

## Central European Energy Conference

### EU Energy Policy and Energy Security of Central Europe VII

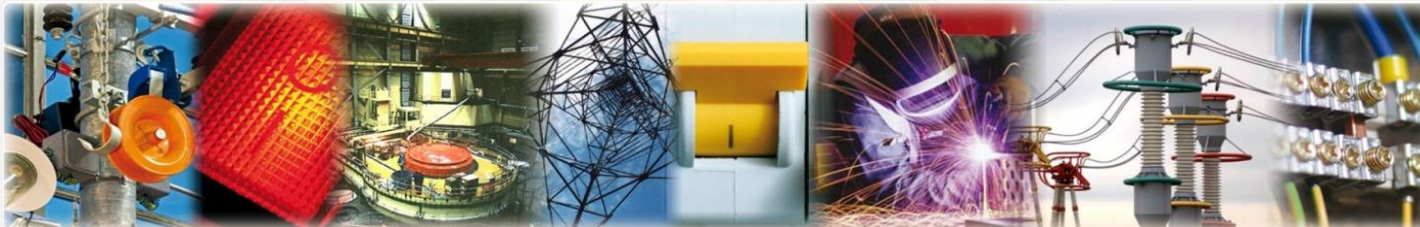
#### *The North-South Energy Corridor and Emerging Regional Energy Market*

24-26 November 2013

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MVM Hungarian Electricity Ltd.



# MVM Group is Hungary's largest power producer and new player of the gas market



## MAIN CHARACTERISTICS OF MVM GROUP

- No. 1 electricity producer
- No. 1 electricity and gas wholesaler and trader
- 100% state-owned company
- 30 subsidiaries, 2 joint ventures and shareholding in several companies in the energy industry

## MAIN OPERATIONAL AREAS THROUGH ITS SUBSIDIARIES AND OTHER JOINT COMPANIES

### POWER GENERATION

- Total installed capacity of 2903
- Nuclear, fossil (coal, CCGT) renewable

### POWER & GAS INFRASTRUCTURE

- Transmission System Operator (MAVIR)
- 4.2 bcm storage facilities
- Natural gas JV infrastructure projects
  - HU – SK Gas Interconnector (4bcm/year from 1 Jan 2015)
  - South Stream (FEED contracted)

### TRADE

- Wholesale and retail trading of electricity and natural gas (MVM Partner, Hungarian Gas Trade)
- HUPX power exchange, CEEGEX gas exchange

### TELECOMMUNICATION

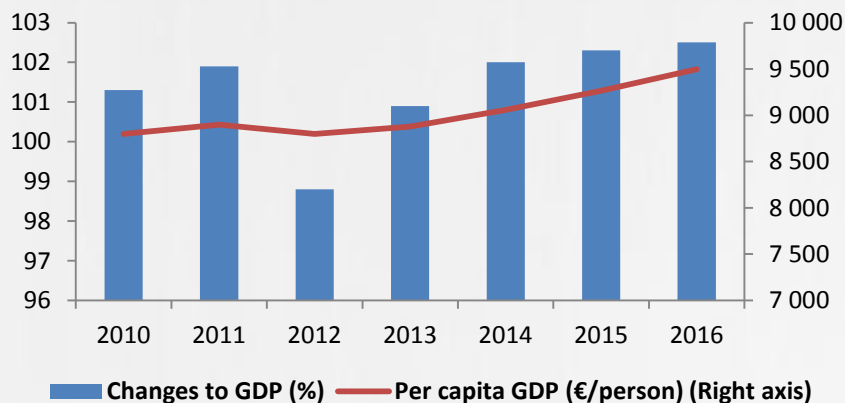
- Telecommunication services (MVM Net)

### OTHER SERVICES

- Technical and construction activities (MVM OVIT, MVM ERBE)
- IT and accounting services

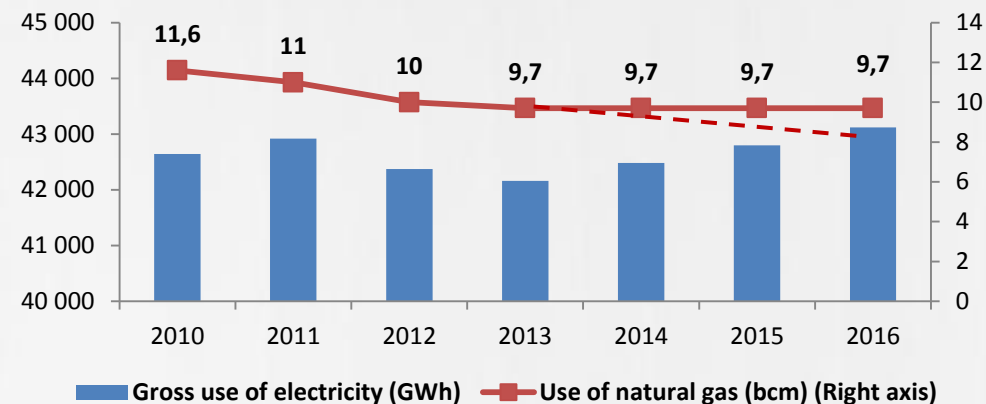
## In 2013 positive economic indicators emerged in Hungary

