

OTE, a. s.

Key Information

OTE, a. s., was founded on 18 April 2001 by the Czech Republic's government, which is the Company's sole shareholder. The Ministry of Industry and Trade is entrusted by the government to exercise the shareholder's rights. The company has been active in the electricity market since 2002, and in the gas market since 2010.

The registered capital of the company is CZK 500 million.

OTE's operations reaffirm the Company's significant position on the electricity and gas markets both in the Czech Republic and across Europe.

Core operations comprise:

- evaluation and financial settlement of imbalances between contracted and metered supply and consumption of electricity and gas;
- the organization of the short-term electricity market and the short-term gas market and the performance of the activities of the NEMO pursuant to Commission Regulation (EU) 2015/1222;
- processing and exchange of data and information related to the electricity and gas markets through the Centre of Data Services, 24 hours a day, 7 days a week;
- administration of support payments to supported energy sources;
- issuance of guarantees of origin of electricity from renewable energy sources and combined heat and power;
- performing the function of a national administrator of the Union registry for emission trading;
- provision of technical support for change of electricity and gas supplier in customer points of delivery;
- preparation of monthly and yearly reports on the electricity market and the gas market in the Czech Republic;
- preparation of reports on projected electricity and gas consumption and the method of ensuring balanced electricity and gas supply and demand;

- trade data reporting pursuant to Regulation (EU) No. 1227/2011 of the European Parliament and of the Council on Wholesale Energy Market Integrity and Transparency (REMIT).

OTE has been actively engaged in professional organizations and their working groups in the Czech Republic and abroad AEM, CIGRE, EUROPEX, Price Coupling of Regions (PCR), Association of Issuing Bodies (AIB). The Company's goal is to promote liberal and transparent principles on the electricity and gas markets, participate in formulating rules governing these markets, and ensuring free and equal access to them for all market participants.

A significant success of the market operator is in response to Commission Regulation (EU) 2015/1222, the determination of The Nominated Electricity Market Operator (NEMO). This status is a visible evidence of many years of work on the development of an organized electricity market in the Czech Republic and a commitment and motivation for further expansion of the integrated day-ahead market and the emergence of an intraday electricity interconnected market.

OTE has been certified by ACER as the Registered Reporting Mechanism (RRM) in accordance with REMIT. The certification is a necessary prerequisite for the provision of reporting services to market participants.

Volumes of electricity and gas registered in the OTE system in 2021

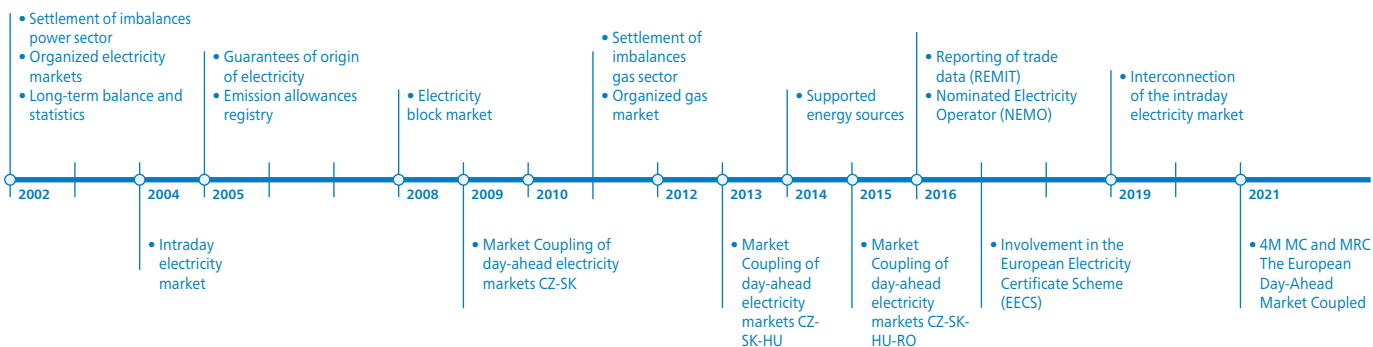
Electricity	Sale	Purchase
Block market	1 GWh	1 GWh
Day-ahead market	23,680 GWh	14,934 GWh
Intraday market (including cross-border exchanges)	3,798 GWh	2,486 GWh
Bilateral transactions (internal nominations)	71,687 GWh	71,687 GWh
Export/import	21,151 GWh	9,743 GWh
Gas	Sale	Purchase
Intraday market	4,007 GWh	4,007 GWh
Bilateral transactions (internal nominations)	235,7 TWh	235,7 TWh
Export/import	137,0 TWh	229,2 TWh
Injection/withdrawal	29,7 TWh	35,9 TWh



