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

PGCC – Study Group C3 (Europe and Russia)
Sub-Group "Security of Supply"

in the name of the group: **Luca Della Gatta**

Head of Origination

OMV Gas & Power

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Venue: 406/7

Patron | Host | Host Sponsor

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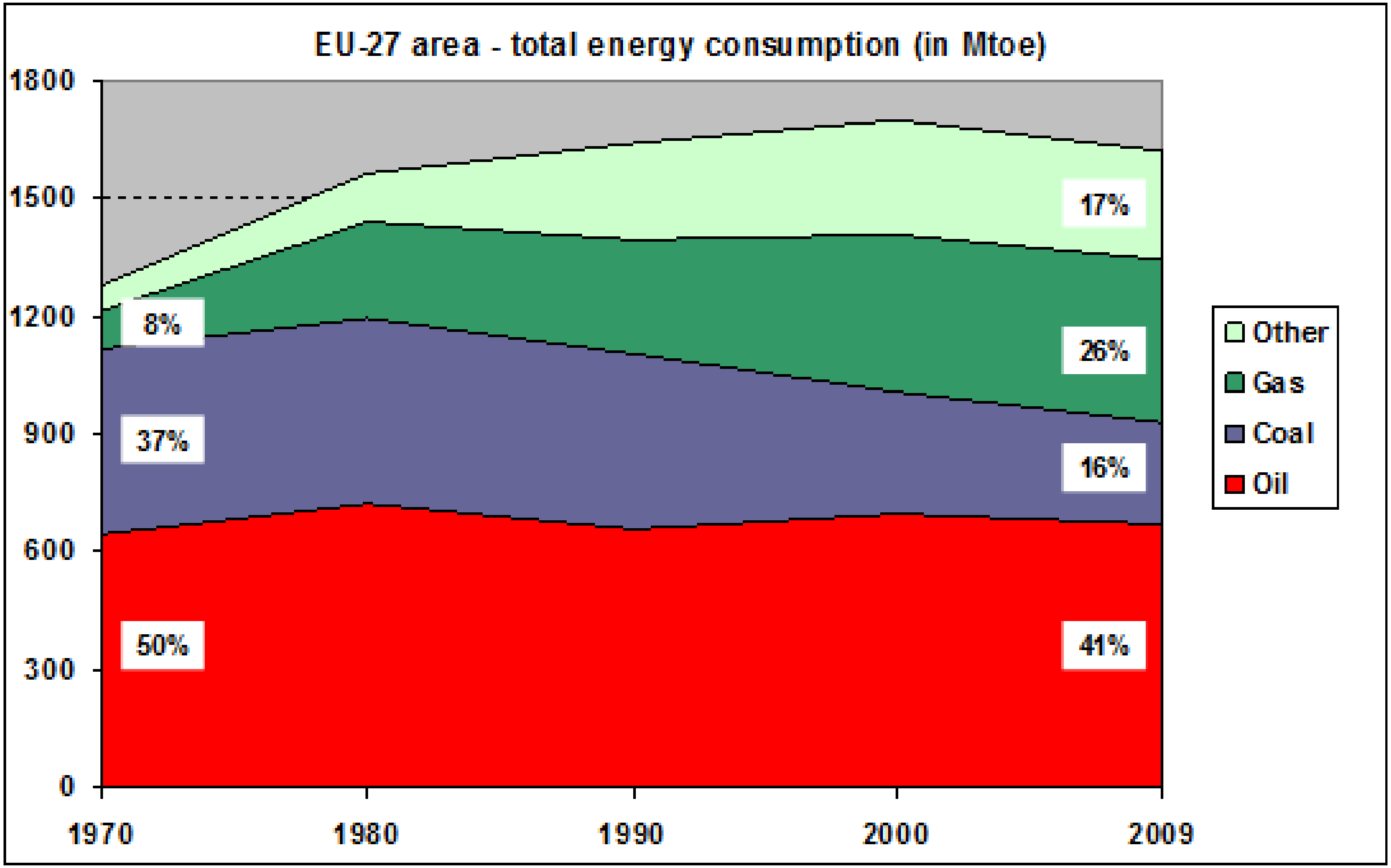
Content

- Europe‘s Energy demand and the role of gas
- Pillars of security of supply
- Diversity
  - Different supply sources
  - Different supply routes (pipelines and LNG)
- Resilience
  - Gas storages
  - Market integration via interconnectors
  - Trading
- Solidarity
  - Cross shareholding
  - Cross national political alignment
- Summary

