

KUALA LUMPUR
2012
WORLD GAS CONFERENCE



25th world gas conference
"Gas: Sustaining Future Global Growth"

Interaction between Neighbouring Networks

Committee Session 3.1

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Date: June 5, 2012

Venue: Kuala Lumpur



Patron



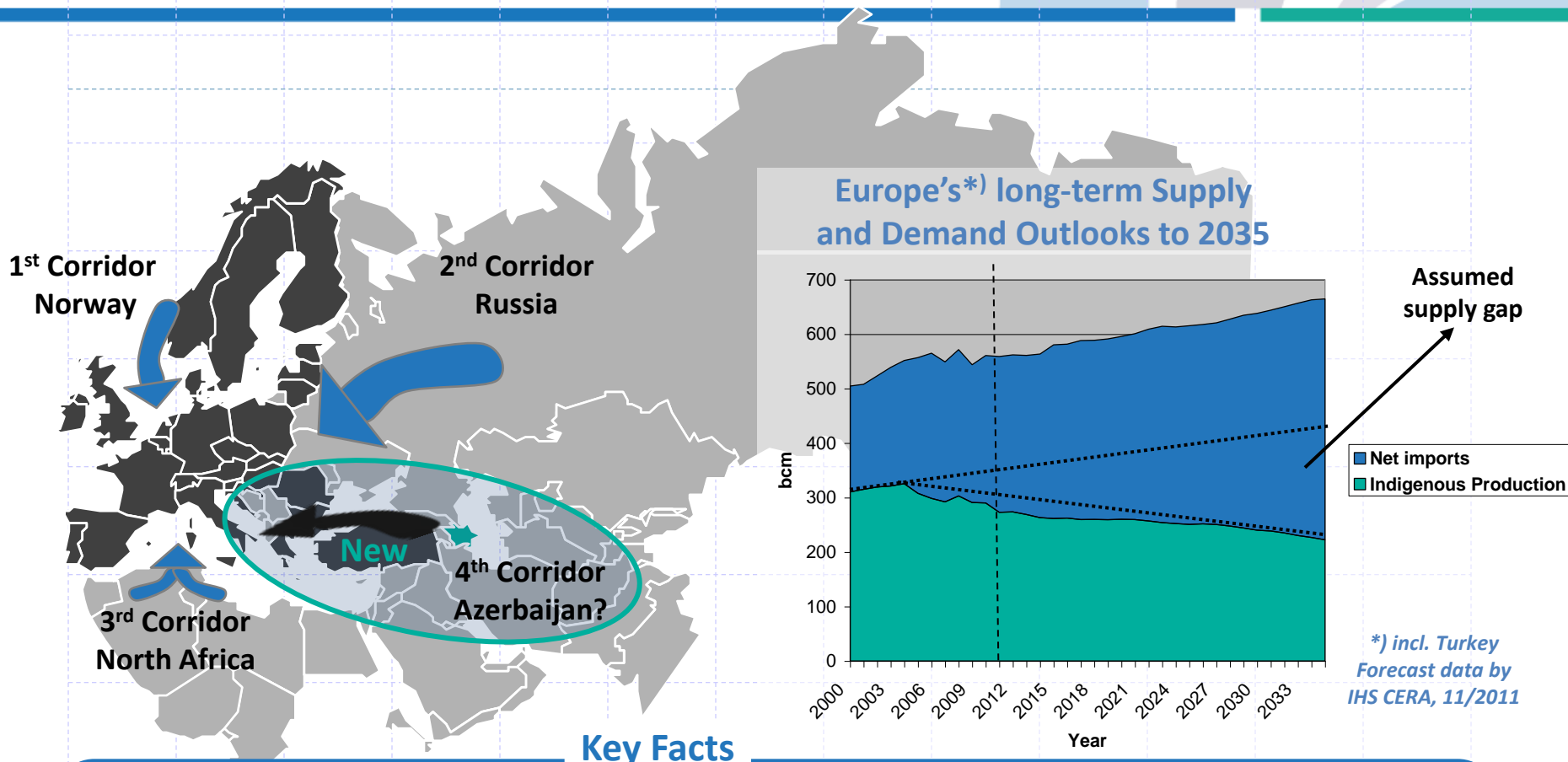
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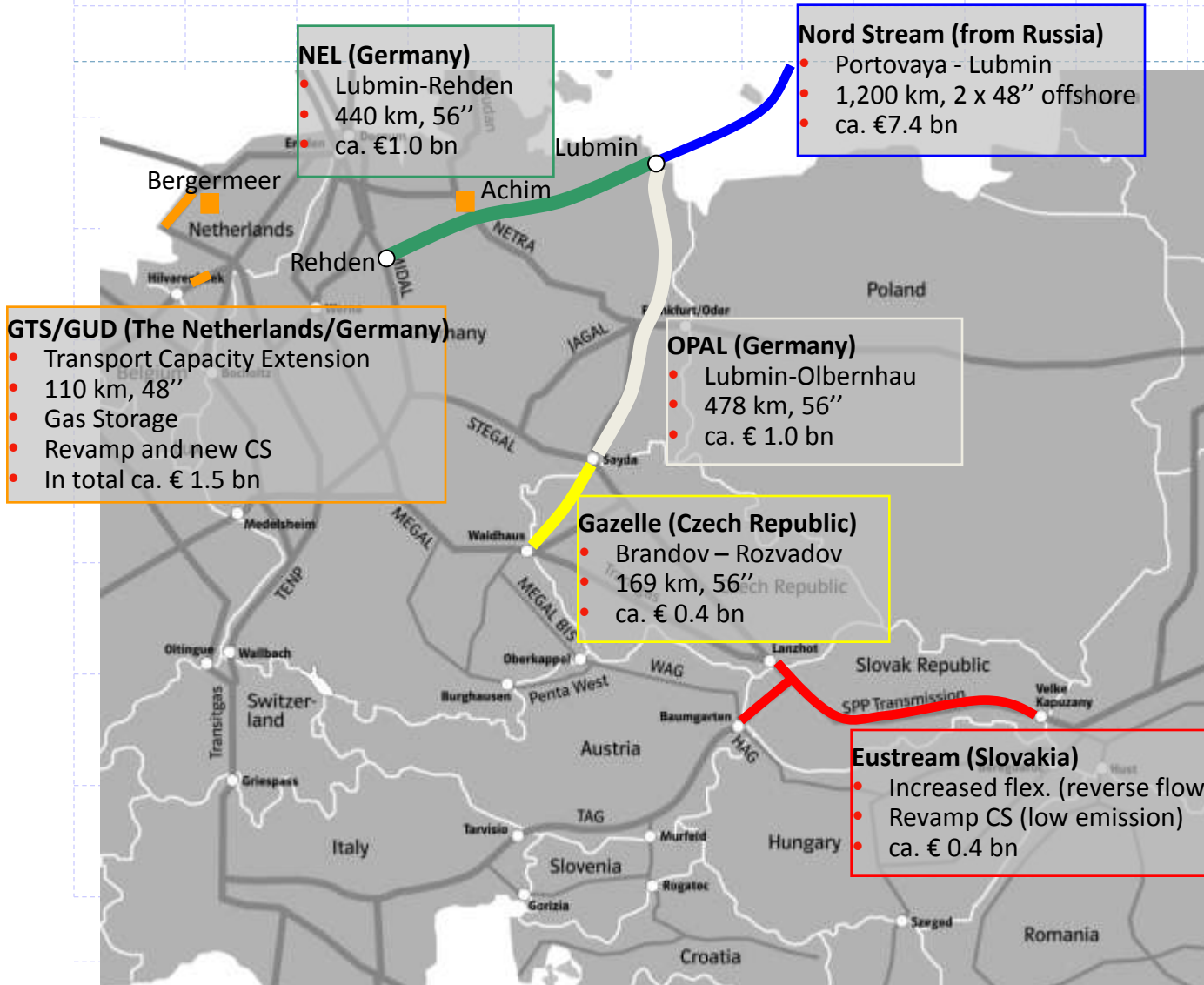
Why Europe needs new gas import routes?