**GDP GROWTH AND GDP PER CAPITA  
2010 - 2016**



Source: MVM Group

**ELECTRICITY AND NATURAL GAS CONSUMPTION IN HUNGARY  
2010 - 2016**



Source: MVM Group and KPMG forecast for 2014-2016

**Despite slightly increasing macroeconomic trends in short-/mid-term natural gas consumption is expected to decrease**

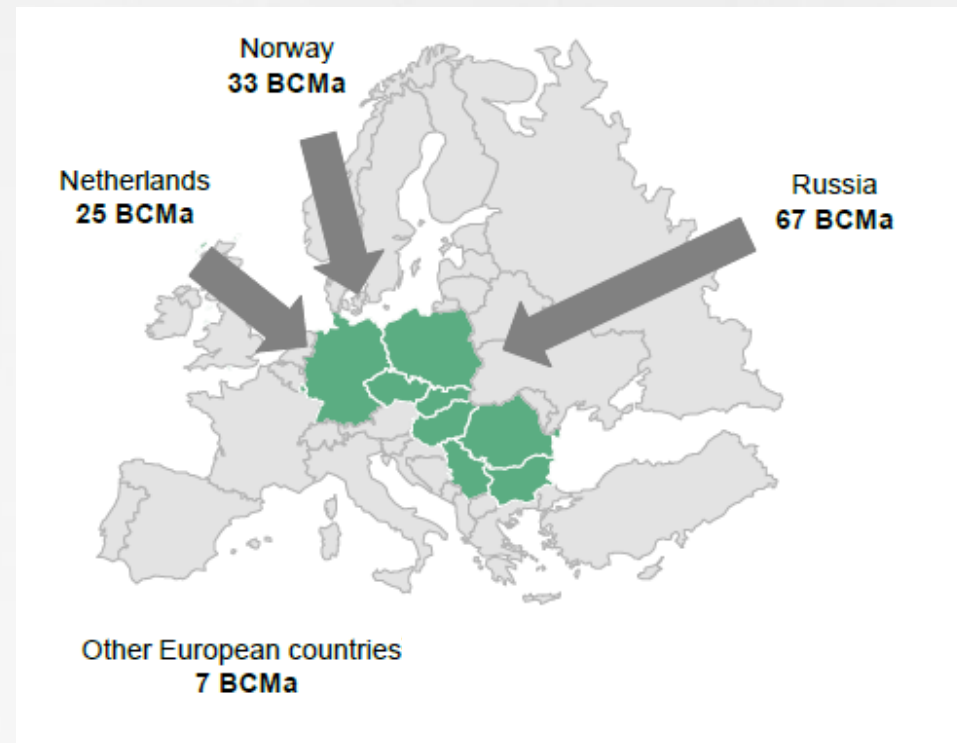
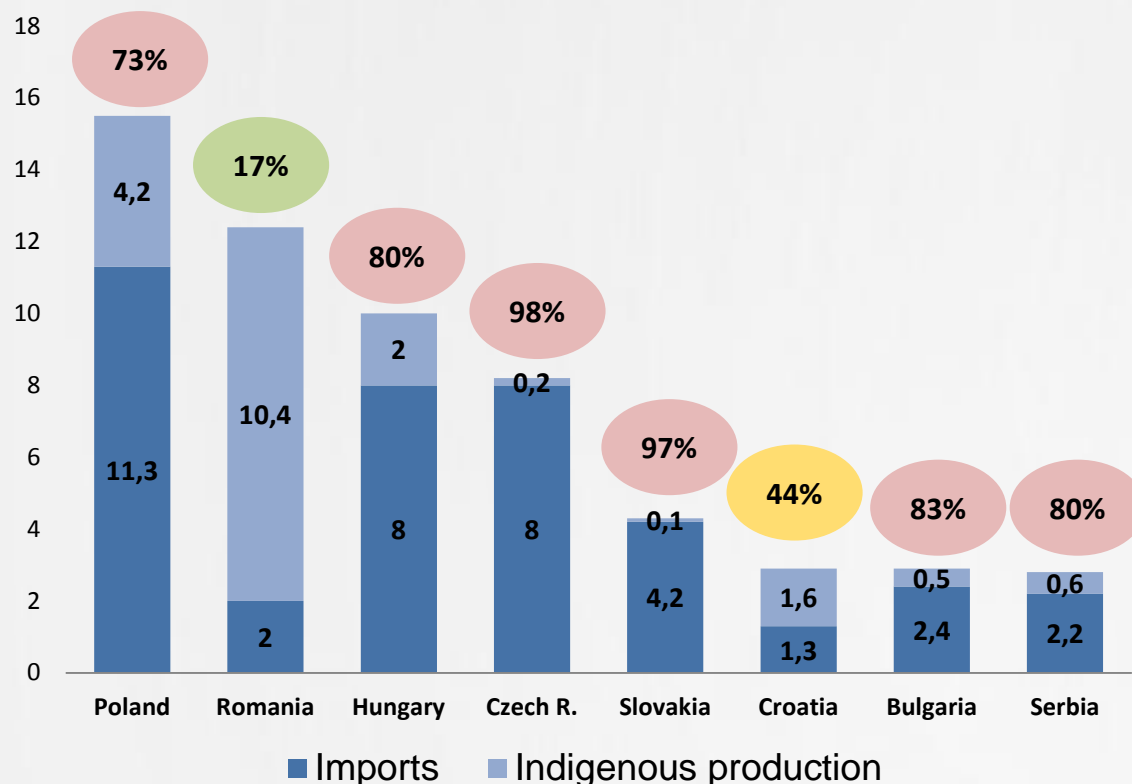
# Low and decreasing indigenous production in most CEE countries implies heavy dependency on natural gas imports



