Gas supply security in Hungary

15. 02. 2024

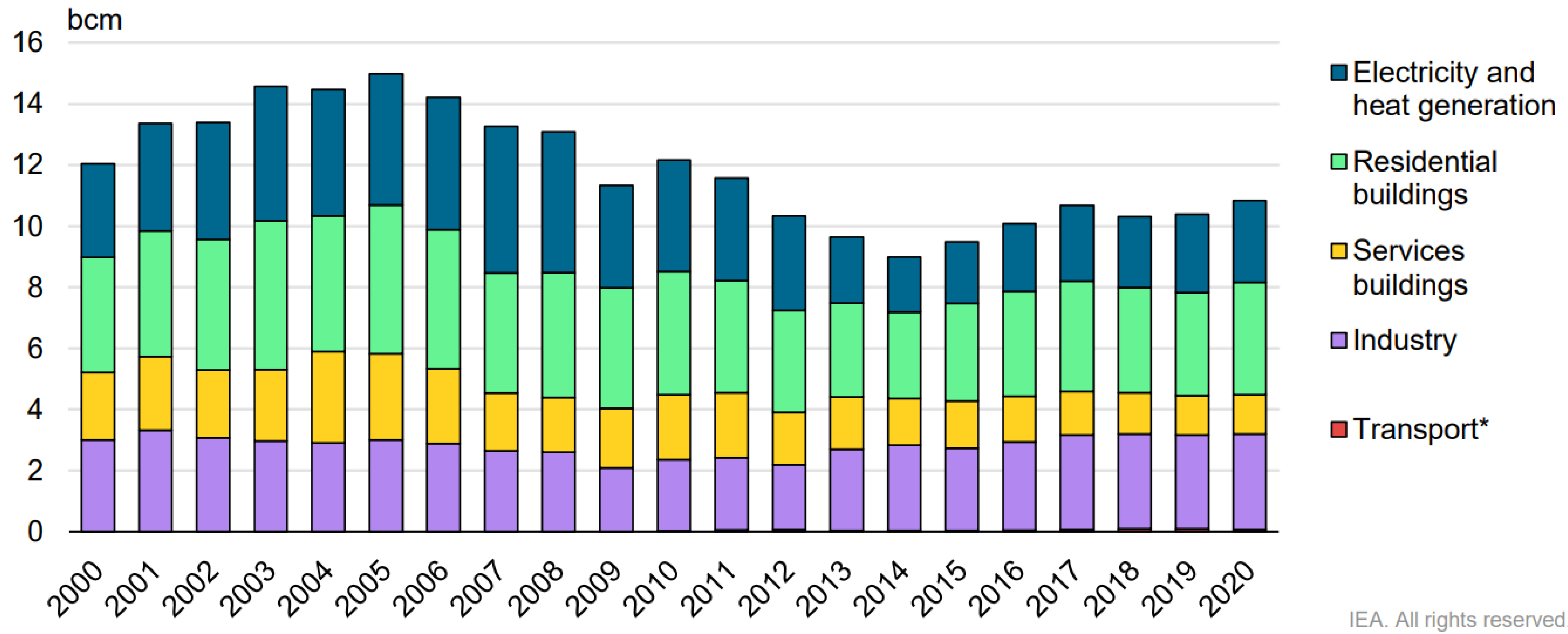
Hungarian Energy and Public Utility Regulatory Authority

