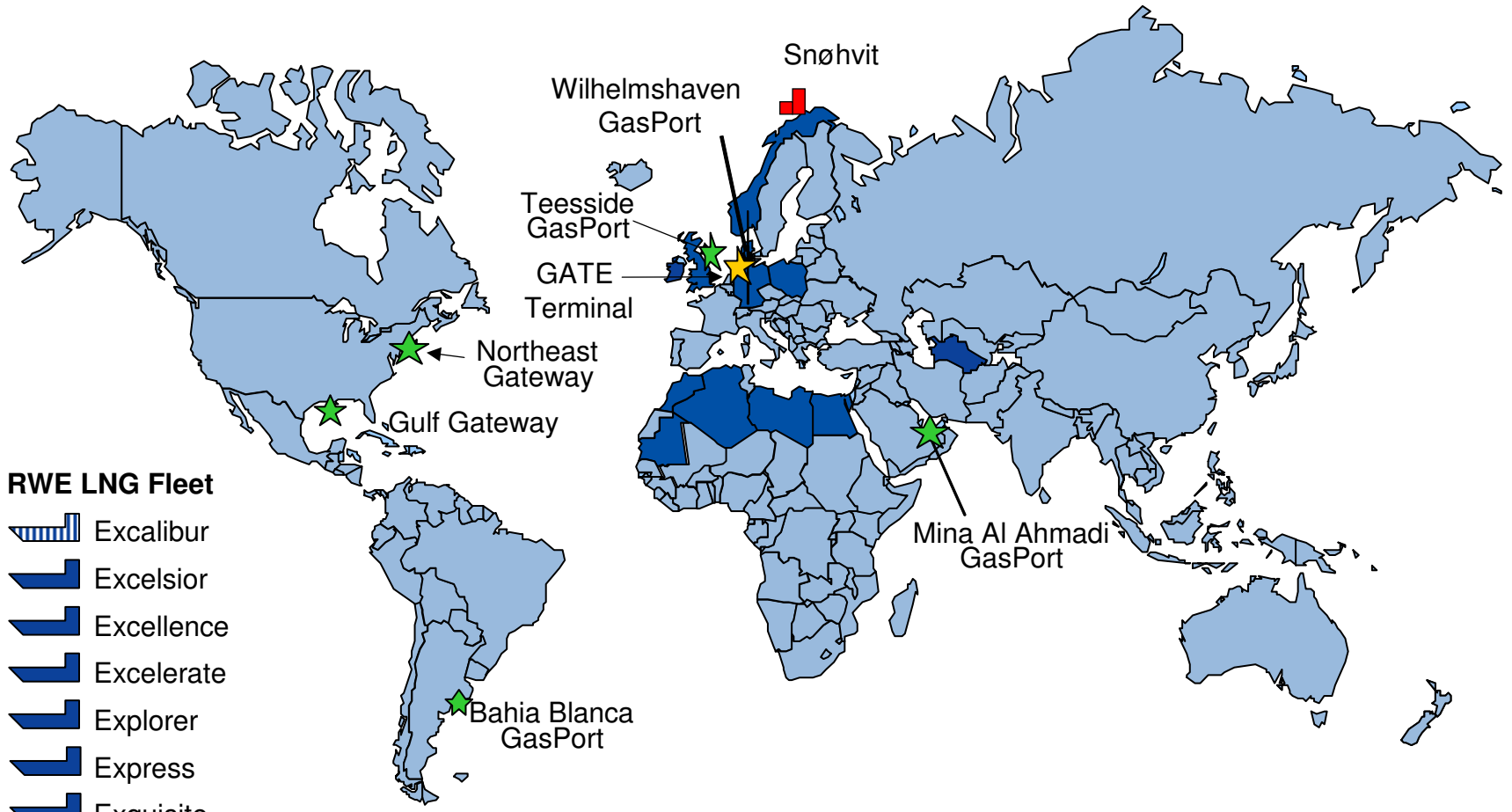


Leading Positions in Core Markets

Product / Market*)	Electricity	Gas
Germany	No. 2	No. 3
UK	No. 4	No. 4
NL	No. 2	No. 1
Eastern Europe	■ No. 2 in Hungary ■ No. 3 in Slovakia ■ Active in Poland	■ No. 1 in the Czech Republic ■ Leading position in Hungary ■ Active in Slovakia
Total Europe	**No. 3**	**No. 6**

*) Market positions of the RWE Group in terms of sales.

…with a growing upstream and LNG position in the Atlantic Basin



RWE
The energy to lead

The Future of Gas Markets – What do we believe?

