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# Unlocking commercial Attractiveness of the Trans-Balkan Pipeline System

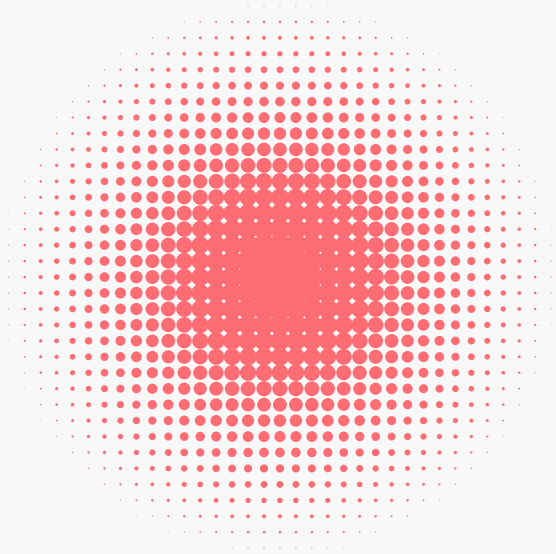
Energy Community Gas Forum 2025

Georg Fischer

25 September 2025

# Agenda

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1. Study Presentation
2. Regional Outlook

# Retrospective: Study Motivation



## Motivation

- Trans Balkan pipeline system (TBP) has historically been a large-volume gas transport route  
→ infrastructure is there
- Stop of Russian transit flows through Ukraine on 1 January 2025  
→ new realities for European gas sourcing
- Make TBP infrastructure available via market-based products / tariffs in line with the EU/EnC regulatory framework  
→ unlock potential



## Benefits of unlocking the potential

- Increase the security of supply for EnCS Contracting Parties, as well as for the EU Member States, in particular by allowing imports for both Ukraine and Moldova from available sources in western and central Europe, as well as from Greece, Bulgaria and Romania
- Support gas market integration from the Aegean Sea to the Baltic Sea
- Increase the economic viability of involved gas transmission system operators

