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PRE REGULÁCIU
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National Report for 2022

**Regulatory Office
for Network Industries (URSO)
Slovakia**

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List of abbreviations

ACER	Agency of the European Union for the Cooperation of Energy Regulators
CEER	Council of European Energy Regulators
CHP.....	combined heat and power
DSO	distribution system operator
ERRA	Energy Regulators Regional Association
HHI	Herfindahl-Hirschman Index
LDN	local distribution network
LDNO	local distribution network operator
LNG	liquefied natural gas
the Office/URSO	Regulatory Office for Network Industries (Slovakia's national regulatory authority)
OKTE	Slovakia's electricity short-term market operator (and NEMO)
PXE	energy exchange specialising in the energy markets of Central and South East Europe (POWER EXCHANGE CENTRAL EUROPE)
REMIT	Regulation (EU) No 1227/2011 on integrity and transparency of the wholesale energy market
RES	renewable energy sources
SEPS	Slovenská elektrizačná a prenosová sústava, a.s. (electricity TSO)
SoLS	supplier of last resort
TPS	system operation tariff
TSO	transmission system operator
TYNDP	Ten-Year Network Development Plan
UGS	underground gas storage
UGSO	underground gas storage operator
VAT	value added tax

National legislation references

Act No 250/2012 Coll. Act No 250/2012 Coll. on Regulation in Network Industries as amended (Regulatory Act)

Act No 251/2012 Coll. Act No 251/2012 Coll. on Energy as amended (Energy Act)

Act No 309/2009 Coll. Act No 309/2009 Coll. on the Promotion of Renewable Energy Sources and High-Efficiency Cogeneration as amended

Act No 391/2015 Coll. Act No 391/2015 Coll. on Alternative Dispute Resolution for Consumer Disputes as amended

Executive management



Andrej Juris
Chairman



Szabolcs Hodosy
Vice-Chairman



Martin Horváth
Vice-Chairman

Message from the Chairman

The year 2022 was marked above all by the ongoing energy crisis in Europe, which created new challenges for energy market participants as well as for URSO and other public institutions in Slovakia. The solutions proven over the years were not applicable to the newly-emerged issues, and a change in the way the energy market had been functioning until now was inevitable. Energy and regulatory legislation, including our decrees, had to be adapted to reflect new demands of consumers and entities in regulated industries. The intention of the Office was, in these revolutionary changes for the energy sector and regulation, to apply a systematic approach in the search for new solutions and to constantly consider whether the impacts on consumers and regulated entities were proportionate. I believe we managed to do that.

2022 was the last year of the 5th regulatory period. In relation to that, a new regulatory policy for the new regulatory period was developed and approved by the Regulatory Board on March 29, 2022. An extensive process of amending the Office's tariff decrees in individual regulated

industries, as well as the beginning of the preparation of new electricity and natural gas market rules followed. At the end of 2022, the Office conducted several hundred tariff proceedings in order to fix regulated energy and water tariffs for 2023. We carefully examined the legitimacy of requests for tariff increases by energy and water suppliers. As everywhere else in the world, the national regulator could not significantly eliminate the worldwide enormous increase of energy commodities market prices. However, we used all available regulatory tools, afforded to us by the current national and EU legislation, in order to secure for Slovak consumers the lowest possible prices in regulated network industries.

Additionally, in the course of 2022, we constantly submitted recommendations and comments for amendments to the primary legislation, with the aim of empowering consumers, readjusting the method of tariff regulation for vulnerable consumers, strengthening competition between suppliers, and mainly mitigating the impacts of the energy crisis on households and other energy consumers. The Office does not have the power to submit amendments to the primary legislation to the legislative process or to provide financial compensation to energy consumers, but we submitted our recommendations to the relevant public authorities pointing out the risks and impacts on consumers. Several of our recommendations were reflected in amendments to the legislation, which enabled the Office as well as other public authorities to take measures mitigating the energy crisis impacts.

I would like to highlight the fact that at the state level, at the end of 2022, it was possible to adopt an unprecedented set of extraordinary measures to protect households as well as other consumers. Of the extraordinary measures in the energy sector, these are primarily the Memorandum with Slovenské elektrárne (SE) on the sale of discounted electricity for households and other consumer groups and the creation of a legislative framework for extraordinary interventions by the state to compensate for increased energy costs, whether in the form of decisions in the general economic interest or regulations of the Slovak government in the crisis regulation regime. The result is a fundamental elimination of the dramatic impacts of the energy crisis on Slovak households and other consumer groups in 2023.

To conclude, allow me to express my appreciation and thanks for their work to all URSO employees, which were able to cope with the new demands placed on them and, despite their increased and broadened workload, were able to ensure smooth running of regulatory processes and proceedings at the Office. Also, I would like to extend my thanks to all the institutions, entities and partners with whom we work in the performance of our regulatory activities.

Conceptual changes in the market design and protection against energy poverty

Development of new decrees on the rules for the functioning of the internal electricity market and rules for the functioning of the internal gas market

In 2022, the Office started the process of developing new electricity and gas market rules. This step was necessitated by the amendments of Acts No 251/2012 Coll. on Energy and No 250/2012 Coll. in the wording effective from 1 October 2022. The amendments as such were transpositions of the EU legislative package Clean Energy for All Europeans (CEP).

For the purposes of developing new decrees on the rules for the functioning of the internal electricity market and the rules for the functioning of the internal gas market, two separate working groups were established. For practical reasons, the Office decided to regulate the issue of market rules in two separate decrees, one for the electricity sector and one for the gas sector. The working groups were composed of representatives of the Office and representatives of relevant electricity and gas market stakeholders, ranging from regulated entities to representatives of consumers and of the so-called "new energy" (aggregators, flexibility providers, etc.). The working groups met on a regular basis, their members gradually submitting suggestions and dealing with concrete comments and suggestions in the drafting process. This process covered a time period roughly from April 2022 to September 2022. In October and November, the documents were finalised for the start of the official legislative process. Expert assistance and coverage of the electricity part was provided to the Office by the renowned consultancy firm EY under the EU-funded project of structural reform of the Office (SRSS project).

In addition to the ongoing drafting of the new market rules, in 2022 the Office also significantly amended the decree on the electricity and gas market rules (Decree No 24/2013 Coll.), with effect from 30 September 2022. The scope of the amendment was subsequently mirrored and considered in the drafting of the aforementioned new proposals. Their approval and effectiveness goes beyond 2022.

With all the above changes to the market rules, the Office responded to the current and pressing needs of the market and also to changes in primary legislation. The most important changes can be summarised as follows:

- introduction of daily settlement of imbalances in the electricity market. This measure can reduce the amounts of financial hedging needed by market participants by up to 40 %. The saved funds can significantly strengthen the financial liquidity of the concerned market

participants. At the same time, however, credit risk position of the market operator itself is optimised,

- modification of the rules for credit assessment of regional distribution system users, including modification of the amount of required financial security for system users with a signed contract for access to the distribution system and for distribution of electricity or with a signed framework distribution contract. By doing so, the Office also aims to strengthen the financial liquidity of suppliers to some extent, while reducing the overall credit risk exposure of the regional distribution system operators themselves,

- adjustments in the area of EIC codes in the electricity market in the sense that the electricity market operator assigns EIC codes to each electricity market participant, including household customers. In a second step, EIC codes of all customers' supply and transfer points will be registered under the customer's EIC code, which will create conditions for streamlining and increasing transparency of the processes, e.g. on the issue of the transmission operation tariff bands; for qualified decision-making on the classification of non-household customers into price-regulated segments (e.g. based on total annual consumption or, in the future, based on SK-NACE codes), and last but not least, the EIC code of non-household customers can contribute to a more efficient implementation of potential state instruments for protection against high energy prices, or in the implementation of the future concept for the protection of consumers at risk of energy poverty,

- change in the definition of the maximum reserved capacity for transfer points in electricity. In particular, the possibility of a contractually agreed value for the maximum reserved capacity of electricity producers is introduced. The universal definitions of maximum reserved capacity and reserved capacity in the directions of off-take and supply from/to the grid create conditions for a more efficient integration of battery electricity storage into the system.

A significant part of the amendment is devoted to the application of experience and procedural improvements in the area of last resort supply of electricity and gas. In particular, the procedures for sharing information on the concerned market participants are modified so that last resort supply as a safeguard instrument is applied in a procedurally efficient manner.

Concept for the protection of energy-poor consumers

During 2022, the Office developed a policy document, the Concept Paper for the Protection of Energy Poverty Eligible Consumers (hereinafter as “the Concept”). The drafting of the Concept Paper and its submission to the Government of the Slovak Republic before the beginning of the new regulatory period is a legislative task of the Office pursuant to Section 9(3)(f) of Act No 250/2012 Coll. on Regulation in the Network Industries, as amended. In the course of 2022, the Concept Paper was being developed in connection with the start of the new 6th regulatory period, which began on 1 January 2023. Although the turbulent price development on commodity markets in 2022 is not related to the development of the Concept Paper, the overall situation on the electricity, gas and heat markets only underlined the overall importance of the Concept Paper.

In order to grasp the process of drafting the concept more professionally from the outset and to get inspiration from good practices in other EU countries, a comprehensive analytical material on energy poverty has been developed in cooperation with the EY consultancy in the framework of the EU-funded project "Structural Reform of the Regulatory Framework for the Network Industries" (SRSS project).

The draft concept was developed together with other central government bodies, namely in cooperation with the Ministry of Health, the Ministry of Finance and the Ministry of Labour, Social Affairs and Family of the Slovak Republic. A working group with this composition met at regular intervals during the autumn of 2022 under the auspices of the Office. The draft Concept, taking into account consultations with other stakeholders, was also submitted by the Office to a wider public consultation and to the standard inter-ministerial commenting procedure. All comments from the public consultation have been assessed and many of them incorporated. The finalised draft of the Concept was submitted to the Government on 23 December 2022, which took note of it at its meeting on 25 January 2023 by Government Resolution No 40/2023.

The approved concept contains a draft methodology for the definition of energy poverty, including framework proposals of eligibility criteria that will allow for the targeted identification of vulnerable consumers meeting the conditions of energy poverty. In addition, the Concept also contains proposals for measures to protect consumers so defined, dividing the measures into two categories: proposals for measures within the remit of the Office and recommendations for possible further measures within the remit of other ministries. The

concept, if further implemented, can be a systemic measure through which the general economic availability of energy and drinking water for the population of the Slovak Republic can be increased in a sustainable way and thus increase their overall standard of living.

1. Electricity

Among the network industries, electricity is clearly one of the most dynamic and, at the same time, from the regulatory point of view, the most complex network industry. In electricity, the Office carries out tariff and technical (non-tariff) regulation, the scope and specification of which are determined by Sections 11 and 13 of Act No 251/2012 Coll.

In the technical regulation, the Office approves the grid codes of individual system operators, conditions for the transmission of electricity through the distribution system in the electricity transmission regime, conditions or methodologies for the transmission system operator under EU legislation, as well as the development and updates of model grid code for local distribution system operators.

After the amendment of Act No 251/2012 Coll. in autumn 2022, the Office started developing new decrees, derived from the amendment. These are in particular Decree No 92/2023 Coll., laying down the conditions of the tender procedure for the provision of services of electricity storage facilities and the Office's Decree laying down the content of the distribution system development plan.

In 2022, the European electricity markets experienced a significant rise in the price of electricity, mainly due to the war conflict in Ukraine, unavailability of a significant number of nuclear power plants covering the core of electricity consumption in Europe, uncertainty of gas supply to Europe and its rising prices, and the related price-setting methodology in the electricity markets, with the price of electricity being set by the "most expensive" activated type of power plant, which is a gas-fired power plant.

High electricity prices on the day-ahead market in 2022 reduced the costs of feed-in-tariffs in RES and CHP, resulting in a surplus of funds in the RES and CHP electricity support scheme. Based on this fact, the Office, within the framework of available regulatory instruments:

- caused the entire historical deficit of RES and CHP electricity generation support created for the regional distribution system operators and OKTE to be repaid,

- offset the increased costs of purchasing electricity to cover losses to individual system operators caused by high electricity market prices in full for 2021 and in part for 2022, thereby significantly reducing the future impact of the adjustment of the eligible costs of the distribution losses tariff as a component of the final electricity price.

In order to support and protect electricity end-users from the impact of high electricity prices, in accordance with the available regulatory instruments and on the basis of Article 9 of the EU Council Regulation 2022/1854 on emergency intervention to address high energy prices, the Office, by Decision No 326/2022/E of 27 December 2022, decided to use part of the surplus revenue from the TSO's congestion revenues resulting from the allocation of cross-zonal capacity in 2022 in the amount of EUR 153 million with the aim to mitigate the impact of the adverse effects of the high prices for 2023.

In 2022, which was the last sixth year of the 2017-2022 regulatory period, a major milestone was the completion of the transposition of the European legislation grouped in the Clean Energy Package into national legislation.

Description and definition of electricity market participants

Electricity market participants are defined in Section 15(2) of Act No 251/2012 Coll:

1. electricity producers,
2. the short-term electricity market operator, OKTE
3. the transmission system operator (TSO), SEPS
4. distribution system operators
 - a. regional distribution systems - companies ZSD, SSD and VSD,
 - b. local distribution system operators - 143 companies,
5. electricity suppliers,
6. end users,
7. the electricity buyer,
8. aggregators,
9. storage facility operators,
10. energy communities,
11. direct line operator.

Table 1 Overview of tariff regulation decisions in electricity (excl. RES and CHP)

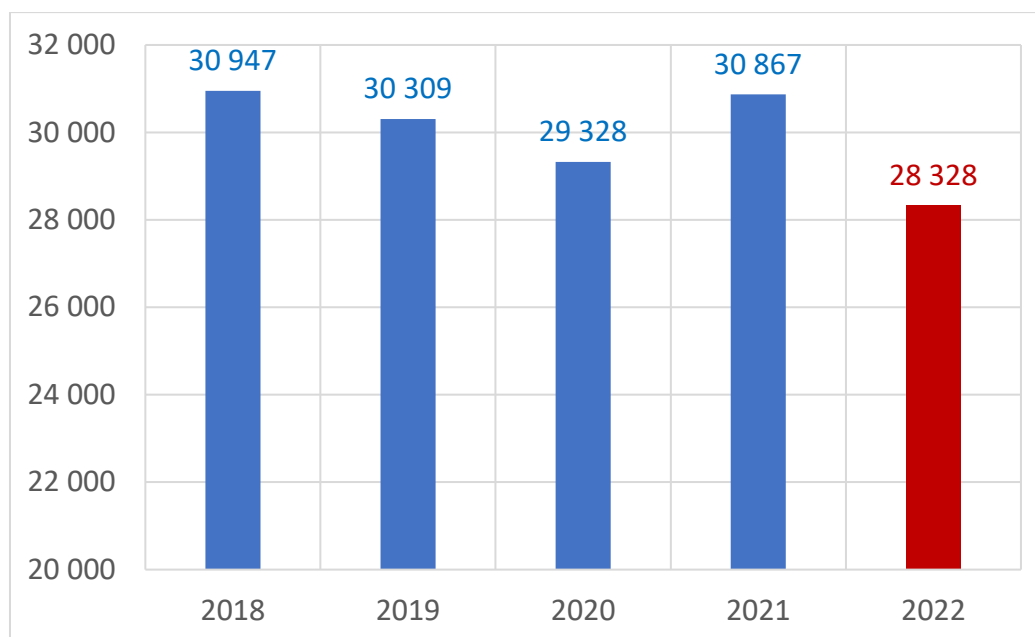
Type of decision	2018	2019	2020		2021		2022	
			issued for 2020	issued for 2021	issued for 2021	issued for 2022	issued for 2022	issued for 2023
Tariff decisions	331	301	49	112	213	104	229	75
Suspended proceedings	20	20	20	-	13	-	167	-
Terminated proceedings	5	7	2	-	8	-	3	-
Interim measure	-	-	-	-	-	-	-	8

Table 2 Overview of the number of decisions issued in non-tariff regulation in electricity

Type of decision	2018	2019	2020	2021	2022
Grid codes	21	15	15	124	85
Commercial terms and conditions	26	10	10	8	10
Transit conditions	2	4	2	1	2
Decisions under EU legislation	20	27	5	7	7

The TSO is pursuant to Section 28(3)(b) of Act No 251/2012 Coll. obliged to develop a ten-year network development plan (TYNDP) every two years, including a plan for the development of interconnectors. Pursuant to Act No 251/2012 Coll., the Office shall consult the TYNDP in a non-discriminatory and transparent manner with existing and potential system users and allow them to submit reasoned comments on it within a reasonable period of time and shall examine the consistency of the TYNDP with the requirements for the realisation of investments in the transmission grid and with the EU-wide TYNDP. Following its examination in 2022, the Office, by Decision No 0003/2022/E-RO, imposed an obligation on SEPS to amend the TYNDP for 2022 - 2031 submitted to the Office, on the grounds that it did not comply with Act No 251/2012 Coll.

Figure 1 Evolution of the country's total gross electricity consumption (GWh)



In 2022, the total gross electricity consumption in Slovakia reached 28 328 GWh, which represents a decrease of 8% compared to 2021 (30 867 GWh), mainly because as a result of the energy crisis and high electricity and gas prices on the European markets, cost increases mainly on the part of consumers led to cuts in their production and thus also reductions in electricity consumption.

Electricity infrastructure

Ancillary and system services

The TSO purchases ancillary services on the market from the ancillary services providers for the purpose of providing system services to grid users in order to maintain the quality of electricity supply and to ensure the security of operation of Slovakia's grid.

Based on the required volumes of individual types of ancillary services, the Office, by the relevant decisions, determined for the TSO:

- total planned costs of purchasing all types of ancillary services,
- maximum price for the procurement of primary, secondary and tertiary active power and frequency control (FCR, aFRR, mFRR),
- maximum annual cost of procuring non-frequency ancillary services - automatic voltage control and black start

- maximum price of positive balancing energy and minimum price of negative balancing energy.

Table 3 shows evolution of the number of ancillary service providers in each year, indicating a stable market for ancillary services on Slovakia's territory. However, during 2022, with the rising price of electricity on the European electricity markets, some providers stopped providing ancillary services due to economic unviability and/or production curtailments and/or adopted savings measures. With the aim to improve the conditions for the provision of ancillary services, the Office amended the decision on the price and conditions for the provision of ancillary services three times by the end of 2022, thus making it possible to secure procurement of sufficient volumes of scarce ancillary services for secure grid operation:

- Decision No 0322/2022/E of 29 November 2022 increased the maximum price of FCR by 118% and of aFRR+/- by 676% and 55%, respectively,
- Decision No 0327/2022/E of 28 December 2022 increased the maximum price for mFRR+ by 458%.

Table 3 Development in the provision of ancillary services

Indicator/year	2018	2019	2020	2021	2022
No of ancillary services providers	25	24	24	24	22

Table 4 shows the volumes of activated ancillary services or balancing energy, where some changes in the structure of individual types of ancillary services between 2021 and 2022 can be observed. In 2022, 15 min and 10 min positive and negative tertiary power and frequency control were no longer used. Furthermore, slightly higher volumes of activated ancillary services or balancing energy can be observed, which can be attributed to higher volatility in the electricity markets, which places higher demands on the regulation of the grid and ensuring security of its operation.

