



**UNIVERSITY OF
CAMBRIDGE** | **Electricity Policy
Research Group**

Getting Serious about European Gas Security

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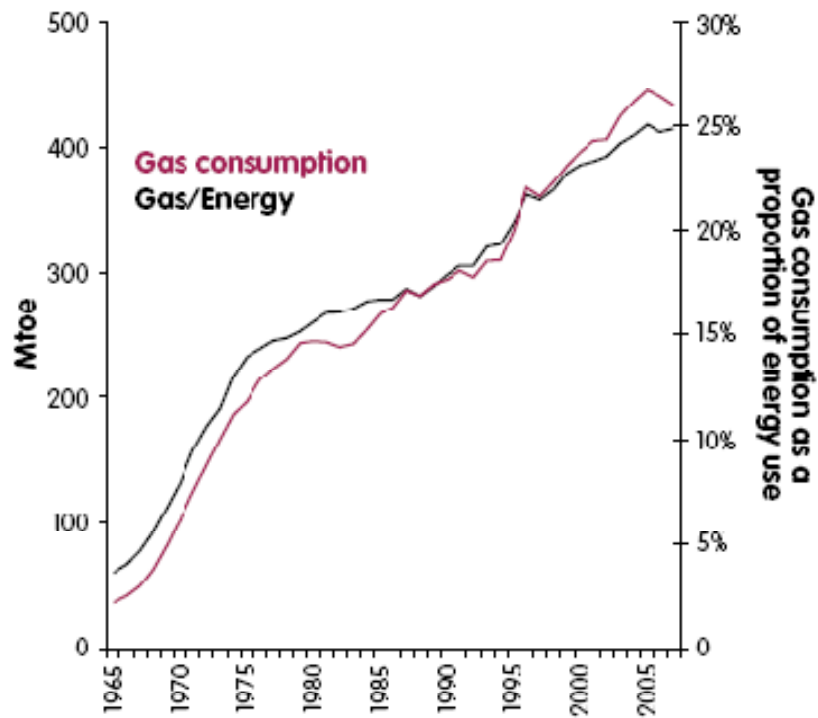


Main messages

- EU gas supply has been diversifying for decades – *and diversification is accelerating*
- Gas consumption is in the west, dependence on Russia is in the east
- We need a functioning, single European gas market that would spread diversity across Europe
- New member states must invest in gas security measures

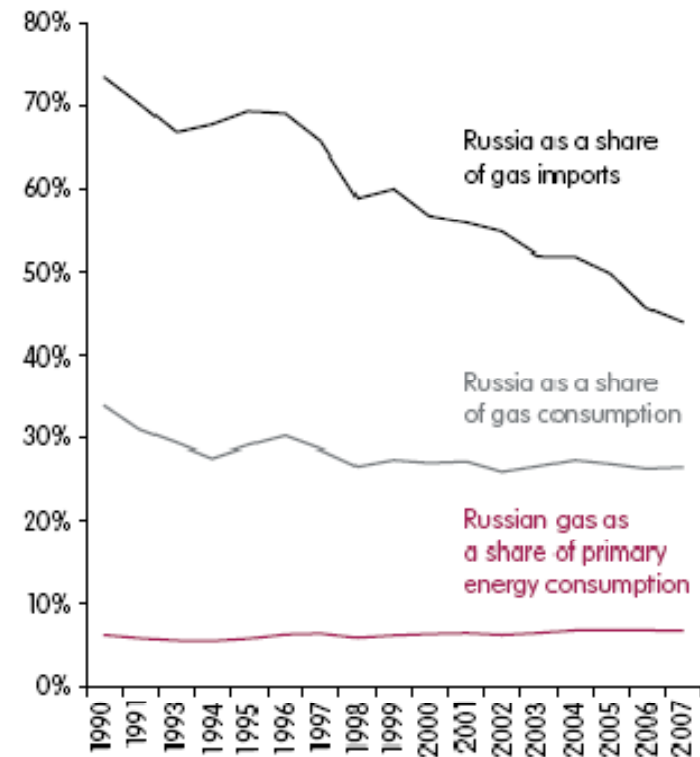
Europe's energy: Gas up, Russia down

Figure 1. EU27 gas consumption, 1965-2007



Source: BP Statistical Review of World Energy (from Cedigaz)

