



**Application for the Approval
of an Incremental Capacity Project according
to Article 28 (1) NC CAM for the Border
between Poland and Ukraine**

27-10-2022



The application for an incremental capacity project for the market border between Poland and Ukraine has to be approved by the respective national regulatory authorities (NRAs). This document presents a common project proposal for the interconnection point between Poland and Ukraine (in the direction from Poland to Ukraine) GCP GAZ-SYSTEM/UA TSO as agreed by:



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According to Article 28 (1) NC CAM, Operator Gazociągów Przesyłowych GAZ-SYSTEM S.A. (hereinafter, GAZ-SYSTEM) submits this proposal for approval through the President of the Energy Regulatory Office (hereinafter, the URE) and LLC “Gas Transmission System Operator of Ukraine” (hereinafter, GTSOU) submits this proposal for approval through the National Energy and Utilities Regulatory Commission (hereinafter, the NEURC) for an incremental capacity project for the market border between Poland and Ukraine.

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1. Introduction to the application of the project proposal for incremental capacity

Transmission system operators Operator Gazociągów Przesyłowych GAZ-SYSTEM S.A. and LLC “Gas Transmission System Operator of Ukraine” have received non-binding demand indications for the firm capacity in the direction from Poland to Ukraine. Currently, between Poland and Ukraine (in the direction from Poland to Ukraine) there is no technical capacity. Firm capacity or interruptible conditionally firm capacity is made available, depending on the situation in the Polish transmission system.

The Market Demand Assessment Report (MDAR) assessed the non-binding demand indication received from 5 July 2021 to 30 August 2021. Based on MDAR conclusions, published on both TSOs' websites on 25 October 2021, GAZ-SYSTEM and GTSOU have conducted studies to prepare a project for incremental capacity on the Polish-Ukrainian border.

No comments were received in the public consultation of the Draft Project Proposal held from 17 January 2022 to 17 March 2022, neither by GAZ-SYSTEM nor by GTSOU.

As a result of the market demand assessment and design phase, GAZ-SYSTEM and GTSOU suggest implementing an **incremental capacity project at the current interconnection point between Poland and Ukraine (in the direction from Poland to Ukraine)** (hereinafter, GCP GAZ-SYSTEM/UA TSO).

The suggested incremental capacity project covers the demand indication received in the demand assessment phase, i.e. 3 869 863 kWh/h.¹

The following abbreviations are used in this document:

NC CAM = Commission Regulation (EU) 2017/459 of 16 March 2017 establishing a network code on capacity allocation mechanisms in gas transmission systems and repealing Regulation (EU) No 984/2013;

NC TAR = Commission Regulation (EU) 2017/460 of 16 March 2017 establishing a network code on harmonised transmission tariff structures for gas.

Following the structure of Article 28 (1) NC CAM, this application is structured as follows:

- Offer Level of the incremental capacity (Art. 28 (1) (a) NC CAM),
- Terms and Conditions for the Incremental Capacity Auction to be accepted by the network user for the acquisition of incremental capacity (Art. 28 (1) (b) NC CAM),
- Timetable for the project of incremental capacity (Art. 28 (1) (c) NC CAM),

¹ Assumed gross caloric value 11.15 kWh/m³ (0/25)

- Parameters of the economic test (Art. 28 (1) (d) NC CAM),
- Information on a possible extended time horizon for contracting incremental capacity (Art. 28 (1) (e) NC CAM),
- Information on an alternative allocation mechanism (Art. 28 (1) (f) NC CAM),
- Information on a possible fixed price approach (Art. 28 (1) (g) NC CAM).

2. Offer Level for incremental capacity (Art. 28 (1) (a) NC CAM)

According to Article 28 (1) (a) NC CAM, GAZ-SYSTEM and GTSOU apply to the relevant NRAs to approve the common Offer Level for bundled capacity products to be marketed at GCP GAZ-SYSTEM/UA TSO at the yearly capacity auction in 2023 as presented below. The Offer Level takes into account the obligations to set aside capacity based on the calculation methodology described in Article 11(6) of NC CAM.

Year	From 2030/2031 To 2044/2045
Offer Level	3 095 890 kWh/h
Incremental capacity – to be offered	3 095 890 kWh/h
Incremental capacity – total	3 869 863kWh/h
Existing Capacity	0

GAZ-SYSTEM and GTSOU will market the Offer Level at an annual yearly auction on the 3rd of July 2023 on the GSA Platform.