Table 4 Overview of balancing energy supply (MWh)

Type of activated ancillary service or balancing energy	2021 [MWh]	2022 [MWh]	change 2022/2021 [%]
Primary power control + (FCR+)	6 366	6 633	4.19%
Primary power control - (FCR-)	-6 361	-6 628	4.21%
Secondary power control + (aFRR+)	73 568	80 917	9.99%
Secondary power control - (aFRR-)	-28 269	-41 302	46.10%

Tertiary power control 12.5 min + (mFRR+)	-	2 417	-
Tertiary power control 12.5 min - (mFRR-)	-	-283	-
Tertiary power control 3 min +	4 010	2 250	-43.89%
Tertiary power control 3 min. -	-176	-166	-5.60%
Tertiary power control 10 min + *	1 348	-	-
Tertiary power control 10 min - *	0	-	-
Tertiary power control 15 min + *	624	-	-
Tertiary power control 15 min - *	0	-	-
Demand reduction*	1 036	-	-
Demand increase*	0	-	-
Import of emergency assistance	0	0	-
Export of emergency assistance	-	22 538	-
Import IGCC (IGCC+)	140 922	124 875	-11.39%
Export IGCC (IGCC-)	-68 731	-65 398	-4.85%
Total volume of positive ancillary services and positive balancing energy	221 507	210 459	-4.99%
Total volume of negative ancillary services and negative balancing energy	-97 176	-107 149	10.26%

* ancillary services in 2022 included under mFRR+ and mFRR-

Transmission system

The Office determined network tariffs for the TSO also in 2022. The TSO applies the tariffs towards:

- transmission grid users in the scope of:
 - tariff for reserved capacity (power-based) (€/MW/year),
 - tariff for transmitted energy (energy-based) (€/MWh),
 - tariff for transmission losses (€/MWh),
- all electricity end-users in Slovakia:
 - tariff for system services (€/MWh).

Figure 2 shows that in 2022 the volume of total electricity transmitted reached 33 523 GWh, up about 2% compared to 2021 (32 807 GWh). In the context of the decrease in the country's total gross electricity consumption compared to 2021, this was due to an increase in transit flows, which occurred due to electricity flows from export areas (Western and North-Western Europe) with a cheaper source mix (photovoltaic and wind power plants) to import areas (Southern and South-Eastern Europe) with a more expensive source mix (fossil fuel fired thermal power plants).

Figure 2 Volumes of electricity transmission in Slovakia (GWh)

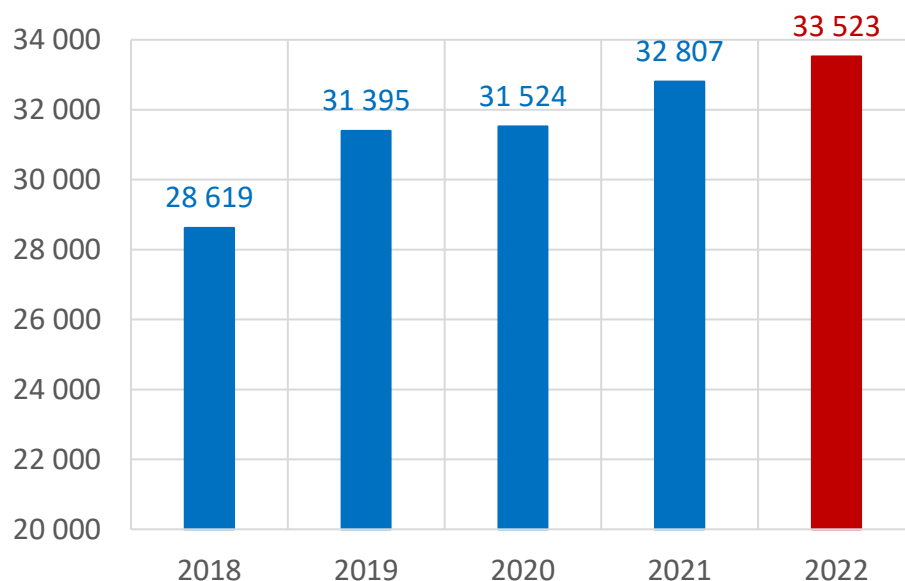
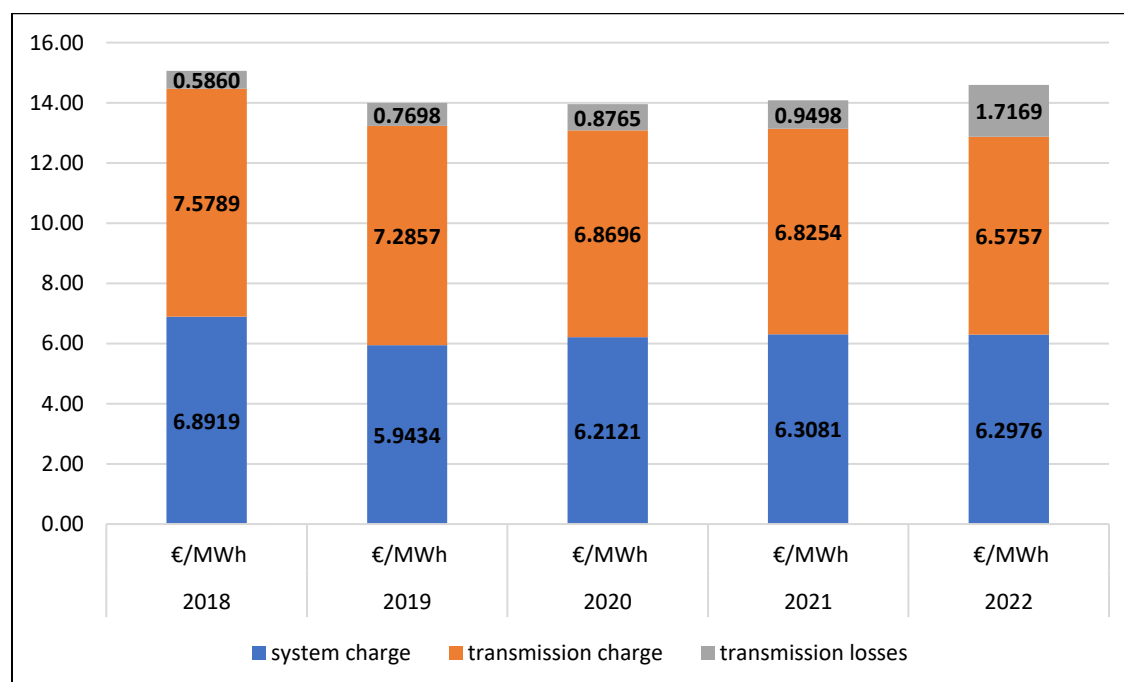


Figure 3 shows the evolution of regulated transmission charges. Compared to 2021, the tariff for system services and the tariff for access and electricity transmission were roughly the same in 2022. The tariff for transmission losses increased by 80% in 2022 compared to 2021, due to an increase in the daily price index of the official price list published by POWER EXCHANGE CENTRAL EUROPE (PXE), product F PXE SK BL Cal-t, on the basis of which the tariff for transmission losses is fixed.

Figure 3 Evolution and structure of regulated transmission charges



Distribution system

For operators of regional distribution systems, the Office also set network tariffs in 2022, which the operators applied towards distribution grid users in the scope of:

- tariff for electricity distribution without losses, including electricity transmission - reserved capacity component (€/MW/month),
- tariff for electricity distribution without losses, including electricity transmission - component for distributed electricity (€/MWh),
- tariff for distribution losses (€/MWh).

Tariff regulation also applied to local distribution network operators and was performed by determining the method of calculating the maximum tariff for electricity supply and the tariff for access to the local distribution system and distribution of electricity.

In 2022, the total distributed electricity in Slovakia reached 19 905 GWh, down about 2% compared to 2021 (20 248 GWh). In the context of the decrease in the country's total gross electricity consumption in 2022 compared to 2021, the reduction was also due to the energy crisis and the high electricity and gas prices on the European markets, which, on the part of consumers, led to the adoption of cost-saving measures as well as to consumption cuts due to cost increases.

Figure 4 Volumes of electricity distribution in Slovakia (GWh)

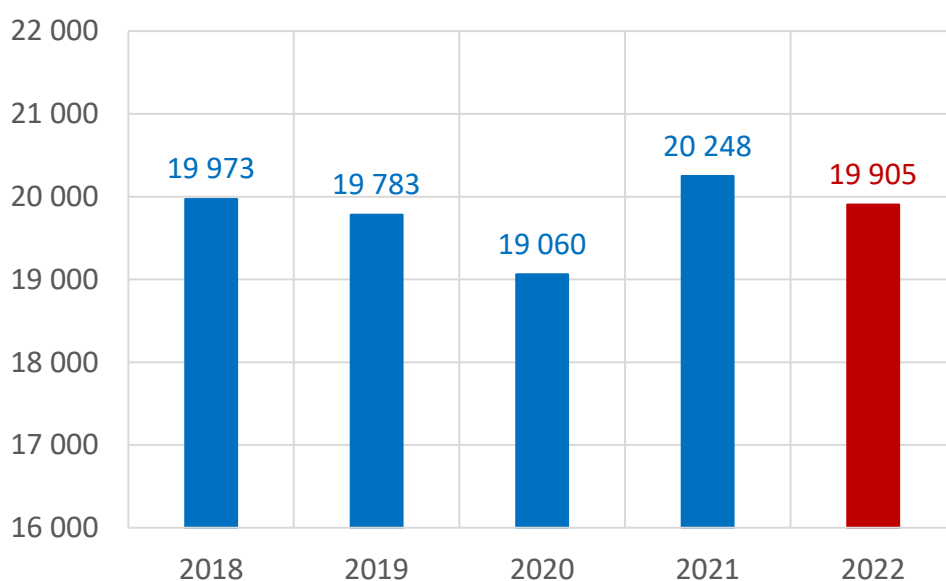
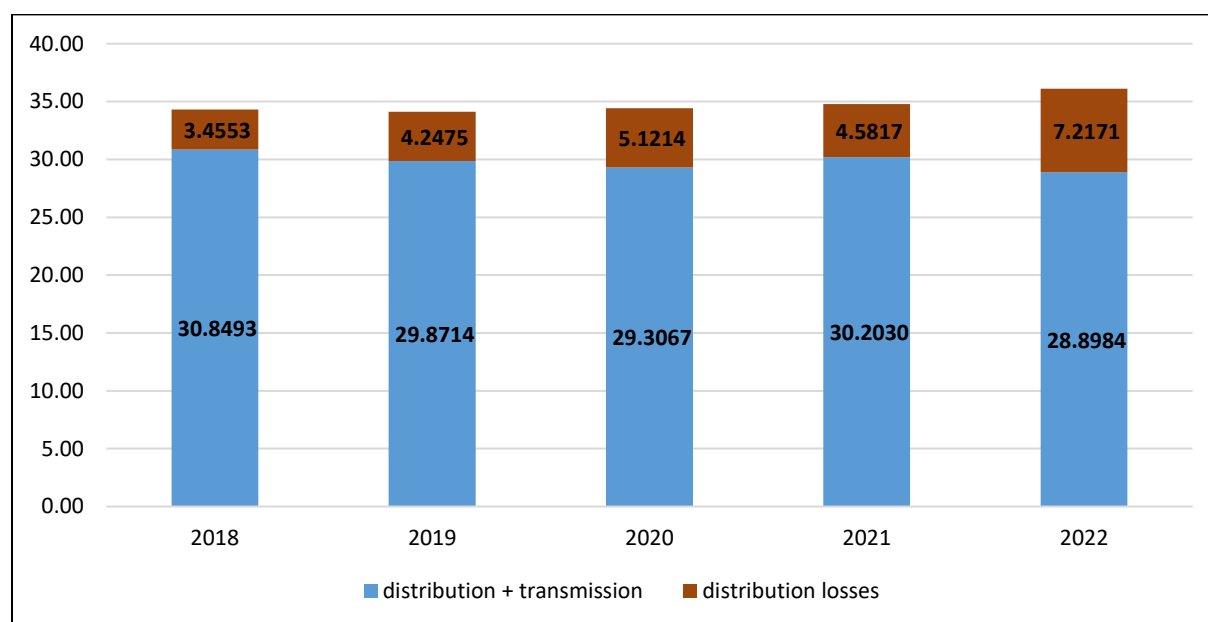


Figure 5 shows the evolution of selected regulated distribution charges. Compared to 2021, tariffs for access to the distribution system and distribution of electricity, including electricity transmission, were approximately the same. The tariff for distribution losses rose by 58 % compared to 2021, which was due to the increase in the daily price index for the product F PXE SK BL Cal-t from the official exchange rate published by PXE (POWER EXCHANGE CENTRAL EUROPE), on the basis of which the tariff for distribution losses is fixed.

Figure 5 Evolution and structure of regulated distribution charges (EUR/MWh)



System operation tariff

The purpose of the system operation tariff (or “TPS”) is to recover the costs of operating the system, consisting mainly of support for the generation of electricity from RES and CHP, generation of electricity from indigenous coal and the costs of the electricity short-term market operator providing the organisation, evaluation and other activities of the spot electricity market. TPS is one of the components of the final electricity price and applies to each final electricity consumer. From 2022, TPS is implemented on several TPS band values (TPS1, TPS2 and TPS3), applied separately for each group of electricity end-users according to the end consumption at the supply point. Assignment to the individual bands is made according to the expected end consumption at a given supply point for year t-1.

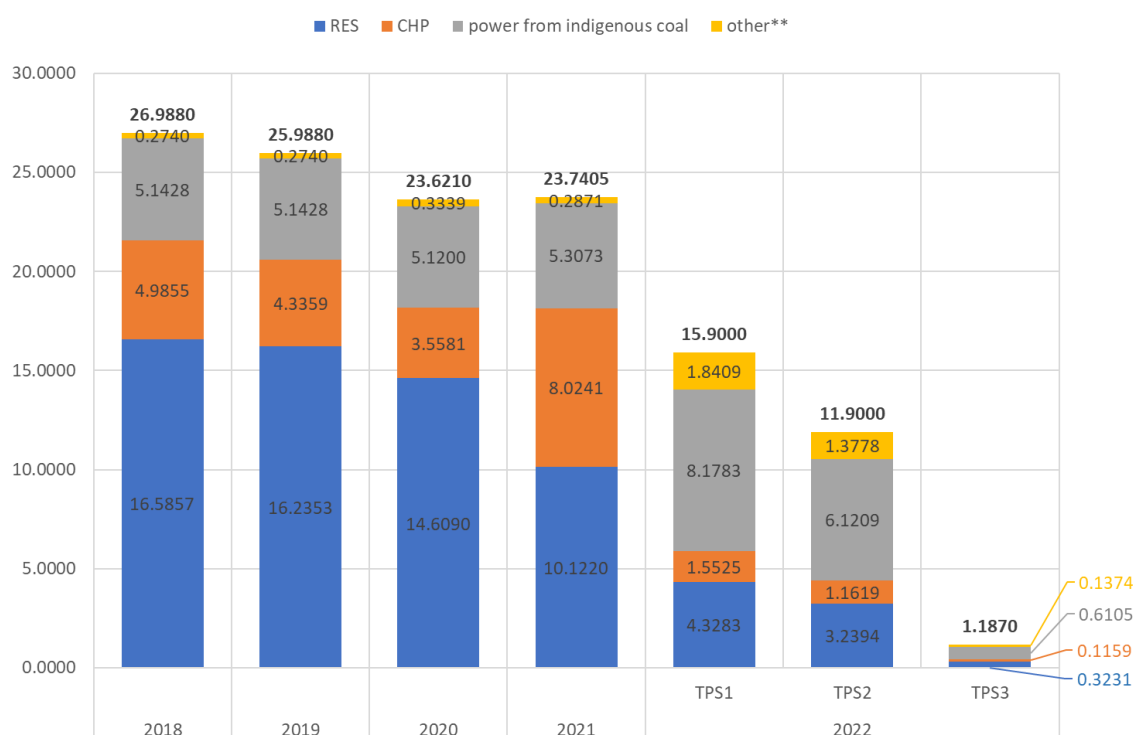
- Band 1 (TPS1) – end consumption of the supply point up to and including 1 GWh,
- Band 2 (TPS2) - end consumption of the supply point from 1 GWh up to and including 100 GWh; and

- Band 3 (TPS3) - end consumption of the supply point bigger than 100 GWh.

The main objectives of the introduction of band-based TPS were to distribute TPS costs reasonably among the different consumer groups according to their electricity consumption and to reduce the burden of the TPS on industrial, energy-intensive customers in order to ensure their competitiveness on the EU markets.

Figure 6 below compares the values of the different components of the TPS over the last five years, with the 2022 TPS split into three values according to the bands above.

Figure 6 Evolution of components of the system operation tariff (TPS) – EUR/MWh



other** - includes cost items of activities of OKTE, electricity buyer (SPP), costs of repaying the historic debt and other

Market coupling

In order to achieve the objectives of the EU strategy issued by the Commission, which include in particular security of electricity supply, flexibility of the interconnected system as well as a well-functioning and transparent wholesale market, investments in internal and cross-border interconnections are a prerequisite.

One of the instruments that can be used for the above objectives is the use of congestion income resulting from the allocation of cross-zonal capacity. Article 19(2) of Regulation (EU) 2019/943 on the internal market for electricity defines the priority objectives for which these funds are to

be used, which include in particular the construction of projects with cross-border significance to maintain and increase cross-border capacities.

The total net congestion revenues of SEPS, the TSO, reached EUR 191.26 million in 2022. In that year, part of the congestion income was used for investment projects with cross-border significance, in particular for the replacement of conductors and reinsulation of the 400 kV line 428 Moldava - Veľké Kapušany, replacement of conductors and reinsulation of the 400 kV line 424 Sokolnice - Križovany, replacement of conductors and reinsulation of the 400 kV line 429 Gabčíkovo - Podunajské Biskupice, and partly for the construction of a new 400 kV substation in Vajnory.

Projects of common interest

Another option how to support the implementation of projects with a significant impact on cross-border capacity is the selection process of Projects of Common Interest (PCIs), which are eligible for co-financing by the European Commission. The Office participated in working groups on these issues at all levels where methodologies are developed and approved by the Office (individually or at Core Capacity Calculation Region level), based on obligations under EU legislation. The projects mentioned below were also the result of processes and activities in which the Office was involved.

In order to be eligible for inclusion in the PCI list, electricity infrastructure projects as well as electricity storage projects had to be included in the ENTSO-E's Ten-Year Network Development Plan 2022 (TYNDP 2022).

Candidate PCIs of the Slovak Republic include:

1. *Electricity infrastructure projects*

- construction of a new 400 kV line Otrokovice (Czech Republic) - Ladce (Slovakia).
The project promoters are SEPS on the Slovak side and ČEPS on the Czech side. The expected increase of transmission capacity on the Slovak-Czech cross-border profile in both directions is 500 MW. A prerequisite for the construction of this line on the Slovak side is the commissioning of the new 400 kV Ladce substation. The expected commissioning date of the project is 2038.

2. Electricity storage projects

Two projects in this category:

- ELSEA (European Large Scale Energy Accumulation). The project promoter is ZSE Energia, a.s. The project consists of a battery storage facility with maximum installed capacity of 384 MW and expected annual electricity production of 252 GWh, consisting of 12 separate battery storage facilities located across Slovakia. After it is expected to be completed in 2035, the storage facility as a whole will be the largest in Europe.

- SE Integrator. The project promoter is Slovenské elektrárne, a.s. The project consists of the upgrading of the existing pumped storage hydro power plant Čierny Váh and the hybridisation of this power plant by adding an electrochemical storage tank - battery storage with expected capacity of at least 70 MW and 105 MWh. The expected commissioning year is 2031. The expected total availability of provision of ancillary services or flexibility of the power plant is from -670 MW to 730 MW.

