



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

**08-01-2024**



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:



**Operator Gazociągów Przesyłowych  
GAZ-SYSTEM S.A.**

**LLC "Gas Transmission System  
Operator of Ukraine"**

Mszczonowska 4 St.

Liubomyra Huzara av. 44

02-337 Warsaw

03065 Kyiv

Poland

Ukraine

E: [incremental@gaz-system.pl](mailto:incremental@gaz-system.pl)

E: [commercial@tsoua.com](mailto:commercial@tsoua.com)



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

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),
- 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).

Transmission system operators GAZ-SYSTEM and GTSOU **have received non-binding demand indications for the firm capacity in the direction from Poland to Ukraine**. Currently, there is no existing firm capacity between the entry-exit system of Poland and Ukraine in the requested direction.

Previous incremental capacity procedure at the Polish-Ukrainian border, initiated in 2021 (INCREMENTAL CYCLE 2021-2023), was terminated in line with Article 22(3) of CAM NC. In the annual auction for incremental capacity on both sides of an interconnection point at the border of Polish and Ukrainian markets which took place on 3 July 2023, no amount of incremental capacity was booked by any market participant<sup>1</sup>, therefore, the outcome of the economic test was negative on both sides of the interconnection point at Polish-Ukrainian border.

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<sup>1</sup> On 3 July 2023, GAZ-SYSTEM and GTSOU proposed the common offer level of incremental capacity (i.e. 3 869 863 kWh/h) for bundled capacity at IP GCP GAZ-SYSTEM/UA TSO.

The Market Demand Assessment Report (MDAR) assessed the non-binding demand indication received from 3 July 2023 to 28 August 2023. The non-binding demand received by GAZ-SYSTEM and GTSOU were identical and amounted to 4,181,150 [(kWh/h)/year]<sup>2</sup> for the direction from Poland to Ukraine, for the gas years 2029/2030 - 2044/2045. Based on the outcome of the MDAR for the incremental capacity process starting in 2023 between the Polish gas transmission system and the Ukrainian gas transmission system, published on both TSOs' websites on 23 October 2023, the TSOs concerned have begun the design phase based on Article 27 of NC CAM.

As a result of the technical studies, GAZ-SYSTEM and GTSOU suggest implementing an **incremental capacity project at the current interconnection point GCP GAZ-SYSTEM/UA TSO (direction UA) between Poland and Ukraine.**

**However, taking into account the previous incremental capacity process 2021-2023 and based on the demand indication received in the demand assessment phase under the incremental capacity process 2023-2025, GAZ-SYSTEM and GTSOU decided to maintain the same offer level as in the incremental capacity process 2021-2023, i.e. 3 869 863 kWh/h<sup>3</sup> and the same technical solution as approved by the National Regulatory Authorities in 2023.**

Considering maturity of the technical solution that constituted the basis for the decision of the NRAs in 2023 both Transmission System Operators propose the readiness to conduct the auction in July 2024. This approach will also allow planning the investment process directly after completion of the design phase<sup>4</sup>.

The public consultation of the Draft Project Proposal were held from 30 October to 30 November 2023. Neither GAZ-SYSTEM nor GTSOU received comments to the Project Proposal as well as the General Terms and Conditions of participation in and access to capacity in the binding phase of allocation of incremental capacity on the border between Poland and Ukraine (GAS-SYSTEM and GTSOU documents).

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<sup>2</sup> The indications were provided by the market in m<sup>3</sup>/h, thus it was assumed that the energy content in 1 m<sup>3</sup> of natural gas is 11.15 kWh.

<sup>3</sup> Assumed gross calorific value 11,15 kWh/m<sup>3</sup> (0/25).

<sup>4</sup> Design contracts signed in 2022 on Polish side of the project.