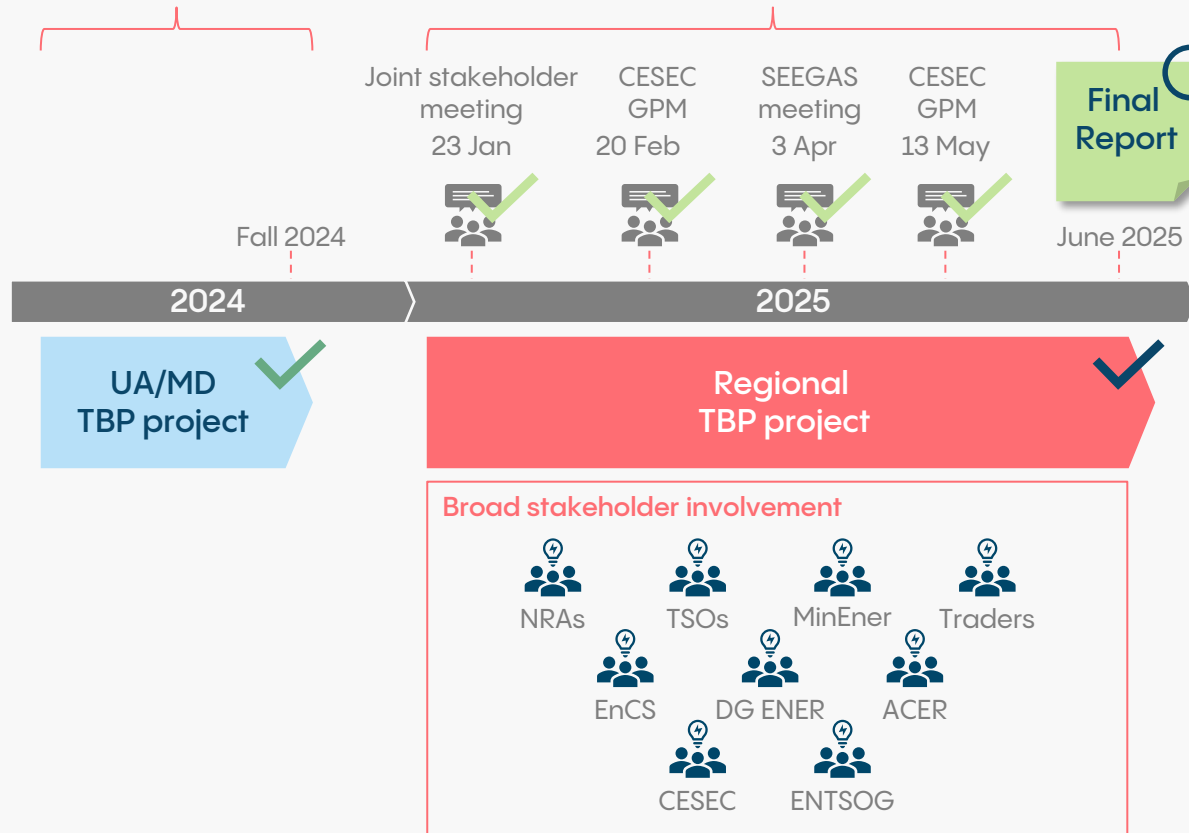
# Retrospective: Study Timeline



Study commissioned by



Study commissioned by



## Part I: Analytical Results

- 1) Use Cases identified by Stakeholders
- 2) Analysis Results for Barriers regarding Capacity Products and Transport Costs
- 3) Overview of Solutions raised by Stakeholders

## Part II: Recommendations

- 4) Introduction to Ad-hoc Solutions
- 5) Benchmarking (Methodology and Tariff Proposal)
- 6) Potential Approaches with higher Complexity

## Annex

- Abbreviations (incl. IP abbreviations used)
- TTC Methodology Details (incl. tariff details per TSO)
- Regional Overview on Bookings and Flows

Report available on EnCS website:  
[www.energy-community.org](http://www.energy-community.org)

# Study Achievements



## Collected and discussed the views of key regional stakeholders:

- Wide range of use cases for the TBP identified
- Issues clarified
- Solution approaches aligned

## Calculated a workable approach for attractive tariffs:

- Developed and described the benchmarking methodology
- Defined the tariff proposal
- Quantified the potential economic impact of the tariff proposal

## Obtained a detailed analytical picture („hard facts“ of TBP attractiveness):

- Capacity products & allocation rules
- Firm capacity available
- Booking levels & physical flows
- Total transport costs

## Formulated clear recommendations to increase commercial attractiveness:

- Ad-hoc solutions via benchmarking tariffs and conditional firm products
- Long-term approaches to address regional capacity booking & tariff complexity

# Example Use Case: Greek LNG to UA

Variant: LNG Revithoussa via Sidirokastro



Values as of 1.1.2025  
Annual capacity tariff  
€/MWh/d/y  
Segment transport costs\*  
€/MWh

UA	↑ 365	3,82
MD	↑ 673	
	↑ 582	
	↑ 89	1,39
	↑ 4	
RO	↑ 304	2,41
	↑ 361	
	↑ 141	1,36
BG		
	↑ 130	1,04
GR	↑ 216	
	↑ 127	

Current gas price (TTF):  
~32,5 €/MWh

Transports commercially not viable!