Development of Energy Mix in Europe

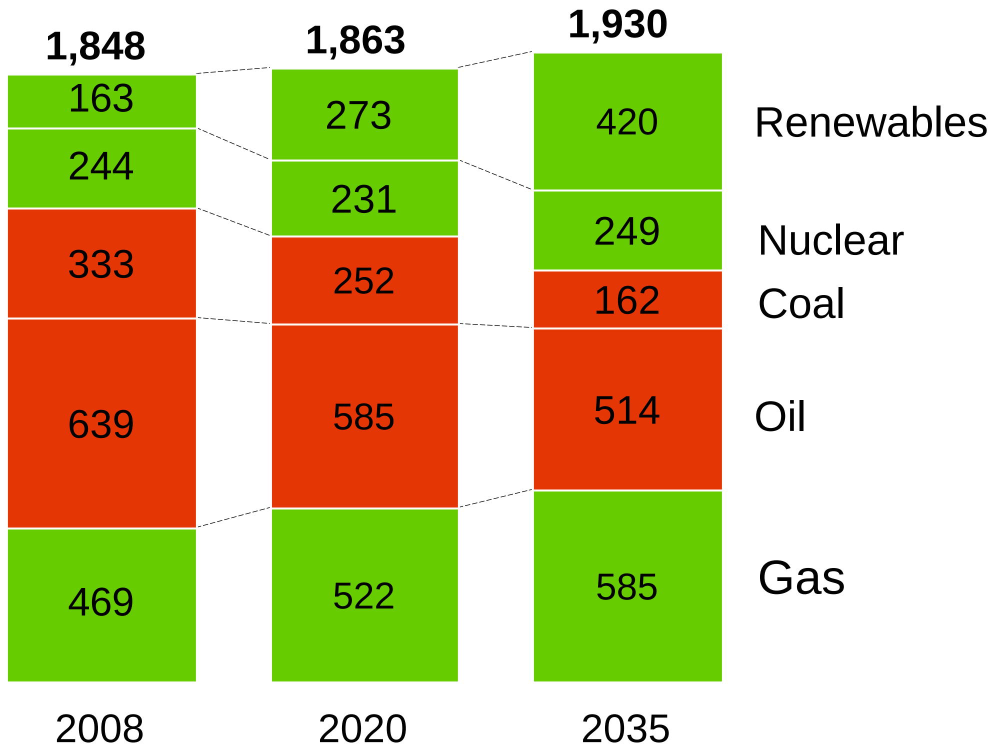


Source : BP, 2011

Future Energy Mix in Europe

EU-27+Turkey primary energy demand

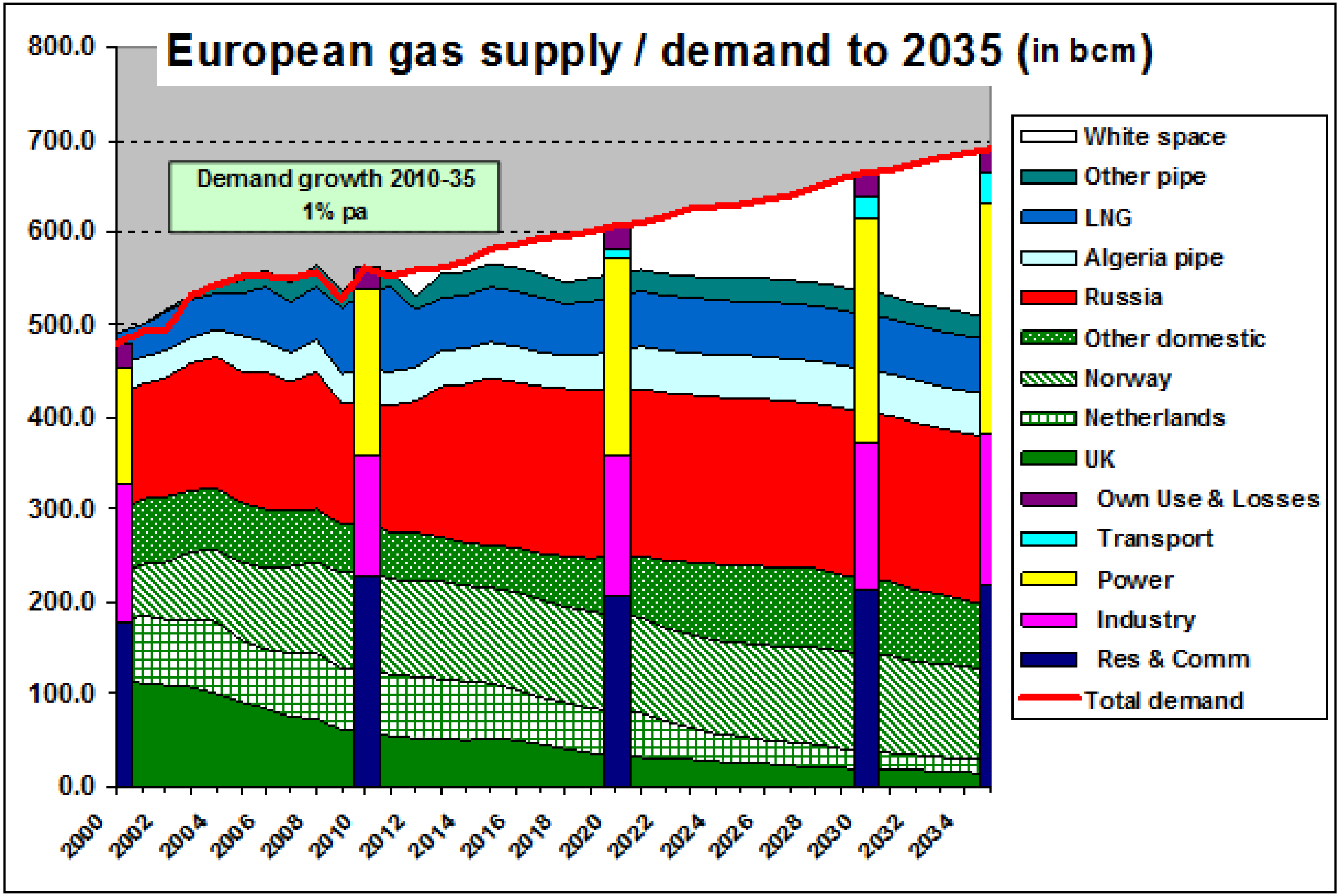
mn toe p.a.



- **Oil and gas >50% of energy demand** in 2035 (today: 63%)
- **High growth of gas demand** (main driver is power sector)
- Europe needs **additional gas imports of up to ~150 bcm p.a.** until 2020

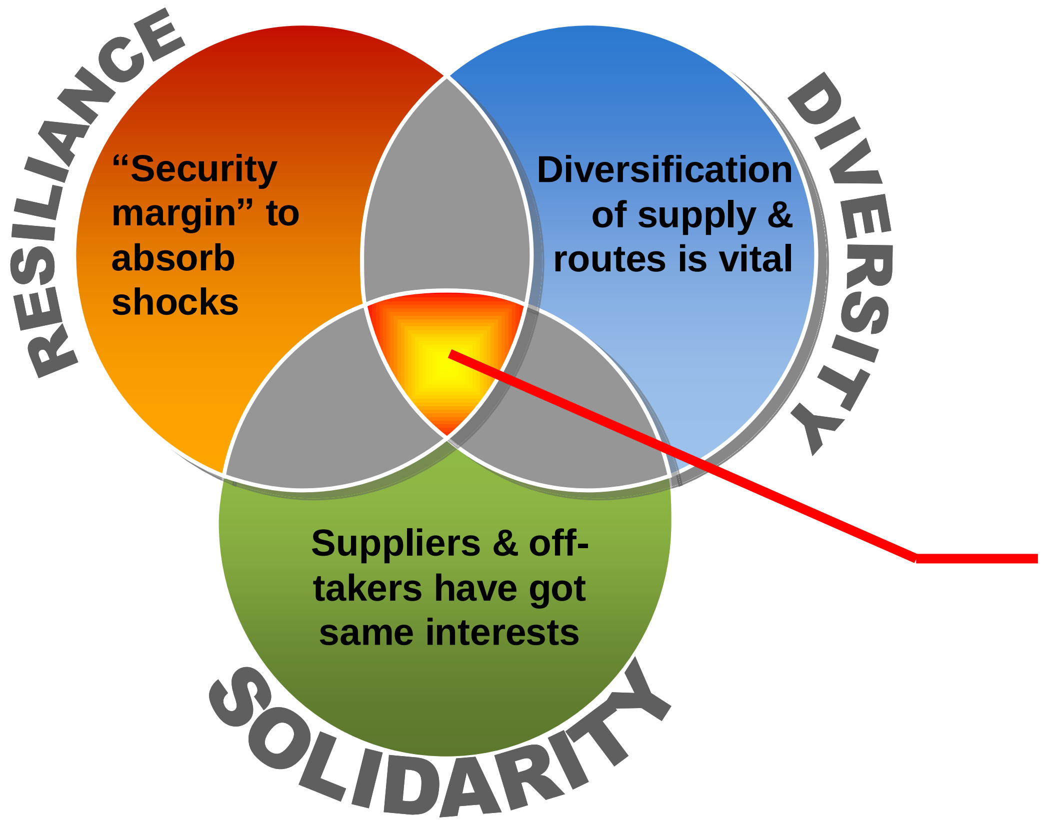
Source: IEA WEO 11/2011 New Policy Scenario, IHS Global Insight 10/2011, BP Statistical review 2011, OMV analysis

