2022

VÝROČNÁ SPRÁVA / ANNUAL REPORT

Úrad pre reguláciu sieťových odvetví
Regulatory Office for Network Industries

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Regulatory Office for Network Industries
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Preklad/Translation: Vlastimil Jurkuliak
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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
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 ("tarifa za prevádzkovanie systému")
TSO	transmission system operator
TYNDP	Ten-Year Network Development Plan
UGS	underground gas storage
UGSO	underground gas storage operator
URSO/Office	Regulatory Office for Network Industries (Slovakia's national regulatory authority)
VAT	value added tax

Act No 250/2012 Coll.	Act No 250/2012 Coll. on regulation in network industries as amended by later regulations (Regulatory Act)
Act No 251/2012 Coll.	Act No 251/2012 Coll. on the energy sector as amended by later regulations (Energy Act)
Act No 309/2009 Coll.	Act No 309/2009 Coll. on the promotion of renewable energy sources and high-efficiency cogeneration (combined heat and power) as amended by later regulations
Act No 211/2000 Coll.	Act No 211/2000 Coll. on free access to information and on the amendment of certain laws (Freedom of Information Act) as amended
Act No 657/2004 Coll.	Act No 657/2004 Coll. on the heating sector as amended
Act No 391/2015 Coll.	Act No 391/2015 Coll. on alternative dispute resolution as amended

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Executive management

Andrej Juris
Chairman

Szabolcs Hodosy
Vice-Chairman

Martin Horváth
Vice-Chairman

Chairman's message

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 achieve that.

2022 was the last year of the 5th regulatory period. As a result, 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, several hundred tariff proceedings were conducted by the Office in order to fix regulated energy and water tariffs for 2023. The legitimacy of requests for tariff increases by energy and water suppliers were carefully examined. As everywhere else in the world, the national regulator could not significantly eliminate the worldwide enormous increase of energy commodities market prices. However, all available regulatory tools, afforded to us by the current national and EU legislation, were used in order to secure for Slovakia's 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 government's level, at the end of 2022, an unprecedented set of extraordinary measures to protect households as well as other consumers was adopted. 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 government in the crisis regulation regime. The result is a fundamental elimination of the dramatic impacts of the energy crisis on Slovakia's households and other consumer groups in 2023.

To conclude, allow me to express my appreciation and thanks for their work to all URSO staff, 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 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.

Andrej Juris
Chairman

Regulatory Board

The Regulatory Board is the Office's body providing strategic direction and the concept of regulation in the network industries. The Regulatory Board currently has five members, leaving it one member short of its full membership. Act No 250/2012 Coll. stipulates that the Regulatory Board shall consist of six members. The members of the Regulatory Board are appointed and dismissed by the President of the Slovak Republic, so that three members of the Regulatory Board are appointed on the proposal of the National Council of the Slovak Republic (the Parliament) and three members on the proposal of the Government of the Slovak Republic. The President of the Slovak Republic shall appoint and dismiss the Chairman of the Regulatory Board on the proposal of the Regulatory Board.

Members of the Regulatory Board

Ján Ďuriš
Chairman

Juraj Doležal
Vice-Chairman

Sylvia Beňová
Member

Miroslav Dudlák
Member

Andrej Ochotnický
Member

Powers of the Regulatory Board

- adopting regulatory policy, including its amendments
- electing a candidate for appointment as the Regulatory Board chairman from among its members,
- proposing a candidate for appointment as the Regulatory Board chairman and proposing to dismiss the chairman, to the President of the Slovak Republic,
- electing the Regulatory Board vice-chairman from among its members,
- commenting on draft general binding legislation issued by the Office,
- examination of objections to the confirmation of the net cost of the obligation in the general economic interest pursuant to Act No 251/2012 Coll.,
- approval of:
  1. draft agreements on mutual cooperation with regulatory authorities of EU Member States,
  2. the Regulatory Board's rules of procedure,
  3. the report on URSO's activities,
  4. establishment of URSO's offices outside its seat,
  5. URSO's annual accounts.

The Regulatory Board also has power to decide on appeals against first instance decisions, except for decisions to impose fines. The parties to the proceedings have the possibility to appeal against a first instance decision taken in a tariff regulation procedure, a non-tariff regulation procedure or an extraordinary regulation procedure. The Regulatory Board shall review the procedure of the first instance authority, address the objections of the parties and, if necessary, supplement the evidence. The Regulatory Board may reverse the decision of the first-instance authority, annul it without compensation, uphold it by dismissing the appeal, annul it and refer the case back to the first-instance authority for reconsideration and decision, or discontinue the proceedings. Decisions of the Regulatory Board shall become final upon delivery to the parties to the proceedings.

In 2022, in accordance with the provisions of Section 6(3)(a) in conjunction with Section 8(5) of Act No 250/2012 Coll., the Regulatory Board adopted a new regulatory policy for the 6th regulatory period, which will last five calendar years from 1 January 2023 to 31 December 2027.

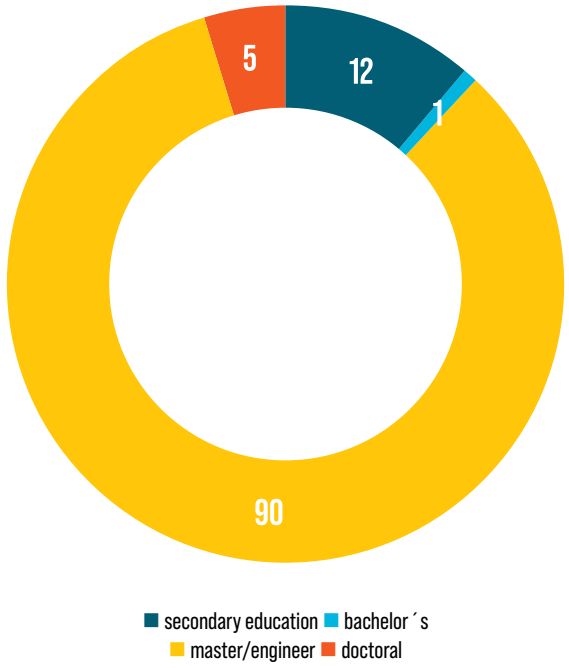
Human resources

As at 31 December 2022, the Office employed a total of 108 staff (96 % of the planned staff of 112), of whom 91 were civil servants and 17 public servants. Out of this number, 13 staff were employed at locations outside the Office's seat - in Trenčín, Košice and Martin.

Table 1 Staff age composition

STAFF AGE	NUMBER
18 - 30 years	6
31 - 50 years	61
over 50 years	41
TOTAL	**108**

Figure 1 Staff qualifications



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 respected 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 went beyond 2022.

With all the aforementioned 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 as much as 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 tariff-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 consumers in energy poverty

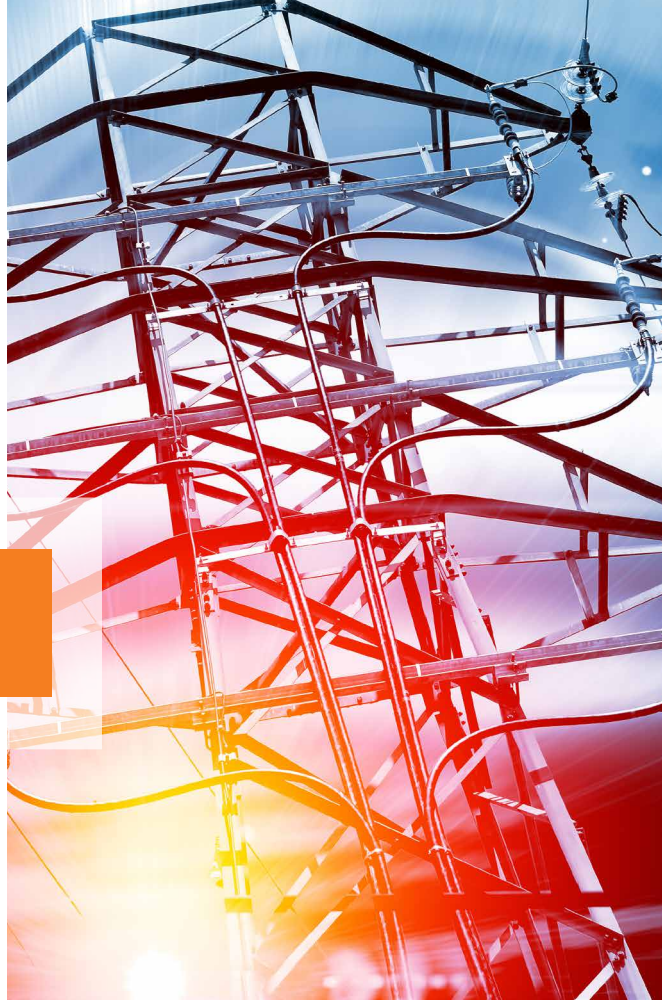
During 2022, the Office developed a policy document, the Concept Paper for the Protection of Energy Poverty Eligible Consumers (hereinafter as "the Concept"). The drafting of the Concept Paper and its submission to the Government of the Slovak Republic before the beginning of the new regulatory period is a legislative task of the Office pursuant to Section 9(3)(f) of Act No 250/2012 Coll. on regulation in 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 of this composition met at regular intervals during the autumn of 2022 under the Office's auspices. 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.

01. 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 sector. 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 250/2012 Coll.

In the technical (non-tariff) 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 saw 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 marginal pricing 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 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 3 Overview of the number of decisions issued in non-tariff regulation in electricity

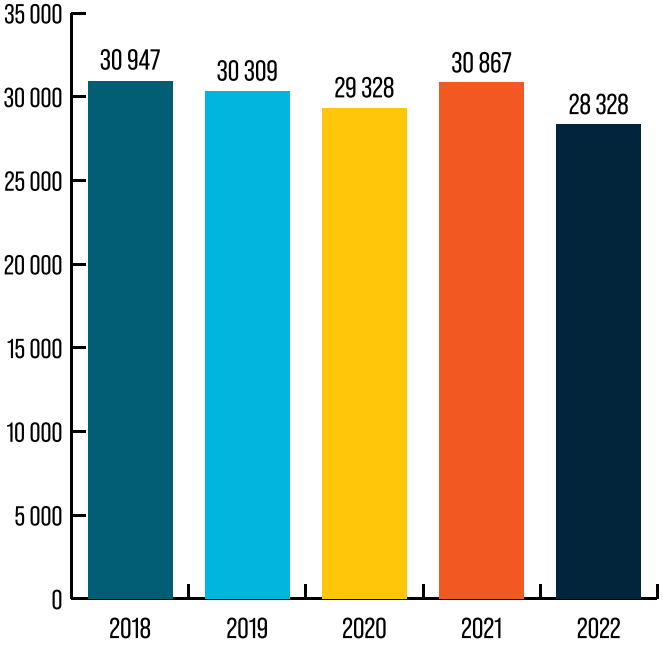
Type of decision	2018	2019	2020	2021	2022
Grid codes	21	15	15	124	85
Commercial terms and conditions	26	10	10	8	10
Transit conditions	2	4	2	1	2
Decisions under EU legislation	20	27	5	7	7

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.

Table 2 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 measures	-	-	-	-	-	-	-	8

Figure 2 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 largely 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, fixed 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 4 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 4 Development in the provision of ancillary services

Year	2018	2019	2020	2021	2022
No of ancillary services providers	25	24	24	24	22

Table 5 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 5 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 3 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 occurring 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 power plants).

Figure 3 Volumes of electricity transmission in Slovakia (GWh)

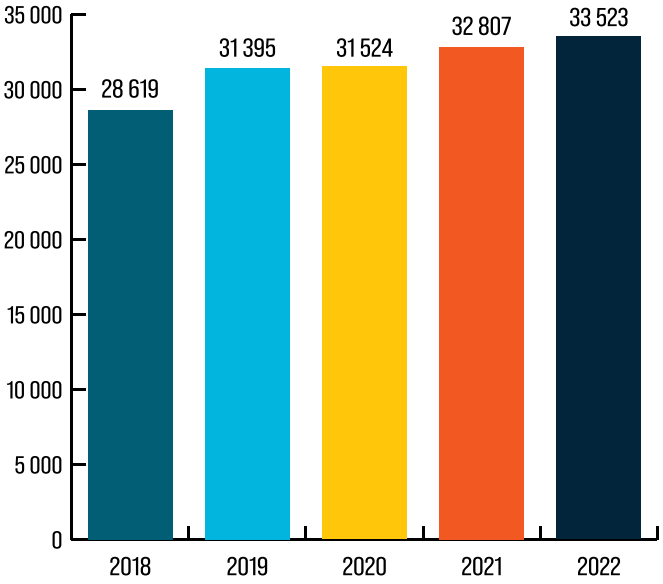
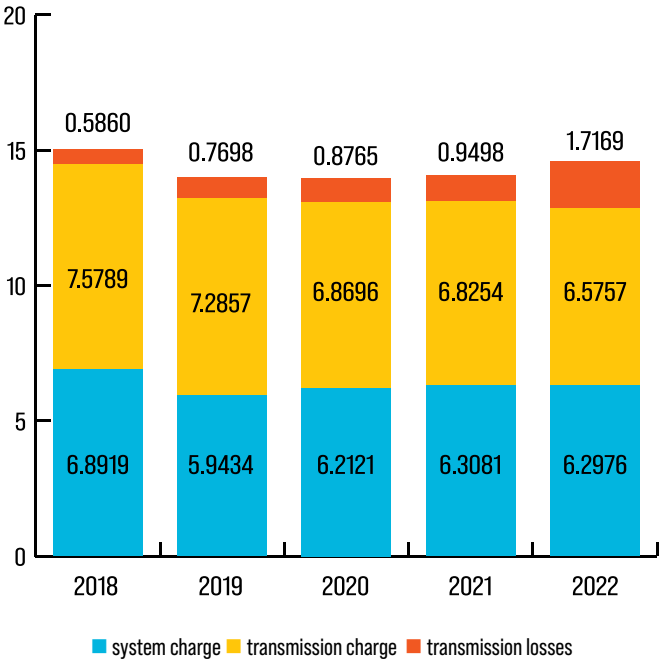


Figure 4 shows the evolution of regulated transmission charges. Compared to 2021, the tariff for system services and the tariff for access and electricity transmission were roughly the same in 2022. The tariff for transmission losses increased by 80% in 2022 compared to 2021, due to an increase in the 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 4 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 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 5 Volumes of electricity distribution in Slovakia (GWh)

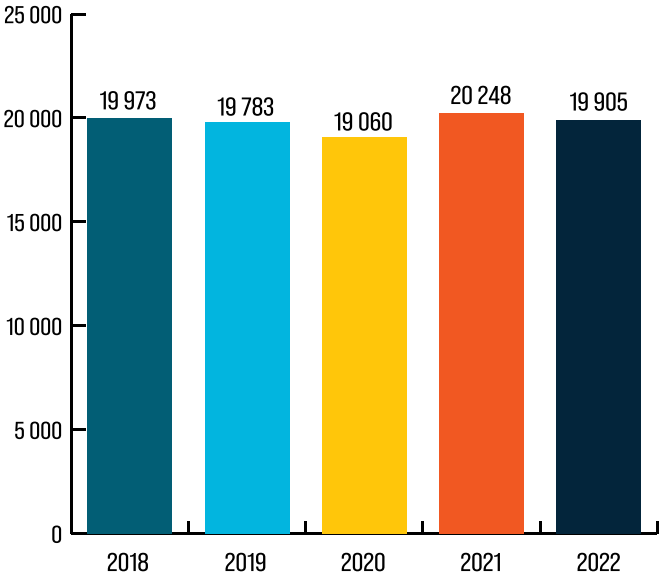
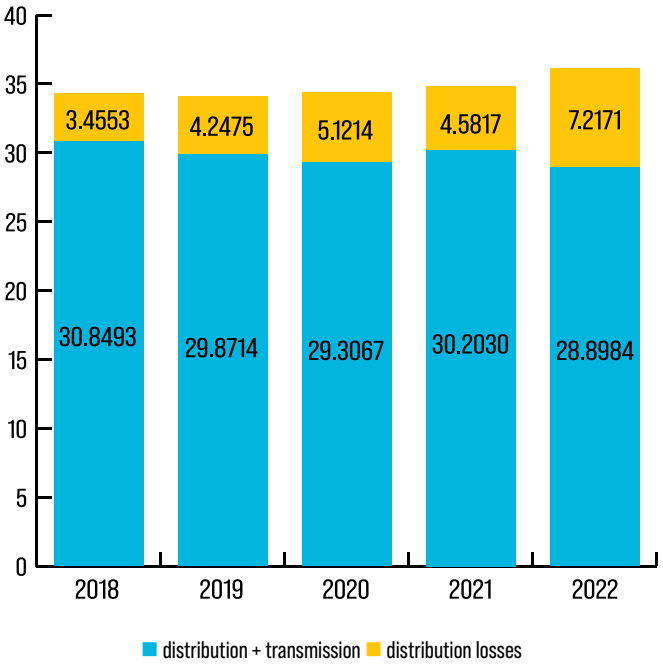


Figure 6 shows the evolution of selected regulated distribution charges. Compared to 2021, tariffs for access to the distribution system and distribution of electricity, including electricity transmission, were approximately the same. The tariff for distribution losses rose by 58 % compared to 2021, 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 6 Evolution and structure of regulated distribution charges (EUR/MWh)



System operation tariff

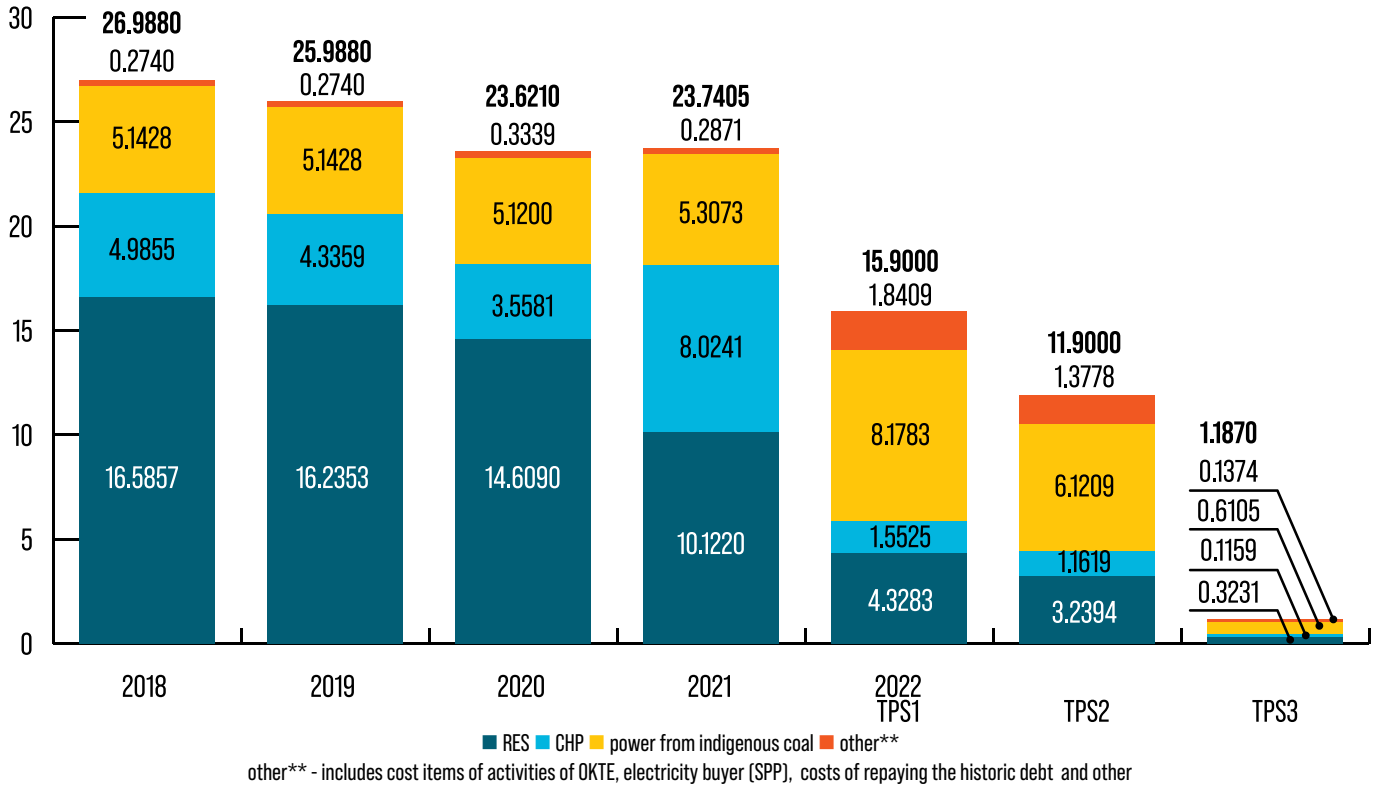
The purpose of the system operation tariff (or "TPS") is to recover the costs of system operation consisting mainly of support for the generation of electricity from RES and CHP, generation of electricity from indigenous coal and the costs of the electricity short-term market operator providing the organisation, 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 over 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 7 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 7 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 191.26 million EUR 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.

In view of the ongoing energy crisis and the very high energy prices, the Council of the EU issued its Regulation (EU) 2022/1854 of 6 October 2022 on an emergency intervention to address high energy prices, on the basis of which, in accordance with Article 9, the Office decided, by Decision No 326/2022/E of 27 December 2022, to use part of the surplus of the TSO's congestion revenues resulting from the allocation of cross-zonal capacity in 2022 in the amount of 153 million EUR for mitigation of the impact of the adverse effects of high prices for 2023.

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 (co)-developed and approved by the Office (individually or at Core Capacity Calculation Region level), based on obligations under EU legislation. The following projects

mentioned 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 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 go live in 2029.

Another way of meeting the EU's strategic objectives in the electricity sector is market coupling.

Successful Single Day-Ahead Coupling (SDAC)

After Greece joined MRC (Multi-Regional Coupling) in 2020, UK exited the MRC, 4MMC countries (Czech Republic, Slovakia, Hungary and Romania) and MRC were coupled through PL-DE, PL-CZ, PL-SK, PL-DE, CZ-DE, CZ-AT and HU-AT cross-border profiles in June 2021 through the Interim Coupling Project and the BG-RO cross-border profile was connected successfully to SDAC in October 2021, the process of coupling the EU day-ahead electricity markets reached its goal. In total, SDAC covers more than 95% of European electricity consumption and a common algorithm calculates volumes exceeding 1 500 TWh/year.

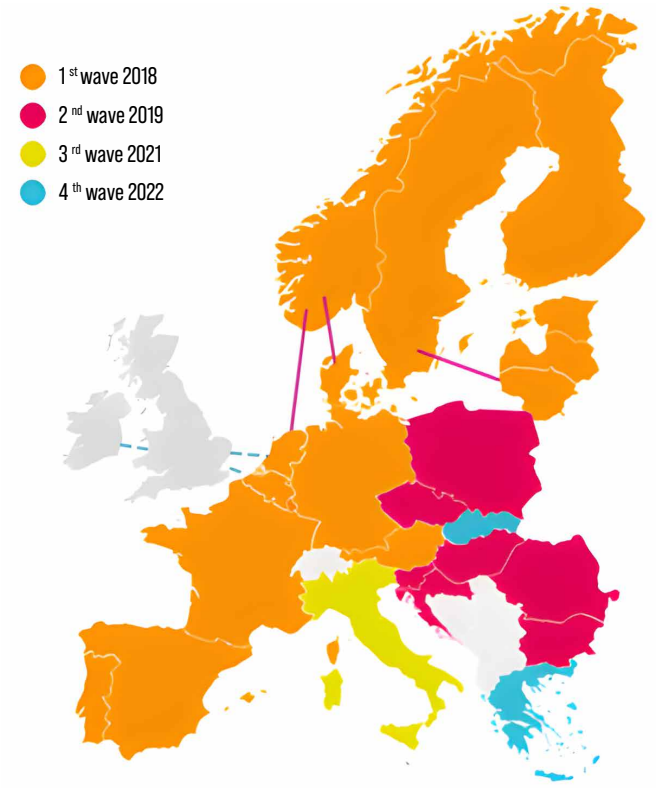
Successful Single Intraday Coupling (SIDC)

SIDC follows upon 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 coupled country, if there is available cross-border capacity between the concerned 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 in the coupling 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



Implementation of new methodologies for day-ahead/intraday capacity calculation and allocation

Another way to meet the EU objectives outlined in the introduction is by way of implementing the 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.

