Decision

under Article 27 (4) of Commission Regulation (EU) 2017/460 of 16 March 2017 establishing a network code on harmonised transmission tariff structures for gas

1. Content

2. Terms and abbreviations

CAM NC
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

The CWD model
The capacity weighted distance reference price methodology

C4G, the Capacity4Gas project
New gas infrastructure interconnecting the Czech transmission system with the EUGAL gas pipeline in Germany and enhancing the capacity of the Czech transmission system for the purposes of gas supply to the Czech Republic and further transit across Slovakia. The project will be implemented at two stages, the completion of which is being planned for 2019 and 2021.[1])

ČR or CR
The Czech Republic

The Energy Act
Act No 458/2000 on conditions for business and state administration in energy industries and amending certain laws (the Energy Act), as amended

The ERO or the Office
The Energy Regulatory Office

The CAPM methodology
The capital asset pricing model

International transmission, transit transmission
The use of the transmission system in the Czech Republic for the purpose of gas transport[2]) to customers in other entry-exit systems

NET4GAS
NET4GAS, s.r.o., the holder of an exclusive licence for gas transmission in the Czech Republic

DSO (*PDS in Czech*)
Distribution system operator

DCC (*PPZ in Czech*)
Customer directly connected to the transmission system

[1]) https://www.net4gas.cz/cz/projekty/projekt-capacity4gas/
[2]) Article 2 (1) of Regulation (EC) No 715/2009

Transmission system operator, TSO (*PPS in Czech*)
NET4GAS, s.r.o.

UGS (*PZP in Czech; in some Charts, PZP is written rather than UGS for technical reasons*)
Storage facility

RAB
Regulatory asset base

Decision
Motivated decision under Article 27 (4) TAR NC

The SEP (*SEK in Czech*)
The State Energy Policy; https://www.mpo.cz/cz/energetika/statni-energeticka-politika/statni-energeticka-koncepce--223620/

TAR NC
COMMISSION REGULATION (EU) 2017/460 of 16 March 2017 establishing a network code on harmonised transmission tariff structures for gas

VIP
Virtual interconnection point[3])

National transmission
The use of the transmission system in the Czech Republic for the purpose of gas transport to customers in the Czech Republic

VTP
Virtual trading point

WACC
Reference value of the regulated rate of return

Principles
Price Control Principles for 2016-2018 for the Electricity and Gas Industries and for the Market Operator's Activities in the Electricity and Gas Industries with Effect Extended to 31 December 2020

The 4th regulatory period
Regulatory period[4]) covering 2016 to 2020

The 5th regulatory period
Regulatory period4) beginning in 2021

[3]) Article 19 (9) CAM NC
[4]) Article 3 point (5) TAR NC

3. Introduction

This Decision describes the actual implementation of the tariff structure under the TAR NC in the Czech Republic. It details the aspects that the ERO has taken into consideration and also reflects the outcomes from the consultation process and ACER’s final analysis.

In compliance with the requirements for transparency, the document details the reasons on the strength of which the ERO is convinced that the methodology used for setting reference prices is in accordance with the TAR NC and the relevant European legislation, while supporting the objectives that are crucial for the Czech gas market.

4. The legal environment

The TAR NC requires the national regulatory authority or the transmission system operator, as decided by the national regulatory authority, to perform the steps referred to in Article 5 (1), Article 26 (1), Article 27 (1), Article 29, and Article 30 TAR NC.

The ERO has assessed this allocation of competences in the context of the applicable Czech legislative framework and concluded that, for the reasons set out in the following, the ERO will be the entity responsible for the required steps.

Being a Commission Regulation, the TAR NC is a directly applicable part of the Czech legal system. Furthermore, in relation to the ERO, the issue covered by the TAR NC is provided for in Act No 265/1991 on the competences of the authorities of the Czech Republic in pricing, as amended (the Price Act), and the Energy Act. Within the Czech legal system, the basis for meeting the requirements of the Regulation must mainly include Section 2c of Act No 265/1991. The price regulation competence has been vested in the ERO by the law, and therefore the ERO vesting this competence in itself through its decision in administrative proceedings is not only redundant, but even impermissible from the perspective of Czech constitutional principles.

And so, if the required outcome of the Decision is that the activities under the TAR NC, which are the subject matter of the Decision, are carried out by the ERO (as Act No 265/1991 taken together with the Energy Act requires already now) to the full extent and exclusively, then the following is true: the non-issuance of the decision imposing an obligation on the transmission system operator to perform certain activities means that the ERO shall perform these activities (by the operation of law). In the present case, the rules contained in all three basic pieces of legislation are substantively identical with the objective to fulfil the meaning and purpose of the TAR NC.

5. Summary of the implementation

- On 1 October 2018, the final consultation on the proposed reference price methodology under Commission Regulation (EU) 2017/460 of 16 March 2017 establishing a network code on harmonised transmission tariff structures for gas was opened; on its basis, the relevant prices for the gas transmission service will be determined and will apply from 1 January 2020.
- Responses could be sent until 31 December 2018. The ERO has not received any responses after that deadline and has not received any responses contrary to the rules set for the consultation process.
- In compliance with Article 26 (3) TAR NC, on 30 January 2019 the consultation responses received and their summary were published. An English translation of the responses was forwarded to ACER.
- In compliance with Article 27 TAR NC, ACER carried out an analysis of the consultation document, including an assessment of the responses received. Within the set period of two months following the end of the consultation, i.e. on 28 February 2019, ACER sent the conclusions of its analysis to the ERO and the Commission.
- Under Article 27 (4) TAR NC, the ERO shall, within five months following the end of the consultation, i.e. by 31 May 2019, take and publish a motivated decision on all items set out in Article 26 (1) TAR NC. Under Articles 29 and 32 TAR NC, the ERO shall publish the prices no later than thirty days before the annual yearly capacity auction (Article 11 (4) of Commission Regulation (EU) 2017/459). The Price Decision must therefore be published in the *Energy Regulation Gazette* no later than by the above date. In compliance with Section 17e (2) (a) of the Energy Act, the draft Price Decision, containing the relevant prices for the transmission service which will be applicable from 1 January of the following year, were subjected to public consultation. Under Section 17e (5) responses in this consultation process could be sent within 15 days from the publication of the draft.
- The responses that the ERO has accepted have been incorporated into this Decision.

6. Disclaimer

All information and assumptions contained herein are based on the information available at the time when this Decision was issued. These assumptions will be updated on an annual basis through information published before the beginning of a tariff period[5]).

The principles and parameters of the price control principles for the following regulatory period, which will begin in 2021, have not yet been determined and therefore cannot be and are not covered by this Decision.

The reference price methodology uses outputs from the price control principles applicable in the year for which the prices are being set (the fourth regulatory period) as the input values. Upon a change in the price control principles, the Energy Regulatory Office will recalculate the tariffs using the reference price methodology set out in this Decision.

The level of the discount on the transmission tariffs at entry points from and exit points to virtual storage facilities under Article 9 (1) TAR NC is based on the currently existing configuration and usage of the various elements in the gas network and the storage and transmission capacities known at the time when this Decision was issued. Should the following period see a change in the input assumptions based on which the reference price for the service of transmission from/to the storage facility has been calculated and based on which the discount applied to this reference price has been determined, the Energy Regulatory Office will recalculate the transmission tariff and reconsider the level of the discount provided for this tariff.

In view of the amount of transmission capacities at all entry and exit cross-border points, there is no data on the basis of which the probability of interruption could be determined. The reference price methodology therefore applies ex-post discounts to capacity products for interruptible capacity, provided that should interruptions actually occur, an ex-ante discount will be implemented and calculated for standard capacity products for interruptible capacity.

This document treats the issue of emission allowances in line with the *Principles* for the fourth regulatory period. The methodology for calculating the amount of acceptable costs incurred in the procurement of emission allowances will be treated in the *Principles* for the fifth regulatory period.

[5]) Article 30 TAR NC

7. Description of the Czech gas system

Compared with the systems in other EU member states, the Czech gas transmission system has its specificities in certain respects. The specificities of the Czech transmission system must be taken into consideration when implementing the TAR NC. This chapter describes the historical development and the root causes of the system's specific features.

7.1. Gas flow and consumption in the Czech Republic

Chart 1 shows the gas quantity entering the Czech Republic (green columns) and the gas quantity exiting the Czech Republic (red columns) between 2007 and 2016. The chart also shows annual gas consumption inside the Czech Republic (the black interconnecting line). The chart shows that the Czech transmission system has primarily been designed as a transit system, as the gas flows across the Czech Republic to other countries constitute a markedly predominant portion and are three to four times larger than the country's gas consumption. However, it would not be possible to supply gas to other countries downstream of the Czech Republic without such a robust system in place.

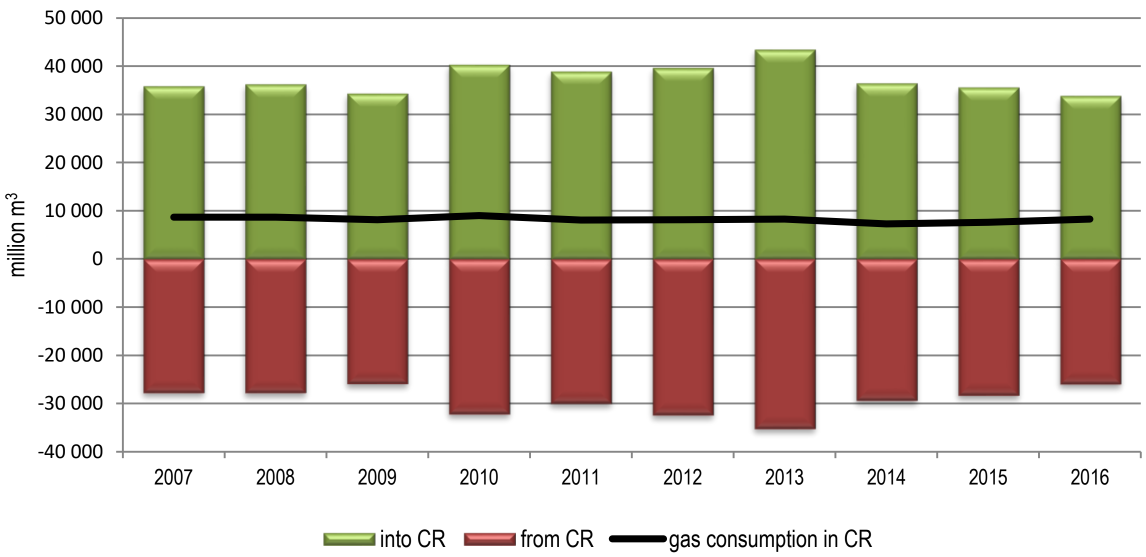

Chart 1 Gas flows into and from the Czech Republic and the country's gas consumption

7.2. The entry-exit model of gas transmission in the Czech Republic

The Czech gas market model is based on the implementation of the third energy package employing a complete entry-exit model. Network users (contracting partners of the transmission system operator) book transmission capacity independently for each entry and exit point of the transmission network (entry/exit). This was the first and foremost requirement of Regulation (EC) No 715/2009 of the European Parliament and of the Council on conditions for access to the natural gas transmission networks. Thus, gas enters the transmission network through the cross-border entry points or the exit points of virtual storage facilities. Gas exits from the transmission network through cross-border exit points, exit points of customers directly connected to the transmission network, entry points of virtual storage facilities, and points of delivery into distribution systems.

In practice this arrangement means, in compliance with the requirements of the third energy package, that gas input into the system at any entry point is available at any exit point. By the same token, every exit point can be regarded as supplied from any entry point. Figure 1 depicts a diagram of the Czech entry/exit model.

In compliance with Regulation 715/2009 the VTP, where network users trade in gas, is located among the above-mentioned points. Thus, the whole of the Czech Republic forms a single balancing zone, i.e. the virtual trading point where all gas trades are registered; an exception is old gas transit contracts, to which the entry/exit regime does not apply. The virtual trading point is therefore not connected with any physical point in the network and is accessible without the need to book entry or exit transmission capacity; these principles are illustrated in Figure 2, which indicatively shows the cumulative gas flows through all entry and exit points of the transmission network. The VTP so designed has made it possible to depart from conventional trading associated with 'making gas physically available', traditionally on the flanges constituting the limits of entry and exit points of the network. The applied, completely flexible approach to capacities at entry and exit points makes it possible for traders to input gas into the system (i.e. to each of the exit points) and to the VTP through any entry capacity. Similarly, a trader who has booked exit capacity has the right to supply gas from any entry point and from the VTP to that point. The trader can therefore limit his activities solely to the entry points if he focuses on gas input into the system, or uses only the exit capacities if the VTP is the source of all of his gas. In addition, the trader has the right to buy and sell gas only at the VTP without having to book entry or exit transmission capacity.

The entry/exit system enables network users to book transmission capacity independently at entry and exit points. This model has been an impetus promoting market development, since it provides network users with a greater flexibility, system transparency, and cost-reflective tariffs. The independence of entry and exit capacities is further underpinned by the VTP at which network users can sell or buy gas. In this configuration gas can easily change hands, and this facilitates gas trade and increases the liquidity of the gas market.

Another characteristic feature of the applied model is the full inclusion of gas distribution in the entry-exit system. The transmission system operator and operators of distribution systems directly connected to the transmission system provide capacity and interconnection at the relevant delivery points. The trader then arranges for capacity only at the level where the gas definitively leaves the system. This arrangement means in practice that a trader supplying gas at the level of distribution needs exit capacities only at this level and is able to meet his contractual obligations from any entry point, including the VTP, while the required capacity at the delivery point between the transmission and distribution systems is covered by a contract between the DSO and the TSO.

The distribution level is therefore part of the balancing zone. The differences between the quantities entering into and exiting from the system (taking account of the transactions at the VTP) are then assessed in aggregate for all entry and exit capacities in the trader's portfolio, regardless of the level of the system.

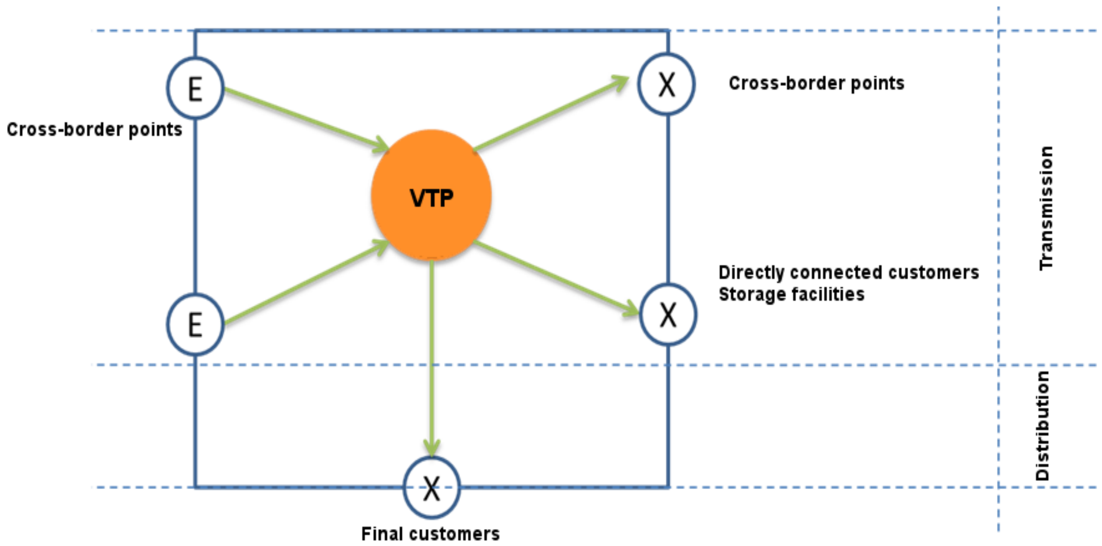

Figure 1 Schematic diagram of the Czech entry-exit system (source: ERO)

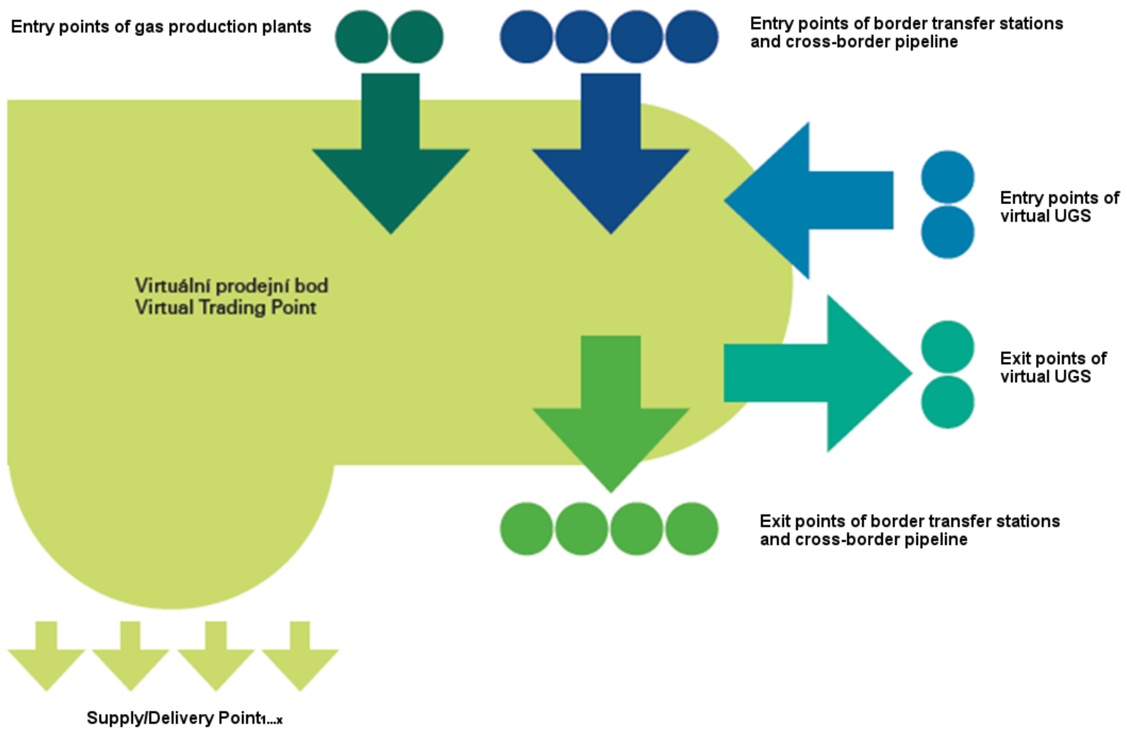

Figure 2 Balancing zone of the Czech gas market (Source: OTE, a.s.)

7.3. The transmission system operator

Based on the legislation contained in the Energy Act, in the case of gas transmission only one exclusive licence for gas transmission has been awarded in the Czech Republic. The transmission system operator is NET4GAS, s.r.o., which operates gas pipelines for international gas transit and national gas transmission having a total length of approximately 3,820 km, with DN 80 to DN 1400 pipes and rated pressures from 4 to 8.4 MPa. The transmission network features a topography divided into four main branches. The northern branch runs from Lanžhot to Brandov/Hora Svaté Kateřiny, the southern branch runs from Lanžhot to Rozvadov, and the western branch interconnects the northern and southern branches in western Bohemia. In the eastern part of the country, the Moravian branch helps to supply gas to Moravian regions and joins the Polish transmission network. The northern, southern and western branches are interconnected at the key junction points in Malešovice, Hospozín and Přimda. Annex 2 contains a map showing the routes.

NET4GAS sells transmission capacity at the individual entry and exit points via which gas transmission takes place.

Upon entering into and exiting from the Czech Republic, gas is ‘delivered and accepted’, that is, gas quantity and quality are metered, at the cross-border transfer stations between the Czech Republic and Slovakia at Lanžhot and at Mokrý Háj; and between the Czech Republic and Germany at Hora Svaté Kateřiny, Olbernhau, Brandov (Saxony), and Waidhaus (Bavaria). Between the Czech Republic and Poland, gas is metered in Cieszyn on the Polish side of the national border.

Gas flows from the long-distance (transit) transmission system into the national transmission system through delivery stations. Through the national part of the transmission network, gas is transported via delivery stations into each of the distribution systems in each of the regions, to customers directly connected to the transmission network, and to storage facilities.

The pressure required in the gas pipelines is maintained by four compressor stations located in the northern branch at Kralice nad Oslavou and at Kouřim and in the southern branch at Veselí nad Lužnicí and at Břeclav. All compressor stations are capable of bidirectional operation. The installed power of the compressors totals 243 MW.

Compressor stations	Kralice nad Oslavou	Kouřim	Břeclav	Veselí nad Lužnicí
Number of turbine sets and their power	5 x 6 MW	5 x 6 MW	9 x 6 MW	9 x 6 MW
	2 x 13 MW	2x 13 MW	1 x 23 MW	
Installed power	56 MW	56 MW	77 MW	54 MW
Total installed power for transmission	243 MW			

Table 1 Compressor stations in the transmission network and their capacities

7.4. The GAZELLE pipeline

In 2011, the Gazelle pipeline, connected with OPAL near Brandov and via the Rozvadov-Waidhaus cross-border transfer station also with the MEGAL transmission network, was exempted from the obligation to allow third party access under the conditions of the Energy Act and from the obligation of the ownership unbundling of the transmission system operator within the meaning of Section 67 of the Energy Act for the period until 1 January 2035 by the ERO’s decision. The European Commission confirmed this in 2011 by its decision to grant an exemption from third party access under Article 36 of Directive 2009/73/EC. Thus, a special status has been granted to Gazelle and not all gas market participants have access to it. Under normal operating conditions, Gazelle is used exclusively for transiting gas from OPAL further down to southern Germany and it is not used for the purposes of supplying the Czech Republic. The above decision exempts a direct forward-flow capacity of up to 30 bcm/year in the Gazelle pipeline from the obligation to allow regulated TPA (Articles 32, 33 and 34 of Directive 2009/73/EC) and from tariff regulation (Article 41 (6), (8) and (10) of Directive 2009/73/EC) for 23 years.

7.5. Long-term contracts

Since the very beginning, the construction and development of the transmission network have been associated with the existence of long-term contracts for gas transport between gas producers and integrated commercial transmission and distribution companies, which formed an integral part of commodity contracts for gas supply. Each of the transit contracts was concluded in parallel with the "mother" gas supply agreement as the necessary condition for performance under the gas supply agreement. For the transmission system operator, the long-term contracts constitute a secure source of funds needed to meet the statutory obligation to ensure safe, reliable, and economical operation. They also support the future upgrade and development of the transmission network[6]), provide for the operability of the whole system, and also create the certainty required for investment in further development[7]).