European gas Supply and Demand



Source : BP and others, 2012

Pillars for Security of Supply

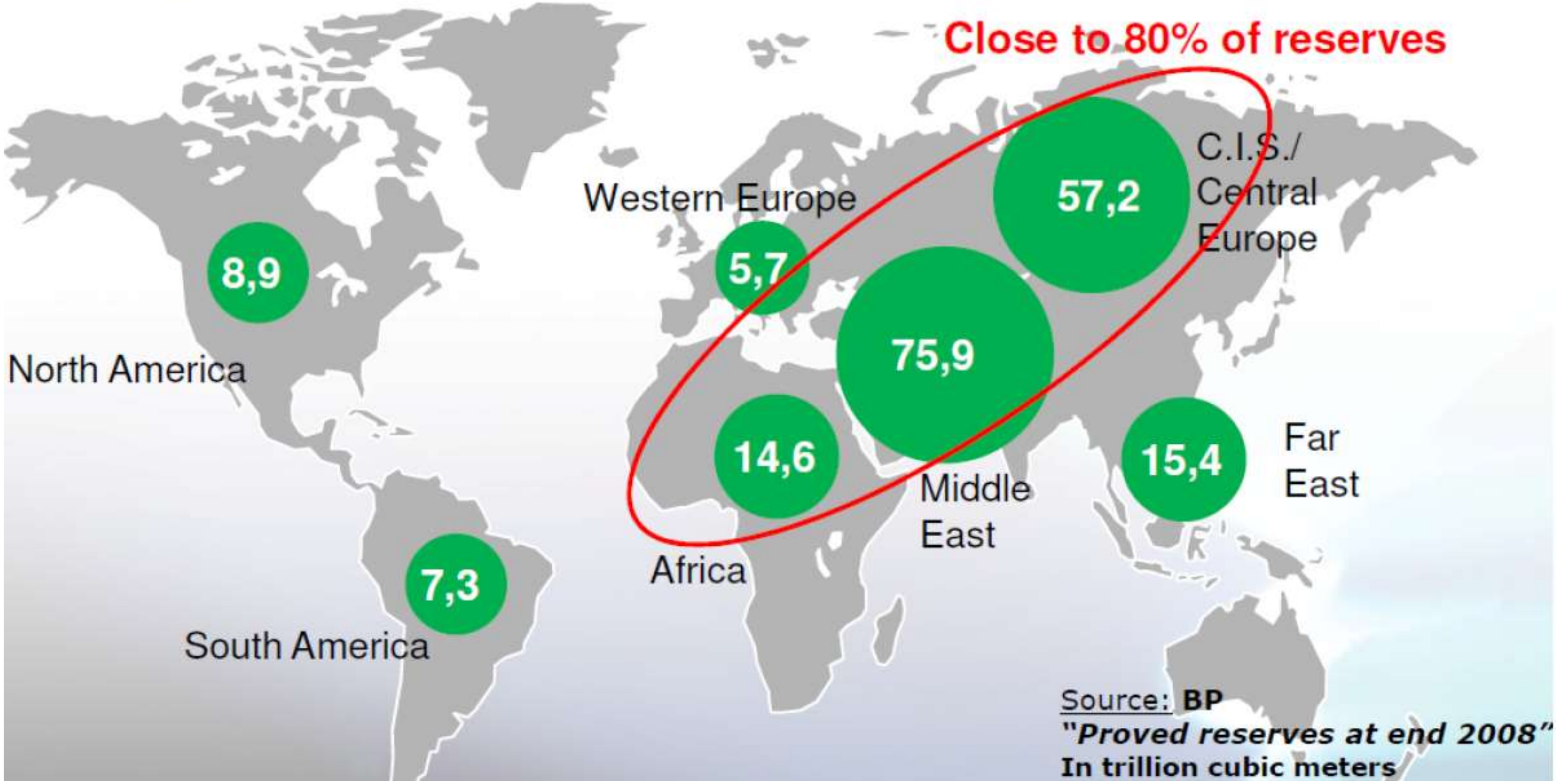


What is the future of Security of Supply ?