3. Smart Grids projects

Two projects in this category:

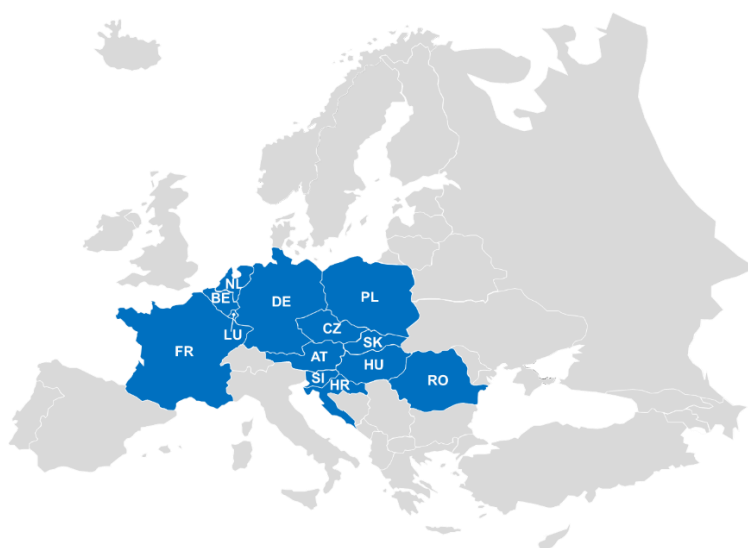
- ACON (Again Connected Network). The project promoter on the Slovak side is the company Západoslovenská distribučná, a.s. The project was included among the PCI candidate projects in 2022, is implemented in cooperation with the Czech Republic and its main objective is to upgrade and significantly increase the efficiency and security of the distribution network, as well as to enable easy integration of the ever increasing volumes of RES into the grid. The project is expected to be operational in 2027.

- Danube InGrid. The promoter of the project on the Slovak side is the company Západoslovenská distribučná, a.s. The project is implemented in cooperation with SEPS, a.s., Východoslovenská distribučná, a.s. on the Slovak side and the TSO and three DSOs on the Hungarian side. The main objective of the project is strengthening the synergy and integration of the Slovak and Hungarian electricity markets, upgrading the networks, creating new platforms for consumers and, last but not least, creating conditions for access and connection of micro producers, self-consumers and prosumers to the respective grids. The project is expected to be operational in 2029.

Successful Go-Live of Core Flow Based Day-Ahead Market Coupling (Core FB DA MC)

One of the ways to meet the EU objectives outlined in the introduction is through the implementation of new methodologies for capacity calculation and allocation. In the Core Capacity Calculation Region (CCR), flow-based capacity calculation methodology in the day-ahead electricity market was implemented in 2022. The flow-based capacity calculation methodology takes into account the physical constraints in the operation of the electricity grids based on the available reserves on critical network elements (mainly lines) and Power Transfer Distribution Factors (PTDFs) defined for each critical line of the grid and each bidding zone in the Core CCR. After many years of cooperation between nominated electricity market operators, transmission system operators and regulators in the Core region - Austria, Germany, Czech Republic, Poland, Hungary, Belgium, Croatia, France, Luxembourg, the Netherlands, Romania, Slovenia and Slovakia, day-ahead electricity market coupling through the flow-based capacity calculation methodology in the Core region went successfully live on 8 June 2022 in accordance with Article 20 of the Commission Regulation No 1222/2015 establishing guidelines for capacity allocation and congestion management (CACM). This methodology uses a coordinated way of capacity calculation for the whole region based on constraints on critical network elements and contingencies, resulting in improved capacity allocation in the region in terms of reflecting the actual constraints in the grid in terms of its operational security, enabling more electricity to be transmitted across borders and ultimately reducing overall costs. The Core region is currently working to implement flow-based methodology in the intraday markets as well. The original planned go-live date was set for June 2023.

Figure 7 Member countries of the Core region



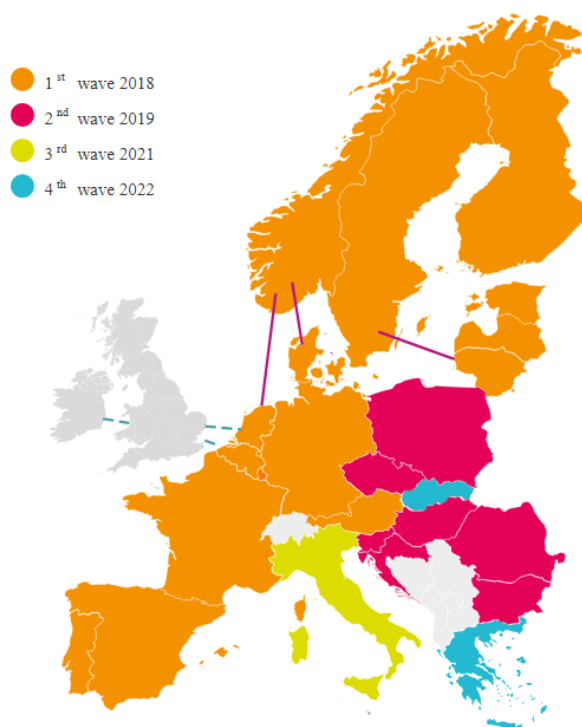
Successful Completion of Single Intraday Coupling (SIDC)

SIDC follows XBID (Cross-Border Intraday) project, which launched a continuous intraday trading platform in June 2018 and covered 15 countries. In November 2019 and September 2021, eight additional countries (Bulgaria, Croatia, Czech Republic, Hungary, Italy, Poland, Slovenia, Romania and Romania) joined SIDC as part of the 2nd and 3rd accession waves. Slovakia and Greece joined SIDC as part of the last 4th accession wave in November 2022, completing the integration of 25 EU countries (Malta and Cyprus are exceptions) in SIDC. Intraday trading starts after the closure of the day-head market.

SIDC is intended to contribute to increasing liquidity in trading. As Slovakia's intraday market does not provide sufficient liquidity, integration on a pan-European platform is expected to bring a positive change contributing also to the development of RES and aggregation of flexibility. The central solution allows orders placed by market participants in one country to be matched with orders placed by market participants in any other interconnected country, if there is available cross-border capacity to transmit electricity between the affected bidding zones. SIDC is in line with the EU's target model for an integrated cross-border intraday market. The integration of Slovakia and Greece into SIDC represents another important milestone and completion of integration of the EU single intraday electricity market.

SIDC currently integrates the intraday markets of 25 countries: Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Italy, Latvia, Lithuania, Luxembourg, Norway, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain and Sweden.

Figure 8 Member countries of SIDC, showing in colour at which year each country joined



Balancing energy sharing platforms

Pursuant to Commission Regulation (EU) 2017/2195 establishing a guideline on electricity balancing (EB GL), the EU platforms are:

- Trans European Replacement Reserves Exchange (TERRE) pursuant to Article 19 of EB GL, which was put into operation on 6 January 2020. Portugal, Spain, France, Switzerland, Switzerland and the Czech Republic gradually joined the platform by January 2021, and Poland is expected to join in the first half of 2023. The Slovak TSO does not participate in this platform;
- exchange of balancing energy from frequency restoration reserves within the Manually Activated Reserves Initiative (MARI) pursuant to Article 20 of EB GL, which was put into operation on 15 September 2022 without any TSOs joining the platform. On 5 October 2022, Czech and German TSOs joined. In 2023 Austria, Belgium and Spain will be gradually joining. All the other TSOs will be connected to the platform in 2024;
- exchange of balancing energy from for frequency restoration reserves with automatic activation, or PICASSO (Platform for the International Coordination of Automated Frequency Restoration and Stable System Operation) pursuant to Article 21 of EB GL, which was put into operation by connecting the Czech TSO on 1 June 2022; Austrian and German TSOs joined on

22 June 2022. TSOs of France, Italy, Romania and Belgium announced their connection date for 2023 and all other TSOs for 2024;

- real-time Imbalance Netting pursuant to Article 22 of EB GL, which was put into operation on 21 June 2021. At that time, all the TSOs of continental Europe were connected, with the exception of Romania (TSO joined in December 2021) and Bulgaria (TSO connected in July 2022).

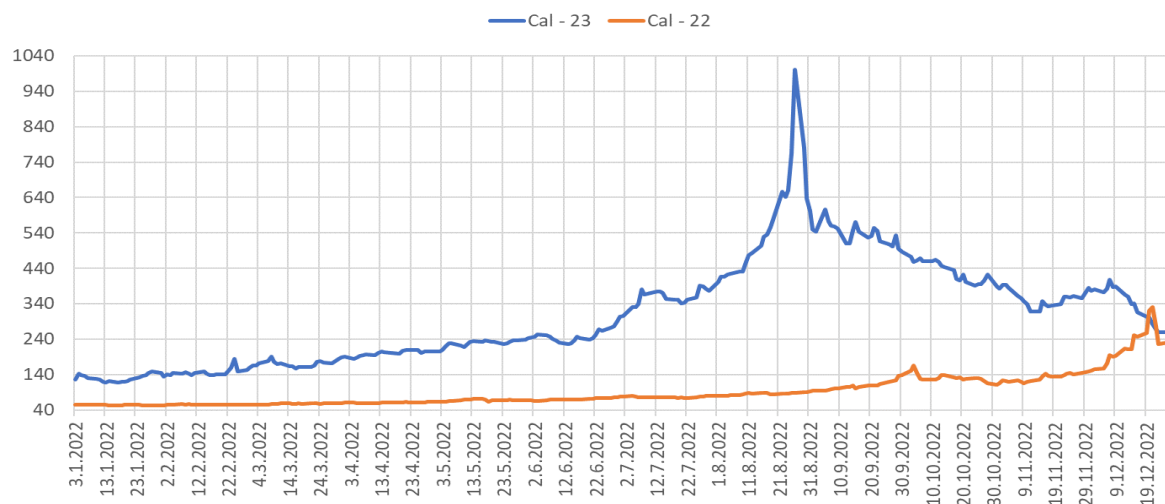
Slovak TSO is planning to join MARI and PICASSO in July 2024, as it submitted to the Office a request for derogation from connection to these platforms pursuant to Article 62(2)(a) of EB GL and was granted the request on 29 March 2021 for the period from 25 July 2022 to 24 July 2024.

Wholesale market

In 2022, the European electricity markets experienced a significant rise in the price of electricity, mainly due to the war conflict in Ukraine, unavailability of a significant number of nuclear power plants covering the core of electricity consumption in Europe, uncertainty of gas supply to Europe and its rising prices, and the related price-setting methodology in the electricity markets, with the price of electricity being set by the "most expensive" activated type of power plant, which is a gas-fired power plant.

Figure 9 shows the developments of power commodity prices on the PXE, of F PXE SK BL Cal -23 and Cal -22 products, showing vast differences between the prices. The average price of commodity on the PXE, of F PXE SK BL Cal -t products went up by approximately 203% in 2022 compared to 2021.

Figure 9 Evolution of electricity commodity price in EUR/MWh (source: PXE Prague)



Retail market

Tariff regulation of electricity supply to vulnerable customers, which are household customers and small enterprises, was carried out in accordance with Act No 250/2012 Coll. on the basis of the regulatory policy and according to the implementing regulation in tariff regulation, namely Decree 18/2017 Coll. establishing tariff regulation in electricity and certain conditions for the performance of regulated activities in the electricity sector, as amended.

In 2022, subject to tariff regulation was electricity supply:

- to households,
- to small enterprises, and
- by suppliers of last resort.

The default parameters used to determine the maximum price for electricity supply to household and small business consumers were, for the year under review, the arithmetic average of daily prices of the official price list published by PXE on its website, for the product F PXE SK BL Cal-t for the period from 1 January 2021 to 30 June 2021, which reached €61.2077/MWh (year-on-year increase of €15.099/MWh, i.e. 32.75 %), to which a coefficient to cover the forecasted profile of electricity supply to vulnerable consumers, costs of imbalance and reasonable profit were added.

On top of the different supply tariff rates, electricity suppliers charged a distribution tariff including transmission and transmission losses, distribution losses, system services tariff and system operation tariff pursuant to URSO tariff decisions. By these decisions, tariffs were approved or fixed for access to the distribution system and electricity distribution for the DSO to whose network the vulnerable consumer's metering point was connected.

During the year under review, several amendments to Act No 250/2012 Coll. and Act No 251/2012 Coll. were adopted which, among other things, brought a significant expansion of the groups of vulnerable electricity consumers. Until the end of March 2022, there were only two groups of vulnerable electricity consumers: household electricity consumer and small enterprise, i.e. non-household electricity consumer with an annual consumption of no more than 30 MWh in the previous year.

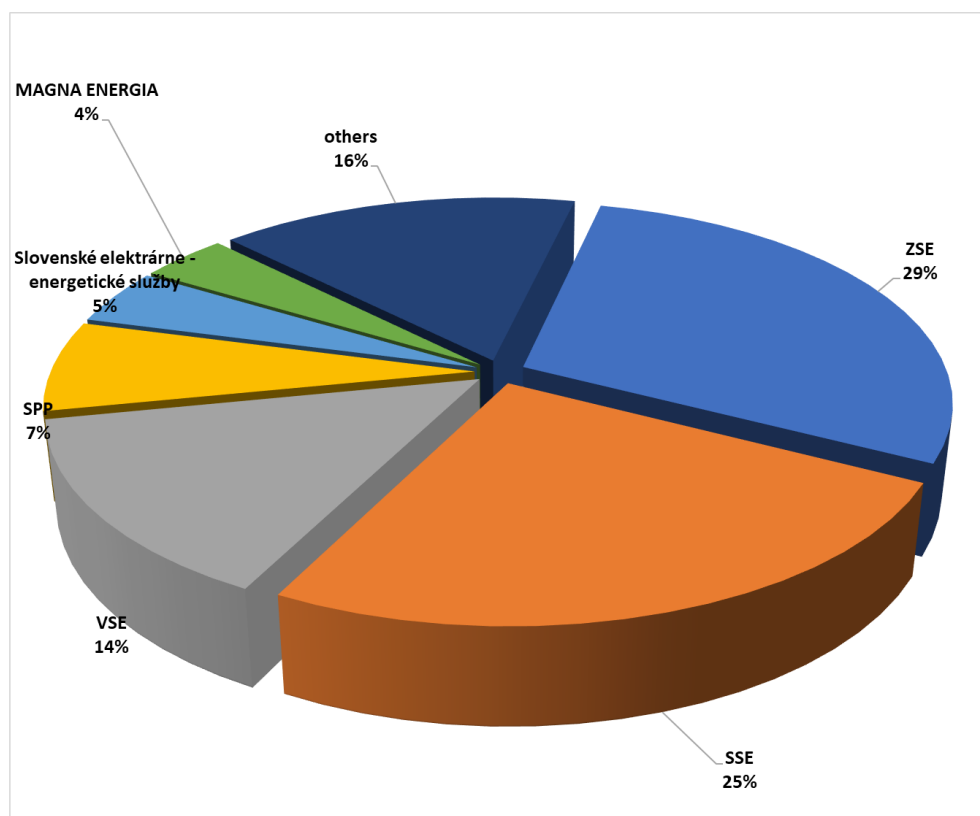
From 1 April 2022, social care facilities, facilities for social protection of children and social curatorship were added to the households and small enterprises, and from 8 December 2022 the above groups of vulnerable non-household customers also included:

- electricity consumers operating a residential building with rental flats owned by a municipality or a higher territorial unit, which are intended for social housing, or operating a residential building with rental flats within the framework of state-supported rental housing,
- a group of electricity end-users, which are the owners of flats and non-residential premises in an apartment building, consuming electricity for the production of heat and domestic hot water, legally represented by a natural or legal person administering a common heat source supplying heat and domestic hot water to the residential building.

The legislative changes also allowed all vulnerable non-household customers to sign up at various stages of 2022 for electricity supply at the tariff regulated by the Office for 2023.

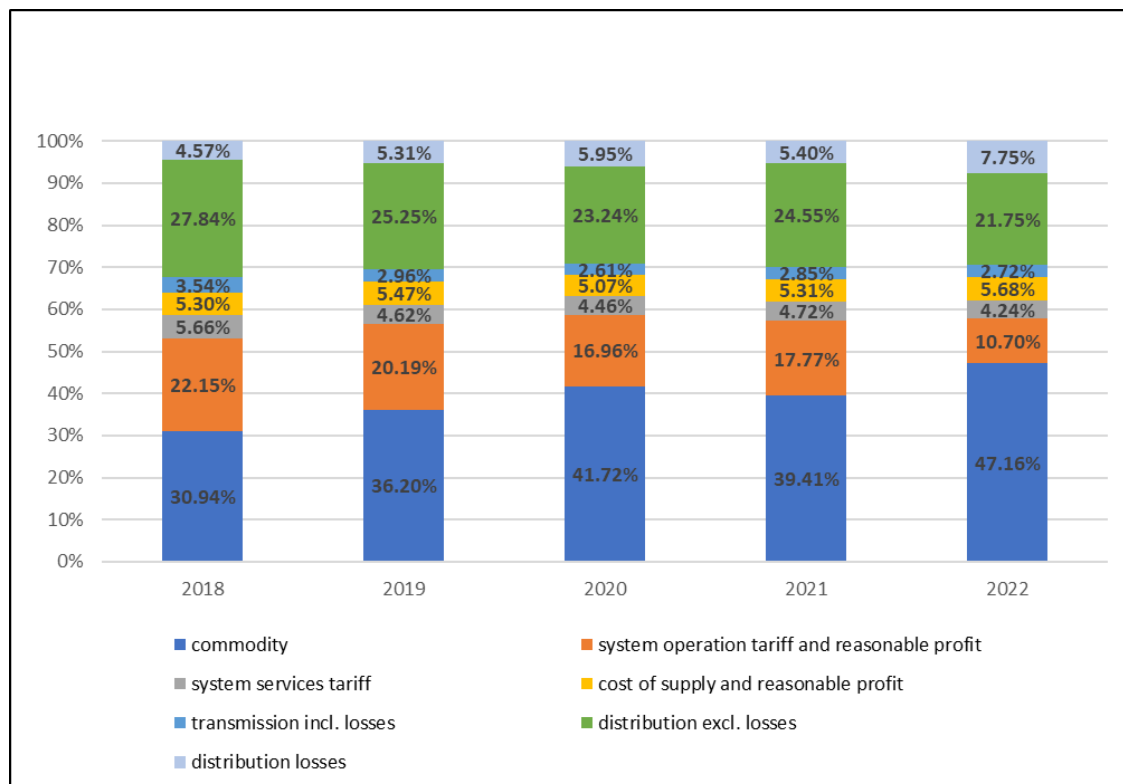
In electricity supply, the largest market share is held by three "traditional" suppliers, which are part of vertically integrated companies - ZSE Energia, a. s., Stredoslovenská energetika, a. s. and Východoslovenská energetika, a. s.