The Offer Level can be marketed to network users no earlier than gas year 2030/2031 because of the project's specifics on the Polish side of the Polish-Ukrainian border.

3. Terms and Conditions for the incremental capacity auction to be accepted by the network user for the acquisition of incremental capacity (Art. 28 (1) (b) NC CAM)

For the marketing of incremental capacity (i.e. the Offer Level) in the yearly capacity auction 2023, GAZ-SYSTEM and GTSOU have developed individual general terms and conditions for the incremental capacity auction to be accepted by the network user before the incremental capacity auction.

According to Article 28 (1) (b) NC CAM,

- GAZ-SYSTEM requests the URE to approve its “General Terms and Conditions of participation in and access to capacity in the binding phase of incremental capacity auction on the border between Poland and Ukraine” provided along with this application (hereinafter: INC GT&C). To be eligible to participate in the auction, network users will have to accept the INC GT&C as well as other GAZ-SYSTEM rules that are required to participate in the auction on a regular basis, such as the General Terms and Conditions of the Transmission Contract, the Transmission Network Code, and the Tariff.
- GTSOU submits to the NEURC its “General Terms and Conditions to Which Network Users Shall Agree in Order to Obtain Access to Capacity in the Binding Phase of Capacity Allocation of the Incremental Capacity Procedure on the Border between Ukraine and Poland” which have been provided along with this application.

Regardless of the fact that both GAZ-SYSTEM and GTSOU both publish terms and conditions for the incremental capacity auction in English and in their respective national languages, only the Polish and Ukrainian versions respectively, shall be considered as binding.

4. Timetable for the incremental capacity project (Art. 28 (1) (c) NC CAM)

According to Article 28 (1) (c) NC CAM, GAZ-SYSTEM requests to approve the following timetable for its incremental capacity project.

Time period	Milestone
03/07/2023	Yearly capacity auction in July followed by an economic test
3Q/2023	Concluding the agreement between GAZ-SYSTEM and GTSOU for implementation of the project
1Q/2024	Design contracts signed
4Q/2026	Building permits obtained
2Q/2027	Construction contracts signed
1Q/2030	Permit to use obtained
2Q/2030	Commissioning of the project

Time periods for signing contracts and obtaining building permits are indicated as the latest finished milestones, taking into account the three separate investment tasks in the common scope of the incremental project.

According to Article 28 (1) (c) NC CAM, GTSOU requests to approve the following timetable for its incremental capacity project.

Time period	Milestone
03/07/2023	Yearly capacity auction in July followed by an economic test
3Q/2023	Concluding the agreement between GTSOU and GAZ-SYSTEM for implementation of the project
2025	Designing ("Project" stage)
2026	Approval of project decisions, expertise
2026-2028	Execution of works
4Q/2028	Commissioning of the project

The timeframes of work completion may be updated due to existing uncertainty related Russia's full-scale war with Ukraine.

The construction phase will only start if there is a commitment by network users to acquire the respective incremental capacities in the yearly auction 2023 and if the results of the following economic tests are also positive for GAZ-SYSTEM and GTSOU. GAZ-SYSTEM together with GTSOU will conclude the agreement on implementation of the project.

Description of the project on the Polish side (GAZ-SYSTEM)

Expansion required within the GAZ-SYSTEM grid:

In order to ensure the possibility of gas transmission in the direction from Poland to Ukraine with a maximum capacity of 3 869 863 kWh/h, the following investments are required on the Polish side:

- Construction of a new DN 1000 gas pipeline Wronów – Rozwadów (L=107 km)
- Construction of a new DN 1000 gas pipeline Rozwadów – Strachocina (L=140 km)
- Construction of metering station in Hermanowice

Expected commissioning: 2Q/2030

Cost estimation²:

With a maximum capacity of 3 869 863 kWh/h approximately EUR 359.2 million for the pipeline section including EUR 6.7 million for the metering station.

Description of the project on the Ukrainian side (GTSOU)

Expansion required within the GTSOU grid:

In order to ensure the security of natural gas supply and the diversification of sources and routes of natural gas transmission (in particular, LNG) to Ukraine, GTSOU is implementing several capital-intensive projects. The reconstruction of the compressor station "Komarno" in the Lviv region is necessary to ensure constant availability and additional flexibility of transporting natural gas from Poland to Ukraine with a maximum capacity of 3 869 863 kWh/h.