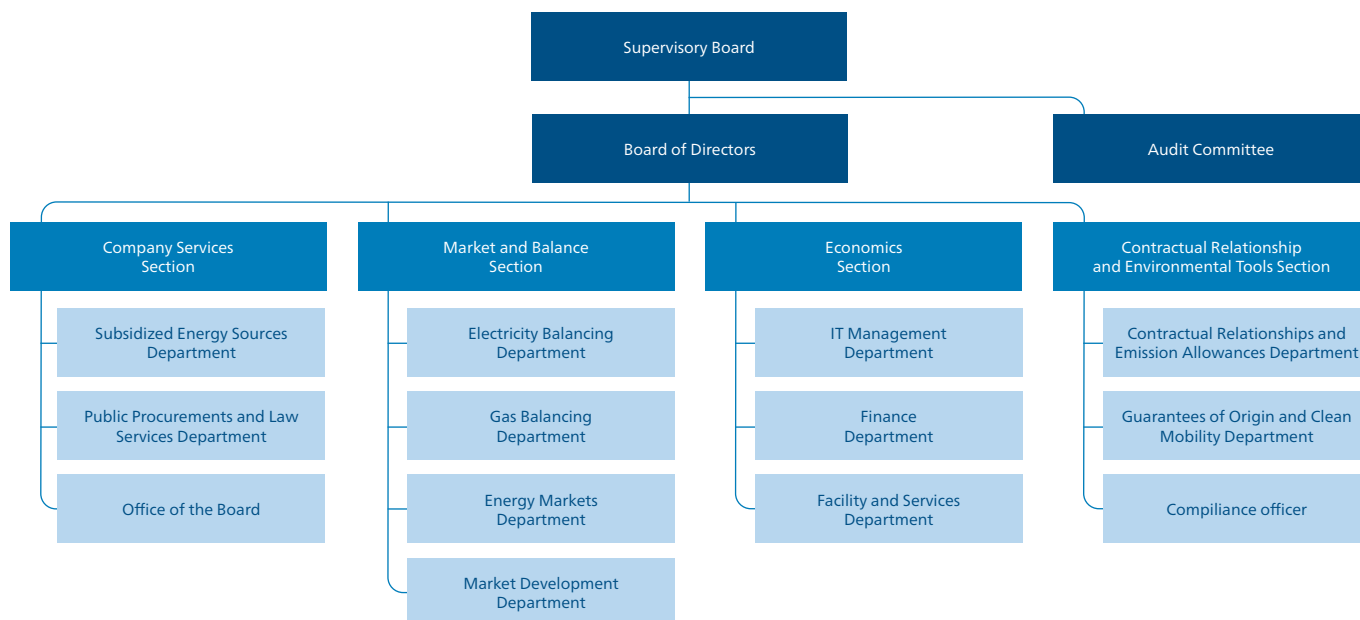
OTE, a. s.