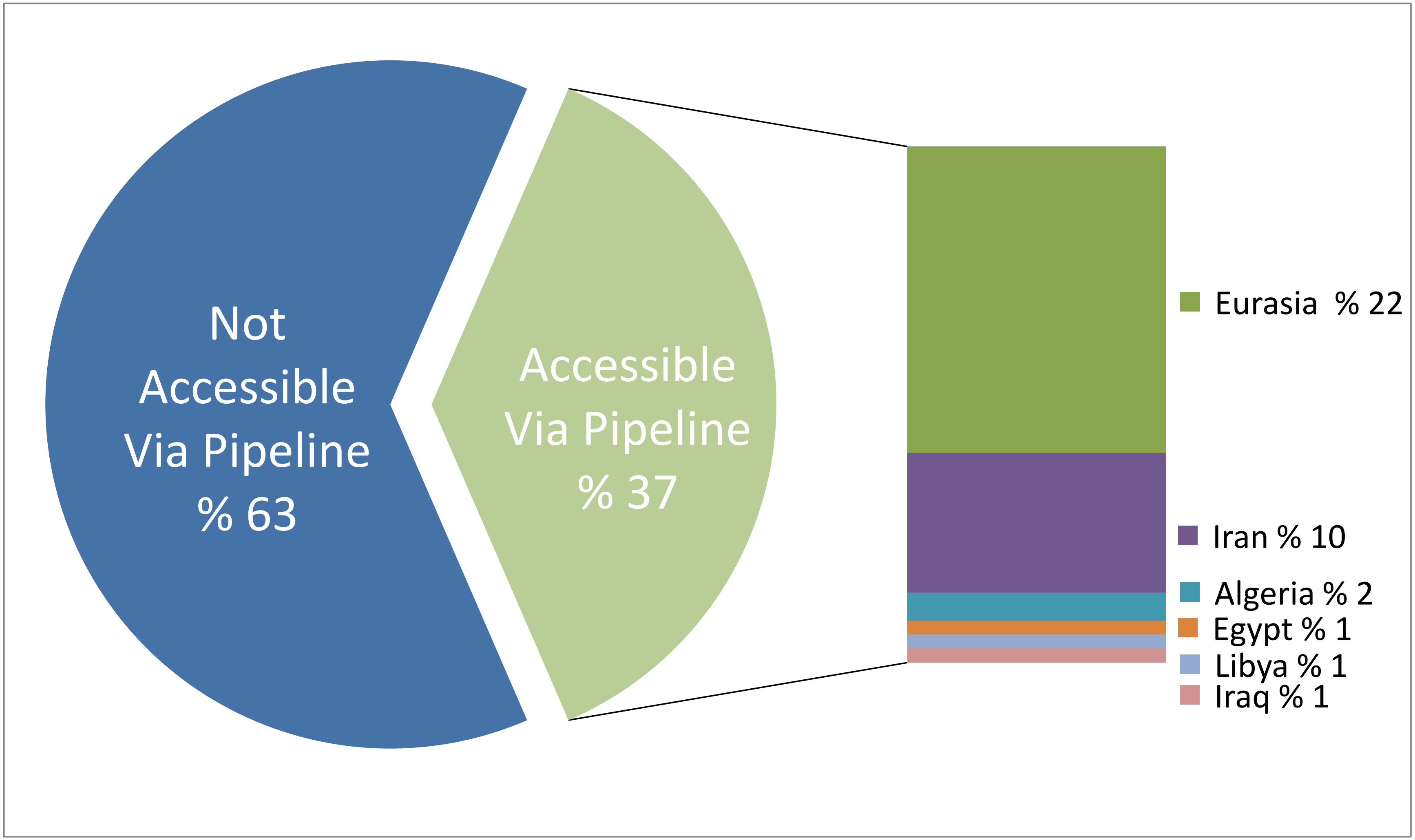
What is the optimum mix of these 3 pillars / approaches for the future development of Security of Supply (in Europe, Russia) ?

Diversity
Access to different gas resources

Proved natural gas reserves are 185 Tcm end 2008, which is sufficient to cover global gas demand for at least another 60 years. The EU is located close to 80% of World natural gas reserves.