Clean energy, sustainable environment

Natural gas consumption has sharply declined

MEKH

Natural gas comsumption by sector, 2000-2020



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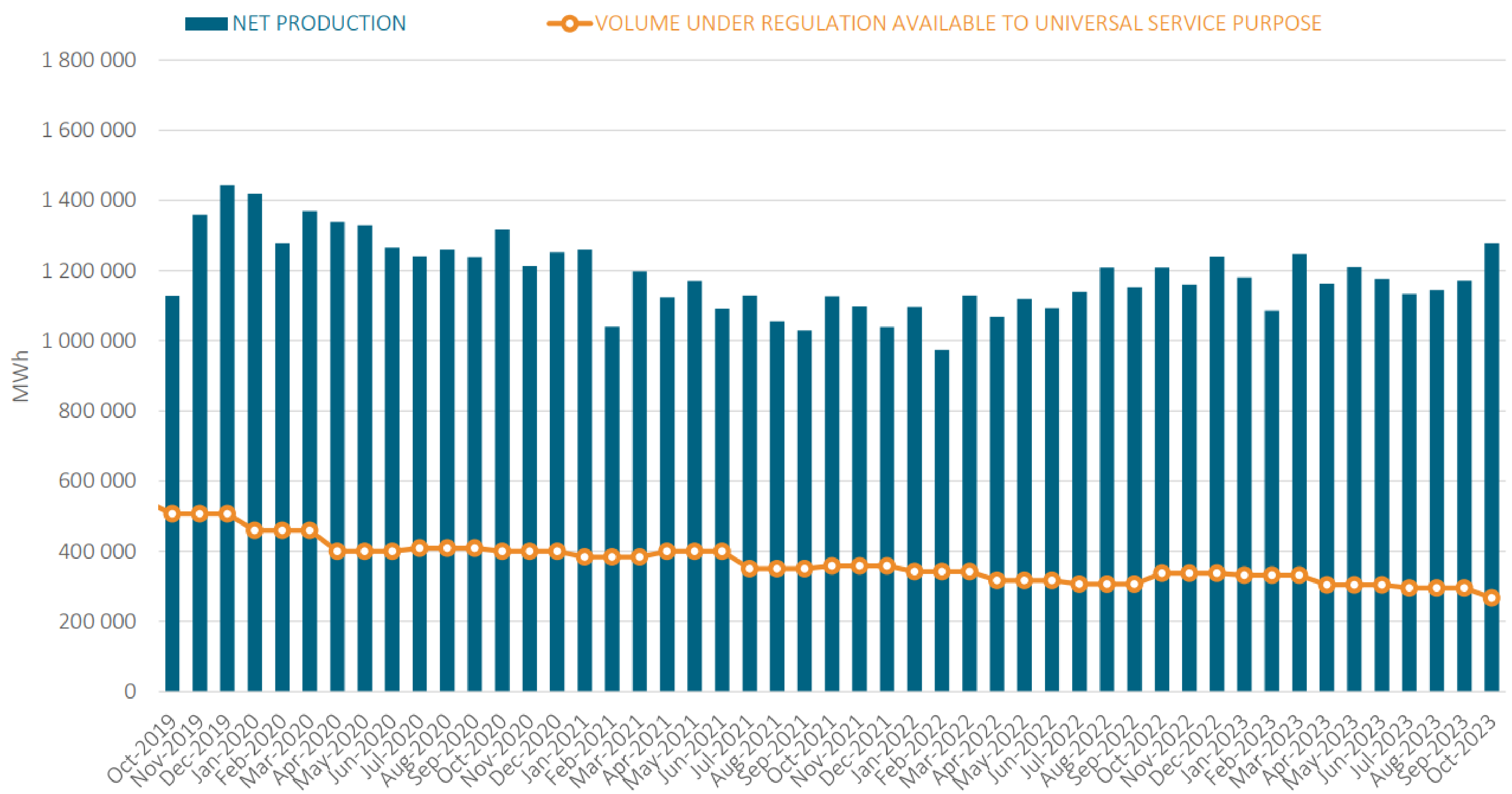
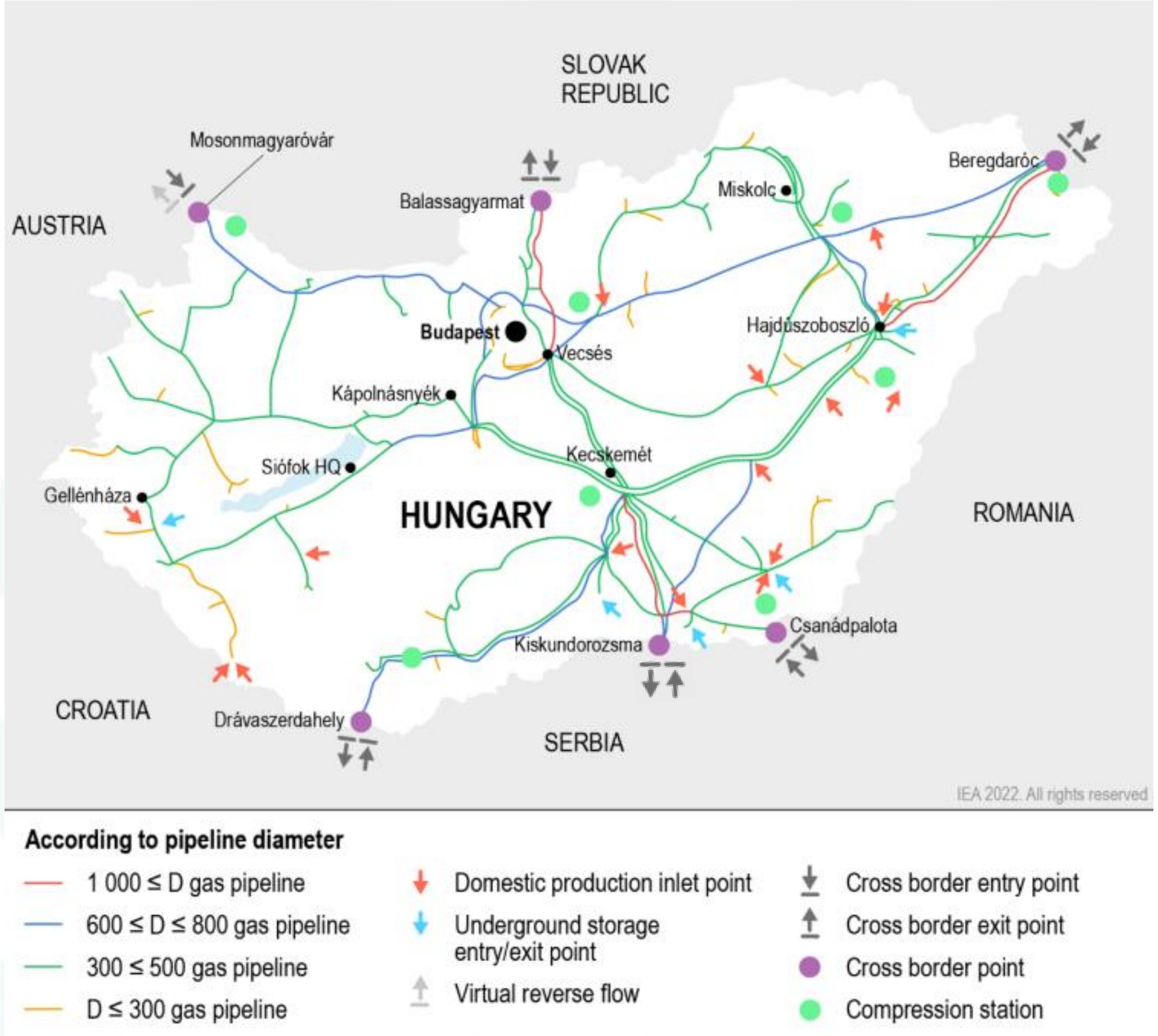
Source: IEA, Hungary 2022, Energy Policy Review