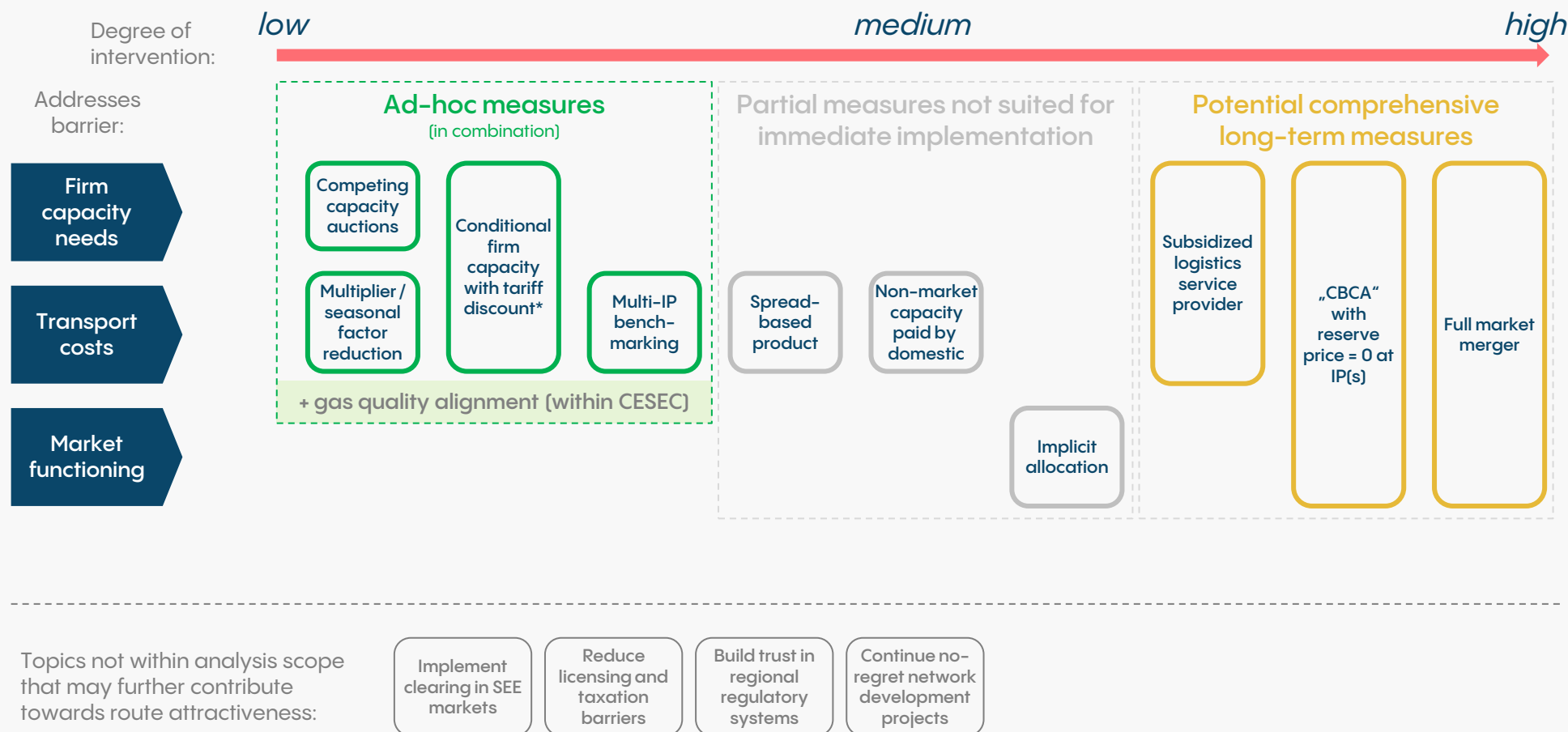


Monthly Products	Daily Products	
10,55	14,63	Jul25
10,90	15,35	Aug25
10,68	14,76	Sep25
10,03	15,63	Max**

LNG terminal usage not included

\* Total of E/X capacity tariffs (assuming 90% load) and E/X commodity tariffs on the segment  
\*\* Maximum seasonal factor (January product)

# Approaches discussed with regional Stakeholders suggest certain Measures can promptly improve Situation



\* Note: The „super-bundled“ route product proposed by Vertical Corridor TSOs end of May 2025 would be an extreme manifestation of this approach, however it raises serious concerns of compliance with EU/EnC regulatory framework and thus is not proposed in this study.