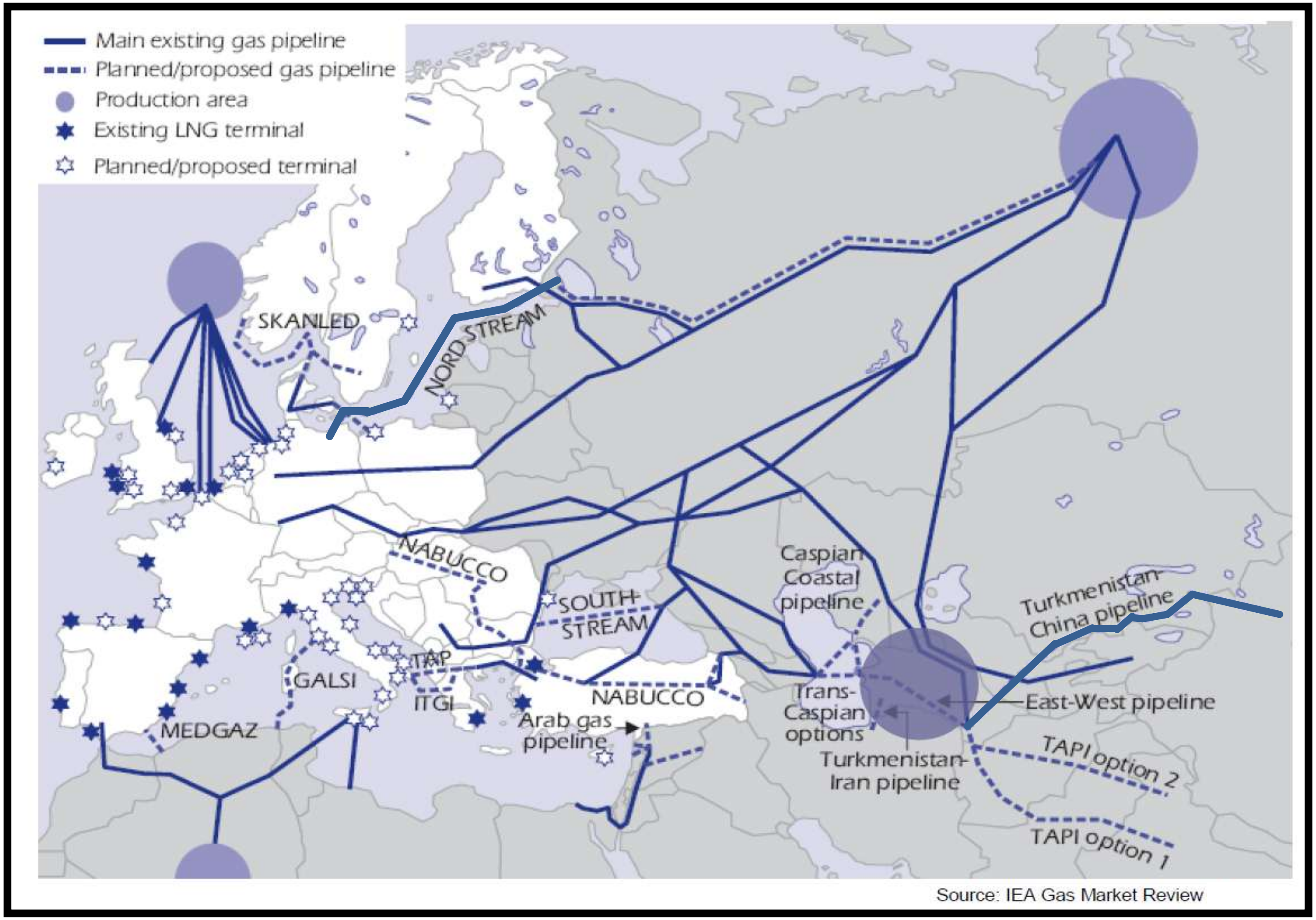


Diversity
Via pipelines accessible world proven gas reserves

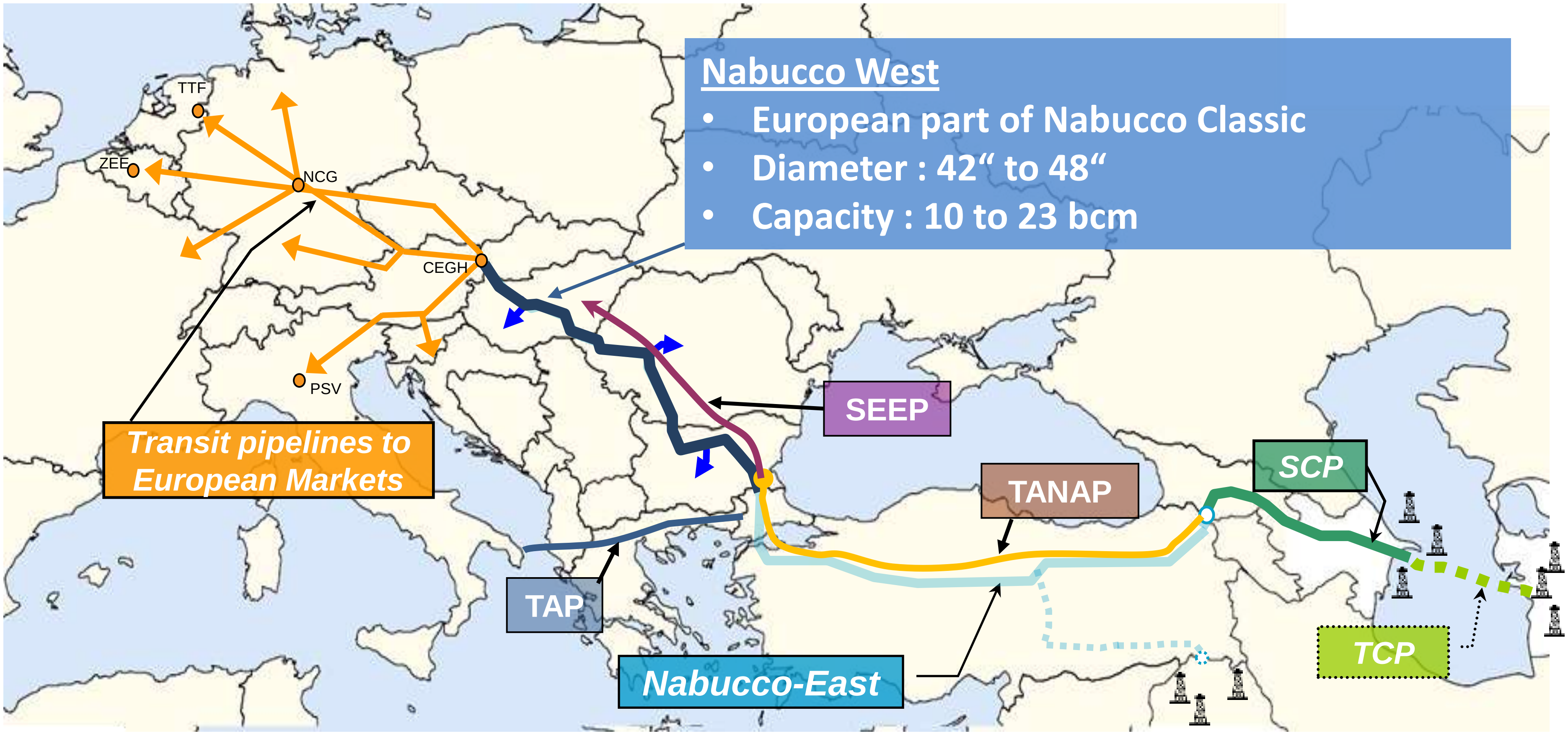


A huge pipeline potential subsists today to supply the EU (Source: BP, 2010).

