



DREAMS COME TRUE?

THE DEVELOPMENT OF GAS SUPPLY SECURITY IN THE VISEGRAD GROUP

András Szirkó
Kraków, 7 July 2011

Agenda

1. History explains all: infrastructural legacies
2. Actual and perceived supply crises
3. Inertia vs agenda-setting: the way forward?

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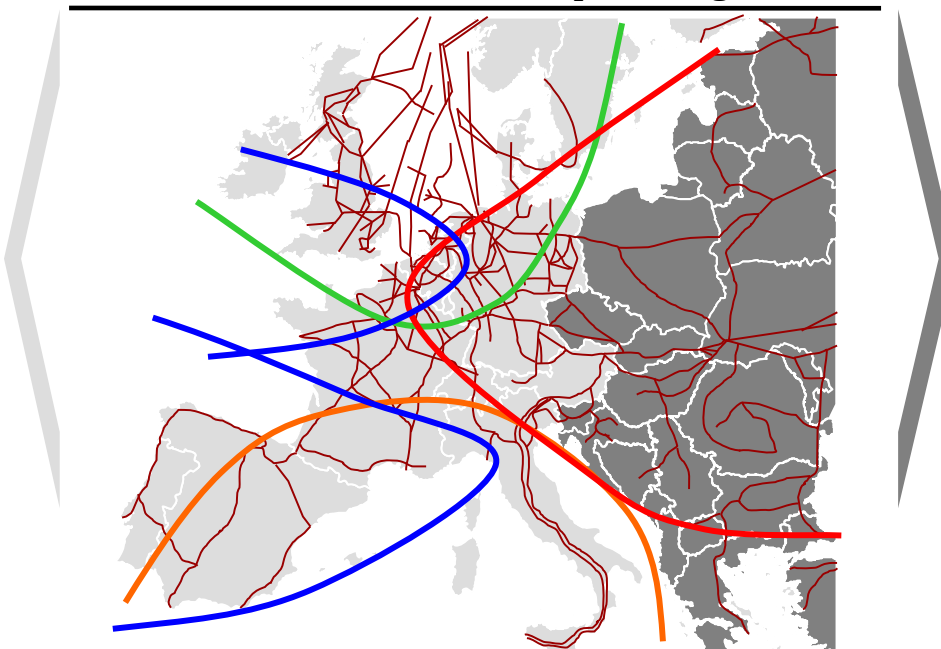
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DIFFERENCE OF SECURITY OF SUPPLY IN WESTERN EUROPE AND CENTRAL AND EASTERN EUROPE

Transmission in EU 15

- ▶ Parallel **East-West** transit routes
- ▶ Existing **North-South** infrastructure
- ▶ Connected to the global LNG market

Transmission network and competitive gas sources



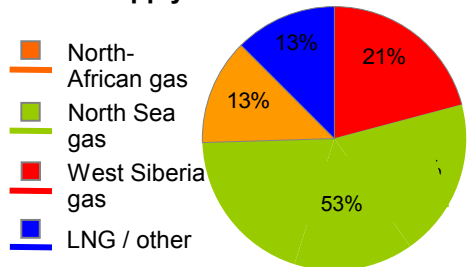
Transmission in EU 12

- ▶ Lack of interconnections – reliance one single direction
- ▶ Flexibility problems stemming from Insufficient storages capacities
- ▶ No access to LNG

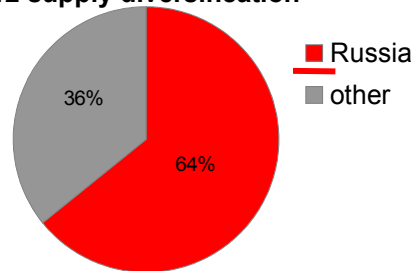
Composition of gas sources in EU 15

- ▶ Several **competing sources** offers cheap and reliable gas for the region
- ▶ Economic and social cost of gas supply security problems are relatively low