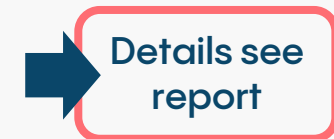
# Introduction to Ad-hoc Solutions



	Solution element	Regulatory context
Tariff proposal	<b>Competing capacity auctions</b> <ul style="list-style-type: none"> <li>This addresses current firm exit capacity in Romanian TBP section being exclusively assigned to exit Negru Voda / Kardam, since physical constraints do not allow simultaneous exits at full capacity at both Negru Voda and Isaccea.</li> <li>Network users effectively decide in each auction how much of the total (constraint-based) firm capacity is made available at each point.</li> </ul>	<i>CAM NC Art. 8 (2.)</i> allows to allocate competing capacity via non-independent auctions
	<b>Time factor reduction at selected IPs</b> <ul style="list-style-type: none"> <li>For selected IPs along the TBP route seasonal factors would be removed and multipliers would be reduced to increase short-term route attractiveness.</li> </ul>	<i>TAR NC Art. 12 (1.)</i> allows different levels of multipliers and seasonal factors at IPs
	<b>FCR (firm capacity with combination restrictions)</b> <ul style="list-style-type: none"> <li><u>Firm</u> conditional capacity product that requires a corresponding nomination for firm usage. Without corresponding usage, the product can be interrupted by the TSO (e.g. in case of lack of internal network transport capabilities).</li> <li>Since TSOs are obliged to maximize capacity, such products may only be introduced to reflect actual technical constraints for limiting VTP access.</li> <li>Tariff discount shall reflect reduced usage possibilities (e.g. reduced transmission system distance used compared to transports from/towards VTP).</li> </ul>	<i>TAR NC Art. 4 (2.)</i> allows to take into account conditions for firm capacity products in tariff setting
	<b>Multi-IP benchmarking</b> <ul style="list-style-type: none"> <li>Benchmarking determines the overall competitive level of transport costs.</li> <li>Reference prices of IPs currently unused (or with low usage) along the route to be reduced, IPs with considerable (forecasted) bookings should remain unaffected to maintain (forecasted) revenues.</li> <li>Coordinated approach of NRAs to implement same tariff reduction (%) for each IP concerned (where no/low bookings expected).</li> </ul>	<i>TAR NC Art. 6 (4.)a</i> allows for the NRA to make benchmarking-related adjustments to the application of the RPM

## Advantages:

- ✓ Significant impact on **commercial attractiveness** of the TBP route achievable
- ✓ Can be implemented in **compliance** with EU/EnC regulatory framework
- ✓ Low **implementation** complexity for TSOs and market participants
- ✓ Can be finetuned next year based on **evaluation** of first experience





# Context of the Tariff Proposal for Ukrainian Supply



## Supply Route TTC Methodology:

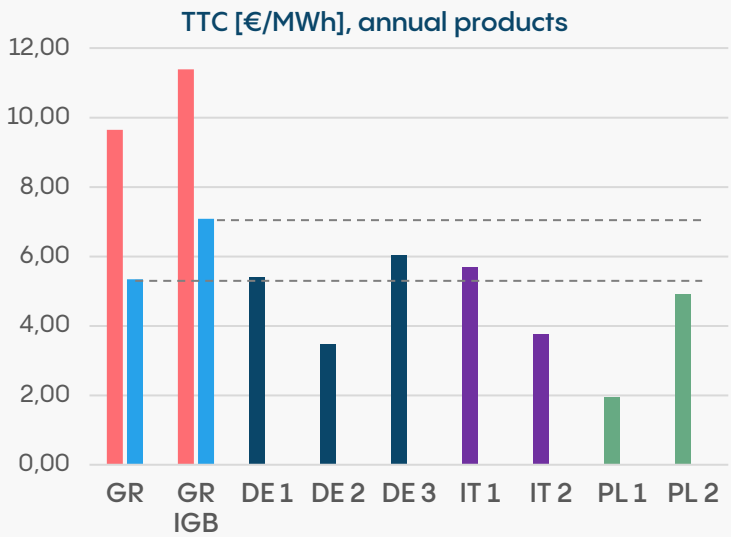
- Purely Ukraine-centric analysis
- All routes based on current tariffs for annual capacity products incl. flow-based charges.
- Transport costs were calculated from gas hub to target market ("entry-paid" at source market).
- Please note that this analysis doesn't indicate quantities available to Ukraine per route.