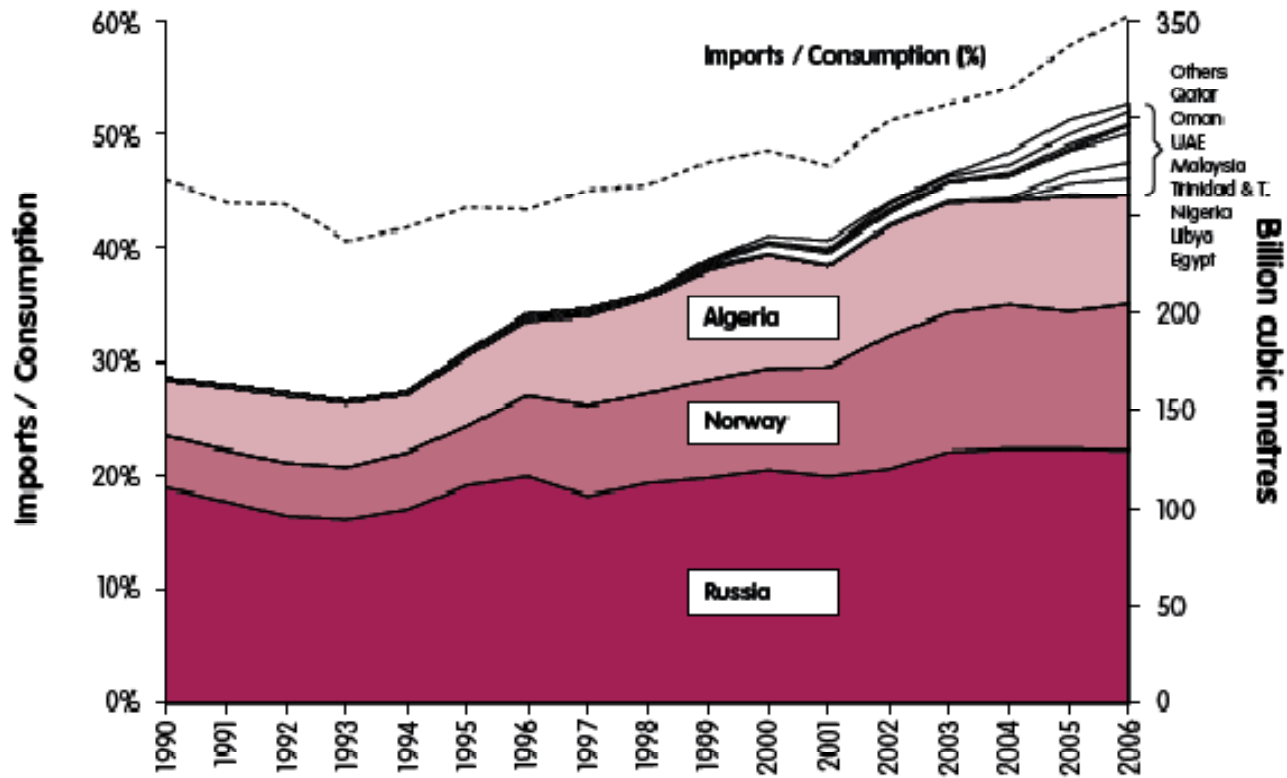
Figure 5. EU27 dependence on Russian gas, 1990-2006