Domestic production is declining; lately new efforts to increase production



Source: MEKH gas markets monthly report, October 2023, Figure 13

Well developed domestic gas infrastructure



- 5.889 km of high-pressure pipeline
- 400 gas delivery points
- Gas interconnections with all neighbours except Slovenia

- Distribution system: 84.917 km
- 11 regional DSOs

Source: IEA, Hungary 2022, Energy Policy Review

Infrastructure developments resulted in high level of connectivity: UA, SK, AT, HR, RS, RO

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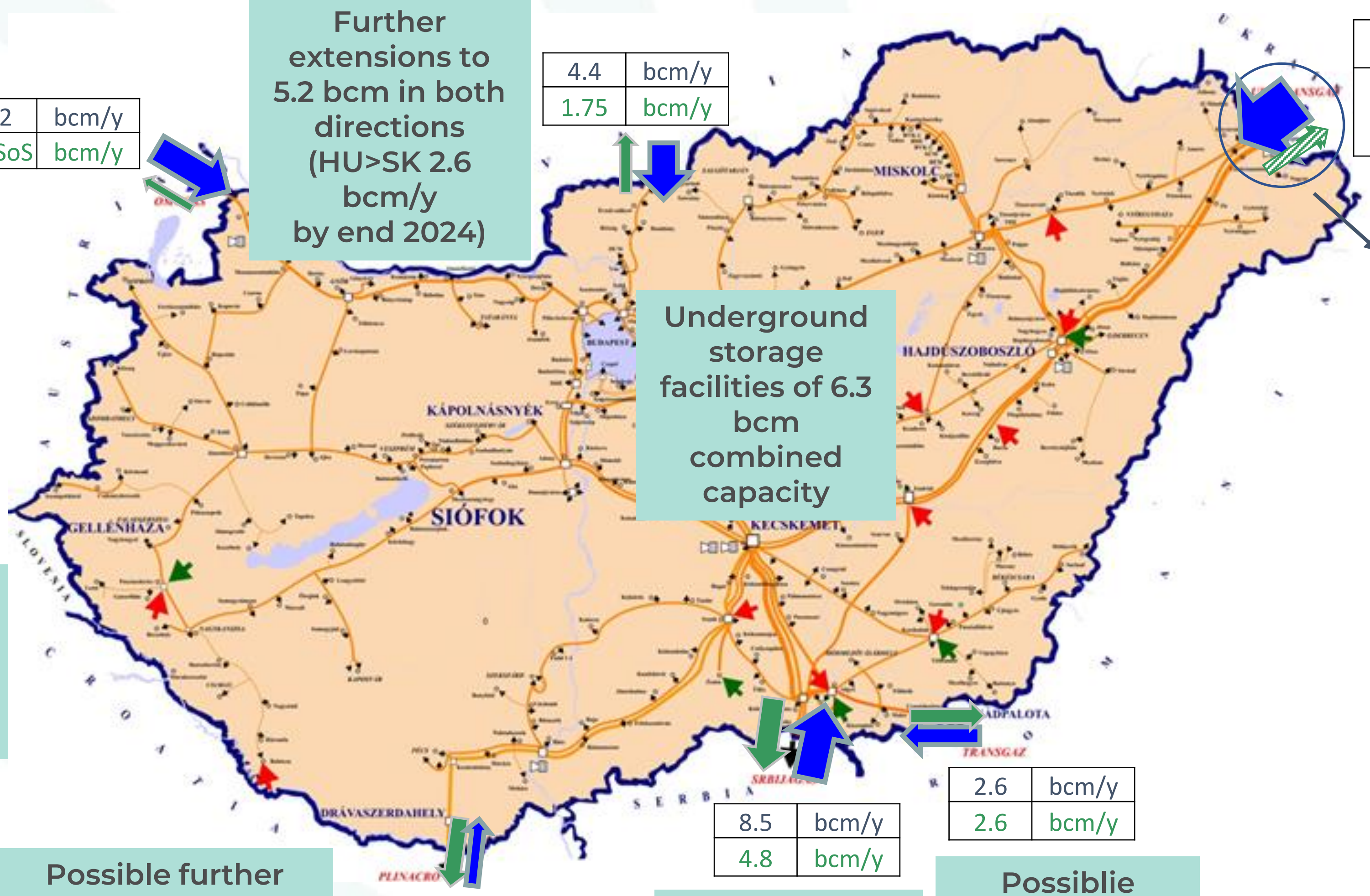