		TTC [€/MWh]	
Route	Route	Current	Red.*
Core TBP	BG>RO>UA>MD>UA	8,32	4,02
GR	GR>BG>RO>UA>MD>UA	9,65	5,34
GR IGB	GR>IGB>BG>RO>UA>MD>UA	11,38	7,08
DE 1	DE>AT>SK>UA	5,40	
DE 2	DE>AT>HU>UA	3,48	
DE 3	DE>CZ>SK>UA	6,03	
IT 1	IT>AT>SK>UA	5,69	
IT 2	IT>AT>HU>UA	3,77	
PL 1	PL>UA	1,93	
PL 2	PL>SK>UA	4,92	



## Results:

- Current tariff levels show significant gap to transport costs on other routes.
- With the proposed benchmarking reductions TBP will become attractive from transport costs view also compared to alternative supply routes for Ukraine.
- At the same time the reductions lead to a moderate competition without replacing other key source markets or routes.



\* Reduced tariffs subject to benchmarking and discounts for conditional capacity products

# Summary Conclusions



Proposed solutions address the evidently prohibitive transport costs along TBP by reducing tariffs to a competitive level

## Key Benefits:

- ✓ Supports SEE market development and security of supply
- ✓ Creates huge upside potential for each TSO's revenues & no downside
- ✓ Compliant with EU/EnC regulatory framework
- ✓ Straight-forward implementation for stakeholders and market participants

Total transport costs (EUR/MWh, August 2025)

LNG Revithoussa	Current	Reduced	Change
→ Ukraine	10,0	5,7	-43%
→ Slovakia	13,2	7,5	-43%

Additional TSO revenues from capacity tariffs

LNG cargos from LNG Revithoussa to Ukraine	
1x (August 2025)	+6,4 MEUR
12x (monthly products)	+98,7 MEUR

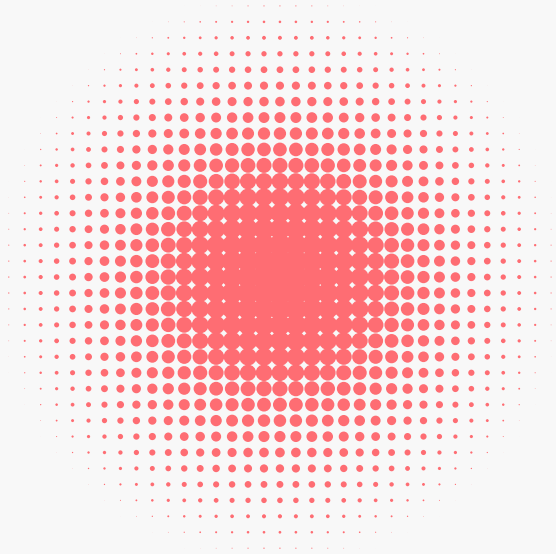
- Gas Regulation (Reg. (EU) 2024/1789\*)
- CAM NC (Reg. (EU) 2017/459)
- TAR NC (Reg. (EU) 2017/460)
- Include conditional product under national network code
- Each NRA adjusts tariffs via RPM amendment to
  - reflect benchmarking
  - define discounts for conditional products
  - update multipliers and seasonal factors

Coordination capability of regional TSOs & NRAs demonstrated under recent „Route 1“ proposal!

<sup>\*</sup> Transposition of Reg. (EC) 2009/715 in the case of Energy Community Acquis