Thus, due to the high demand for gas from Russian fields, the Czech transmission network features considerable transmission capacities at entry and exit cross-border points (and the corresponding gas pipelines). It is in full compliance with the EU legislation[8]) imposing the obligation to adopt such regulatory measures that will be the guarantee of security of gas supply across the Union and reduce the exposure of individual Member States to the harmful effects of disruptions of gas supply.

Where a Member State's security of gas supply is threatened, there is a risk that measures developed unilaterally by that Member State may jeopardise the proper functioning of the internal gas market and damage the gas supply to customers in other Member States. To allow the internal gas market to function even in the face of a shortage of supply, provision must be made for solidarity and coordination in the response to supply crises, as regards both preventive action and the reaction to actual disruptions of gas supply.

Regional cooperation should therefore help to mitigate the risks and optimise the benefits of coordinated action and also to carry out the most cost-effective measures for consumers in the EU. At the same time, the transmission capacities that are currently being used for gas transport in other than standard situations, such as an unexpectedly high gas demand, must be maintained fully available. The benefits deriving from this regional cooperation, which constitutes one of the key pillars of the internal gas market, should, however, at all times be allocated together with the costs that are necessarily incurred in the implementation of the measures. Taking into account the requirements for the reference price methodology, there is no doubt whatsoever that it is necessary to ensure that there is no discrimination in the form of

[6]) Section 58 (8) (a) of Act No 458/2000 as amended
[7]) Brown, M. H.; Rewey, Ch.; Gagliano, T.: Energy Security; The National Conference of State Legislatures; Denver; 2003
[8]) Regulation (EU) 2017/1938 of the European Parliament and of the Council, Recital (7)

cross-subsidisation[9]) and that significant volume risk related particularly to transports across an entry-exit system is not assigned to final customers within that entry-exit system[10]).

7.6. Distribution systems

Three operators of distribution systems that are directly connected to the transmission network operate in the Czech Republic. They are GasNet, s.r.o., Pražská plynárenská Distribuce, a.s. [PPD in the matrix of distances], and E.ON Distribuce, a.s. In the Czech Republic, 65 (local) distribution systems are also currently registered; they are connected to the gas system through one of the above operators of (regional) distribution systems. Areas served by the regional distribution systems are apparent from Figure 3.

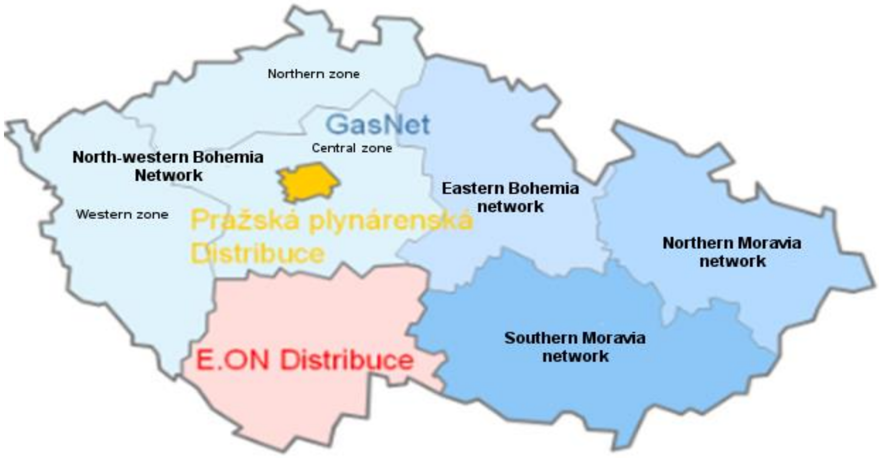

Figure 3 DSOs' areas of operation

7.7. Storage facilities

Storage facilities constitute an important tool with the help of which gas traders in the Czech Republic partly cover and shave the seasonal variations and peaks in gas demand over a year. The system is arranged as follows: in periods of lower gas consumption, gas is injected into the storage facilities, so that in periods of increased gas consumption the storage facilities help traders fill the gap between the current consumption and the current gas import into the country.

As in other EU countries, the liberalised Czech gas market has experienced an expansion of the traditional role of gas storage in meeting the seasonal swings in demand. At present, storage facilities are also used for covering and optimising short-term changes in gas demand, for ensuring security of gas supply, and as an arbitrage instrument for spot trades on organised gas markets.

In this connection, the seasonal differences in gas prices continue to be the principal tool for storage capacity valuation from the users' perspective. The value of storage capacity also includes the opportunity to profit from short-term ups and downs in prices. The third component of the value of storage capacity for users is its contribution to providing for the security of supply to their customer portfolios.

[9]) Article 7(c) of Regulation 2017/460
[10]) Article 7(d) of Regulation 2017/460

Despite the partial shift from its function as a strategic reserve to a tool for short-term liquidity in the gas market, gas storage continues to be a logical element of the gas market and plays an irreplaceable role in providing for its stability.

A special aspect of storage facilities, resulting from the historical logic of the development of the gas infrastructure as the optimum whole, is their participation in ensuring gas supply to the northern Moravia region, for which the transmission system operator has long been indicating – in its Ten Year Transmission System Development Plan – capacity insufficiency in winter when, according to the information provided by the transmission system operator, the transmission system does not have the capacity on its own to meet the maximum daily consumption in the region without assistance provided by the storage facilities in the region[11]).

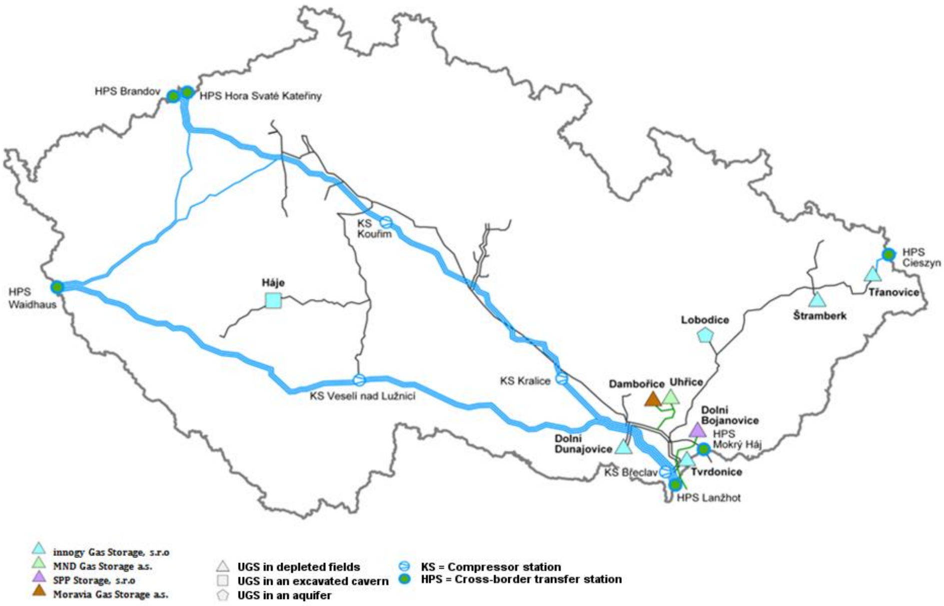

Figure 4 Map of storage facilities in the CR and their connection to the transmission network

7.8. Development of the Czech gas infrastructure

7.8.1. Short-term and mid-term horizon

Over the short term, we can expect the implementation of projects responding to the change of the direction of transit flows across the Czech Republic to Austria, Italy, and southern Germany. These mainly include the expansion of the existing Hora Svaté Kateřiny cross-border transfer station, the construction of a new 25 MW compression station in the Ústecký Region, the construction of a line running in parallel with Gazelle from the Kateřinský potok junction point to the Přimda junction point, and reinforcement of the exit capacity at the Lanžhot cross-border point. The above projects are referred to in aggregate as Capacity4Gas and will be carried out at stages, the completion of which is being planned for 2019 to 2021.

[11]) https://www.net4gas.cz/files/rozvojove-plany/ntyndp18-27_cz_181119schvalen.pdf

For 2022, the completion of the national Moravia pipeline is being planned, and possibly the Moravia Capacity Extension project, the purpose of which is to ensure sufficient exit transmission capacity for northern Moravia, and also a potential additional expansion of capacities in connection with the development of the North-South Corridor[12]). The implementation of the project, in any of the variants being considered and addressed, is associated with an upgrade of the Břeclav compressor station.

If the Moravia project is carried out, in 2022 the STORK II pipeline is also expected to be put into operation; it will interconnect the Czech and Polish gas systems with a sufficient capacity, thereby creating the potential for diversifying gas sources and gas supply routes through interconnection with LNG terminals in Poland and Croatia.

No new storage facility is expected to be commissioned over the medium term; the full capacity of the Dambořice facility will only be put into operation at stages. The transmission system operator and SPP Storage, s.r.o. are preparing a connection between the Dolní Bojanovice facility and the Czech gas system. Following the completion of this project, the ratio of the total capacity of storage facilities and gas demand in the Czech Republic will be 40-48%, and the SEP's requirements will therefore be met with a reserve margin.

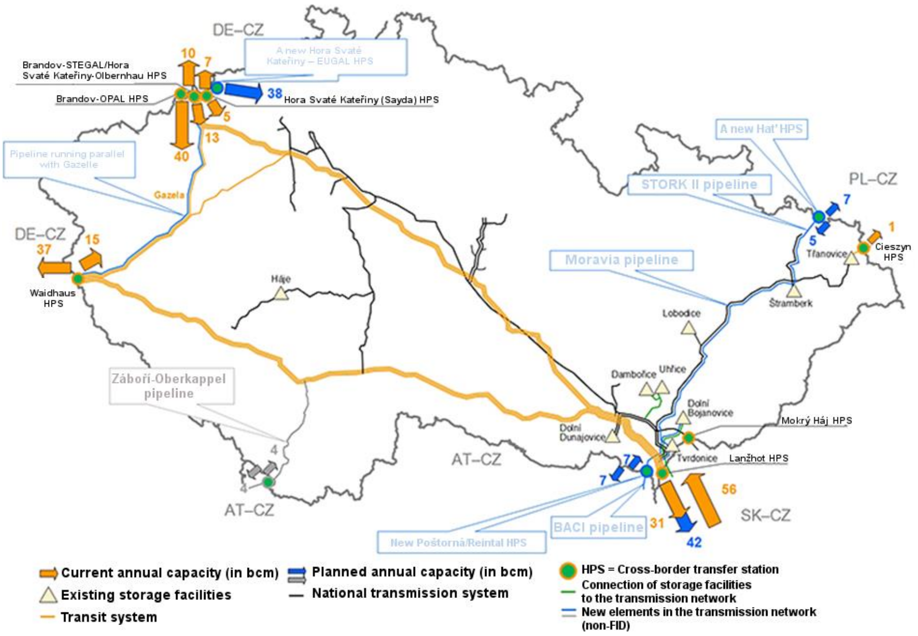

Figure 5 Map of entry and exit transmission capacities at cross-border transfer stations

7.8.2. Long-term horizon

It is not feasible to determine clearly how the supply routes from the south, which are now being prepared or considered (TurkStream, South Corridor, Eastring, etc.), will change the situation in the European gas market. A wider portfolio of gas sources would increase supply in the market and probably strengthen the change of the directions of gas flows in Europe. The entering into long-term contracts is likely to continue to be replaced, to a larger extent, with both medium-term and short-term contracts, with a stronger role of trading at exchanges/pools. Infrastructure development will be strongly tied to and follow the market's

12) https://acer.europa.eu/cs/Gas/Infrastructure_development/EIP_G/NSgiCESEE/Stranky/default.aspx

demand. The Czech transmission network will probably no longer increase its capacity significantly over the long term. From 2035, Gazelle will be opened to third party access (an exemption has been granted only in the Brandov–Waidhaus direction).

In view of the expected growth in gas demand under the SEP scenarios, up to 1.2 bcm of new storage capacity[13]) will have to be put into operation by 2050 to meet the SEP's requirements, depending on the particular scenario, together with matching transmission capacity.

[13]) Report on the electricity and gas demand expected in the future and the method for balancing electricity and gas supply and demand, OTE, a.s., 2017

8. Consultation under Article 28 TAR NC

8.1. Setting the level of multipliers

8.1.1. The general principles for setting the level of multipliers

The transmission network has been designed with a capability to transport large gas flows under peak loads. However, it is utilised only partly under average conditions. Multipliers applied to tariffs for short-term products with a shorter period of validity make it possible to charge more to the network users who contribute to the peak demand than to the network users with a flat profile of transmission requests. When using these multipliers, it is crucial to strike a balance between the efficient utilisation of the network and revenue recovery. Low values of multipliers incentivise traders to shape the profile of their transmission capacity bookings to their own needs, while high values of multipliers should increase their interest in longer-term bookings (yearly or longer bookings).

Thus, the following aspects had to be taken into account when determining the level of multipliers, in compliance with the TAR NC[14]):

- the balance between facilitating short-term gas trade and providing long-term signals for efficient investment in the transmission system,
- the impact on the transmission service revenue and its recovery,
- the need to avoid cross-subsidisation between network users and to enhance cost-reflectivity of reserve prices as much as possible,
- situations of physical and contractual congestion, and
- the impact on cross-border flows.

By their very nature, multipliers therefore determine the level of the price differentiation between capacity products with different durations (yearly, quarterly, monthly, daily, and within-day).

[14]) Article 28 (3) (a) of Regulation 2017/460

Assessment criterion	Low value of the multiplier	High value of the multiplier
The need to avoid cross-subsidisation between network users and to enhance cost-reflectivity of reserve prices	-	+
Preventing situations of physical and contractual congestion	+	+
Facilitate short-term gas trade	+	-
Long-term signals for efficient investment in the transmission system	-	+
Impact on the transmission service revenue and its recovery	-	+
Impact on cross-border flows	0	0

Table 2 Assessment criteria for setting multipliers

Arguments in favour of setting a high level of multipliers:

- It promotes transmission capacity bookings on a yearly basis;
- Traders pay for their peak demand for capacity; it is a cost-reflective parameter.

However, the price for booking transmission capacity for less than a year reflects costs only when used for profile-shaping bookings. At the same time, the forecasts for network usage should be taken into account. If it is not possible to determine such forecasts with an acceptable level of probability, the value of the individual multipliers is a tool for achieving cost pass-through into the applied tariff.

From the perspective of long-term signals for efficient investment in the transmission system it is relevant to note that a low value of multipliers renders yearly capacity products relatively unattractive. Traders are not motivated to use these products in the following gas year. Where clear signals for efficient investment are not provided, there is a risk of insufficient investment in the system. Naturally, it is also true that there is a risk of too high investment having no support in demand for transmission capacity.

Low values of multipliers bring positive benefits for the sale of capacity products on a short-term basis. Transmission capacity bookings will directly correlate with the need to actually use such capacity, such use reflecting the currently prevailing conditions determining demand for gas. Users of the transmission network therefore have at their disposal a very flexible tool for responding to dynamic changes in the market.

Positive benefits of the low and high levels of multipliers can be identified in the aspect of physical and contractual congestion. Low values of multipliers support capacity sales based on the market situation, triggering an effect in the form of lower sales of unused capacity, which makes this a measure directed towards the prevention of contractual congestion. On the other hand, a high level of multipliers provides a signal for efficient investment in the system, which therefore makes this a measure directed towards the prevention of physical congestion.

In the case of impacts on cross-border gas flows, it is not feasible to identify clear-cut arguments for a low or a high level of multipliers. The impact on the cross-border flow is primarily determined by the price differentials between markets and the expected development of this spread. As mentioned above, a low level of multipliers encourages the sale of transmission capacity in relation to the prevailing market situation, which helps traders to respond dynamically to changes in price spreads, resulting in increased cross-border gas flows. On the other hand, a high level of multipliers promotes long-term capacity products. Once the transmission capacity has been bought, it constitutes sunk costs, and any price differential can be used for recovering these costs, which in turn leads to increased cross-border gas flows.

The above clearly suggests that not only one correct solution to the problem of setting the level of multipliers exists. The multipliers should always carry information that the choice of a particular capacity product is a compromise between the costs of acquiring such product and its added value, where both of these factors must be related to the price of the yearly capacity product. The costs of transmission capacity are mainly caused by the size of the demand for this capacity. The transmission system operator maintains an extensive network with sufficient capacity to be able to meet requests for transmission in periods of peak demand. From the perspective of determining the size of the system, transmission capacities are therefore available not only in periods of peak consumption but also for the rest of the year. The costs of providing short-term transmission capacity in the periods of high demand therefore do not differ significantly from the costs of offering capacities during the year.

Since a multiplier = 1 cannot be regarded as adequate and matching the situation in the Czech gas market, it is unquestionably very evident that the multiplier must be higher. Its value must create the conditions for striking a balance between the various capacity products so that each of these products enjoys a justified slot in each trader's capacity portfolio (if the value of the multiplier for the quarterly capacity product is higher than for the monthly product, or if the value is the same, the quarterly product will not have any added value). The baseline assumption for setting multipliers is that a quarterly multiplier is lower than a monthly one, which is lower than a daily one, which is lower than a within-day one (the price for within-day transmission capacity booking is set as 1/24 of the daily price for each hour remaining until the end of the gas day).

8.1.2. Levels of multipliers

When deciding on the levels of multipliers, the ERO considered more than only the assumptions and justification set out in point 8.1.1.

The responses received in the consultation process proposed both increased multipliers and reduced multipliers, in particular the multiplier for within day capacity. The responses that requested an increase in the multipliers proposed in the consultation, argued declining bookings of long-term products for the benefit of short-term products and the context of the developments in Germany. On the other hand, one of the responses demanded a reduction in all multipliers, in particular the one for within day capacity booking from 1.7 to 1.5, arguing a more efficient use of the transmission capacity and a more liquid market.

The ERO has concluded that the higher level of the within day multiplier (1.7) than that of the daily one (1.5), proposed in the consultation, reflects a compromise between the effort to achieve the maximum usage of otherwise unused capacities and the preference for booking transmission capacities with a longer duration (daily) because of the better predictability (and thus also relatively lower costs) of their use compared with the use of within day capacity for only a few remaining hours of the gas day. As part of this consultation, the ERO does not find any room for a further reduction in the coefficients, also due to the declining bookings of long-term products for the benefit of short-term ones.

Based on the above, the multipliers for cross-border points and virtual cross-border points will be set as follows for 2020:

Levels of multipliers	
Capacity product	**Multiplier**
Quarterly	1.1
Monthly	1.25
Daily	1.5
Within-day	1.7

Table 3 Levels of multipliers for 2020

For the subsequent periods, the level of multipliers will be subject to consultation on the draft Price Decision under Section 17e of the Energy Act.

8.2. Setting the levels of seasonal factors and the calculations referred to in Article 15 TAR NC

Seasonal factors for calculating reserve prices for capacity products are not used in the Czech Republic and their introduction in the future is not envisaged. In relation to the earlier consultations on proposals for the rules of gas market functioning in the Czech Republic, no demand for introducing seasonal transmission tariffs was expressed by the users or the operator of the transmission system. The probable reason is the existence of short-term transmission tariffs (see subchapter 8.1 above) that make it possible for transmission network users to structure their capacity requirements to a sufficient extent while taking into account the need to cover the costs caused by short-term transmission products. Because of the size of the Czech transmission network, no cases occur where, for example, a winter season sees shortages of available transmission capacity and such circumstance, and the related higher costs, have to be reflected in the structure of transmission tariffs.

8.3. Discounts referred to in Article 9 (2) and Article 16 TAR NC

In the Czech Republic, no LNG facilities or infrastructure developed with the purpose of ending the isolation of EU member states are currently being operated. Article 9 (2) of the TAR NC will therefore not be applied.

In the Czech Republic, the approach of the ex-post discount, whereby network users are compensated after the actual interruptions occurred, has so far been applied for calculating the reserve prices for capacity products for interruptible capacity. The ERO determines the size of such compensation in a transparent manner.

In the consultation process, a requirement was raised to implement an ex-ante discount under Article 16 (2) TAR NC. The ERO agrees that from the market's perspective, an ex-ante discount for interruptible capacity is a better tool than an ex-post discount. In the Czech Republic, where because of the above-outlined sufficient amount of transmission capacities at all entry and exit cross-border points data is not available on the basis of which it would be possible to determine the probability of interruption required for determining the ex-ante discount at the various entry or exit cross-border points (or, rather, this probability converges to zero), any ex-ante discount would therefore be zero.

Under Article 16 (4) TAR NC, the ex-post discounts will therefore be applied to capacity products for interruptible capacity (through compensation for interruption) in respect of the interrupted part of capacity, amounting to three times the price for daily standard firm capacity. Should an interruption at a cross-border point occur the ERO will analyse the probability of interruption and an ex-ante discount will be implemented for the subsequent period under Article 16 (2) TAR NC.

9. Information published under Article 26 (1) (a) TAR NC

9.1. The current regulatory approach

The ERO regulates the prices for the gas transmission service under Section 19a of the Energy Act. They are set as fixed prices [‘fixed price’ as per the Price Act] and the TSO and network users cannot change them. To provide for the virtual separation of revenue from national transmission and revenue from transit transmission, the pricing process is split. This approach ensures that there are no cross-subsidies or assignment of the volume risk between the transiting users of the network (traders transporting gas across the Czech Republic) and the users of the national part of the network (domestic customers).

The Czech transmission network was built as predominantly a transiting network in the past. The Czech transmission capacity was therefore primarily intended for the purposes of gas supply for other countries (Germany, France, Austria, and Italy) in the past. It is therefore justified that the costs incurred in maintaining transit capacities are defrayed by those network users as part of the entry/exit system and are not assigned to domestic customers who do not need this service.