Gas Market Scenarios

"Evolution"

- Economic recovery in the mid-term
- Oligopolistic behaviour of international producers preserves oil-linked pricing being predominant for imports

Most likely

"Competitive revolution"

- Current gas oversupply results in full competition and gas-to-gas pricing for imports
- Erosion of gas prices to long-run marginal costs

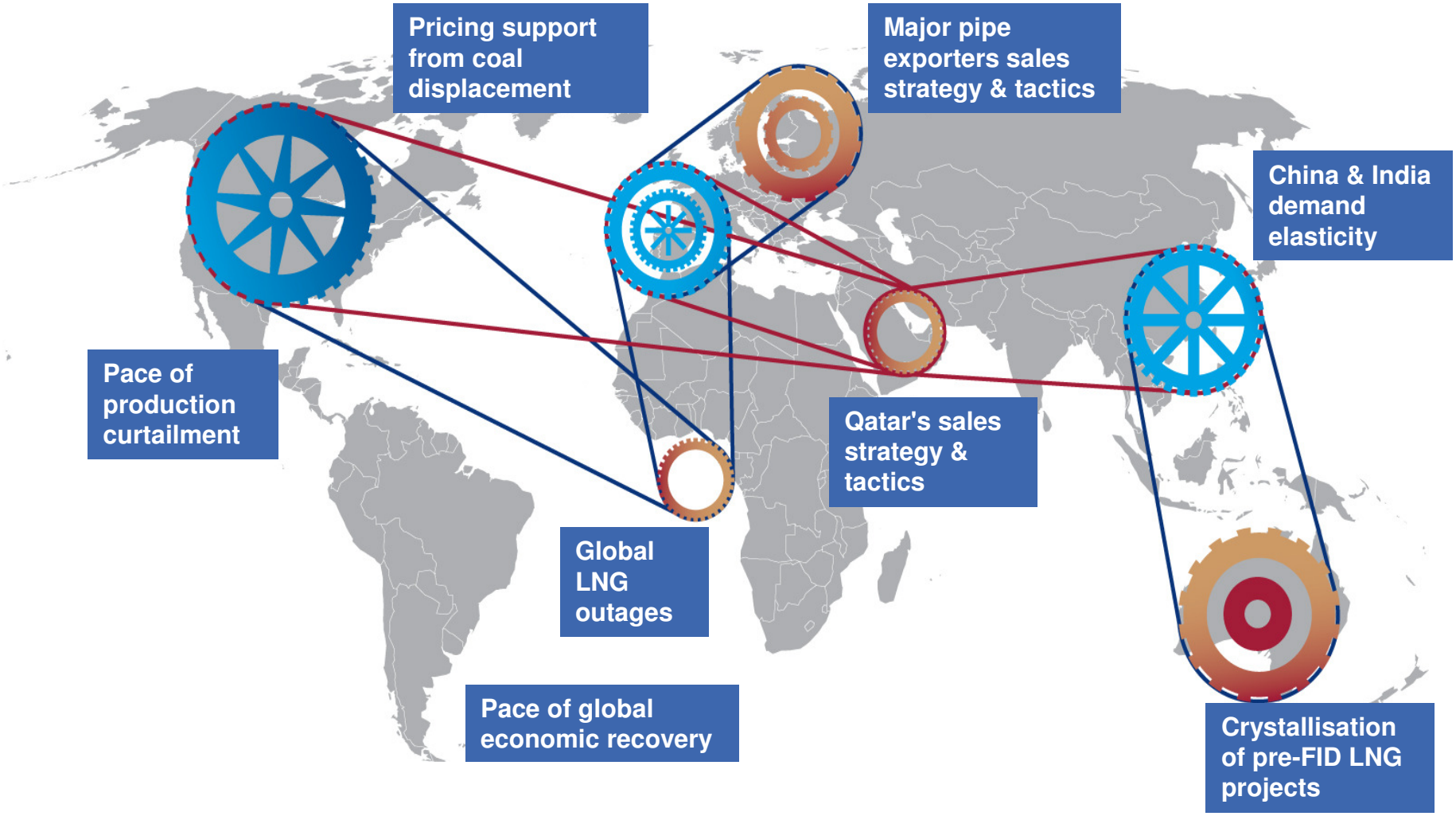
"Climate heaven"

- Strict climate policy induces long term stagnation/decrease of global gas demand
- Predominantly oil-linked import pricing mechanisms

Possible

Gas spot markets remain volatile and continue to become more liquid in all scenarios