EU 15 supply diversification



EU 12 supply diversification

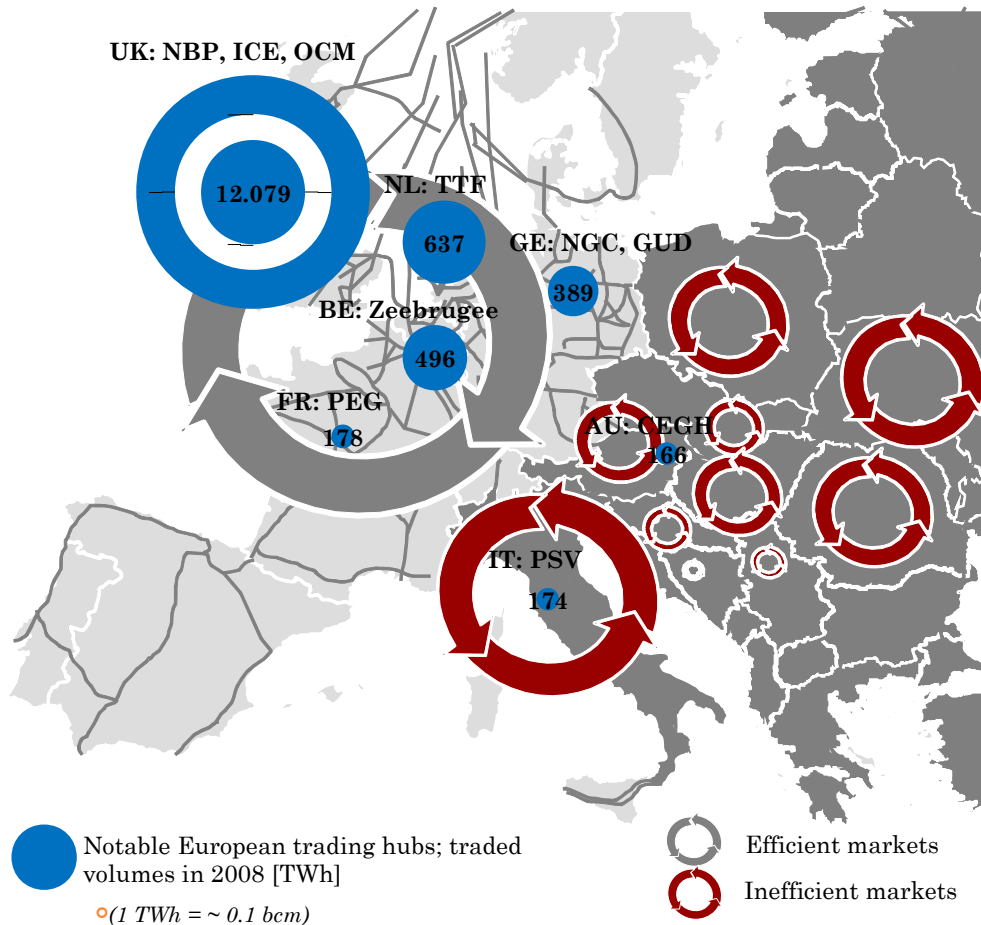


Composition of gas sources in EU 12

- ▶ Excessive reliance on **one single source**
- ▶ **High prices** due to lack of competition
- ▶ **High economic and social cost** of gas supply security problems

EU GAS MARKET LIBERALISATION: HOW LONG WILL THE EAST-WEST DISCREPANCY CONTINUE?

Gas Hubs in Europe



Source: CERA, ENTSOG

Gas market liberalisation

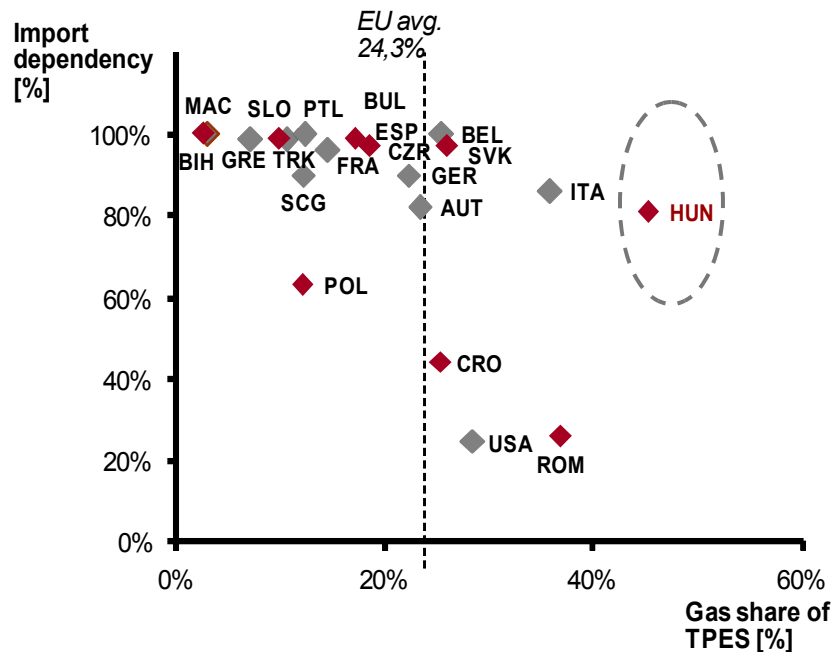
- ▶ Programme of European gas and electricity market liberalisation started in 1998
- ▶ European Commission's vision of a **more integrated European gas market** (cross-border trading and enhanced security of supply)
- ▶ Directives (1998, 2003, 2009) introduced competition, deregulation of prices, third party access to transmission network, and unbundling
- ▶ Directives transposed to national laws in new member states (inc. V4) step-by-step
- ▶ Main winners of the process so far: major western energy companies (RWE, E.ON, Eni, EdF, GdF Suez)