Source: Eurostat; BP Statistical Review of World Energy

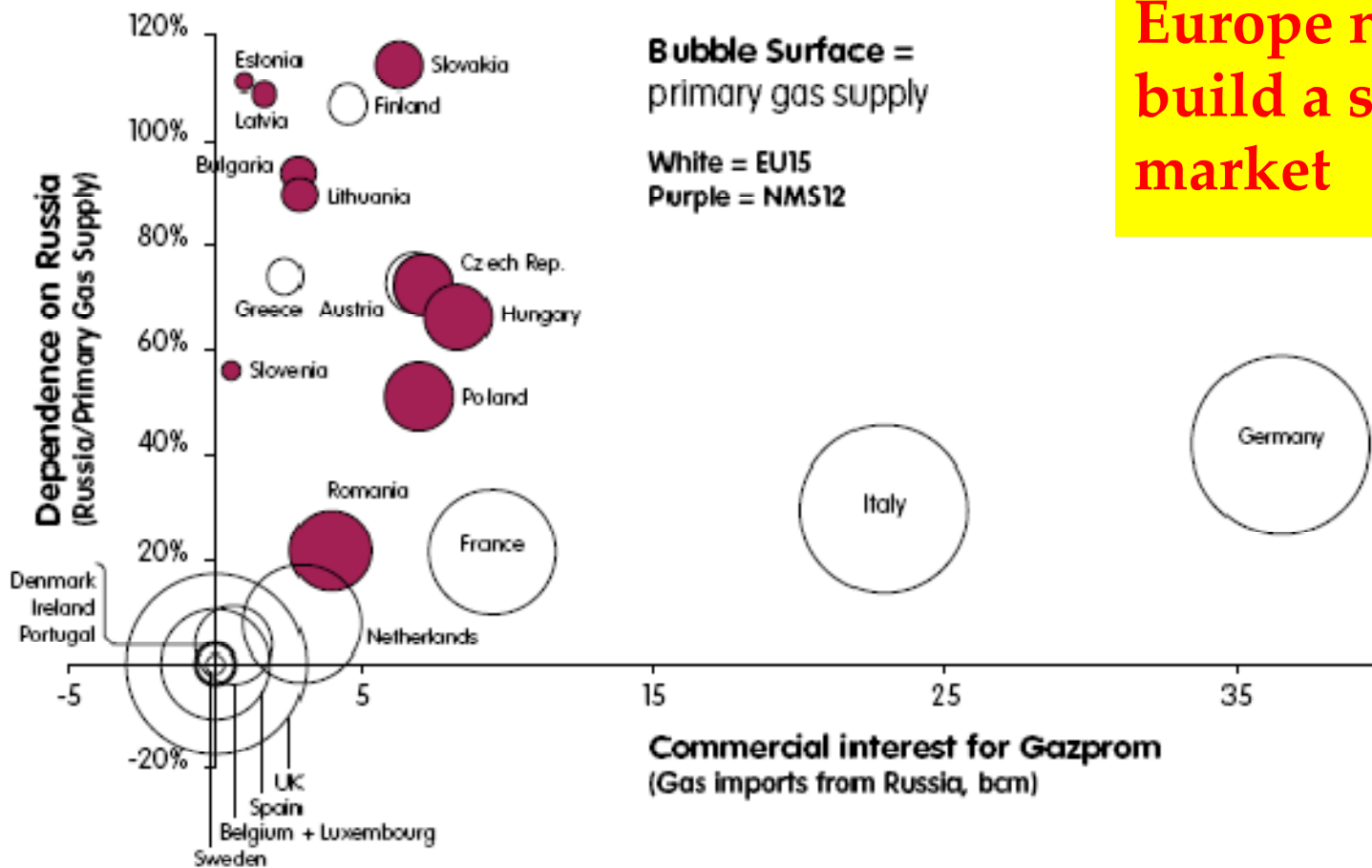
Gas supply: 20 years of diversification

Figure 4. EU27 gas imports, 1990-2006



Source: BP Statistical Review; Eurostat

Consumption is in the west, dependence is in the east



Europe needs to build a single gas market

Source: BP Statistical Review; Eurostat

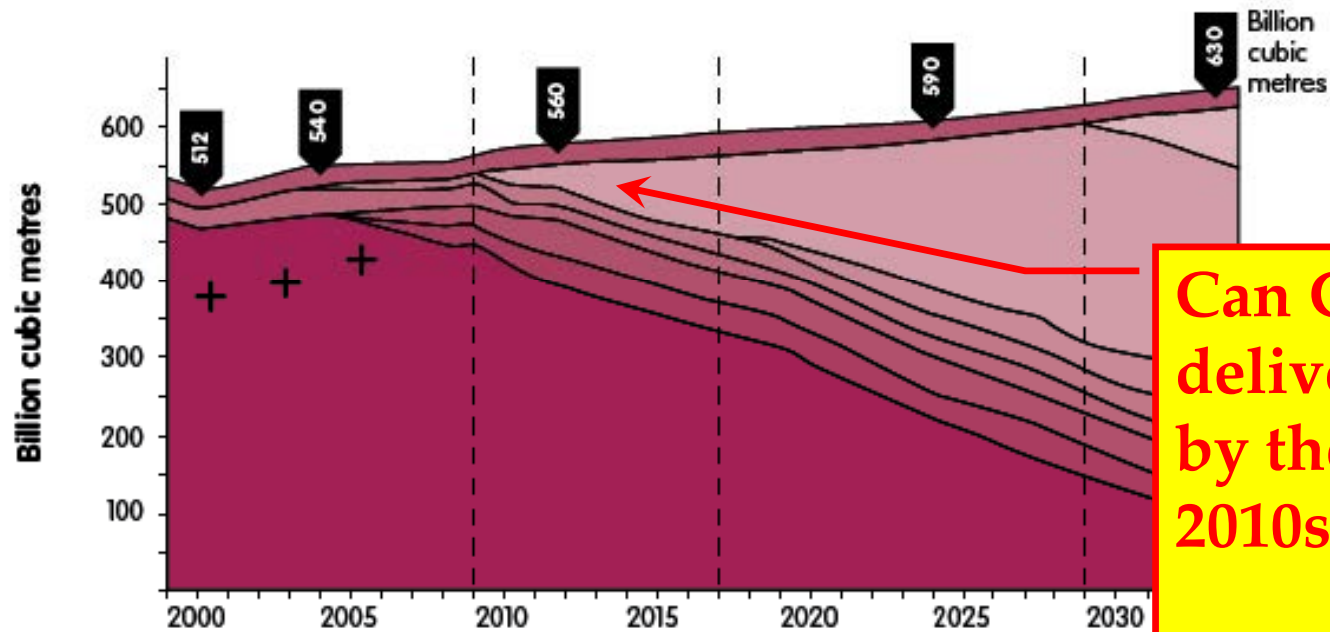
Benefits of market integration

- Increase supply security
 - “Export” diversity eastward
 - Spontaneously re-allocate supply in times of crisis