LNG connects previously independent gas regions to a global market



Source: Wood Mackenzie Global Gas Service

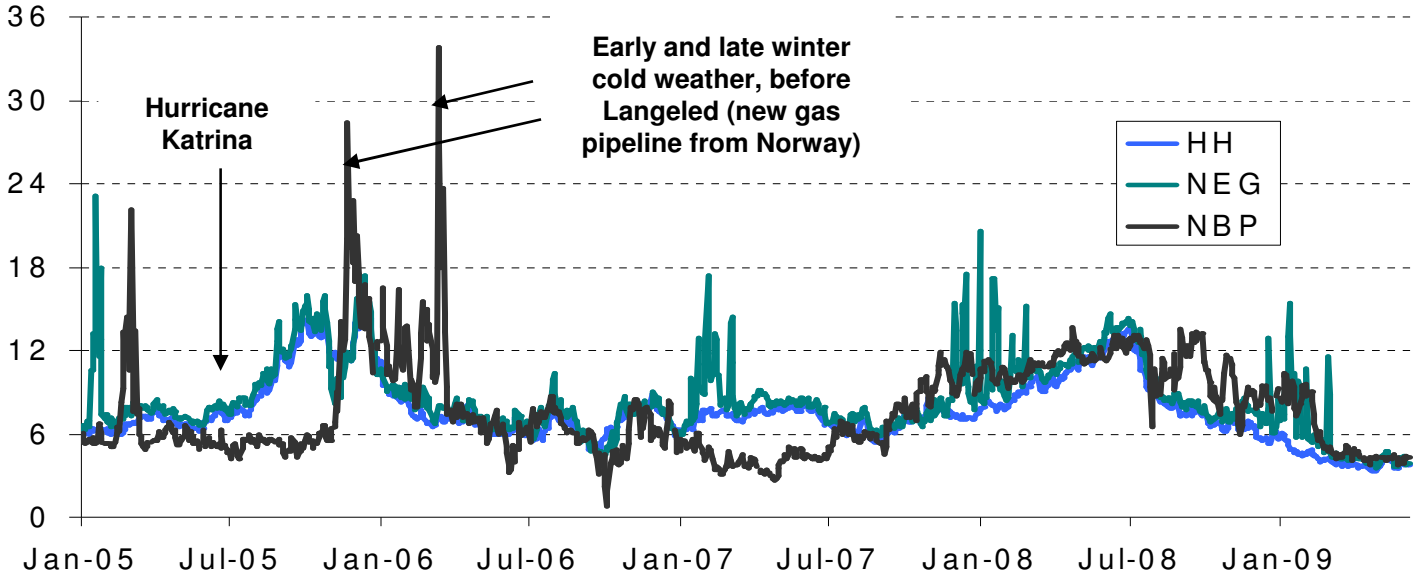
What is the contribution of LNG?

Flexibility	> LNG supply is not physically linked to a specific destination > Ships can be re-routed flexibly, providing options for regional arbitrage and thus procurement from the cheapest market
Security of Supply	> LNG allows diversification of supply sources, e.g. LNG enables supplies from the Middle East to Europe > No commitment of (mid-/ downstream) infrastructure to one specific supplier
Access to gas markets	> Regional markets without access to pipeline gas can be supplied via LNG with potentially lower capex and lower barriers (e.g. resulting from international agreements required for pipelines)

“Flexibility becomes the name of the game” – volatility as key risk and source for value creation

Transatlantic Arbitrage Potential

Day-ahead US (Henry Hub (HH), Northeast US (NEG*) and UK (NBP) Gas Prices in USD/MMbtu



> LNG infrastructure usage can be highly volatile (assuming the absence of long-term commitments)

* Northeast Gateway (NEG) price based on 70% Tetco-M3, 30% Algonquin Citygates

On-board regasification is ideally suited for managing volatility and accessing new markets

Onshore Regasification

- Investment of approx 1 Billion €, high fixed operational costs
- Large space required
- Signficant impact on environment (e.g. storage)
- Planned lifetime of 25 years

"Excelerate Energy" On-Board Regasification

Gateway

GasPort

- LNG regasification (through heating) on board of the LNG vessel
- Reduced investments of only 10% of onshore terminals, low operational costs
- Very limited space requirements
- Reduced infrastructure (e.g. no storage) and reduced environmental burdens

On-Board Regasification avoids large investments in fixed landing infrastructure and thus allows for economic operations even with limited utilitisation rate (e.g. seasonal or spot deliveries only)

RWE The energy to lead

Innovative infrastructure concepts – Example LNG gas supply to the Middle East

Jetty layout (tandem transfer) at the Mina Al Ahmadi GasPort

- The gas demand varies substantially in Middle East countries over the year – with a winter low and a summer peak
- Even though most countries in the Region remain net-exporters throughout the year, they increasingly depend on gas imports in the summer
- Utilising LNG to meet peak demand represents a flexible, clean and economic solution

Mina Al-Ahmadi (Kuwait) GasPort

- Project completed August '09
- Terminal owned and operated by Kuwait National Petroleum Company
- Excelerate / RWE acts as EPC contractor for entire construction
- Concept to commercial operations in only 24 months

Summary

- RWE is an up- and midstream centred gas player with a focus on Europe and the Atlantic Basin
- We believe that liquidity and volatility of gas markets will increase – whatever the precise development of e.g. oil-indexation may be
- LNG connects previously independent regional gas markets
- “Flexibility will become the name of the game” for LNG infrastructure
- RWE has build up a flexible portfolio of mid- and upstream assets
- RWE/Excelerate’s flexible on-board regasification technology is ideally suited to access new markets at low cost and provides a maximum of flexibility for any LNG portfolio