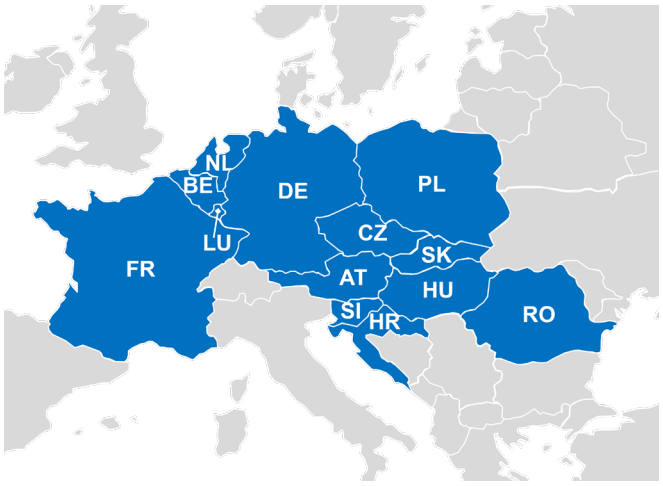
The flow-based capacity calculation methodology takes into account the physical constraints in the operation of the electricity grids based on the available reserves on critical network elements (mainly lines) and power transfer distribution factors (PTDFs) defined for each critical line of the grid 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 9 Member countries of the Core region



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).

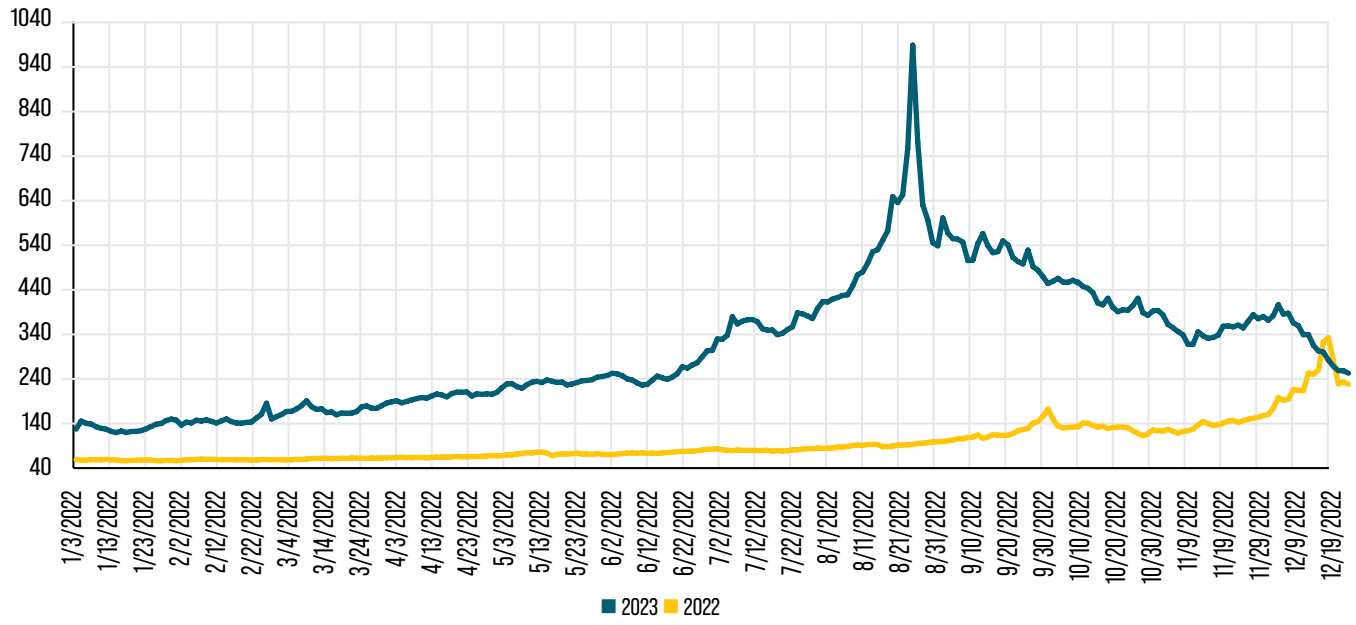
Slovak TSO is planning to join MARI and PICASSO in July 2024, as it submitted to the Office a request for derogation from connection to these platforms pursuant to Article 62(2)(a) of EB GL and was granted the request on 29 March 2021 for the period from 25 July 2022 to 24 July 2024.

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 10 depicts 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 10 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.

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

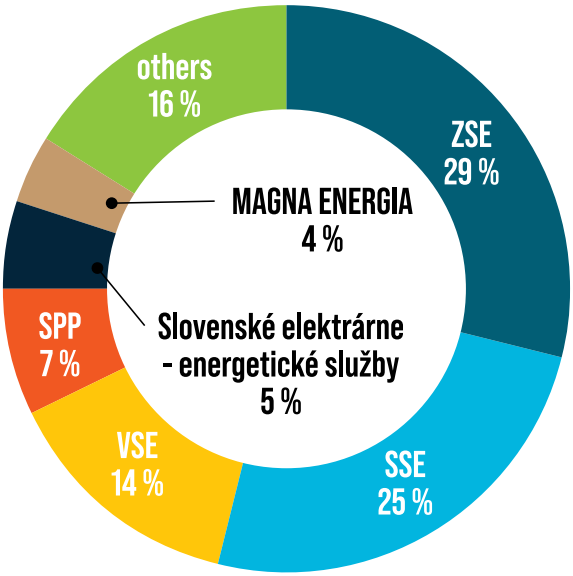
- electricity consumers operating a residential building with rental flats owned by a municipality or a higher territorial unit, which are intended for social housing, or operating a residential building with rental flats within the framework of state-supported rental housing,

➔ 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 regulated tariff 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 11 Market shares of electricity suppliers to all consumer groups



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 Breakdown of the average end price for electricity supply to households

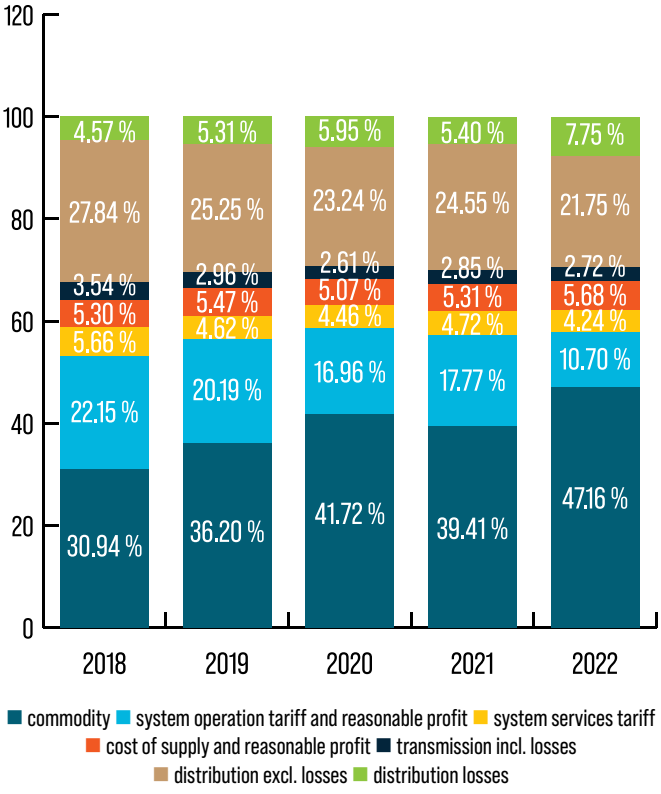
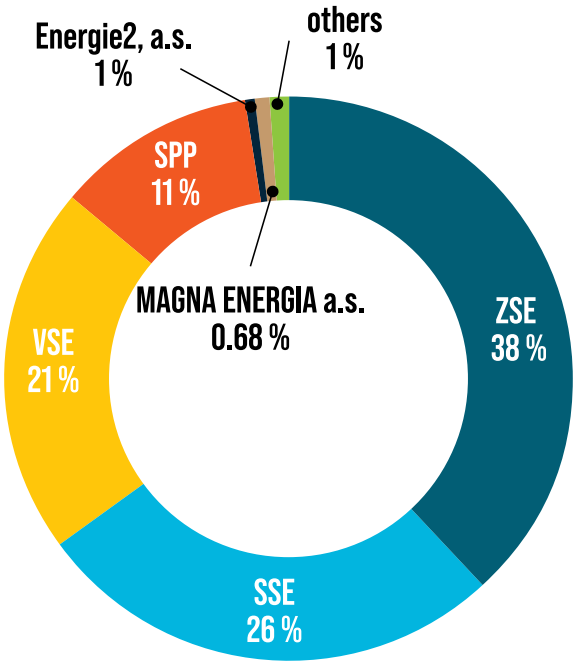


Figure 13 Market shares of electricity suppliers to households



Electricity supply to small enterprises

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

Figure 14 Market shares of electricity suppliers to small enterprises

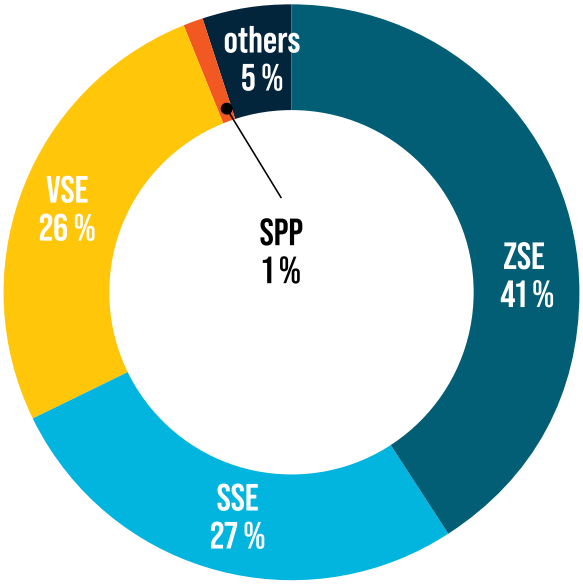
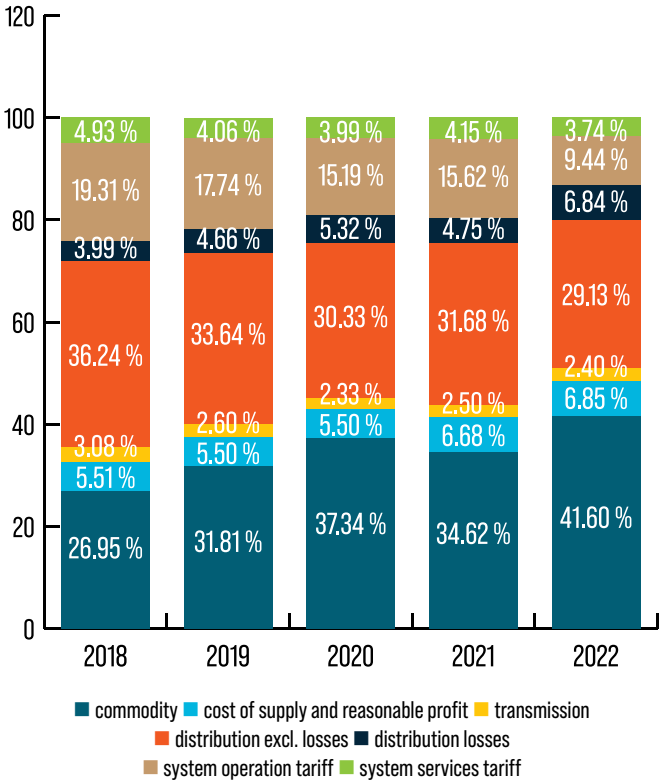


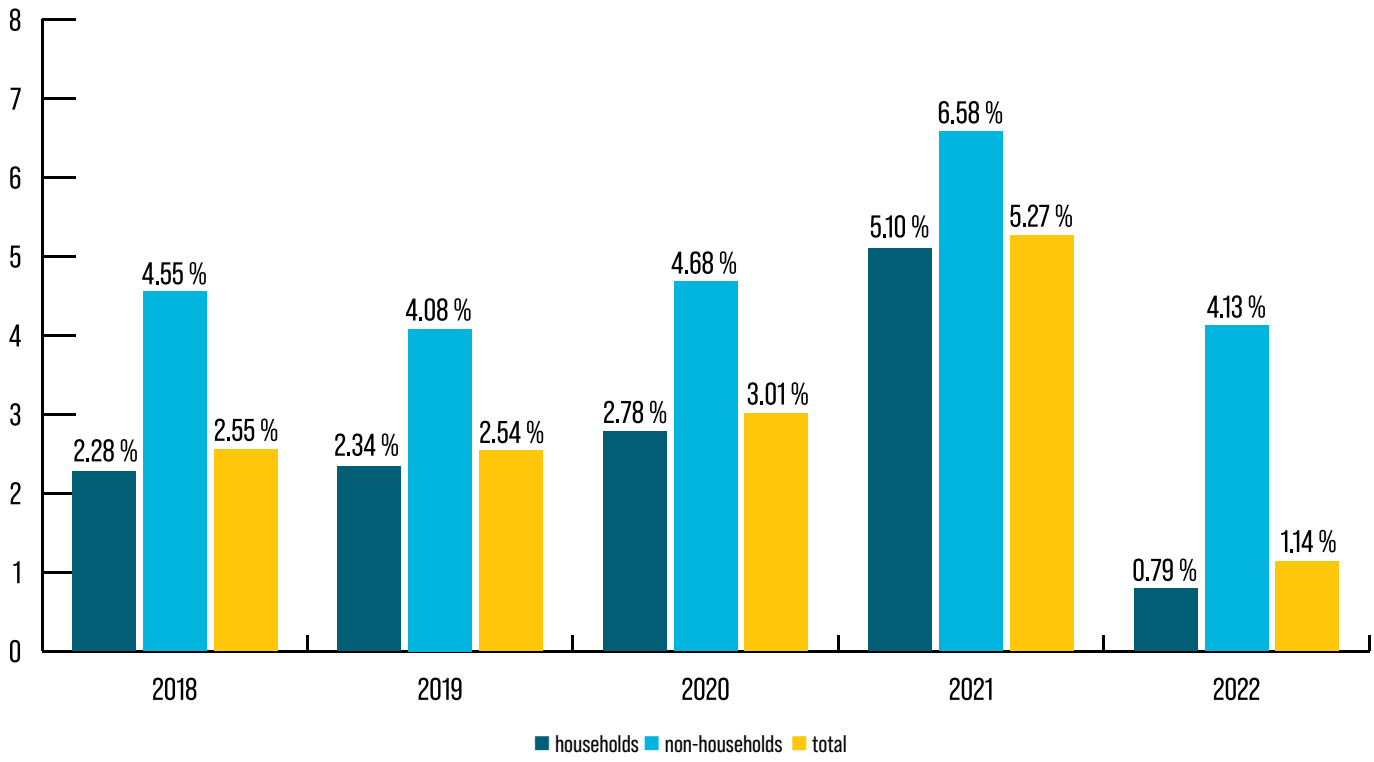
Figure 15 Breakdown of the average end price for electricity supply to small enterprises



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 16 Switching



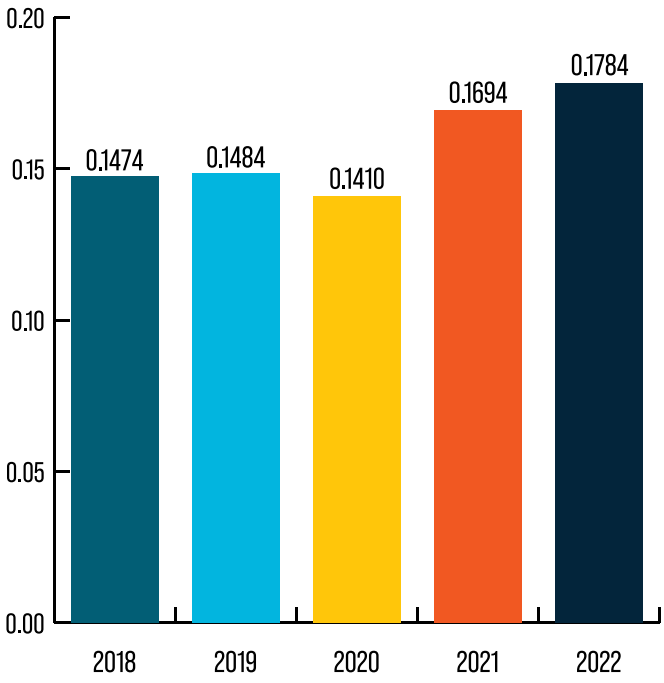
Supply of last resort

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 17 Evolution of HHI



02.
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 regulating 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 reducing their consumption by around 13%.

Figure 18 Development of gas consumption in Slovakia (TWh)

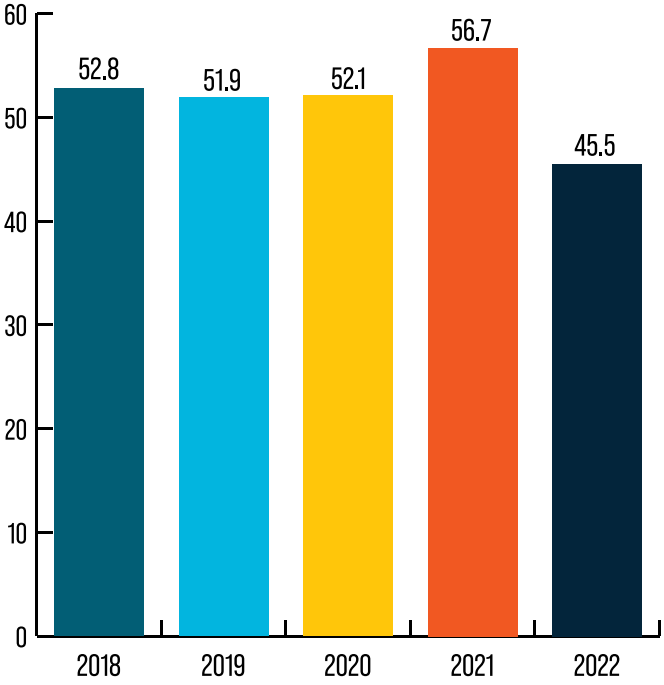


Figure 20 Gas consumption by category in 2022

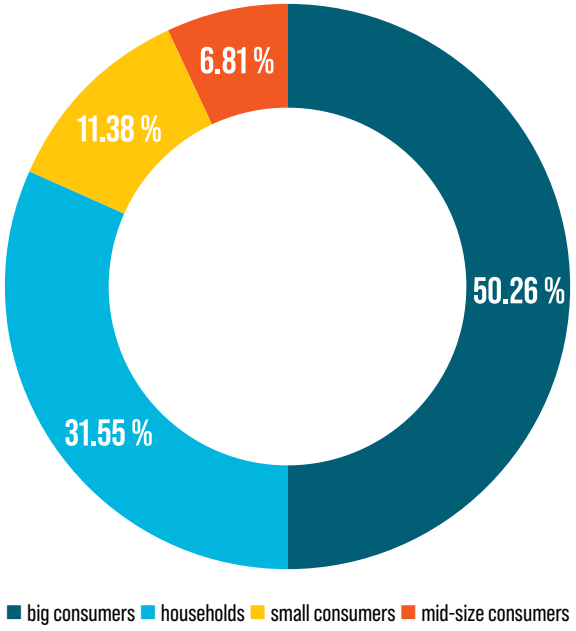


Figure 19 Gas consumption by category (2018-2022)

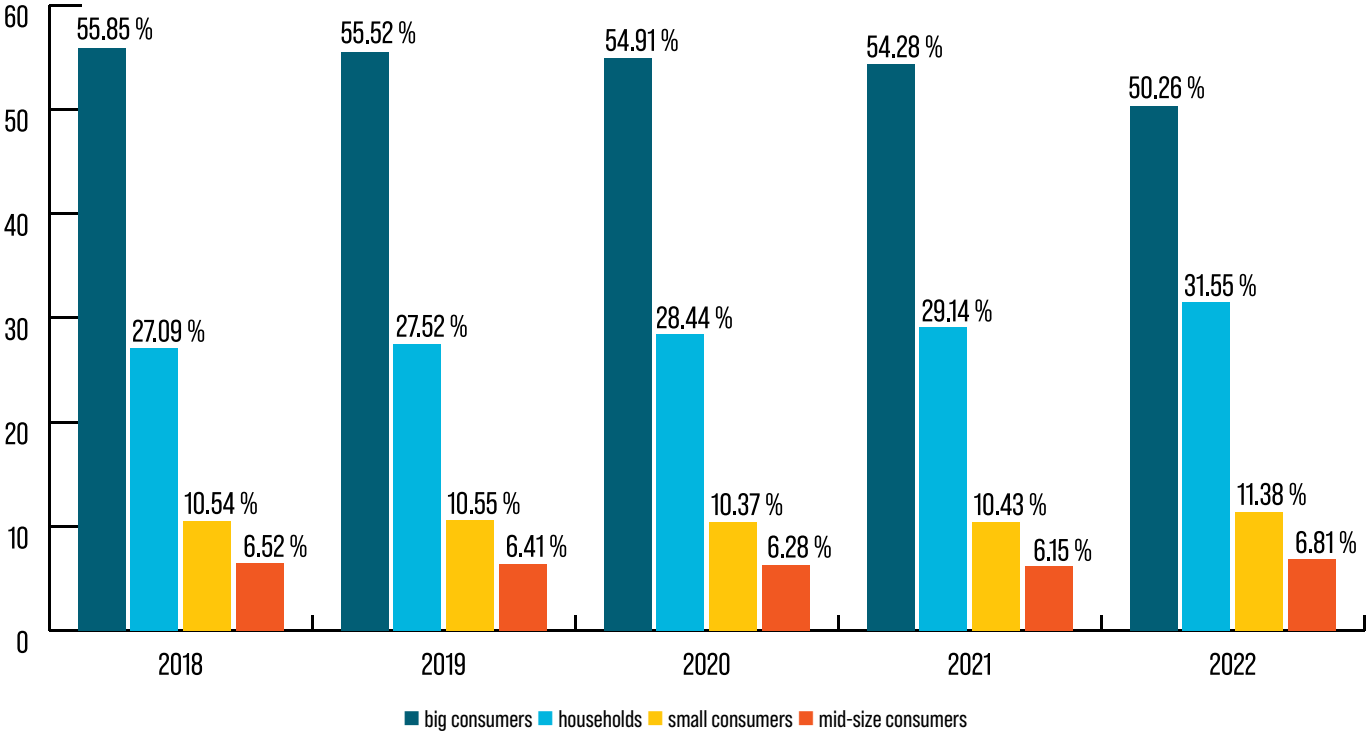


Table 6 Tariff regulation decisions

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 registry of renawable gases						
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 use of transit 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.

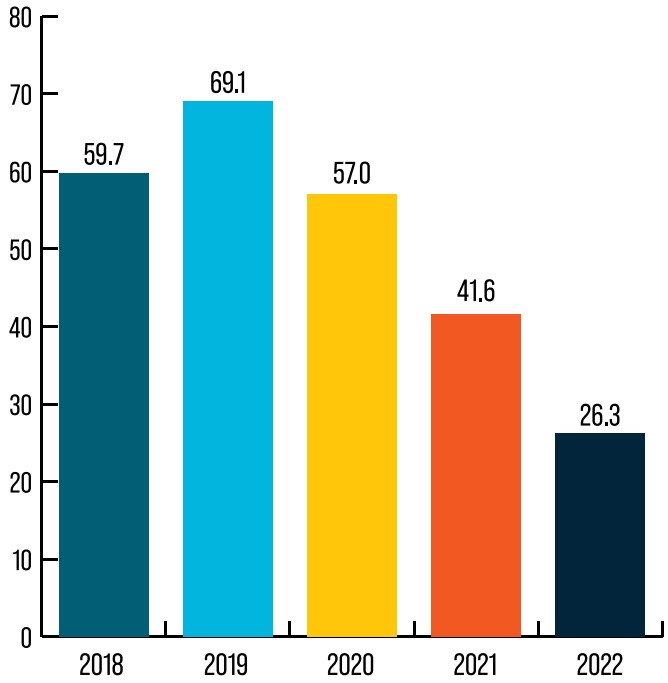
The transmission system operator eustream provides information on its website on the volumes of technical, available and contracted capacities at individual entry/exit points in line with the legislation.

Table 7 Investments in eustream's transmission system

in mil. EUR	2022
	139.14

Technical functionality of the transmission network

Figure 21 Gas transmission volumes (bcm)



Transmission capacity

The annual capacity of the transmission network is approximately 90 billion m^3 (bcm) of natural gas. In 2022 eustream transmitted 26.3 bcm of gas, a 36.8% decrease compared to 2021. The downward trend in the volume of gas transited through Slovakia's transmission network continues, was compounded in 2022 by the military conflict in Ukraine and the suspension of gas supplies to several EU Member States.