Figure 10 Market shares of electricity suppliers to all consumer groups



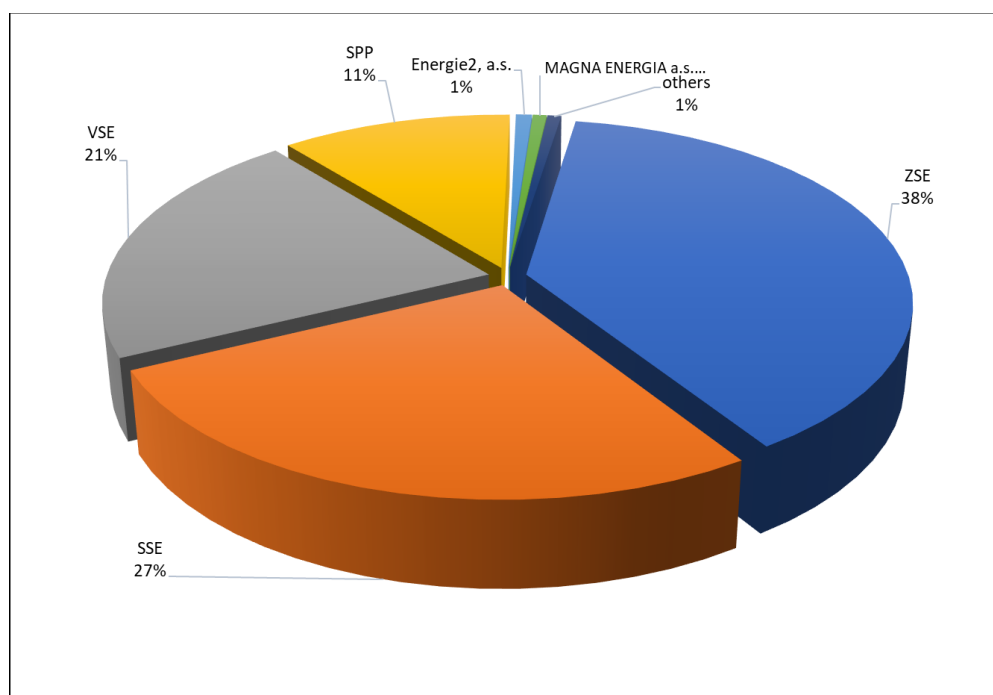
Electricity supply to households

Figure 11 Breakdown of the average end price for electricity supply to households



Electricity supply to households was divided into eight tariffs. Vulnerable household customers were served by 14 nationwide suppliers in 2022.

Figure 12 Market shares of electricity suppliers to households



Electricity supply to small enterprises

Electricity supply to small businesses was divided into 11 tariffs and provided by 14 nationwide suppliers.

Figure 13 Market shares of electricity suppliers to small enterprises

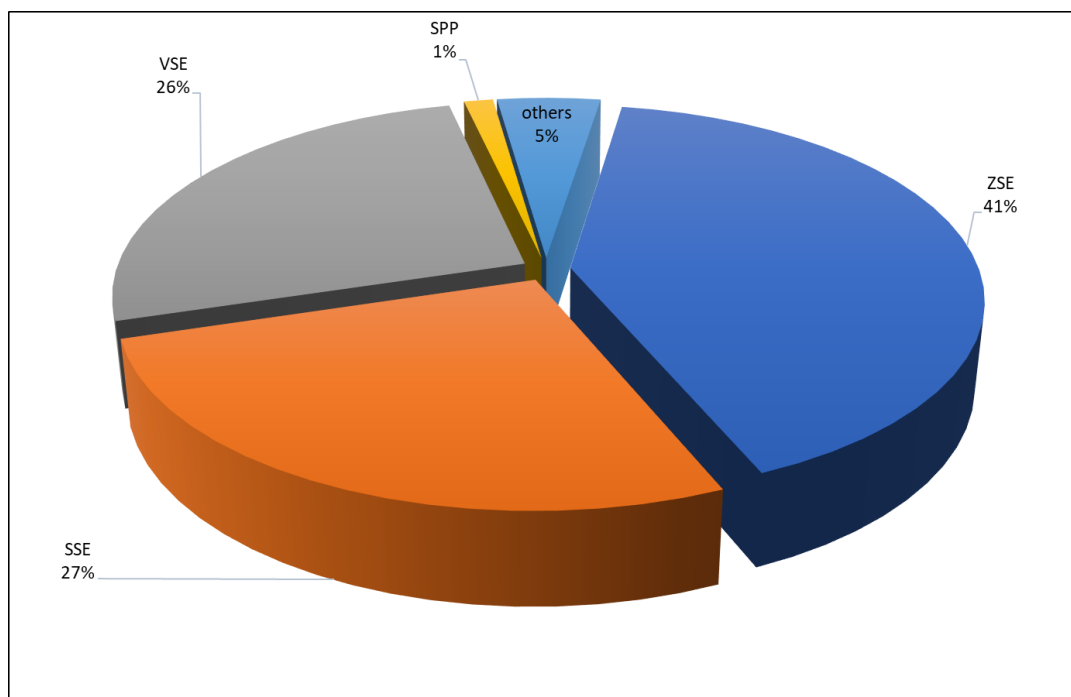
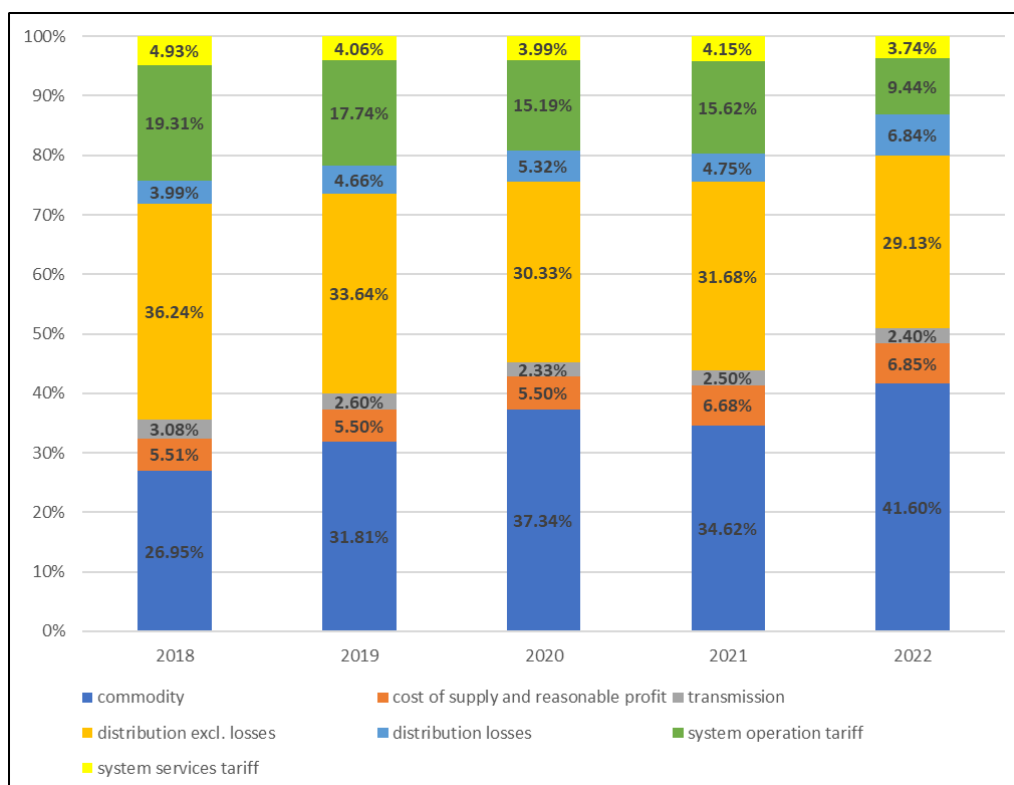


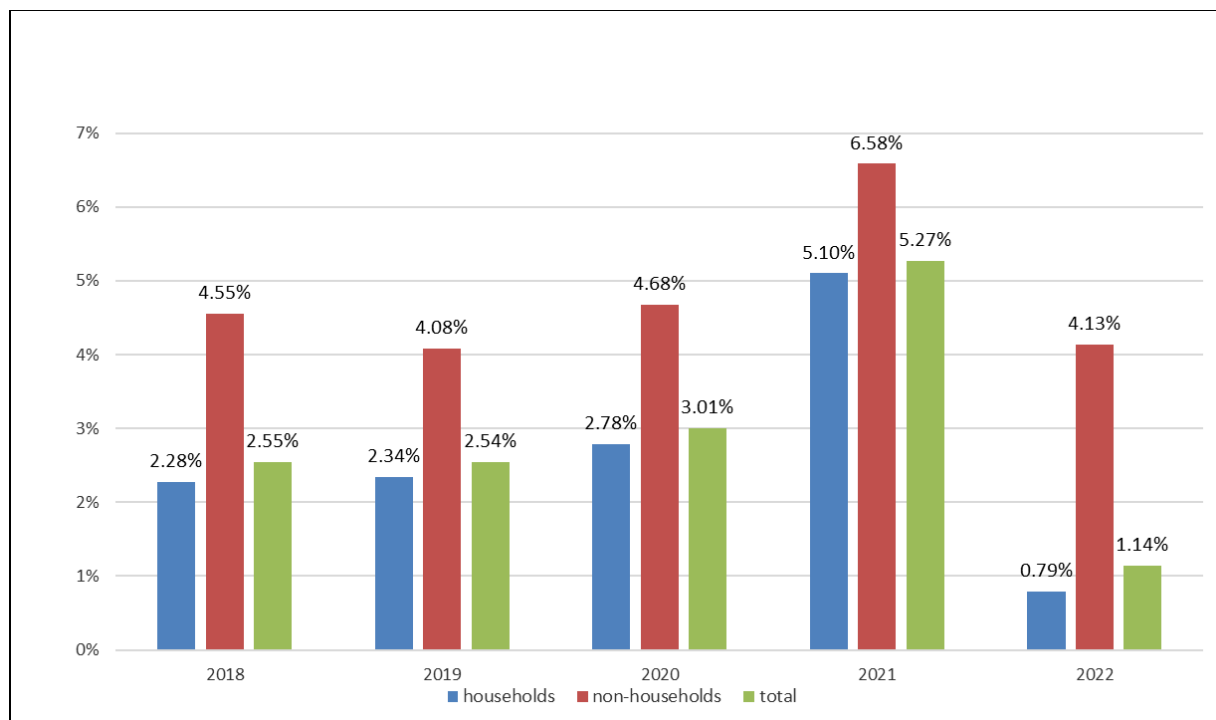
Figure 14 Breakdown of the average end price for electricity supply to small enterprises



Switching

The level of liberalisation of the electricity market is indicated by the switching ratio. This expresses the ratio of the number of customer supply points with a change of electricity supplier to the total number of supply points in the year under review.

Figure 15 Switching



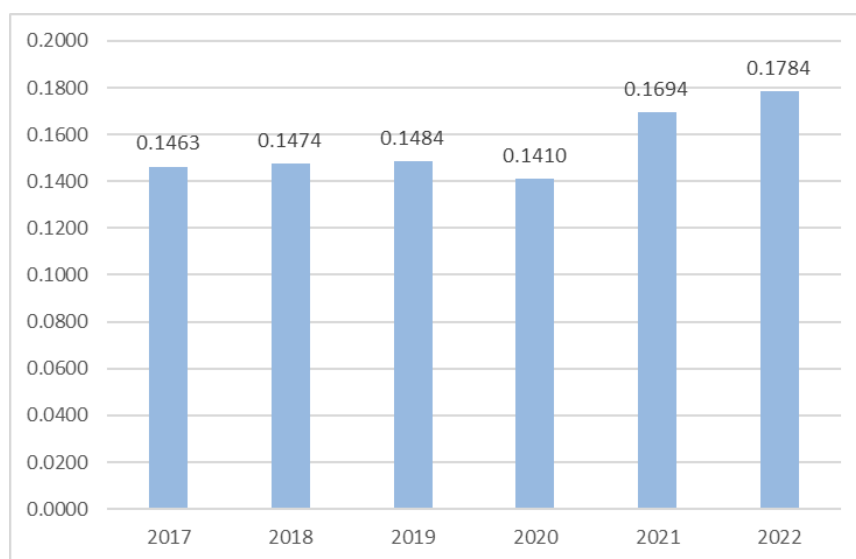
Supply of last resort

On the basis of the Office's decision, ZSE Energia, a.s., Východoslovenská energetika, a.s. and Stredoslovenská energetika, a.s. are the suppliers of last resort (SoLR) in the territory of the Slovak Republic. In 2022, the Office kept track of 4 922 customer metering points in the SoLR regime and it took note of 3 electricity suppliers that had lost their ability to supply electricity to customers pursuant to Act No 251/2012 Coll.

Herfindahl - Hirschman Index (HHI)

The purpose of the HHI is to determine the competitiveness of the market. The Office assessed the position of regulated entities operating on the market for electricity supply to all customers. A market is concentrated if the HHI is more than 0.1 and highly concentrated if it exceeds 0.2.

Figure 16 Evolution of HHI



Electricity generation from RES and CHP

Promoting electricity generation from RES and CHP is one of the most important factors in achieving 20% reduction in greenhouse gas emissions. This ambitious energy and climate commitment has been set as a major and quantified target by the Integrated National Energy and Climate Plan 2021-2030, which was developed under Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action, amending Regulations (EC) No 663/2009 and (EC) No 715/2009 of the European Parliament and of the Council, Directives 94/22/EC, 98/70/EC, 2009/31/EC, 2009/73/EC, 2010/31/EU, 2012/27/EU and 2013/30/EU of the European Parliament and of the Council, Council Directives 2009/119/EC and (EU) 2015/652 and repealing Regulation (EU) No 525/2013 of the European Parliament and of the Council.

As a legislative basis for the support of electricity generation from RES and CHP in Slovakia, Act No 309/2009 Coll. was approved in 2009, which improved the functioning of the electricity market in RES and CHP by providing a long-term guarantee of purchase prices for 15 years (feed-in-tariffs) and at the same time favoured the construction of small and decentralised facilities. In order to further accelerate the development of RES (whose planned share in final energy consumption for 2030 is set at 19.2%) during 2022-2030, this basic legislative framework has been amended several times so that, in its current version, RES electricity producers are allowed to extend the period of support for electricity generation for another five years (prolongation of support). At the same time, conditions were created to support the use

of upgraded biogas - biomethane, while maintaining support for the hydropower and geothermal potential of the Slovak Republic.

Supported technologies

The RES technologies whose generation of electricity (or combination of electricity and heat) was also supported in 2022 under Act No 309/2009 Coll., include:

- incineration of landfill gas or gas from sewage treatment plants with installed capacity of up to 500 kW,
- incineration of biogas produced by anaerobic fermentation with installed capacity of up to 500 kW,
- incineration of biogas produced by anaerobic fermentation, in CHP facilities with installed capacity of up to 500 kW,
- incineration of biomethane obtained from biogas produced by anaerobic fermentation technology,
- geothermal energy,
- hydropower with installed capacity of up to 500 kW.

Support of CHP technologies remained virtually unchanged compared to previous years, but the emphasis of the support is primarily placed on its use in district heating, as the support is conditioned on the supply of heat produced for district heating.

Currently supported CHP technologies are:

- combined cycle combustion turbine,
- combustion turbine with heat recovery,
- internal combustion engine fuelled by natural gas, fuel oil, a mixture of air and methane, from catalytically treated waste, from thermal cracking of waste and its products,
- back-pressure steam turbine or condensing steam turbine with heat extraction fuelled by natural gas, fuel oil, brown coal, hard coal with the electricity producer's total installed capacity above 50 MW, municipal waste, gas produced by thermochemical gasification of waste in a gasifier or by thermal cracking of waste,
- combustion of energetically usable gases produced in the steelmaking process,
- organic Rankine cycle,
- incineration or co-incineration of purpose-grown biomass excluding cereal straw, other waste biomass excluding cereal straw, bioliquids.

Tariff decisions and certificates of origin for electricity

During the year under review, the process of issuing tariff decisions in RES and CHP was influenced primarily by the adoption of the new regulatory policy for the 6th regulatory period and, last but not least, by significant changes in the average prices of input commodities for electricity generation in RES and CHP facilities. As a result, the Office issued a total of 262 decisions, mainly due to the change of the adjustment for primary fuel in RES and CHP plants, the change of ownership of RES and CHP plants, or the completion of the reconstruction of CHP plants. It also issued 47 decisions due to the termination of activity or a change in the person of the electricity producer.

Table 5 Overview of issued tariff decisions RES and CHP

Decisions issued for RES installations	162
Decisions issued for CHP installations	100
Tariff decisions annulled	47
Total	309

In 2022, the Office also issued 631 certificates of origin for electricity from renewable energy sources, of which 92 certificates were for installations using biogas combustion technology and 498 certificates for solar energy source in relation with the transition of the installations to the prolongation regime, the rest related to other technologies. The Office issued 111 certificates of origin for CHP, of which 94 were for installations with technology using natural gas as a fuel. In total, therefore, the Office issued as many as 742 certificates of origin.

Investment cost reference values

The reference values of investment costs for the acquisition of a new comparable technological part of the electricity producer's installation, which the Office publishes annually on its website pursuant to Section 7(15) of Decree No 18/2017 Coll., are calculated on the basis of data on the actual volumes of electricity generated in the RES and CHP electricity producers' installations with the entitlement to support for the period 2012-2020.

The parameters entering into the calculation of the investment cost benchmarks are obtained by the Office primarily from the annual reports of individual electricity producers and from data on investment and operating costs of electricity producers from RES and CHP for the period 2020 and 2021. The computation of the individual parameters entering into the calculation of the investment cost benchmarks is based on processing output data from more than 2 400 electricity producers from RES and CHP.