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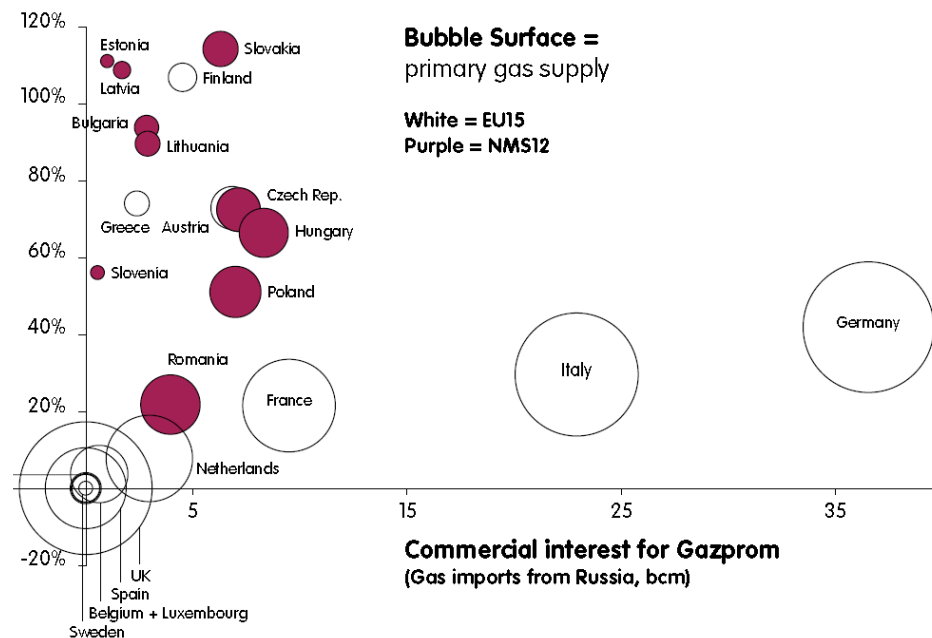
CEE COUNTRIES DEPEND ON GAS (AND ON THE MAJOR SOURCE: RUSSIA), WHILE RUSSIA IS NOT DEPENDENT ON CEE CUSTOMERS TO THAT EXTENT

Import dependency vs. dependency on gas (share in TPES¹⁾)



Dependence on Russian imports vs Gazprom's interests in single customers

Dependence on Russia [Russia/Primary gas supply]



- ▶ Some CEE countries' (especially Hungary's) economy is highly dependent on gas
- ▶ Russia is the largest or the sole supplier of most CEE countries
- ▶ CEE countries are not the largest customers of Russia
- ▶ The mitigation of the CEE countries' exposure is crucial

1) TPES: Total Primary Energy Supply (for all purposes – heating, power, etc. -, includes: oil, gas, coal, nuclear renewable)

EXPOSURE BECOMES APPARENT: “GAS WARS”

Gas crisis in January 2006

Gas crisis in January 2009

Gas crisis in June 2010

Type

- ▶ May be considered as commercial dispute

- ▶ High level political involvement

- ▶ May be considered as commercial dispute

Location

- ▶ Ukraine

- ▶ Ukraine

- ▶ Belorussia

Size

- ▶ Transit flows only reduced

- ▶ Transit flows totally cut

- ▶ Threat of transit disruption, reduction of supply to Minsk

Time horizon

- ▶ Relative quick resolution

- ▶ 3 weeks to solve

- ▶ 2 weeks to solve

Ex-ante perception

- ▶ „Worst case scenario”

- ▶ „Impossible”

- ▶ „In the air”



- ▶ The event of January 2009 was way out of the previously projected set of possibilities
- ▶ After high level political involvement, transit cuts are still an issue in Europe
- ▶ Two major Russian import routes had transit disputes recently

PERCEPTION MATTERS: RUSSIA AS DEALER OR ADDICT?



