



Draft Project Proposal for the Incremental Capacity Project on the Border between Ukraine and Republic of Moldova Gas Transmission Systems

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This document is a joint draft project proposal for the incremental capacity project on the border between Ukraine and Republic of Moldova jointly conducted by:



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The Market Demand Assessment Report (MDAR) assessed the non-binding capacity indications received from 3 July 2023 until 28 August 2023. Based on the outcome of the MDAR for the incremental capacity process starting in 2023 between the Ukrainian gas transmission system and the Republic of Moldova gas transmission system and published on both TSOs websites on 23 October 2023 (https://tsoua.com/wp-content/uploads/2023/10/2023_10_23_MDAR_UA-MD_ENG.pdf, https://www.vmtg.md/images/Rapoarte_evaluare_cerere_/Demand_Assessment_Report_for_incremental_capacity_between_Ucraina_and_Republica_Moldova_2023.pdf) the two TSOs concerned have begun the design phase based on Article 27 of COMMISSION REGULATION (EU) No 2017/459 of 16 March 2017 establishing a network code concerning capacity allocation mechanisms in gas transmission systems and repealing Regulation (EU) No 984/2013 (NC CAM). This document is the result of the technical studies and calculations conducted by LLC "Gas Transmission System Operator of Ukraine" LLC (hereinafter referred to as **GTSOU**) and "Vestmoldtransgaz" LLC (hereinafter referred to as **VMTG**) and may be subject to change, based on feedback received via the public consultation. The public consultation will be conducted during 1 February 2024 - 29 February 2024.

Please provide your replies by 29 February 2024 by email to commercial@tsoua.com and to office@vmtg.md.

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1. Description of the incremental capacity project

This section describes the common draft project proposal for incremental capacity on the border between Ukraine and Republic of Moldova at IP Grebenyky and IP Kaushany, based on the relevant technical studies conducted by GTSOU and VMTG. The description also includes a cost estimation.

The demands for incremental capacity have been indicated for IP Oleksiivka (flow direction from Republic of Moldova to Ukraine), IP Grebenyky (flow direction from Republic of Moldova to Ukraine) and IP Kaushany (flow direction from Ukraine to Republic of Moldova). Currently there is no existing firm capacity between the entry-exit system of Ukraine and Republic of Moldova, at this IP, in the requested direction.

Based on MDAR conclusions GTSOU and VMTG have conducted studies to prepare a project for incremental capacity on the Ukrainian-Republic of Moldovan border at IP Grebenyky (MD-UA) and IP Kaushany (UA-MD). Creating a stable physical flow through IP Oleksiivka is not economically feasible based on the existing GTSOU tariffs. In addition, it will significantly increase the cost of the route for network users. Therefore, GTSOU and VMTG decided do not initiate the incremental capacity project for IP Oleksiivka. Within the framework of the project, proposed to increase the capacity of IP Grebenyky (up to 176 465 000 kWh/d/year) in comparison with the results obtained during the MDA.

Consequently, as a result of the technical studies, GTSOU and VMTG suggest initiating an **incremental capacity project at the current interconnection points Grebenyky and Kaushany between Ukraine and Republic of Moldova**

GTSOU and VMTG propose to consider two options depending on the stability of the physical flow via IP Grebenyky:

- Option 1, short-term solution. Stable physical flow via CS Pivdennobuzka (UA) in the range (113 848 000 – 176 465 000 kWh/d/year¹);
- Option 2, long-term solution. Stable physical flow via CS Pivdennobuzka (UA) in the range (22 770 000 – 176 465 000 kWh/d/year²).

Option 1. **Summary of project proposal technical parameters (the border pressure at IP Negru Voda1/Kardam 48.5 bar³):**

Parameter	MD Section	UA Section
Technical capacity (IP Kaushany, UA-MD)	192 020 746 kWh/d/year	192 020 746 kWh/d/year ⁴
Technical capacity (IP Grebenyky, MD-UA)	176 465 000 kWh/d/year	176 465 000 kWh/d/year ⁵
Capacity type (quality)	firm	firm
Interconnection Points	Kaushany (Entry) Grebenyky (Exit)	Kaushany (Exit) Grebenyky (Entry)

¹ which corresponds 10.0-15.5 mcm/d (20°C)

² which corresponds 2.0-15.5 mcm/d (20°C)

³ which corresponds 49.6 kgf/cm²

⁴ which corresponds 18.0 mcm/d (20°C)

⁵ which corresponds 15.5 mcm/d (20°C)

CS Pivdennobuzka inlet pressure	-	38.2 bar (39 kgf/cm ²)
New pipeline length	-	-
Required technical equipment	<ul style="list-style-type: none"> * Reverse piping system of GMS Kaushany, ATI pipeline * Construction of the main pipeline connection between RI-SDKRI (CS Vulcanesti) * Construction of the main pipeline connection between RI-SDKRI (GMS Kaushany) 	Reverse piping system of the unit Orlivka-2 of CS Orlivka and CS Pivdennobuzka (use of existing gas pumping units)
Estimated Cost	2 377 240 EUR ⁶	2 600 000 EUR ⁷
Cost estimate accuracy	± 20%	± 10%