Russia (Gazprom) is the major CEE imported gas supplier

Without Germany, over 80% of CEE/SEE gas supplies come from Russia under Long Term Contracts

Gas consumption in 2012 (bcm)



Share of net imports in total country gas consumption (imports dependency):

Hungary is heavily dependent on Russian gas supplies

- High
- Medium
- Low

Source: BCG analysis

Source: Cedigaz database

# Hungarian transmission network entry and exit points – capacity and connection improvements enhance security of supply



## Hungarian-Slovak connection

Annual capacity in: 4,0 out: 1,6 bn m<sup>3</sup>

**Entry point: HAG**  
(Mosonmagyaróvár)

Annual capacity: 4,4 bn m<sup>3</sup>

**HAG development**

**Entry point: Brotherhood**  
(Beregdaróc)

Annual capacity: 20,5 bn m<sup>3</sup>

**Exit point: Drávaszerdahely**

Annual capacity: 1,7 bn m<sup>3</sup>

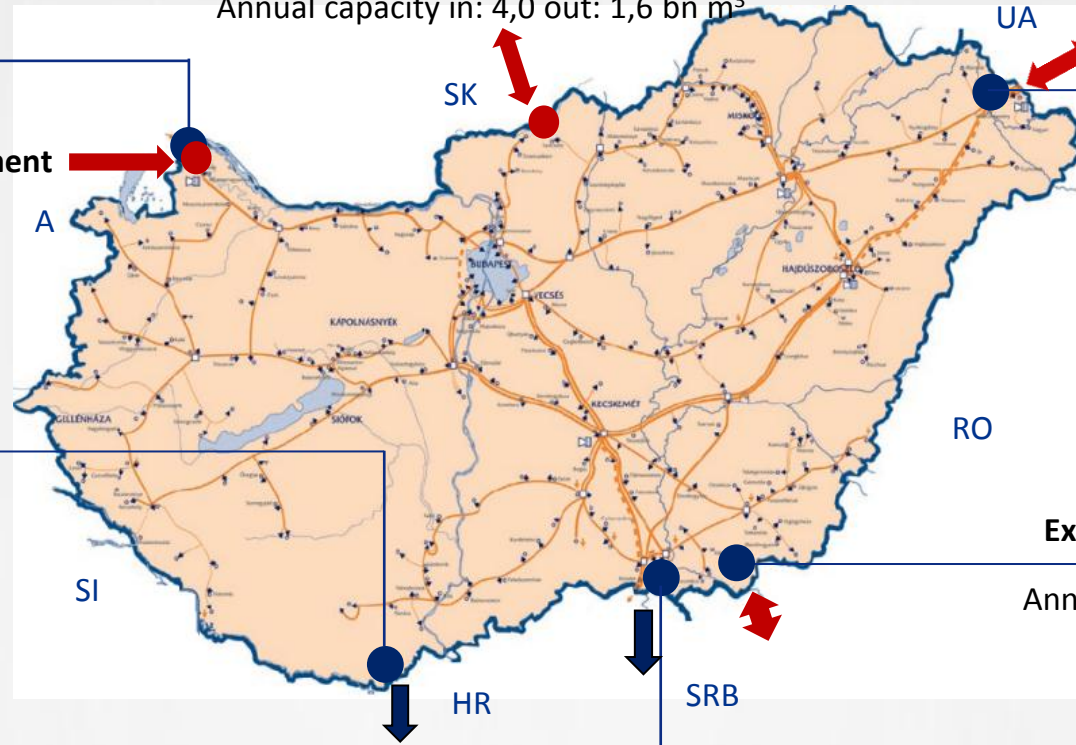
**Exit point: Csanádpalota**

Annual capacity: 1,7 bn m<sup>3</sup>

**Exit point: Kiskundorozsma**

Annual capacity: 4,9 bn m<sup>3</sup>