In the case of prices for the gas transmission service, two different methodologies are used for pricing national transmission and for pricing transit transmission. In respect of national transmission, the revenue cap approach is applied: a precise amount of funds earmarked for the operation, maintenance, and development of the transmission network is determined for the transmission system operator for a calendar year. If the transmission system operator recovers lower or higher revenue, for the next subsequent year its revenue is adjusted by the difference between the allowed and actual revenues. The national part of transmission includes:

- virtual delivery points into distribution networks
- delivery points of virtual storage facilities
- delivery points of customers directly connected to the transmission network
- cross-border entry points into the transmission network to the extent required for supplying customers in the Czech Republic

In respect of transit transmission, the price cap approach, underpinned by international comparisons of transmission tariffs (benchmarking) is applied. As part of TAR NC implementation, it will be replaced with a regime based on costs, depreciation and reasonable profit based on RAB and WACC. Thus, for the transit part of transmission, the transmission system operator is not given any precise amount of revenue that it has the right to recover; the basis is the assumption that a price cap determined by comparing similar transmission systems and routes provides the transmission system operator with an adequate amount of revenue, including cover for the risks related to the operation of transit transmission, because the recovered funds are not then adjusted to any preset level.

The transit part of transmission includes:

- cross-border exit points from the transmission network
- cross-border entry points into the transmission network, but without the part needed for supplying customers in the Czech Republic

9.2. Compatibility of the current regulatory approach with the requirements of Article 7 (d) TAR NC

Because of the expected development of new major gas transport routes and the resulting changes in gas flow directions in the EU, systems with the currently existing transit routes are facing the risk of declining capacity bookings and increasing instability in transmission capacity bookings beyond domestic demand. This volume risk and the related aspects should be addressed with a view to preventing cross-financing between network users and also to preventing any reduction in the capacities used for the purposes of supplying gas to other countries, even though their full usage occurs with a low intensity only.

The applied model of TAR NC implementation addresses the situation where the volume risk, i.e. the risk of insufficient bookings of technical capacities and covering the related costs, cannot be defrayed by the domestic users of the network in fairness. This requirement is all the more visible due to the fact that the advantages related to the technical capacity in question are being enjoyed by other network users, i.e. the transmission system is used for transporting gas to final customers in other market areas. This mainly includes systems with a very large proportion of capacities dedicated to transit flows, which are determined by the capacity at cross-border exit points, but with significantly volatile transmission capacity bookings.

If the transmission system operator accepts the volume risk for the ‘transit’ part of the technical capacities in the system and the recovery of the related revenue is based on the price cap regime, revenue will necessarily be differentiated as well. To prevent cross-subsidisation, it would be necessary to separate the revenue the recovery of which is guaranteed by the domestic users of the network in the revenue cap regime from the revenue from transit transmission the recovery of which is not guaranteed in the Czech Republic due to the price cap regime. Because of the different levels of risk deriving from the regulatory mechanism employed, this fact has been taken into account when setting revenue for national transmission and revenue for transit transmission. It is therefore relevant that the model employed for implementing the TAR NC contains a solution whereby the costs are transparently allocated to the users of the national part of the network and to customers in other market areas, who use only the transit part of the network, because at the end of the day it is those customers who have necessitated such costs. This requires an opportunity for a clear-cut identification of the needs of transit and of the needs of domestic customers, and for reflecting these needs in a methodology the mechanisms of which meet the key requirements of the TAR NC, including the provision in Article 7 (d), which requires to ensure that volume risk related particularly to transports across an entry-exit system (i.e. the transit part of the network) is not assigned to final customers within that entry-exit system. At the same time, the applied solution takes into account the requirements of Regulation 2009/715/EC to the full extent.

9.3. Description of the proposed reference price methodology

9.3.1. General pricing assumptions

Because of the long-term dominant role of gas transmission for neighbouring countries' needs through the Czech transmission system, different regulatory regimes have to be applied to national gas transmission and international gas transmission, primarily to shelter the domestic customers from the risks of changes in bookings for transit purposes.

National transmission, characterised by stable and long usage, is regulated employing the revenue cap method based on actual or expected costs, while the regulation of international transmission is based on the price cap method.

With the transition to the cost-reflective methodology for international transmission regulation, also related to the implementation of the TAR NC requirements, the ERO considers (in line with Article 7 (d) TAR NC) that in the Czech Republic, a country with predominating international gas transmission, the volume risk related to this transmission should not be assigned to domestic customers. The ERO therefore retains the current method of price controls, i.e. revenue cap, for national transmission, and applies the price cap regime to international transmission, taking into account the higher risk deriving from the uncertainty as to the level of transit transmission bookings.

The risk entailed in transit flows in the Czech Republic is considerably higher than in some other countries that are *de facto* transit countries for other countries having no opportunity to change the direction of their gas imports over the medium term. On the contrary, from the long-term perspective, gas transit across the Czech Republic is directed to countries that are able to change their gas resources completely (for example, switching over to LNG, using a different transport route for Russian gas, or new gas resources in the Mediterranean). The risk premium reflects the fact that after the long-term contracts terminate, the transmission system operator will still have gas pipelines for which it will have no use but which will not yet have been depreciated in full, see point 9.3.3.

The application of the TAR NC rules to 2020 has to take into account that 2020 will also be the last year of the fourth regulatory period, governed by the regulatory rules set out in the *Principles*.

Since the TAR NC is legislation with a higher legal force, and therefore has to be implemented in the regulatory principles at the national level to the required extent, the Decision takes into account the following assumptions under Article 27 (4) TAR NC:

- In respect of national gas transmission, for 2020 ensure the compatibility of the application of the TAR NC rules with the regulatory rules for the fourth regulatory period, in particular as regards the setting of the allowed revenue subsequently used for applying the selected reference price methodology for calculating transmission tariffs;
- Through this Decision, provide the transmission network users with methodological and pricing information not only concerning 2020 but also offering an outlook for the potential evolution of the tariffs beyond 2020. Through this Decision, such outlook is

being provided until 2025, i.e. it also covers the minimum expected duration of the fifth regulatory period[15]). Taken together with the publication of the simplified tariff model under Article 30 (2) (b) TAR NC, the outlook contributes to a reasonable level of transparency and predictability of tariff changes for network users. The ERO is convinced that this approach meets the objectives of TAR NC as expressed in the reasons for its adoption; see TAR NC, Recital (2).

9.3.2. Setting the allowed and target revenues for the transmission system operator

The baseline assumptions for determining the expected allowed revenue and target revenue for calculating the transmission tariffs specified in this document include the following:

- Allowed revenue in respect of national gas transmission in 2020 has been set under the methodology applicable to the fourth regulatory period;
- Target revenue in respect of international gas transmission in the period 2020-2025 and allowed revenue in respect of national gas transmission in the period 2021-2025 are based on the planned investment and depreciation, planned operational expenditures, and WACC applied to RAB (adjusted by the planned investment and depreciation). When setting allowed revenue for the fifth regulatory period, the costs planned for 2021-2025 will be further analysed and the ERO will set the final amount of the eligible costs that may potentially have an impact on price setting and on the presented models;
- The relevant capital and operational expenditures have been split between international and national gas transmission using the same mechanism that was used for setting the conditions for the fourth regulatory period. The split is based on the allocation of particular parts of the transmission network to national purposes and to transit purposes using an allocation ratio, and the splitting of the costs shared by transit and national usage. The split reflects the use of the system for national purposes vs. transit purposes based on capacity, distances, pressure losses, and typical usage for a given type of transmission over a year. This allocation therefore means that the entire part of the gas pipelines and other components of the transmission system, which are used only for the needs of intra-system customers (typically gas pipelines of smaller dimensions and pressures) and 19.2% of gas pipelines used for supplying both intra-system and cross-system customers (typically gas pipelines of larger dimensions and compression stations) are allocated to intra-system customers. Thus, 80.8% of gas pipelines used for both intra-system and cross-system customers have been allocated to customers using the cross-system network.
- Because of the planned change in capacity booking and the considerable reinforcement of the capacity in the Brandov-Lanžhot direction, and also potential other investments to boost both transit and national transmission, the value of the allocation ratio will be verified and specified more accurately as part of determining the parameters for the fifth

[15]) In connection with the fifth regulatory period the ERO notes that the principles and parameters for the fifth regulatory period have not yet been determined and are not covered by this Decision.

regulatory period[15]), and the result of this re-calculation of the allocation will probably be felt in pricing and will influence the calculation models[16]).

Because of the higher risk entailed in international gas transmission, for which the ERO does not expect the coverage of under- or over-recovery of revenue from transmission services or the existence of a regulatory account and its reconciliation over time, the risk premium on the reference value of the regulated rate of return (WACC) will be used as the primary tool to take this risk into account (Article 17 (2) TAR NC).

9.3.3. Reference WACC and risk premium

Whereas:

- A methodology for determining WACC does not yet exist for international gas transmission,
- the consultation process for setting the regulatory rules, including the rules for WACC for the fifth regulatory period, has not yet been launched, and
- in the light of the historical development of government bond rates, being the key parameter for WACC calculation using the CAPM regulatory methodology, it is most likely that the value of the average risk-free rate of return will be changed for the fifth regulatory period compared with the fourth regulatory period,

the ERO uses, for the purposes setting the transmission tariffs set out in this Decision and in line with the CAPM methodology employed, the reference regulated rate of return for the application of the revenue cap regime, which [i.e. the reference rate of return] is determined based on the changing market conditions, with a different value than for the fourth regulatory period. The final level for the fifth regulatory period will be determined later.

In addition to this reference level, the ERO uses a risk premium in the case of the application of the price cap regime; in the calculation of the resulting WACC the risk premium will be applied as a premium on only a part of the cost of equity calculated in the reference WACC.

As part of the consultation and ACER analysis, a comment was raised that the amount of the risk premium is not sufficiently specified and justified. The ERO therefore adds a more detailed explanation below.

The C4G project and its share of the transmission system operator's assets play a crucial role in the ERO's decision-making on the amount of the risk premium. When evaluating the risks accepted by the transmission system operator in respect of international gas transmission, and the associated risk premium applied above the level of the reference rate of return, WACC (i.e. above the level corresponding to the selected revenue cap regime in respect of national transmission), for the relevant period 2020-2025 the ERO has primarily taken into account the very small number of traders who book capacity at the cross-border points of the transmission system, in particular for the C4G project, and also the size and duration of traders' booked capacities at cross-border points (including the plan) and the amount of the forecasted revenue under historical transmission contracts.

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[16]) These calculation models are based on the data and information known as at the day on which the decision under Article 27 TAR NC was issued.

The ERO has concluded that in view of the limited number of traders with a low rate of bookings of longer-term capacities, there is a higher level of uncertainty and a low level of the diversification of the risk related to the future recovery of costs, both those already spent and expected costs. The existence of long-term capacity bookings from the auction held in 2017 can clearly be evaluated as a positive factor that reduces the risk, but a considerable risk continues to exist on the part of the diversification of the traders who book capacities.

It can be noted in the light of the above circumstances that the risk associated with cross-system capacity bookings is higher than the risk associated with intra-system capacity bookings, and not only due to the different regulatory method but also due to the profile of the customers. It is difficult to determine this risk on the basis of a probabilistically supported volatility of booked capacities. Thus, when determining the risk premium, the ERO relied not only on the volume risk but also on the credit risk of the dominant trader who books long-term transmission capacities. The result was the setting of a risk premium of 1.92% related to return on equity (related to the reference WACC, the value is 1.46%) to reflect the impact of forecasted revenue under the historical transmission contracts that terminate in 2020 and 2021 (the existence of these contracts reduces the risk premium).

The revenue associated with the application of this risk premium is very clearly assigned to international transmission, i.e. directly allocated to the cross-border exit points of the transmission network, to prevent influence on the tariffs for national transmission, which is subject to a different regulatory regime, i.e. that of revenue cap.

The Decision refers to two amounts of target revenue, namely target revenue containing revenue derived from the risk premium (i.e. such as the transmission system operator recovers) and target revenue without revenue derived from the risk premium (for the purposes of model calculations).

9.3.4. Pricing assumptions and method

The pricing assumptions for the period 2020-2025 include the following:

- The planned values of investment and depreciation with an impact on the RAB value and also operational expenditures are causing a significant year-on-year volatility of regulated revenue, also as a consequence of the C4G, Moravia and STORK II projects, the implementation of which is expected between 2019 and 2023, which is also borne out by the following table of the TSO’s planned investment (CAPEX):

CZK million	2020	2021	2022	2023	2024	2025
Planned investment (CAPEX)	1 406.0	9 852.0	5 195.5	6 235.9	636.7	723.9

Table 4 Planned investment (CAPEX)

- The C4G project will also cause gradual year-on-year increases in the booked capacities planned, see Table 5, in particular on the part of cross-system network users (international transmission), which would exacerbate the volatility of prices in the period under review if the prices were directly derived from the unstable values of allowed/target revenue.

MWh/day/year	2020	2021	2022	2023	2024	2025	Average
Planned ENTRY capacity, cross-system	927 563	1 262 393	1 141 742	1 258 642	1 267 742	1 270 142	1 188 037
Planned EXIT capacity, cross-system	927 563	1 262 393	1 141 742	1 258 642	1 267 742	1 270 142	1 188 037
Planned ENTRY capacity, intra-system	338 520	349 759	373 379	321 558	322 657	320 757	337 772
Planned EXIT capacity, intra-system*	583 078	583 078	583 078	583 078	583 078	583 078	583 078
Planned ENTRY capacity, storage facilities	117 524	117 524	117 524	117 524	117 524	117 524	117 524
Planned EXIT capacity, storage facilities	127 433	127 433	127 433	127 433	127 433	127 433	127 433

*) regional distribution systems + directly connected customers

Table 5 Booked capacities planned

In the case of intra-system network users (national transmission), no volatility of booked capacities is envisaged and they have been planned as stable for the whole period.

A view appeared in the consultation and the ACER analysis that the selected pricing methodology based on NPV neutrality of revenue in the period 2020-2025 is not adequately cost-reflective due to the transfer of a part of revenue in time (the requirement of Article 7 (b) TAR NC) and that this approach potentially complicates the functioning of the regulatory account in the revenue cap regime.

Based on an analysis of the feasible solutions the ERO has concluded that the required principles of cost-reflectivity are fully preserved in the proposed system, but also that the benefits deriving for customers from the use of the selected NPV neutral pricing methodology are very clear, namely for the following reasons:

- The selected NPV neutral pricing methodology adequately reflects the pricing impacts of the strategically important incremental project, C4G, whose expected total investment costs over the period from 2019 to 2025 amount, in a comparison based on the nominal value, to more than 40% of the value of the regulated asset base (the aggregate RAB of the inter-system and cross-system infrastructure) at the beginning of this period. Not applying this methodology would considerably impair the requirement for stability of prices and requirements of Article 7 (b) TAR NC.
- The methodology helps to achieve predictable and stable prices for customers in the upcoming fifth regulatory period, which an alternative pricing methodology based on the continuous development of revenue (‘pay-as-you-go’) and gradually increasing capacity bookings do not make possible, because in the above-mentioned period it is too dependent on, primarily, the year in which the major C4G incremental infrastructures will come into service and also on the related operational expenditure.
- From the general perspective, the proposed NPV methodology reflects and takes into account the fact that return on assets that are part of gas infrastructures takes a longer time to materialise.

The applied methodology is *de facto* an NPV-modified version of the conventional regulatory payback scheme, which ensures in real terms (i.e. in prices net of the actual inflationary increase) an impact on customers which is identical in terms of prices and fair in the period from 2020 to 2025 and therefore meets the requirements of Article 7 (b) NC TAR.

The ERO has also carefully considered the objection that this NPV methodology may cause problems with the functioning of the regulatory account in respect of the revenue cap regime and intra-system revenue. The ERO believes that in methodological and analytical terms, it is not complicated to reflect this fact in the adopted form of regulation correctly; nevertheless, the ERO will decide on the final system design that would include the relevant corrections only as part of the consultation and rules for the fifth regulatory period.

In the light of the above circumstances the ERO has based the setting of transmission tariffs on the value of average capacities for 2020 to 2025 and also, together with this, introduced a calculation mechanism that will ensure the dependence of the variations of regulated prices on the inflation index (2.3% p.a.[17]) and the neutrality of the net present value (NPV) of revenue in the period under review, provided that changes in the parameters set for the fifth regulatory period will be taken into account.

9.3.5. Illustration of the proposed approach

Table 6 shows projections of revenue (the sum of target revenue, including the risk premium, and allowed revenue) calculated on the basis, which is continuously evolving year-on-year, of underlying capital and operational expenditures, together with a calculation of NPV neutral revenue, which subsequently generate the required year-on-year profile of capacity-based tariffs (without including revenue from transmission services recovered from commodity-based transmission tariffs, i.e. a flow-based charge recovered at the exit points of the transmission network):

CZK thousand	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Forecasted regulated revenue on a continuous basis	5 686 960	6 231 214	6 696 455	7 363 904	7 327 868	7 266 094
Year-on-year change		9.6%	7.5%	10.0%	-0.5%	-0.8%
NPV neutral revenue*	6 378 834	6 523 026	6 670 541	6 821 456	6 975 852	7 133 811
Year-on-year change		2.3%	2.3%	2.3%	2.3%	2.3%

Discount factor		102%	104%	106%	109%	111%
Discounted continuous revenue	5 686 960	6 103 050	6 423 822	6 918 802	6 743 334	6 548 960
Total						**38 424 928**
Discounted NPV neutral revenue	6 378 834	6 388 860	6 398 962	6 409 141	6 419 398	6 429 732
Total						**38 424 928**

* NPV neutrality of revenue calculated to generate inflation-indexed tariffs for average capacities

Table 6 Projected development of revenue

[17]) This is a value for the purpose of the model.

CZK thousand	2020	2021	2022	2023	2024	2025
Continuous base of revenue – implicit tariffs for capacity*						
ENTRY	2 055	1 801	2 051	2 169	2 145	2 127
Year-on-year change		-12.4%	13.9%	5.8%	-1.1%	-0.9%
EXIT	1 736	1 579	1 808	1 870	1 852	1 834
Year-on-year change		-9.0%	14.5%	3.4%	-0.9%	-1.0%

NPV neutral revenue base – implicit tariffs for capacity*						
ENTRY	1 941	1 985	2 030	2 075	2 122	2 171
Year-on-year change		2.3%	2.3%	2.3%	2.3%	2.3%
EXIT	1 680	1 718	1 757	1 796	1 837	1 879
Year-on-year change		2.3%	2.3%	2.3%	2.3%	2.3%

* 50/50 ENTRY/EXIT revenue split

Table 7 Tariffs on the postage stamp principle

Table 7 shows a calculation of the relevant tariffs on the postage stamp principle, using continuously evolving revenue and continuously evolving capacities, compared with the use of NPV neutral revenue and average capacities (the used capacities are shown in Table 5).

The contribution of the NPV neutralisation of revenue and of the use of average capacities to the stability of prices required by the TAR NC is very evident from the results shown above, because the year-on-year volatility of tariffs in the case of using continuously evolving revenue and continuously evolving capacities (the evolution of which is strongly affected by the launch of the above-mentioned key development project, C4G) is too strong and, in addition, any changes caused by the capitalisation [i.e. posting to assets] of capital expenditure reflecting the actual progress in C4G construction would heavily influence the stability of prices.

It is noteworthy that although the NPV of neutralised revenue required for achieving inflation-indexed tariffs, for example in 2020 (CZK 6,378.8 million), significantly exceeds revenue in the case of the regulatory approach based on continuously evolving revenue (CZK 5,686.9 million), the NPV revenue is not any realistically attainable/actual revenue but only a sort of a calculation base serving for price setting deriving from the requirement for inflation-indexed tariffs increasing over time and using average capacities in the period under review. In reality, 2020 would see recovery of revenue based not on average but on actual (expected) capacities, i.e. significantly lower as indicated by the following calculation:

- At entry points: 1,941 x (927,563+338,520+117,524) = CZK 2,685.3 million,
- At exit points: 1,680 x (927,563+583,078+127,433) = CZK 2,751.8 million,

i.e., a total of CZK 5,437.2 million of revenue expected to be recovered from network users in the selected year, which would even be CZK 249.8 million less than in the case of using continuously evolving regulated revenue (CZK 5,686.9 million). The proposed procedure therefore does not damage the network users for whom the capacity booking tariffs at the beginning of the selected period would increase considerably in the case of continuously evolving revenue and continuously evolving capacities, which is also evident from a simple comparison of the tariffs in question in Table 7 above.

9.3.6. Reference price model under TAR NC – capacity weighted distance reference price methodology (CWD) with entry-exit split 50/50

In compliance with the requirements of the TAR NC, the final decision contains a calculation of the reference model to facilitate a comparison with the selected model. The reference model calculation of tariffs is based on the following assumptions:

- Operational expenditures, depreciation, and profit are the building blocks of allowed revenue for intra-system (national) transmission and target revenue for cross-system (international) transmission;
- The sum of allowed revenue and target revenue entering the CWD calculation in the period 2020-2025 is subject to the principle of NPV neutralisation described in point 9.3.5, including the use of average capacities for this period;
- The profit for national transmission is calculated based on a WACC of 7.94% for 2020, and thereafter 6.72% for 2021 to 2025, applied to the RAB;
- The profit for international transmission is calculated based on a WACC of 8.18% applied to the RAB;
- The values used for the period 2021-2025 are the parameters foreseen for the fifth regulatory period and have not yet been set; their level will have an impact on prices for these years;
- Use of the capacity weighted distance reference price methodology (CWD), with entry-exit split 50/50 (Article 8 TAR NC);
- A discount of 70% applied to tariffs for underground storage facilities (Article 9 TAR NC); the determination of the final level of the discount is described in point 9.3.8;
- Equalisation of tariffs for homogeneous groups of points (Article 6 (4) (b) TAR NC) for distribution system operators, one of the reasons being that GasNet, s.r.o., as the largest distribution system operator, provides services to customers located over most of the Czech territory; i.e., if tariffs between distribution systems are not equalised the relevant granularity would also have to be introduced among GasNet s.r.o.'s customers in order to be able to regard the system as balanced. Since the prices for national transmission are included in the prices for gas distribution, the system of non-equalised tariffs would also be very challenging for implementation on the part of GasNet, s.r.o. For this reason the ERO has not accommodated a comment raised in the consultation, requesting the separation and calculation of prices for an individual directly connected customer.

The splitting of costs between international and national transmission, as the springboard for creating separated target revenue and allowed revenue, has only been used for preserving the possibility to apply two different regulatory regimes (revenue cap and price cap) and different rates of return to the relevant assets due to different risks. Nevertheless, both target revenue and allowed revenue enter the reference price calculation using the CWD methodology as a sum, and the specific revenue generated and contained in it through the risk premium is directly allocated to the exit interconnection points of the network.