Diversity
Different supply routes

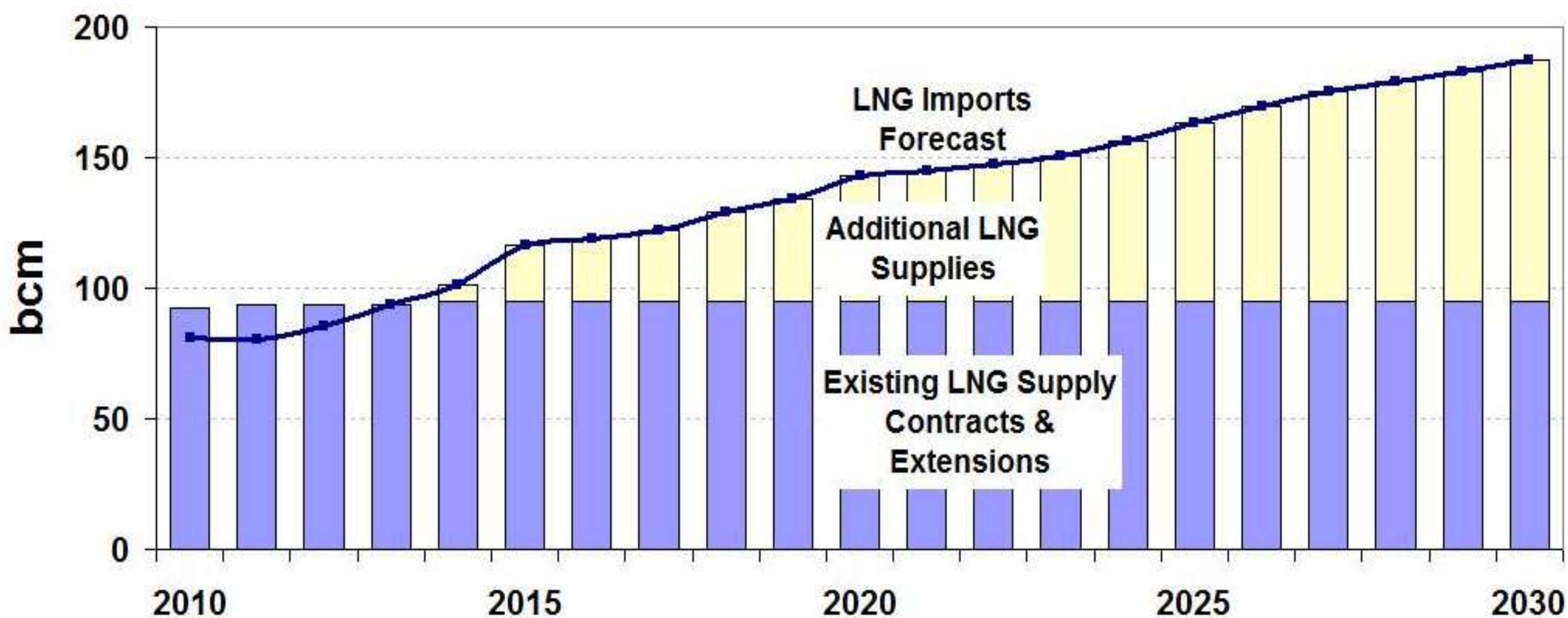


Diversity
The Southern Corridor



Diversity
The growing importance of LNG imports to Europe

- LNG strengthened its competitive position vs. pipelines imports to Europe
- LNG imports to the EU27 increased by almost 50% since 2005, and represents today 15-20% of the total gas imports
- LNG became a very important and efficient alternative way to secure gas supplies to European customers located in Spain, Italy, France, Belgium, Greece, Portugal and the UK.

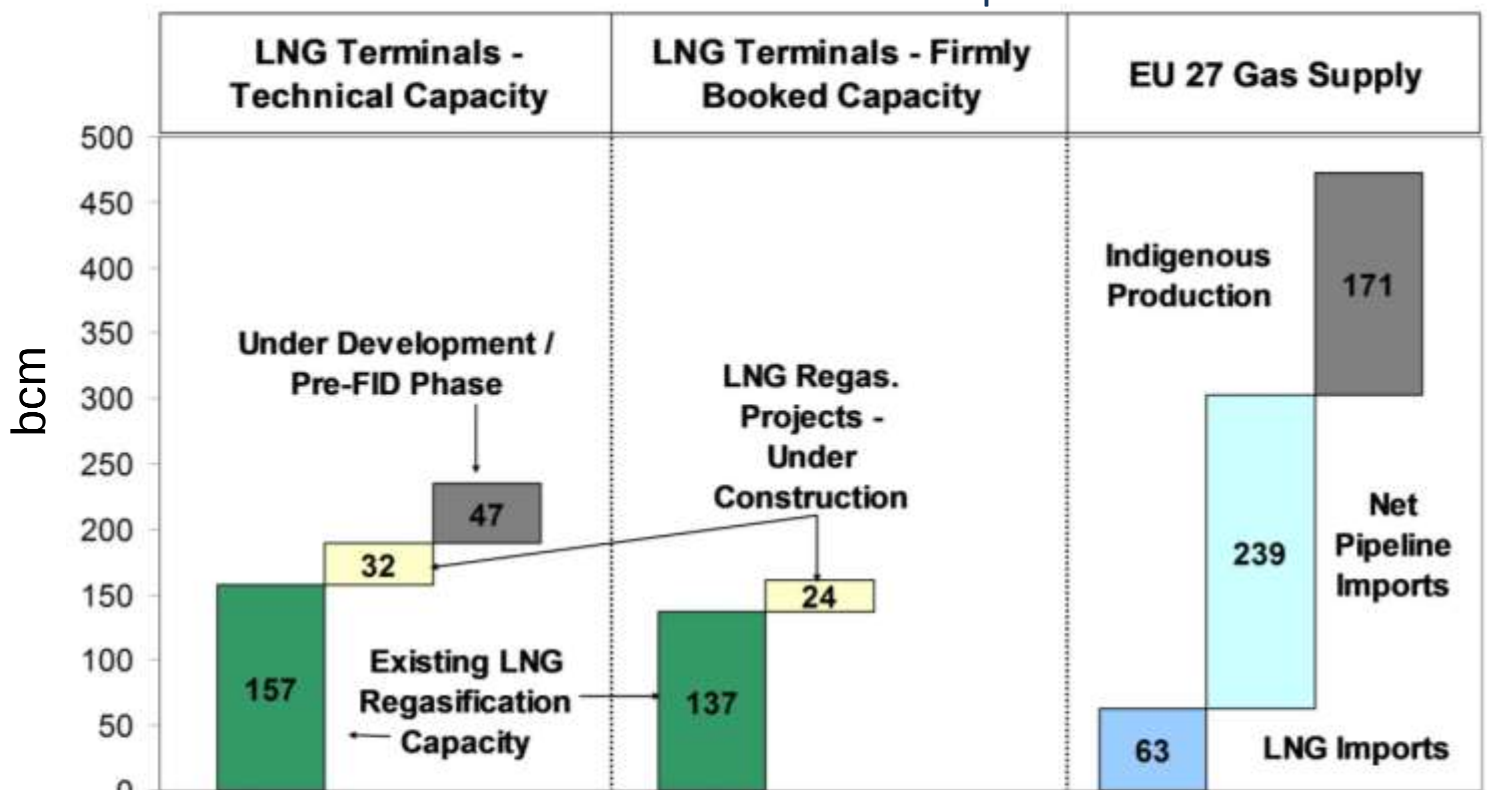


Source: IHS Cera, 2010

Diversity
The dilemma of the LNG regasification terminals

- The low utilization rates currently observed indicate poor profitability, but represent a strong security tool and an emergency refuge.
- The European LNG terminals provide a diversified portfolio to withstand any interruptions and/or shortages by offering several gas “entry points”.