Key Information

OTE at glance



Organisation scheme at 1 February 2021



Electricity and Gas market participants in 2021

Type of participant electricity market	Number at 31 December 2021	Year-on-year change
Balance responsible party	117	-5
Supplier	198	+8
Provider of ancillary services	26	+1
Distribution system operator	264	+6
Transmission system operator	1	0

Type of participant gas market	Number at 31 December 2021	Year-on-year change
Balance responsible party	113	+9
Supplier	105	+2
Distribution system operator	69	+2
Transmission system operator	1	0
Gas storage operator	4	0



Emission allowances

Key information

OTE, a. s., performs the function of a national administrator of the Union Registry for emission trading that ensures accurate accounting of the issuance, holding, transfer and cancellation of emission allowances and Kyoto units. OTE has performed this administration first on the basis of the authorization of the Ministry of the Environment since 2005, later pursuant to Act No. 383/2012 Coll., on the Terms of Greenhouse Gas Emission Allowance Trading.

Records of allowances and Kyoto units are maintained in specific national accounts, operator holding accounts, aircraft operator holding accounts, person accounts and trading accounts.

Pursuant to Act No. 383/2012 Coll., on the Terms of Greenhouse Gas Emission Allowance Trading, operators of installations that have been included in the EU Emissions Trading System (EU ETS) and have been issued a permit by the Ministry of the Environment to emit greenhouse gas into the atmosphere are required to open a Registry account. Since January 2012 this obligation has applied also for aircraft operators whose operating licences have been issued in the Czech Republic or who are under the administration of the Czech Republic in accordance with the list of aircraft operators published by the European Commission.

Any natural person or legal entity may open a trading account, including installation operators and aircraft operators that have already established holding accounts.

EU Emission Trading System (EU ETS) was established pursuant to Directive 2003/87/EC. Pursuant to Commission Delegated Regulation (EU) No. 2019/1122, all Member States are required to use the standardized Union Registry launched in 2012, which replaced the EU Member States' national registries. The Union Registry is operated also as a consolidated registry system under the Kyoto Protocol.

The Union Registry can be accessed from the website <https://www.povolenky.cz>.

As at 31 December 2021, there were 255 operator holding accounts, 53 trading accounts, 8 aircraft operator holding accounts and 2 person accounts in the Registry. These accounts belong to a total of 214 entities. Some of these entities have more than one account in the Registry.

In 2021, 1,203 transactions took place in the Registry, during which a total of 410,318,598 units changed accounts. The statistics include all transfer transactions with general, aviation emission allowances and Kyoto units made between account holders.

The reason for the transaction and the actual prices of allowances and Kyoto units are neither evaluated nor traded in the Registry. Allowance trading takes place, for example through bilateral or exchange trades.

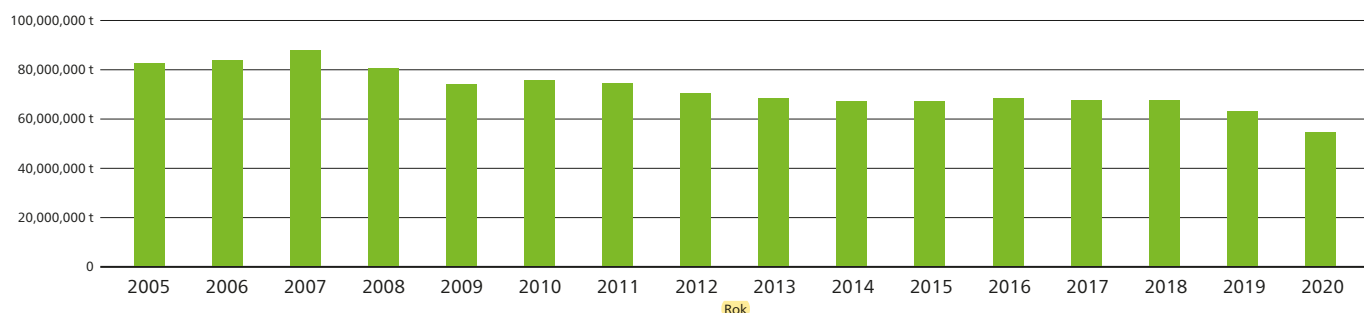
The deadline for meeting the legal obligation to surrender allowances in the amount of verified tonnes of greenhouse gas emissions produced from the installation in 2020 was 30 April 2021 for the operators of these installations. Two operators did not comply with this obligation. Thus, on 14 May 2021, the Report on the Evaluation of Facility Operators and Aircraft Operators in Relation to Compliance for 2020 was published at EU level in accordance with Annex XIII, paragraph 1 d), e) of Commission Delegated Regulation No. 2019/1122. The total amount of verified emissions produced from stationary equipment and aircraft in 2020 was 54,774,696 tonnes of CO₂, N₂O and PFC, which is 8,228,707 tonnes less year-on-year.