Under the above conditions, the inputs into pricing in the period under review are as follows:

Revenue - capacity (CZK thousand)	2020	2021	2022	2023	2024	2025
Allowed revenue	1 635 158	1 679 733	1 725 538	1 772 608	1 820 979	1 870 685
Target revenues w/o revenue from risk premium	4 266 774	4 356 376	4 447 860	4 541 265	4 636 632	4 734 001
Revenue from risk premium	476 902	486 917	497 142	507 582	518 241	529 124
Target revenue incl. risk premium	4 743 676	4 843 293	4 945 002	5 048 847	5 154 873	5 263 126
Total revenue	**6 378 834**	**6 523 026**	**6 670 541**	**6 821 456**	**6 975 852**	**7 133 811**

Name of point	Booked contracted capacities					
ENTRY (MWh/d/yr)	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
VIP Brandov	1 422 188	1 422 188	1 422 188	1 422 188	1 422 188	1 422 188
Lanžhot	54 080	54 080	54 080	54 080	54 080	54 080
VIP Waidhaus	18 774	18 774	18 774	18 774	18 774	18 774
Cieszyn (Český Těšín)	0	0	0	0	0	0
Hať	30 767	30 767	30 767	30 767	30 767	30 767
UGS	117 524	117 524	117 524	117 524	117 524	117 524
TOTAL	**1 643 333**	**1 643 333**	**1 643 333**	**1 643 333**	**1 643 333**	**1 643 333**
intra-system	455 295	455 295	455 295	455 295	455 295	455 295
cross-system	1 188 037	1 188 037	1 188 037	1 188 037	1 188 037	1 188 037
EXIT (MWh/d/yr)	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
VIP Brandov	36 786	36 786	36 786	36 786	36 786	36 786
Lanžhot	1 064 629	1 064 629	1 064 629	1 064 629	1 064 629	1 064 629
VIP Waidhaus	23 611	23 611	23 611	23 611	23 611	23 611
Cieszyn (Český Těšín)	4 877	4 877	4 877	4 877	4 877	4 877
Hať	58 133	58 133	58 133	58 133	58 133	58 133
DSO+DDC	583 078	583 078	583 078	583 078	583 078	583 078
UGS	127 434	127 434	127 434	127 434	127 434	127 434
TOTAL	**1 898 550**	**1 898 550**	**1 898 550**	**1 898 550**	**1 898 550**	**1 898 550**
intra-system	710 512	710 512	710 512	710 512	710 512	710 512
cross-system	1 188 037	1 188 037	1 188 037	1 188 037	1 188 037	1 188 037

Table 8 Input values for price setting in CWD models

Please note the pass-through of the risk premium contained in the cost of equity in WACC for international transmission into the target revenue; for example, in 2020 this creates a value of CZK 476.9 million (10.1% of the target NPV neutral revenue in 2020). In terms of methodology, the risk premium is treated the same way as indicated in point 9.3.5, i.e. with a view to making it possible to achieve NPV neutrality of revenue and the required inflation-indexed evolution of prices also when the risk premium is reflected.

Table 9 lists the overall results after equalising the tariffs at exit points of distribution system operators, including users directly connected to the transmission system operator's network (homogenisation under Article 6 (4) (b) TAR NC), as follows:

ENTRY (CZK/MWh/d/yr)	2020	2021	2022	2023	2024	2025
VIP Brandov	1 968.4	2 013.2	2 058.9	2 105.8	2 153.7	2 202.8
Lanžhot	1 191.3	1 218.3	1 246.0	1 274.4	1 303.4	1 333.1
VIP Waidhaus	2 107.3	2 155.2	2 204.3	2 254.4	2 305.7	2 358.2
Cieszyn (Český Těšín)	515.8	527.6	539.6	551.8	564.4	577.3
Hať	515.8	527.6	539.6	551.8	564.4	577.3
UGS	269.5	275.6	281.9	288.3	294.9	301.6

EXIT (CZK/MWh/d/yr)	2020	2021	2022	2023	2024	2025
VIP Brandov	2 290.4	2 341.7	2 394.2	2 447.9	2 502.8	2 559.0
Lanžhot	2 132.9	2 180.7	2 229.6	2 279.6	2 330.7	2 383.0
VIP Waidhaus	1 173.4	1 199.7	1 226.6	1 254.1	1 282.3	1 311.0
Cieszyn (Český Těšín)	3 193.9	3 265.5	3 338.7	3 413.6	3 490.2	3 568.5
Hať	3 147.3	3 217.8	3 290.0	3 363.8	3 439.2	3 516.4
DSO + DDC	1 324.6	1 354.8	1 385.6	1 417.2	1 449.4	1 482.5
UGS	582.7	595.9	609.5	623.4	637.6	652.1

Revenue (CZK thousand)	2020	2021	2022	2023	2024	2025
Revenue at entry points	2 950 966	3 018 055	3 086 699	3 156 937	3 228 805	3 302 343
Revenue at exit points	3 427 868	3 504 972	3 583 841	3 664 519	3 747 047	3 831 468
Total revenue	**6 378 834**	**6 523 026**	**6 670 541**	**6 821 456**	**6 975 852**	**7 133 811**
Revenue for intra-system use	1 524 550	1 559 220	1 594 695	1 630 993	1 668 134	1 706 138
Revenue for cross-system use	4 854 282	4 963 804	5 075 844	5 190 461	5 307 716	5 427 670

CAA test (art. 5 TAR NC)	2020	2021	2022	2023	2024	2025
Comparison index incl. risk premium	23.3%	23.3%	23.3%	23.3%	23.3%	23.2%
Comparison index w/o risk premium	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%
Difference between allowed revenue and intra-system revenue, CZK thou	110 608	120 513	130 843	141 616	152 845	164 547

Table 9 Prices emerging from the CWD 50/50 model

In this variant, the capacity cost allocation comparison index under Article 5 (3) (c) TAR NC is approximately 23%; it is 12.5% when the risk premium is not reflected. The ERO considers that the risk premium should not be included in the calculation of the capacity cost allocation comparison index under Article 5 (3) (c) TAR NC, because it expresses a price increase associated with the risk of transit transmission, which is allocated to transit transmission users at cross-border exit points. The ERO regards revenue net of the risk premium as comparable between national and transit transmission.

This variant, where the entry-exit revenue split is 50/50, does not ensure equality between allowed revenue and intra-system revenue, and the deficit so arising would therefore be assigned to cross-system network users in the amount shown in the bottom row of Table 9.

9.3.7. The target model – capacity weighted distance reference price methodology (CWD) with optimised entry-exit revenue split

For the purposes of the target model, this point uses the assumptions in point 9.3.6, but these are not reiterated here. Individual changes compared with the reference model are only set out in the following.

Although the use of the reference model in point 9.3.6 when regulated revenue is entry-exit split 50/50 almost satisfies – when the impact of the risk premium is not included – the test of the capacity cost allocation comparison index under Article 5 (3) (c) TAR NC, the objective of further procedure was to determine a revenue split and modifications to the reference model, which would achieve even more favourable results in this test while meeting additional objectives of TAR NC implementation.

Another objective of TAR NC implementation was finding a revenue split that would minimise disruption in the continuity of new prices with the current prices (i.e. between 2019 and 2020), since we also have to take into account that in the Czech Republic, there already exist long-term transmission capacity bookings for fixed prices [as per the Price Act] (which are only subject to future indexation to inflation) at the entry and exit interconnection points of the network, which have originated from the auctions of transmission capacities held in 2017, and this creates a relevant and long-term price benchmark (and possibly also the risk of arbitraging against these prices).

By the same token, the whole market is positioned for several coming years (big customers usually buy gas for a few years ahead) and a major change in the setting of prices would have very heavy adverse impacts on the market and, in particular, its proximity with the NCG and GASPOOL markets in terms of prices.

We also expect that the planned merger of the NCG and GASPOOL market areas into a single market area for Germany will trigger the question of the potential future merger of the Czech and German trading zones, i.e. the Czech entry charges would be completely removed and transferred to the exit points. Increasing the portion of entry to 50% in the entry-exit revenue split would not only mean a fundamental change; the change would be quite detrimental from the perspective of the future integration.

Another adjustment to the target model compared with the reference model, ensuring a cost-reflective price allocation, is the fact that after calculating prices in the CWD model, the equality between the allowed and target revenue resulting from calculated prices and the input values is checked. Any (actually very small) difference is re-allocated between cross-border exit points and the distribution system operators' exit point. This ensures that cross-system users and intra-system users pay costs determined for them accurately. In real life, the proposed entry-exit split therefore does not influence the level of the prices paid by cross-system and intra-system users.

The calculated tariffs, following their equalisation at distribution system operators' exit points, including users directly connected to the TSO's network (homogenisation under Article 6 (4) (b) TAR NC), are listed in Table 10.

ENTRY (CZK/MWh/d/yr)	2020	2021	2022	2023	2024	2025
VIP Brandov	801.1	819.4	838.0	857.1	876.6	896.5
Lanžhot	484.8	495.9	507.1	518.7	530.5	542.6
VIP Waidhaus	857.7	877.2	897.1	917.5	938.4	959.8
Cieszyn (Český Těšín)	209.9	214.7	219.6	224.6	229.7	234.9
Hať	209.9	214.7	219.6	224.6	229.7	234.9
USG	109.7	112.2	114.7	117.3	120.0	122.7

EXIT (CZK/MWh/d/yr)	2020	2021	2022	2023	2024	2025
VIP Brandov	3 388.3	3 458.0	3 529.2	3 601.8	3 675.9	3 751.5
Lanžhot	3 155.3	3 220.2	3 286.5	3 354.1	3 423.1	3 493.5
VIP Waidhaus	1 735.9	1 771.6	1 808.1	1 845.3	1 883.2	1 922.0
Cieszyn (Český Těšín)	4 725.0	4 822.2	4 921.4	5 022.7	5 126.0	5 231.4
Hať	4 656.0	4 751.8	4 849.5	4 949.3	5 051.1	5 155.0
DSO + DDC	2 127.7	2 188.8	2 251.6	2 316.2	2 382.7	2 451.1
UGS	930.8	952.0	973.6	995.8	1 018.5	1 041.7

Revenue (CZK thousand)	2020	2021	2022	2023	2024	2025
Revenue at entry points	1 201 043	1 228 348	1 256 287	1 284 873	1 314 124	1 344 054
Revenue at exit points	5 177 791	5 294 678	5 414 254	5 536 583	5 661 728	5 789 757
Total revenue	**6 378 834**	**6 523 026**	**6 670 541**	**6 821 456**	**6 975 852**	**7 133 811**
Revenue for intra-system use	1 635 158	1 679 733	1 725 538	1 772 608	1 820 979	1 870 685
Revenue for cross-system use	4 743 675	4 843 292	4 945 002	5 048 847	5 154 872	5 263 125

CAA test (art. 5 TAR NC)	2020	2021	2022	2023	2024	2025
Comparison index incl. risk premium	14.1%	13.5%	12.9%	12.3%	11.7%	11.1%
Comparison index w/o risk premium	2.9%	2.3%	1.7%	1.1%	0.5%	0.2%
Difference between allowed revenue and intra-system revenue, CZK thou	0	0	0	0	0	0

Table 10 Prices resulting from the CWD model with entry-exit revenue split 20.35/79.65

Based on the methodology used, the achieved split of regulated revenue (allowed and target revenue without the risk premium) between entry and exit points of the network is **20.35% to 79.65%.**

This entry-exit split results in the capacity cost allocation comparison index under Article 5 (3) (c) TAR NC declining to 0.2% to 2.9%, net of the risk premium, while achieving the required price continuity and converging to the long-term price benchmark.

This variant also ensures the equality of allocated and actually recovered and calculated allowed/target revenue, and thus the cost-reflectivity of the whole model.

9.3.8. Discount applied to tariffs for storage facilities under Article 9 TAR NC

The discount applied to tariffs for storage facilities under Article 9 TAR NC attracted the single largest number of responses in the consultation on the TAR NC. The users requested a considerable increase of the discount from the proposed 50% to a level of up to 100%.

As part of its final decision, the ERO has taken into account and evaluated the responses received:

- The setting of the discount level cannot reflect the SSOs' economic situation, because without relevant arguments, this would constitute cross-subsidisation with a negative impact on cross-border trade, and would therefore be contrary to Article 7 (e) TAR NC.

- The savings of costs on the construction of regulating stations deriving from the existence of storage facilities are very limited, since the existence of regulating stations is also necessary in the periods outside the withdrawal season and in cases where no gas withdrawal from the particular storage facility takes place.
- The ERO agrees that the transmission system operator indicates that at present, it is not possible to ensure gas supply to northern Moravia without storage facilities located in that region in periods with a high gas demand, see subchapter 7.7.
- The ERO accepts the argument that operating storage facilities in line with local demand brings a certain locally limited saving on the part of the transmission system operator.
- The fact that storage facilities are located quite close to the dominant future route for gas transmission has been reflected in the methodology for flow-based charges in subchapter 17.1.
- The change in the bookings and flows in the transmission system is resulting in the route growing longer, in particular for transporting gas to storage facilities, compared with the earlier situation with gas flowing from the east to the west.
- The ERO also regards the enhanced security of supply due to the use of storage facilities as a relevant aspect, although the transmission system is sufficiently diversified and the N-1 security criterion is exceeded several times.
- The ERO also regards the contribution to the flexibility of the system as a relevant aspect.

On the basis of the above, the ERO has decided that the current level of the prices for transport to/from storage facilities is not sustainable in terms of costs, since the methodology has not been revised since 2010 and the calculations made as part of TAR NC implementation have highlighted the need to increase the current prices.

On the strength of the above arguments, the ERO has decided to set the discount applicable to tariffs for storage facilities under Article 9 TAR NC at a level of 70%. This discount takes into account the current benefits of storage facilities for the gas system, and in turn the gas market when viewed as a comprehensive whole, and reflects the requirement to avoid double charging for transmissions to and from storage facilities.

The level of the discount applicable to the tariff for transmission from/to the storage facility is based on the configuration and usage of the various elements of the gas system and the storage and transmission capacities known at the time when this Decision was issued. When determining the parameters for the fifth regulatory period, the ERO will again evaluate the level of the discount granted and decide on further steps for reconsidering the granted discount in case of changes in the input assumptions based on which the reference price for the service of transmission from/to the storage facility has been calculated and the discount applicable to this reference price has been granted.

9.3.9. Regulatory account and its reconciliation

The regulatory account and its reconciliation address only the capacity portion of revenue related to intra-system transmission regulated on the revenue cap principle. The reconciliation of the differences associated with the flow-based charge is described in point 17.1.5.

At exit cross-border points, 100% of the revenue is attributable to the price cap regime, which is not covered by the regulatory account. At entry cross-border points, the share of revenue that is not covered by the regulatory account is 78%, and it is therefore apparent that including a correction for entry cross-border points would constitute cross-subsidisation between intra-system and cross-system customers.

Because of the current timing of regulated price setting, the difference between the actual and allowed revenue is not known sufficiently well in advance to enable the setting of its amount before the date under Article 32 (a) TAR NC, when the prices for cross-border points and the prices for points of storage facilities are published.

For the above reasons the regulatory account will be reconciled through prices for the exit domestic point for the following year and through points of storage facilities for the year after the following year. The share of revenue from transmission via points of storage facilities and via the domestic point for the reconciliation of the regulatory account will be determined in compliance with Article 20 (1) TAR NC.

9.3.10. Justification of the compatibility of the proposed method of implementation with the requirements of Article 7 TAR NC

The principles of pricing chosen for the period 2020-2025 and described in the preceding parts of this document bring the following advantages:

- The tariffs are cost-reflective;
- The tariffs are predictable and the calculation methodology constrains their undesirable high volatility caused by the unstable evolution of both the underlying planned expenditure (both capital and operational) as well as capacities in relation to the implementation of the important C4G project;
- There is no cross-subsidisation between intra-system network users and cross-system network users;
- Price continuity with the preceding period (before TAR NC implementation) is preserved, with the exception of tariffs for storage facilities, on which a 70% discount is provided under Article 9 (1) TAR NC and for which the calculations made as part of TAR NC implementation have shown the need to modify the prices (see 9.3.8);
- The tariffs follow the evolution of prices for long-term transmission capacity bookings for fixed prices [as per the Price Act] from 2017, and therefore also satisfy the price benchmark so established an do not constitute a barrier to cross-border trade.

9.3.11. Reasons for dismissing other methodologies

Despite the existence of the above-outlined dual system of price controls in the Czech Republic, there is no need to depart from the CWD methodology proposed in the TAR NC. The ERO strongly prefers the application of the CWD reference price methodology and therefore does not opt for any alternative methodologies, including, e.g., the postage stamp, or for any oversimplifications of the very principles of the CWD methodology.

10. Indicative information about items referred to in Article 30 (1) (a) TAR NC

The selected parameters such as pressures and other input values applied in the transmission network at its delivery points meet the requirement for ensuring the safe, economical, and reliable operation of the transmission system. They also help to keep the delivery pressures and volumes specified in interconnection agreements with other transmission system operators, distribution system operators, storage system operators, and directly connected customers. For historical reasons, this configuration meets the requirements for ensuring reliable supply both in the Czech Republic and in neighbouring countries.

For reference price calculation using the CWD methodology the ERO has determined:

- the localities of the entry and exit points of the transmission network (see 10.1);
- the distances between the entry and exit points of the transmission network (see 10.2);
- the forecasted contracted capacities at entry and exit points (see 10.3);
- the forecasted flows via entry and exit points (see 10.4).

The basic parameters and formulas for calculating reference prices using the CWD methodology are described in Article 8 TAR NC.

10.1. Localities of entry and exit points

The exact identification of the physical locality of each entry and exit point of the transmission network is a prerequisite for calculating distances between these points. Based on discussion in a working group, the ERO has developed a procedure for identifying the physical locality for each of four types of points:

- for virtual interconnection points,
- for interconnection points,
- for delivery points between the transmission system and distribution systems and directly connected customers, and
- for points of storage facilities.

10.1.1. Virtual interconnection points

Under Article 19 CAM NC, VIPs have been established. Capacities will be offered and corresponding tariffs will be set directly at these VIPs.

The Brandov virtual cross-border entry point is composed of the following physical cross-border entry points:

- Hora Svaté Kateřiny;
- Hora Svaté Kateřiny – Olbernhau;
- BRANDOV – OPAL;
- BRANDOV – EUGAL.

The Brandov virtual cross-border exit point is composed of the following physical cross-border exit points:

- Hora Svaté Kateřiny;
- BRANDOV – STEGAL;
- BRANDOV – OPAL;
- BRANDOV – EUGAL.

The ERO has determined, for the purposes of calculating distances, the physical locality of the Brandov VIP at the physical point Brandov EUGAL, which is identical with the Brandov OPAL point, the Brandov STEGAL point, and the Hora Svaté Kateřiny – Olbernhau point, because most of the forecasted contracted capacity is being planned at these points.

The Waidhaus virtual cross-border point is composed of the Waidhaus entry and exit cross-border point. For the purposes of calculating distances, the physical locality of the Waidhaus VIP has been determined at the Waidhaus point, because it is the same point.

	Physical locality of the VIP	Latitude N	Longitude E
Brandov VIP	Physical locality Brandov–OPAL IP, Brandov–STEGAL IP, and EUGAL IP	50.643583865049°	13.373556976147°
Waidhaus VIP	Physical locality Waidhaus IP	49.654283715025°	12.526042103734°

Table 11 Localities of virtual interconnection points

10.1.2. Cross-border interconnection points

For the purposes of calculating distances, the physical locality of the Cieszyn (Český Těšín) cross-border interconnection point is the same as the actual physical locality of this point.

For the purposes of calculating distances, the physical locality of the Hať cross-border interconnection point is the same as the physical locality of the village of Hať, because the Hať point has not yet been created.

For the purposes of calculating distances, the physical locality of the Lanžhot cross-border interconnection point is the same as the actual physical locality of this point.

	Latitude N	Longitude E
Lanžhot	48.717120859458°	17.011401911342°
Cieszyn (Český Těšín)	49.774454790354°	18.605118759951°
Hať	49.946388885012°	18.239444374383°

Table 12 Localities of cross-border interconnection points

10.1.3. Delivery points between the transmission system and distribution systems and directly connected customers

Because of the large number of delivery stations between the transmission system operator and distribution system operators the ERO has decided that these points will be simplified and their number reduced from several dozen to eight points so that only one virtual point is located in each of the regional zones in which distribution companies have historically operated. As part of the simplification, the physical locality of customers directly connected to the transmission network in a given zone is deemed to coincide with the locality of the virtual point determined by calculation.

The technical capacities of each of the delivery stations are based on the transmission system operator's documentation and applicable contracts concluded between the transmission system operator and the operator of a given distribution system. Any technical constraints, such as those for adding up technical capacities, have been taken into account.

Combining entry and exit points into clusters is allowed under Article 8 (1) (c) TAR NC. The coordinate of the virtual point has been determined through the aggregation of the coordinates of delivery stations separately in each of the zones, weighed by their technical capacity. The resulting coordinate is unchanging over time and supports the predictability of tariffs.