Table 8 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

Indicator/year	2018	2019	2020	2021	2022
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 9 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, enabling the entry of new players into the market, increasing the security of gas supply in individual countries and in the wider Central and South-Eastern European region and also contributing 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 m^3 of gas could flow daily from Poland to Slovakia via the pipeline, and in the opposite direction, towards Poland, up to 15.6 million m^3. 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 Lanzhot 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 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 10 Development of investments in renewal and reconstruction of the distribution network of SPP - distribúcia, a. s.

volume in mil. EUR	2018	2019	2020	2021	2022
	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 11 Network balancing (mcm/d) - withdrawal or injection from/ into underground storage

	2018	2019	2020	2021	2022
withdrawal (shortage)	1.8	1.5	1.6	1.5	1.3
injection (surplus)	1.4	1.3	1.9	1.2	1.5

DSO (SPP - distribúcia, a. s.)

Table 12 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 m^3 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 m^3.

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 13 Storage capacity of UGS operators

UGSO	Technical working volume (mil. m^3/year)					Technical injectability (mil. m^3/day)					Technical deliverability (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 14 NAFTA storage capacity 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 15 POZAGAS storage capacity 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 failing to offer the minimum price.

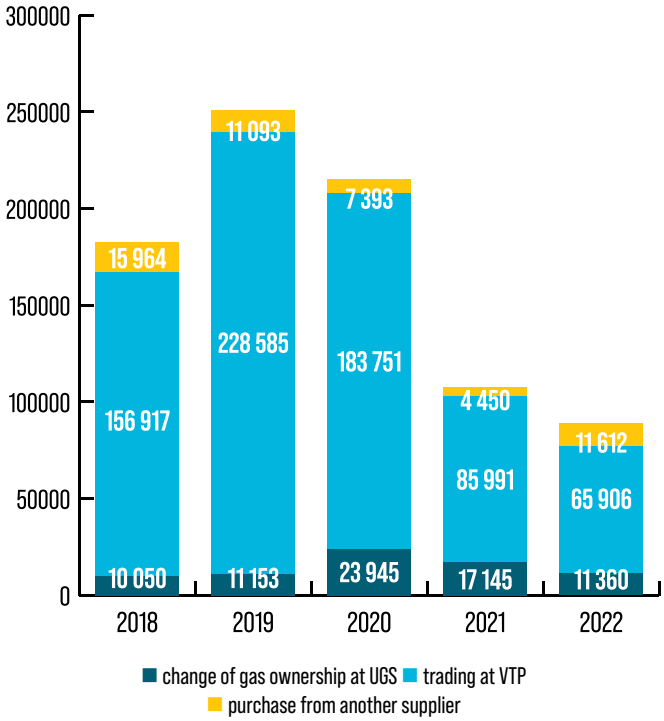
Table 16 Investments in storage facilities by NAFTA and POZAGAS

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.

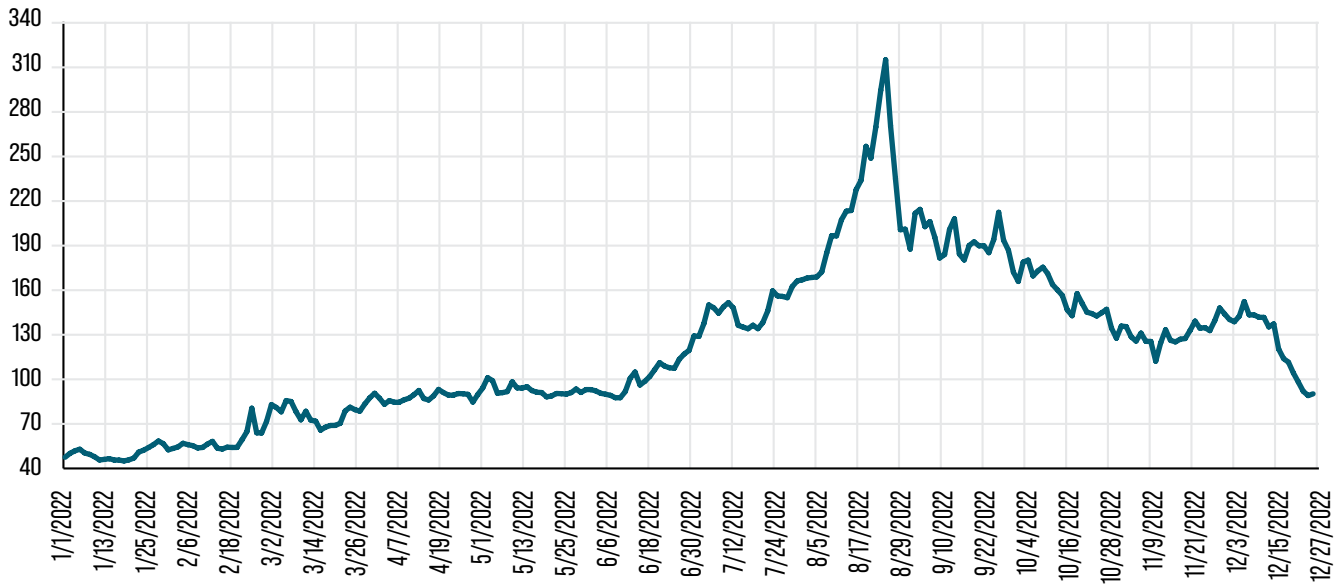
Figure 22 Evolution of some wholesale gas indicators (in GWh)



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 23 Evolution of gas commodity price on the EEX

EEX The Cal-t, period: 01/2022 through 12/2022, average price: 118.78 €/MWh



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 24 Gas suppliers to households and their market shares

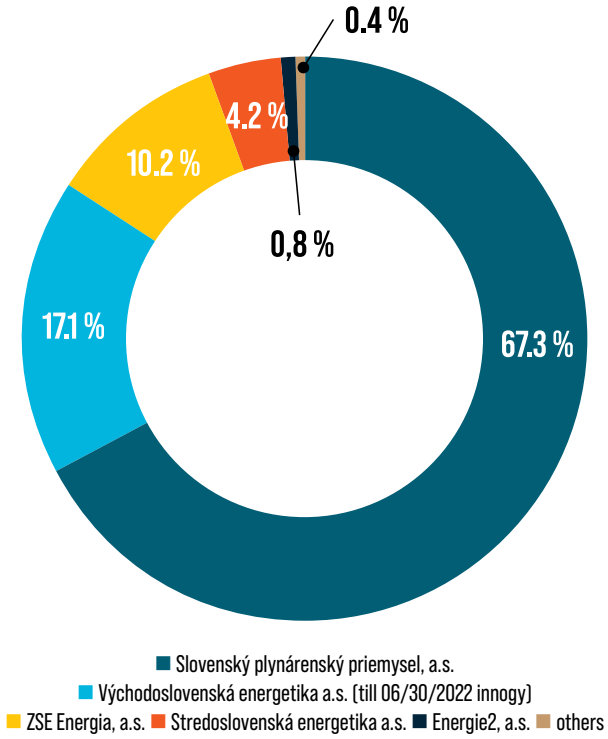


Table 17 Evolution of maximum tariffs for gas supply to households, including network charges, by average consumption in individual tariff groups of vulnerable customers

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 25 Breakdown of the average end tariff for gas supply to households

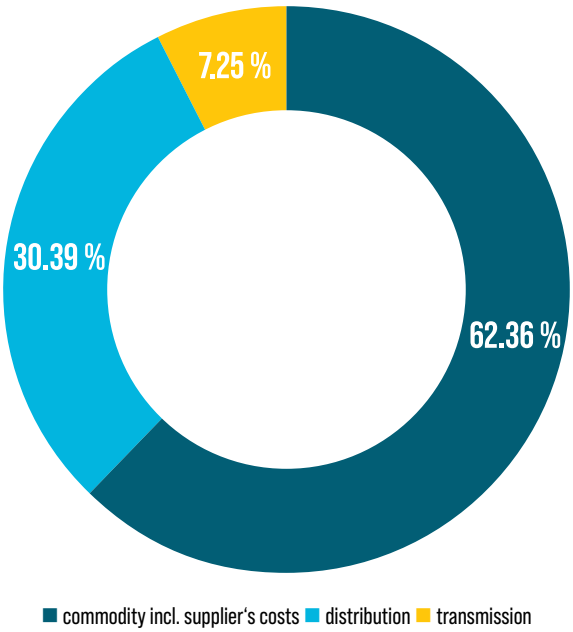


Figure 26 Gas suppliers to small enterprises and their market shares

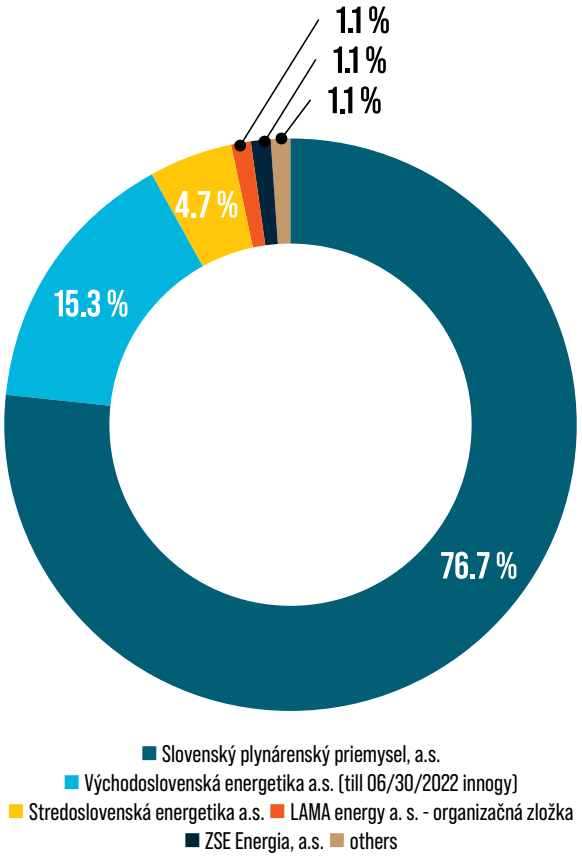


Figure 27 Gas suppliers to industrial customers excluding supply to small enterprises

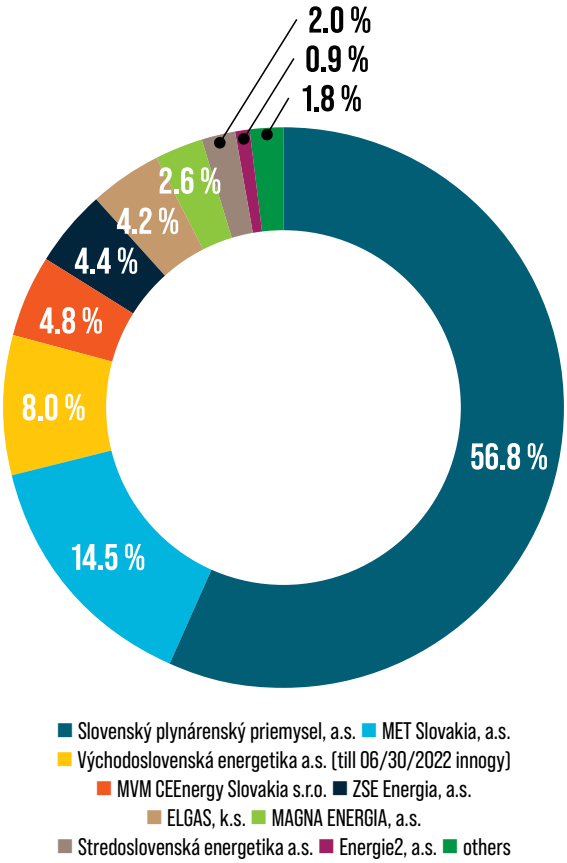
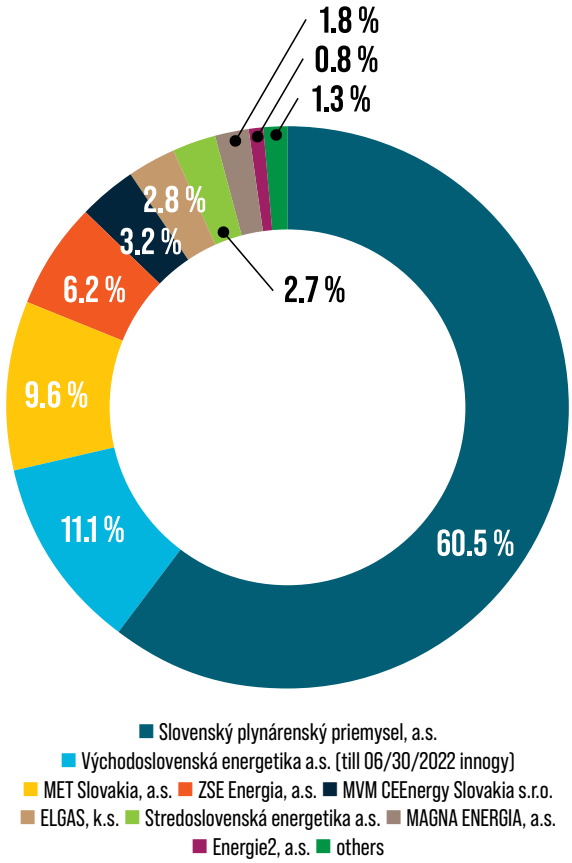


Figure 28 Gas suppliers to all customer categories and their market shares



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, have been added to households and small businesses.

Since 8 December 2022, the aforementioned groups of vulnerable non-household customers have 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 regulated tariff for 2023.

Supply of last resort

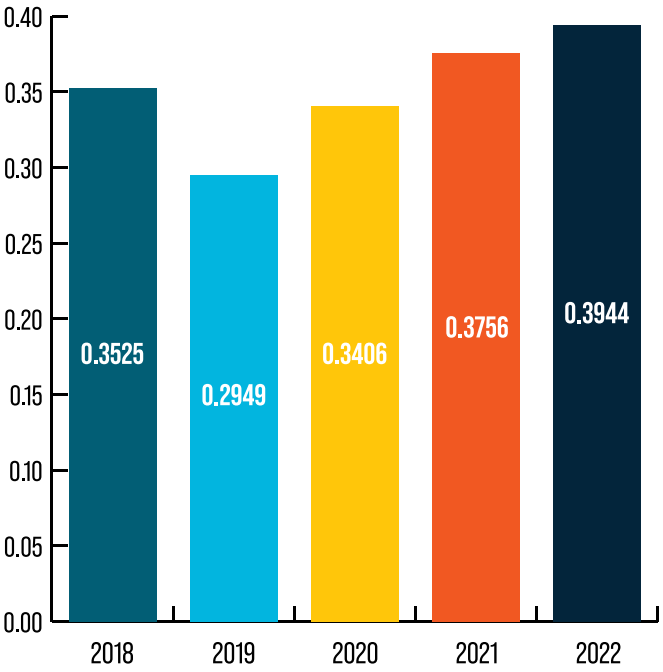
The supplier of last resort also in 2022 was the company Slovenský plynárenský priemysel, a. s. (SPP) based on the Office's decision. In the year, the Office kept track of 1 330 supply points in the last resort supply regime. The Office received notifications from three gas suppliers that had lost their 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 29 Evolution of HHI



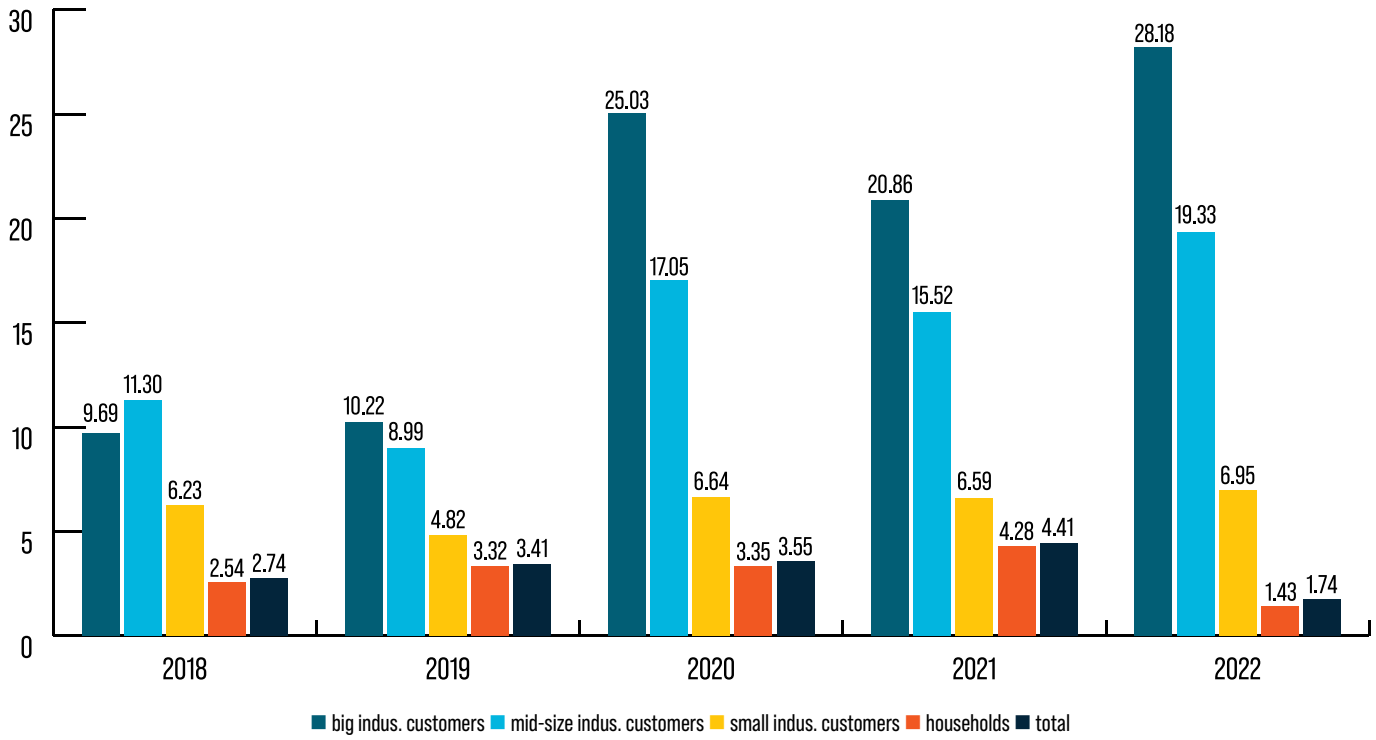
Switching

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 18 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 30 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, these supplies are not sure for Europe for the coming years, thus posing a risk both in terms of security of gas supply and the prevailing high gas prices.

03. DISTRICT HEATING

Description of the heat market

The heat market in Slovakia is mainly influenced by the nature of the heat installation systems. There are approximately 333 holders of licenses for generation, distribution and supply of heat in the country's heating sector.

The conditions for doing business in the heating energy sector are stipulated in Act No 657/2004 Coll. Any entity may obtain a license for doing business in the heating sector after fulfilling all legislative requirements. In tariff regulation, this is primarily Act No 250/2012 Coll. and, in terms of requirements for increasing energy efficiency and reducing energy intensity, Act No 321/2014 Coll.

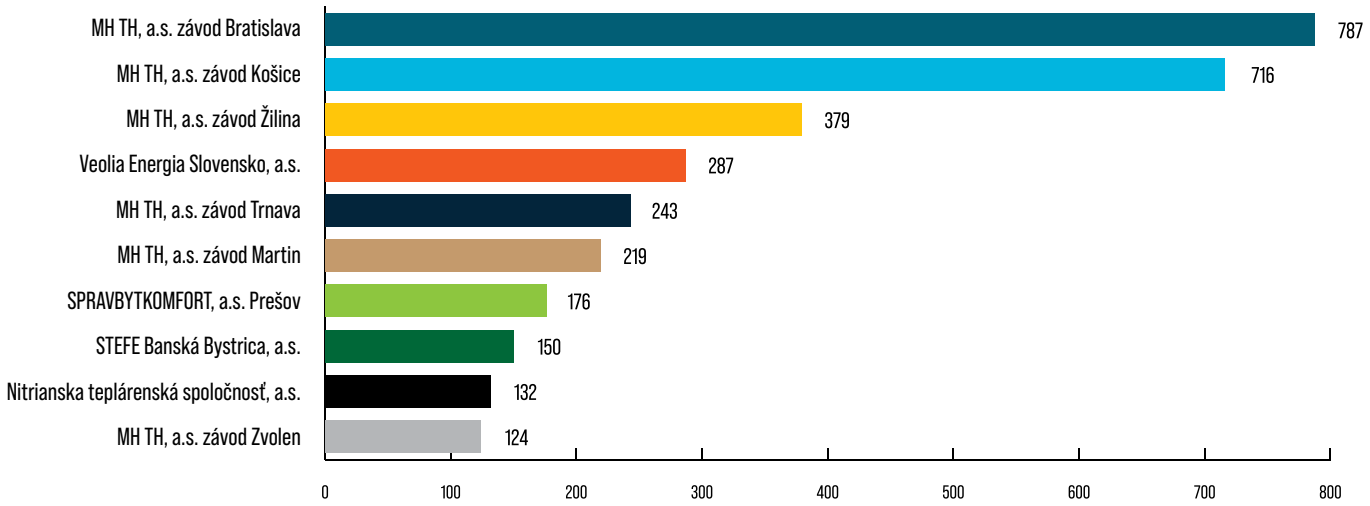
Despite the liberalised rules on the entry of legal and natural persons into the heat market it cannot be assumed that the heat market itself will be liberalised, i.e. heat traders will enter the market. It is required to have an ownership or other legal relationship to heat installation systems. Changing these conditions is not envisaged in the near future. The heat installation systems are local and the position of the trader is not relevant, in particular in that it does not create conditions for increased competition on the market but, on the contrary, increases the final heat price precisely by the trader's costs. Already today, several heating installation systems are connected to multiple heat installation operators who lease part of their equipment, whereas it would be considerably more efficient if the heating installation systems were operated by a single operator.

The number of entities operating in the heating sector is therefore limited by the number and scale of district heating systems and their number remains essentially unchanged. Recently, however, the number of heat suppliers who obtained a license to operate their business on the basis of proving their ownership of domestic boiler rooms increased, and here we would point out that ownership of such boiler rooms by persons other than the owners of the flats is in direct contravention of Act No 182/1993 Coll. on the ownership of flats and non-residential premises, as amended.

Table 19 Entities operating in the heating sector

Year	2018	2019	2020	2021	2022
No. of heat suppliers	346	351	348	343	333
No. of heat suppliers who ended their heat generation, distribution and supply	14	7	8	8	18
No. of heat suppliers who started their heat generation, distribution and supply	8	13	11	4	8

Figure 31 Major heat suppliers (GWh)



Structure of heating installation systems

A significant portion of Slovakia's population, state and public buildings, commercial and industrial establishments is supplied with heat from heating installation systems. Although a substantial part of them was built in the last century, today they are largely modernised and capable of providing efficient and safe heat supply. It is also an ideal base for building a smart energy system for towns and municipalities, more capable of reflecting new global challenges and creating quality living conditions for citizens, particularly in securing healthier air. The nature of the heating installations is very diverse in terms of their scale, technology used, fuel mix and, last but not least, age of operation. The largest heating installations consist of one or more heat sources, usually combined heat and power plants, primary distribution systems, heat transfer stations, secondary distribution systems or on-site heat transfer stations. On these systems, heat supply is usually provided by several suppliers from generation to end consumption. In Slovakia, we have such large systems in 42 cities. In other systems of heating installations, consisting mainly of heating plants, block boilers and boiler houses, there is only one supplier providing heat generation or distribution.

Table 20 Heating installation systems by number of suppliers

Heating installation systems	Quantity
Producers who are also suppliers	698
Suppliers who are producers and/or the first distributor in the system	51
Suppliers who are producers and/or second distributors in the system	11
Suppliers who are producers and/or third distributors in the system	4
Suppliers who are producers and/or first and second distributors in the system	1

Heat supply

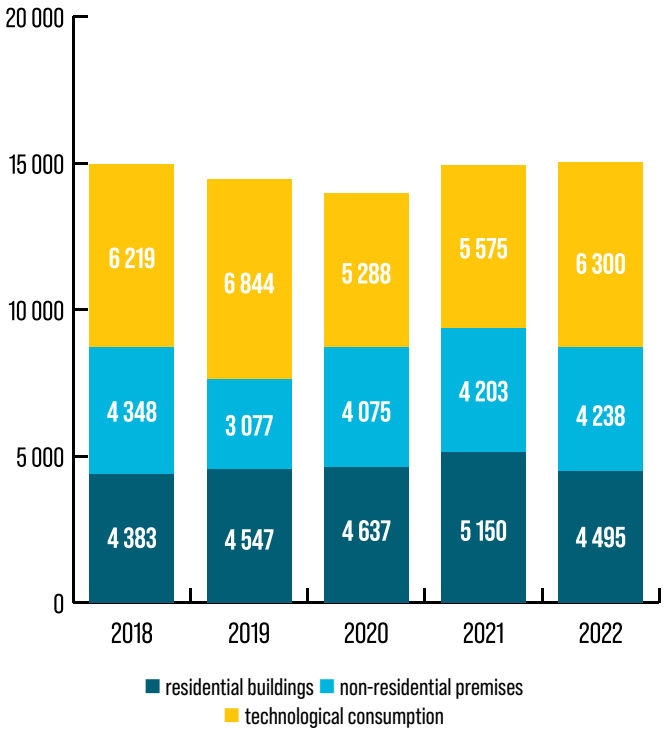
Apart from bigger cities, district heating systems have also been built in several municipalities because it is an energy-efficient, effective and environmentally friendly way of providing heat in densely populated localities. At the same time, this way of supplying heat accelerates the use of renewable energy sources in heat generation and the use of combined heat and power generation. Heat from these systems is supplied to about 11 600 end consumers at more than 29 000 end consumption metering points for customers for their own use and end-users who distribute the heat supplied to final consumers (mainly households). The key supplier of heat for households is the state-owned joint stock company MH Teplárenský holding, a.s. with its plants in Bratislava, Košice, Trnava, Žilina, Martin and Zvolen. Their supply from individual plants ranges from 120 GWh to 800 GWh per year. There are also heat producers in the country with higher generation volumes, but their supply to households is minimal.