Trends of reduction of emissions covered by the EU ETS system in the Czech Republic are demonstrated in the figure below on data from the Union Registry between 2005 and 2020.

Number of transactions and volume of transferred units in 2021

Unit type	Unit volume	Number of transactions
Emission allowances	408,902,960	1,094
Aviation emission allowances	766,721	13
Kyoto units	648,917	96
Total	410,318,598	1,203

Emission trends of CO₂, N₂O and PFC covered by the EU ETS in the Czech Republic



Guarantees of origin

Key Information

A guarantee of origin of electricity from renewable energy sources and high-efficiency combined heat and power generation proves that a given quantity of electricity was generated from renewable energy sources or combined heat and power and supplied to the grid. The purpose of a guarantee of origin is to prove the origin of electricity. For this purpose OTE operates the Registry of Guarantees of Origin (EZP).

The Market Operator was assigned the obligation to issue guarantees of origin upon written request of producers of electricity under Act No. 180/2005 Coll. The implementation of Act No. 165/2012 Coll. resulted in a fundamental change in the administration of guarantees of origin in 2013. The guarantees of origin can now be issued in response to requests of producers of electricity only electronically Decree No. 403/2015 Coll., on guarantees of origin of electricity sets out procedures, conditions and ways to verify data necessary for issuance, transfer, recognition and cancellation of guarantees of origin and its content requirements.

In 2021, 6,217,946 guarantees of origin were issued to 1,221 active account holders, which represents an increase of 2.9% in issued guarantees compared to 2020. The process of cancelling guarantees of origin transparently guaranteed the origin of approximately 2,957 GWh of electricity produced from renewable sources and consumed in the Czech Republic.

As the EZP system allows the issuance of guarantees of origin for power generation retroactively up to 12 months, it may be assumed that a certain portion of the guarantees of origin relating to power generation in 2021 will not be issued and cancelled until 2022.

Cancellation of the guarantee of origin is the process of its transfer to the cancellation account, which ends its life cycle. By the cancellation of the guarantee of origin the account holder declares that a given volume of electricity represented by the relevant number of guarantees of origin was supplied to a final consumer.

Holders of license to produce electricity or to trade electricity may request access to the EZP system. All information on the EZP and on establishing access to it is available from the website <https://www.ote-cr.cz/cs/zaruky-puvodu-a-povolenky/>.

International transactions

Following the launch of the EZP system, the market operator became a member of the international Association of Issuing Bodies (AIB) in November 2013. The market operator is also included in the international standardized European Electricity Certificate Scheme (EECS).

The EZP system is thus fully harmonized with the other systems of countries associated in the AIB and allows the import and export of guarantees of origin issued in these countries. Specifically: Austria, Belgium, Croatia, Cyprus, Denmark, Estonia, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Hungary, Netherlands, Norway, Portugal, Serbia, Slovakia, Slovenia, Spain, Sweden and Switzerland, this list will be expanded as new countries will join the AIB.

The cooperation of the market operator with other AIB members significantly increases the transparency of the whole system of guarantees of origin at all stages of their life cycle.