 - *We should rely on the market, not specific companies*
- Reduce the divisiveness of Russian gas
 - “Europeanise” large bilateral import contracts – *they would bring gas to Europe, not Germany, France or Italy*
 - Reduce German, Italian and French incentive to prioritise their bilateral relationship with Russia over European unity
 - Reduce central and eastern Europe “energy insecurity syndrome”

Russia will *not* export more gas to Europe

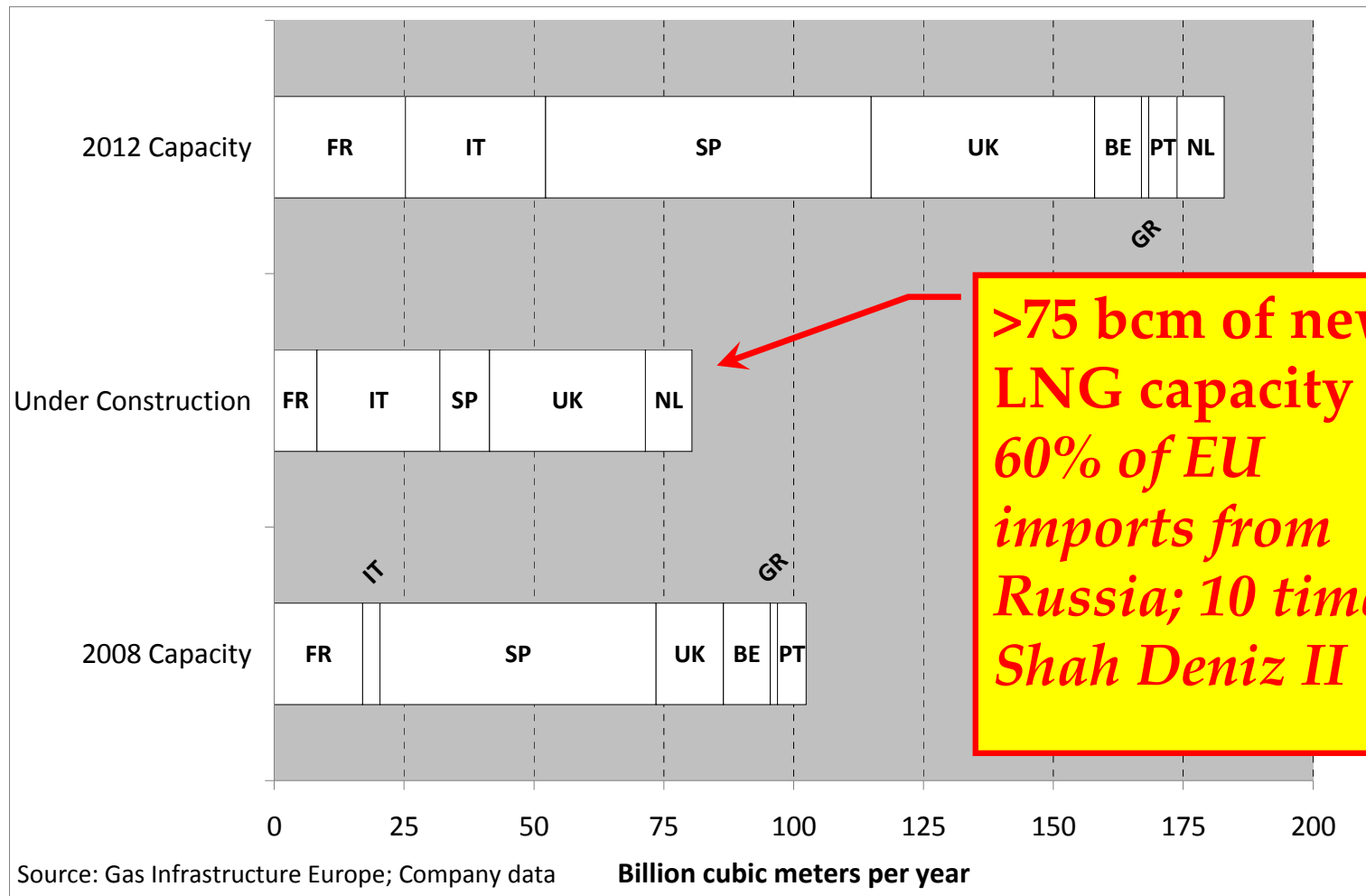
North Stream and South Stream are *only* bypassing pipelines