- Cross-border point in operation
- Development



**Increased import from CEGH (Austrian exchange) currently results in bottleneck at the Western entry point**

# Hungarian storage market – Hungary is capable to store more than half of the annual domestic consumption



## MMBF – Strategic Stock

Mobil gas capacity\*: 1 900 mill m<sup>3</sup>  
Daily withdrawal capacity: 25 mill m<sup>3</sup>/day  
Daily injection capacity: 12,7 mill m<sup>3</sup>/day

## MFGT – Pusztaederics

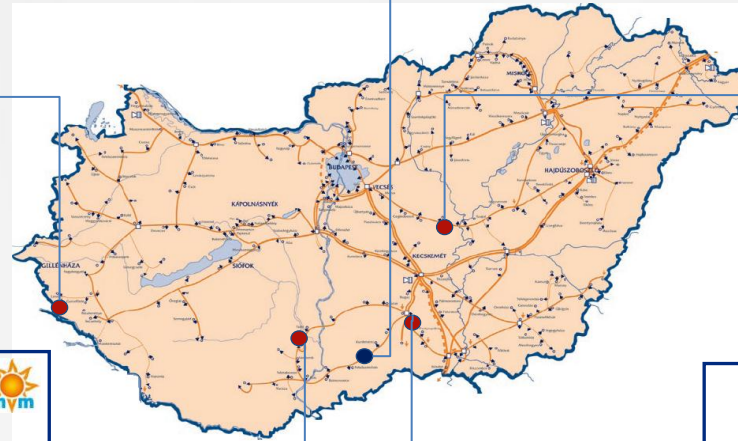


Mobil gas capacity: 340 mill m<sup>3</sup>  
Daily withdrawal capacity: 3,1 mill m<sup>3</sup>/day  
Daily injection capacity: 2,5 mill m<sup>3</sup>/day

## MFGT – Hajdúszoboszló



Mobil gas capacity: 1 440 mill m<sup>3</sup>  
Daily withdrawal capacity: 20,8 mill m<sup>3</sup>/day  
Daily injection capacity: 10,3 mill m<sup>3</sup>/day



## MFGT – Zsana



Mobil gas capacity: 2 170 mill m<sup>3</sup>  
Daily withdrawal capacity: 28 mill m<sup>3</sup>/day  
Daily injection capacity: 17,2 mill m<sup>3</sup>/day