Option 2. Summary of project proposal technical parameters (the border pressure at IP Negru Voda1/Kardam 48.5 bar):

Parameter	MD Section	UA Section
Technical capacity (IP Kaushany, UA-MD)	192 020 746 kWh/d/year	192 020 746 kWh/d/year
Technical capacity (IP Grebenyky, MD-UA)	176 465 000 kWh/d/year	176 465 000 kWh/d/year
Capacity type (quality)	firm	firm
Interconnection Points	Kaushany (Entry) Grebenyky (Exit)	Kaushany (Exit) Grebenyky (Entry)
CS Pivdennobuzka inlet pressure	-	38.2 bar (39 kgf/cm ²)
New pipeline length	-	-
Required technical equipment	<ul style="list-style-type: none"> * Reverse piping system of GMS Kaushany, ATI pipeline * Construction of the main pipeline connection between RI-SDKRI (CS Vulcanesti) * Construction of the main pipeline connection between RI-SDKRI (GMS Kaushany) 	Reverse piping system of the unit Orlivka-2 of CS Orlivka. Reconstruction of CS Pivdennobuzka: <ul style="list-style-type: none"> - 2 gas pumping units (3 MW installed capacity); - 2 gas pumping units (6 MW installed capacity).
Estimated Cost	2 377 240 EUR ⁸	68 444 000 EUR ⁶
Cost estimate accuracy	± 20%	± 10%

⁶ the average monthly exchange rate of the NBM for November 2023 was used to calculate the cost in euros (1 EUR = MDL 19.3425)

⁷ the average monthly exchange rate of the NBU for November 2023 was used to calculate the cost in euros (1 EUR = UAH 39.01)

⁸ the average monthly exchange rate of the NBM for November 2023 was used to calculate the cost in euros (1 EUR = MDL 19.3425)

1.1. Description of the project on the Ukrainian side (GTSOU)

New infrastructure required to be implemented on the GTSOU side.

In order to ensure the possibility of gas transmission through the route from IP Isaccea1/Orlovka1 to CS Pivdenbuzka in the above-mentioned amount of capacities, the following investments are required on the Ukrainian side:

1. Option 1. Reverse piping system of the unit Orlovka-2 of CS Orlovka and CS Pivdenbuzka.
Expected commissioning: Quarter 4/2025.
2. Option 2. Reverse piping system of the unit Orlovka-2 of CS Orlovka. Reconstruction of CS Pivdenbuzka:
 - 2 gas pumping units (3 MW installed capacity);
 - 2 gas pumping units (6 MW installed capacity).Expected commissioning: Quarter 4/2028.

1.2. Description of the project on the Republic of Moldovan side (VMTG)

In order to ensure to gas transmission through the territory of Republic Moldova, the following objectives are necessary to be achieved:

- Reverse piping system of GMS Kaushany, ATI pipeline
- Construction of the main pipeline connection between RI-SDKRI (CS Vulcanesti)
- Construction of the main pipeline connection between RI-SDKRI (GMS Kaushany)

The mentioned projects are planned to be implemented in 2025 according to the 2023-2032 Development Plan approved by the Regulator according to Decision no. 820/2023

Expected commissioning: Quarter 4/2026.

1.3. Cost estimation on the Ukrainian side (GTSOU)

The preliminary cost estimation for the implementation of the above-mentioned investment objectives on the Ukrainian side is approx.:

- Option 1. EUR 2.6 million (CAPEX);
- Option 2. EUR 68.4 million (CAPEX).

1.4. Cost estimation on the Republic of Moldova side (VMTG)

The preliminary cost estimation for the implementation of the above-mentioned investment objectives on the Republic of Moldova side is approx. EUR 2.4 million (CAPEX).

2. Offer level for harmonized capacity products

The table below shows the common offer-level for the capacity marketing in the yearly capacity auction in 2024 of GTSOU and VMTG taking into account the obligations of the set aside capacity for short-term products of NC CAM.

Based on the above-mentioned description of the incremental capacity project and considering the capacity for short-term products required to be set-aside, i.e. 10% of the technical incremental capacity according to Article 8 of NC CAM and applying a gross calorific value of 11.39 kWh/Nm³ (0 °C), the offer levels for bundled capacity products at **IP Grebenyky (flow direction from Republic of Moldova to Ukraine)** and **IP Kaushany (flow direction from Ukraine to Republic of Moldova)**, are as follows:

No. of years	Gas year	Level of the harmonized offer for IP Grebenyky in the direction MD→UA for the technical capacity proposed to be developed of 13 950 000 mcm/d/year (0°C), (kWh/d/year) ⁹
1	2026/2027	158 820 000
2	2027/2028	158 820 000
3	2028/2029	158 820 000
4	2029/2030	158 820 000
5	2030/2031	158 820 000
6	2031/2032	158 820 000
7	2032/2033	158 820 000
8	2033/2034	158 820 000
9	2034/2035	158 820 000
10	2035/2036	158 820 000
11	2036/2037	158 820 000
12	2037/2038	158 820 000
13	2038/2039	158 820 000
14	2039/2040	158 820 000
15	2040/2041	158 820 000