Based on its calculations the ERO has set, for the purposes of calculating distances, the resulting physical localities of virtualised delivery points between the transmission system and distribution systems and directly connected customers as follows:

Zone	**Locality of the virtual point**	
	Latitude N	**Longitude E**
Pražská plynárenská distribuce (PPD)	50.087039518302°	14.484842544093°
E.ON Distribuce	49.314431417551°	14.744461272616°
GasNet SZČ (NW Bohemia), central zone	50.007230894443°	14.562733670452°
GasNet SZČ (NW Bohemia), western zone	49.69708806575°	13.228898743743°
GasNet SZČ (NW Bohemia), northern zone	50.457659124801°	13.937673980089°
GasNet, VČ (E Bohemia)	49.927875667723°	15.715734061856°
GasNet, JM (S Moravia)	49.126457403323°	16.840044020521°
GasNet, SM (N Moravia)	49.633564509145°	18.078315135179°

Table 13 Localities of virtual points of DSOs + DCCs

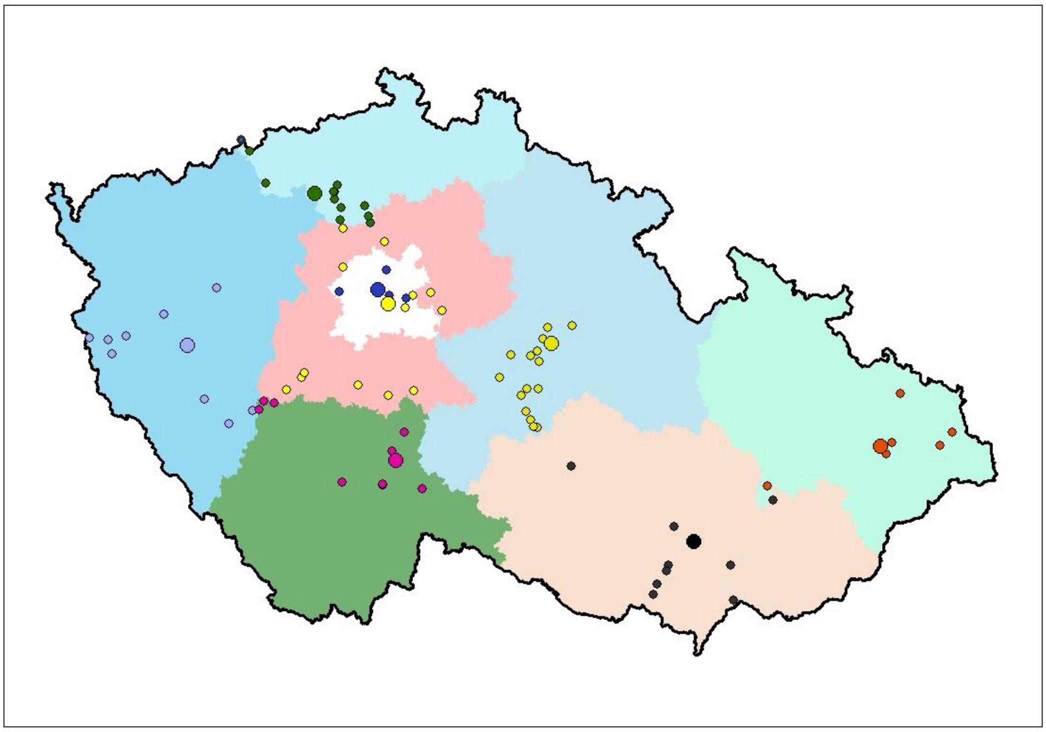


Figure 6 Localities of physical points between the transmission system and distribution systems and directly connected customers in distribution zones and of virtual points

10.1.4. Points of storage facilities

The localities of the physical points of underground storage facilities, whose localities match the eight storage facilities connected to the transmission system, have been aggregated into a single virtual point. The ERO decided to create the coordinate of the aggregated virtual point in two steps:

- In the first step, it created the coordinates of the entry point and the exit point based on aggregating the coordinates of the individual localities of the physical points of storage facilities weighted by their maximum daily withdrawal/injection capacity. Since the maximum daily capacities for withdrawal and injection differ, the result is different coordinates for the virtual entry point of storage facilities and for the virtual exit point of storage facilities.
- In the second step, it used a simple average of these two coordinates to find the coordinate of a single aggregated virtual point of storage facilities.

	Latitude N	Longitude E
Aggregated virtual point of storage facilities	49.335423172241°	17.257684805742°

Table 14 Locality of the aggregated virtual point of the storage facility

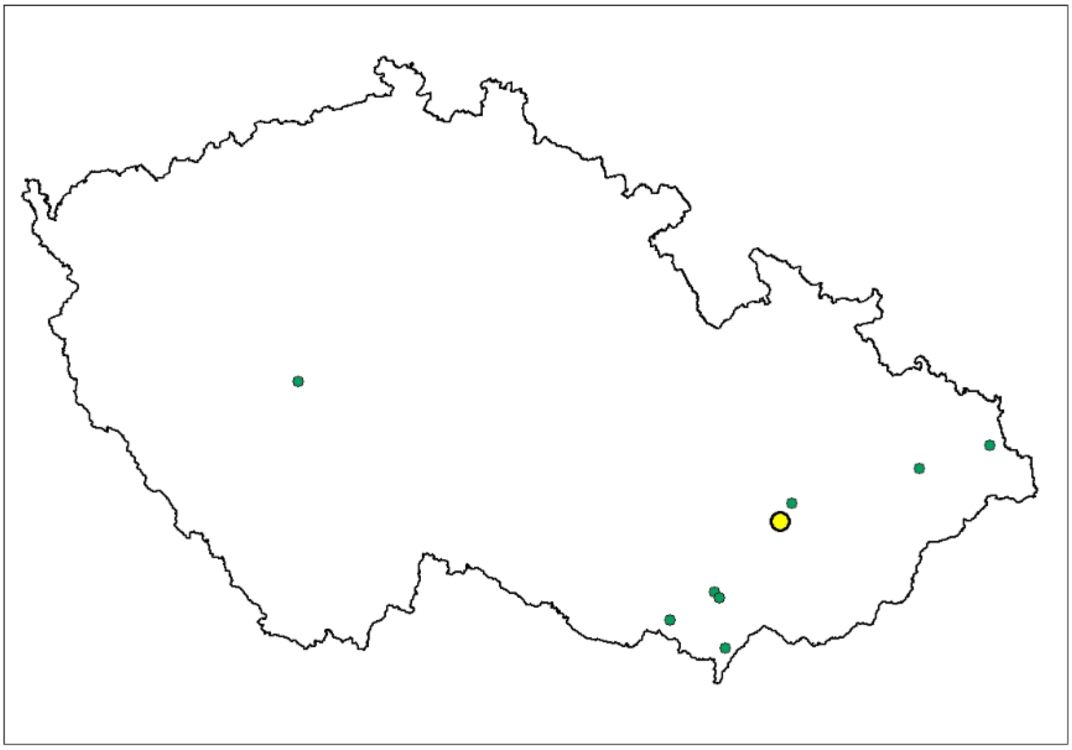


Figure 7 Localities of the physical points of storage facilities and of the virtual point

10.2. Distances between entry and exit points

The distances between the entry and exit points of the transmission network are one of the basic inputs when applying the CWD methodology. The calculation of distances is closely related to the determination of localities in subchapter 10.1.

Complying with Article 8 (1) (c) TAR NC, the shortest distances of the pipeline routes between an entry point or a cluster of entry points and an exit point or a cluster of exit points were taken into consideration. For calculating the matrix of distances, first of all the possible directions of the gas flow in the network, which are possible in the network when the technical parameters of the network are taken into account and which are depicted in Figure 8, were determined.

For each entry point *En* and each exit point *Ex*, just one physical locality, which is exactly defined in 10.1, exists. For localities of the points situated right on the route of a pipeline in the transmission network, the calculation of distances is determined as the distance of the pipeline route (the shortest path that is possible when the technical constraints are taken into account). For localities of virtual points situated outside the pipeline route, the ERO has determined an algorithm for calculating this distance. The algorithm takes into account the following:

- the distance, as the crow flies, from the virtual entry point to the delivery station that is the closest to this point,
- the distance along the pipeline to the exit point (or the delivery station that is the closest to the virtual exit point),
- the distance, as the crow flies, from the delivery station to virtual exit point.

Table 15 lists all the distances.

Distances [km]		En1	En2	En3	En4	En5	En6
		Brandov VIP	Lanžhot	Waidhaus VIP	Český Těšín	Hať	UGS
Ex1	Brandov VIP	0.00	380.40	168.31	NA	NA	423.22
Ex2	Lanžhot	380.40	0.00	402.02	NA	NA	98.15
Ex3	Waidhaus VIP	168.31	402.02	0.00	NA	NA	459.50
Ex4	Český Těšín	591.28	226.93	610.08	NA	107.41	139.78
Ex5	Hať	575.29	210.94	594.01	NA	NA	122.61
Ex6	PPD aggregation	162.39	266.57	236.27	NA	NA	327.41
Ex7	GasNet SZČ, central zone, aggregation	161.20	265.38	235.08	NA	NA	326.75
Ex8	E.OND aggregation	249.00	239.71	217.74	NA	NA	297.19
Ex9	GasNet SZČ, western zone, aggregation	142.19	446.42	66.46	NA	NA	477.66
Ex10	GasNet SZČ, northern zone, aggregation	112.18	332.14	186.09	NA	NA	380.63
Ex11	GasNet VČ aggregation	254.67	207.81	328.55	NA	NA	258.49
Ex12	GasNet JM aggregation	383.44	83.21	402.24	NA	NA	149.84
Ex13	GasNet SM aggregation	538.58	174.23	557.38	NA	54.66	87.04
Ex14	UGS	423.22	98.15	459.50	NA	122.61	0.00

Table 15 Matrix of distances between entry and exit points of the transmission system; NA = Not possible

10.3. Forecasted contracted capacity at entry and exit points

Another cost driver entering the calculation of the resulting tariffs using the reference price methodology under Article 8 TAR NC is the forecasted contracted capacities at entry and exit points. Technical capacities at entry and exit points do not influence the resulting reference price and therefore only the forecasted contracted capacity is used in compliance with Article 4 (1) (a) TAR NC.

Forecasted contracted capacities have been derived based on the successful auction of yearly capacities in 2017 until the gas year 2038, while the capacities for national transmission have been estimated based on the country's normal off-take and the historical injection and withdrawal curves of storage facilities. Going forward, a slight increase in gas consumption in the Czech Republic and injection-withdrawal balanced storage facilities during the gas year are being envisaged.

For calculating the yearly values, the ERO has developed an algorithm for each of the four types of points:

- for virtual interconnection points,
- for interconnection points,
- for delivery points between the transmission system and distribution systems and directly connected customers, and
- for points of storage facilities.

The yearly values of forecasted contracted capacity

- are based on the usage of capacities during a given calendar year; they therefore also include the size of the proposed multipliers;
- take into account the existing contracts, historical situation, and forecasted evolution;
- represent the sum of capacities related to national transmission and to international transmission if relevant for a given point.

10.3.1. Virtual interconnection points

For the Brandov entry VIP, the fact that this point is composed of the following physical cross-border entry points is taken into account:

- Hora Svaté Kateřiny (Sayda)
- Hora Svaté Kateřiny – Olbernhau
- BRANDOV – OPAL
- BRANDOV – EUGAL

For the Brandov exit VIP, the fact that this point is composed of the following physical cross-border exit points is taken into account:

- Hora Svaté Kateřiny (Sayda)
- BRANDOV – STEGAL (formerly Hora Svaté Kateřiny – Olbernhau)
- BRANDOV – OPAL
- BRANDOV – EUGAL

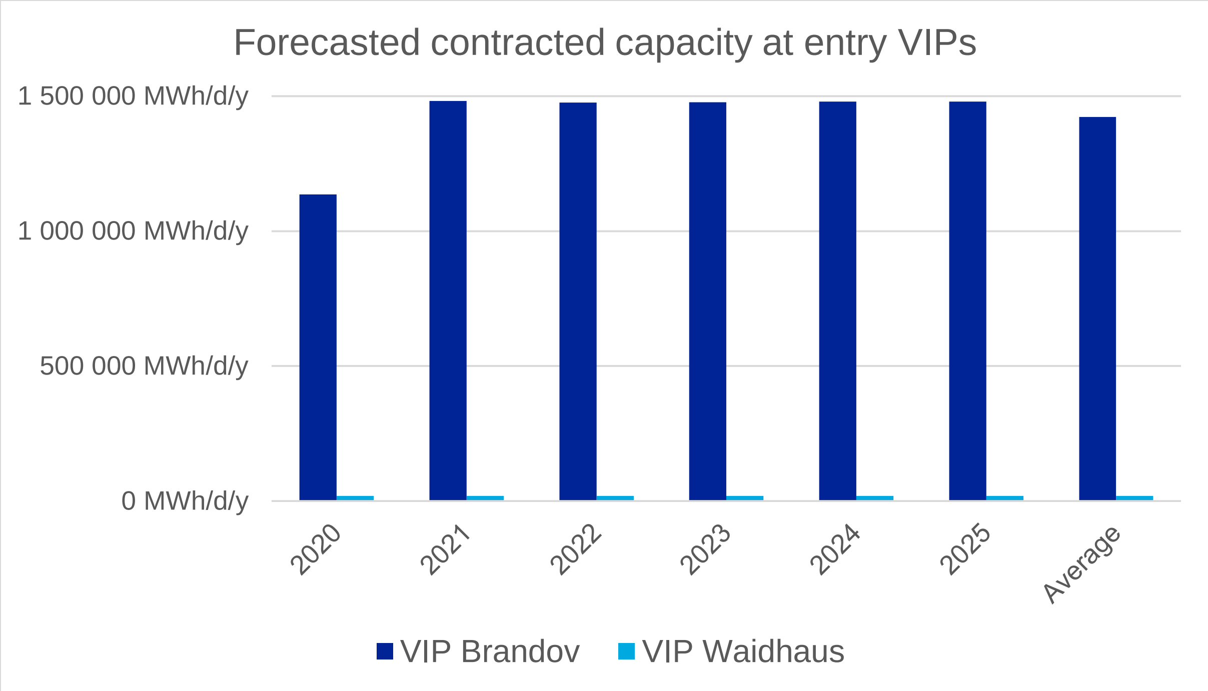


Chart 2 Forecasted contracted capacity at entry VIPs

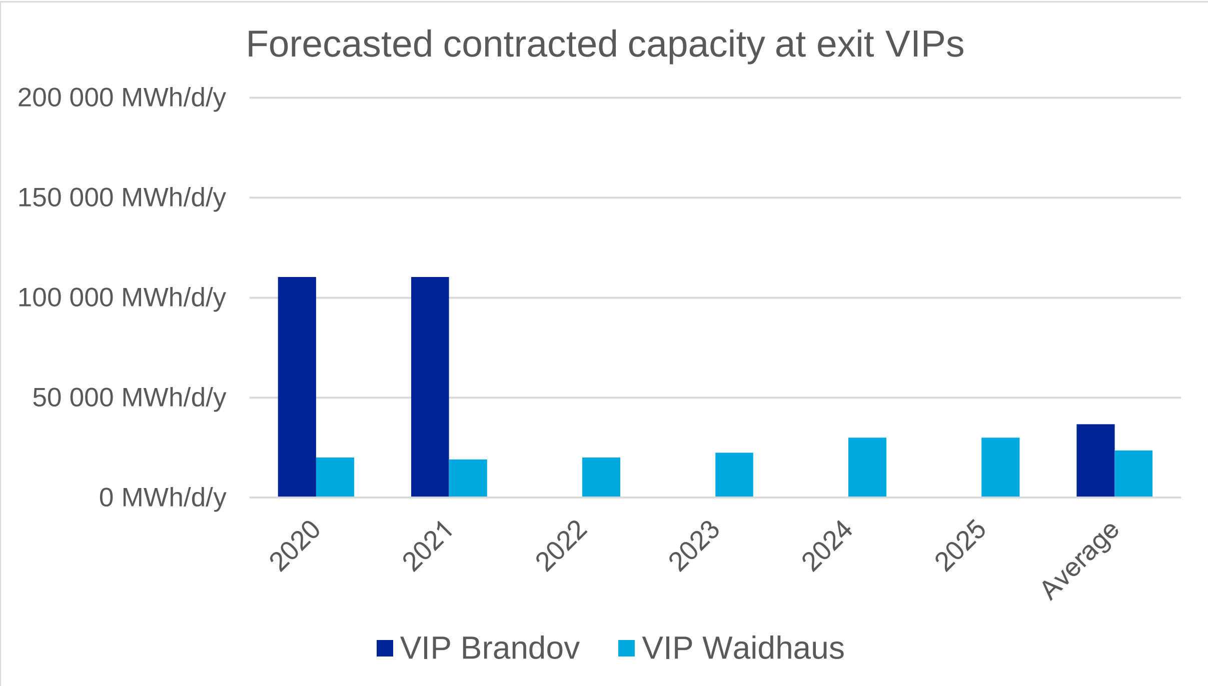


Chart 3 Forecasted contracted capacity at exit VIPs

10.3.2. Interconnection points (IP)

The ERO has decided that the forecasted contracted capacity of the Lanžhot point, for the purpose of applying the reference price methodology, is formed by the sum of

- the forecasted contracted capacity of the Lanžhot border point, and
- the forecasted contracted capacity of the Mokrý Háj border point.

The forecasted contracted capacity at the Mokrý Háj point equals zero and therefore does not influence the tariffs at the Lanžhot point. The reason for subsuming the Mokrý Háj point under the Lanžhot point is the fact that no point in the transmission network, even if its capacity is zero, can be omitted or subjected to a tariff converging to a limit of zero.

The forecasted contracted capacity at the Hať point is based on a joint investment request of NET4GAS, s.r.o. and GAZ-SYSTEM S.A. and the expected commissioning on 1 January 2023.

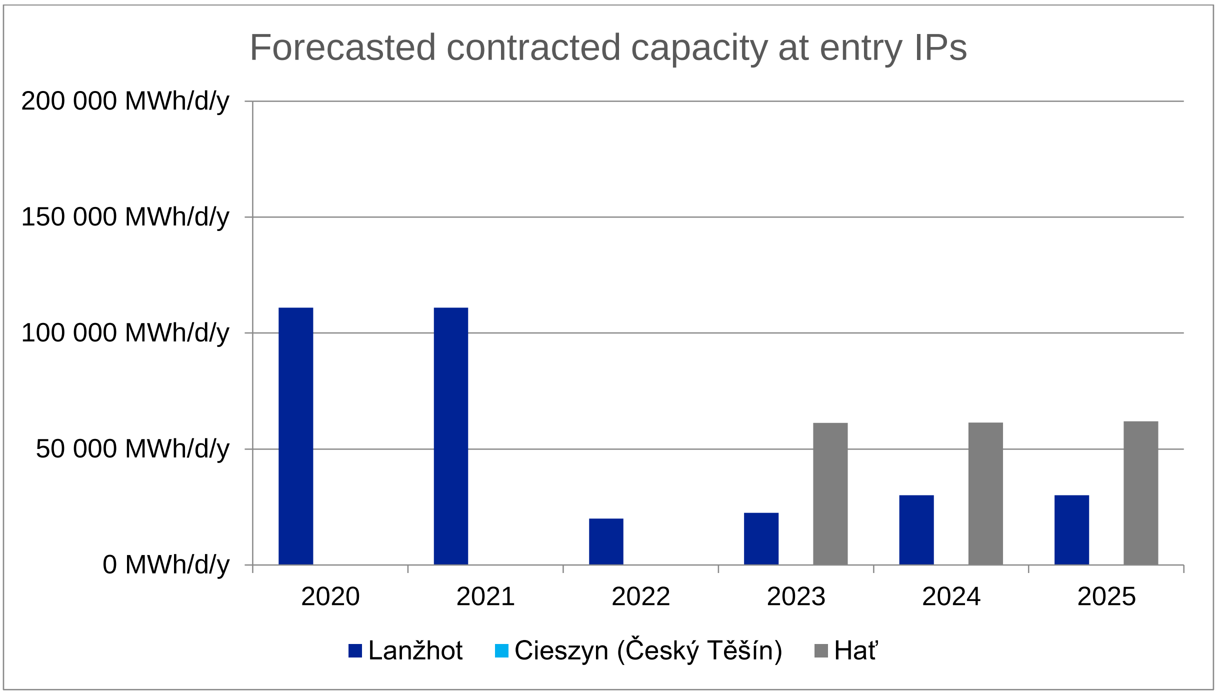


Chart 4 Forecasted contracted capacity at the entry IPs

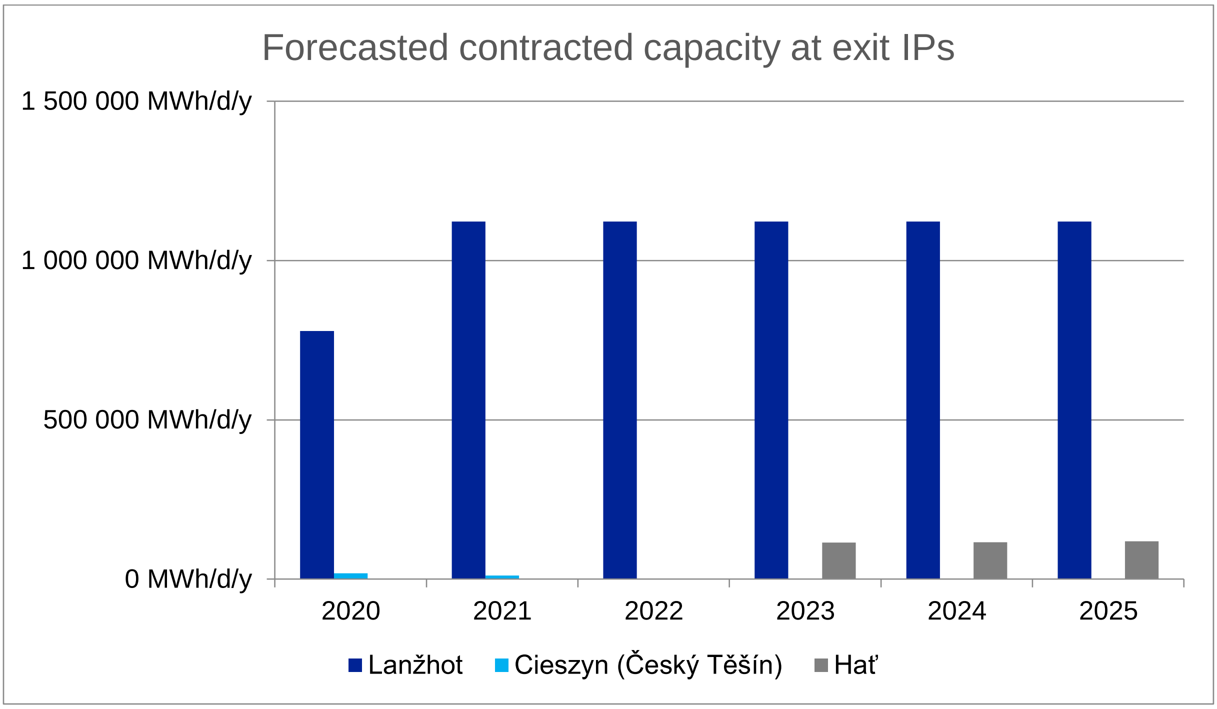


Chart 5 Forecasted contracted capacity at the exit IPs

10.3.3. Delivery points between the transmission system and distribution systems and directly connected customers

The forecasted contracted capacity at delivery points between the transmission system and distribution systems has been determined as the sum of the forecasted contracted capacities in each of the zones for:

- the forecasted contracted capacities between the transmission system and a distribution system, and
- the forecasted contracted capacities between the transmission system and directly connected customers.