## MFGT – Kardoskút



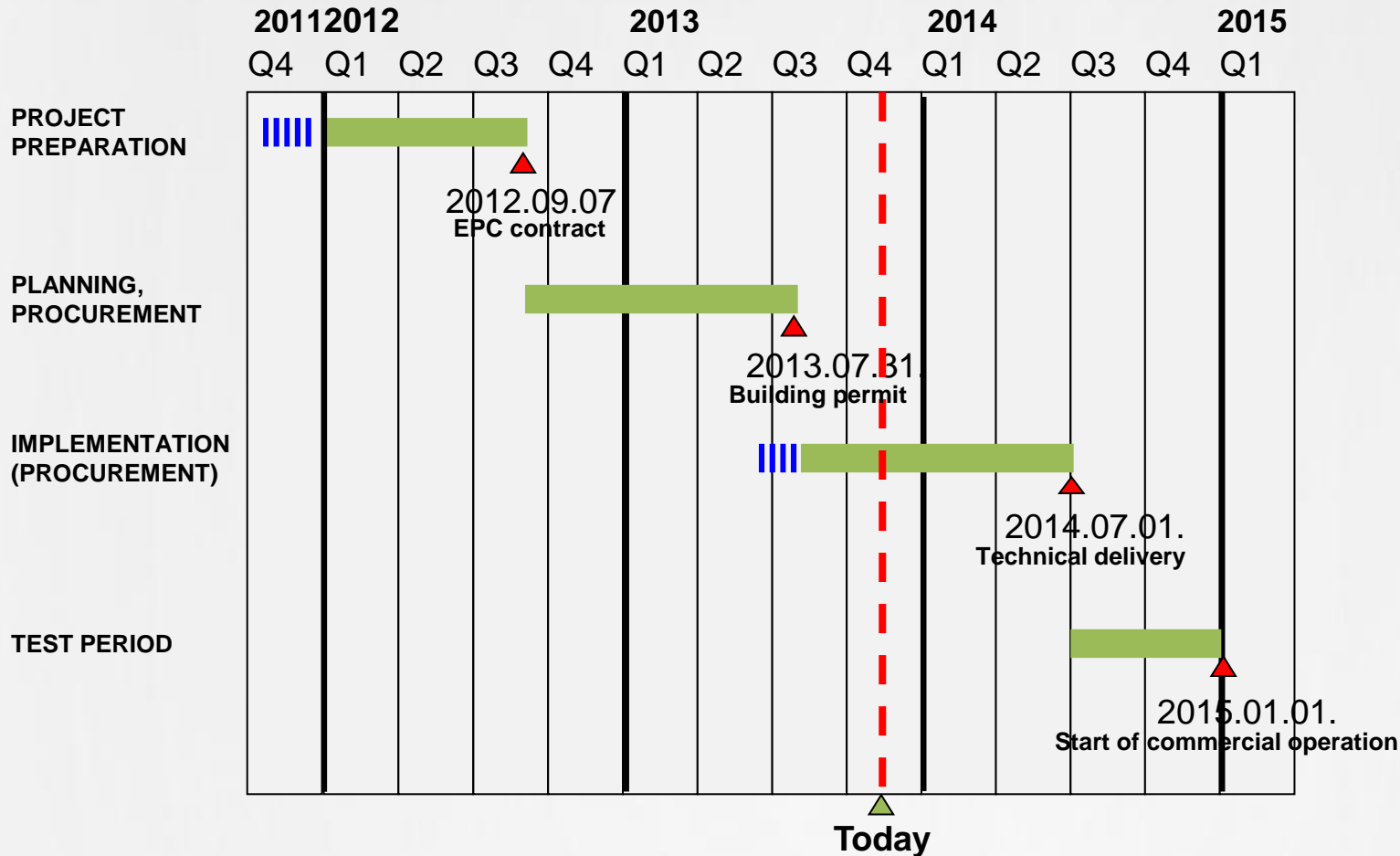
Mobil gas capacity: 280 mill m<sup>3</sup>  
Daily withdrawal capacity: 3,2 mill m<sup>3</sup>/day  
Daily injection capacity: 2,2 mill m<sup>3</sup>/day

\* 1 200 million m<sup>3</sup> strategic storage, 700 million m<sup>3</sup> market storage

- Security of supply is backed by the 6.1 bcm Hungarian storage capacity and interconnections with neighboring countries
- Hungarian gas system is able to guarantee domestic supply in case of any of the sources becomes unavailable
- Main objective is to secure a competitive supply portfolio including Russia as key partner



# Hungarian-Slovak interconnector - status



## Main parameters:

- **Pipeline length:**
  - HU section: 92 km
  - SK section: 19 km
- **Pipeline capacity:**
  - SK->HU ~500e m<sup>3</sup>/h
  - HU->SK ~200e m<sup>3</sup>/h
- **Start of commercial operation**
  - 1<sup>st</sup> January 2015

**By 2015 Hungary fulfills infrastructure development of the Hungarian section of the North-South Gas Corridor**

Source: Hungarian Gas Transit Ltd.

- Impact of unbundling on infrastructure project financing and management
- Return on investment on regional level vs. project level
- Diversification of routes, and what about sources
- Market coupling may improve negotiation power in the region
- National regulatory environment (e.g. tariffs) supporting crossborder trading vs. protecting domestic markets/players

**The way towards a unified CEE market requires synchronised progress in**

- **network code harmonization**
- **infrastructure development**
- **source diversification.**