Figure 6. Gazprom's gas output (2000-2035)



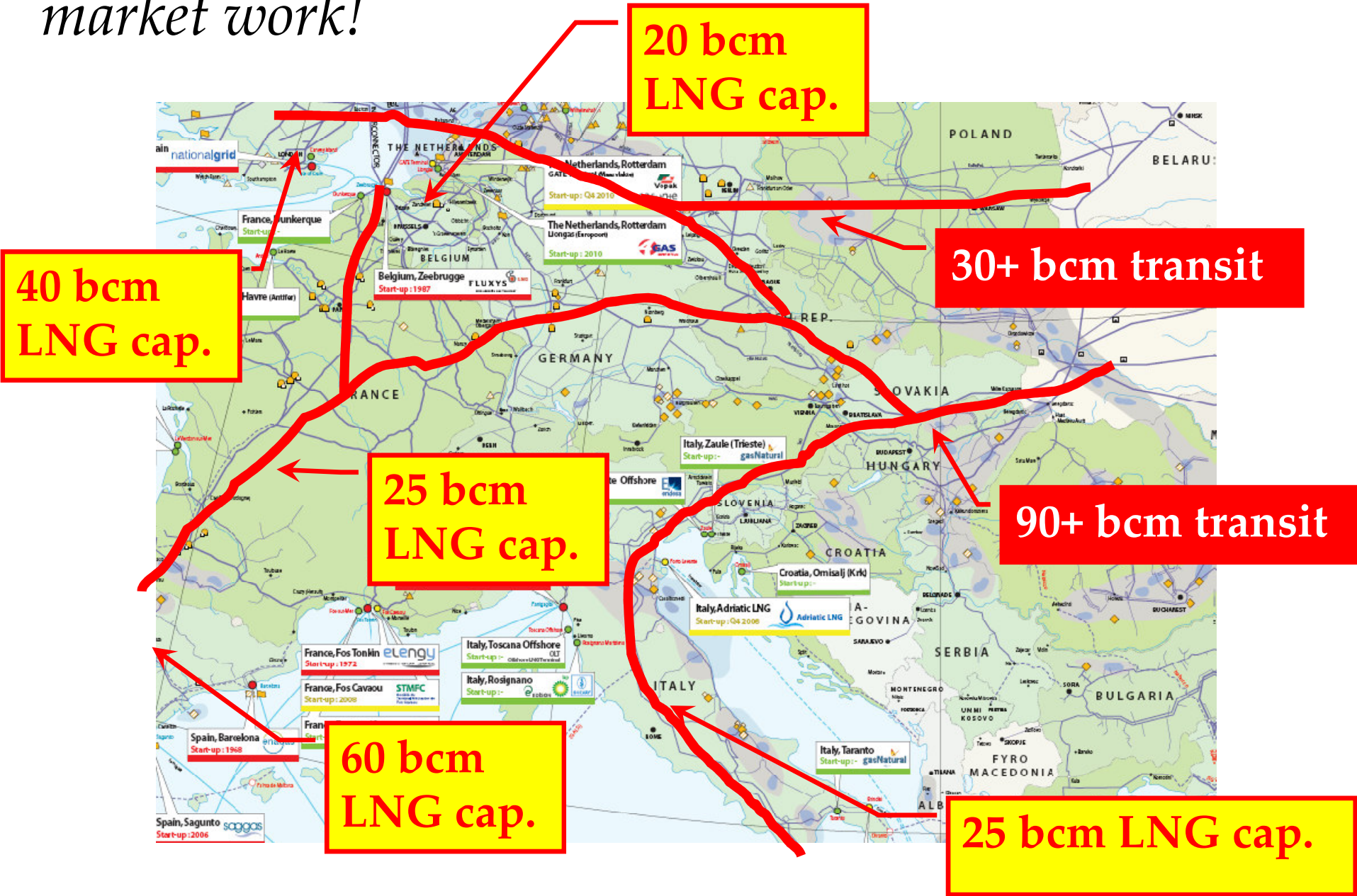
Can Gazprom deliver Yamal by the early 2010s? -- No.