5.2	bcm/y
0 / SoS	bcm/y

HU-AT reverse flow is available only on interruptible basis

Further extensions to 5.2 bcm in both directions (HU>SK 2.6 bcm/y by end 2024)

4.4	bcm/y
1.75	bcm/y

17.5	bcm/y
2.8 firm test (7) (interruptible)	bcm/y

Establishment of firm capacities to UA

Bereg VIP (since 1 May 2020)

Underground storage facilities of 6.3 bcm combined capacity

Main supply direction changed in 2021: Russian gas is delivered via Serbia (Kiskundorozsma) and partly Austria (Baumgarten) instead of the Ukrainian entry point (Beregdaróc)

Missing bidirectional IP with SI *expected 0.44 bcm

Possible further extensions to receive flows from HR for regional delivery

1.75	bcm/y
2.6	bcm/y

8.5	bcm/y
4.8	bcm/y

New 8.5 bcm interconnector since 1 Oct 2021

2.6	bcm/y
2.6	bcm/y

Possiblie further extension to 4.4 bcm in both directions

Source: MEKH, EU Affairs Unit

Current gas supply structure

- 15 year long gas supply contract with Gazprom, signed in 2021 by MVM CEEnergy: **4,5 bcm/year** - to be supplied through the Serbian interconnection, Kiskundorozsma via TurkStream (3,5 bcm) and through Austria, Baumgarten (1 bcm)
- 7 year long contract signed in 2020 by MVM CEEnergy to reserve **1 bcm/year** capacity in Krk LNG terminal (technical capacity 2,9 bcm)
- **0,1 bcm/year** gas from Azerbaijan, contracted by MVM CEEnergy, which could be increased based on long term contract to 1 or 2 bcm/year

Further efforts to increase supply security

Gas source diversification

- Black Sea resources - HU-RU interconnection capacity? RO internal gas network?
- Azeri sources – bottlenecks in the Southeast gas infrastructure; Solidarity Ring could be a solution
- Other LNG sources – geographical distance manifests in transportation cost; significant cost disadvantage

Develop a national biogas/biomethane strategy

- So far only limited focus on this energy source

Potential role of hydrogen

- Limitations due to affordability

Increasing diversification: Solidarity Ring (STRING) project

Objective:

- Transport Caspian/Azeri gas from TR-BG border towards RO, HU and SK (and beyond)

Description:

- The project builds on already existing infrastructure but certain pipeline capacities need to be increased
- April 2023, Sofia: MoU signed with SOCAR (Azerbaijan)

Participating gas TSOs:

- Bulgartransgaz
- Transgaz
- Eustream
- FGSZ

SOLIDARITY RING
SUMMARY

Capacity (bcm)	Existing	Incremental	TOTAL
BG to RO	5.0	4.5	**9.5**
RO to HU	2.3	2.3	**4.7**
HU to SK	1.7 – 2.4	3.3	**4.9**

Incremental Capacity Investments (mEUR)	
BG	201
RO	150
HU – borders	220
HU – internal	159
SK	-
TOTAL	**730**

Commissioning of incremental capacity can be expected at the end of 2026.

Source: FGSZ

Increasing diversification: Vertical Corridor

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Objectives:

- Transport gas from South to North and vice versa
- Debottlenecking the route (Bulgaria, Romania)
- Supply Black Sea gas towards North
- More active use of Ukrainian storages

Description:

- January 2024: MoU signed in Athens

Participating gas operators:

- DESFA
- Gastrade S.A. (Greece)
- Bulgartransgaz
- Gas Interconnector Greece-Bulgaria (ICGB) AD (Bulgaria)
- Transgaz (Romania)
- FGSZ
- Eustream (Slovakia)
- Gas TSO of Ukraine
- Vestmoldtransgaz (Moldova)

Source: DESFA

Thank you for your attention!

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Clean energy, sustainable environment