Since directly connected customers are always situated in one of the eight distribution zones in which distribution companies have historically been operating, their forecasted contracted capacities are added to the forecasted contracted capacity of the particular zone. The sum of forecasted contracted capacities of all eight zones does not change over time and its amount is shown in Table 16 and Chart 6. This value is based on the maximum daily consumption of all distribution systems, in cubic metres[18]) over the last three years, and on the forecasted contracted capacities of directly connected customers.

The forecasted contracted capacity between the transmission system and distribution systems and directly connected customers (MWh/d)	583 078

Table 16 The forecasted contracted capacity between the transmission network and distribution systems and directly connected customers

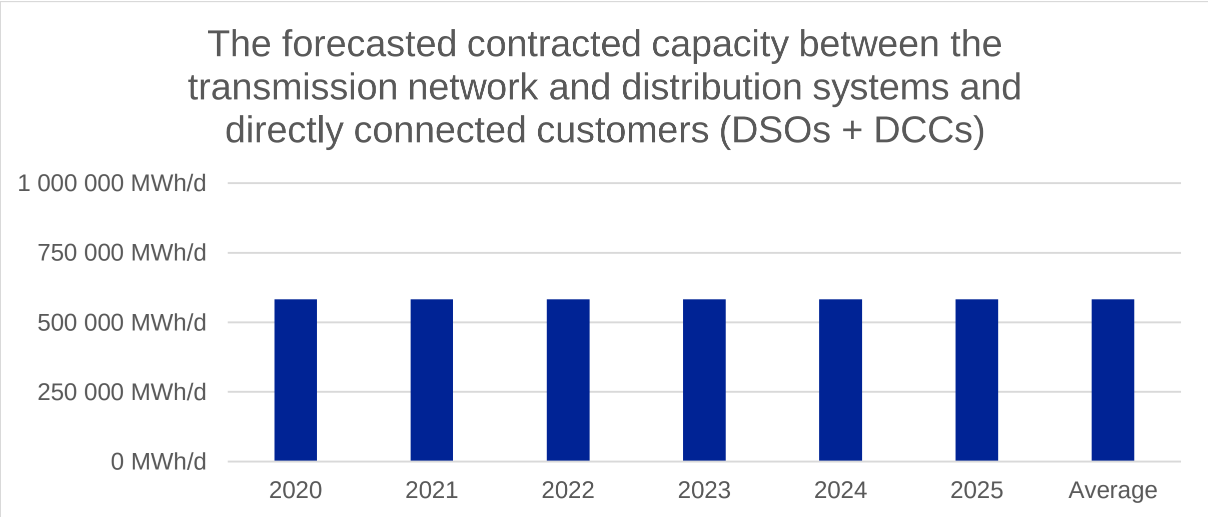


Chart 6 The forecasted contracted capacity between the transmission network and distribution systems and directly connected customers

10.3.4. Points of storage facilities

The forecasted contracted capacity of the points of storage facilities has been aggregated for all storage facilities and determined with regard to the expected usage of the capacities, including the predominating short-term bookings. Its amount can be seen in Chart 7.

[18]) Assuming a GCV of 10.6 kWh/m^3

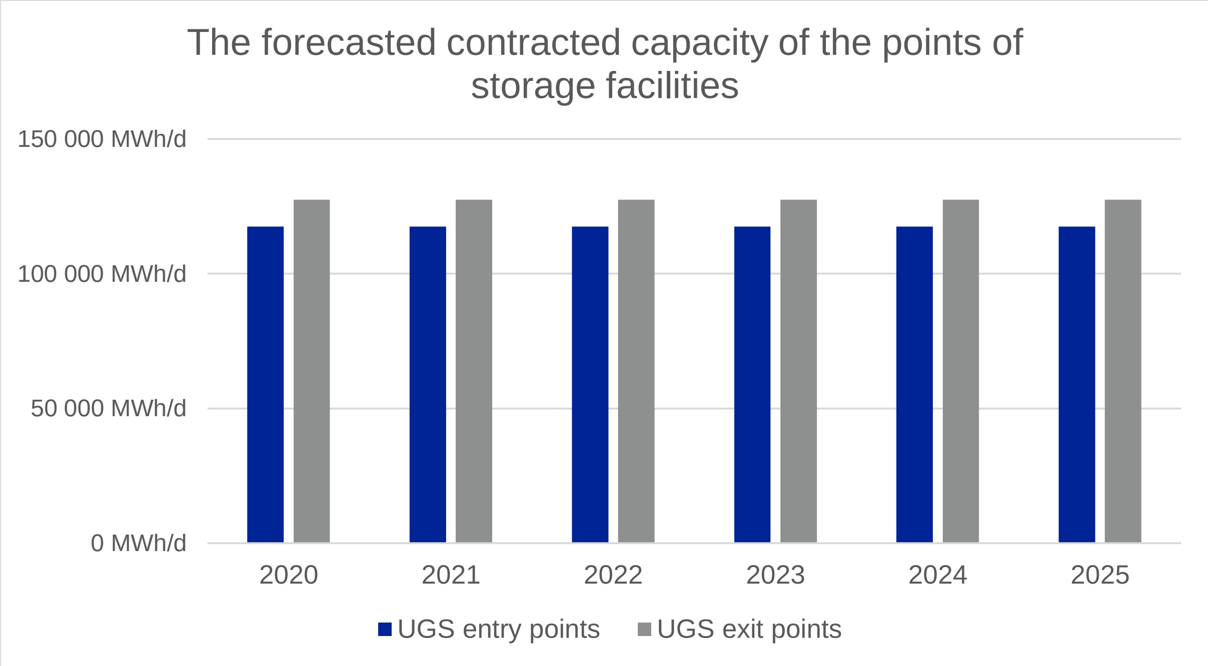


Chart 7 The forecasted contracted capacity of the points of storage facilities

10.4. Quantity and direction of gas flows for entry and exist points

The quantity and the direction of the gas flow for entry and exit points are the basis for determining commodity-based transmission tariffs. The technically feasible directions of gas flows are depicted in Figure 8. At all entry and exit cross-border points, bidirectional gas flow is feasible, with the exception of the Cieszyn (Český Těšín) point, where only exit from the transmission network is possible. Virtual delivery points between the transmission system and distribution systems and directly connected customers enable only exit from the transmission system. The aggregated virtual point of storage facilities enables entry and exit into/from the transmission system. This is also reflected in the distances for clusters of individual points as listed in the table.

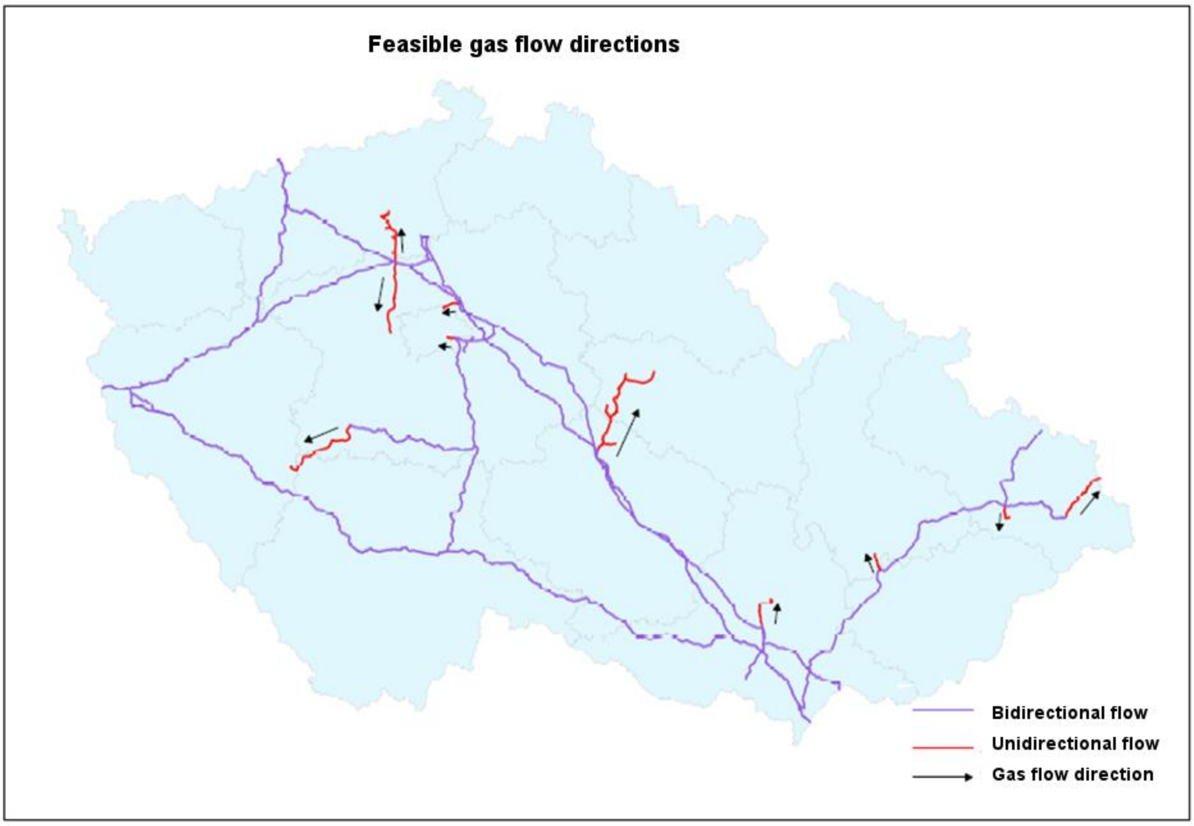


Figure 8 Feasible gas flow directions

For calculating flows in each calendar year, the following is taken into account:

- The number of days in the calendar year;
- The forecasted contracted capacity of the given point; and
- The forecasted usage of the given point.

10.4.1. Forecasted usage at entry and exit points

The basis for determining the expected flows is the expected usage of forecasted contracted capacities for a given point and period.

In respect of usage at exit points for intra-system network use, i.e. for domestic consumption and storage facilities, the basis can be the stable usage of storage facilities, while in respect of domestic consumption, the basis is its gradual increase at a rate of approximately 2% per year. It is much more complicated to determine usage of exit points for cross-system network use, i.e. cross-border exit points, because of its dependence on many external variables (gas-to-gas competition in the EU, weather, etc.). The key point for capacity usage is the Lanžhot cross-border exit point, primarily in relation to the gradual reinforcement of its capacity once the Capacity4Gas project is launched. For the purpose of this document, the ERO has used the usage of contracted exit capacity of the Lanžhot cross-border point at 80% for 2020 and 2021 and at 90% for 2022-2025 as the basis.

Usage at the Hať entry point is based on the assumption that this point will be put into operation on 1 January 2023, and therefore its usage is zero in the years until then.

Usage of entry capacities is then the result of the intra-system and cross-system use of entry points, and for the exit points of the storage facility the same flows at entry and exit are assumed.

10.4.2. Forecasted flows at entry points

The resulting forecasted flows at entry points for the period 2020-2025 are shown in Chart 8. The chart clearly indicates the dominant role of the Brandov VIP, which contributes some 95% to gas imports into the Czech Republic.

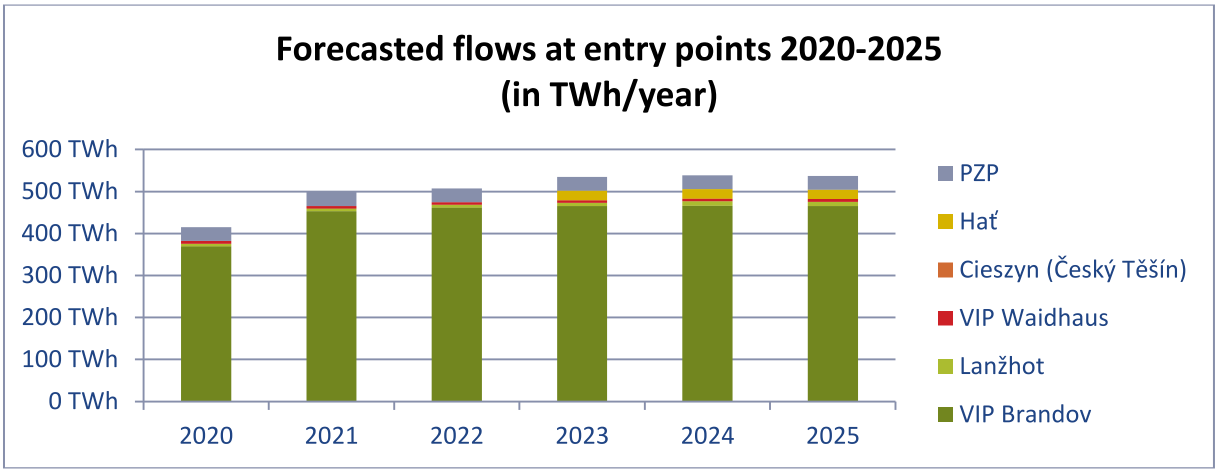


Chart 8 Forecasted flows at entry points

10.4.3. Forecasted flows at exit points

The resulting forecasted flows at exit points for the period 2020-2025 are shown in Charts 9 and

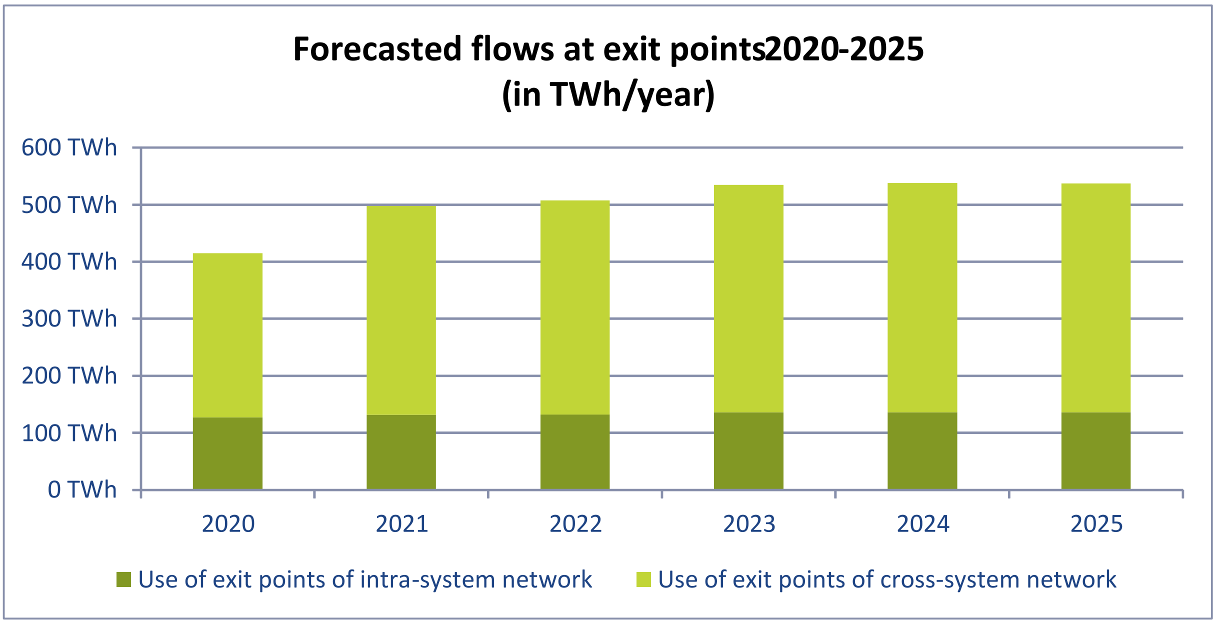


Chart 10. The charts clearly indicate that cross-system usage of exit points predominates over intra-system usage, with the dominant role of the Lanžhot cross-border exit point.

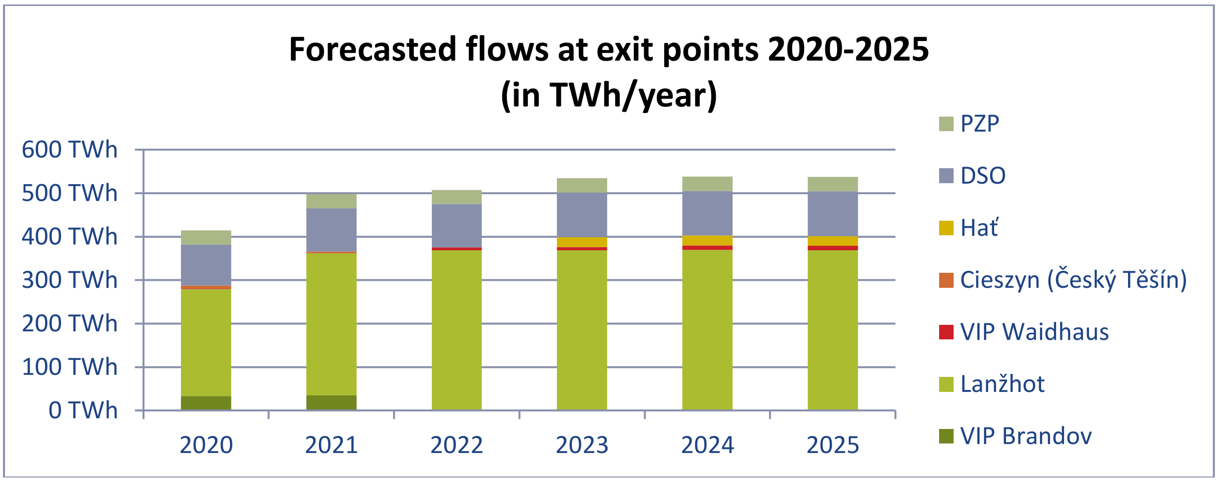


Chart 9 Forecasted flows at exit points

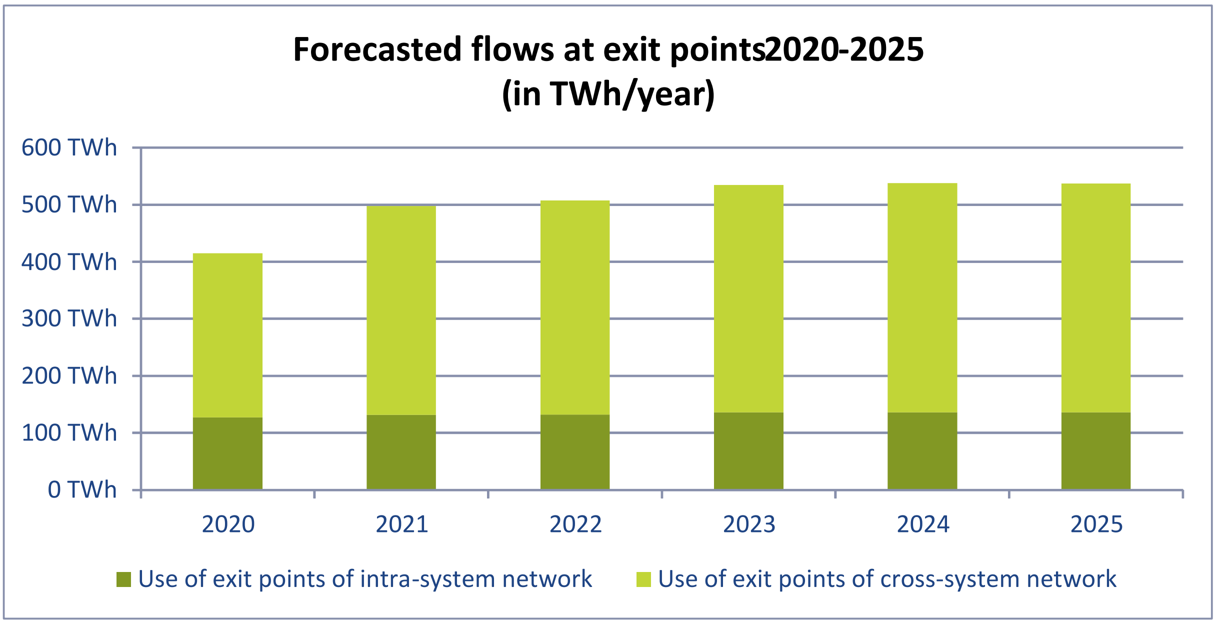


Chart 10 Forecasted flows at exit points

10.5. The structural representation of the transmission network with an appropriate level of detail

See 2

10.6. Additional technical information about the transmission network, such as the length and the diameter of pipelines and the power of compressor stations

See subchapter 7.3

11. Information published under Article 26 (1) (a) (ii) TAR NC

See point 9.3.8 and subchapter 8.3

12. Information published under Article 26 (1) (a) (iii) TAR NC

See point 9.3.7

13. Information published under Article 26 (1) (a) (iv) TAR NC

The results, the components and the details of these components for the cost allocation assessments set out in Article 5 TAR NC are described in the following subchapters.

13.1. Cost allocation assessment under Article 5 (1) (a) TAR NC

For a cost allocation assessment relating to the transmission service revenue to be recovered through capacity-based transmission tariffs, the values of the comparison index under Article 5 (1) (a) (iv) TAR NC have been calculated, i.e. only on the basis of the forecasted contracted capacity and distance.

The resulting values of the index assessing the allocation of the costs related to the transmission service revenue to be recovered through capacity-based transmission tariffs are listed in Table 20.

The ERO regards revenue net of the risk premium as comparable between national and transit transmission, because the risk premium expresses the extra costs that are incurred by the risk of flows between systems and that are not assignable to the costs of intra-system customers. These values meet the requirement in Article 5 (6) TAR NC, where a threshold of 10 per cent is stated for this comparison index.

13.2. Cost allocation assessment under Article 5 (1) (b) TAR NC

For a cost allocation assessment relating to commodity-based transmission tariffs (‘CAA com’), the values of the comparison index have been calculated under:

- Article 5 (1) (b) (i) TAR NC, i.e. only based on the amount of gas flows,
- Article 5 (1) (b) (ii) TAR NC, i.e. only based on the amount of gas flows and distance, while for this calculation the simplification concerning flows and distances set out in point 17.1.2 below was considered.