Table 21 Heat supply

Year	degree-days	supply to residential buildings [GWh]			supply to non-residential buildings [GWh]	supply for technological consumption [GWh]	total supply [GWh]	self-consumption [GWh]
		district heating	hot water	total				
2018	3 224	2 881	1 502	4 383	4 348	6 219	14 950	254
2019	3 329	2 978	1 569	4 547	3 077	6 844	14 468	214
2020	3 386	3 016	1 621	4 637	4 075	5 288	14 000	256
2021	3 774	3 459	1 691	5 150	4 203	5 575	14 928	273
2022	3 456	2 939	1 556	4 495	4 238	6 300	15 033	284

Total heat supply in 2022 reached 15 033 GWh, up 0.7% year-on-year. The total heat supply includes supply for heating and domestic hot water for residential and non-residential buildings and supply for technological consumption. Suppliers' self-consumption is an indicative figure and is not included in the total supply volume. Of the total heat supply in 2022, 30 % is consumed for heating and domestic hot water in residential buildings, 28 % in non-residential premises and 42 % for technological purposes. In the year under review, the share of heat supply for heating and domestic hot water in residential buildings fell by 12.7%, as a result of a warmer year in 2022 and, simultaneously, heat savings by household customers. The average number of degree days in 2022 was 3 456, down 8.4% in comparison to 2021 with an average number of 3 774 degree days. Non-residential heat supply was up 0.8%, indicating a recovery in commercial operations when considering a warmer year in 2022. Supply for technological consumption, which is minimally affected by weather, saw a 13% rise compared to 2021, but as with supply to non-residential premises, this increase indicates a recovery in the sector and a return to pre-pandemic COVID-19 levels.

Figure 32 Heat supply (GWh)



Heat supply from RES and CHP

In 2022, 47.6% of the heat was supplied from systems with CHP technology. The rest of the regulated heat is supplied from sources without combined heat and power, the so-called mono generation. RES accounted for 16% of the total heat supply.

Figure 33 Share of heat supply from CHP

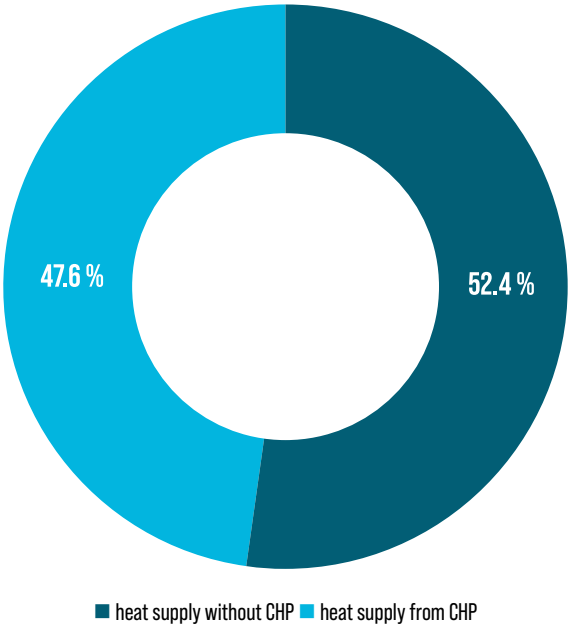


Figure 34 Share of heat supply from RES

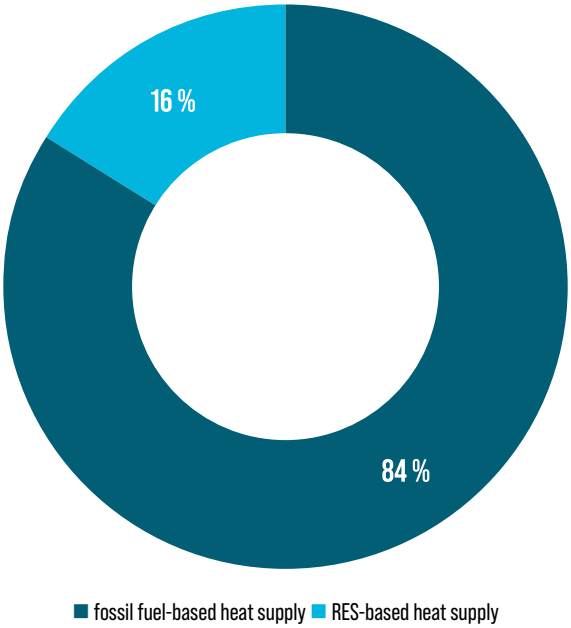
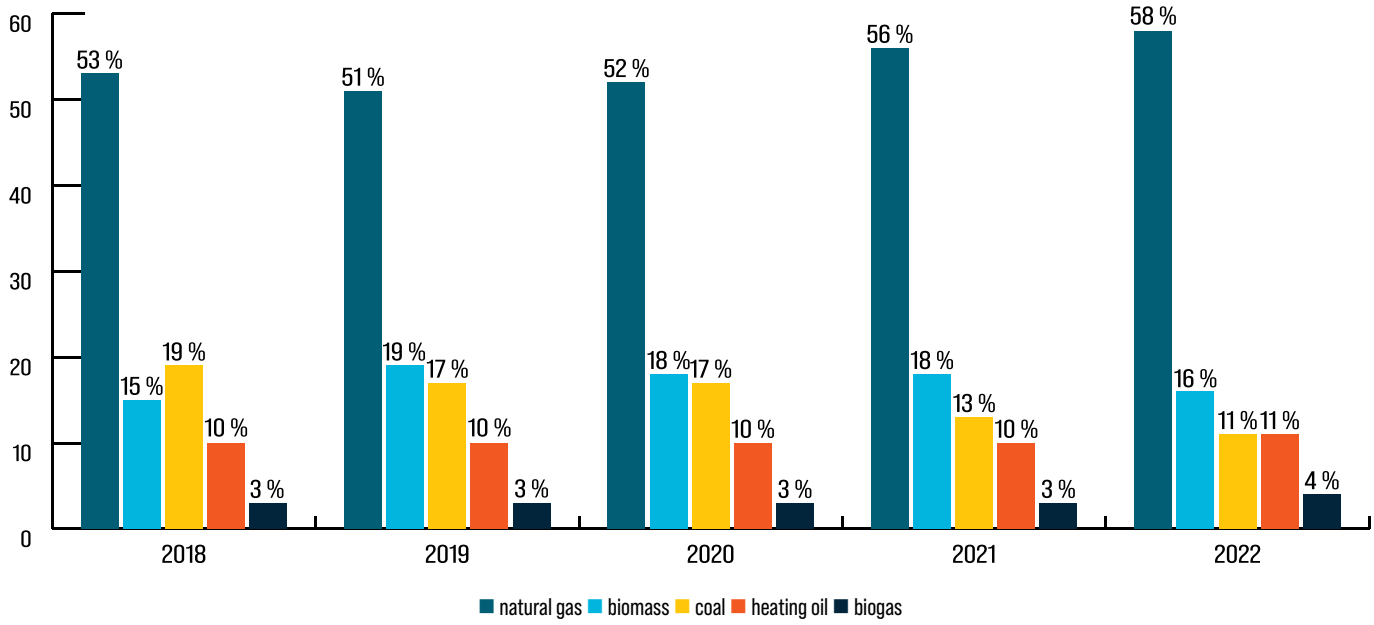


Table 22 Share of fuels in heat generation

Year	natural gas [GWh]	biomass [thous. t]	coal [thous.t]	biogas [GWh]	heating oil [thous.t]
2018	8 637	877	586	326	128
2019	8 597	1 062	595	326	127
2020	8 582	1 020	554	347	127
2021	8 865	1 009	411	337	127
2022	9 338	927	335	503	127

Figure 35 Share of fuels in heat generation



In 2022, we observed a fall in coal consumption of 76 000 tonnes compared to 2021, which represents about 18%, mainly due to its gradual replacement by greener natural gas. Biomass consumption was also down by 82 000 tonnes, i.e. 8%. In contrast, gas consumption went up by 473 GWh, i.e. 5.3% year-on-year, and biogas consumption by 166 GWh, i.e. an increase of roughly 50 %. The percentage share of the different types of fuel in heat generation varied only slightly over the reviewed period.

Fuel and emission allowance prices

During the second half of 2021, we saw an extraordinary surge of energy prices on world markets. In the case of natural gas, the price rose from January to December 2021 from the original approx. 16.3 €/MWh to approx. 90.6 €/MWh, i.e. by roughly 455 %, a maximum daily value having reached up to 140.6 €/MWh. The arithmetic average of the daily natural gas CENCGt prices in 2021 published by the EEX was 34.12 €/MWh. The allowed maximum price of natural gas in the heat tariffs is based on the arithmetic average of the daily prices published by the EEX for the period from 1 January to 30 June of year t-1. As the price of natural gas began to surge in September 2021, i.e. in the period of natural gas supply for heat generation for the following year, the Office had to increase the cap of the maximum allowed price of gas in heat tariffs to the value of 41.485 €/MWh. Also, the prices of emission allowances have been continuously increasing since 2017, when their price was at the level of 7 €/t CO_2, while at the end of 2022 it exceeded 80 €/t CO_2. The arithmetic average of the daily prices of emission allowances in 2022 reached 80.82 €/t.

Table 23 Average market and regulated fuel prices

Fuel	Price	2018	2019	2020	2021	2022
Natural gas in €/MWh (§ 4(1) (a) of Decree 248/2016 Coll.)	CE_{NCGt} - arithmetic average of daily prices published by the EEX of the product NCG Calendar+1 for the period from January 1 of year t-1 to June 30 of year t-1	16.908	18.572	19.998	13.822	19.063
	CZP_t - maximum value of natural gas price in heat tariffs for year t	19.4441	27.3384	22.9972	15.8952	41.485
Emissions in €/t (§ 4(1) (d) of Decree 248/2016 Coll.)	EEX exchange	15.82	24.85	24.73	53.52	80.82
	maximum value in heat tariffs	current monthly average at time of purchase				
Black coal in €/MWh	market price	14.21	14.33	15.07	14.10	15.47
	maximum value in heat tariffs	17.00				
Brown coal in €/MWh	market price	17.55	18.61	17.87	17.35	17.37
	maximum value in heat tariffs	20.00				
Pellets in €/MWh	market price	33.91	33.00	34.54	33.68	34.41
	maximum value in heat tariffs	38.00				
Dendromass in €/MWh	market price	19.37	19.27	18.57	18.59	19.03
	maximum value in heat tariffs	19.00				
Agricultural biomass in €/MWh	market price	22.49	22.29	22.93	22.96	22.81
	maximum value in heat tariffs	23.00				
Landfill gas and sewage gas from WWT in €/MWh	market price	22.00	21.35	22.00	22.00	22.00
	maximum value in heat tariffs	22.00				
Biogas in €/MWh	market price	30.55	26.11	29.67	28.54	28.8
	maximum value in heat tariffs	35.00				

Table 24 Investments and their purpose

Investment purpose	2018	2019	2020	2021	2022
Heat generation installations [thous. €]	1 664	20 241	12 963	55 997	3 562
Heat distribution installations [thous. €]	18 717	12 035	9 255	8 318	13 029
Greening [thous. €]	0	10 120	120	0	0
RES construction [thous. €]	467	265	0	0	590
Total [thous. €]	20 848	42 661	22 338	64 315	17 181

Value of investment claimed by heat suppliers in the heat tariff for 2022 by using the investment development factor for modernisation, reconstruction and construction of new heat equipment with the aim of increasing the energy efficiency of heat installations, greening of heat generation equipment or reducing operating costs in generation or distribution, reached approximately € 17 million, which is a 73.3% decrease compared to 2021. The fall in investments was mainly due to the shortage of goods and services in all sectors of the economy in the previous period of the COVID-19 pandemic and the consequent rise in their prices. In 2022, the largest share of funds was spent on the construction or reconstruction of heat distribution installations. Only those investments that cannot be realised by heat producers and suppliers without increasing the maximum cap of economically eligible costs are specifically monitored and recorded.

Scope and method of regulation

2022 was the sixth year of the 2017-2022 regulatory period. Regulation of heat tariffs (prices) was performed in line with URSO Decree No 248/2016 Coll. establishing tariff regulation in the heating sector, as amended by Decree No 205/2018 Coll. and Decree No 298/2021 Coll. (hereinafter referred to as the "Decree"). The amending decrees responded to the experience from the law application, but they were not of a fundamental nature and impact on the scope and amount of economically eligible costs that could be applied in the heat tariff. The last amending Decree No 298/2021 Coll. stipulated in particular the change of the length of the regulatory period following the change of the regulatory policy. Tariff regulation in 2022 was applied to the generation, distribution and supply of heat and tariffs (prices) were fixed by a determined method of calculating the maximum heat tariff based on the cost method utilising some elements of price cap.

Basic principles of tariff regulation:

- setting a two-component heat tariff to ensure that the costs of heat generation and distribution are covered evenly,
- determining the optimum eligible costs and reasonable profit in order to ensure an efficient, reliable and safe heat supply,
- setting binding values of energy conversion efficiency for heat generation and distribution installations, whereby costs of uneconomic heat generation and distribution are excluded from the heat tariff,
- regulation of fuel prices for heat generation in order to optimise eligible variable costs,
- motivating regulated entities through regulatory measures to increase the energy efficiency of heat generation and distribution
- promoting the use of renewable energy sources for heat generation, particularly in district heating systems,
- achieving fair settlement of costs incurred in heat generation and distribution for end consumers by accounting for actual costs in the heat tariff after the end of each calendar year, with a view to create a stable sector with a predictable and transparent regulatory environment.

Heat tariffs monitoring

Pursuant to Act No 250/2012 Coll., tariff decisions issued for 2017 are valid for the entire regulatory period ending on 31 December 2022, unless the Office, on the proposal of a regulated entity or on its own initiative does not approve a change to the tariff decision. For 2022, the Office issued 13 tariff decisions for new suppliers and new sites, approving 14 tariffs. On the basis of requests from regulated entities, the Office issued a further 372 decisions for 2022, approving tariff changes in 544 sites. The changes in the heat tariff for 2022 were mainly due to changes in the economic parameters on which the previous tariff was based.

Table 25 Tariff decisions

Year	Tariff decisions	Decisions	Tariffs
2018	No. of new decisions for new suppliers and new sites	15	15
	No. of decision amendments	162	228
2019	No. of new decisions for new suppliers and new sites	20	21
	No. of decision amendments	211	301
2020	No. of new decisions for new suppliers and new sites	33	58
	No. of decision amendments	89	156
2021	No. of new decisions for new suppliers and new sites	15	15
	No. of decision amendments	115	145
	No. of decisions to extend the regulatory period	207	-
2022	No. of new decisions for new suppliers and new sites	13	14
	No. of decision amendments	372	544

Table 26 Heat tariffs

Year	2018	2019	2020	2021	2022
Variable component in €/kWh	0.0358	0.0396	0.0402	0.0402	0.0569
Fixed component in €/kW	178.77	182.67	182.75	187.77	192.46
Final tariff in €/kWh	0.0679	0.0712	0.0732	0.0753	0.0941

Table 27 Year-on-year increase in heat tariffs

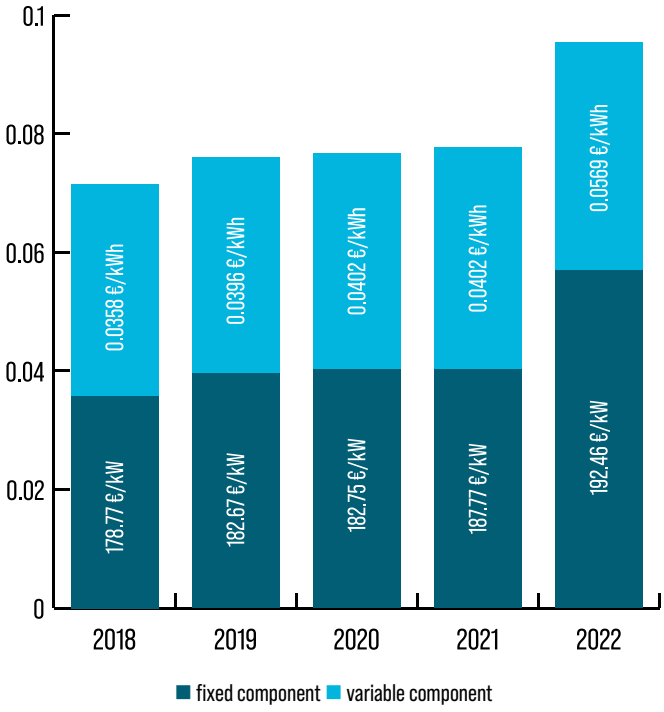
Year	2019/2018	2020/2019	2021/2020	2022/2021
Variable component in €/kWh	10.6 %	1.6 %	- 0.1 %	41.5 %
Fixed component in €/kW	2.2 %	0.0 %	2.7 %	2.5 %
Final tariff in €/kWh	4.8 %	2.9 %	2.9 %	24.9 %

The Office approves each supplier's two-component heat price as the common price from all heating installations from which heat is supplied within the city or city boroughs.

The variable component of the heat tariff fixed by the Office's decisions at the end of 2022 averaged 0.0569 €/kWh, up 41.5% year-on-year. The reason for the price increase was the rise in commodity prices on world markets (natural gas, electricity) from mid-2021, which peaked in August and September 2022. Also, increase in the price of biomass, including the cost of its transport, and increase of emission allowance prices negatively affected the price of heat in 2022. The increase in natural gas prices was taken into account by the Office by adjusting the correction coefficient for natural gas for 2022, which increased to 1.8924, thus setting the maximum eligible natural gas (commodity) price in the heat tariff for 2022 at 41.4854 €/MWh. The growth of this value compared to the maximum eligible natural gas (commodity) price for 2021 (15.8952 €/MWh) represents an increase of 161 %, which had a significant impact on the increase of the variable component as well as the final heat tariff (price) in 2022.

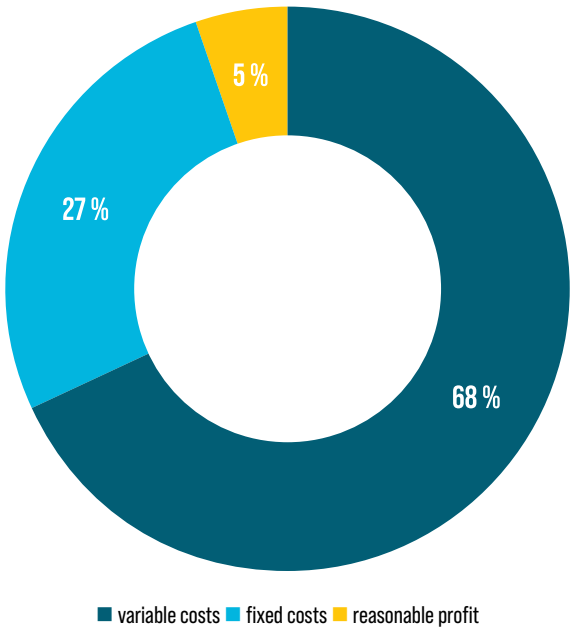
Proposals for the change of the heat tariff for 2022 were mainly submitted by regulated entities whose contracts for the purchase of natural gas, electricity and biomass ended in 2021 or during 2022. Another reason for changing the heat tariff was a justified change in the fixed costs or the regulatory heat capacity value based on which the fixed component of the heat tariff is determined. Heat suppliers are obliged to return to customers the positive cost difference in the approved heat tariffs compared to the actual costs, which are submitted after the end of the year.

Figure 36 Average heat tariff



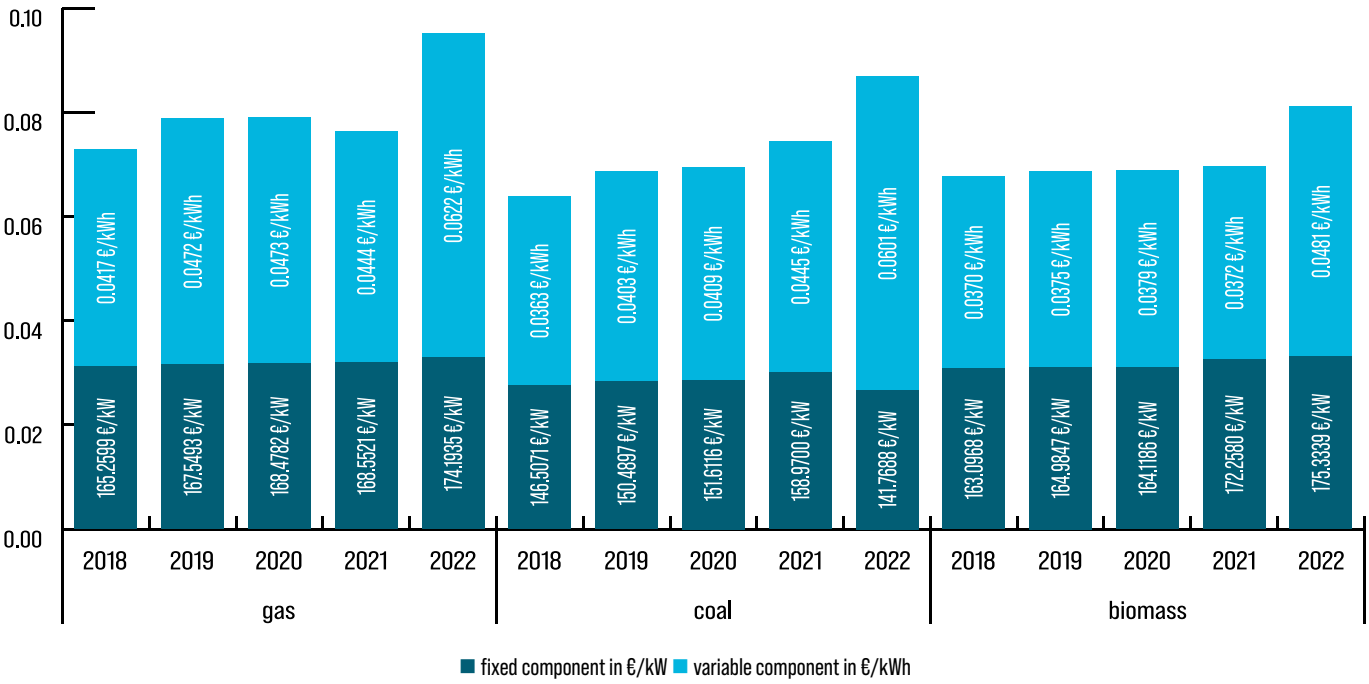
The average fixed component of the heat tariff, which is determined in €/kW of the regulatory heat capacity value, increased compared to 2021 from 187.77 €/kW to 192.46 €/kW, i.e. by 2.5%. The main reason for this was not an increase in fixed costs or profit, but solely a decrease in the regulatory heat capacity value of 8.8%. In fact, the regulation method in force for the 2017-2022 regulatory period allowed for a year-on-year increase in fixed costs only due to new investments in greening, in making heat generation and distribution more efficient. The option to increase the fixed component of the tariff in 2022 due to new investments was exercised by 24 suppliers with a total volume of approx. 17 000 000 EUR. The total amount of fixed costs and reasonable profit for all suppliers sank by 6.5% year-on-year showing that the cost of new investments did not play a large role in the average price. The 8.8% reduction of the regulatory heat capacity value, reflecting the decreasing heat supply, had a major impact on the increase in the fixed component of the heat price. However, according to the regulatory rules, the decrease in the regulatory heat capacity value in specific cases also led to a proportional reduction in some eligible fixed costs and profits, which are limited by its value. The regulatory heat capacity value depends on the actual heat supply in the last complete calendar year prior to the submission of the tariff proposal, i.e. for 2022 the base year is the actual supply in 2020. As a result of rationalisation measures on the part of heat consumers, which are mainly insulation, hydraulic regulation, partial replacement of heat supply from district heating systems by own alternative heat sources, a decreasing volume of actual heat supply has been recorded in the long term causing a proportional increase of the fixed component of the heat price. The impact of climate conditions on the level of the fixed component of the heat price is largely eliminated due to the regulatory measures adopted by Decree No 248/2016 Coll.