Summary overview of transactions with guarantees of origin in 2021

Transaction type	Number of GOs
Export	4,582,607
Import	1,538,362
Cancellation (guarantees the origin of electricity consumed in the Czech Republic)	2,957,183
Cancellation (guarantees the origin of electricity consumed abroad)	366,590
Domestic transfer	5,819,643
Issuance	6,217,946
Withdrawal due to expiration	150,535



Supported energy sources

Types of Support and Registration

Support for power generation is provided as green bonuses for electricity or as purchase prices (feed-in-tariff). Operating aid for production of heat is provided as green bonuses for heat (pursuant to Act No. 165/2012 Coll., on Supported Energy Sources and amendments to certain laws).

Pursuant to the Act No. 458/2000 Coll. (Energy Act) the Market Operator is required to:

- pay electricity producers green bonuses for electricity from renewable energy sources, secondary sources and combined heat and power (CHP);
- pay mandatory purchasers the difference between the feed-in-tariff and the hourly price and the price for their activities;
- pay heat producers green bonuses for heat.

Registration of support

Registration of power and heat producers, registration of the selected type of support is done electronically in the Market Operator's system via secure access. Producers eligible for support apply under the terms of Act No. 165/2012 Coll.; the application procedure is set out in Decree No. 9/2016 Coll.

Records of generated electricity volumes

Producers eligible for support for generation of electricity from renewable energy sources, secondary sources or combined heat and power record monthly volumes of generated electricity through reports in the Market Operator's system.

Settlement of support for electricity

The settlement of green bonuses for electricity is carried out on the basis of data included in the monthly report submitted by the

relevant producer pursuant to the provisions of Act No. 165/2012 Coll. and the Market Rules of OTE, a. s., for the Power sector.

The settlement of the feed-in-tariff applied to purchase of electricity is performed by the producer for the mandatory purchaser on the basis of metered data at the delivery point of the power-generating installation and the distribution/transmission system and on the basis of data included in the monthly report. After the mandatory purchaser has paid the producer the feed-in-tariff, the Market Operator shall reimburse the mandatory purchaser for the difference between the feed-in-tariff and the hourly price of electricity (from the day-ahead spot market organized by OTE, a. s.).

Records of generated heat volumes and settlement of bonuses for heat

Producers eligible for support for heat generated from renewable energy sources record monthly volumes of generated heat through reports in the Market Operator's system. The settlement of green bonuses for heat is carried out quarterly on the basis of reports received from producers pursuant the provisions of Act No. 165/2012 Coll. and the Market Rules of OTE, a. s. for the Power Sector.

In 2021 support was paid for 4-615 TJ of heat produced from renewable energy sources in the total amount of CZK 265 million.

Sources registered in the system CS OTE

Type of source / fuel	Total sources registered in CS OTE		Of which sources commissioned in 2021	
	Installed capacity (MW)	Number of sources	Installed capacity (MW)	Number of sources
Photovoltaic plants	2,101.6	29,090	9.6	107
Wind power plants	339.5	229	0.0	0
Biomass	2,674.4	136	0.0	0
Biogas stations	322.7	728	0.0	0
Mine and drained gas	43.1	33	0.0	0
Landfill and sewer gas	87.7	191	0.1	1
Other secondary sources	509.5	31	0.0	0
Small hydro power plants	356.8	2,324	5.8	67
Other sources	14,239.3	1,166	24.1	61
Total	20,674.5	33,928	39.6	236