European exports of Gazprom

	2007	2008	2009	2010	2011
Export volumes, bcm*	153	160	141	139	155**
Average price, USD/th cm	269	407	296	306	appr. 400
Revenue, billion USD	41	65	42	44	over 60

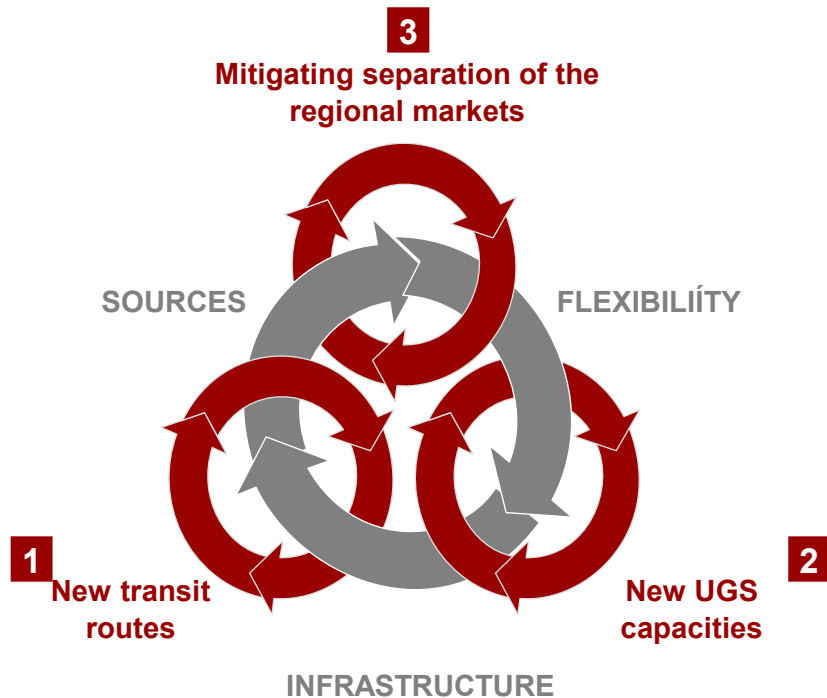
*Without operations of overseas subsidiaries and LNG, only exports crossing Russian border

**Minimum estimate, more optimistic: 158-159 bcm

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MAJOR TOOLS FOR INCREASING SECURITY OF GAS SUPPLY



1 New transit routes

- ▶ Source diversification by channeling new competitively priced sources to the region
- ▶ Establishing the link between LNG receiving terminal (as new source) and domestic network
- ▶ **Diversification strategy requires serious infrastructure investments**