Figure 37 Cost structure of the heat tariff



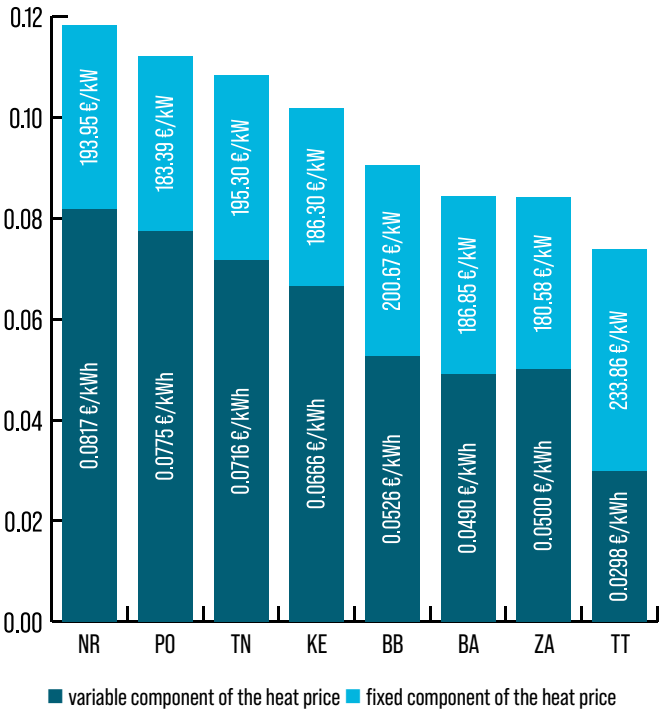
Average heat tariffs by fuel type

Figure 38 Heat tariffs by fuel type



The previous chart shows that the development of heat tariffs by fuel type reflects the development of prices of fuels entering the variable component of the heat tariff.

Figure 39 Average heat prices (tariffs) in the country's regions



The prices of heat suppliers may differ significantly from the average in individual regions. Although all regulatory measures adopted for the 2017-2022 regulatory period were aimed at stabilising the price of heat for the end user, there are cases that deviate from the price average. This is due to the fact that individual district heating systems differ significantly in terms of size, generation technology, fuels used, investments in heat installations, etc. Another major factor negatively affecting the final heat price is the so called supply chaining, which means that heat supply to the final customer in one district heating system is provided by several suppliers in succession, ultimately increasing the heat price, especially the fixed component.

Heat prices from heating installation systems for end customers

Table 28 Heat prices for end consumers

Heat installation systems by No. of suppliers in chain		variable component in €/kWh	fixed component in €/kW	final price in €/kWh
multi-supplier systems	producers and producers which are also distributors	0.0532	170.68	0.0858
	second and third distributors	0.0557	247.97	0.1046
single supplier systems		0.0635	178.20	0.0979

Figure 40 Heat prices by heating installation system size

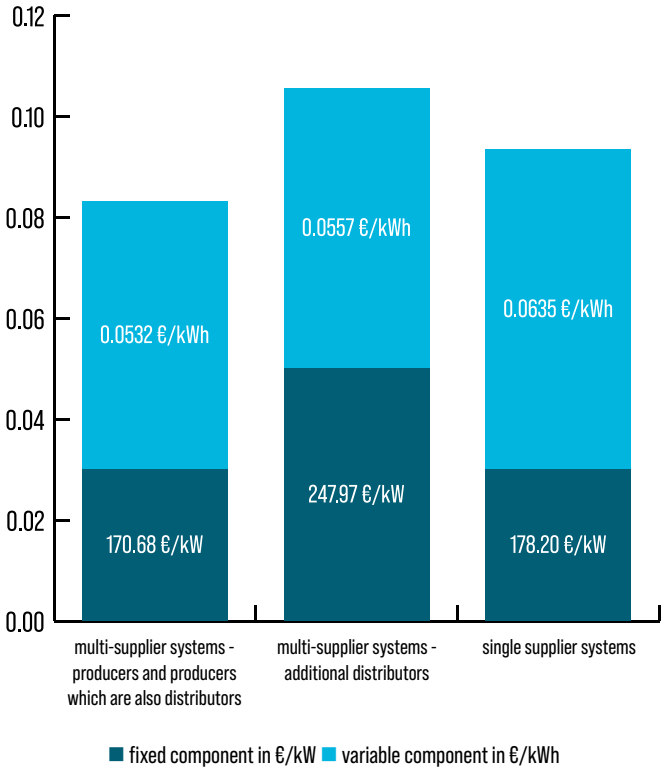
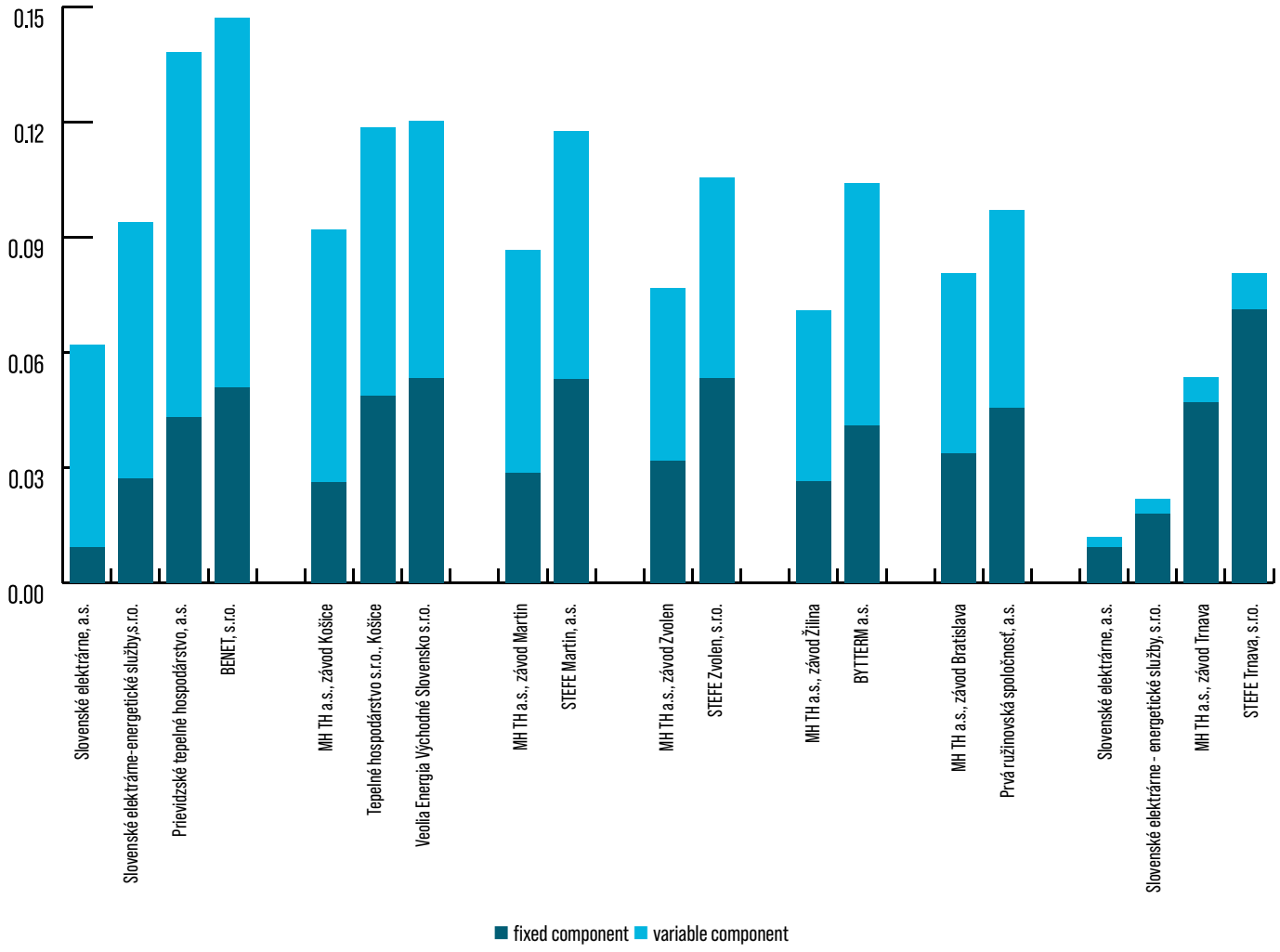


Figure 41 Heat prices in multi-supplier systems (€/kWh)



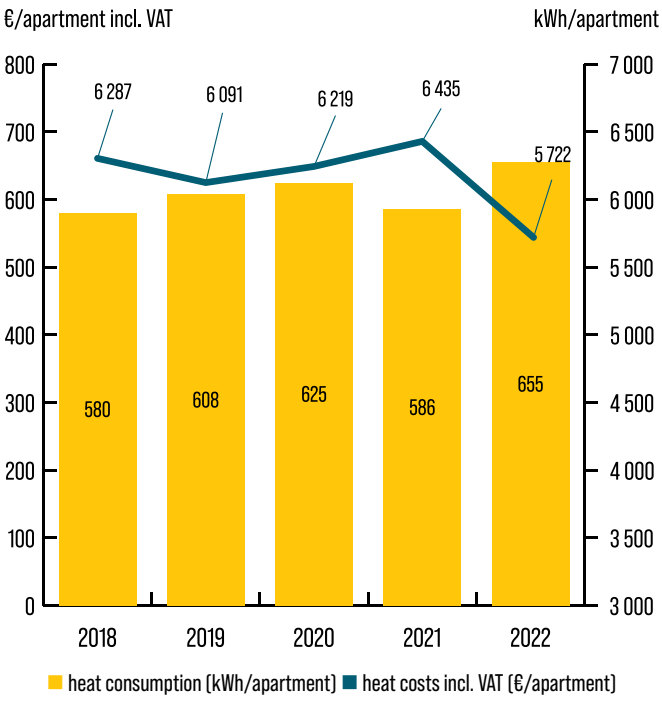
Household heating costs

The Office monitors and evaluates annually the actual consumption of heat for heating and domestic hot water of households. The sample monitored represents 41 000 dwellings. Heat consumption per household in 2022 reached 5 722 kWh, which is 11.1% less than in 2021. The reduced heat consumption is to be attributed to heat savings and a warmer year in 2022, as evidenced by an 8.4% lower number of degree-days in 2022 compared to 2021.

Table 29 Household heating costs

	2018	2019	2020	2021	2022
heat consumption (kWh/apartment)	6 287	6 091	6 219	6 435	5 722
heat costs incl. VAT (€/apartment)	580	608	625	586	655

Figure 42 Household heating costs



Annual cost of heat for heating and hot water for one household, including VAT, reached 655 EUR, up 11.8% year-on-year. This increase of heating costs is, despite the reduced consumption of heat in apartments, due to the higher costs of heat generation and supply in 2022.

Impact of the war in Ukraine on heat consumption and price

Heat prices in 2022 were also indirectly affected by the war conflict in Ukraine, which resulted in an impending and growing shortage of natural gas, electricity, coal and biomass due to the reduction of transmission and supply links. This was manifested in particular in the second half of the year by a Europe-wide upward pressure on the prices of the above commodities. Nevertheless, the Office did not record any events in 2022 that would have endangered the security and continuity of heat supply in the heating sector on account of these facts.

04. WATER

Market regulation in the water sector

The Office performs tariff regulation in water management; technical (non-tariff) regulation for this area is not within its competence. Tariff regulation in the water sector is performed by the Office in public water supply and public sewerage and also in the area of services related to the use of surface water. The regulated activities in the area of public water supply and public sewerage are production, distribution and supply of drinking water by public water pipes and collection and treatment of wastewater by public sewerage. In surface water use, the regulated activity is abstraction of surface water and energy water from watercourses and exploitation of the watercourses' hydropower potential.

The company which supplies drinking water or collects and treats wastewater operates in a defined area being the sole provider of these services in that area. In the production, distribution and supply of drinking water and wastewater collection and treatment, each company is a natural local monopoly, with 14 large water companies having a majority market share. Smaller operators of public water supply and public sewerage systems, which include mainly municipalities but also small companies, also have local monopoly status. Approximately 84.4 % of Slovakia's population is connected to a public water supply system, of which 93 % are connected to the public water supply system operated by large water companies and the remaining 7 % to the public water supply system managed by small operators. About 70.6 % of the country's population is connected to public sewerage, of which 88 % to public sewerage operated by large water companies and 12 % by small operators. In services related to the use of surface water, the only regulated entity with a monopoly position is SLOVENSKÝ VODOHOSPODÁRSKY PODNIK, as the state-appointed entity administering the country's strategically significant watercourses.

A water management asset may be operated by its owner, provided they meet the conditions under the applicable legislation or entrust the operation to another entity on the basis of a contractual relationship. The business environment within public water supply and public sewerage systems is currently stabilised by the statutory scope of tariff regulation and the definition of a regulated entity. Regulated entities are granted registration certificates issued by the Office indicating the regulated activity and the category of public water supply or public sewerage system used for that activity.

In 2022, the Office issued a total of 54 certificates of registration on the basis of applications from regulated entities pursuant to Section 23 of Act No 250/2012 Coll. Of that number, 10 certificates were issued to new regulated entities, three regulated entities applied for the addition of another regulated activity and 41 certificates were issued due to a change in the data contained therein.

As of 31 December 2022, a total of 680 regulated entities operating public water supply and public sewerage systems were registered. Of this number of regulated entities, 14 were water companies, one city, 40 municipalities and 86 smaller companies operating public water supply or public sewerage systems of category I and II. There were 539 small towns and municipalities operating public water supply or public sewerage systems of category III.

Method of tariff regulation of drinking water and wastewater

The Office sets the tariff in tariff proceedings by issuing tariff decision for regulated entities operating public water supply and/or public sewerage of category I and II and by issuing tariff confirmation for regulated entities operating public water supply and/or public sewerage of category III.

Table 30 Type and number of decisions issued

	2018	2019	2020	2021	2022
New tariff decisions	7	7	12	16	85
Amendments to tariff decisions	11	17	19	18	30
Decisions on tariff decision prolongation	0	0	0	126	0
Tariff confirmations	22	20	17	532	19
Decisions to discontinue a proceeding	3	6	6	19	19
Decisions to suspend a proceeding	21	21	38	40	229
Decisions on revocation of a tariff decision	1	3	1	1	1
Total	65	74	93	752	383

Monitoring and development of drinking water and wastewater prices (tariffs)

On 10 November 2020, in accordance with Section 8(9) of Act No 250/2012 Coll., the Regulatory Board adopted Amendment No 1 to the Regulatory Policy for the Regulatory Period 2017-2021, which, among other things, extended the regulatory period 2017-2021 until 31 December 2022. On the basis of the above and pursuant to Section 14(5) of Act No 250/2012 Coll., regulated entities in the water sector were obliged to submit in September and November 2022 their tariff (price) proposals for the first year of the regulatory period 2023-2027.

Of the 85 new tariff decisions issued in 2022, 73 were issued for the new regulatory period starting in 2023. Ten new tariff decisions were issued for new regulated entities or for new sites of already registered regulated entities, and two new tariff decisions were issued for operators that went into forced administration. In 2022, the Office issued 30 amended tariff decisions, of which 12 were issued to large water companies.

The Office approved changes to the maximum price for drinking water production and supply in eight water utilities, which contributed to an increase of the average price for drinking water production and supply by 4.39% to €1.1516/m^3 (the price calculated as weighted average of prices), mainly due to significant increase of energy prices, especially electricity, and the related rise in inflation. Price changes in the wastewater collection and treatment sector for nine water utilities were also due to significant rise of electricity prices and inflation, so that the average price for wastewater collection and treatment by public sewerage increased by 4.55 % to €1.1354/m^3 (price calculated as weighted average of prices).

Table 31 Prices for drinking water production and supply by public water supply system

Water utility company	2018 €/m³	2019 €/m³	2020 €/m³	2021 €/m³	2022 €/m³
Bratislavská vodárenská spoločnosť (BVS)	0.9359	0.9359	1.0135	1.0135	1.0387
Trnavská vodárenská spoločnosť (TTVS)	0.7286	0.7398	0.7449	0.7449	0.7847
Západoslovenská vodárenská spoločnosť (ZVS)	1.0802	1.0802	1.0802	1.0802	1.1683
Trenčianske vodárne a kanalizácie (TVK)	0.9684	0.9684	1.0293	1.0293	1.0293
Považská vodárenská spoločnosť (PVS)	0.9741	0.9741	0.9741	0.9741	0.9937
Severoslovenské vodárne a kanalizácie (SeVaK)	0.9765	1.0094	1.0094	1.0343	1.0343
Turčianska vodárenská spoločnosť (TVS)	0.7427	0.7427	0.7427	0.7978	0.7978
Oravská vodárenská spoločnosť (OVS)	1.0353	1.0353	1.0353	1.0353	1.0353
Vodárenská spoločnosť Ružomberok (VSR)	0.7460	0.7460	0.8024	0.8024	0.8024
Liptovská vodárenská spoločnosť (LVS)	0.9102	0.9102	0.9102	0.9102	0.9991
Stredoslovenská vodárenská prevádzková spoločnosť (SVPS)	1.2010	1.2010	1.2010	1.2119	1.2680
Podtatranská vodárenská prevádzková spoločnosť (PVPS)	1.0884	1.0884	1.0884	1.0884	1.0960
Východoslovenská vodárenská spoločnosť (VVS)	1.3362	1.3362	1.3530	1.4004	1.4944
Vodárne a kanalizácie mesta Komárna (KOMVaK)	0.9162	0.9162	0.9900	0.9900	0.9900

Figure 43 Evolution of prices for drinking water production and supply (€/m³)

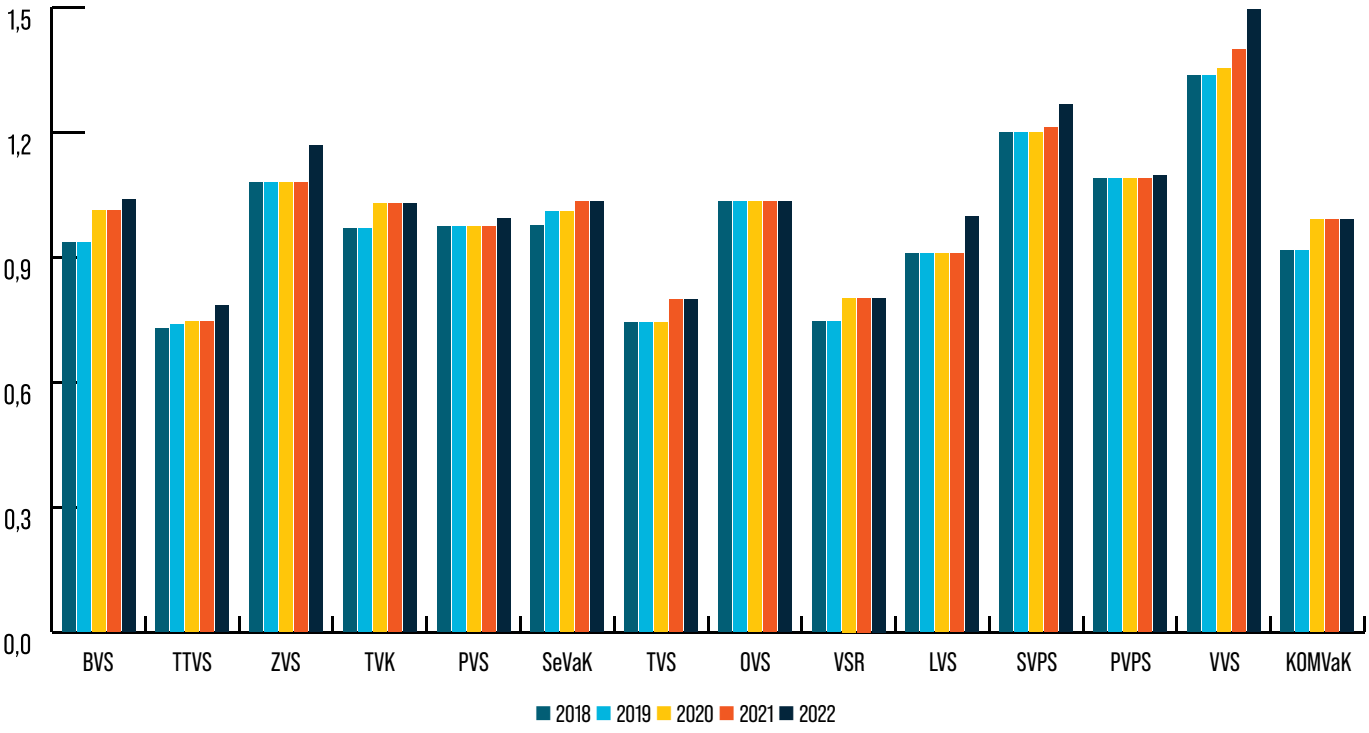
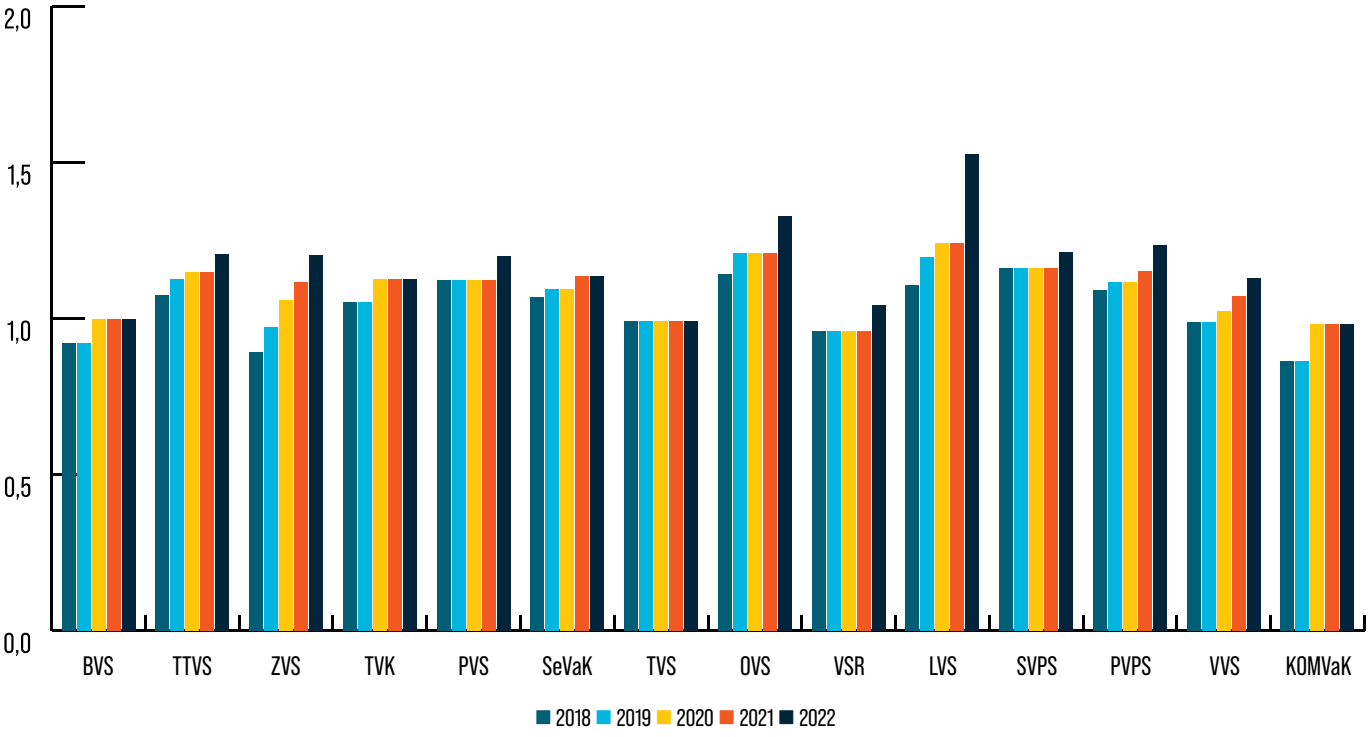


Table 32 Prices for wastewater collection and treatment by public sewerage systems

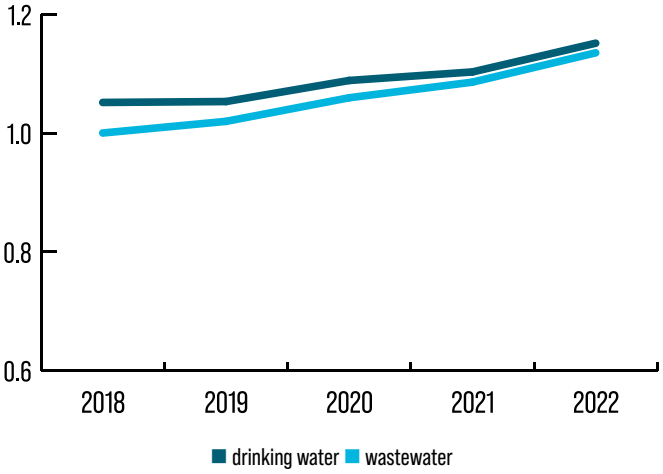
Water utility company	2018 €/m³	2019 €/m³	2020 €/m³	2021 €/m³	2022 €/m³
Bratislavská vodárenská spoločnosť(BVS)	0.9216	0.9216	0.9985	0.9985	0.9985
Trnavská vodárenská spoločnosť (TTVS)	1.0758	1.1251	1.1497	1.1497	1.2071
Západoslovenská vodárenská spoločnosť (ZVS)	0.8918	0.9721	1.0573	1.1157	1.2024
Trenčianske vodárne a kanalizácie (TVK)	0.9554	1.0509	1.1251	1.1251	1.1251
Považská vodárenská spoločnosť (PVS)	1.1235	1.1235	1.1235	1.1235	1.1993
Severoslovenské vodárne a kanalizácie (SeVaK)	1.0669	1.0947	1.0947	1.1352	1.1352
Turčianska vodárenská spoločnosť (TVS)	0.9907	0.9907	0.9907	0.9907	0.9907
Oravská vodárenská spoločnosť (OVS)	1.1416	1.2075	1.2075	1.2075	1.3271
Vodárenská spoločnosť Ružomberok (VSR)	0.9603	0.9603	0.9603	0.9603	1.0415
Liptovská vodárenská spoločnosť (LVS)	1.1068	1.1978	1.2398	1.2398	1.5262
Stredoslovenská vodárenská prevádzková spoločnosť (SVPS)	1.1615	1.1615	1.1615	1.1615	1.2122
Podtatranská vodárenská prevádzková spoločnosť (PVPS)	1.0904	1.1164	1.1164	1.1499	1.2336
Východoslovenská vodárenská spoločnosť (VVS)	0.9870	0.9870	1.0235	1.0716	1.1305
Vodárne a kanalizácie mesta Komárna (KOMVaK)	0.8643	0.8643	0.9813	0.9813	0.9813

Figure 44 Evolution of prices for wastewater collection and treatment (€/m³)



The average price for drinking water production and supply and for wastewater collection and treatment, excluding VAT, in water utilities in Slovakia reached € 2.2870/m³ and rose by 4.47 % year-on-year.