Expected commissioning: 4Q/2028

Cost estimation:

According to the feasibility study approved by the order of GTSOU No. 75 dated 09.02.2023, the estimated cost of the reconstruction of compressor station "Komarno" is UAH 3 213.838 million excluding VAT (EUR 82.3 million excluding VAT)³. The costs of reconstruction of compressor station "Komarno" will be financed on account of depreciation costs envisaged under the respective tariff of the gas transmission system operator. After the binding phase of the incremental capacity procedure, the value indicators of reconstruction costs may be updated due to inflation adjustments only.

5. Parameters of the economic test (Art. 28 (1) (d) in conjunction with Art. 22 (1) NC CAM)

According to Article 28 (1) (d) NC CAM, GAZ-SYSTEM and GTSOU send requests to approve the parameters of the economic test.

The economic test is based on the following parameters according to Article 22 (1) NC CAM:

- a) The present value of the binding commitments of the network users for contracting capacity.
- b) The present value of the estimated increase in the allowed or target revenue of the TSO associated with the incremental capacity included in the respective Offer Level.

² 1 EUR= 4.80 PLN was used for calculation of the costs in EUR

³ The average monthly exchange rate of the NBU for March 2023 was used to calculate the cost in euros (1 EUR = UAH 39.07)

c) The f-factor.

Reference price for determining the present value of the binding commitments of network users – GAZ-SYSTEM

According to Art. 22 (1) (a) in conjunction with Art. 25 (1) (a) of the NC CAM, the President of the URE approves the reference prices estimated for the time horizon of the incremental capacity offered by GAZ-SYSTEM as part of the incremental project for the market border of Poland and Ukraine. The reference prices, amounting to PLN 2.532 /(MWh/h)/h (EUR 0.528 /(MWh/h)/h), will be used in the economic test carried out by GAZ-SYSTEM to calculate the current value of the liabilities of network users in the scope of contracting incremental capacity made available under offers placed in the auction procedure at GCP GAZ-SYSTEM/UA TSO.

The reference prices should be set for the time horizon of the incremental capacity offered under the project for the market border of Poland and Ukraine, i.e. for the time horizon of 15 gas years, i.e. from 1 October 2030 until 1 October 2045.

It should be emphasized that GAZ-SYSTEM is currently undergoing the implementation of capital-intensive investment projects aimed at ensuring the diversification of gas supplies to Poland. The dynamics of the implementation of these projects is difficult to predict. This is due to the fact that the projects will be implemented with the cooperation of other European gas transmission system operators and that their implementation is only partly dependent on the schedule of operation undertaken by GAZ-SYSTEM.

Reference rates estimation for a 15-year time horizon, with such a high dynamic implementation of strategic investment projects may bring unrealistic and unreliable results in the form of an increase in transmission charges, which will reduce the level of capacity required to achieve a positive result from the economic test.

Given the above arguments, GAZ-SYSTEM proposes to adopt, for the purposes of the economic test for all the years covered by the analysis, a reference price at the level of the fixed fee for the provision of gas transmission services at the exit point binding from 1 January 2023 to 1 January 2024. This method is in accordance with "The Tariff No. 16 for Gaseous Fuels Transmission Change No. 1" approved by the decision of the President of the DRG. DRG-2.4212.72.2022. JDo1 on 15 December 2022.

Present value of the estimated increase in the allowed revenues due to capacity increase – GAZ-SYSTEM

The target value of the estimated increase in allowed revenues corresponds to the value of the investment funds cost concerning the project implemented by the transmission system operator and settled in the period covering the contracted incremental capacity made available as part of offers submitted in the auction procedure for GCP GAZ-SYSTEM/UA TSO.

GAZ-SYSTEM adopted a discount rate of 4.81% for the calculation of the discounted value of the allowed revenue related to the realization of the project for the market border of Poland and Ukraine in the years 2030-2045.

The discount rate used in the calculation (4.81%) was determined at the weighted cost of capital (WACC) adopted for the Tariff No. 16 for gaseous fuels transmission for 2023.