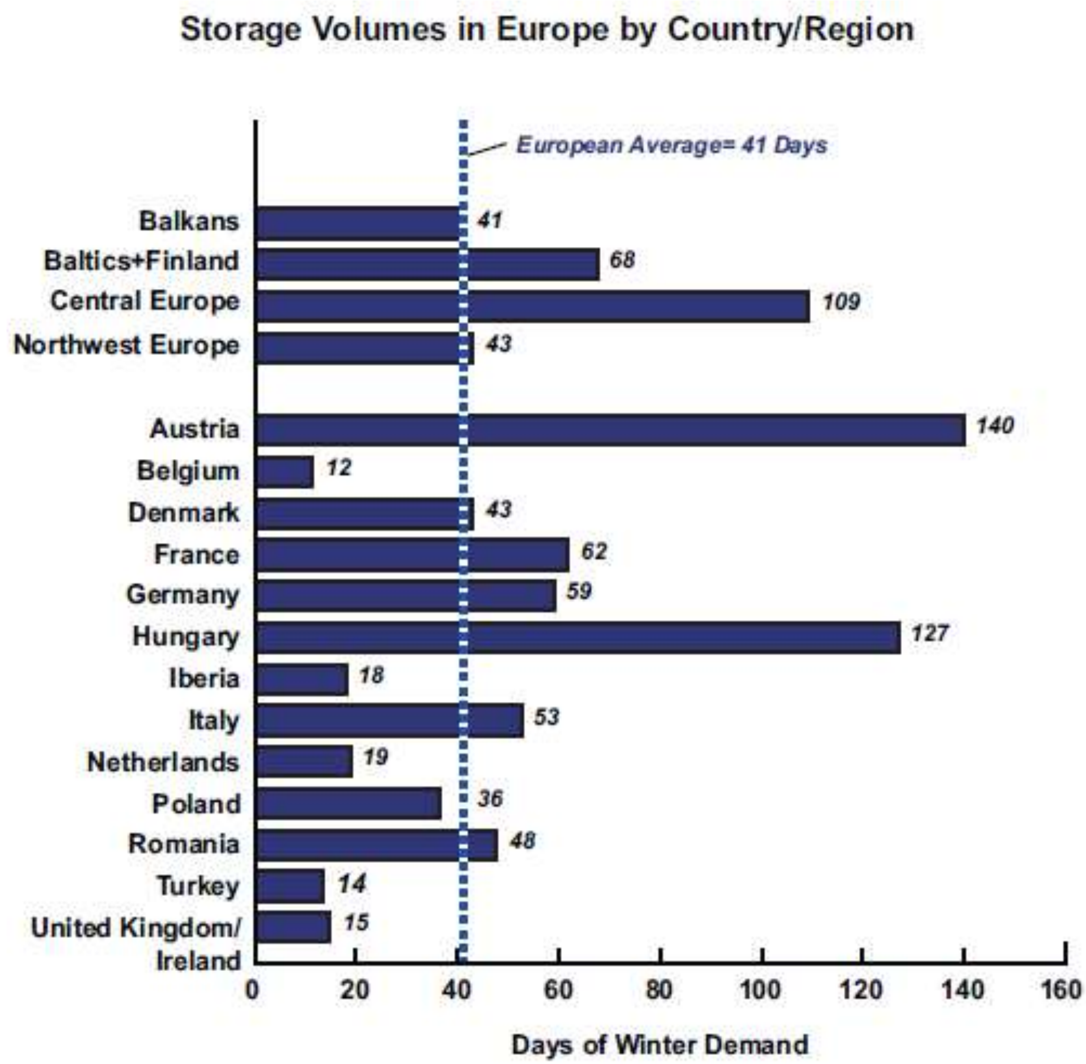
EU27 LNG Infrastructure Development – 2009 Facts



Source: BP, 2010

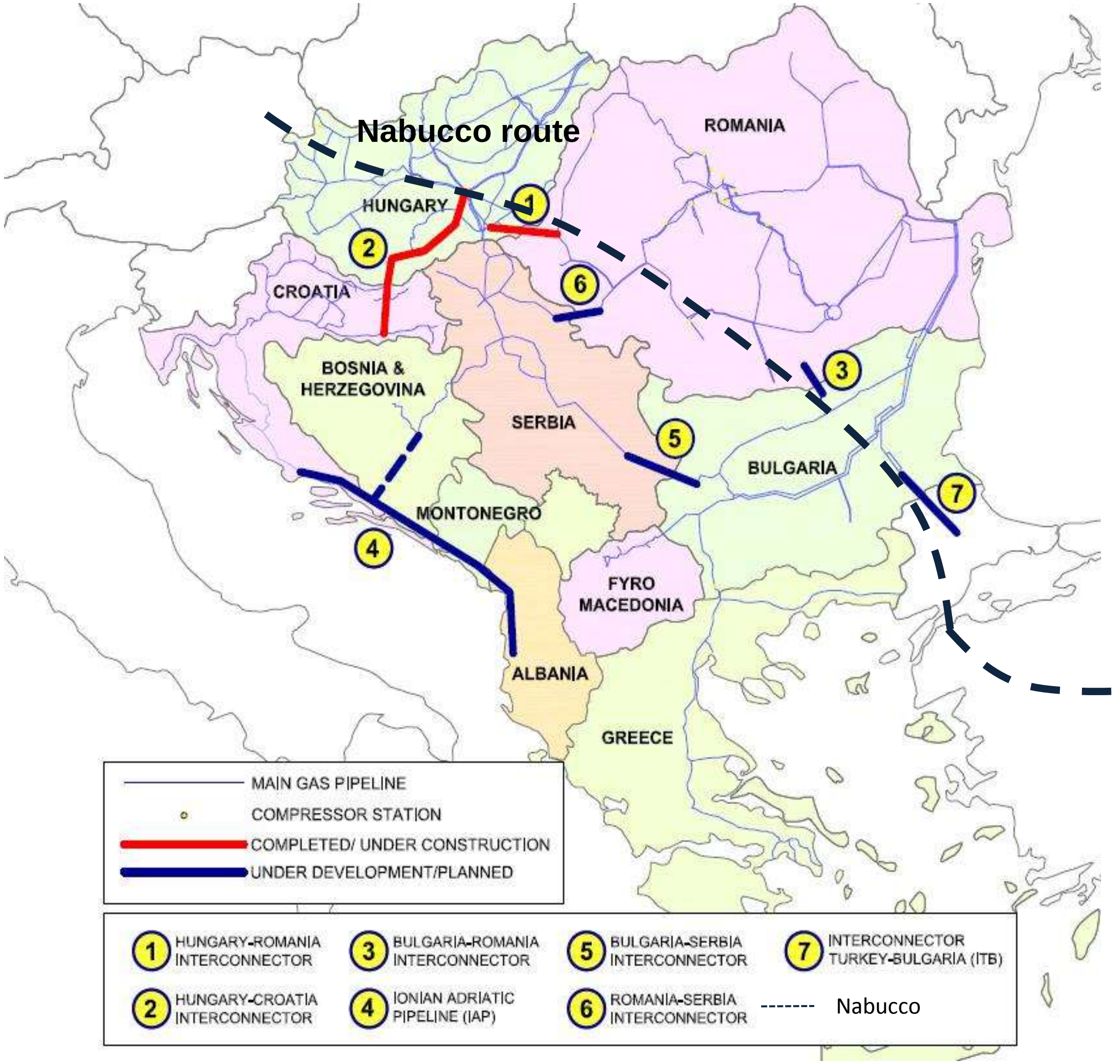
Resilience
The role of Storage Units for security of supply