The resulting values are listed in the following table:

CAA com	2020	2021	2022	2023	2024	2025
Based on flows, i)	66%	66%	66%	65%	65%	65%
Based on distance and flows, ii)	0%	0%	0%	0%	0%	0%

Table 17 Resulting values of the index assessing the allocation of the costs related to commodity-based transmission tariffs

The results of the comparison index based only on the amount of gas flows express the degree of inaccuracy that would emerge when setting prices under Article 4 (3) (ii) TAR NC at the same level for all exit points. For this reason, this method was found to be non-cost-reflective and the ERO has opted for the methodology described in point 17.1.2.

14. Information published under Article 26 (1) (a) (v) TAR NC

Article 7 TAR NC and Article 13 of Regulation 715/2009/EC set out the elementary requirements for tariffs related to access to the transmission network. The ERO has concluded that these requirements must be met while taking into account the national specificities.

The Czech transmission network is characterised by the dominant role of gas transmission for neighbouring countries' needs. National customers must therefore be sheltered from risks arising from changes of bookings for the purpose of international gas transmission.

The ERO is convinced that the proposed model takes into account the above specificity and respects legislative requirements. At the end of the day, it provides for a fair allocation of costs to different network users. The applied methodology takes into account all the key allocation factors as well as distances between the relevant points, and the capacities at those points. It is a comprehensive model that

- minimises the possibility of a dramatic change in tariffs at the affected interconnection points in case of the absence of long-term transmission capacity bookings,
- promotes the efficient utilisation of the transmission network,
- prevents cross-subsidisation between network users, and
- encourages cross-border trade.

15. Information published under Article 26 (1) (a) (vi) TAR NC

As noted above in subchapter 9.3, although the ERO relies on the primary division of revenue into two categories, allowed and target, it subsequently uses their sum as an input to determine reference prices based on applying the capacity weighted distance reference price methodology (CWD), with the only exception: it directly allocates a part of the target revenue generated by the price cap risk premium to the cross-border exit interconnection points.

Another important aspect of pricing was subsequently to find the optimum entry-exit split of revenue (allowed and target revenue without the risk premium).

The following table shows the differences in tariffs when the CWD methodology is applied with a 50/50 split versus the same methodology proposing the optimum entry-exit split of revenue at 20.35/79.65:

Differences CWD 50/50 v 20.35/79.65						
ENTRY (CZK/MWh/d/yr)	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
VIP Brandov	1 167.3	1 193.8	1 221.0	1 248.7	1 277.2	1 306.2
Lanžhot	706.4	722.5	738.9	755.7	772.9	790.5
VIP Waidhaus	1 249.6	1 278.1	1 307.1	1 336.9	1 367.3	1 398.4
Cieszyn (Český Těšín)	305.9	312.8	320.0	327.2	334.7	342.3
Hať	305.9	312.8	320.0	327.2	334.7	342.3
UGS	159.8	163.4	167.2	171.0	174.9	178.8
EXIT (CZK/MWh/d/yr)	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
VIP Brandov	-1 097.9	-1 116.3	-1 135.0	-1 153.9	-1 173.0	-1 192.4
Lanžhot	-1 022.4	-1 039.5	-1 056.9	-1 074.5	-1 092.4	-1 110.4
VIP Waidhaus	-562.5	-571.9	-581.5	-591.1	-601.0	-610.9
Cieszyn (Český Těšín)	-1 531.0	-1 556.7	-1 582.7	-1 609.1	-1 635.8	-1 662.9
Hať	-1 508.6	-1 533.9	-1 559.6	-1 585.6	-1 611.9	-1 638.6
DSO + DCC	-803.1	-834.0	-866.0	-899.1	-933.3	-968.6
UGS	-348.1	-356.0	-364.1	-372.4	-380.9	-389.6

Table 18 Differences in prices between the CWD model 50/50 and the CWD model 20.35/79.65

The differences in revenue between these two CWD variants are shown in the following table:

Differences CWD 50/50 v 20.35/79.65						
Revenue (CZK thousand)	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Revenue at entry points	1 749 923	1 789 706	1 830 413	1 872 064	1 914 682	1 958 289
Revenue at exit points	-1 749 923	-1 789 706	-1 830 413	-1 872 064	-1 914 682	-1 958 289
Total revenue	**0**	**0**	**0**	**0**	**0**	**0**
Revenue for intra-system use	-110 608	-120 513	-130 843	-141 616	-152 845	-164 547
Revenue for cross-system use	110 607	120 511	130 842	141 614	152 843	164 546

Table 19 Differences in revenue between the CWD model 50/50 and the CWD model 20.35/79.65

And equally importantly, the differences between capacity cost allocation comparison indexes with different entry-exit splits of revenue are listed in Table 20:

CAA test (art. 5 TAR NC) 50/50 v 20.35/79.65	2020	2021	2022	2023	2024	2025
50/50 Comparison index incl. risk premium	23.3%	23.3%	23.3%	23.3%	23.3%	23.2%
20.35/79.65 Comparison index incl. risk premium	14.1%	13.5%	12.9%	12.3%	11.7%	11.1%
Difference	9.2%	9.8%	10.4%	11.0%	11.6%	12.2%
50/50 Comparison index w/o risk premium	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%
20.35/79.65 Comparison index w/o risk premium	2.9%	2.3%	1.7%	1.1%	0.5%	0.2%
Difference	9.6%	10.2%	10.8%	11.4%	12.0%	12.3%

Table 20 Comparison of the CAA index variants: CWD model 50/50 and CWD model 20.35/79.65

16. Information published under Article 26 (1) (b) TAR NC

16.1. Indicative information referred to in Article 30 (1) (b) (i), (iv) and (v) TAR NC

16.1.1. The allowed and target revenue of the transmission system operator, without the flow-based charge

Revenue (CZK thousand)	2020	2021	2022	2023	2024	2025
Allowed revenue	1 635 158	1 679 733	1 725 538	1 772 608	1 820 979	1 870 685
Target revenue incl. risk premium	4 743 676	4 843 293	4 945 002	5 048 847	5 154 873	5 263 126

Table 21 Allowed and target revenue without the flow-based charge

16.1.2. The transmission services revenue

Revenue (CZK thousand)	2020	2021	2022	2023	2024	2025
Capacity portion of transmission service revenue	6 378 834	6 523 026	6 670 541	6 821 456	6 975 852	7 133 811
Commodity portion of transmission system revenue	460 113	1 063 238	1 617 905	1 617 905	1 617 905	1 617 905
Transmission system revenue	6 838 947	7 586 264	8 288 446	8 439 361	8 593 757	8 751 716

Table 22 Transmission services revenue

16.1.3. The ratios for the revenue referred to in point (iv)

Capacity-commodity split

The breakdown between the revenue from capacity-based transmission tariffs and the revenue from commodity-based transmission tariffs is shown in Table 23.

Capacity-commodity split	2020	2021	2022	2023	2024	2025
Capacity	93.27%	85.98%	80.48%	80.83%	81.17%	81.51%
Commodity	6.73%	14.02%	19.52%	19.17%	18.83%	18.49%

Table 23 The capacity-commodity split

Entry-exit split

The split between the revenue from capacity-based transmission tariffs at all entry points and the revenue from capacity-based transmission tariffs at all exit points is shown in the variant where allowed revenue and target revenue, including the risk premium, are used for calculating the ratio (Table 24). The entry-exit split with the inclusion of target revenue without the risk premium is shown in point 9.3.7.

Entry-exit split	2020	2021	2022	2023	2024	2025
Entry	18.83%	18.83%	18.83%	18.84%	18.84%	18.84%
Exit	81.17%	81.17%	81.17%	81.16%	81.16%	81.16%

Table 24 The entry-exit split (including revenue from the risk premium)

The intra-system/cross-system split

The split between the revenue from intra-system network use at both entry and exit points and the revenue from cross-system network use at both entry and exit points, calculated as set out in Article 5 TAR NC, is shown in Table 25.

Intra-system/cross-system split	2020	2021	2022	2023	2024	2025
Intra-system	25.63%	25.75%	25.87%	25.99%	26.10%	26.22%
Cross-system	74.37%	74.25%	74.13%	74.01%	73.90%	73.78%

Table 25 The intra-system/cross-system split

17. Information published under Article 26 (1) (c) TAR NC

17.1. The commodity-based transmission tariffs (flow-based charge)

17.1.1. Costs entering the calculation

For recouping the costs incurred in the operation of compressor stations, cost allocation to the commodity component of the price at the exit points of the transmission network has been used in the Czech Republic for a long time. As part of TAR NC implementation, the recouping of these costs in the commodity component of the price at the exit points of the transmission network has been preserved.

The costs of operating compressor stations are comprised of the following items:

- Cost of gas and electricity bought for running compressor stations
    - This cost item is based on the assumption of gas/electricity for their running bought on the basis of daily prices; the cost of electricity (for running one new compressor station) also includes all the other components of the price (distribution, aid for renewable sources, system services, ancillary services, charge for the market operator, electricity tax). For the purposes of the model gas price is considered at EUR 19.42/MWh and the rate of exchange at CZK 25.68/EUR.
- Cost of the tax on the gas for fuelling compressor stations [fuel gas]
    - This cost item is an input based on the actual consumption of gas and a tariff of CZK 30.6/MWh.
- Cost of emission allowances
    - At present not included in the calculation of variable costs because of the current level of fuel gas consumption and a sufficient free allocation of allowances.

In view of the expected dramatic increase in the flows from the Brandov VIP to the Lanžhot cross-border point, caused by the C4G project, we expect a growth, by an order of magnitude, of the costs of compressor station operation. The resulting level of the costs (and thus also the proposed tariff) will considerably depend on the usage of the transmission capacity at the Lanžhot cross-border exit point. Chart 11 for 2020-2021 and Chart 12 for 2022-2025 show the forecasted levels of costs (in CZK million) depending on the usage of that cross-border exit point.

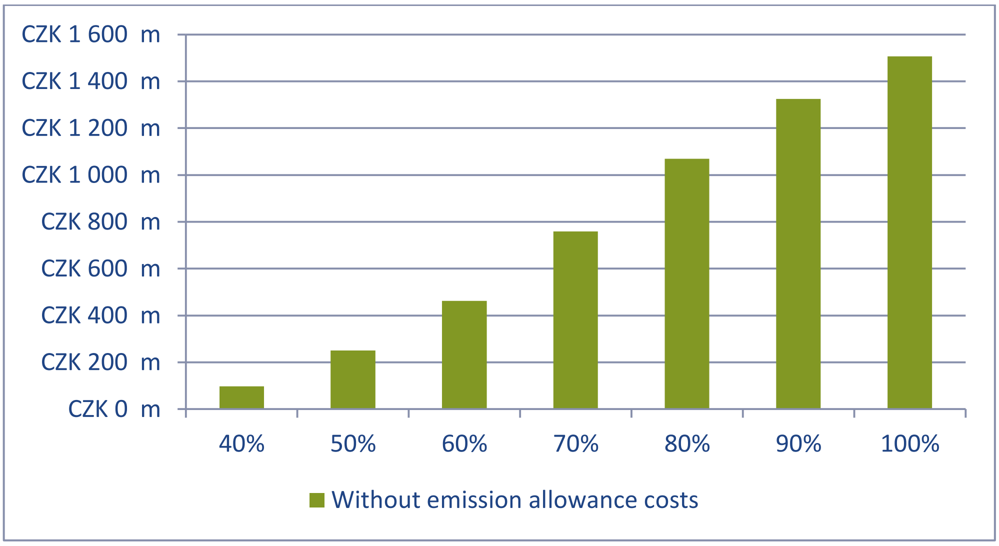


Chart 11 Forecasted variable costs depending on the usage of the contracted capacity at the Lanžhot exit point, in CZK million, 2020-2021

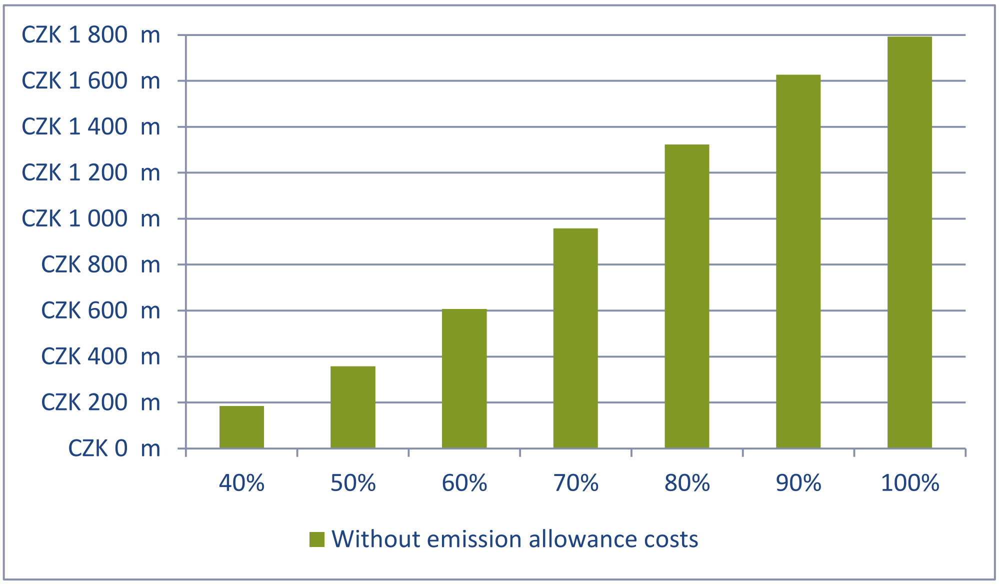


Chart 12 Forecasted variable costs depending on the usage of the contracted capacity at the Lanžhot exit point, in CZK million, 2022-2025

Based on information received from the transmission system operator and the relatively high expected usage of contracted transmission capacity, the ERO has used the usage of contracted transmission capacity at 80% for 2020 and 2021 and 90% between 2022 and 2025 as the basis of cost calculation.

17.1.2. The method for setting the flow-based charge

When preparing the methodology for setting the flow-based charge, the ERO examined the cost-reflectivity of each of the exit points in terms of the consumption of compression work, and thus also from the perspective of the costs of compression. It has found a considerable dependence on the transmission distance (and also, to some extent, on the required output pressure at a given point) and that these distances differ profoundly. Applying a single tariff to all exit points under Article 4 (3) (a) (ii) TAR NC would result in considerable cross-subsidisation between the various types of users and would be contrary to the objectives of cost allocation required by the TAR NC. Evidence of this is the fact that the requirement for cost allocation assessment under Article 5 (1) (b) (ii) TAR NC sets out distance as a potential cost driver. It is therefore logical that for different distances, such test cannot come out under the 10% threshold with the same level of tariffs. The ERO has therefore decided to prefer the requirement for cost allocation and cost allocation assessments as opposed to the requirement in Article 4 (3) (a) (ii) TAR NC.

For setting the commodity-based transmission tariffs, the ERO has used the forecasted flow weighted distance price methodology, which is analogical to the methodology described in Article 8 TAR NC. This methodology has been adjusted as follows for the purposes of calculating the commodity-based tariffs:

- The model is strictly geared towards actually incurred costs on the basis of actually expected flows. Unlike the CWD model for capacity-based transmission tariffs, the model does not consider, for cost allocation, all the theoretical combinations of entry and exit points, which are realistic only in theory and will never happen. Our objective is the simplest possible cost-reflective model.
- For the purpose of determining the costs, the model has been simplified to four main points representing the predominating flows in the system:
    - The Brandov VIP as the point at which gas enters the Czech Republic;
    - The Lanžhot cross-border point expressing gas exit from the Czech Republic;
    - The virtual point representing gas consumption in the Czech Republic;
    - The virtual entry/exit point of the storage facility.
- For the purpose of calculating commodity-based transmission tariffs the ERO has therefore decided to deem that all forecasted flows entering the network enter it at the Brandov VIP entry point. This simplification is acceptable because flows at this entry point account for approximately 92-96% of all forecasted flows entering the network at border points.
- For the purpose of calculating commodity-based transmission tariffs the ERO has therefore decided to deem that all forecasted flows for using the exit points of the cross-system network exit at the Lanžhot physical point. This simplification is acceptable because flows at this exit point account for approximately 90% of all forecasted flows exiting the network for the purposes of cross-system gas transfer.
- For the purpose of calculating commodity-based transmission tariffs the ERO has therefore decided to deem that all forecasted flows for using exit points of the intra-system network, except for the flow into the storage facility, exit at the virtual exit point, the coordinate of which has been determined by aggregating the coordinates of all delivery stations weighted by their technical capacity.

	Latitude N	Longitude E
Virtual exit point for using intra-system network	49.7512333°	15.6343731°

Table 26 The GPS coordinate of the virtual exit point

- The virtual entry/exit point of the storage facility is identical with the point for calculating capacity-based tariffs in the CWD model in point 10.1.4 above.
- Table 27 shows the forecasted flows.

Flows (TWh/year)	2020	2021	2022	2023	2024	2025
ENTRY points (Brandov VIP)	415	498	507	534	538	537
EXIT intra-system, DSO	94	99	99	103	103	103
EXIT intra-system, UGS	33	33	33	33	33	33
EXIT cross-system (Lanžhot)	288	366	375	399	402	401

Table 27 Forecasted gas flows broken down by points

- In the simplified system, the transmission distance considered is the distance based on Figure 9, and therefore based on the shortest distance of the pipeline routes between the entry point and exit point in compliance with the requirements of Article 8 (1) (c) TAR NC, specifically for the direction from the Brandov VIP to Lanžhot and for the direction from the Brandov VIP to the DSOs+DCCs virtual point.
- For the purposes of the practical cost-reflectivity of storage facilities, a situation with the non-existence of storage facilities and a situation with storage facilities are considered. The assumption is that the extra costs are not associated with the complete route into/from storage facilities, but only with the distance expressing the branching off to inject gas, and the returning back to the Brandov VIP – Lanžhot route when gas has been withdrawn (in practice, when gas is injected into a storage facility the distance equals the distance between the Brandov VIP and the virtual point of the storage facility, but when gas is withdrawn from a storage facility, the corresponding quantity of gas may not be transported over this route, which leads to savings of costs along most of the route between the Brandov VIP and the virtual point of the storage facility). The responses in the consultation process have helped to verify that the above assumption is in line with the estimate of the required compression work, in particular for gas injection into storage facilities, and that the consumption of compression work is non-zero.

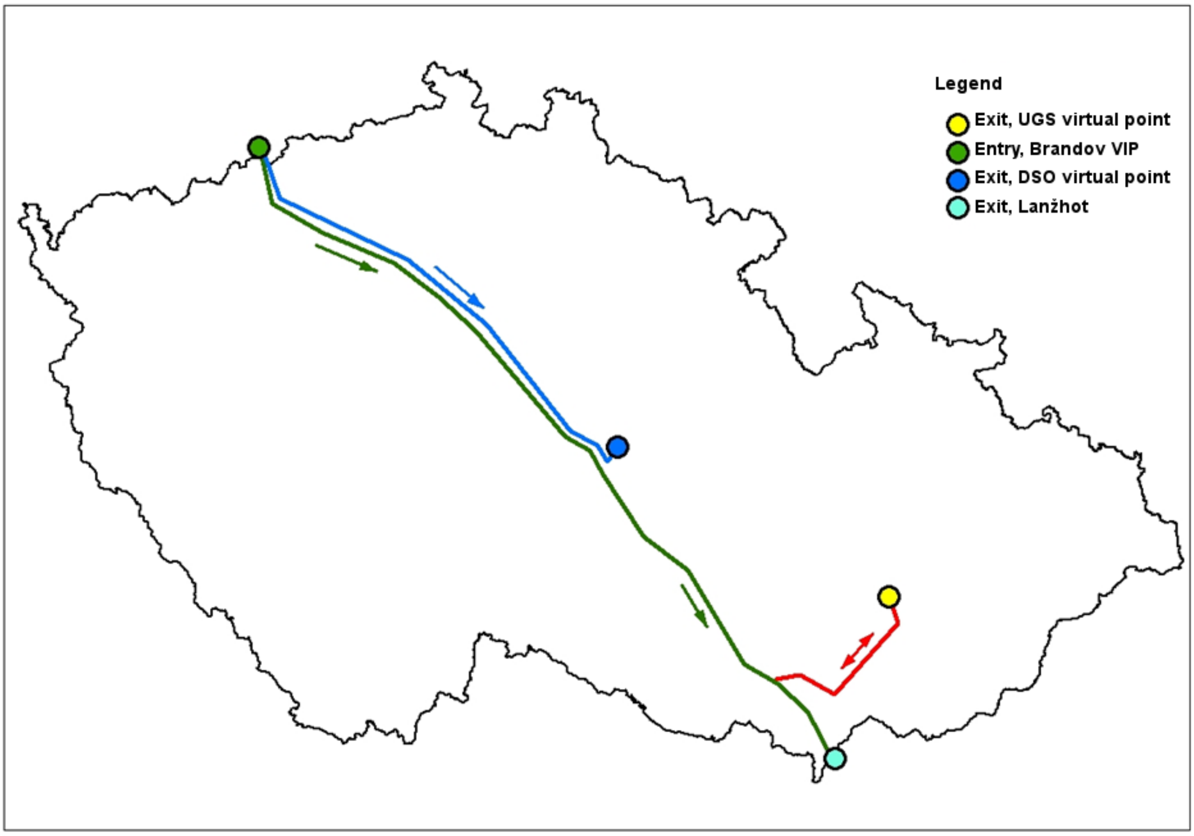


Figure 9 Flows for calculating the flow-based charge

- Based on the above, distances for each of the routes have been calculated:

Distances (km)	
ENTRY (Brandov VIP) - EXIT intra-system (DSO)	228
ENTRY (Brandov VIP) - EXIT intra-system (UGS)	89
ENTRY (Brandov VIP) - EXIT cross-system (Lanžhot)	383

Table 28 Distances for calculating the flow-based charge

- The entry-exit commodity split has been set at 0/100, in line with the practice in the Czech Republic up to now, whereby the commodity component of the tariff has been set at the exit points only, and has been zero at the entry points.
- The transmission tariffs have been derived in sequential steps, analogically to the capacity weighted distance reference price methodology described in Article 8 TAR NC. Thus, the weight of the costs of a given exit point is determined depending on the amount of the flow and distance.
- For calculating commodity-based transmission tariffs at exit points, the quotient of the portion of revenue attributable to that point and the forecasted flows at that exit point is considered.

17.1.3. The share of the allowed or target revenue forecasted to be recovered from such tariffs

In the Czech Republic, the transmission service revenue is composed of a capacity component and a commodity component. The capacity component of the transmission service revenue is comprised of allowed revenue and target revenue. The commodity component of the transmission service revenue is comprised of commodity-based transmission tariffs. For this reason, it is not possible to forecast the share of the allowed or target revenue to be recovered from commodity-based tariffs.