This value was determined using the calculation tool provided by GAZ-SYSTEM. The calculation tool reflects the current practice, including the calculation parameters for determining the allowed revenues approved by the President of the URE for the tariff for 2023.

F-factor for GAZ-SYSTEM

The f-factor must take the following into account:

- a) The amount of technical capacity set aside according to Articles 8 (8) and (9) NC CAM;
- b) The positive externalities of the incremental capacity project on the market, the transmission network, or both;
- c) The duration of the binding commitments of the network users for contracting capacity compared to the economic life of the asset;
- d) The extent to which the demand for the capacity established in the incremental capacity project can be expected to continue after the end of the time horizon used in the economic test.

The project assumptions are based on the non-binding demand indications 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. Thus, on the GAZ-SYSTEM side, there are no conditions allowing GAZ-SYSTEM to request an approval involving an f-factor which is less than 1.

In addition, considering the level of incremental capacity to be offered and the required level of revenues from the binding commitments of the network users to pass the economic test with an f-factor equalling 1, it is also necessary to apply a mandatory minimum premium of PLN 2.684/(MWh/h)/h (EUR 0.559/(MWh/h)/h).

Therefore, GAZ-SYSTEM requests approval of an f-factor which amounts to 1 for the application of the economic test.

Based on the above considerations, the economic test calculation tool provided by GAZ-SYSTEM has been filled in accordingly and is attached along with this application.

Tariff for determining the present value of binding commitments of network users - GTSOU

The economic test will use the current tariff for GCP GAZ-SYSTEM/UA TSO, which is determined for the period from 1 January 2020 to 31 December 2024, and approved by the NEURC resolution No. 3013 of 24 December 2019. The specified tariff for a yearly product is USD 4.45 for 1000 cubic m/day without VAT (USD 0.399/(MWh/h)/h without VAT; EUR 0.374/(MWh/h)/h without VAT)⁴.

The present value of the estimated increase in the allowed revenue of the transmission system operator associated with the incremental capacity - GTSOU

The value of the expected increase in the allowed revenues corresponds to the value of investment costs for the project and is calculated for the period covering the contractual incremental capacity that is offered during the auction allocation of capacity for GCP GAZ-SYSTEM/UA TSO.

GTSOU accepted the discount rate of 6.10% to calculate the discounted value of the allowed revenues related to the implementation of the project and supply on the capacity market on the border between Poland and Ukraine in 2030-2045.

The discount rate (6.10%) is determined as of February 2023 based on the interest rate on new loans in US dollars to non-financial corporations for a period of more than 5 years (Financial markets statistics "Interest rates on loans and deposits. Securities issued by residents. PFTS index" <https://bank.gov.ua/ua/statistic/sector-financial#2fs>).

F-factor for GTSOU

The f-factor was determined taking into account the fact that the reconstruction of compressor station "Komarno" is carried out by GTSOU at the expense of depreciation costs provided for in the relevant tariff of the gas transmission system operator. In addition, the project of incremental capacity creates conditions for diversification of sources and routes of natural gas transmission to Ukraine, including storage in UGS facilities, as well as transit of natural gas through the territory of Ukraine. Based on the above mentioned, the f-factor can be set at 0.

Taking into account the required level of revenue from contractual obligations of network users, in order to successfully conduct an economic test with an f-factor equal to 0, the size of the mandatory minimum premium should be USD 0.00 per 1000 cubic m/day.

GTSOU asks to approve the f-factor of 0 to be used when conducting the economic test.

Based on the above considerations, the economic test calculation tool provided by GTSOU has been filled in accordingly and is attached along with this application.

⁴ The average monthly exchange rate of the NBU for March 2023 was used to calculate the tariff (1 USD = UAH 36.57)



6. Possible extended time horizon for contracting incremental capacity (Art. 28 (1) (e) NC CAM)

Based on a common decision, GAZ-SYSTEM and GTSOU agree that, for this incremental capacity project, no extended time horizon for contracting incremental capacity is needed according to Art. 30 NC CAM.

7. Alternative allocation mechanism (Art. 28 (1) (f) NC CAM)

GAZ-SYSTEM and GTSOU abstain from an application of an alternative allocation mechanism for the acquisition of incremental capacity according to Article 28 (1) (f) NC CAM. Based on a common decision, both TSOs will apply the standard auction procedure for incremental capacity in 2023.



8. Contact information



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