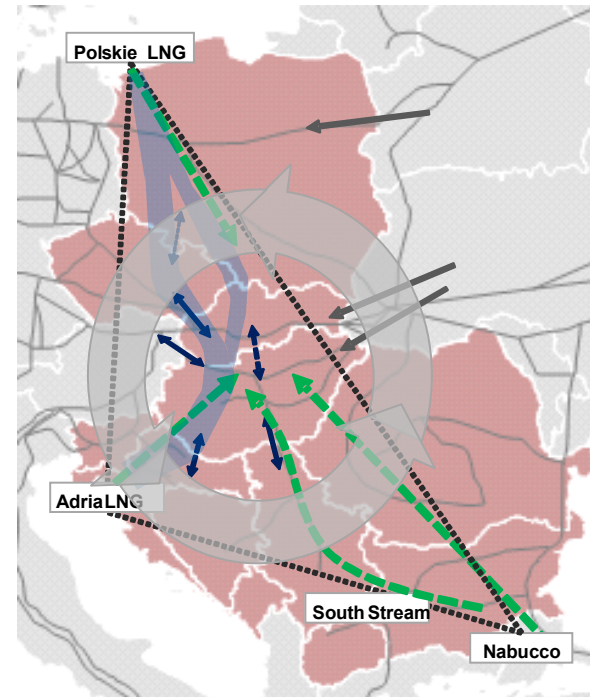
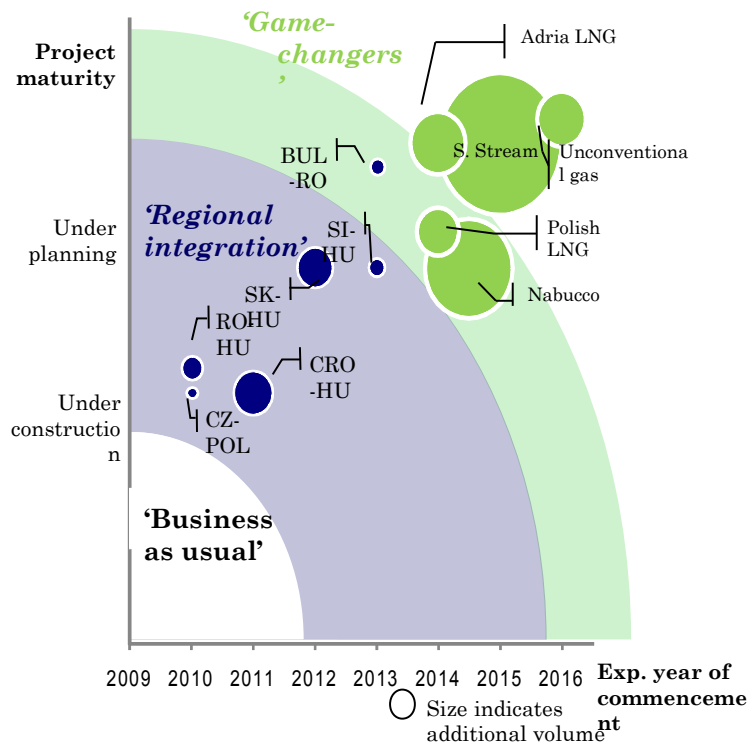
2 Establishing new underground storage (UGS) capacities

- ▶ New UGS developments linked to the existing transmission system
- ▶ Supporting the seasonal flexibility of the large pipeline development projects
- ▶ **Increasing demand for flexibility can be supplied on the basis of large infrastructure developments**

3 Mitigating separation of the regional markets

- ▶ Connecting the Hungarian infrastructure with more flexible Western-European systems
- ▶ **Separated regional markets has to be linked physically to increase the market liquidity**

PROJECTS UNDER DEVELOPMENT TO REACH THE DESIRED INTEGRATION



Necessary prerequisite for changing status quo

- ▶ Infrastructure
 - ▶ Game-changers (Diversification triangle)
 - ▶ Interconnectors to integrate markets
- ▶ Other measures
 - ▶ Policy co-operation (V4+)
 - ▶ Regulation harmonization

With game-changers

- ▶ Flexible networks
- ▶ Higher security of supply
- ▶ Diversified sources
- ▶ Efficient markets with lower prices

Even in the best case scenario, there will be no additional capacity available before 2014/15. Due to the financial crisis big infrastructure projects can be even further delayed by a few years.

SUCCESSFUL AGENDA-SETTING ON EU LEVEL: THE NORTH-SOUTH WORKING GROUP

A Visegrad success story, at last!

- ▶ The EU is not an automatic guarantee of gas supply security – revelation for V4 in 2006
- ▶ Gas supply security measures taken on national levels (eg. Hungary – strategic UGS)
- ▶ EU regulation only in 2010: mandatory solidarity between member states in case of gas supply crises
- ▶ **February 2010:** Hungarian Visegrad presidency initiated V4+ energy summit: interconnections the main mid-term goal
- ▶ **November 2010:** Regional bi-directional interconnections included in EU planned infrastructure projects for 2020&beyond
- ▶ **February 2011:** Barroso proposes “high level working groups” in electricity, gas and oil (inc. North-South working group, V4+RO, BG, HR)
- ▶ **October 2011:** interconnectors to be included in EU infrastructure priorities (“projects of European interest”)



INTERCONNECTIONS WILL SOLVE ONLY PART OF THE SECURITY OF SUPPLY PROBLEMS



Energy policy for the future?