Massive expansion of LNG capacity in the EU



>75 bcm of new LNG capacity = 60% of EU imports from Russia; 10 times Shah Deniz II

Make gas fungible in Europe -- *Make this market work!*



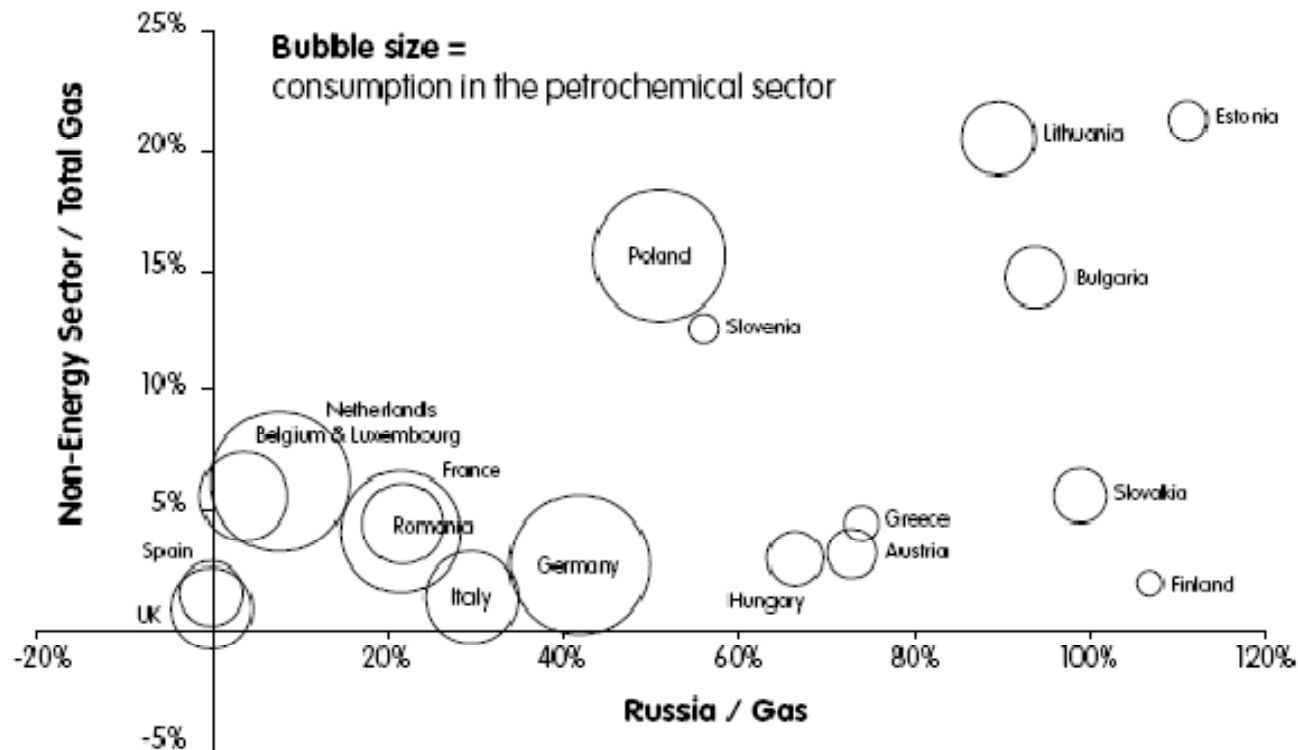
New member states must spend money on gas security