Table 6 Overview of investment cost reference values for the acquisition of a comparable technological part of the electricity producer's installation valid for the period from 1 July 2022 to 30 June 2023

Electricity generation installation		Reference price in €/MW
RES		
a)	hydropower with the total installed capacity	
1.	up to 100 kW	3 069 020
2.	above 100 kW and up to 200 kW	2 494 421
3.	above 200 kW and up to 500 kW	2 059 084
b)	geothermal energy	5 208 000
c)	incineration of:	
1.	landfill gas or gas from sewage treatment plants with total capacity up to 500 kW	1 763 725
2.	biogas produced by anaerobic fermentation with total capacity up to 500 kW	4 318 684
d)	biogas produced by anaerobic fermentation, in CHP facilities with total capacity above 250 kW and up to 500 kW	3 887 645
e)	combustion of biomethane obtained from biogas produced by anaerobic fermentation	3 774 194
CHP		
a)	combined cycle combustion turbine	617 123
b)	combustion turbine with heat recovery	647 329
c)	internal combustion engine fuelled by:	
1.	natural gas	458 216
2.	fuel oil	385 667
3.	mixture of air and methane	438 258
4.	catalytically treated waste	694 286
5.	thermal cracking of waste and its products	1 572 464
d)	back-pressure steam turbine or condensing steam turbine with heat extraction fuelled by:	
1.	natural gas	709 395
2.	fuel oil	751 923
3.	brown coal	759 740
4.	hard coal with total installed capacity up to 50 MW	768 954
5.	hard coal with total installed capacity above 50 MW	957 837
6.	municipal waste	943 970
7.	gas produced by thermochemical gasification of waste in a gasifier or by thermal cracking of waste	1 207 609
e)	combustion of energetically reusable gases from steelmaking	738 390
f)	organic Rankine cycle	882 038
g)	incineration or co-incineration of:	
1.	purpose-grown biomass excluding cereal straw	3 430 364

2.	waste biomass excluding cereal straw	3 277 388
3.	bioliquids	2 036 667

RES support settlement and the buyer of electricity generated from RES and CHP

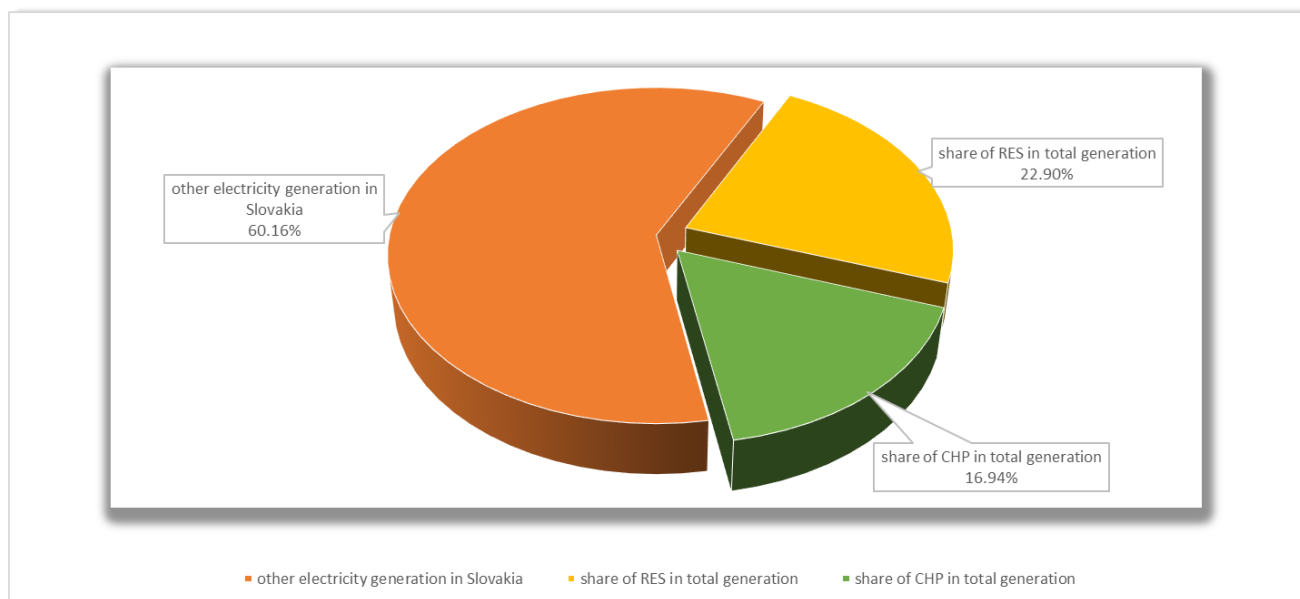
Despite significant fluctuations on the world energy markets in 2022, OKTE successfully performed not only the function of the RES/CHP support settlement, but also, in cooperation with the statutory buyer, secured the operation and administration of the feed-in-tariff support for all producers with the entitlement to support by purchase and assumption of responsibility for imbalance. SPP, a. s. performed the role of the buyer of electricity from RES and CHP also in 2022, based on the results of the 2019 auction. Given its previous results and experience with the activities of the buyer, SPP, a.s. was selected by the Ministry of Economy of the Slovak Republic by direct designation as the buyer of electricity from RES and CHP also for 2023.

Share of electricity produced from RES and CHP in the total volume of electricity produced

When evaluating the share of electricity produced from RES or CHP, the Office based its assessment on the largest possible number of registered sources that demonstrably generate electricity from renewable sources using the relevant technology. The database of monitored electricity producers is therefore supplemented by those sources which are not supported by tariffs within the meaning of Section 3(1)(c) of Act No 309/2009 Coll., in particular those sources which are in the local source regime and those sources which, for various reasons, do not meet the conditions of support laid down by Act No 309/2009 Coll.

The not insignificant increase in the number of RES sources in 2022 was also caused by the installation of local sources, which increased in comparison with recent years the most in the year under review. Given the country's hydropower potential, electricity generation in hydropower plants maintained the largest share of 64.83% (mainly due to Gabčíkovo hydro power plant) of all monitored renewable sources in 2022. Based on the data submitted to the Office by SEPS, total electricity generation in Slovakia reached 26 916 GWh.

Figure 17 Share of electricity produced from RES and CHP in total electricity generation of the country



In the following graphs you can see the shares of the generation of each type of RES and CHP technologies in the total RES and CHP production in 2022.

Figure 18 Share of individual RES technologies in total RES generation

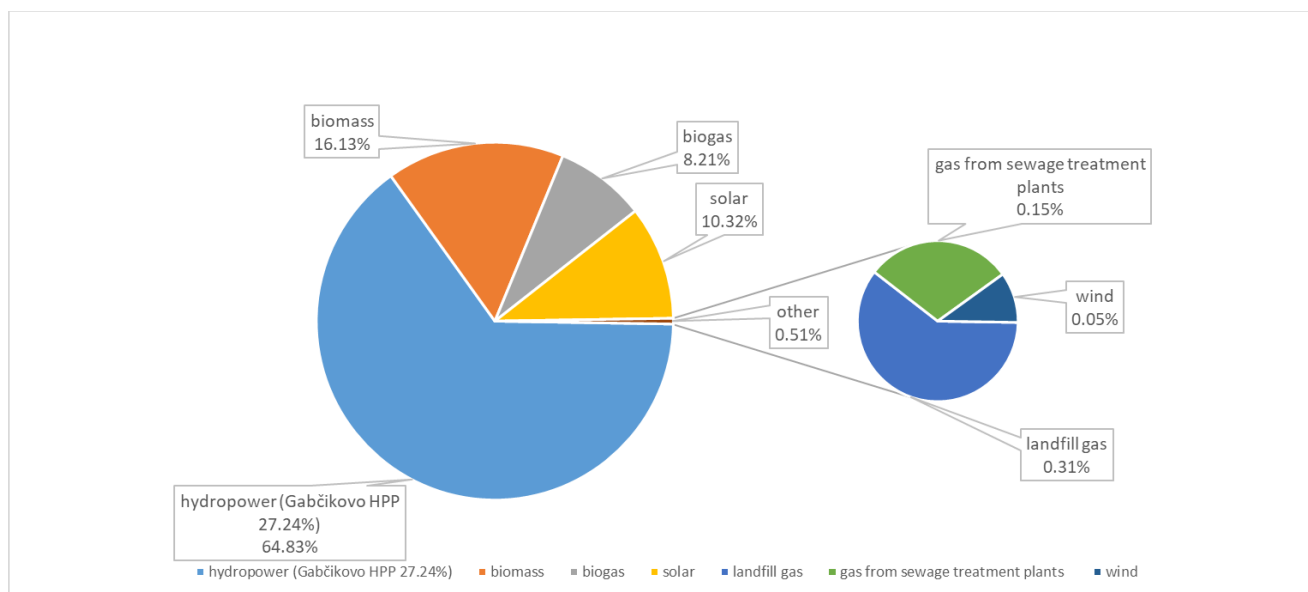
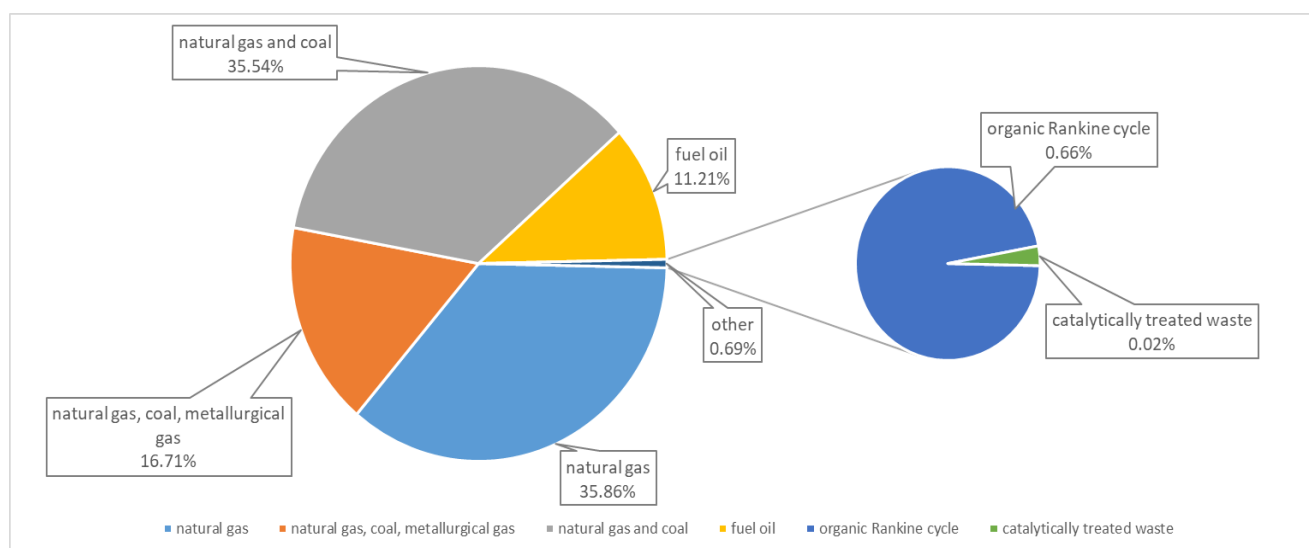


Figure 19 Share of individual CHP technologies in total CHP generation



Impact of the war in Ukraine on electricity generation from RES

Volatility of electricity prices as well as their permanent and extreme increase due to the war in Ukraine in 2022 resulted in easing the pressure on increasing the system operation tariff (TPS). The reduction of the volumes of the RES and CHP support premiums paid (and included in the TPS) due to high electricity prices, together with the implementation of the repowering (prolongation of support) institute, allowed to reduce the TPS compared to 2021, which significantly contributed to mitigation of the increase of final electricity prices for Slovak households and businesses in 2022, despite high market prices.

2. Gas

The Office performs tariff and technical (non-tariff) regulation in the gas sector for regulated activities in the use of gas infrastructure for network operators and in the field of gas supply for vulnerable customers, which are specified in Act No 250/2012 Coll. as well as in Act No 251/2012 Coll.

In gas infrastructure regulation, tariff regulation mainly concerns:

- access to the transmission network and gas transmission,
- access to the distribution network and gas distribution,
- network connection for gas producers or new gas consumers.

In network infrastructure use, non-tariff regulation consists primarily in the approval of rules of operation for network operators, including storage facilities, in terms of setting the rules of network operators in the operation of their networks in relation to network users. The Office assesses technical requirements for access and connection to the network and may comment on them and to request network operators to modify them in the event of non-compliance with generally binding legislation.

Until 30 September 2022, approvals of terms and conditions for gas suppliers providing universal service, which regulated the relationship between gas supplier and vulnerable gas customers, were also subject to non-tariff regulation.

Access to and storage of gas is not subject to tariff regulation. For gas market participants, it is possible to switch from agreed storage access to regulated access in accordance with the relevant primary energy legislation.

In the second half of 2022, the Office noted a sharp increase in natural gas prices on commodity exchanges compared to the previous period, which also affected the level of regulated prices for gas supply to vulnerable customers for 2023.

Gas market participants in the Slovak Republic

- the transmission system operator (Eustream, a. s.),
- the distribution system operator in the territory of the Slovak Republic (SPP - distribúcia, a. s.),
- 39 local distribution network operators (LDNOs),
- two underground gas storage (UGS) operators (NAFTA a. s. and POZAGAZ a. s.),
- 20 active gas suppliers,
- gas consumers.

Gas consumption in Slovakia in 2022 reached 45.5 TWh, down about 20% as against 2021. The largest share of the year-on-year consumption fall is to be ascribed to large gas consumers with their consumption decrease of more than 25%, while households reduced their consumption by around 13%.

Figure 20 Development of gas consumption in Slovakia

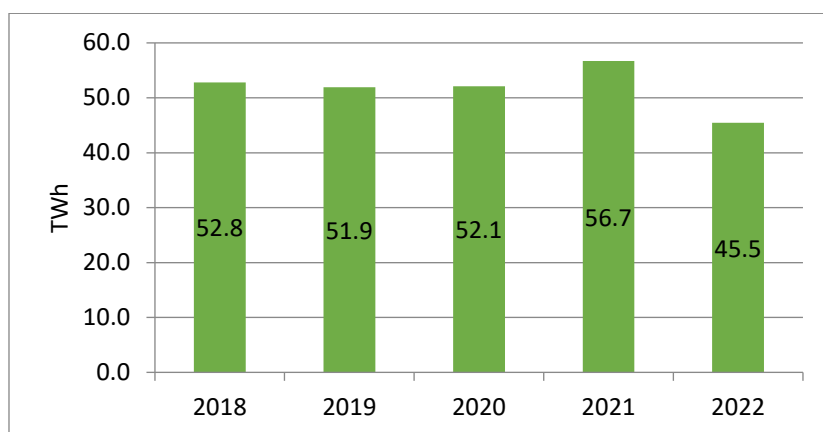


Figure 21 Gas consumption by category (2018-2022)

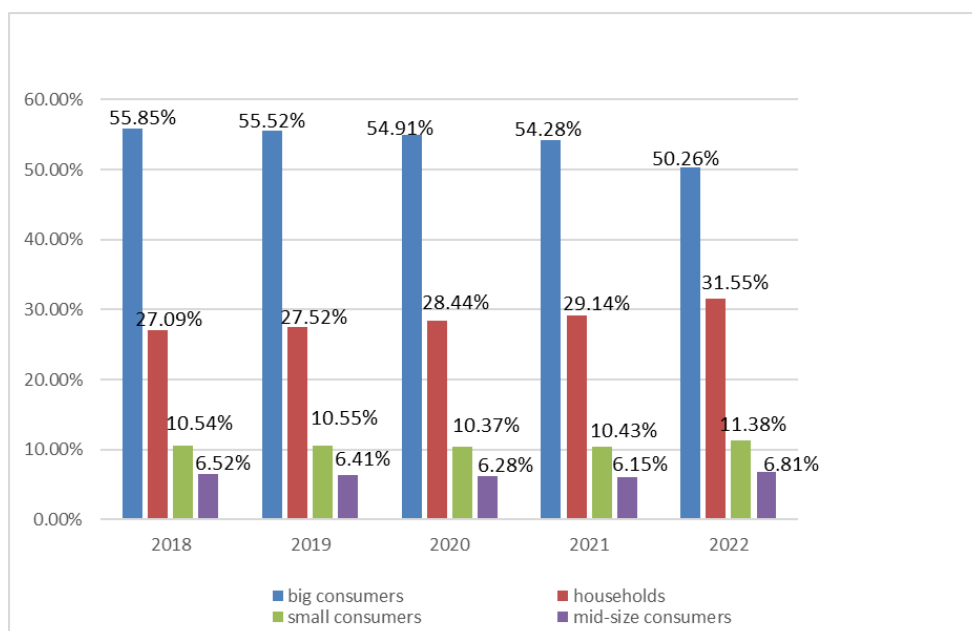


Figure 22 Gas consumption by category in 2022

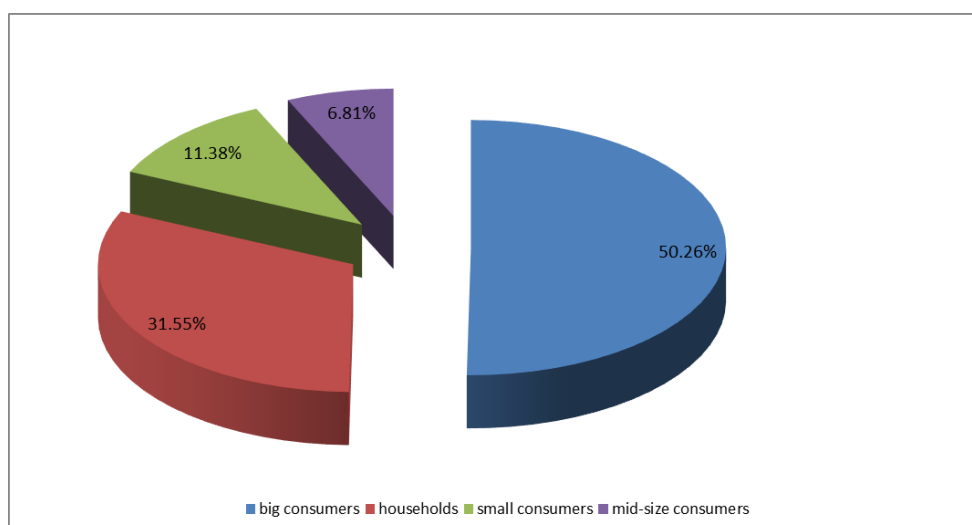


Table 7 Tariff regulation decisions

Tariff regulation related decisions		2018	2019	2020	2021	Issued in 2022 for 2022	Issued in 2022 for 2023
of which	Gas supply to vulnerable consumers – nationwide suppliers	4		2	1		12
	Gas supply to vulnerable consumers – nationwide suppliers - decisions amended	17	10	21	16	7	
	Last resort supply						1
	Last resort supply - decisions amended				1		
	Gas supply to vulnerable consumers - local distribution networks (LDN)	1	1				15
	Gas supply to vulnerable consumers - local distribution networks (LDN) - decisions amended	12	6	19	16	1	
	Distribution network access and gas distribution (LDN - § 11 (6))	1	2		4		
	Distribution network access and gas distribution (LDN - § 11 (6)) - decisions amended	1	2	4	19		
	Distribution network access and gas distribution (LDN - § 11 (7))	2					
	Distribution network access and gas distribution (LDN - § 11 (7)) - decisions amended			1	1		
	Distribution network access and gas distribution (LDN - § 11 (8))		1		1		
	Distribution network access and gas distribution (LDN - § 11 (8)) - decisions amended			9	1	11	
	Distribution network access and gas distribution (LDN - § 12 (1))	2	4	1	1		
	Distribution network access and gas distribution (LDN - § 12 (1)) - decisions amended			2	17		
	Distribution network connection (LDN)	1	4			1	
	Distribution network connection (LDN) - decisions amended				10		
	Distribution system access and gas distribution (SPP-D)						1
	Distribution system access and gas distribution (SPP-D) - decisions amended	1		1	1		
	Distribution system connection (SPP-D)						
	Repurchasing of gas equipment						
	Repurchasing of gas equipment - decisions amended				1		
	Transmission system access and gas transmission		1				
	Transmission system access and gas transmission - decisions amended			1	3		
	Provision of services related to operation of renewable gases registry						
Total		42	31	61	93	49	
Tariff proceedings terminated		1			3	1	
Tariff proceedings suspended		2	5	1	3		93
Decisions revoked				3	2	3	

Rules of operation for the TSO, DSO, LDNOs and UGSOs

In 2022, the Office decided to approve or amend a total of eight sets of rules of operation for network operators - of which for seven distribution network operators with less than 100 000 end-users connected to their local distribution networks (LDNs) amendments of their rules of operation were approved and one decision was approved for a new LDN operator. In 2022, fifteen LDN operators adopted the full version of the model rules of operation of the operator of a distribution network with less than 100 000 end-users connected, which the Office issued on 1 October 2022 and published on its website pursuant to Section 90(d), second point of Act No 251/2012 Coll. The LDN operators simultaneously applied to the Office for the annulment of the decisions in question, which approved the rules of operation pursuant to Section 17(2)(g) of Act No 250/2012 Coll.

Technical conditions

The Office also assessed technical conditions of gas network operators, of which two proposals of technical conditions were from LDN operators and one was from the TSO. From 1 October 2022, the gas network operators and the Office conducted public consultations on the proposals on their websites in accordance with Section 19(5) of Act No 251/2012 Coll. The Office did not receive any comments on the proposals of technical conditions from market participants.

Commercial terms and conditions for the supply of gas in the provision of universal service

In 2022, the Office issued one decision on the approval of commercial terms and conditions for the provision of universal service to small business gas customers.

On 1 October 2022, the Office published on its website Model Commercial Terms and Conditions for the Provision of Universal Service for Gas Supply pursuant to Section 90(d), third point of Act No 251/2012 Coll.