- ▶ Main lessons of the gas supply crises for V4 countries: energy policy decisions have **very long term consequences** for both the economies and politics of the countries involved
- ▶ European energy policy has been shaped so far by the interests of EU15: **new member states can and should participate actively in agenda setting** – not just transpose, transform!
- ▶ Diversification is only one side of the solution to security of supply: how do we structure **demand** (our **energy mix**) in the future is just as much important

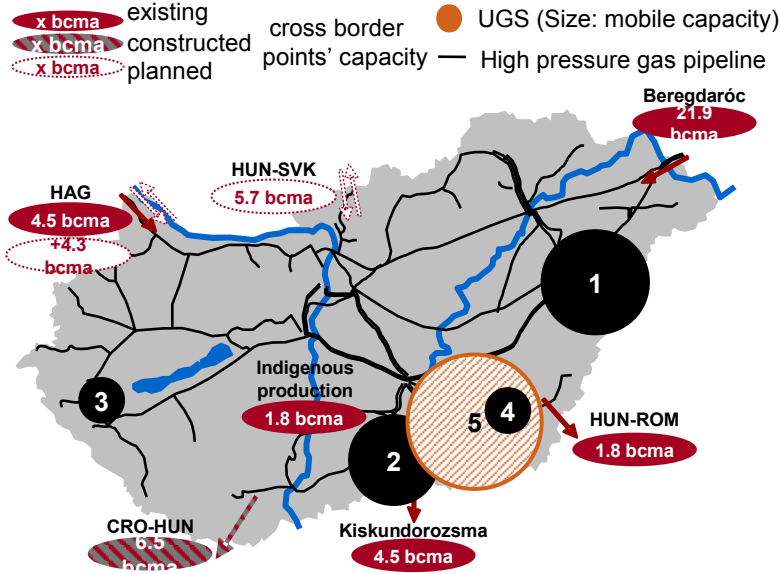
**THANK YOU FOR YOUR
ATTENTION!**

**QUESTIONS, COMMENTS, BUSINESS PROPOSALS:
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CURRENT HUNGARIAN GAS SUPPLY INFRASTRUCTURE IS ABLE TO SATISFY THE NEEDS IN THE NEXT DECADES, BUT CURRENTLY ONLY FROM RUSSIAN SOURCES

Hungarian gas demand and supply capacity

Hungarian gas supply infrastructure¹⁾

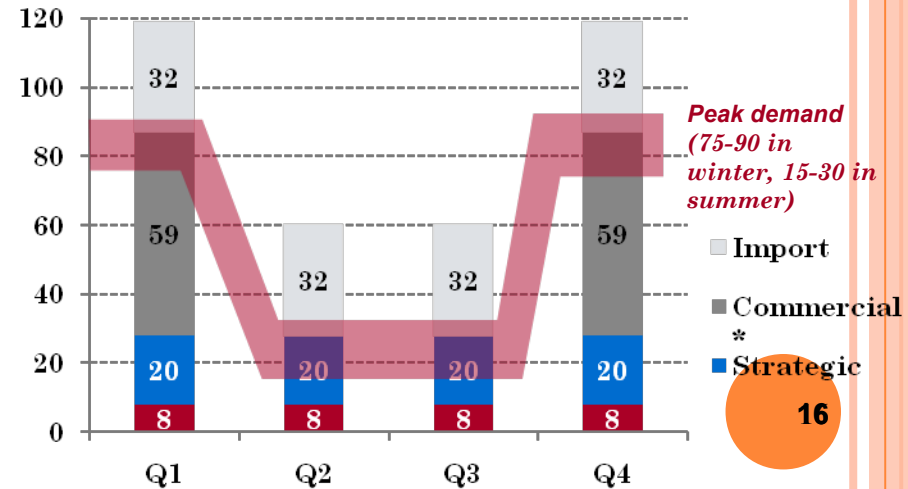


Hungarian UGS facilities and security of supply

UGS facility	Capacity	
	Mobile [mcm]	Peak [mcm/d]
1 Hajdúszoboszló	1 440	20.2
2 Zsana	2 170	28.0
3 Puszttaederics	340	3.1
4 Kardoskút	280	3.2
5 Szőreg-1	1 200 + 700	20 + 5

e-on
MOL

Peak UGS withdrawal capacities against peak demand (seasonal)



Transmission Network

Natural monopoly – in Hungary it is operated by FGSZ Plc (100% MOL subsidiary)

- ▶ 5564 km high pressure transmission network
- ▶ Pressure: 43-75 bar
- ▶ Annual volumes transmitted (in 2010): appr. 15 bcm (including transit to Serbia and Bosnia as well as gas injection to storage)

1) Source: MMBF, FGSZ, E.On

* During summer, there is no gas in the commercial storages (injection is going on), while the gas in strategic remains in place