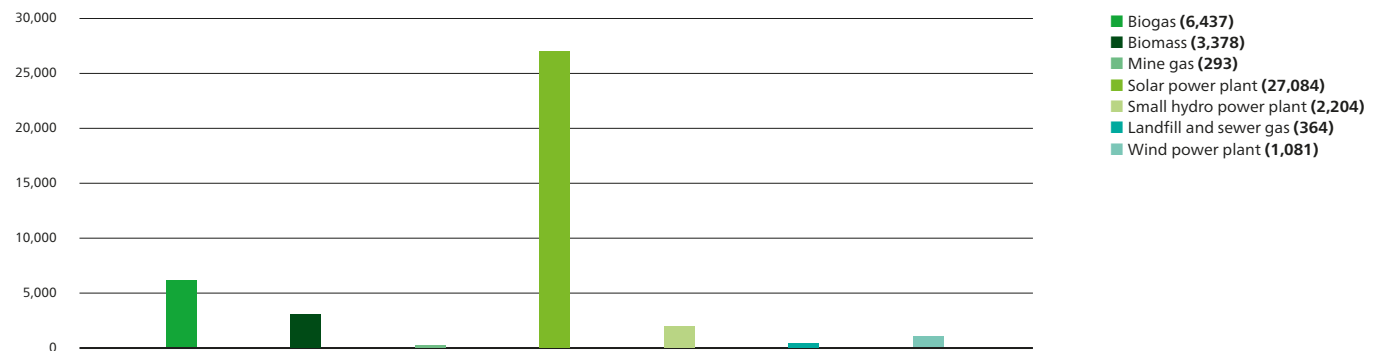
Supported energy sources

Support Paid by Source

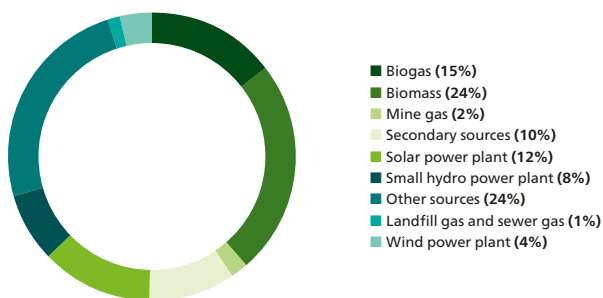
Electricity from renewable energy sources (RES) and secondary sources (Sec. S), combined heat and power (CHP)

Type of source	RES	Sec. S	CHP	Total
Supported volumes (GWh)	8,431	618	7,600	16,648
Paid (CZK million)	40,841	119	2,017	42,976

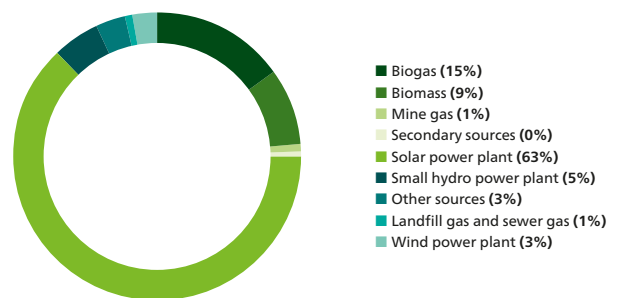
Paid support by renewable source (CZK million)



Shares of supported volumes of RES + Sec. S + CHP by source



Shares of paid support for RES + Sec. S + CHP by source



Electricity market

Organized Short-term Market

The organized short-term electricity market allows electricity market participants to optimize their trading positions at short notice before the delivery date (day, hours and minutes) in response to the current situation in their production or consumption portfolio.

The short-term electricity market is comprised of the following trade platforms:

- block market,
- day-ahead market,
- intraday market.

All deals closed on the foregoing markets are also automatically added to the respective trading positions, therefore market participants do not need to perform additional registration of the executed transactions, contrary to external platforms.

Key rules governing trading on OTE's short-term markets:

- ensuring a neutral and secure environment;
- support for market competition and ensuring non-discriminatory conditions for all participants;
- provision of market-related information;
- ensuring anonymous trading and acting as a central counterparty;
- hedging risks in respect of financial settlement of transactions and physical supply of the commodity;
- reducing barriers preventing market entry for new participants;
- distribution of market price signals;
- interconnection within the single European day-ahead and intraday electricity market.

Trade Platforms

Block market

Since 2008, the organized block market in electricity has allowed the continuous trading of fixed electricity blocks on a given trading day. Base type (0:00–24:00), Peak type (8:00–20:00) and Off-peak type (0:00–8:00; 20:00–24:00). The volume of electricity traded on this market in 2021 totalled 0,7 GWh.