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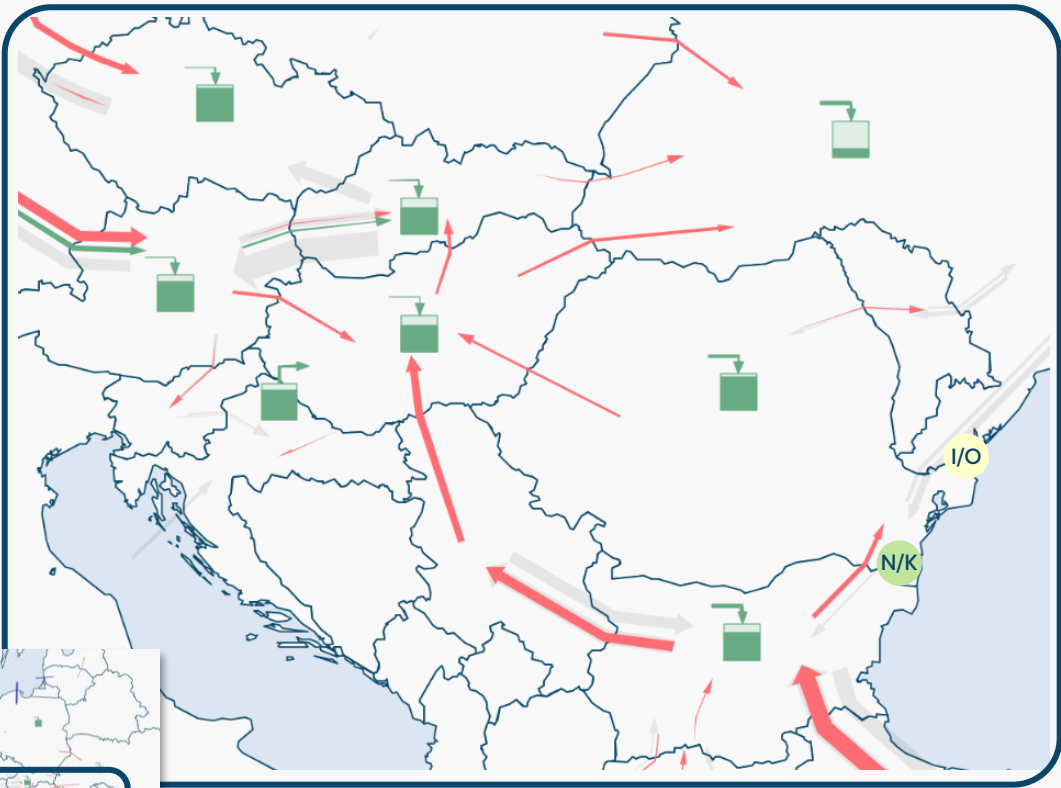


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# Flow Development over Summer 2025: Significant usage of regional IPs, but not via TBP to UA



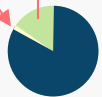
Flow & storage data (example gas day 18.09.2025):



Average summer usage for selected IPs:

Jun/Jul/Aug 2025					
from	to	IP	Ø usage		TC GWh/d
RS	HU	Horgos	100%		246
RO	HU	Csanadpalota	84%		79
HU	SK	Velke Zlievce	72%		102
HU	UA	VIP Bereg	96%		104
PL	UA	GCP	71%		127
SK	UA	Budince	13%		437
BG	RO	Negru Voda	80%		158
RO	UA	Isaccea	2%		121

Only 0,18 TWh were transported via Isaccea / Orlivka



3,43 TWh technical capacity at Negru Voda / Kardam remained unused

# Where do we stand now?



- ➔ **Gas flows:** Significant usage of many regional IPs
  - not so on TBP via Isaccea / Orlivka
- ➔ **Route 1 Product:**
  - Trial ended on Monday Sep 22
  - Low demand (<0,2 of 4,3 TWh realized)
  - Uncertain future (EU NC compliance issues)
- ➔ **Moldova:** Introduced a conditional product
  - Pure transit product, least-quality interruptible
  - Combined transit tariff: 1,37 €/MWh (~50% discount)
- ➔ **Many capacity increases planned:**
  - DESFA: Komotini & Ampelia CS expanded “in coming weeks”
  - Bulgartransgaz: +13 TWh/a (GR>BG) and +50 TWh/a (BG>RO) from 1.10.2026
  - HU>SK: +10 TWh/a (date of introduction tbd.)

Implement  
recommended capacity  
products and tariffs  
(compliant with EU/EnC  
regulatory framework)

Initialize development of  
more comprehensive  
approaches for the  
region

A decorative halftone pattern consisting of a dense grid of white dots on a dark blue background, forming a curved, elongated shape that tapers towards the left.