- Secure gas supply during gas chain interruptions
- Compensate decreasing indigenous production
- Compensate summer/winter supply swing
- Meet new demand pattern (peak shaving power plants, short term trading)
- Could optimize gas transport



Resilience
Market integration via Interconnectors

- Important security supply tool in crisis situation
- Prerequisite for cross border trading, liquid hubs and competitive markets
- Western Europe well connected
- Central and South-East Europe are mostly connected East to West
- EU initiative to increase interconnectivity

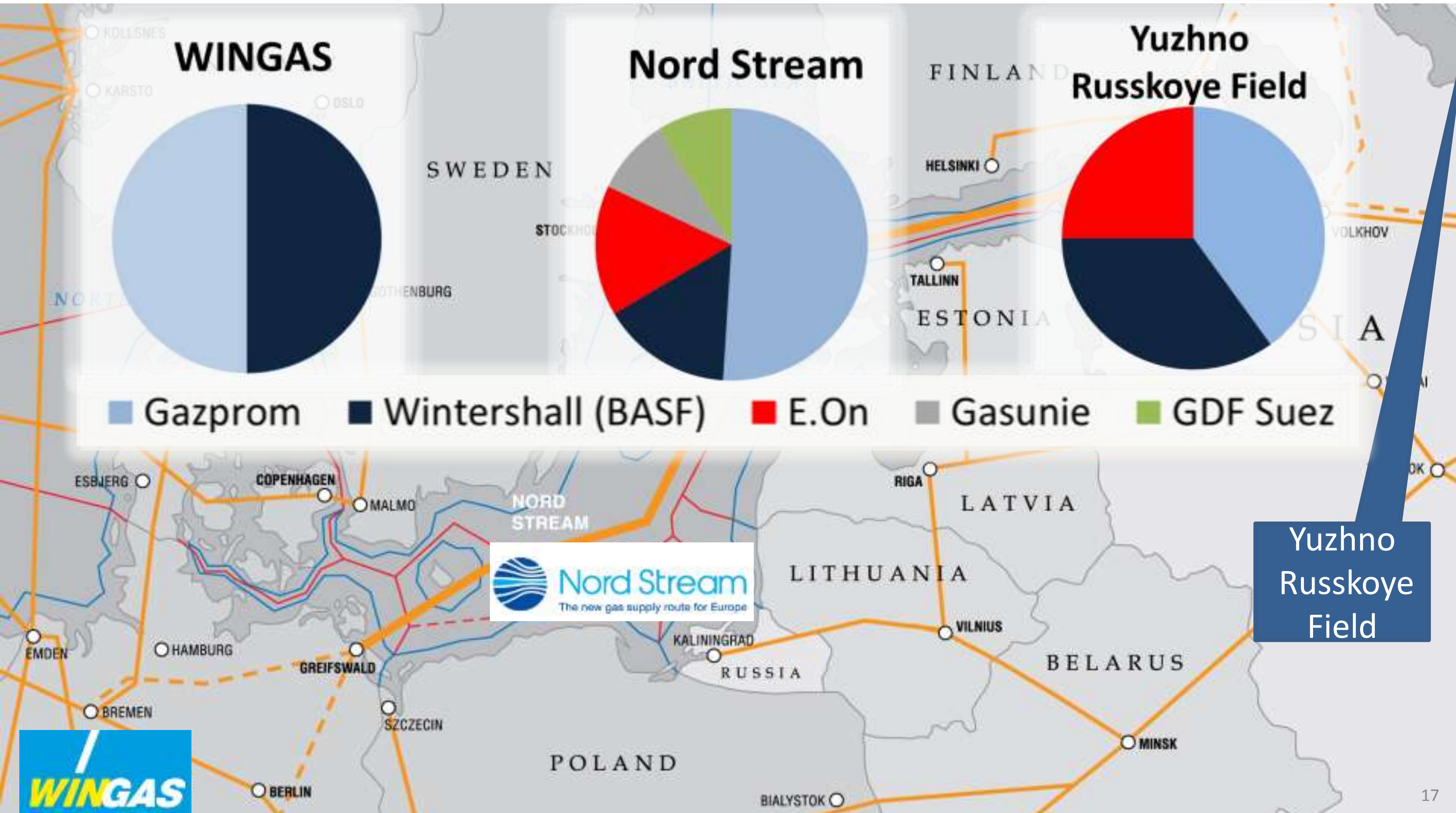


Solidarity
Partnerships between suppliers and consumers

- Solidarity of states should ensure necessary pooling of, and access to, resources
- Transparent, open access and real-time information flow between producers and consumers
- Cross national alignment of supplier, transit and consumer states for cross border mid-stream projects ensure reliable legal and commercial frameworks (e.g. Nabucco IGA)
- Political initiatives to enable gas export from so far not available supplier countries (e.g. EU initiative for IGA between Azerbaijan and Turkmenistan)
- Participation of supply and consumer companies in mid-stream projects ensure aligned interests (e.g. Nord and South Stream projects)
- Cooperation of gas producers, operators and owners of pipelines as well as suppliers along the whole gas value chain

Solidarity
Example for Up / Mid / Down Stream Cross Ownership

Down-stream Mid-stream Up-stream



Constraints to European Security of Supply (SoS) Strategy

- Europe has to face a far stiffer worldwide competition for supplies in the future
- The required infrastructure represents a serious investment challenge, which needs a reliable legal as well as commercial framework combined with sufficient incentives for the investors (at least 200 bn EUR investment needed until 2030)
- Big redundant infrastructure capacities, expensive back-up supply arrangements and very large stock reserves may indeed increase the level of SoS, but are usually commercially inacceptable
- SoS for natural gas has to consider that gas has to stay competitive against alternative energy sources
- Different gas customers need individual levels of SoS

Summary

- Natural gas has a strong and growing position in energy markets in Europe thanks to a robust demand base and the capability to meet successfully climate change targets
- The Security of Supply (SoS) strategy of Europe should rely on the three pillars

  Diversity, Resilience and Solidarity
- **Diversity** is achieved by access to different supply sources and different supply ways. Beside new pipeline routes LNG plays a significant role of increasing importance for the SoS
- **Resilience** during crisis situations is secured by a sufficient amount of gas storage and network of cross border interconnectors. Cross border trade, liquid hubs and competitive markets accompany the impact of an improved SoS.
- **Solidarity and partnership** between gas producers and consumers on the level of states and companies are a further key stone for SoS in Europe.
- These pillars have to consider the **key constraints of SoS** in Europe, which are increasing competition for energy resources, huge investment needs for required infrastructure and a competitive price level for gas consumers.

THANK YOU

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