17.1.4. The flow-based charge

The level of the flow-based charge at the exit cross-border points has been set as a coefficient for calculating the quantity of gas energy for driving compressor stations in the transmission system multiplied by the gas price on a given day based on the applicable regulatory methodology. The expected level of the charge is shown in Table

Commodity-based tariffs (coefficient*€NCG/MWh)	2020	2021	2022	2023	2024	2025
For exit point for cross-system network use	0.0026	0.0049	0.0073	0.0069	0.0069	0.0069

Table 29.

Commodity-based tariffs (coefficient*€NCG/MWh)	2020	2021	2022	2023	2024	2025
For exit point for cross-system network use	0.0026	0.0049	0.0073	0.0069	0.0069	0.0069

Table 29 Flow-based charge at exit cross-border points (set as a coefficient)

The level of the various flow-based charges at the exit points for intra-system gas transmission has been set in CZK/MWh and is shown in Table 30.

Commodity-based tariffs (CZK/MWh)	2020	2021	2022	2023	2024	2025
For exit point for intra-system network use (DSO)	0.78	1.47	2.18	2.06	2.05	2.05
For exit point for intra-system network use (UGS)	0.30	0.57	0.85	0.80	0.80	0.80

Table 30 Flow-based charge at exit intra-system points

The entry-exit revenue split is 0/100, and the flow-based charge is therefore zero at all entry points.

The flow-based charge so calculated does not cover the costs incurred in the procurement of emission allowances. The ERO will determine the principles of the approach to emission allowances in the principles of price controls for the regulatory period 2021–2025; it will analyse the transmission system operator’s cost neutrality in the context of the required reduction in emissions while employing as efficient methods as possible, and it will lay down the rules for the potential inclusion of the costs of emission allowances in the variable component.

Similarly, in the principles of price controls for the regulatory period 2021–2025 the ERO will lay down the method for calculating the purchase price of energy in gas for fuelling compressor stations in the transmission system on a given day.

17.1.5. Correction of the actual costs and revenue in respect of the flow-based charge

In view of the great uncertainty as to the actual usage of the transmission network, in particular due to the gradual commissioning of the C4G projects, the calculation of the flow-based charge will be derived from the planned costs of compressor station operation described in point 17.1.1 and the planned values of flows in the future before the flows in the transmission network stabilise.

This uncertainty in the determination of the input data will result in differences between the forecasted revenue from gas flows and the costs of compressor station operation. In order to preserve the transmission system operator's cost neutrality, the price of fuel gas for the nearest possible subsequent period will include this correction as follows:

- The ERO will check the actual amount of the costs of compressor station operation and adherence to the principle of the efficient and economical operation of the transmission system;
- Based on the model set out in point 17.1.2, into which actual costs and actual flows will enter, the ERO will allocate actual costs to:
    - the exit points for intra-system network use – storage facilities,
    - the exit points for intra-system network use – the domestic point and directly connected customers,
    - the exit points for cross-system network use.
- Separately for each of those groups, the ERO will determine the difference between actual revenue and actual costs and will separately determine a correction for:
    - the exit points for intra-system network use – storage facilities,
    - the exit points for intra-system network use – the domestic point and directly connected customers,
    - the exit points for cross-system network use.
- The amount of the correction will then be reflected in the various flow-based charges for the nearest possible period.

18. Non-transmission services

Non-transmission services provided to network users are not being proposed.

19. Indicative information about transmission tariffs referred to in Article 30 (2) TAR NC

The difference in the level of transmission tariffs for the same type of transmission service applicable for the prevailing tariff period and for the tariff period for which the information is published is discussed in the following subchapters.

19.1. Explanation of the difference in the level of transmission tariffs until the end of the regulatory period

19.1.1. Level of reference prices at entry points

Different changes in capacity-based transmission tariffs for each of the entry points, shown in Table 31, are caused by the introduction of the capacity weighted distance reference price methodology in compliance with the TAR NC, and thus the introduction of the cost drivers of forecasted contracted capacity and distance. Since no equalisation under Article 6 (4) (b) TAR NC takes place at these points, the differences between changes at each of the points are different.

Name of point	Price in the current period (CZK/MWh/d/yr)	Proposed reference price methodology, 2020 (CZK/MWh/d/yr)	Difference
ENTRY			
VIP Brandov	765.01	801.14	5%
Lanžhot	765.01	484.84	-37%
VIP Waidhaus	765.01	857.68	12%
Cieszyn (Český Těšín)	765.01	209.94	-73%
Hať	765.01	209.94	-73%
UGS	442.96	109.69	-75%

Table 31 Differences in levels of transmission tariffs at entry points

19.1.2. Level of reference prices at exit points

Different changes in capacity-based transmission tariffs for each of the exit points, shown in Table 32, are caused by the introduction of the capacity weighted distance reference price methodology in compliance with the TAR NC, and thus the introduction of the cost drivers of forecasted contracted capacity and distance.

Name of point	Price in the current period (CZK/MWh/d/yr)	Proposed reference price methodology, 2020 (CZK/MWh/d/yr)	Difference
EXIT			
VIP Brandov	2 991.43	3 388.29	13%
Lanžhot	2 991.43	3 155.28	5%
VIP Waidhaus	2 991.43	1 735.89	-42%
Cieszyn (Český Těšín)	2 991.43	4 724.95	58%
Hať	2 991.43	4 655.96	56%
DSO + DCC	2 552.95	2 127.72	-17%
UGS	95.60	930.79	874%

Table 32 Differences in levels of transmission tariffs at exit points

19.1.3. Level of flow-based charges at entry points

In the period under review, the commodity-based transmission tariffs for each of the entry points do not change, as indicated in Table 33.

Commodity-based tariffs	Price in the current period (CZK/MWh)	Proposed reference price methodology for 2020 (CZK/MWh)	Difference
For entry point	0.00	0.00	0%

Table 33 Difference in the level of the flow-based charge at entry points

19.1.4. Level of flow-based charges at exit points

In the period under review, the commodity-based transmission tariffs for individual exit points are changing; the change is primarily due to the introduction of the methodology for setting flow-based charges under Article 4 (3) (a) TAR NC, and therefore the introduction of the cost drivers of forecasted flows and distance, which have not been applied so far. Another factor is the fact that beginning in 2020, major changes will take place in the usage of the transmission network, and the increase in the commodity portion of the transmission service revenue compared with 2019 is related to that. As regards the tariffs for national consumption and storage facilities, the currently existing variable part of the tariff, amounting to approximately CZK 0.05/MWh, is heavily influenced by the negative adjustments made in the past years due to a lower gas consumption and lower purchasing prices of fuel gas for compressor stations, and it therefore does not express the impact of the increase compared with the costs allocated to these customers on a long-term basis (on average around CZK 0.4 to 0.5/MWh).

Commodity-based tariffs	Price in the current period (CZK/MWh)	Proposed reference price methodology for 2020 (CZK/MWh)	Difference
For exit point for intra-system network use (DSO)	0.05	0.78	1 461%
For exit point for intra-system network use (UGS)	0.05	0.30	508%
For exit point for cross-system network use	$0.003 \cdot C_{NCG}$	$0.0026 \cdot C_{NCG}$	-13%

Table 34 The difference in the level of the flow-based charge at exit points

19.2. Explanation of the difference in the level of transmission tariffs for the next regulatory period

The estimated difference in the level of transmission tariffs for the same type of transmission service applicable for the tariff period for which the information is published and for each tariff period within the remainder of the regulatory period is discussed in the following subchapters. Since 2020 is the last year of the regulatory period, we present the outlook and estimated differences in the level of the transmission tariffs for the next subsequent period that will end in 2025.

19.2.1. Estimated level of tariffs at entry points between 2020 and 2025

The estimated level of the tariffs at entry points for the period 2020-2025 is shown in Table 35.

ENTRY (CZK/MWh/d/yr)	2020	2021	2022	2023	2024	2025
VIP Brandov	801.1	819.4	838.0	857.1	876.6	896.5
Lanžhot	484.8	495.9	507.1	518.7	530.5	542.6
VIP Waidhaus	857.7	877.2	897.1	917.5	938.4	959.8
Cieszyn (Český Těšín)	209.9	214.7	219.6	224.6	229.7	234.9
Hať	209.9	214.7	219.6	224.6	229.7	234.9
UGS	109.7	112.2	114.7	117.3	120.0	122.7

Table 35 Estimated level of tariffs at entry points

The estimated relative year-on-year difference in the level of tariffs at entry points for the period 2020-2025 is shown in Table 36.

ENTRY	2020	2021	2022	2023	2024	2025
Brandov VIP		2.3%	2.3%	2.3%	2.3%	2.3%
Lanžhot		2.3%	2.3%	2.3%	2.3%	2.3%
Waidhaus VIP		2.3%	2.3%	2.3%	2.3%	2.3%
Cieszyn (Český Těšín)		2.3%	2.3%	2.3%	2.3%	2.3%
Hať		2.3%	2.3%	2.3%	2.3%	2.3%
UGS		2.3%	2.3%	2.3%	2.3%	2.3%

Table 36 Estimated relative difference in the level of tariffs at entry points

19.2.2. Estimated level of tariffs at exit points between 2020 and 2025

The estimated level of the tariffs at exit points for the period 2020-2025 is shown in Table 37.

EXIT (CZK/MWh/d/yr)	2020	2021	2022	2023	2024	2025
VIP Brandov	3 388.3	3 458.0	3 529.2	3 601.8	3 675.9	3 751.5
Lanžhot	3 155.3	3 220.2	3 286.5	3 354.1	3 423.1	3 493.5
VIP Waidhaus	1 735.9	1 771.6	1 808.1	1 845.3	1 883.2	1 922.0
Cieszyn (Český Těšín)	4 725.0	4 822.2	4 921.4	5 022.7	5 126.0	5 231.4
Hať	4 656.0	4 751.8	4 849.5	4 949.3	5 051.1	5 155.0
DSO + DCC	2 127.7	2 188.8	2 251.6	2 316.2	2 382.7	2 451.1
UGS	930.8	952.0	973.6	995.8	1 018.5	1 041.7

Table 37 Estimated level of tariffs at exit points

The estimated relative year-on-year difference in the level of tariffs at exit points for the period 2020-2025 is shown in Table 38.

EXIT	2020	2021	2022	2023	2024	2025
Brandov VIP		2.1%	2.1%	2.1%	2.1%	2.1%
Lanžhot		2.1%	2.1%	2.1%	2.1%	2.1%
Waidhaus VIP		2.1%	2.1%	2.1%	2.1%	2.1%
Cieszyn (Český Těšín)		2.1%	2.1%	2.1%	2.1%	2.1%
Hať		2.1%	2.1%	2.1%	2.1%	2.1%
DSOs + DCCs		2.9%	2.9%	2.9%	2.9%	2.9%
UGS		2.3%	2.3%	2.3%	2.3%	2.3%

Table 38 Estimated relative difference in the level of tariffs at exit points

The differences are mainly due to the selected price setting methodology and the different evolution of target revenue and allowed revenue.

19.2.3. Estimated level of flow-based charges between 2020 and 2025

For exit cross-border points, the level of flow-based charges is expressed through the coefficient for calculating the quantity of energy in fuel gas for compressor stations in the transmission system, multiplied by the gas price on the given day. The estimated development of this coefficient is shown in Table 39.

Commodity-based tariffs (coefficient*€$_{NCG}$/MWh)	2020	2021	2022	2023	2024	2025
For exit point for cross-system network use	0.0026	0.0049	0.0073	0.0069	0.0069	0.0069

Table 39 Estimated level of flow-based charge between 2020 and 2025

The level of the flow-based charges at exit points for intra-system gas transmission has been set in CZK/MWh and is shown in Table 40.

Commodity-based tariffs (CZK/MWh)	2020	2021	2022	2023	2024	2025
For exit point of intra-system network use (DSO)	0.78	1.47	2.18	2.06	2.05	2.05
For exit point for intra-system network use (UGS)	0.30	0.57	0.85	0.80	0.80	0.80

Table 40 Estimated level of flow-based charge between 2020 and 2025

The estimated relative year-on-year difference in the level of the flow-based charge between 2020 and 2025 is shown in Table 41 and is mainly attributable to the forecasted changes in the magnitude of network usage and the related amounts of flows, including the evolution of the cost parameters that may influence the size of the commodity component of the transmission revenue.

Commodity-based tariffs	2020	2021	2022	2023	2024	2025
For exit point for cross-system network use		87.7%	48.9%	-5.5%	-0.8%	0.2%
For exit point of intra-system network use (DSO)		87.7%	48.9%	-5.5%	-0.8%	0.2%
For exit point for intra-system network use (UGS)		87.7%	48.9%	-5.5%	-0.8%	0.2%

Table 41 Estimated relative difference in the level of flow-based charge between 2020 and 2025

19.3. The simplified tariff model

The simplified tariff model, which the ERO updates on a regular basis, including the explanation of how to use it, enabling network users to calculate the transmission tariffs applicable for the prevailing tariff period and to estimate their possible evolution beyond such tariff period, is published on the ERO's website.

20. Information published under Article 26 (1) (e) TAR NC

Based on the comments in ACER's final report, the ERO has modified the conditions for booking a fixed payable price for booked capacity at entry cross-border points to render them compliant with Article 25 (1) TAR NC. Since about 78% of revenue at entry cross-border points are generated in the price cap regime, the ERO considers that offering 70% of the existing capacity in the mechanism of the fixed payable price meets the requirements of the TAR NC. This fact will be taken into account when calculating the correction under point 9.3.9.

The fixed payable price for booked standard firm transmission capacity can be offered in compliance with Article 25 TAR NC. The fixed payable price for booked standard firm transmission capacity $\mathbf{C_F}$ is the price set in the Price Decision at the time of the auction.

Where yearly standard firm transmission capacity is allocated to it in the auction process, the cleared entity or the foreign participant can apply to the transmission system operator in writing within five working days immediately following the end of the auction in which the capacity was allocated to the gas market participant, requesting that the price determined in the auction be a fixed payable price for booked standard firm transmission capacity.

The fixed payable price can be applied under the following conditions:

a) the capacity has been allocated at exit interconnection and exit virtual interconnection points, or
b) the capacity has been allocated at entry interconnection and entry virtual interconnection points only up to 70% of the technical capacity of the relevant entry interconnection and entry virtual interconnection point in the relevant gas year, or
c) the capacity has been allocated at entry interconnection and entry virtual interconnection points in compliance with Article 25(1)(b)(ii) TAR NC,

while:

a) auction-allocated yearly standard firm transmission capacity at the relevant cross-border point was allocated for a period of at least 10 consecutive years and at the same time the condition is satisfied for the booked firm transmission capacity for that period for every gas year that the amount of the auction-allocated booked firm transmission capacity is not more than 50% higher or lower than the average amount of the booked standard firm transmission capacity of this gas market participant for the whole of this period, or
b) auction-allocated yearly standard firm transmission capacity for which, in connection with the yearly standard firm transmission capacities allocated to the gas market participant in auctions held in preceding years, the condition of booking for a period of at least 10 consecutive years is satisfied and at the same time the condition is satisfied for the newly booked firm daily transmission capacity for each gas year that the amount of the auction-allocated booked firm daily transmission capacity is not more than 50% higher than the average amount of the daily booked standard firm transmission capacity of this gas market participant for a period of 10 years immediately preceding the last year for which yearly firm transmission capacity was booked.

The fixed payable price for booked standard firm transmission capacity, $\mathbf{C_{Fi}}$ in CZK/MWh/d, is calculated, for yearly standard firm capacity for calendar year **i,** using the formula

$$C_{Fi} = \left(C_{r0} \times \prod_{t=j}^{i} \frac{I_{t-1}}{100} \right) + AP + RP,$$

where

C_{r0} is the price for booked firm transmission capacity set out in the Price Decision,

RP is the risk premium set at 0,

i is the calendar year for which the fixed payable price for booked standard firm transmission capacity is being determined,

j is the calendar year in which the agreement on the provision of the gas transmission service was concluded,

t is a calendar year within the interval <j, i>,

I_{t-1} is the value of the price escalation factor, which for years **j-1** and **j** equals 100 and for year **j+1** and following years is calculated using the formula

$$I_{t-1} = 0.7 \times IPS_{t-1} + 0.3 \times (CPI_{t-1} + 1),$$

where

IPS_{t-1} [%] is the index of business service prices calculated as a weighted average of the following price indices

62 - Computer programming, consultancy, and related services,
63 - Information services,
68 - Real estate services,
69 - Legal and accounting services,
71- Architectural and engineering services; technical tests and analyses,
73 - Advertising and market research services,
74 - Other professional, scientific and technical activities,
77 - Rental and operating lease services,
78 - Employment services,
80 - Security and investigation services,
81 - Services related to buildings and landscape,
82 - Office administration and other business support services

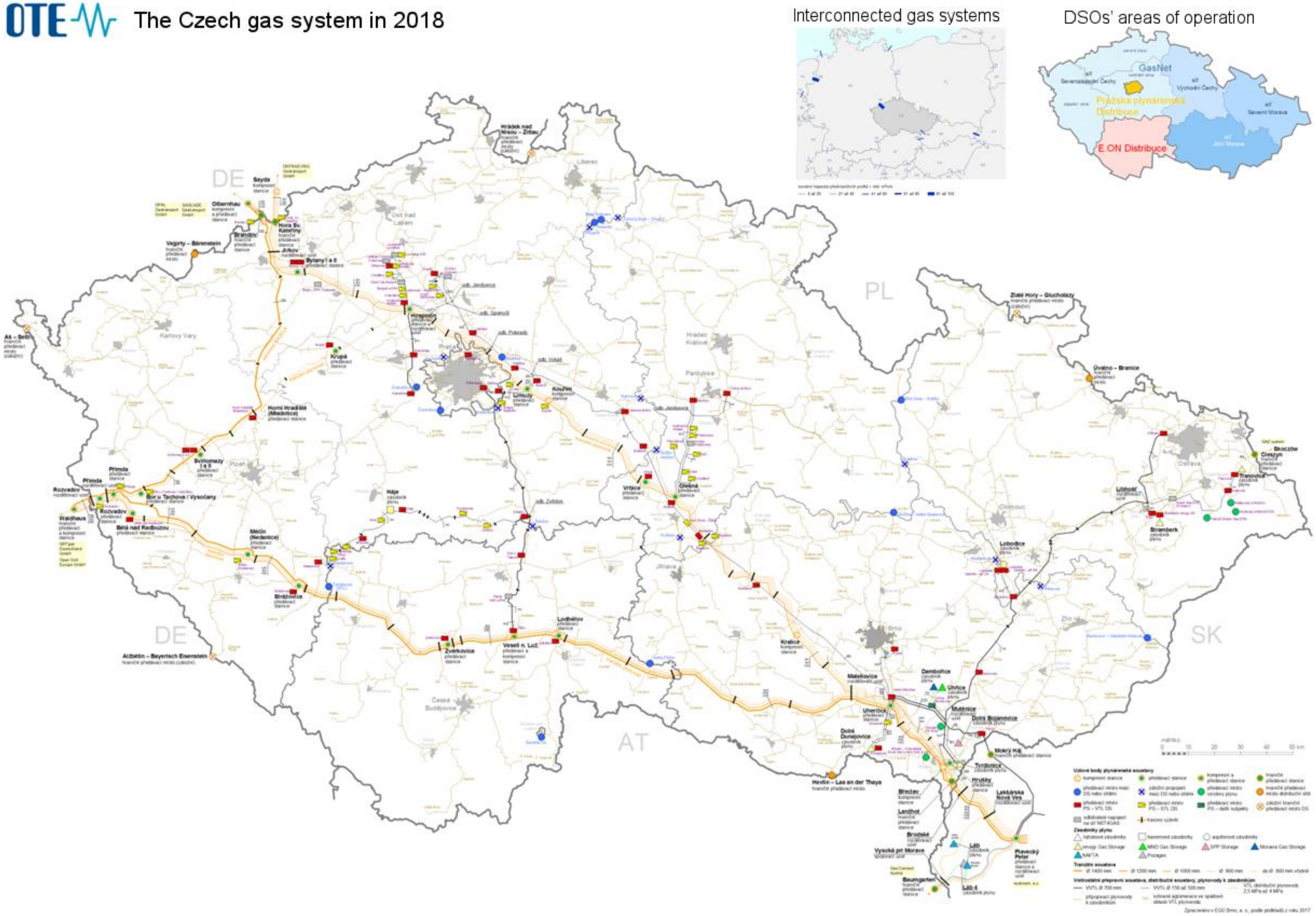
as reported by the Czech Statistical Office in the table "Price indices of market services" (code 011046) for April of year **t-1** on the basis of the ratio of rolling averages of basic indices, where the weights are annual sales for services, calculated using the Czech Statistical Office's methodology,

CPI_{t-1} [%]is the consumer price index calculated on the basis of the ratio of rolling averages of basic indices of consumer prices over the last 12 months and the preceding 12 months, as reported by the Czech Statistical Office in the table "Consumer price index" (code 012018) for April of year **t-1**.

Annex 1 Overview of the required particulars of consultation under Article 26 TAR NC and the corresponding chapters of the consultation document

Content	Requirements set under TAR NC	Corresponding chapter/subchapter
Description of the proposed methodology	Article 26 (1) (a)	9.3
Information about parameters	Article 26 (1) (a) (i)	10
Values of the proposed adjustments for transmission tariffs	Article 26 (1) (a) (ii)	11
Indicative reference prices	Article 26 (1) (a) (iii)	12
Cost allocation assessments	Article 26 (1) (a) (iv)	13
Assessment of the methodology	Article 26 (1) (a) (v)	14
Counterfactual	Article 26 (1) (a) (vi)	15
Amount of revenue, changes and ratios	Article 26 (1) (b)	16
Commodity-based transmission tariffs	Article 26 (1) (c) (i)	17
Non-transmission services	Article 26 (1) (c) (ii)	18
Difference in the level of transmission tariffs	Article 26 (1) (d)	19.1, 19.2
Simplified tariff model	Article 26 (1) (d)	19.3
Fixed payable price	Article 26 (1) (e)	20

Annex 2 Map of the Czech gas system



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Annex 3 List of Figures

Annex 4 List of Tables

Annex 5 List of Charts