## 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 2024 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<br>To 2044/2045 |
|--------------------------------------|--------------------------------|
| <b>Offer Level</b>                   | <b>3 095 890 kWh/h</b>         |
| 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 1<sup>st</sup> of July 2024 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 2024, 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 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   |
|-------------|---|
| 01/07/2024  | Yearly capacity auction in July followed by an economic test                            |
| 3Q/2024     | Concluding the agreement between GAZ-SYSTEM and GTSOU for implementation of the project |
| 2Q/2025     | Building permits obtained   |
| 1Q/2027     | Construction contracts signed   |
| 1Q/2030     | Permit to use obtained  |
| 4Q/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   |
|-------------|---|
| 01/07/2024  | Yearly capacity auction in July followed by an economic test                            |
| 3Q/2024     | Concluding the agreement between GTSOU and GAZ-SYSTEM for implementation of the project |
| 2025-2026   | 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 2024 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: 4Q/2030

Cost estimation<sup>5</sup>:

With a maximum capacity of 3 869 863 kWh/h approximately 1 684 526 thousand PLN (365 407 thousand EUR) for the pipeline section and approximately 36 904 thousand PLN (8 005 thousand EUR) for the metering station.

**Description of the project on the Ukrainian side (GTSOU)**

Expansion required within the GTSOU grid:

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<sup>5</sup> 1 EUR= 4.61 PLN was used for calculation of the costs in EUR.

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)<sup>6</sup>. 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.
- 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 3.214 PLN/(MWh/h)/h (0.697 EUR/(MWh/h)/h), will be used in the

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<sup>6</sup> The average monthly exchange rate of the NBU for November 2023 was used to calculate the cost in euros (1 EUR = UAH 39.01).

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.

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 2024 to 1 January 2025. This method is in accordance with “The Tariff No. 17 for Gaseous Fuels Transmission - change No. 1” approved by the decision of the President of the Energy Regulatory Office sign: DRG.DRG-2.4212.45.2023.JDo1 on 13 December 2023.

#### **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 7.60% 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 (7.60%) was determined at the weighted cost of capital (WACC) adopted for the Tariff No. 17 - change No. 1 for gaseous fuels transmission for 2024.

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 2024.

#### **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 obtained in the demand assessment phase and the ability to meet the demand arising from the potential gas market development in the south-east Poland. The f-factor has been estimated on the assumption that the construction of the pipeline section indicated in Section 4. *Timetable for the incremental capacity project (Art. 28 (1) (c) NC CAM)* will ensure supply towards Ukraine and allow for the future increased supply to existing and new network users. The distribution of revenues associated with the operation of the DN1000 Wronów – Rozwadów and DN1000 Rozwadów – Strachocina gas pipelines is a result of the expected percentage of incremental capacity in the total planned capacity of the above-mentioned pipelines.

On the basis of the above, GAZ-SYSTEM estimated an f-factor of 0.47.

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 0,47, it is not necessary to apply a mandatory minimum premium (mandatory minimum premium equals 0 (zero) PLN/(MWh/h)/h).

**Therefore, GAZ-SYSTEM requests approval of an f-factor which amounts to 0,47 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 0.479/(MWh/h)/h with VAT; EUR 0.444/(MWh/h)/h<sup>7</sup> with VAT<sup>8</sup>).

#### **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.

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<sup>7</sup> The average monthly exchange rate of the NBU for November 2023 was used to calculate the tariff (1 USD = UAH 36.16).

<sup>8</sup> The standard VAT rate in Ukraine in 2023 is 20%.

GTSOU accepted the discount rate of 5.80% 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 (5.80%) is determined as of October 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.

## **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 2024.



## 8. Contact information



### **Operator Gazociągów Przesyłowych GAZ-SYSTEM S.A.**

Paulina Buczek

International Relations Division

Telephone:  
+48 22 220 18 47  
+48 22 220 15 18

Email:  
[paulina.buczek@gaz-system.pl](mailto:paulina.buczek@gaz-system.pl)

Mszczonowska 4 St.  
02-337 Warsaw  
Poland

Telephone:  
+48 22 220 18 00

Email:  
[incremental@gaz-system.pl](mailto:incremental@gaz-system.pl)

### **LLC "Gas TSO of Ukraine"**

Andrii Yefanov

Head of Auction Platforms Support Unit

Telephone:  
+38 044 298 69 56

Email:  
[yefanov-av@tsoua.com](mailto:yefanov-av@tsoua.com)

Liubomyra Huzara av. 44  
03065, Kyiv  
Ukraine

Telephone:  
+38 044 239 78 43

Email:  
[commercial@tsoua.com](mailto:commercial@tsoua.com)