Decisions under EU Regulations

In the year under review, the Office approved by Decision No 0001/2022/P-EU of 3 February 2022, pursuant to Commission Regulation (EU) No 312/2014 establishing a network code on gas balancing of transmission networks, the Fifth updated report on the application of interim measures for the TSO.

Gas infrastructure

The transmission network of Slovakia is specific within the EU, especially in its transit use to the EU, but also to third countries. In 2022, domestic natural gas consumption amounted to 11.2 % of the total gas transmission volume.

Compared to EU countries, Slovakia is also specific in the scope of distribution networks. In 2022, the distribution system operator (SPP - distribúcia, a.s.) distributed gas to more than 1.5 million metering points.

The Regulatory Policy for 2017 - 2022 and the Office's Decree No 223/2016 Coll. establishing tariff regulation in the gas sector, as amended, formed also in 2022 the regulatory framework for tariff regulation for regulated activities such as:

- access to the transmission system and gas transmission,
- access to the distribution system and gas distribution,

- connection to the transmission and distribution networks.

Transmission network

The transmission network in Slovakia is owned and operated by Eustream. The transmission system represents a significant energy link for gas imports into the EU. The interconnection of Slovakia's transmission network with the neighbouring EU Member States (the Czech Republic, Austria, Hungary and Poland) is secured through cross-border interconnection points. In 2022, interconnection with Poland via Výrava entry-exit point was also completed and put into operation. The transmission network is directly connected to the gas system in Ukraine via two interconnection points.

The entry/exit point from/to distribution networks and storage facilities in the territory of the Slovak Republic is the domestic point.

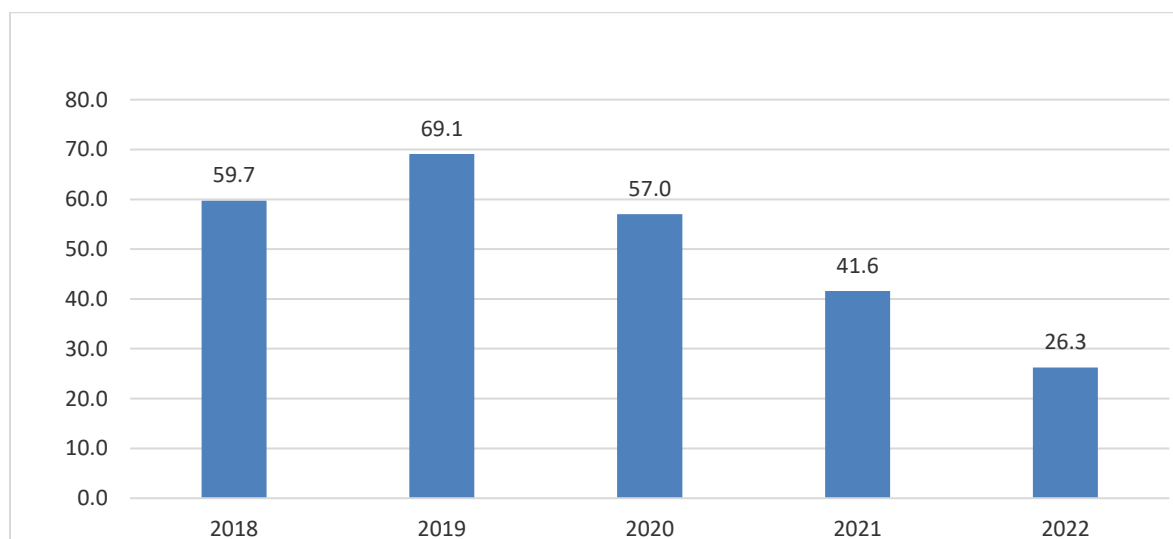
The transmission system operator Eustream provides information on its website on the volumes of technical, available and contracted capacities at individual entry/exit points in line with the legislation.

Table 8 Investments in Eustream's transmission system

in mil. EUR	2022
	139.14

Technical functionality of the transmission network

Figure 23 Gas transmission volumes (bcm)



Transmission capacity

The annual capacity of the transmission network is approximately 90 billion m³ (bcm) of natural gas. In 2022 Eustream transmitted 26.3 bcm of gas, which represents a 36.8% decrease compared to 2021. The downward trend in the volume of gas transmitted through Slovakia's transmission network continues, compounded in 2022 by the military conflict in Ukraine and the suspension of gas supplies to several EU Member States.

Table 9 Transmission network - evolution of the number of requests and contracts concluded

Indicator/year	2018	2019	2020	2021	2022
No. of requests for transmission network access	1 212	2 639	1 294	844	5 001
No. of requests for transmission network connection	0	0	0	0	1
No. of concluded contracts on transmission network connection	0	0	0	0	0
No. of concluded contracts on gas transmission with firm transmission capacity	995	2 276	1 150	842	
of which: long-term	1	0	0	1	0
yearly	24	27	29	9	16
short-term, of which:	970	2 249	1 121	832	4 766
quarterly		53	28	19	23
monthly		83	98	42	116
day-ahead		2 013	874	507	3 763
within-day		100	121	264	864
No. of concluded contracts on gas transmission with interruptible transmission capacity	213	363	128	2	216
of which: long-term	0	0	0		
yearly	0	1	0		
short-term, of which:	213	362	128	2	216
quarterly		9	16		
monthly		23	51		
day-ahead		315	51	2	189
within-day		15	10		27
No. of concluded contracts on gas transmission with combined transmission capacity	4	19	16		3
of which: long-term					
yearly			4		
short-term, of which:	4	19	12		3
quarterly			7		
monthly			3		
day-ahead		19	2		2
within-day		0	0		1
No. of transmission system users	27	45	31	22	48

Table 10 Share of network users by country of origin in gas transmission volume

Domestic transmission network users (transmission to the domestic point)	2018	2019	2020	2021	2022
	(%)	(%)	(%)	(%)	(%)
Slovakia	5.20	7.40	8.40	9.10	11.20
Transit users of the transmission network					
Russia	72.23	66.80	71.30	86.90	77.40
Germany	5.97	4.00	1.70	0.00	0.30
Czech Republic	5.72	7.10	1.80	0.70	1.90
Hungary	0.00	0.10	2.40	0.00	1.00
Switzerland	0.73	1.60	5.10	0.60	3.10
United Kingdom	0.03	1.10	4.50	2.70	2.90
Austria	0.03	0.80	0.40	0.00	0.50
Denmark	0.00	0.00	0.00	0.00	0.50
France	0.17	0.10	0.60	0.00	0.00
Luxembourg	0.27	0.30	1.10	0.00	0.10
Ukraine	9.65	10.10	0.00	0.00	0.00
Poland	0.03	0.00	0.00	0.00	0.10
Romania	0.00	0.40	0.50	0.00	0.00
Netherlands	0.00	0.20	2.20	0.00	0.20
Croatia	0.00	0.00	0.00	0.00	0.80
Total	100.00	100.00	100.00	100.00	100.00

TYNDP and cross-border cooperation

The legal obligations of the transmission system operator include the regular submission of the Ten-Year Network Development Plan (TYNDP), inasmuch responsibility for the technical functionality of the transmission network and its development lies also with the transmission system operator. In 2022, Eustream submitted to the Office for assessment an updated proposal of the TYNDP for 2022-2031 together with the Report on the implementation of the TYNDP for 2021-2030, including the breakdown of the investments made and planned for the included projects, which the Office monitors annually.

The Ten-Year Plan includes a description of the network, a scenario of the development of gas consumption in Slovakia, as well as a description of effective measures to guarantee the adequacy of the network and the security of gas supply. TYNDP also lists the main parts of the transmission network to be built or upgraded in the next ten years, together with the expected dates of their completion.

This regularly updated annual Ten-Year Network Development Plan is essential to identify the needs for new infrastructure projects to ensure primary level of security of gas supply for Slovakia and the whole European region.

The TYNDP includes, among other things, the development of cross-border interconnectors. The plan is developed in line with the EU's TYNDP, which includes, inter alia, so-called EU Projects of Common Interest (PCIs). Regulation (EU) 2019/942 establishing a European Union Agency for the Cooperation of Energy Regulators obliges national regulatory authorities to, in close cooperation with ACER, monitor and assess the consistency of the investment plans for cross-border infrastructure development projects with the Union-wide network development plans.

The requirements for the development of the EU TYNDP are based on Regulation (EC) No 715/2009 on conditions for access to the natural gas transmission networks. The TYNDP is adopted and published every two years by the European Network of Transmission System Operators for Gas (ENTSO-G) and aims to provide comprehensive information on the development of the European transmission networks and to identify possible future investment needs. The TYNDP must include integrated network modelling, scenario development, a European supply adequacy outlook and an assessment of network resilience.

The Office, in close cooperation with ACER and in accordance with Regulation (EC) No 347/2013 on guidelines for trans-European energy infrastructure and repealing Decision No 1364/2006/EC and amending Regulations (EC) No 713/2009, (EC) No 714/2009 and (EC) No 715/2009, shall submit project reports and status assessments and monitor the entire project identification process.

Each year, Eustream consults the TYNDP with all stakeholders on its website before submitting it to the Office. In accordance with Section 59(5) of Act No 251/2012 Coll., the Office also conducts a public consultation on the Ten-Year Plan with existing and potential users of the transmission network on its website.

At the same time, the Office published on its website an evaluation of the implementation of the Ten-Year Network Development Plan of Eustream for 2021-2023.

Development projects

Among the most important development projects we can include the following projects:

1. Polish-Slovak (PL-SK) gas interconnector

PL-SK interconnector project is part of the EU's priority energy infrastructure corridor of North-South gas interconnections in Central and Eastern Europe and South-Eastern Europe.

On 28 June 2022, this bi-directional pipeline with a diameter of DN 1000 was opened, connecting the transit transmission networks of Poland and Slovakia in order to secure diversification of gas supply. As part of the North-South gas interconnectors priority corridor, it created new gas trading opportunities for the benefit of Slovak and European customers. At the same time, the interconnector will also contribute to the creation of a platform for a competitive, liquid internal gas market, enable the entry of new players into the market, increase the security of gas supply in individual countries and in the wider Central and South-Eastern European region and also contribute to the implementation of the North-South gas corridor in Central, Southern and Eastern Europe.

In the current energy crisis, this has opened up another significant opportunity for Slovakia to access gas from the North as a result of the interconnection to the Baltic Pipe from Norway. It is also becoming a reality for us to use LNG gas from various parts of the world from the terminals in Świnoujście in Poland and Klaipėda in Lithuania. In addition, the gas infrastructure itself is also usable for the transmission of renewable gases in the future. Hydrogen plays an important role among them, and the new interconnector is technically adapted for its blending and will also be part of the planned future pan-European hydrogen transmission network (European Hydrogen Backbone).

The interconnector is almost 170 km long, of which 103 km passes through Slovakia's territory from the Výrava interconnector point to the compressor station in Veľké Kapušany. A maximum of 13.4 million m³ of gas could flow daily from Poland to Slovakia via the pipeline, and vice versa, towards Poland, up to 15.6 million m³. The capacity of the pipeline is approximately five bcm per year.

2. Increase of firm capacity at Lanžhot entry point

With the implementation of the project, firm capacity at the Lanžhot entry point has reached 55.1 bcm/year. The reason for the increase in transmission capacity was to satisfy the indicated interest of Eustream's customers in gas transmission from the Czech Republic to Slovakia.

In case of the increased interest of network users in gas transmission in the direction from the Czech Republic, further expansion of the firm capacity up to the level of around 61.7 bcm/year is envisaged. The second phase of the project is expected to be commissioned in 2025.

3. Increase in reverse gas flow to Ukraine

Through the Budince exit point, Eustream ensures gas flows in the direction to Ukraine in the volume of 14.6 bcm/year (of which 9.9 bcm/year is firm and the rest is interruptible). The project is on hold as currently Eustream has not received any binding requirements for future utilisation of the reverse flow to Ukraine.

4. Green H2 project at the compressor station Veľké Kapušany

The purpose of the planned project is to pilot the production, blending and injection of hydrogen into fuel gas of TuS (turbo equipment) at the Veľké Kapušany compressor station, thereby reducing greenhouse gas emissions. Hydrogen will be produced by PEM electrolysis using electricity obtained from renewable sources (photovoltaic panels). The hydrogen/natural gas mixture is planned to be up to 2% hydrogen in the initial phase. The decision to launch the project was not taken in 2022, thus postponing the project to the next period.

5. Transmission of hydrogen and transmission of natural gas with hydrogen admixture

In 2022, communication took place with suppliers of equipment and components of the transmission network regarding their compatibility to transmit natural gas with 5% hydrogen admixture. The process of replacing metering equipment and chromatographs was started.

Eustream, EP Infrastructure, NAFTA and RWE Supply & Trading signed a memorandum of understanding in September 2021 to jointly explore the development of state-of-the-art blue hydrogen facilities in the eastern part of the country. RWE Supply & Trading intends to source and export the produced hydrogen to Germany and other key RWE markets in Western Europe. The hydrogen would be transmitted to Germany via adapted Eustream's pipeline. The carbon dioxide captured in the production of hydrogen could be stored in depleted natural gas fields in

Slovakia or in neighbouring Central and Eastern European countries, including Ukraine. The partners want to help accelerate the take-off of hydrogen economy and make a significant contribution to Europe's decarbonisation goals.

6. H2I-T project

In order to achieve EU's objectives and to have a significant impact on economic growth, sustainability or value creation across the EU in the area of economic transformation leading to the reduction of greenhouse gas emissions, Eustream engaged in the process of obtaining IPCEI (Important Projects of Common European Interest) status for research on the impact of hydrogen on the components of the transmission network previously used to transmit natural gas, through the construction of a test polygon, including laboratory and hands-on research. If the European Commission considers the proposed H2I-T project to be sufficiently innovative, Eustream may have access to co-financing from the Slovak state budget.

Distribution network

The structure of gas pipelines of the distribution network of SPP - distribúcia, a. s. (the DSO) as of 31 December 2022 was 33 354 km in total length, of which the length of high-pressure pipelines was 6 273 km and the length of medium-pressure and low-pressure pipelines was 27 081 km.

Table 11 Development of investments in renewal and reconstruction of the distribution network of SPP - distribúcia, a. s.

	2018	2019	2020	2021	2022
volume in mil. EUR	28.16	33.6	34.87	34.44	34.13

Distribution network balancing

In order to ensure safe and reliable gas distribution, both physical and commercial balancing must be performed when there is a shortage or surplus of gas in the network.

The distribution network operator (SPP - distribúcia) performing the tasks of gas dispatching based on the decision of Slovakia's Ministry of Economy, has gas stored for these purposes in the underground storage facility Dolní Bojanovice located in the Czech Republic.

Table 122 Network balancing (mcm/d) - withdrawal or injection from/into underground storage

	2018	2019	2020	2021	2022
withdrawal	1.8	1.5	1.6	1.5	1.3
injection	1.4	1.3	1.9	1.2	1.5

DSO (SPP - distribúcia, a. s.)

Table 13 Evolution of the number of supply points and volumes of gas distribution by SPP - distribúcia, a. s.

	2018	2019	2020	2021	2022
No. of supply points	1 518 200	1 522 710	1 526 582	1 529 429	1 528 834
Gas distribution volume in m ³	4 777 815 776	4 841 280 704	5 003 958 741	5 504 375 139	4 463 629 085

Of the total number of supply points, there were 17 CNG filling stations with a volume of 9 105 847 m³ of distributed gas, about 17% more than in 2021.

LDN operators

In 2022, there were 39 local distribution network (LDN) operators registered with the Office, distributing gas in 60 LDNs (large enterprises' premises, industrial parks, business centres, residential complexes) in total volume of 1 088 237 684 m³.

Underground gas storage operators

Underground gas storage (UGS) facilities in the Slovak Republic are mainly used for seasonal storage of natural gas. As part of the gas infrastructure, UGS are an important tool enhancing the country's energy security. In Slovakia's territory, UGS facilities are operated by NAFTA a. s. and POZAGAS a. s.

Table 14 Storage capacity of UGS operators

UGSO	Technical working volume					Technical injectability					Technical deliverability				
	(mil. m ³ /year)					(mil. m ³ /day)					(mil. m ³ /day)				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
NAFTA	3 061	3 357	3 357	2 999	3 008	31.87	31.87	31.87	43.28	31.87	36.96	39.51	39.51	42.43	39.51
POZAGAS	655	655	655	655	655	6.85	6.85	6.85	6.85	6.85	6.85	6.85	6.85	6.85	6.85
Total	3 716	4 012	4 012	3 654	3 663	38.72	38.72	38.72	50.13	38.72	43.81	46.36	46.36	49.28	46.36

Table 15 NAFTA storage utilization

UGS users (by country of origin)	share
Slovakia	48.80%
United Kingdom	24.41%
Czech Republic	15.00%
Switzerland	8.97%
Austria	2.52%
Hungary	0.26%
Germany	0.04%
Total	100.00%

UGS operator NAFTA concluded 241 contracts with storage users, including one contract with interruptible storage capacity and 240 contracts with firm capacity. The number of requests received was 263, of which 26 were rejected due to the allocation of storage capacity to other interested parties in accordance with applicable legislation.

Table 3 POZAGAS storage utilisation

UGS users (by country of origin)	share
France	31.84%
Slovakia	26.84%
Switzerland	13.21%
Germany	11.84%
Denmark	10.41%
Slovenia	4.26%
Austria	1.60%
Total	100.00%

UGS operator POZAGAS received 167 requests for access to storage and concluded 71 contracts for fixed capacity and four contracts for interruptible capacity with storage users. The remaining requests were rejected on the grounds of a better price offered by other bidders and for not offering the minimum price.

Table 4 Investments in storage facilities by NAFTA and POZAGAS

volume in mil. EUR	NAFTA	4.40
	POZAGAS	1.32

Wholesale gas market

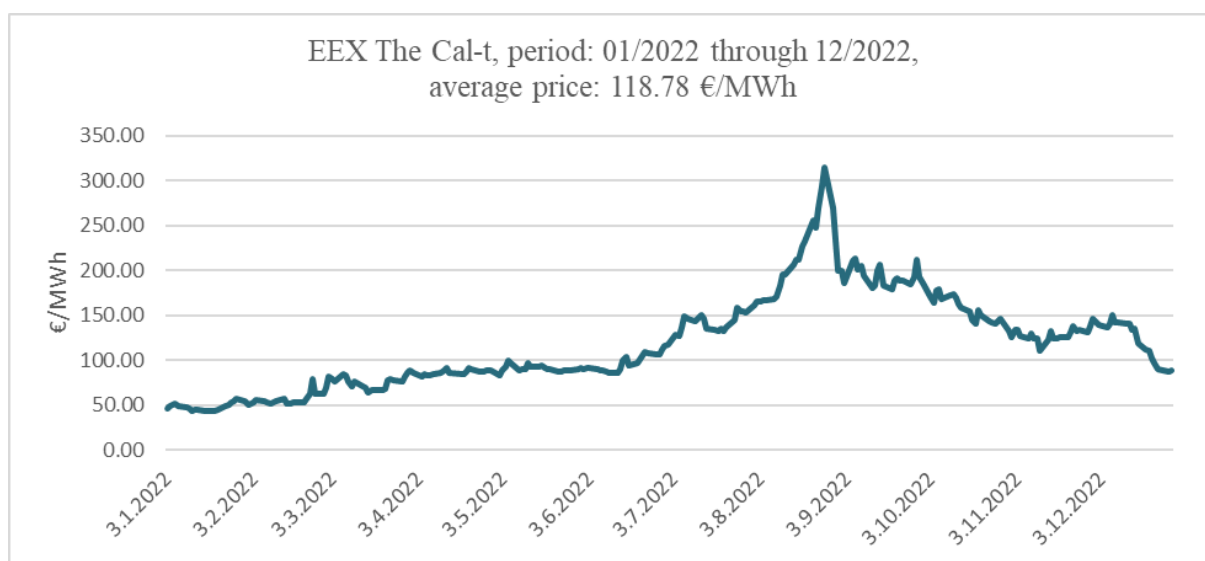
Gas purchases on the wholesale market are done on the basis of long-term contracts and on commodity exchanges. Gas suppliers also secured the commodity by purchasing gas from another trader - a gas supplier (in 2022 in the volume of 11 360 GWh, down about 33% as against 2021). Another option for gas purchases is also trading on the transmission network's virtual trading point (VTP) - in 2022 in a volume of 65 906 GWh, about 23% less than in 2021. Gas purchases are also possible by trading or changing ownership in storage facilities, in 2022 in a total volume of 11 612 GWh.