Figure 45 Evolution of the average price for drinking water production and supply and for wastewater collection and treatment (€/m³ excl. VAT)



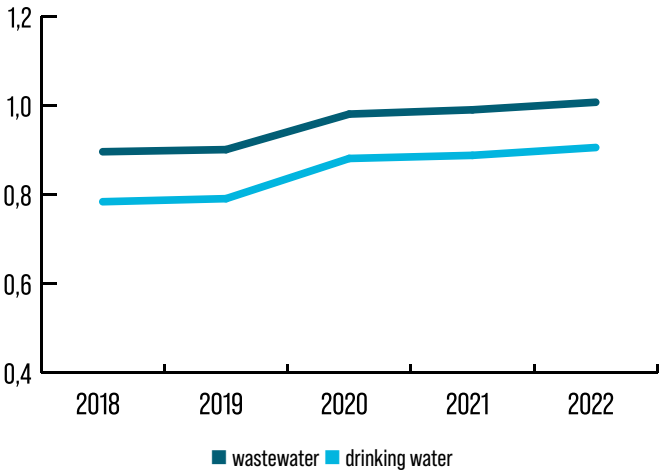
In the year under review, smaller companies and municipalities supplying drinking water or collecting and treating wastewater, mainly in villages and smaller peripheral parts of towns, submitted 37 proposals for tariff (price) changes, of which the Office changed the tariffs in 18 cases and stopped the proceedings in 19 cases. In 2022, the Office issued 12 new tariff decisions for smaller companies and municipalities, of which two related to operations under forced administration. For municipalities operating water supply or sewerage system of category III, the Office issued 19 price confirmations.

In the category of small companies and municipalities, the average price for drinking water supply increased by 2% and the average price for wastewater collection by 1.7%. These average prices are lower than those of water utility companies. In prices for drinking water supply, the increase was due to rise in the price of electricity and also the fact that both small companies and some municipalities purchase drinking water from water utility companies and therefore the growth in the water company's price will be reflected in an increase in the cost of purchasing water from these companies. The price of wastewater collection and treatment is mainly affected by the increase in electricity price.

Table 33 Evolution of average prices of small regulated entities (€/m³)

	2018	2019	2020	2021	2022
Drinking water	0.7843	0.7912	0.8815	0.8885	0.9061
Waste water	0.8966	0.9014	0.9812	0.9908	1.0078

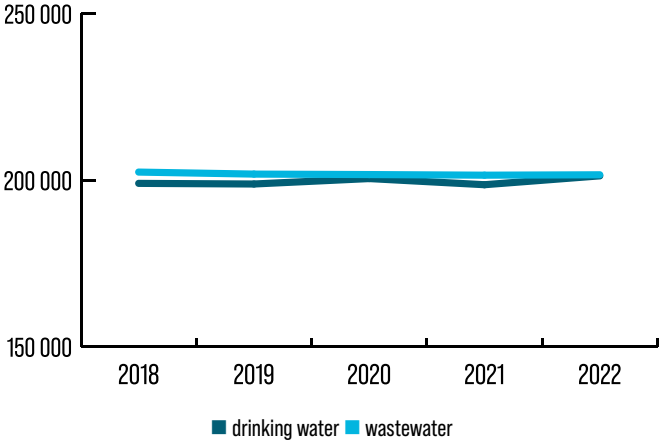
Figure 46 Evolution of prices of small regulated entities (€/m³)



Development of drinking water supply and wastewater collection

The development of drinking water supply by large water companies saw a slight growth in 2022. Compared to 2021, the volume of drinking water supplied increased to 201 262 200 m³, up 1.2%. The volume of wastewater collected and treated was almost stable since 2018, with 201 585 324 m³ in 2022.

Figure 47 Development of drinking water supply and wastewater collection in thous. m³



Investments

In large water utilities, the value of assets used for drinking water supply in 2022 shrank by 2.7% compared to the 2021 level, while the value of assets acquired from EU and state budget subsidies grew slightly, by 5 %. The total value of assets used for wastewater collection and treatment also sank by 2.2%, but the value of assets built with subsidies increased by 6.2%. These figures indicate a low level of investment in the construction and renewal of public water supply and public sewerage systems in 2022.

Figure 48 Development of water sector assets and subsidies - public water supply (in thous. of EUR)

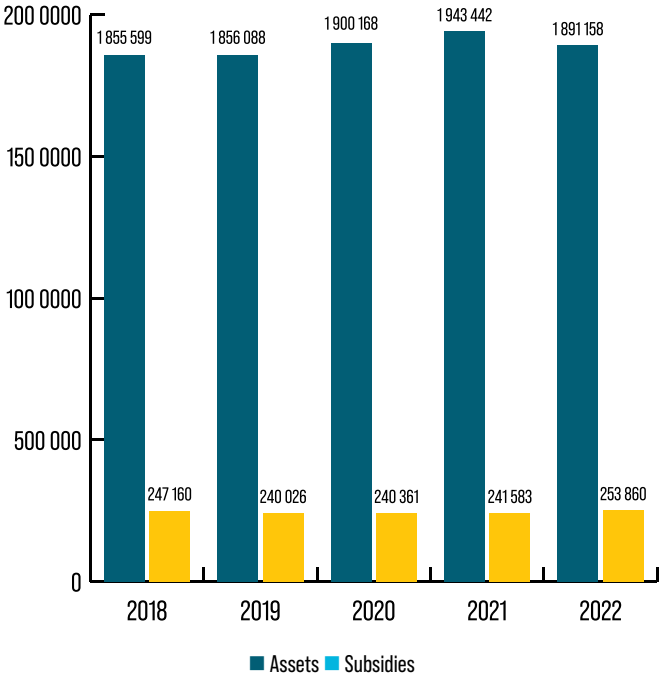


Figure 49 Development of water sector assets and subsidies - public sewerage and wastewater treatment plants (in thous. of EUR)

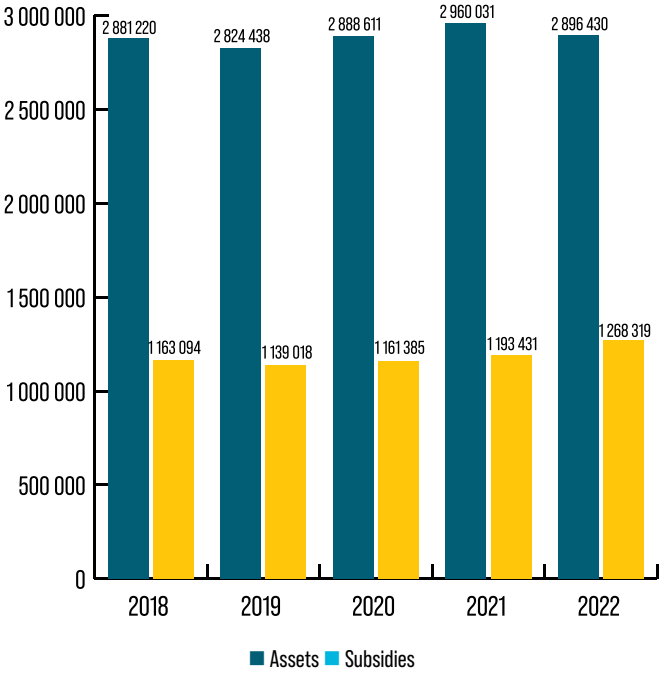


Table 34 Development of indicators for regulated activities in large water utility companies

Drinking water	2018	2019	2020	2021	2022
Revenues from regulated activities in thous. €	208 113	209 210	212 753	215 892	223 701
Eligible costs in thous. €	202 859	204 659	207 746	210 760	232 898
Profit/loss in thous. €	5 254	4 551	5 007	5 132	-9 197
Assets in thous. €	1 855 599	1 856 088	1 900 168	1 943 442	1 891 158
from subsidies in thous. €	247 160	240 026	240 361	241 583	253 860
Repairs of assets in thous. €	31 210	32 344	31 057	27 423	28 318
Volume of water thous. m^3	199 006	198 816	200 447	198 602	201 262
Assets capacity utilisation	96%	94%	94%	94%	96%

Waste water	2018	2019	2020	2021	2022
Revenues from regulated activities in thous. €	199 202	202 194	207 268	216 546	225 900
Eligible costs in thous. €	210 658	209 751	210 101	217 936	237 931
Profit/loss in thous. €	-11 456	-7 557	-2 833	-1 390	-12 031
Assets in thous. €	2 881 220	2 824 438	2 888 611	2 960 031	2 896 430
from subsidies in thous. €	1 163 094	1 139 018	1 161 385	1 193 431	1 268 319
Repairs of assets in thous. €	21 531	20 641	19 976	19 801	21 520
Volume of water thous. m^3	202 394	201 791	201 652	201 464	201 585
Assets capacity utilisation	84%	84%	85%	91%	88%

Surface and energy water abstraction and the use of hydropower potential

Regulated activities in the field of surface water utilisation are surface water abstraction, abstraction of energy water from watercourses and exploitation of the watercourses' hydropower potential.

These regulated activities are carried out by the state-appointed company administering the watercourses - SLOVENSKÝ VODOHOSPODÁRSKY PODNIK, with a monopoly position in the Slovak Republic.

In the year under review, the price for surface water abstraction from watercourses, the price for energy water abstraction from watercourses and the average price for the use of hydropower potential did not change compared to 2021.

Table 35 Evolution of prices for regulated activities in the field of surface water utilisation in EUR

	2018	2019	2020	2021	2022
Price for surface water abstraction per m^3	0.1120	0.1250	0.1250	0.1250	0.1250
Average price for the use of hydropower potential per 1 MWh	13.8796	15.9615	15.9615	15.9615	15.9615
Price for energy water abstraction per thous. m^3	0.1691	0.1691	0.1691	0.1691	0.1691

Figure 50 Price development for water abstraction in EUR

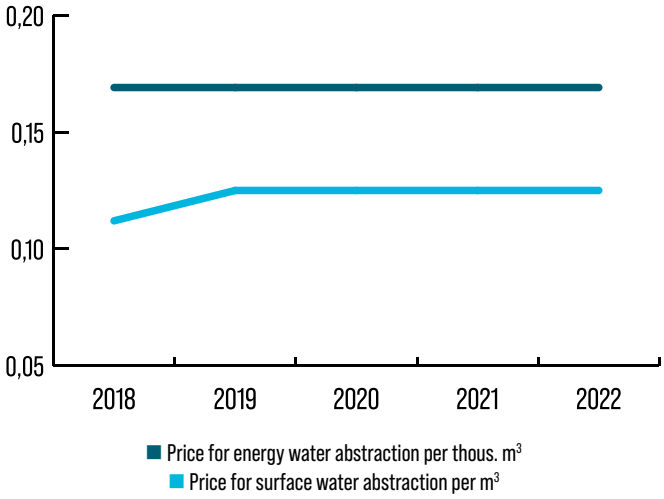
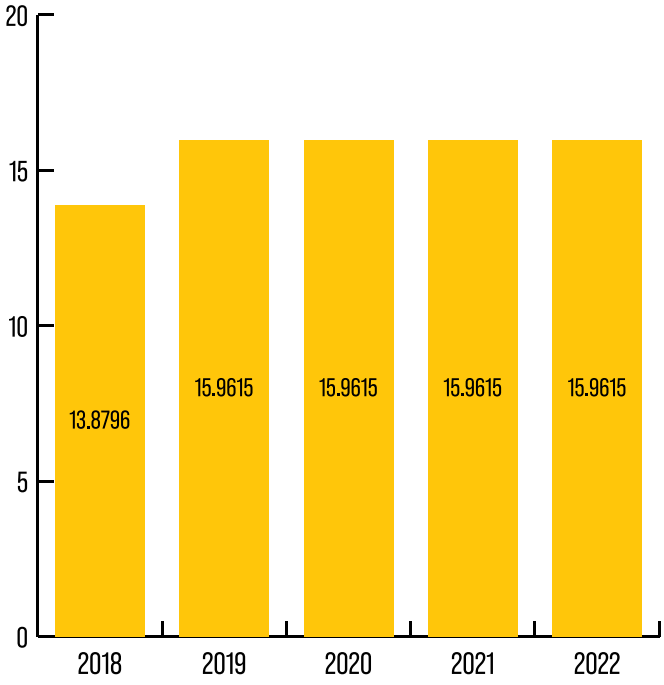
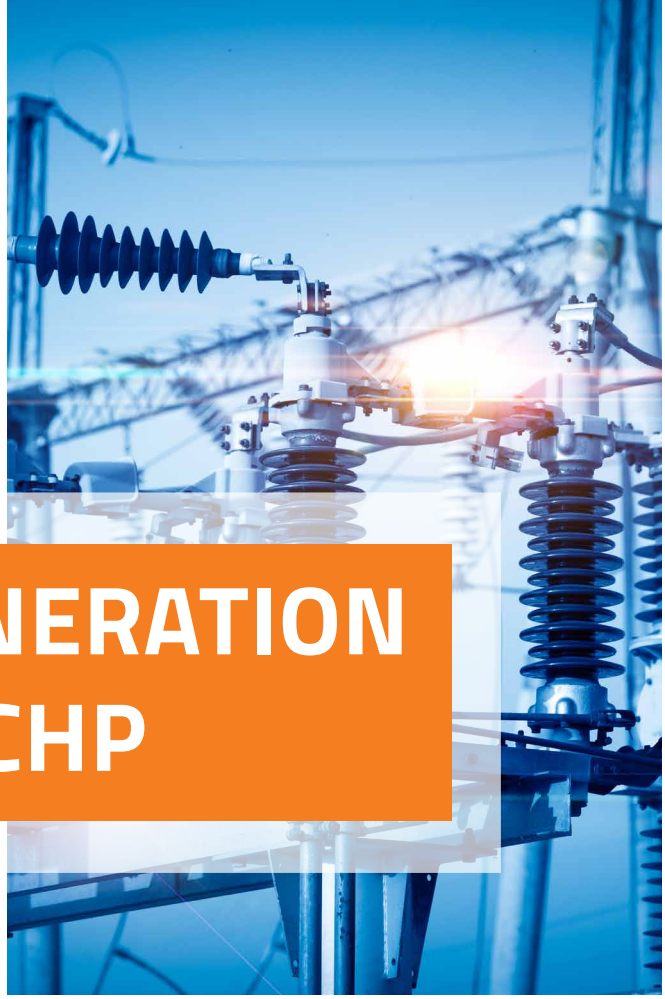


Figure 51 Average price for the utilisation of hydropower potential (EUR/MWh)



05.

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 improving 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 favouring 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 additional 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 country's hydropower and geothermal potential.

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 adopted 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 reconstruction in CHP plants. It also issued 47 decisions due to the termination of activity or a change in the person of the electricity producer.

Table 36 Overview of issued tariff decisions RES and CHP

Decisions issued for RES installations	162
Decisions issued for CHP installations	100
Tariff decisions on termination	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 37 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. heating 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. heating 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

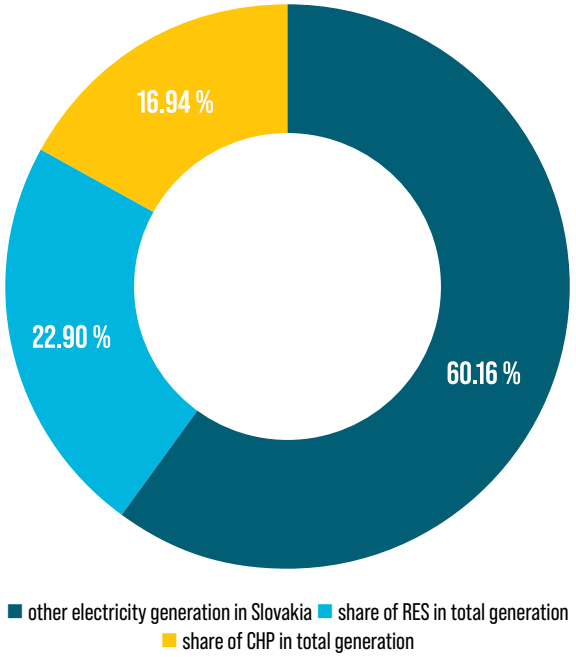
Despite significant fluctuations on the world energy markets in 2022, OKTE successfully performed not only the function of the RES/CHP support settlement, but also, in cooperation with the statutory buyer, ensured the operation and administration of the feed-in-tariff support for all producers with the entitlement to support through electricity 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 generated from RES and CHP in the total volume of electricity generation

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 tariff-supported 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 stipulated by Act No 309/2009 Coll.

The notable increase in the number of RES sources in 2022 was also caused by the installation of local sources, which, in the year under review, increased in comparison with recent years the most. 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 52 Share of electricity produced from RES and CHP in total electricity generation of the country



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

Figure 53 Share of individual RES technologies in total RES generation

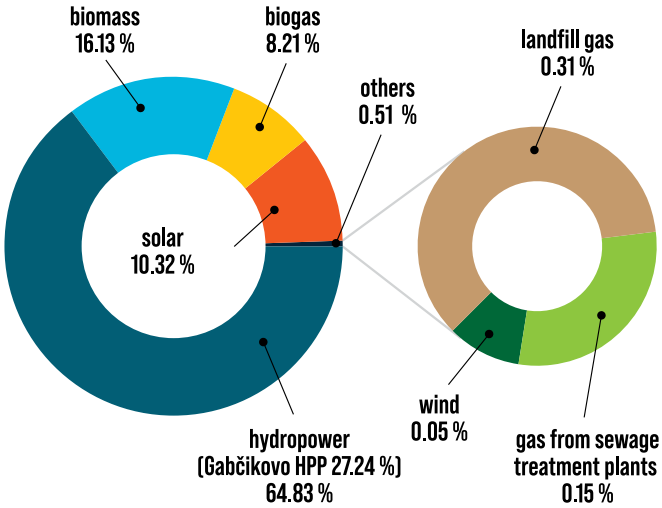
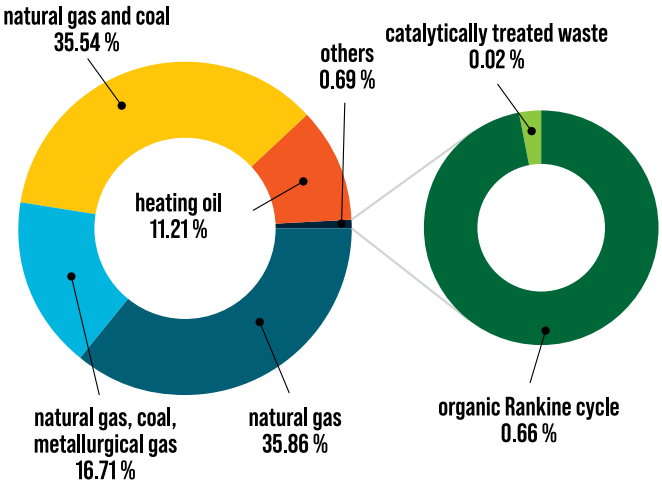


Figure 54 Share of individual CHP technologies in total CHP generation



Impact of the war in Ukraine on electricity generation from RES

Volatility of electricity prices as well as their sustained and extreme rise due to the war in Ukraine in 2022 caused the pressure on increasing the system operation tariff (TPS) to ease. 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, thus having significantly contributed to mitigation of the increase of final electricity prices for Slovak households and businesses in 2022, despite the high market prices.

06.
LEGAL AGENDA

The year 2022 was particularly dynamic in terms of changes to primary and secondary legislation governing the regulation of network industries. The changes occurred as a result of the transposition of European energy legislation (CEP) as well as the long-term unfavourable situation on the European energy market threatening the affordability of electricity and gas supplies due to extreme volatility of electricity and gas market prices.

In 2022 as well as in 2021, the Office, in cooperation with the Ministry of Economy, actively engaged in the transposition of directives and implementation of regulations of the Clean Energy Package resulting in an extensive amendment of Act No 251/2012 Coll. and Act No 250/2012 Coll. The goal was to transpose into legislation the measures of the Clean Energy Package, which fundamentally transforms the energy environment within the EU with a view to meeting strategic objectives of the climate and energy policy by 2030. The amendment of Act No 251/2012 Coll. and Act No 250/2012 Coll. provided, inter alia, for:

- legal regulation of new electricity and gas market participants, such as active customer, energy community, aggregator or flexibility provider,
- legislation on electricity sharing and storage,
- partial deregulation of retail electricity and gas prices and related changes in consumer protection,
- conditions for the deployment of smart metering systems at supply points,
- changing the legal framework for the procurement of ancillary services,
- adjusting data flows associated with new processes,
- expanding the groups of vulnerable consumers eligible for regulated electricity and gas prices,
- enhancing the Office's competences and tasks, strengthening cooperation between the Office and the regulatory authorities of other Member States,
- expanding the scope of the Office's non-tariff (technical) regulation as well as the Office's ability to resolve and adjudicate disputes.

The implementation of the EU legislation also resulted in the amendment of Act No 309/2009 Coll., especially in operation of local sources, but also, for example, in the amendment of Act No 455/1991 Coll. on trade business, which takes into account the newly adopted legal regulation of new activities in the energy sector (e.g. aggregator).

Act No 251/2012 Coll. and Act No 250/2012 Coll. were amended several times in the course of 2022, also on the basis of the Office's suggestions, in order to provide for effective instruments to mitigate the increase of regulated energy prices and to ensure sustainable impacts on consumers for the coming period, including the new institute of crisis regulation, the addition of obligations in the general economic interest and related cost compensation, as well as the introduction of the possibility of setting a cap on the price increase in the heating sector by a Government regulation.

A significant change in the legislation governing regulation of network industries was also an amendment to Act No 309/2009 Coll. in connection with the transposition of the EU Directive on the promotion of the use of energy from renewable sources and the implementation of the Clean Energy Package, which, among other things, modified legal definitions and conditions for the support of electricity generation and established a legal framework for the methodology and conditions for the support of renewable gas and the issuance of guarantees of origin for gas from RES. The major amendment to Act No 309/2009 Coll. also amended Act No 250/2012 Coll. and Act No 657/2004 Coll.