- Gas security is about meeting peak demand in normal and exceptional circumstances
 - Operating Balancing Arrangements
 - Interruptible consumption (dual-fuel capability)
 - Option supply contracts
 - Storage (size and deliverability rate)
- The EU should force NMS to invest in energy security
 - EU standard for the security of gas supply – Unfortunately the new directive will probably not define a standard
 - The cost-effective way to meet a given standard is country-specific – *gas storage; back-up diesel; spare elec generation capacity...*

Dependence vs Interruptibility (1)

Lots of interruptible consumption in highly dependent countries

Figure 14. Dependence on Russian gas versus gas consumption in the petrochemical sector (2006)

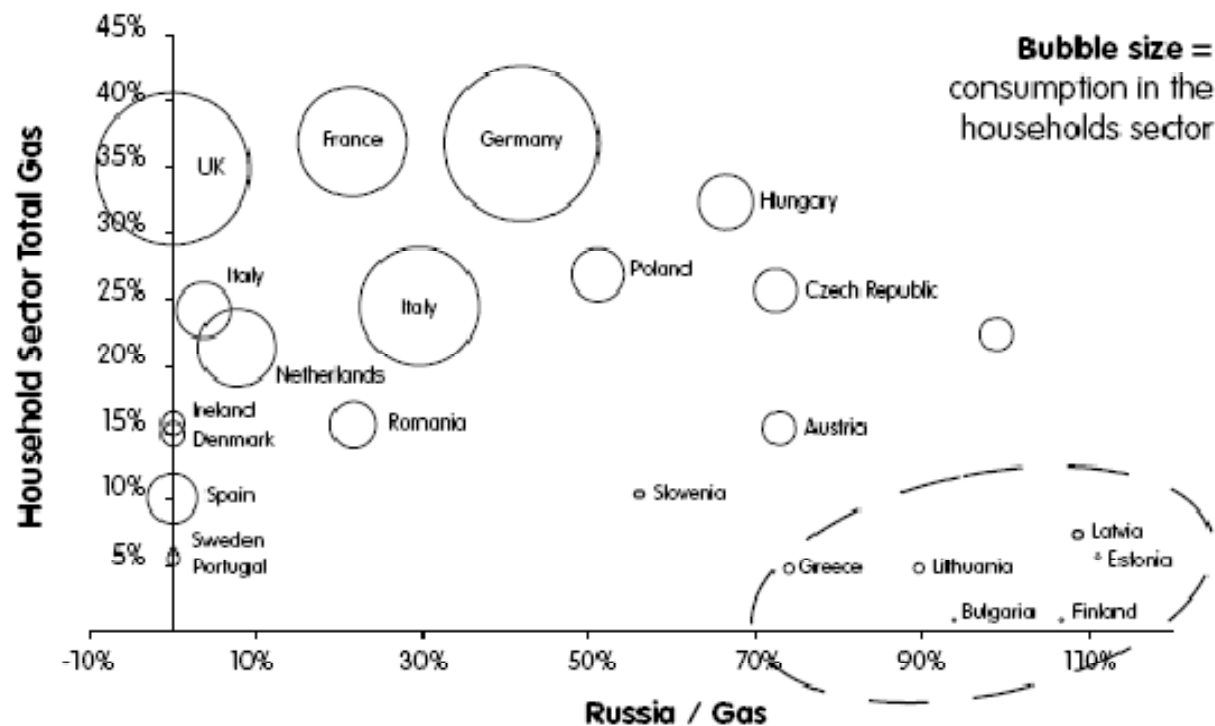


Source: BP Statistical Review; Eurostat

Dependence vs Interruptibility (2)