Figure 24 Evolution of some wholesale gas indicators (in GWh)



Similar to electricity market prices, the evolution of the market price of gas, which is decisive for the calculation of the tariff for gas supply to vulnerable customers, was particularly dramatic in the second half of 2022. The average price of THE Cal -t product on the EEX surged by 248% in 2022 compared to 2021.

Figure 25 Evolution of gas commodity price on the EEX



Impact of the war in Ukraine on gas prices

The situation in natural gas markets in 2022 was marked by sharp price fluctuations, which were also heightened by the conflict in Ukraine. From the beginning of 2022, there was a sharp rise in energy prices in the EU and worldwide. The conflict further made energy prices surge, also leading to concerns about security of energy supply in the EU. Russia's decision to suspend gas supplies to several EU Member States further exacerbated the situation.

Retail gas market

Gas supply to vulnerable customers

Pursuant to Act No 250/2012 Coll., tariff decisions for gas suppliers to vulnerable customers issued for the regulatory period remained valid for the entire regulatory period (2017-2022). During the regulatory period, tariff decisions were changed mainly due to a change in the reference price (EEX NCG (THE) Cal -t), the value of which is decisive for the calculation of the maximum tariff of gas supply.

Figure 26 Gas suppliers to households and their market shares

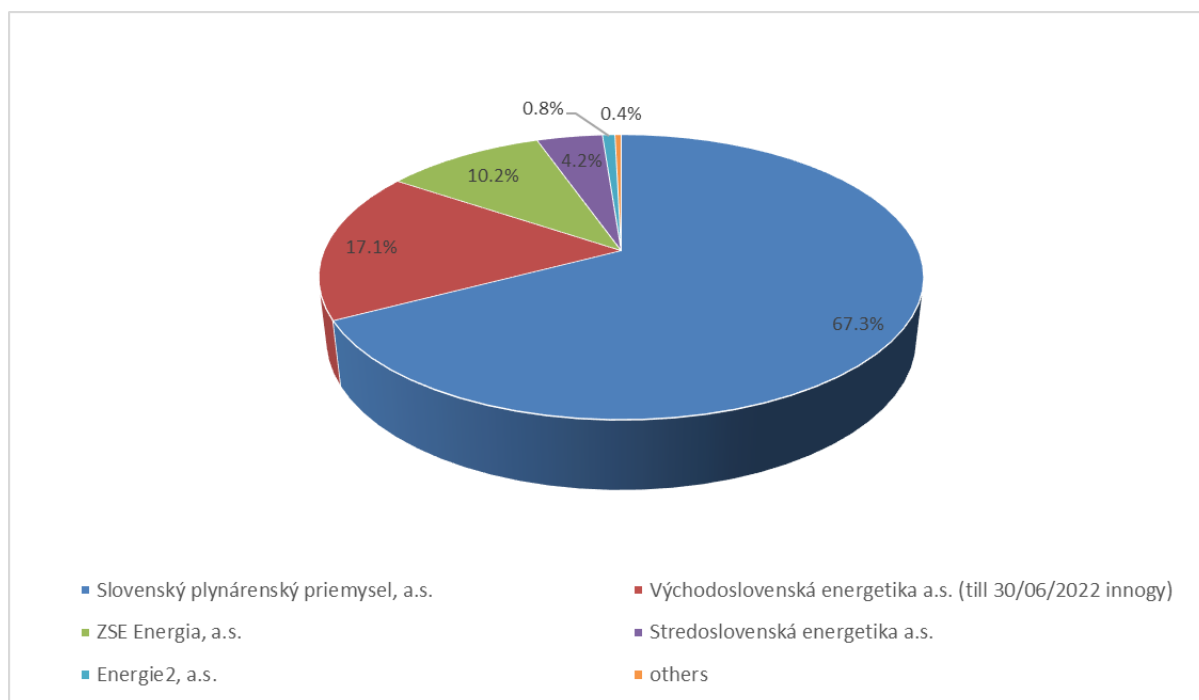


Table 5 Evolution of maximum tariffs for gas supply to households, including network charges, by average consumption in individual tariff groups of vulnerable customers

Tariffs (by annual volume of supplied gas in kWh)	Fixed monthly component (€/month)					Variable component for gas consumed (€/kWh)				
	from 1/12/2018	2019	2020	2021	2022	from 1/12/2018	2019	2020	2021	2022
1 (up to 2 138 kWh)	2.78	2.78	2.78	2.78	2.88	0.0453	0.0453	0.0453	0.0436	0.0534
2 (over 2 138 up to 18 173 kWh)	5.76	5.76	5.76	5.76	5.86	0.0333	0.0333	0.0333	0.0300	0.0373
3 (over 18 173 up to 42 760 kWh)	8.64	8.64	8.64	8.64	8.74	0.0332	0.0332	0.0332	0.0297	0.0364
4 (over 42 760 up to 69 485 kWh)	13.36	13.36	13.36	13.36	13.46	0.0320	0.0320	0.0320	0.0280	0.0346
5 (over 69 485 up to 85 000 kWh)	42.45	42.45	42.45	42.45	42.55	0.0420	0.0420	0.0420	0.0387	0.0424
6 (over 85 000 up to 100 000 kWh)	51.78	51.78	51.78	51.78	51.88	0.0419	0.0419	0.0419	0.0386	0.0422

Figure 27 Breakdown of the average end tariff for gas supply to households

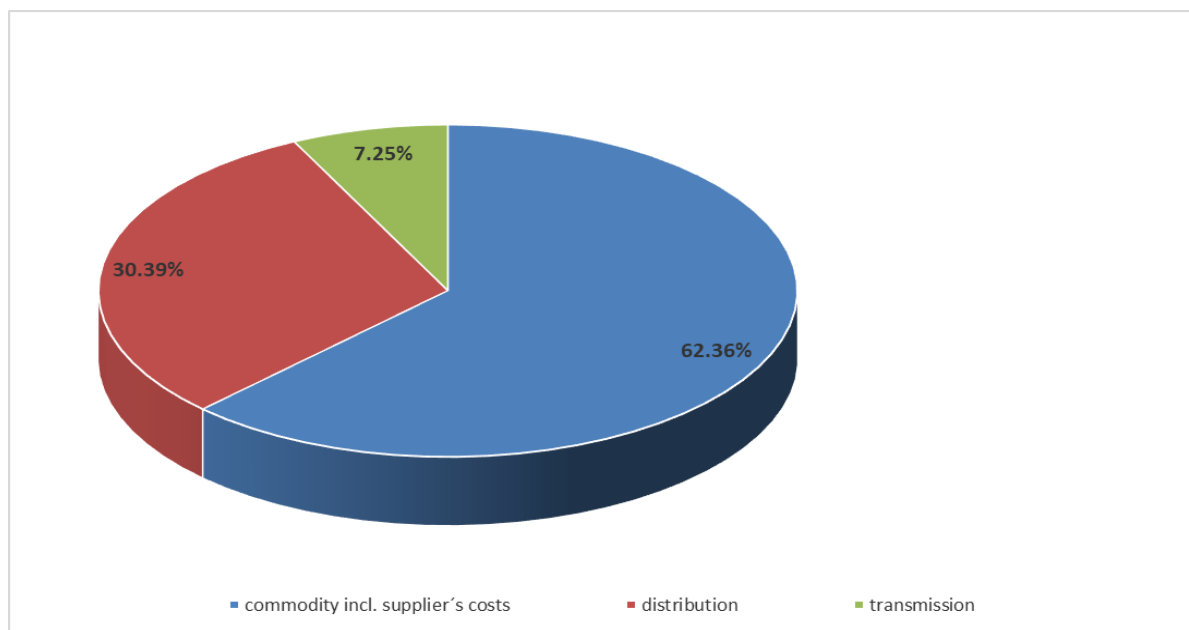


Figure 28 Gas suppliers to small enterprises and their market shares

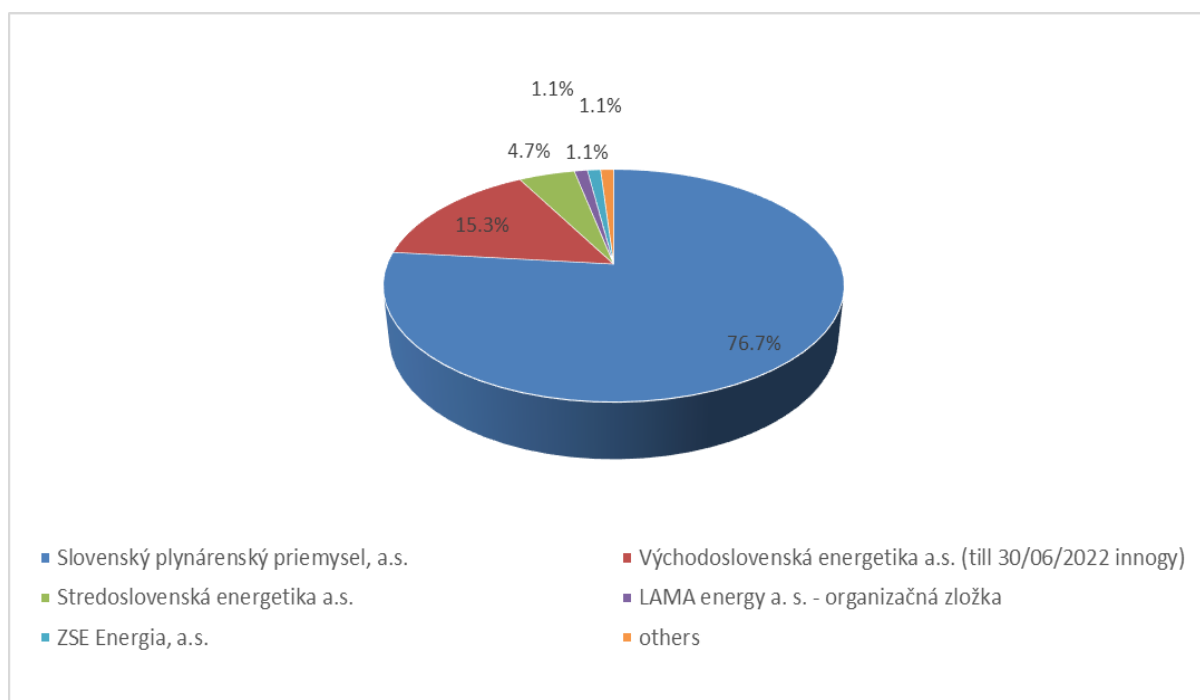


Figure 29 Gas suppliers to industrial customers excluding supply to small enterprises

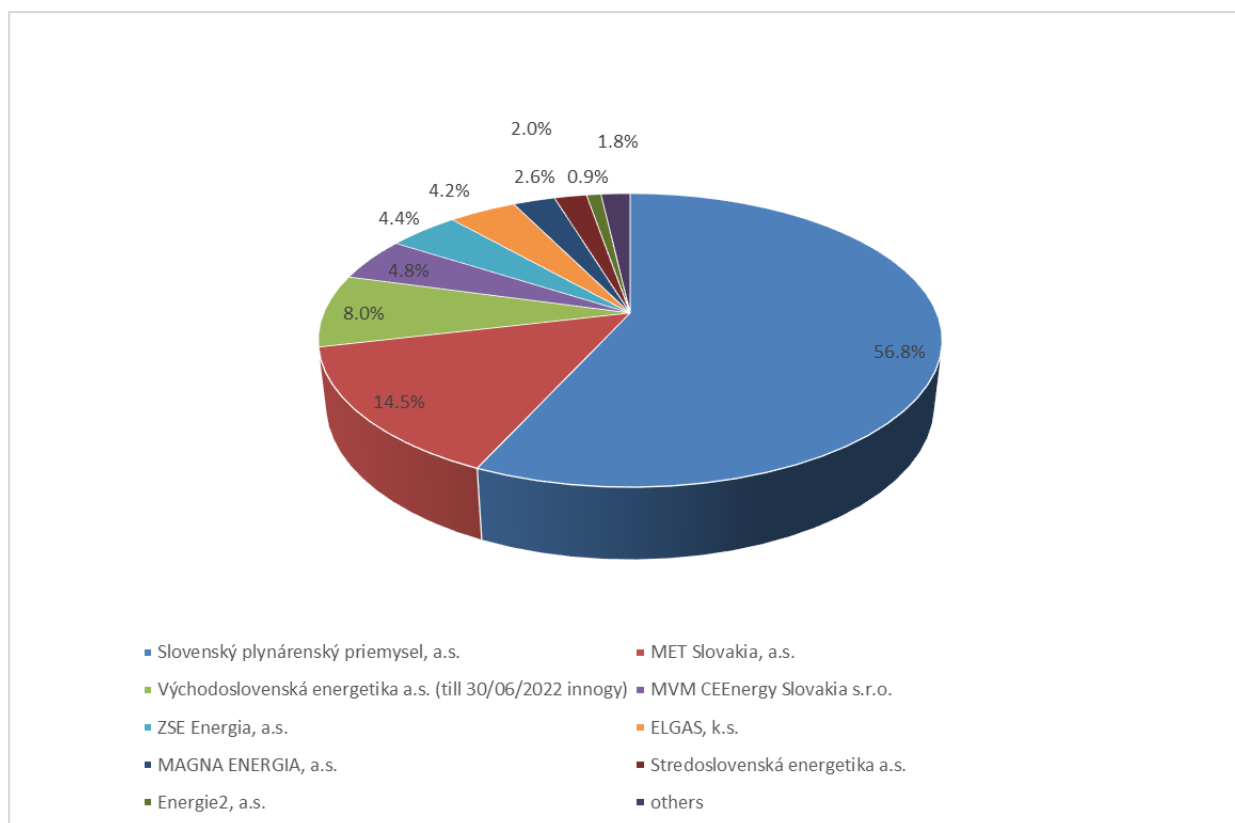
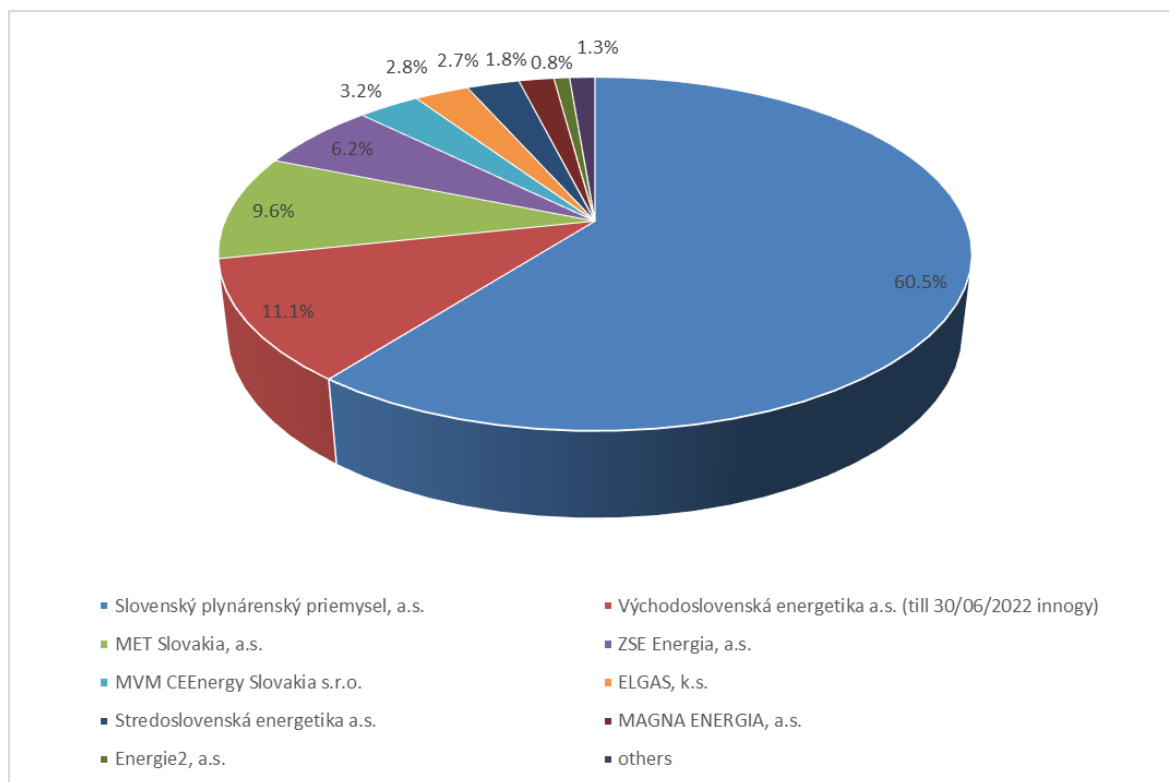


Figure 30 Gas suppliers to all customer categories and their market shares



By the end of March 2022, there had been only two groups of vulnerable gas customers:

- household gas consumers,
- small enterprises, i.e. a non-household gas customers with annual gas consumption of 100 MWh or less in the preceding year.

Since 1 April 2022, social care facilities, facilities for social-legal protection of children and social curatorship and owners of flats and non-residential premises in a residential building consuming gas for the production of heat and domestic hot water, legally represented by a natural or legal person administering a common heat source supplying the residential building with heat and domestic hot water, were added to households and small businesses.

Since 8 December 2022, the above-mentioned groups of vulnerable non-household customers included also gas consumers for the operation of a residential building with rental flats owned by a municipality or a higher territorial unit, which are intended for social housing or for the operation of a residential building with rental flats within the framework of state-supported rental housing.

The legislative changes also allowed all vulnerable non-household customers to sign up at various stages of 2022 for gas supply at the tariff regulated by the Office for 2023.

Supply of last resort

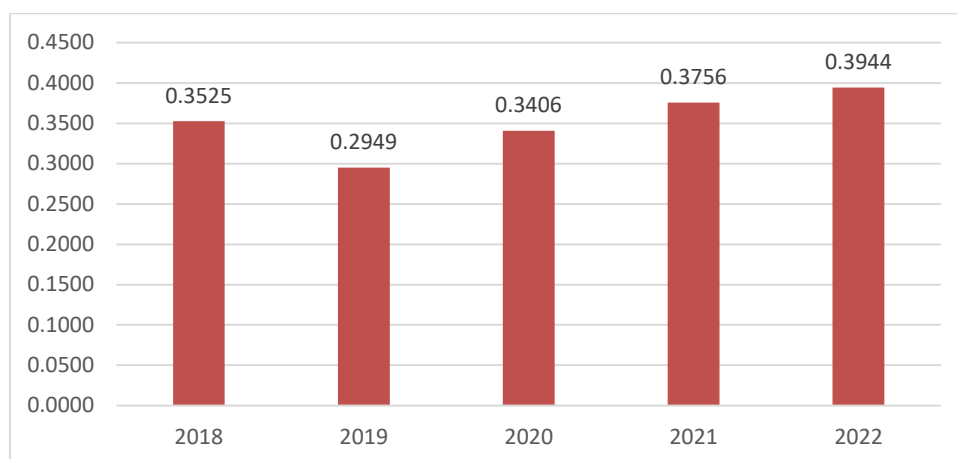
The supplier of last resort also in 2022 was the company Slovenský plynárenský priemysel, a. s. (SPP) based on the Office's decision. In the year, the Office kept track of 1 330 supply points in the last resort supply regime. The Office received notifications from three gas suppliers that had lost their ability to supply gas to customers pursuant to Act No 251/2012 Coll.