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# Benchmarking based on robust Route Comparison

Most robust „umbrella use case“ for the benchmarking comparison:

Supply Slovakia  
from Bulgarian market  
(incl. from upstream GR/TR markets)

- ✓ **commercially attractive**  
(because significant bookings & flows over past months)
- ✓ **needs additional option**  
(because route congested)
- ✓ **contains many other use cases**  
(supply of Ukraine, vertical LNG transports, UGS filling)

benchmarking routes



Base Route

via  
MD/UA

max. route  
capacity

75 GWh/d  
2,6 bcm/a

Alternative  
Route 1

via  
RS/HU

102 GWh/d  
3,5 bcm/a

Alternative  
Route 2

via  
RO/HU

79 GWh/d  
2,7 bcm/a

Benchmarking suggests ~50% total transport costs reduction required (ca. 7-8 €/MWh for monthly capacity products)



# Summary of Recommendations

## Proposed solutions:

### Project scope

Required benchmarking reductions to tariffs can be achieved via combination of:

- Multiplier and seasonal factor reduction
- Discount for conditional firm products
- Benchmarking reduction of reference prices

Capacity products attractiveness can be improved via combination of:

- Conditional firm capacity (FCR)
- Competing capacity auctions

### Complementary initiatives

Address technical issues  
(e.g. metering installations)

Address gas quality issues  
(to unlock firm exit capacity at Isaccea / Orlivka)

Address market issues  
(e.g. clearing, licensing, regulatory stability)

## Proposed tariff structure:

Annual products for the benchmarking route (BG>SK):

Interconnection point			Current TTC (€/MWh)	Proposal		Adj. TTC (€/MWh)
				FCR discount	RP reduct.	
N/K	Exit	BG	0,70	-	-	0,70
N/K	Entry	RO	1,10	-	-	1,10
I/O	Exit	RO	1,31	-60%	-50%	0,57
I/O	Entry	UA	0,01	-*	-50%	0,01
Ka	Exit	UA	0,27	-*	-50%	0,14
Ka	Entry	MD	1,77	-50%	-50%	0,44
Gr	Exit	MD	2,05	-50%	-50%	0,51
Gr	Entry	UA	1,11	-	-50%	0,56
VK	Exit	UA	1,69	-	-50%	0,84
VK	Entry	SK	1,49	-	-50%	0,94
			11,50	Total:		5,80

\* already subject to discount

Multipliers:

Q	M	DA
1,05	1,15	1,50

Seasonal factors:

- Unchanged for IP N/K
- None at all other IPs

Benchmark:

5,67  
only ~2% markup

## Impact of Tariff Adjustments:

Only reflecting IPs subject to the route BG>SK:

Scenario title	Add. quantity	Revenue change for adj. tariffs
No additional bookings	+0 TWh/a	-1,2 M€/a
Single LNG cargo	+1,5 TWh/a	+5,9 M€/a
Quarterly LNG cargos	+6 TWh/a	+26,0 M€/a
12x LNG cargo (~66% usage)	+18 TWh/a	+86,2 M€/a
Close to full usage (~80%)	+2,1 bcm/a	+126,0 M€/a

Huge upside potential without downside

TTC...total transport costs (capacity tariffs under 90% load assumption and including flow-based charges)

FCR...“firm with combination restrictions” capacity product, RP...reference price

# Outlook on regional Gas Market Measures



- **Trial phase to assess effectiveness of ad-hoc measures**
  - Over the course of next months/year, regional gas market development shall be closely monitored to determine effects on e.g. bookings, flows, trading liquidity and market spreads.
  - Since the proposed ad-hoc measures shall be complemented with other improvements like implementing clearing in SEE markets, reducing licensing and taxation barriers, increasing reliability of national regulation and implementing no-regret network development projects, development and integration of the SEE gas markets could progress considerably.
- **Prepare for more comprehensive solutions**
  - However, at a certain stage, evaluation may still show that there is simply too much market fragmentation and regional coordination is not strong enough. For this scenario more comprehensive solutions may be necessary.
  - Such comprehensive solutions will take more time to develop, coordinate and implement, Thus preparations should start right away so these solutions have already been described, analyzed and preferences have been clarified by the end of this year.
  - In the following, three distinct approaches to measures are presented that can also be potentially combined. Note that these were collected in stakeholder discussions and are described herein only broadly to serve as a starting point.

*Measure:*

Ad-hoc measures

*Main proposition:*

Commercial attractiveness of TBP increased through tariffs and conditional capacity products

Subsidized logistics service provider

Complexities, risks and costs of regional multi-IP gas logistics are managed by a separate entity

„CBCA“ with zero IP tariffs

Costs of regional gas transmission system infrastructure are allocated between national markets

Full market merger

Single gas market for (a part of) the SEE region