Key Facts

- Indigenous production in Europe is declining
- In parallel gas consumption will slightly rise or stay at least close to current level
- Natural gas will play a key role → Commitment of Europe to greenhouse gas reduction
- Shale gas potential in Europe seems to be limited → Extended gas imports required
- European Union focus: Diversification of supply routes, security of supply, competition, market integration

SG 3.1 Case Study: Nord Stream Pipeline triggers huge investments in Europe



Abbreviations:

- CS:** Compressor station
- GTS:** Gas Transport Services
- GUD:** Gasunie Deutschland
- NEL:** Nordeuropäische Erdgasleitung (Northern Europe Natural Gas Pipeline)
- OPAL:** Ostsee Pipeline Anbindungsleitung (Baltic Sea Pipeline Link)

Impressions: New-build pipelines and extension of existing systems

Bergermeer Gas Storage



Source: www.bergermeergasstorage.com

Construction of NEL pipeline



Source: OGE

Nord Stream



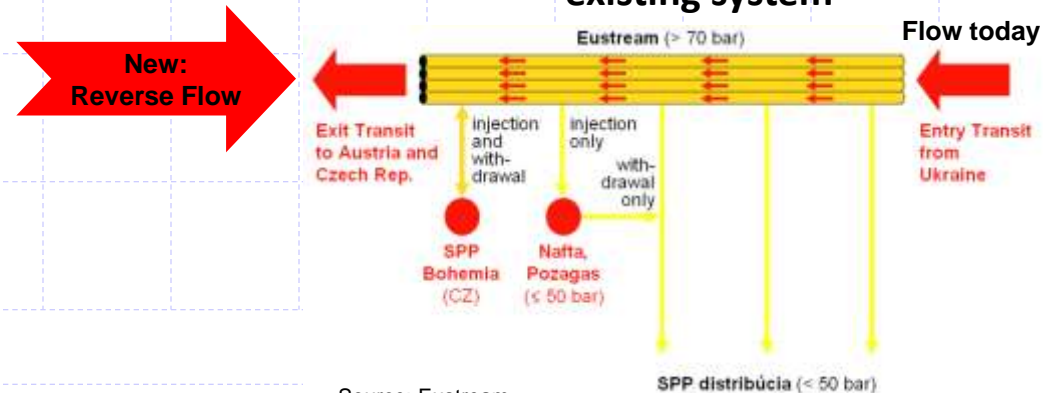
Source: www.nord-stream.com

Construction of „Gazelle“



Source: Net4gas

Eustream: Optimisation of existing system



Source: Eustream

Increasing need for public acceptance – Example: NEL construction stop

Construction stop on NEL site since June 2011

Situation: Despite the fact that the pipeline has been planned in accordance with German codes TRFL / DVGW-G 462 and has passed successfully the EIA process the higher administrative court (OVG Lueneburg) claimed **not sufficient safety distances**.

Consequences:

- 40 km rerouting (southern route)
- CAPEX: ca. + € 80m
- First gas date postponed by 1 year (now envisaged: October 2013)



Teachers and parents of a primary school in the village Stelle (11.000 inhabitants) **protesting against the gas pipeline** under their playground.



Table: Deterministic approach for safety distances in Germany

Pipe Diameter	Minimum width of protection strip acc. to DVGW-G 463 (middle of the strip should indicate the pipe axis)
≤ 150	4 m
> 150 ≤ 400	6 m
> 400 ≤ 600	8 m
> 600	10 m

Proposal for **alternative routings** the village around Stelle

Summary and Conclusions SG 3.1 report

- **Decline of gas production in Western Europe** requires increase in gas flow from outside towards Europe → strengthening the Eastern and establishing the Southern gas corridor
- **Shale gas potential in Europe seems to be limited** (compared to the USA)
- **Diversification of gas supply routes** necessary to ensure security of supply, market integration and competition (goals of European Union politics)
- **New gas infrastructure** must be extended, optimised or newly developed to ensure future gas supply
- **Investment climate** defined by national regulators and European Commission play a key role → return on invest must be adequately to attract investors and to cover development risks
- **More and more important:**
 - Early involvement of all stakeholders and transparent information to **achieve acceptance of the projects** in public
 - Timing: Especially cross border pipelines have to focus on bankability (“equator principles”) and **Permitting / Authorisation** → often here projects tend to be on the critical path rather than due to technical / engineering issues

WOC 3, SG 3.1 “Strategic gas transmission infrastructure projects”



**Thanks your for your
attention!**

Questions?