No. of years	Gas year	Level of the harmonized offer for IP Kaushany in the direction UA→MD for the technical capacity proposed to be developed of 15 180 000 mcm/d/year (0°C), (kWh/d/year)
1	2026/2027	172 818 671
2	2027/2028	172 818 671
3	2028/2029	172 818 671
4	2029/2030	172 818 671
5	2030/2031	172 818 671
6	2031/2032	172 818 671

⁹ This offer level is only viable if the concerned national regulatory authorities publish a coordinated and positive decision on the project proposal by 26.04.2024 at the latest. This capacity is available after the completion of the project development Q4/2026.

7	2032/2033	172 818 671
8	2033/2034	172 818 671
9	2034/2035	172 818 671
10	2035/2036	172 818 671
11	2036/2037	172 818 671
12	2037/2038	172 818 671
13	2038/2039	172 818 671
14	2039/2040	172 818 671
15	2040/2041	172 818 671

3. Alternative allocation mechanism for incremental capacity

Both TSOs have agreed to use the standard auction allocation process for the allocation of the incremental capacity since the conditions in Article 30(2) of CAM NC have not been met.

4. Provisional timeline

The incremental capacity project will generally follow this timeline. However, the implementation phase will only start if there is a commitment by the market to acquire the respective incremental capacities in the 2024 yearly auction and if successfully passes the economic test for each of the TSOs concerned. The dates shown below are subject to change.

Start Date	End Date	Description
23.10.2023		Start of Design Phase
23.10.2023	31.01.2024	Technical studies and preparation of public consultation documents
31.01.2024		Publication of public consultation documents
31.01.2024	29.02.2024	One month public consultation
01.03.2024	15.03.2024	Further development of the project proposal, potential adjustments of the project parameters based on public consultation feedback
16.03.2024		Submission of the project proposal to the NRAs
17.03.2024	17.04.2024	6 months period for national regulatory authorities to publish coordinated decisions on the project proposal
26.04.2024		Publication by the TSOs of the parameters approved by NRAs and of a template of the contract(s) related to the capacity to be offered
01.05.2024		Final date for publication of auction notice for the incremental capacity offer
01.07.2024 ¹⁰		Conducting the yearly capacity auction/incremental capacity auction.
		Publication of incremental capacity auctions result (aggregated)

¹⁰ This stage is only viable if the concerned national regulatory authorities publish a coordinated and positive decision on the project proposal by 26.04.2024 at the latest.

2 days after auction closure	Economic test
1 day after the result of the economic test	Allocation/or not of the requested incremental capacity and publication of the results
30.09.2024	Conclusion of the Project Implementation Agreement between TSOs with a detailed schedule of works

The implementation phase will only start if there is a commitment by the market to acquire the respective incremental capacities in the yearly auction and if successfully passes the economic test for each of the TSOs concerned.

5. General rules and conditions for participating in the capacity auctions

During the binding capacity allocation phase GTSOU and VMTG will offer the incremental capacities in an annual yearly auction on the RBP Platform.

For GTSOU general rules and conditions have been developed for the participation in the capacity auctions for incremental capacity in 2024. These are attached to this consultation document.

GTSOU

The general rules and conditions that a network user shall accept to participate and access capacity in the binding capacity allocation phase of the incremental capacity process are set out in Annex 1 of this consultation document and in the [Network Code](#) and in the [Gas Transportation Agreement](#) of GTSOU.

VMTG

The general rules and conditions that a network user has to accept in order to participate and have access to capacity in the binding capacity allocation phase of the incremental capacity process are out in the [Network Code](#).

6. Information on the fixed price approach for the allocation of incremental capacity

GTSOU and VMTG do not choose the application of a fixed price approach for the acquisition of incremental capacity in 2024 (Article 28 (1) lit. g) NC CAM).

7. Estimation of the f-factor

GTSOU proposes that the level of the f-factor shall be 1. The project assumptions are based on the non-binding demand indication received in the demand assessment phase. This f-factor was estimated based on the assumption that the given incremental capacity project is purely a market driven project and that the full cost of the project shall be covered by the capacity bookings in the relevant binding capacity auction.

The level of user commitments, expressed as VMTG is estimate of the f-factor is 1.0.

8. Information on additional demand indications

Neither GTSOU or VMTG has received any additional demand indications IP Grebenyky (flow direction from Republic of Moldova to Ukraine) and IP Kaushany (flow direction from Ukraine to Republic of Moldova) in accordance with Article 26(7) of NC CAM.

9. Information on a possible impact on other non-depreciated gas infrastructure in the same and adjacent entry-exit systems

The realization of this incremental capacity project will not lead to a sustained and significant decrease in the utilization of other existing gas infrastructures in the two and adjacent entry-exit systems.



10. Contact information



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