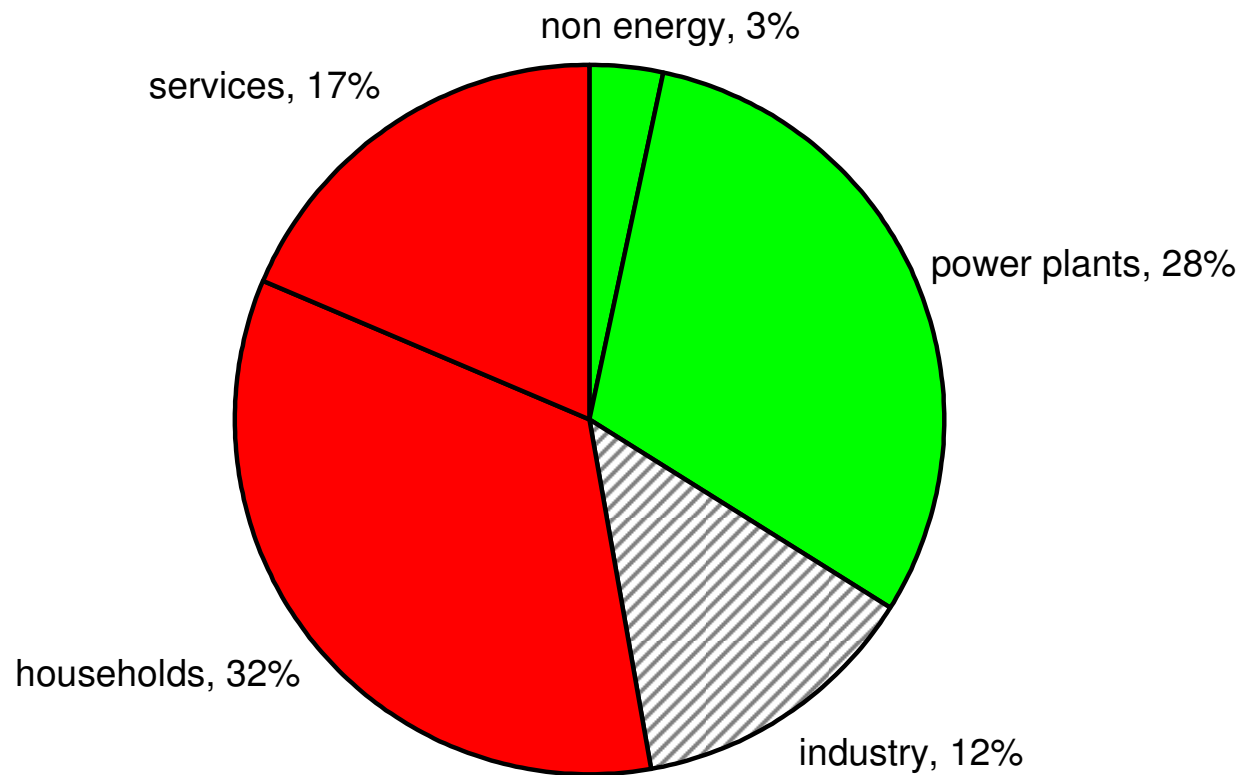
Most highly dependent countries have little household consumption – *but Hungary has a lot*

Figure 15. Dependence on Russian gas versus gas consumption by households (2006)



Structure of gas consumption in Hungary

In principle, plenty of interruptible demand



Source: Eurostat

Getting serious about European gas security – *What does it mean?*

- Getting serious about market integration
 - European energy regulators need strong, sustained political support – *Regional Gas Initiative*
- Getting serious about gas security policies
 - Need for in-depth understanding of costs and benefits of increasing gas security in eastern Europe
 - *And then, spend money on the problem!*
- Nabucco?
 - We don't have a diversity problem but an EU market problem
 - Beware the dreams of cheap gas, or cheap gas security
 - Beware distractions from the main tasks and difficult decisions
 - This pipeline will be built if and when gas companies sign large supply contracts east of Turkey – *not the other way round*