Herfindahl - Hirschman Index

The purpose of the HHI is to assess the concentration of regulated entities in a competitive environment. The Office assessed the position of regulated entities operating on the gas supply market for all segments of the market. In principle, a market is concentrated if the HHI value is more than 0.1 and highly concentrated when it exceeds 0.2.

The HHI value for gas supply to all gas consumers in 2022 reached 0.3944, implying a high level of concentration in the gas market.

Figure 31 Evolution of HHI



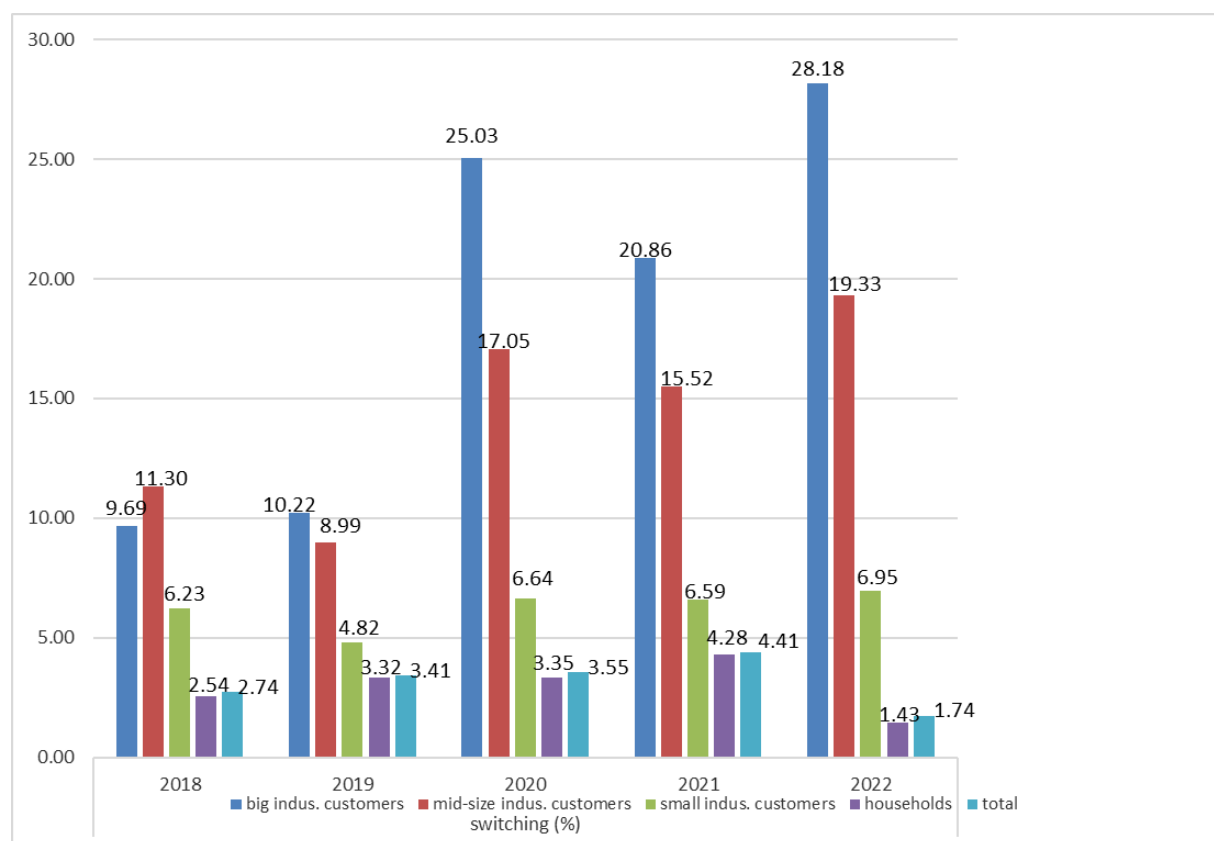
Switching

The level of liberalisation of the gas market is indicated by the switching ratio. This expresses the ratio of the number of customer supply points with a change of gas supplier to the total number of supply points.

Table 6 Switching

Customer categories	No. of gas customers with switching					switching (%)				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
big indus. customers	71	90	179	145	204	9.69	10.22	25.03	20.86	28.18
mid-size indus. customers	314	284	478	415	535	11.30	8.99	17.05	15.52	19.33
small indus. customers	4 765	3 687	5 093	5 151	5 251	6.23	4.82	6.64	6.59	6.95
households	36 627	48 000	48 481	67 067	20 738	2.54	3.32	3.35	4.28	1.43
total	41 777	52 061	54 231	72 778	26 728	2.74	3.41	3.55	4.41	1.74

Figure 32 Switching



In the year-on-year comparison between 2021 and 2022, the Office notes a higher increase in switching in the big and mid-size customer categories, a slight increase in the small customer category, and a more significant decrease for households.

The impact of the war in Ukraine on gas consumption

The worst-case scenario since the outbreak of the war in Ukraine was that there would simply not be enough gas in Europe. The fear that there would be a shortage of gas for heating and that the situation could not be resolved because gas would not be available did not materialise in the end, but at the cost of a huge increase in the gas market price. Gas consumption in Slovakia fell by around 20% year-on-year as a result of concerns about gas shortages and high market prices.

Gas market prices in Europe rose significantly. They were higher than in other parts of the world - and as a result attracted large volumes of LNG to Europe. There are many uncertainties associated not only with the war, but also with the development of other important factors. At the same time, domestic gas production is low. Last year, it even fell further, and this is a long-term trend. Replacement of Russian gas, which accounted for around 40% of EU gas imports, mainly consisted in imports of LNG. However, this supply is not sure for Europe for the coming

years, which poses a risk both in terms of security of gas supply and the prevailing high gas prices.

3. Consumer protection and alternative dispute resolution

Suggestions, complaints

In 2022, the negative impact of rising energy prices on consumers generally continued, especially for businesses. The disproportionate increase in prices on the energy markets also had a major impact on the number of complaints submitted by customers, which has been increasing year on year. Compared to the previous year, when we observed an increased number of complaints regarding the inability to pay energy bills since the last quarter of 2021, in 2022 similar complaints occurred throughout the year. The majority of submissions related to prices and tariffs and classification as a regulated consumer. However, also in the year under review, consumers contacted the Office due to errors in electricity and gas consumption metering, connections to the distribution network and the quality of supply.

In 2022, the Office received a total of 683 customer complaints and submissions, a rise of 27% compared to 2021 and almost double the number received in 2020. Also in the year, the Office received some submissions (27) which were not within its competence and which were subsequently referred to other competent authorities for handling.

Table 20 Number of complaints handled by the Consumer Protection Department

	2018	2019	2020	2021	2022
Number of complaints received	358	350	353	538	683
of which the number of referrals outside the Office	44	41	50	48	27
of which number of complaints closed with a reply/opinion	198	223	222	388	530
of which number of complaints closed otherwise	116	86	81	102	126

Alternative dispute resolution

Since 2016, the Office has been the authority for alternative resolution of consumer disputes pursuant to a special regulation of consumer disputes resulting from Act No 391/2015 Coll. Also, pursuant to Section 9(1)(o) of Act No 250/2012 Coll. the Office carries out alternative resolution of consumer disputes of an electricity end-user, a gas end-user, a customer who uses

the supplied heat for his own consumption, a water customer or a waste water producer who is a consumer pursuant to a special regulation, and decides on the imposition of penalties for administrative offences committed in breach of the obligations laid down in the special regulation.

In 2022, the Office received a total of 13 proposals for alternative dispute resolution. Of these, six were filed on the basis of Act No 391/2015 Coll., where the party to the dispute was a natural person - a consumer. Seven were filed in accordance with Section 37 of Act No 250/2012 Coll., where the party to the dispute was a legal entity – an end consumer.

Of these proposals, two were rejected in accordance with the rules of alternative dispute resolution pursuant to Section 13(2)(b) of Act No 391/2015 Coll. on the grounds that the proposal was not submitted by an authorised person and in the second case, that it was a type of dispute that the ADR entity did not have listed among their services (additional service Repairer).

In one case, an agreement was reached; the dispute concerned the sharing of costs of equipment relocation.

Of the ten cases postponed, in two cases the proposal was postponed as it was found that the consumer's rights had not been infringed. In one case, the proposal was postponed due to the withdrawal of the proposal (however, in this case the dispute was settled within the complaints' framework).

In seven cases, the complainant was notified of the expiry of the time limit where no agreement had been concluded between the regulated entity and the end consumer.

Table 21 Number of disputes settled out of court

	2018	2019	2020	2021	2022
Received	9	18	9	4	13
*Rejected	1	3	5	1	2
*Agreement in favour of the consumer	2	3	0	1	1
*Deferred, or time limit expired	6	12	0	2	10
*Reasoned opinion	-	-	4	0	0

* legal grounds for termination of ADR within the meaning of Sections 17 to 20 of the ADR Act and Section 37 of Act No 250/2012 Coll.

The most frequent reason (46%) for consumers to submit proposals for ADR was the price of the commodity in the year under review. Similarly to the previous period, 38% of claimants had doubts about the correctness of consumption billing by the regulated entity. Consumers sought an investigation into the accuracy of the measured consumption data, the supplier's billing of consumption, and the subsequent correction or amendment of the consumption bill. Less than 8 % of the requests concerned contractual conditions and switching (only the three most frequent reasons are given).

It can be stated that alternative dispute resolution in the regulation of network industries is not widely used among consumers, despite the education provided by the Office. This is probably due to the fact that most consumers find it easier to file a simple, often incomplete, complaint with the Office than to fill in an admittedly simple, but nevertheless formalised proposal and go through a standardised alternative dispute resolution procedure. The Office concludes, that increasing consumer awareness of the options available to them to resolve their issues, as well as increasing the experience of the persons responsible for the ADR agenda, can contribute to its higher effectiveness and quality. However, the Office also points out that, if one of the parties is unwilling to conclude an agreement, it has no option but to terminate the proceedings with a reasoned opinion.

Quality standards

By monitoring quality standards, the Office protects the consumer's right to receive adequate quality for the price they pay for energy and water in the context of the dominant position of the regulated entity. URSO decrees laying down the quality standards primarily aim to protect the consumer under conditions of dominance of a regulated entity operating in one of the network industries. Compensation payments have a supporting function in quality regulation, which was intended to motivate regulated entities to increase the level of compliance with quality standards and to incentivise investments ensuring the improvement of the safety, stability and development of their infrastructure.

Table 22 Number of received evaluations and recorded events in electricity

Electricity	transmission	distribution	supply
Number of evaluations received	1	133	160
Number of recorded events	8	6 630 313	1 849 959
Number of recorded events with breached quality standard	0	13 943	789
Proportion of events with a breached quality standard to recorded events	0.00 %	0.21 %	0.04%

Table 23 Number of received evaluations and recorded events in gas

Gas	storage	transmission	distribution	supply
Number of evaluations received	2	1	41	64
Number of recorded events	831	990	38 759	903 209
Number of recorded events with breached quality standard	0	6	5	527
Proportion of events with a breached quality standard to recorded events	0.00 %	0.61 %	0.02 %	0.06 %

4. International cooperation

National regulators, not only within the EU but around the world, are facing an emergency state, and dealing with it in the context of an energy crisis is a challenge for all. This makes cross-border cooperation and solidarity all the more important. International cooperation between regulators opens up opportunities to use and share a set of tools and expertise to tackle cross-border and global issues in a coordinated way. The ongoing energy crisis adversely affected all EU member states to varying degrees in 2022. The enormous impact of price volatility and the uncertainty of energy supply stability on the European market triggered an EU response, with a high level of activity throughout the year to adopt integrated and interlinked measures

and recommendations to mitigate the impact of the crisis on all market participants, in particular the vulnerable ones. Therefore, energy policy during the year focused on the energy crisis and the impact of volatile energy prices on different sectors of society covering key areas of energy efficiency and affordability, resilience and gas and electricity supply. There was a wide range of responses to the energy crisis across the EU. To reduce dependence on fossil fuels and increase resilience to price shocks, the Commission published its REPowerEU plan in May 2022 to accelerate the deployment of clean energy. At the same time, discussions on the electricity market design gained momentum in the wake of soaring wholesale prices. To mitigate the effects of high electricity prices on consumers, many countries introduced measures such as wholesale and retail prices regulation; revenue caps for inframarginal technologies such as renewables, nuclear and coal-fired power plants; reductions in energy taxes and VAT; and direct subsidies. Overviews of the measures by regulatory authorities in individual markets were shared among themselves.

Short-term action packages adopted

- On 18 May 2022, the European Commission published the REPowerEU package dealing with common European rules for more affordable, secure and sustainable energy,
- Council Regulation (EU) 2022/1369 on coordinated demand-reduction measures for gas, thereby reducing the EU's dependence on Russian fossil fuels. Although these legislative initiatives succeeded in strengthening Europe's security of energy supply and the EU reduced its dependence on energy imports from Russia from 40% to 9%, prices continued to rise,
- Regulation (EU) 2022/1032 amending Regulations (EU) 2017/1938 and (EC) No 715/2009 with regard to gas storage - in order to prevent risks to the security of energy supply, the Commission proposed to strengthen coordination between Member States in the assessment of security of supply. The assessment should be carried out in full compliance with the principles of a well-functioning internal market. Additionally, the Regulation set the thresholds and trajectories for filling underground gas storage facilities in the EU. A monthly underground gas storage facilities filling obligation was introduced for the purpose of monitoring and source availability scenarios at the European Commission level.

Also, the Regulation introduced the provision of certification of a storage operator, including any storage operator controlled by a transmission system operator. The certification will be

ensured by the national regulator or another competent authority designated by the Member State;

- Council Regulation (EU) 2022/1854 on an emergency intervention to address high energy prices - the intention was to create a level playing field. The Commission proposed two complementary instruments to cover the whole energy sector: a) a temporary measure targeting electricity producers' revenues, b) a temporary measure setting a solidarity contribution from surplus profits in the sector of fossil fuels falling within the scope of the Regulation
- Council Regulation (EU) 2022/2576 on enhancing solidarity through better coordination of gas purchases, reliable price benchmarks and exchanges of gas across borders,
- Council Regulation (EU) 2022/2577 laying down a framework to accelerate the deployment of renewable energy.

Regulation (EU) 2022/869 on guidelines for trans-European energy infrastructure (TEN-E Regulation) sets out guidelines for the timely development and interoperability of priority corridors and areas of trans-European energy infrastructure. The guidance contributes to ensuring climate change mitigation, in particular the achievement of the EU's energy targets. It further contributes to ensuring interconnections, energy security, market and system integration, competition to the benefit of all Member States and affordable energy prices. In particular, the Regulation:

- (a) provides for the identification of projects on the Union list of projects of common interest and projects of mutual interest,
- (b) facilitates the timely implementation of projects on the Union list by streamlining, coordinating more closely and accelerating permit granting processes, and by enhancing transparency and public participation,
- (c) provides rules for the cross-border allocation of costs and risk-related incentives for projects on the Union list,
- (d) determines the conditions for eligibility of projects on the Union list for Union financial assistance.

An important milestone for the introduction of interoperability is the adoption of Directive (EU) 2022/2555 on measures for a high common level of cybersecurity across the Union, amending

Regulation (EU) No 910/2014 and Directive (EU) 2018/1972, and repealing Directive (EU) 2016/1148 (NIS 2 Directive). The next step will be the adoption of a network code on cybersecurity.

In parallel, since May 2022, there have been discussions on the reform of the long-term electricity market design, with the current short-term measures not intended to be an incentive for a structural reform of the well-functioning electricity market. A legislative proposal governing the EU electricity market is expected to be issued in 2023.

The Office's representatives continued in their activities in 2022 as members of several working groups coordinated by ACER and the CEER. The Office co-operated in the development of methodologies, commenting on documents, rules for the common electricity and gas markets, reinforcing cross-border energy infrastructure or monitoring and surveillance of wholesale energy markets. A significant activity of the Office in the context of the development of the single electricity market has been its involvement in working groups composed of representatives of regulators (and transmission system operators) of the Core capacity calculation region, which, in cooperation with ACER, intensively discussed, drafted and fine-tuned rules for the coupling of day-ahead, intraday or forward electricity markets.

In the process of commenting on draft legislation prepared by the Commission, the Office actively contributed to the activities of a dedicated working group (Fast Response Team), e.g. in methane emissions, or to the work of important working groups composed of representatives of the Commission, ministries, regulators and ENTSO-E or ENTSO-G, where strategic topics in the electricity and gas sectors of the EU are addressed (Electricity Coordination Group and Gas Coordination Group).

In the gas sector, discussions were held on the forthcoming legislative package for the hydrogen and decarbonised gas market. Negotiations went beyond the 2022 reference year.

All foreign business trips of the Office's staff during 2022 were done with the aim to deal with the set tasks, share experience, participate in conferences, and resulted mainly from the Office's obligations arising from its membership in international organisations or working groups (in particular ACER, CEER, ERRA or the Core region). Ensuring the implementation of the common rules for the single electricity and gas markets in the EU, addressing the energy crisis and high energy prices and the related consumer protection were important parts of the workload. In the framework of the ongoing TSI (Technical Support Instrument) project, workshops were held with partner regulatory authorities (Czech Republic and Austria) to share

experiences in the transposition of Directive (EU) 2019/944 on common rules for the internal market for electricity into national legislation.

REMIT

Regulation (EU) No 1227/2011 on Wholesale Energy Market Integrity and Transparency (REMIT) lays down rules for market participants active in the wholesale electricity and gas markets. The Regulation aims to strengthen confidence in the integrity of trading on wholesale markets in the EU, while prohibiting insider trading and market manipulation, including its attempts.

On the national level, URSO has, on the basis of Act No 250/2012 Coll., with effect from 1 September 2012, the power to register wholesale market participants, to investigate suspicious cases of market abuse and to impose sanctions in the event of REMIT breaches. At European and cross-border level, market monitoring and cooperation between national regulatory authorities is coordinated by ACER. In close cooperation with ACER, which filters suspicious cases from the reported transaction data, the Office examines the alerts received on a regular basis. Other means (in addition to the regulator's own monitoring) by which potential REMIT breaches are brought to the attention of the regulator for investigation are reports from energy exchanges or other trading and broker platforms (PPATs), or anonymous notifications from market participants. The Office pursued this activity also in 2022.

In accordance with Commission Implementing Regulation (EU) No 1348/2014 on data reporting implementing Article 8 (2) and (6) of REMIT, market participants are obliged to register in the national register of market participants (CEREMP) and report wholesale transaction data through so called registered reporting mechanisms (RRM) authorised by ACER.

As of 31 December 2022, a total of 145 market participants operating on the Slovak wholesale energy market were registered in URSO national register. The majority of market participants reported their transaction data to ACER through two Slovakia's RRM, OKTE and Solien.