The Office has, among other things, the power to issue generally binding legal regulations, which take the form of decrees, conferred by Act No 250/2012 Coll. During 2022, the Office monitored developments on the electricity and gas markets, assessing the impact of both the current and forthcoming primary and secondary legislation on market participants, protection of consumers and protection of legitimate interests of regulated entities.

In the framework of its own legislative activity, the Office was mainly engaged in issuing price (tariff) decrees, which responded to changes in primary legislation, to the adopted new regulatory policy for the 6th regulatory period, as well as to the unfavourably developing situation on the European energy markets.

On the basis of the empowering provisions of Act No 250/2012 Coll., Act No 251/2012 Coll. and Act No 309/2009 Coll., the Office drafted, submitted to the legislative process and subsequently issued the following decrees in the Collection of Laws of the Slovak Republic in 2022:

Tariff decrees

1. Decree of the Office for Regulation of Network Industries No 88/2022 Coll., amending and supplementing Decree of the Office for Regulation of Network Industries No 18/2017 Coll., establishing price regulation in the electricity sector and certain conditions for the performance of regulated activities in the electricity sector, as amended,

2. Decree of the Office for Regulation of Network Industries No 233/2022 Coll., amending and supplementing Decree of the Office for Regulation of Network Industries No 18/2017 Coll., establishing price regulation in the electricity sector and certain conditions for the performance of regulated activities in the electricity sector, as amended,

3. Decree of the Office for Regulation of Network Industries No 312/2022 Coll., establishing price regulation in the thermal energy sector,

4. Decree of the Office for Regulation of Network Industries No 323/2022 Coll., establishing price regulation of production, distribution and supply of drinking water by public water supply and wastewater disposal and treatment by public sewerage and certain conditions for the performance of regulated activities in the water sector,

5. Decree of the Office for Regulation of Network Industries No 445/2022 Coll., establishing price regulation of surface water and energy water abstraction from watercourses and the use of hydro-energy potential of watercourses,

6. Decree of the Office for Regulation of Network Industries No 450/2022 Coll., establishing price regulation of gas supply,

7. Decree of the Office for Regulation of Network Industries No 451/2022 Coll., establishing price regulation of selected regulated activities in the gas industry and certain conditions for the performance of selected regulated activities in the gas industry.

Market rules

1. Decree of the Office for Regulation of Network Industries No 318/2022 Coll., amending Decree of the Office for Regulation of Network Industries No 24/2013 Coll., laying down rules for the functioning of the internal electricity market and rules for the functioning of the internal market with gas, as amended.

Following a change in primary legislation related to the implementation of EU legislation as well as taking into account the current situation on the electricity and gas markets, the Office has been preparing a new Decree establishing rules for the functioning of the internal electricity market and a new Decree establishing rules for the functioning of the internal gas market in 2022 in close cooperation with market participants, which will be submitted to the legislative process in 2023.

07.

LICENSES, CERTIFICATES, NOTIFICATIONS

Licensing

The Office grants energy business licenses pursuant to Act No 251/2012 Coll. and Act No 657/2004 Coll.

Energy licenses - Act No 251/2012 Coll.

In 2022, the Office issued a total of 208 decisions on the granting, amendment or revocation of energy licenses, an increase of almost 50% compared to the previous year (in 2021, the Office issued 140 decisions).

In sum, the Office:

- granted 51 new licenses for the energy sector. Of these, 40 were in electricity, 10 in gas and one in fuel and oil sectors,
- revoked 27 energy licenses. Of these, 19 were in electricity, six in gas and two in fuel and oil,
- issued 130 amendments to granted licenses, most of which were due to a change in in the scope of technical installations, a change in the authorised representative or in the identification details of the license holder.

In addition, the Office terminated a total of 11 applications for the granting, amendment or revocation of licenses in 2022. The discontinued proceedings were due to withdrawal of the application, non-payment of the administrative fee or failure to comply with the conditions for the granting, amendment or revocation of the license.

Table 38 Overview of applications submitted and decisions issued as of 31 December 2022

	new licenses	revoked licenses	license amendments	suspended proceedings	terminated proceedings
electricity	40	19	102	48	8
gas	10	6	22	7	2
fuel and oil	1	2	6	3	1
Total	51	27	130	58	11

Table 39 Overview of valid electricity licenses as of 31 December 2022

generation	2
transmission	1
distribution	12
generation and supply	101
generation, distribution and supply	24
generation, supply and aggregation	1
distribution and supply	110
supply	182
supply and storage	1
the short-term electricity market operation	1
activities of the electricity buyer	1
Total	436

Overview of electricity licenses (overlapping activities)	
generation	128
distribution	146
supply	419

Table 40 Overview of valid gas licenses as of 31 December 2022

production	1
production and transmission	1
transmission	1
distribution	4
distribution and supply	42
storage	2
supply	149
Total	200

Overview of gas licenses (overlapping activities)	
distribution	46
supply	191

Table 41 Overview of valid fuel and oil licenses as of 31 December 2022

fuel transport pipeline operation	1
operation of pressure vessel filling equipment	17
crude oil transport pipeline operation	2
operation of pressure vessel filling equipment and operation of liquefied gaseous hydrocarbon distribution equipment	1
Total	21

Disctrict heating licences

In 2022, the Office issued a total of 141 decisions on the granting, amendment or revocation of a district heating license, up almost 20% year-on-year (in 2021 the Office issued 119 decisions).

In sum, the Office:

- granted eight new licenses (seven licenses for heat generation and distribution and one license for heat generation only),
- revoked 18 heating licenses, 17 of them in the scope of heat generation, heat distribution, one in the scope of business of heat distribution,
- issued 115 changes in the issued licenses in the thermal energy sector, most of which were due to a change in the scope of technical equipment for heat production and heat distribution, or a change in the responsible representative or identification data of the license holder,
- terminated one license amendment proceeding because the applicant withdrew their application.

Table 42 Overview of issued decisions and valid licenses in the heating sector as of 31 December 2022

Overview of decisions issued				
new licenses	revoked licenses	license amendments	suspended proceedings	terminated proceedings
8	18	115	39	1

Overview of valid licenses	
heat generation and distribution	309
heat generation	13
heat distribution	11
Total	333

Confirmations/certificates

The Office issues confirmations (certificates) of compliance with the notification obligation pursuant to Act No 251/2012 Coll. and certificates of electricity generation from a local source pursuant to Act No 309/2009 Coll.

Certificates of compliance with the notification obligation pursuant to Act No 251/2012 Coll.

In the year under review, the Office issued a total of 248 certificates of compliance with the notification obligation, of which:

- 236 for electricity generation and supply by facilities with total installed capacity up to 1 MW,
- one for biogas production and supply,
- six for the sale of compressed natural gas intended for the propulsion of motor vehicles,
- five for the sale of liquefied gaseous hydrocarbon intended for the propulsion of motor vehicles, including the filling of motor vehicle tanks with liquefied gaseous hydrocarbon intended for the propulsion of motor vehicles excluding the filling of pressure vessels.

Of the total number of certificates of compliance with the notification obligation issued in 2022:

- 16 certificates were for the generation and supply of electricity in small hydro power plants (of which two for a change of ownership, three for a new installation, one for correction of the address of the installation and eight for changes),
- 159 certificates for the production and supply of electricity in photovoltaic installations (of which 36 for new installations, 16 for new entities - the installations were previously in certificates for other entities, ownership changed, 76 for changes in the certificate, seven repairs, 17 ceased operations),
- 46 certificates for the generation and supply of electricity in biogas plants and wastewater treatment plants (of which one new, 12 changes, 12 for new entities - the facilities were previously in certificates for other entities, nine ceased operations),
- 15 certificates for electricity generation and supply in cogeneration units (of which three for new installations, two for ceased operations, one for a new entity - the installation was previously in certificate for another entity and eight changes).

Overview of certificates issued pursuant to Section (§) 6(5) of Act No 251/2012 Coll.

Table 43 Electricity generation and supply by installations with total installed capacity up to 1 MW

division of activities pursuant to § 10 of Decree No 18/2017 Coll. establishing tariff regulation in electricity and certain conditions for the performance of regulated activities in electricity, as amended	number of certificates issued	number of new certificates (new installations)	number of new certificates (installations taken over from other entities)	number of certificates with a change (registered office, statutory body, etc.)/correction (installed capacity, address, etc.)	number of terminated certificates (installations taken over by other entities)	number of terminated certificates
paragraph 1(a) - from hydropower	16	3	2	9	2	0
paragraph 1(b) - from solar	159	36	16	74	16	17
paragraph 1(g) - from incineration	46	1	12	12	12	9
paragraph 2(a) - in a combined cycle combustion turbine	15	3	1	8	1	2
TOTAL:	236	43	31	103	31	28

Table 44 Biogas production and supply

number of certificates issued	number of new certificates (new installations)	number of new certificates (installations taken over from other entities)	number of certificates with a change (registered office, statutory body, etc.)/ correction (installed capacity, address, etc.)	number of terminated certificates (facilities taken over by other entities)	number of terminated certificates
1	1	0	0	0	0

Table 45 Sales of compressed natural gas intended for the propulsion of motor vehicles

number of certificates issued	number of new certificates (new installations)	number of new certificates (installations taken over from other entities)	number of certificates with a change (registered office, statutory body, etc.)/ correction (installed capacity, address, etc.)	number of terminated certificates (facilities taken over by other entities)	number of terminated certificates
6	5	0	1	0	0

Table 46 Sale of liquefied gaseous hydrocarbon gas intended for the propulsion of motor vehicles, including the filling of motor vehicle tanks with liquefied gaseous hydrocarbon gas intended for the propulsion of motor vehicles, excluding filling of pressure vessels

number of certificates issued	number of new certificates (new installations)	number of new certificates (installations taken over from other entities)	number of certificates with a change (registered office, statutory body, etc.)/ correction (installed capacity, address, etc.)	number of terminated certificates (facilities taken over by other entities)	number of terminated certificates
5	5	0	0	0	0

Certificates of electricity generation in a local source according to Act No 309/2009 Coll.

In 2019, the Office started to issue certificates of electricity generation in a local source pursuant to Section 4b(7) of Act No 309/2009 Coll.

According to Act No 309/2009 Coll., a local source means an installation for the generation of electricity from a renewable energy source generating electricity to cover the consumption of a customer offtake (metering) point identical to the supply point of that electricity generation installation and whose total installed capacity does not exceed the maximum reserved capacity of such an offtake point. The institute of the local source which is based on energy generation and consumption at a single location is not considered as energy business.

As of 31 December 2022, the Office issued a total of 322 certificates for the generation of electricity in the local source.

Table 47 No. of certificates (local source) issued as of 31 December 2022

year	issued	terminated
2019	10	
2020	45	
2021	68	
2022	200	1

The enormous increase in the number of issued certificates on electricity generation in the local source in 2022 was caused by the amendment of Act No 309/2009 Coll. with effect from 1 April 2022, when according to § 4b paragraph 12 an electricity producer in the local source may, within the scope of the local source's maximum reserved capacity, supply to the system the electricity generated in the local source, which is not consumed at an offtake point identical to the supply point of the local source. If the technical requirements of connection of the local source to the distribution system do not allow to contractually agree the maximum reserved capacity of the local source in the amount of the local source's total installed capacity, the maximum reserved capacity of the local source shall be agreed in a lower value allowed by the technical requirements of connection of the local source to the distribution system.

Prior to this amendment to Act No 309/2009 Coll., a producer of electricity in a local source with electricity supply license could sell the electricity produced in a local source that is not consumed at an offtake (consumption) point identical to the supply point of the local source. The maximum reserved capacity of the local source could not exceed 10 % of its total installed capacity.

Notifications

Notifications pursuant to Act No 251/2012 Coll.

Entities (persons) supplying gas or electricity at purchase prices without any additional price increase or operating a publicly accessible charging station are obliged, pursuant to Section 4(9) of Act No 251/2012 Coll., to notify this fact within 30 days to the Office.

In 2022, the Office received a total of 25 notifications in the electricity sector and seven notifications in the gas sector. The Office received 43 notifications of the start of operation of publicly accessible charging stations.

Until 30 September 2022, when the amendment to Act 251/2012 Coll. entered into force, according to Section 4 (4) of the Act, electricity generation in a small source by a producer who does not apply for feed-in-tariff pursuant to a special regulation and who is also a household electricity consumer and whose annual electricity generation does not exceed 1.5 times the 12-month actual consumption of the customer's metering point calculated on the basis of the average daily consumption according to the household customer's last billing settlement cycle shall not be considered as energy business. For new consumption points the 12-month actual electricity consumption shall be replaced by the forecast annual electricity consumption indicated in the building permit.

With effect from 1 October 2022, pursuant to Section 4(4) of Act No 251/2012 Coll., electricity generation in an installation with installed capacity of up to 11 kW, unless the producer applies for feed-in-tariff pursuant to a special regulation, and electricity storage with installed capacity of up to 11 kW, shall not be considered as energy business.

Also, with effect from 1 October 2022, the notification obligation pursuant to Section 4(9) of Act No 251/2012 Coll. does not apply to sources with installed capacity of up to 11 kW.

Throughout 2022, entities (persons) submitted to the Office information on the start-up of a small source or electricity generation installation with installed capacity of up to 11 kW in the total number of 481 notifications.

Notifications pursuant to Act No 657/2004 Coll.

Pursuant to Section 11(1) of Act No 657/2004 Coll., a legal person generating heat or distributing heat pursuant to Section 1(3)(b) and a natural person or legal person carrying out an activity pursuant to Section 1(3)(c) and (d) are obliged to notify the Office of this fact no later than 30 days from the start of pursuing these activities; the notification obligation shall not apply to special premises and facilities under the jurisdiction and use of the Ministry of Defence of the Slovak Republic, the Armed Forces of the Slovak Republic, the Ministry of the Interior of the Slovak Republic, the Slovak Information Service and the Prison and Judicial Guard Corps.

In 2022, 74 notifications were received under Section 11(1) of Act No 657/2004 Coll.

Certificates of registration

On the basis of applications from regulated entities, the Office issues, pursuant to Section 23 of Act No 250/2012 Coll., certificates of registration for the production, distribution and supply of drinking water by public water supply system and the collection and treatment of wastewater by public sewerage.

Table 48 Overview of valid registration certificates as of 31 December 2022

water utility companies	14
city	1
municipalities	40
smaller companies operating public water supply or public sewerage systems of category I and II	86
small towns and municipalities operating a public water supply or public sewerage system of category III	539
Total	680

08. INSPECTIONS

In the year under review, the Office continued to carry out inspections in regulated entities based on its competence arising in particular from Act No 250/2012 Coll. and Act No 251/2012 Coll. The reasons for these on-site inspections were protection of vulnerable customers, supervision of the functioning of the market in regulated commodities, as well as compliance with legal regulations in regulation of network industries, in particular the Office's decrees. The Office also focused on administrative checks of the documents available to us from our own sources. On the basis of these, the Office was subsequently able to start administrative proceedings on its own initiative.

When carrying out inspections, the Office also focused on the protection of consumer rights as a more vulnerable party in customer-supplier relations, in particular on compliance with the provisions of the commercial terms and conditions of electricity and gas suppliers.

In 2022, an organisational change of the Office was made, on the basis of which, in addition to the Inspection Department, the RES and CHP Department started to perform inspections of compliance with Act No 250/2012 Coll., Act No 251/2012 Coll., generally binding legal regulations and compliance with the Office's decisions, in the area of RES and CHP.

Overview of inspection findings

In the year under review, the Office carried out on-site inspections in 45 regulated entities, of which 39 were carried out by the Inspection Department and six by the RES and CHP Department. The on-site inspections were carried out in nine entities on the basis of received submissions, and in 36 entities, in line with the inspection activity plan.

The Office concluded on-site inspections in 29 regulated entities by drawing up a protocol on the inspection result, i.e. with a breach of the applicable legislation found. Fifteen inspections were concluded by making a record on the inspection result, i.e. without a breach of the applicable legislation and one inspection was concluded by an official record without discussing the protocol, as the regulated entity ceased its business activity during the inspection, cancelled its trade licence, as a result of which the license to carry out the regulated activity ceased to be valid, and in the extract from the business register, the role of the company's managing director or statutory representative was cancelled, as a result of which there was no authorised person representing the regulated entity.

Out of 15 inspections, which were completed by making a record of the inspection result, six inspections were performed by the RES and CHP Department, of which one in line with the inspection plan of the RES and CHP Department and five inspections were done on the basis of submissions received from OKTE with focus on verifying the truthfulness of the data contained in the documents to the certificates of origin of electricity in island plants in order to determine the eligibility for the feed-in-tariff for 2021.

The inspections carried out by the Inspection Department focused on compliance with applicable legislation in the performance of regulated activities in the network industries for the period 2018-2022. In this context, the inspections focused on compliance with the scope of tariff regulation, non-tariff regulation and quality regulation approved by the Office.

In 2022, 22 on-site inspections were carried out in entities carrying out activities in the electricity sector, six of which were in the RES and CHP sector, of which 32 breaches of Act No 250/2012 Coll. and Act No 251/2012 Coll. were identified in 13 of them. In gas, the Office carried out on-site inspections in eight entities, of which nine breaches of Act No 250/2012 Coll. and Act No 251/2012 Coll. were found in six of them. The most frequent breaches in the electricity and gas sector included non-compliance with the approved commercial terms and conditions of electricity and gas supply, charging prices without a tariff decision of the Office or in contradiction with a tariff decision of the Office, failure to provide accurate data in the submitted evaluation of quality standards, errors in billing settlement invoices (e.g. missing mandatory legal information on the share of RES, information on quality standards, etc.).

In the heating sector, the Office carried out on-site inspections in 24 entities, one of which included also an inspection of RES and CHP area and of which in 13 entities 23 breaches of Act No 250/2012 Coll. and Act No 657/2004 Coll. were found. The most frequent offence in the heating sector was the failure of a heat supplier to settle with its customers unjustified costs included in the variable or fixed component of the maximum heat price, thus withholding the heat consumers' funds until the supplier complied with the Office's order for settlement.

In the water sector, the Office carried out on-site inspections in five entities and found seven infringements of Act No 250/2012 Coll. in four entities. In water, the most frequent offences were erroneous data in the required and submitted tables and incorrect (in contravention of a tariff decision) charging of the price for water supply and distribution and for wastewater treatment.

In addition to carrying out on-site inspections in regulated entities, the Office also found breaches of the provisions of Act No 250/2012 Coll. and Act No 251/2012 Coll. directly from its off-site activities. As a result, the Office imposed fines on five entities in the total amount of 4 800 EUR. In one case it was an administrative proceeding for breach of provisions of Section 29(1)(j) of Act No 250/2012 Coll., two cases were administrative proceedings for breach of provisions of Section 29(1)(o) of Act No 250/2012 Coll., one case was an administrative proceeding for breach of provisions of Section 4(7) of Act No 251/2012 Coll. and one case was an administrative proceeding for breach of provisions of Section 6(1) of Act No 251/2012 Coll.

The Inspection Department also received 44 submissions/complaints from natural and legal persons, five of which were included in the inspection plan and 15 of which were used as the basis for administrative proceedings.

Breaches found

The overview shows the number of individual types of breaches of Act No 250/2012 Coll., Act No 251/2012 Coll. and Act No 657/2004 Coll., found by the Inspection Department during the performance of on-site and off-site inspections:

Table 49 Number of individual types of breaches of Act No 250/2012 Coll., Act No 251/2012 Coll. and Act No 657/2004 Coll.

BREACH FOUND		SECTOR *				TOTAL	
		E	G	DH	W		
§ 29 (1) (b) of Act No 250/2012 Coll.	failure to carry out regulated activity in accordance with a final decision or confirmation of the Office and failure to comply with tariff regulation pursuant to a generally binding regulation issued by the Office	16	3	0	1	20	61
§ 29 (1) (c) of Act No 250/2012 Coll.	failure to settle heat generation, distribution and supply costs which are not considered to be eligible, within the time limit and in the manner determined by the Office	0	0	16	0	16	
§ 29 (1) (k) of Act No 250/2012 Coll. (or § 29 (1) (j) of Act No 250/2012 Coll. as amended by Act No 256/2022 Coll.)	failure to provide the Office, free of charge, with complete and accurate data, documents, and any information necessary for the purposes under this Act and for the exercise of the Office's powers in scope, manner and within time limits determined by the Office	2	0	3	4	9	
§ 29 (1) (o) of Act No 250/2012 Coll.	failure to comply with market rules	5	1	0	0	6	
§ 29 (1) (a) of Act No 250/2012 Coll.	failure to carry out regulated activity on the basis of and within the scope of a license, confirmation of compliance with the notification obligation or registration confirmation	1	0	2	0	3	
§ 22 (5) of Act No 250/2012 Coll.	failure to make a compensation payment to the consumer due to non-compliance with quality standards in the amount and in the manner set in accordance with URSO decree	1	1	0	0	2	
§ 34 (2) (b) of Act No 250/2012 Coll.	failure to provide required assistance corresponding to the powers of the Office's staff in carrying out an inspection pursuant to § 33(1)(a) and (b)	0	0	1	1	2	
§ 15 (6) of Act No 250/2012 Coll.	failure to submit to the Office for approval a proposal for amendment to the grid code, the wording of which takes into account the actual scope of the regulated activity and the extent of changes resulting from generally binding legislation	1	0	0	0	1	
§ 29 (1) (j) of Act No 250/2012 Coll.	failure to notify the Office by the end of February of a calendar year of having discontinued a regulated activity, specified in the license or confirmation of compliance with the notification obligation, in the previous year	1	0	0	0	1	
§ 34 (2) (e) of Act No 250/2012 Coll.	failure to attend the meeting to get acquainted with the inspection finding protocol within the time limit set by the Office and failure to notify the Office of serious reasons for not being able to attend the meeting for the acquaintance with the protocol	0	0	0	1	1	
§ 4 (7) of Act No 251/2012 Coll.	failure to comply with the notification obligation within 30 days of discontinuing business in the energy sector	3	3	0	0	6	15
§ 17 (12) of Act No 251/2012 Coll.	failure to deliver the final billing of payments for electricity or gas supply to household electricity or gas consumer no later than four weeks after switching the supplier	2	2	0	0	4	
§ 6 (1) of Act No 251/2012 Coll.	conducting business in the energy sector without or in breach of a license or a confirmation of compliance with the notification obligation	4	0	0	0	4	
§ 34 (3) of Act No 251/2012 Coll.	failure to comply with the obligation to provide end electricity consumers with required information pursuant to § 34(2)(c), (d) and (h) of Act 251/2012, on the electricity supply bill or in the content included in it or in the promotional materials disseminated to end electricity consumers	1	0	0	0	1	
§ 5 (1) of Act No 657/2004 Coll.	conducting business in the heating sector without a license or in breach of it	0	0	1	0	1	1
TOTAL		37	10	23	7	77	

* LEGEND E - electricity
G - gas
DH - district heating
W - water

Remedial measures imposed

Pursuant to Section 9(1)(e) of Act No 250/2012 Coll., the Office imposes measures to eliminate and remedy the shortcomings following the detection of breaches of applicable legislation. In 2022, the Office imposed 10 remedial measures during inspections, including nine measures in the heating sector and one measure in the gas sector.

The Office imposed nine remedial measures on six regulated entities. In them it ordered the reimbursement to heat consumers of funds representing the difference between the charged price and the price that should have been charged according to applicable regulations, in the total amount of 112 620.54 EUR, of which:

- in the variable component of the maximum heat price 78 787.49 EUR,
- in the fixed component of the maximum heat price 33 833.05 EUR.

Additionally, in one of these regulated entities the Office imposed also one measure in gas supply, namely to fulfil the notification obligation pursuant to Section 4(7) of Act No 251/2012 Coll.

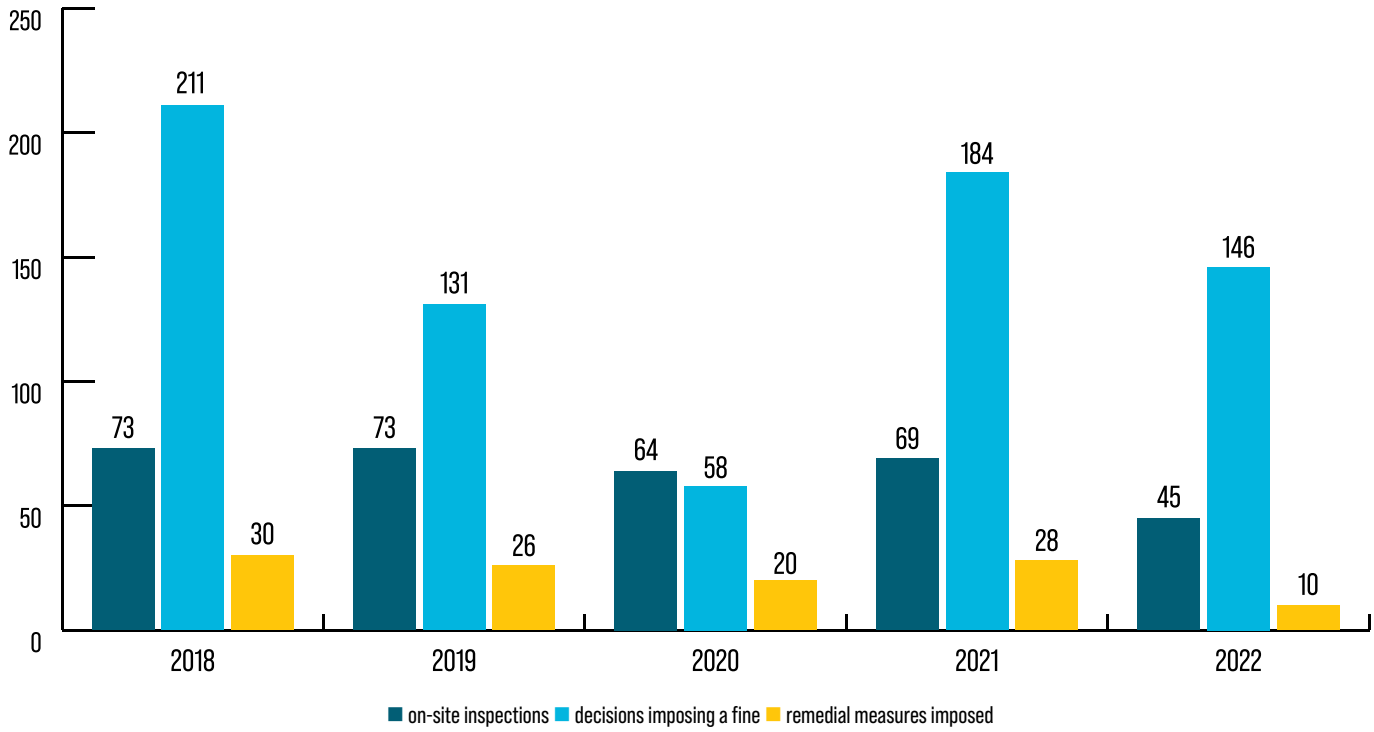
Table 50 Overview of administrative proceedings

		DECISIONS ADOPTED	
		QUANTITY	FINE (€)
I. ADMINISTRATIVE PROCEEDINGS BASED ON ON-SITE INSPECTION FINDINGS		34	189 100.00
II. ADMINISTRATIVE PROCEEDINGS BASED ON OFF-SITE INSPECTION FINDINGS	failure to notify the Office by the end of February of a calendar year of having discontinued a regulated activity, specified in the license or confirmation of compliance with the notification obligation, in the previous year (breach of § 29 (1) (i) or (j) of Act 250/2012 Coll.)	34	43 400.00
	failure to comply with market rules (breach of § 29 (1) (o) of Act 250/2012 Coll.)	2	2 600.00
	failure to comply with the notification obligation within 30 days of discontinuing business in the energy sector (breach of § 4 (7) of Act 251/2012 Coll.)	1	900.00
	conducting business in the energy sector without a license (breach of § 6 (1) of Act 251/2012 Coll.)	1	300.00
	failure to submit actual data to the Office within the specified time limit on the production or supply of drinking water by public water supply system or on the wastewater collection and treatment by public sewerage for 2020 or 2021 (breach of § 29 (1) (b) of Act 250/2012 Coll.)	32	21 820.00
	failure to provide the Office, free of charge, with complete and accurate data, documents and any other information necessary for the purposes under this Act and for the exercise of the Office's competence in the scope, manner and within the time limits specified by the Office when submitting the actual data for the year 2021 for the regulated activities of production and supply of drinking water by public water supply system, production and distribution of drinking water by public water supply system, wastewater collection and treatment by public sewerage and treatment of wastewater fed to wastewater treatment plant by public sewerage (breach of § 29 (1) (k) of Act 250/2012 Coll.)	1	13 500.00
	failure to submit to the Office the actual costs of heat generation, distribution and supply within the specified time limit (breach of § 29(1)(b) of Act 250/2012 Coll.)	5	6 000.00
	failure of the electricity TSO to comply with the obligation to take into account in the TYNDP a decision of the Office issued in the past and imposing an obligation to amend the TYNDP pursuant to paragraph 7 (breach of § 29 (3) of Act 251/2012 Coll.)	1	10 000.00
	failure to submit quality standards evaluation (breach of § 22(4)(h) of Act 250/2012 Coll.)	34	65 600.00
	failure to submit rules for the allocation of assets and liabilities, costs and revenues (breach of § 16 (4) (c) of Act 251/2012 Coll.)	1	500.00
TOTAL		146	353 720.00

Fines for breaches of the law imposed at the first instance of administrative proceeding

In the overview, the Office lists fines imposed at the first instance of administrative proceeding for the entire Office, i.e. the table includes, in addition to the fines imposed by the Inspection Department for breaches detected during on-site and off-site inspections, also fines imposed by other units of the Office.

Figure 55 On-site inspections performed, remedial measures imposed and decisions imposing a fine



09. MONITORING OF REGULATED ACTIVITIES

In order to ensure balance between the interests of the consumer and the regulated entity, the Office monitors the activities of regulated entities in order to obtain the necessary information so that it has sufficient tools at its disposal to verify the structure and amount of costs incurred in the performance of regulated activities, in order to set transparent and non-discriminatory regulation and to prevent abusive vertical integration of regulated entities. Monitoring the activities of regulated entities is carried out by monitoring compliance with quality standards, economic indicators achieved, procurement processes and service level agreements concluded within related undertakings.

Rules for the allocation of assets, liabilities, costs, revenues

In order to prevent discrimination and cross-subsidies within the meaning of Section 16 of Act No 251/2012 Coll., the Office, based on the application of seven eligible entities, issued for 2022 a total of seven decisions approving the rules for the allocation of assets, liabilities, costs, revenues.

Monitoring of economic indicators

The Office monitors the impact of tariff and non-tariff regulation on the achieved financial results and economic efficiency of regulated entities in the electricity and gas sectors through selected economic indicators.

In 2022, the Office monitored data of separate accounts for the 2021 accounting period, receiving a total of 1 103 entries from individual market participants in the following structure:

- 1 020 records from electricity only,
- 14 records from gas only,
- 69 records from both electricity and gas.

For 2021, compliance with the individual assessed parameters was demonstrated at an overall average of 84.10%. Compared to the previous year when the value reached 88.65%, this shows a decline.

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 51 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 52 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 %

Table 53 Number of received evaluations and recorded events in district heating

District heating	heat supply
Number of evaluations received	296
Number of recorded events	50 791
Number of recorded events with breached quality standard	472
Proportion of events with a breached quality standard to recorded events	0.93 %

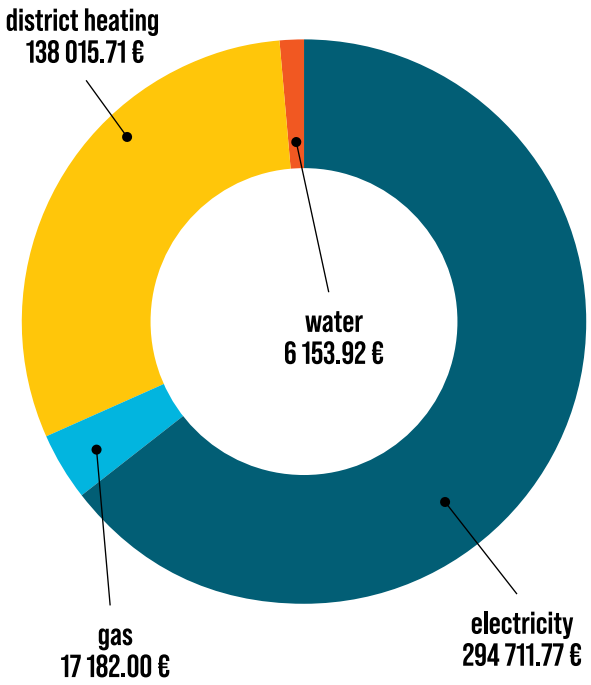
Table 54 Number of received evaluations and recorded events in water

Water	drinking water supply	wastewater collection
Number of evaluations received	397	398
Number of recorded events	73 927	52 722
Number of recorded events with breached quality standard	316	285
Proportion of events with a breached quality standard to recorded events	0.43 %	0.54 %

Table 55 Summary of compensation payments made

Regulated activity		Compensation payments made
Electricity	transmission	0.00 €
	distribution	275 219.41 €
	supply	19 492.36 €
	Total	294 711.77 €
Gas	storage	0.00 €
	transmission	0.00 €
	distribution	330.00 €
	supply	16 852.00 €
	Total	17 182.00 €
District heating	heat supply	138 015.71 €
	Total	138 015.71 €
Water	drinking water supply	6 089.01 €
	waste water collection	64.91 €
	Total	6 153.92 €

Figure 56 Overview of compensation payments made



A total amount of 456 063.40 EUR was paid to consumers in 2022.

Procurement and service level agreements

In order to create a level playing field on the market, the Office monitors the activities of network operators to prevent them from taking advantage of vertical integration. A regulated entity which carries out a regulated activity in the electricity or gas sector and is part of a vertically integrated undertaking is obliged to submit a service level agreement (SLA) or an amendment thereto to the Office for approval. In 2022, three SLAs were approved by the Office.

In order to ensure a higher degree of control and efficiency of heating and water companies, since 2020 the Office has also monitored the conclusion of SLAs with a related undertaking, in case such agreements are concluded by the heating and water companies outside the public procurement process. In 2022, 18 SLAs concluded with a related undertaking by an entity operating in the heating and water sector were approved.

The purpose of approving service level agreements, especially the condition that the regulated entity is obliged to ensure the reasonableness of costs incurred in carrying out the regulated activity, is cost optimisation.

The Office also monitors transparent methods of procurement of goods and services necessary for the performance of regulated activities by entities that are part of vertically integrated undertakings and operate in the electricity and gas sectors.

Pursuant to Section 29(3) of Act No 250/2012 Coll., the Office registered 921 announced commercial public tenders notified by 23 regulated entities. Of the tenders announced in 2022 and in the previous period, 803 were completed and 65 were cancelled in the period under review. Eight tenders were closed without a winner. As of 31 December 2022, 208 commercial tenders were in progress.

Pursuant to Section 29(4) of Act No 250/2012 Coll., 88 regulated entities that are not vertically integrated notified the Office of 625 contracts with value exceeding 300 000 EUR.

Commercial and financial agreements

The conclusion of commercial and financial agreements by a transmission system operator with another person that is part of the same vertically integrated gas undertaking is monitored by the Office in order to ensure its independence from other parts of the vertically integrated undertaking.

The Office shall grant consent to the conclusion of the contract or its amendment if the transmission system operator demonstrates that the terms and conditions of the contract or its amendment correspond to those customary in the ordinary course of business, otherwise the Office shall not grant consent. During 2022, one commercial agreement was approved by the Office.

10. 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 sets of tools and expertise to tackle cross-border and global issues in a co-ordinated way. The ongoing energy crisis adversely affected in 2022 to varying degrees all EU member states. 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 price 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 in individual markets were shared among the regulators.

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 storage 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 securing 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 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 taken 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

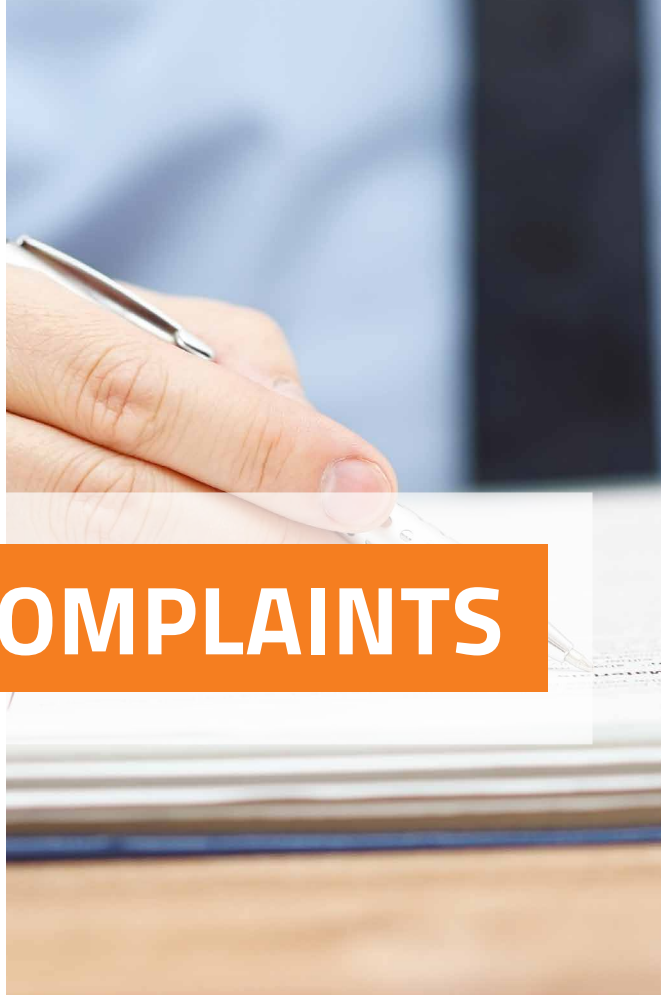
Regulation (EU) No 1227/2011 on Wholesale Energy Market Integrity and Transparency (REMIT) lays down rules for market participants active in the wholesale electricity and gas markets. The Regulation aims to strengthen confidence in the integrity of trading on wholesale markets in the EU, while prohibiting 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 screens suspicious behaviour based on the reported transaction data, the Office reviews 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 (RRMs) 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’s national register. The majority of market participants reported their transaction data to ACER through two Slovakia’s RRMs, OKTE and Solien.

11. SUBMISSIONS/COMPLAINTS



In 2022, the adverse 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 by 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 were coming throughout the year. The majority of submissions related to prices and tariffs and classification as a regulated consumer. However, as in previous years, consumers continued to contact 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. The Office also received some submissions (27) which were not within its remit and which were subsequently referred to other relevant authorities for handling.

Table 56 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

12. 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 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 – 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 (‚Repairer' as additional service).

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 upon. In one case, the proposal was postponed due to the withdrawal of the proposal (however, in this case the dispute was settled within the framework of complaints).

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 57 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. Similarly to the previous period, 38% of claimants had doubts about the accuracy 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 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.

13. HANDLING OF REQUESTS

Pursuant to Section 2(1) of Act No 211/2000 Coll., the Office is the obliged person to disclose information.

In 2022, the Office registered 51 requests for (disclosure of) information under Act No 211/2000 Coll.

As one request for information did not have the prescribed particulars and was not completed after the Office had requested it, this request for information was deferred.

The Office processed 50 requests for information, where:

- 18 requesters were provided with the information,
- six requests for information were referred for direct handling, in two cases within the Office to a dedicated organisational unit (the Inspection Department) and four requests for information were referred by the first instance authority (the Chairman's Office) for handling to OKTE,
- in 26 cases a decision was issued where:
  - in 13 cases the Office did not disclose the information because in 10 cases the information was not available to it and in three cases the requests for information were not requests within the meaning of Act No 211/2000 Coll.,
  - in 11 cases, the Office partially withheld information for legitimate reasons, i.e. protection of business secrets of regulated entities and/or protection of the person and personal data,
  - in two cases a decision was issued where one request for information was dealt with by a combination of disclosure of information, non-availability of information and at the same time referral for direct handling of part of the request for information to the Ministry of Economy, and the other by a combination of disclosure of information in part (due to business secret) and at the same time non-availability of part of the requested information.

Compared to 2021, when the Office received 67 requests for disclosure of information, a slight decrease can be noted, mainly due to previous year's influx of requests for information with a requirement to disclose documentation on the assignment of business ID numbers by the authorities to natural persons (14 cases).

From the nature of the content of the requests for information received, the prevailing requests were for:

- specific tariff proposals of regulated entities,
- information on licenses granted, including license applications and relevant documentation,
- various decisions of the Office, certificates of compliance with the notification obligation by regulated entities,

- specific URSO Staff Regulations,
- information on the amounts/feed-in-tariffs paid to eligible electricity producers, etc.

In 2022, the requester appealed on two occasions. The Chairman, as the appeal body, upheld the decision of the first instance authority in one case and upheld the appeal in the other, disclosing the requested information in its entirety.

Table 58 Statistics on requests for information pursuant to Act No 211/2000 Coll.

	2018	2019	2020	2021	2022
received	38	38	57	67	51
deferred	2	2	1	1	1
processed, of which:	36	36	56	66	50
information disclosed	25	30	45	47	18
decisions issued not to disclose information or partially disclosed information	5	1	6	8	26 **
referred to a relevant department of the Office / competent public authority	6	5	5	11	6
withdrawn in full or in part	0	0	0	0	0
appeals against the decision of the first instance body	1	0	1	3x3 *	2
appeal dismissed by the appeal body	1	0	1	1	1+2***

LEGEND:
* 3 requesters appealed in 1 case 3 times
** request further partially referred
*** requests or appeals from 2021

14. URSO BUDGET

The Office fulfilled the binding indicators of the state budget for the year under review and managed the allocated funds as follows:

Revenues

For 2022, the approved total revenue budget indicator was set at 300 000 EUR. As of 31 December 2022, total revenue was 303 306 EUR, of which fines imposed by the Office on regulated entities in accordance with the Regulatory Act reached 299 638 EUR and other non-tax revenue amounted to 3 668 EUR. This represents the fulfilment of this binding indicator at 101.10 %.

Expenditures

The approved total expenditure budget for the year under review was set at 5 044 818 EUR. As of 31 December 2022, this was adjusted to 5 274 533 EUR by budgetary measures of the Ministry of Finance. The actual expenditure budget spending as of 31 December 2022 reached 5 274 474 EUR, which represents 100.00 % (a saving of 59 EUR).

15.

URSO'S ONGOING AND UPCOMING PROJECTS

In 2022, URSO's Project Department as a newly created department within its organisational structure, focused on the preparation and management of projects by providing organisational and technical assistance related to the preparation, implementation, monitoring and financial management of projects financed from the state budget, the European structural and investment funds and other EU programmes and instruments of assistance provided to Member States.

In line with URSO management's objectives to ensure an effective exercise of powers in the regulation of network industries, to consistently fulfil legislative obligations and to ensure economical spending of allocated funds, activities were focused on the preparation of a number of projects with the aim of achieving and securing progressive process improvements:

- digitalisation, automation and optimisation of the Office's workflows by using the concept of the "data-driven state" in the context of eliminating the enormous administrative burden and the requirement for the subsequent use and processing of data generated by the Office for analytical purposes by various public administration institutions,
- proposal of the structure of processed data on regulated entities and proposal of the consolidated data model and data-analytical platform of the Office in the context of an efficient verification of eligibility for financial support of electricity producers from renewable energy sources,
- enhancing the Office's information and cyber security capabilities,
- designing and implementing reforms to achieve a modern and environmentally sustainable regulatory framework, with a focus on legislative changes, including transposition of EU regulations and directives, the draft energy poverty concept and URSO staff training and development strategy.

Data Management in the Regulation of Network Industries

Operational Programme:	Operational Programme Integrated Infrastructure
Programme period:	2014 - 2020
Funding:	European Regional Development Fund
Project budget:	498 486.80 EUR
Planned project completion:	12/2023

The Data Management in the Regulation of Network Industries project will significantly support the activities of the Office related to the definition of energy poverty in Slovakia accompanied by severe material deprivation, which is one of its main indicators.

The aim of the project is to ensure elimination of the enormous administrative burden of the Office's employees through the digitalisation and automation of selected processes and to ensure efficient performance of the Office's duties by defining, creating, operating and supporting a relevant data model for the Office.

The project and its outputs will contribute to supporting the development of strategies related to addressing the issue of energy poverty in Slovakia, which will be based on real and relevant data, with the subsequent implementation of specific practices and activities from these strategies into public policies, and, within the remit of the Office, the creation of an administrative data source according to Act No 540/2001 Coll. on State Statistics. Such data source can be further provided by the Office to various public administration institutions in formats supporting significant improvement in the use and processing of these data for analytical purposes by these institutions.

By the end of 2022, the project was at the stage of evaluation of the bids submitted by the participants in a public tender.

Development of URSO Governance and Information and Cyber Security

Operational Programme:	Operational Programme Integrated Infrastructure
Programme period:	2014 - 2020
Funding:	European Regional Development Fund
Project budget:	134 814.80 EUR
Planned project completion:	08/2023

By implementing the project, the Office will ensure the implementation of basic requirements of Act No 69/2018 Coll. on cyber security as amended, and Act No 95/2019 Coll. on information technologies in public administration as amended.

The aim of the project is to introduce and set up the Office's core capacities in information and cyber security management, to ensure compliance of security measures with related legislation and decrees and to streamline the performance of the Office's tasks as a basic service operator and a public authority responsible for cyber security within its remit and an authority for the management of public administration information technology operated within its remit.

The benefits of the project and its outputs for the Office will be to support core activities of information and cyber security management by establishing an information asset management process and formalised risk management, processing of the list of information assets, classification and categorisation of information systems and computer networks, implementation of risk and impact analysis, updating the security strategy and security documentation, possible use of a separate client module supplied by the Ministry of Investment, Regional Development and Informatisation of the Slovak Republic enabling the processing of information in the Office's environment, and lifecycle management of the required information and cyber security data, and preparation of the Office for a cyber security audit.

By the end of 2022, the project was in the phase of preparation of documents for the call for a public tender.

Increasing the Level of Information and Cyber Security at URSO

Operational Programme:	Operational Programme Integrated Infrastructure
Programme period:	2014 - 2020
Funding:	European Regional Development Fund
Project budget:	444 315.20 EUR
Planned project completion:	10/2023

The project Increasing the level of information and cyber security at URSO will enable the implementation of extended requirements for ensuring cyber protection of information systems and ensuring the management of information and cyber security at URSO.

The aim of the project is to introduce and set up the Office's enhanced capabilities in the field of cyber protection of information systems and information and cyber security management, to ensure compliance of security measures with relevant legislation and decrees, and to deploy and implement the necessary hardware and software technologies for monitoring, management and administration of security incidents.

The benefits of the project and its outputs will be to support enhanced activities of information and cyber security management at URSO and cyber protection of information systems by introducing monitoring, management and administration of security incidents, log management, two-factor authentication, access rights management, business continuity management process and preparation of the Office for a cyber security audit.

By the end of 2022, the Application for a non-repayable financial contribution submitted by the Office was in the process of expert evaluation.

Structural Reform of the Regulatory Framework for Network Industries

EU programme:	EU Technical Support Instrument
Funding:	European Commission
Project budget:	650 000 EUR
Planned project completion:	12/2023

Slovakia's Government has recognised the need to reform the regulatory framework for network industries and to strengthen the green agenda and expand the agenda of the Regulatory Office for Network Industries. Slovakia's Recovery and Resilience Plan depicts broader efforts to develop renewable energy sources, address energy poverty through the Building Renovation Programme and planned digitalisation.

The aim of the project is to contribute to institutional, administrative and growth-promoting structural reforms in Slovakia within the regulatory framework of the network industries.

The contribution of the project is the development of a basis for future determination of the WACC (weighted average cost of capital) for the new regulatory period 2023-2027 and the revised legislation needed to create a more innovative, greener, transparent, predictable and adaptable regulatory framework with a view of developing a comprehensive strategy and measures suitable for the new regulatory policy in the Slovak Republic, drafting the Energy Poverty Concept, streamlining and digitalising processes and increasing their transparency, designing regulatory systems to support innovation in the regulated energy sector, methodologies and tools for regulatory impact assessment and market reporting, and developing a training strategy for the Office's staff.

Technical Support for the Implementation of the Building Renovation Programme within the Slovak RVHP

EU programme:	EU Technical Support Instrument
Funding:	European Commission
Project budget:	520 000 EUR
Planned project completion:	01/2024
Beneficiaries of support:	National Implementation and Coordination Body (Government Office of the Slovak Republic), Ministry of Environment of the Slovak Republic, Slovak Environmental Agency and Regulatory Office for Network Industries (URSO).

The renovation of public and private buildings has been highlighted in the European Green Deal as a key initiative to promote energy efficiency in this sector and achieve climate targets.

The aim of the project is to actively and effectively support the activities and entities in the Slovak Republic focused on renovation projects of model houses; methodological guidelines on the "do no significant harm" principle including waste management.

The benefits of the project and its outputs for the Office will be optimization and streamlining of the exercise of its powers in network industries regulation by using data collected in the process of applying for the renovation programme to support households in energy poverty, verification of the proposed indicators defining the issue of energy poverty, and recommendations for regulatory instruments and measures within the Office's remit supporting the programme of renovation of buildings for energy-poor and vulnerable households.

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