Day-ahead market

The organized day-ahead electricity market has been operating since 2002. Since 2009, it is coupled with the day-ahead market in Slovakia, since 2012 the day-ahead market in Hungary and from 2014 the day-ahead market in Romania through implicit auctions. This form of trading is also known as 4M Market Coupling. In June 2021, these four daily markets were interconnected to the interconnected MRC region, creating the singular European market (SDAC). Market participants' requirements for the purchase or sale of electricity by market participants for the following day are met jointly and from neighboring market areas without the need to purchase transmission capacity, up to the amount of free transmission capacity at individual borders. On the day-ahead market, it is possible to anonymously offer or demand electricity for any hour of the day of delivery. The result is closed trades for a specified amount of electricity and a uniform price for trades for each hour of the day of delivery. In 2021, 24.36 TWh of electricity was traded on this market. OTE is designated on the day-ahead electricity market by the Nominated Market Operator (NEMO), which ensures uniform interconnection of day-ahead or intraday markets according to Commission Regulation (EU) 2015/1222.

Intraday Market

Since 2004, the organized intraday electricity market has allowed market participants to continue to trade anonymous offers for trading hours on a given delivery day, up to a limit time of 5 minutes before the start of the hour of delivery or consumption. Since 19 November 2019, the intraday electricity market has been linked to the intraday markets of another 20 European countries within the SIDC. In 2021, 5,212 GWh of electricity was traded on this market. OTE is designated on the intraday electricity market by the NEMO, which ensures uniform interconnection of day or intraday markets according to Commission Regulation (EU) 2015/1222.

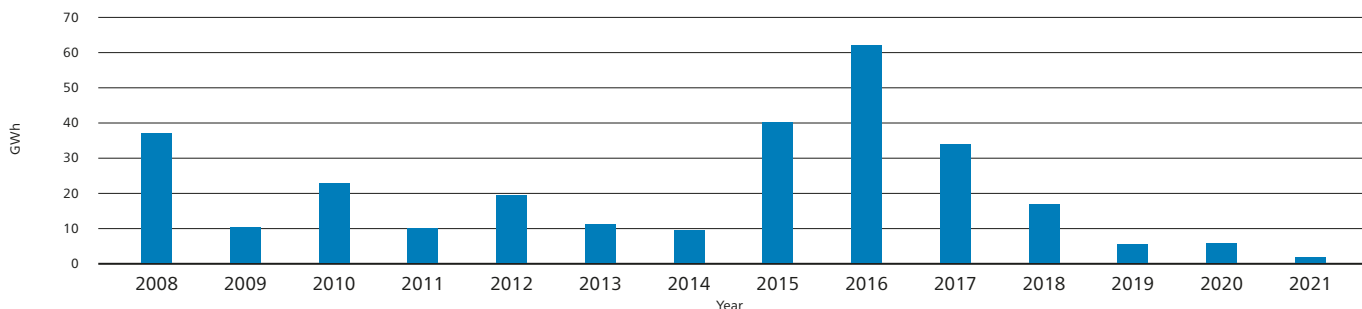
Comparison of specifics of electricity markets

	Block market	Day-ahead market	Intraday market
Type of market	continuous matching	daily auction	continuous matching
Traded period	12 or 24 hours	1 hour	1 hour
Minimum tradable volume	1 MW × 12 or 24 hours	0.1 MWh	0.1 MWh
Maximum tradable volume	50 MW × 12 or 24 hours	99,999 MWh	999 MWh
Smallest quantity increment	1 MW × 12 or 24 hours	0.1 MWh	0.1 MWh
Trading currency	CZK	EUR	EUR
Minimum price	CZK 1/MWh	EUR -500/MWh	EUR -9,999/MWh
Maximum price	CZK 9,999/MWh	EUR 3,000/MWh	EUR 9,999/MWh
Smallest price increment	CZK 1/MWh	EUR 0.01/MWh	EUR 0.01 MWh
Zero price option	NO	YES	YES
Market opens at	9:30 D-5	unlimited	15:00 D-1
Market closes at	13:30 D-1	11:00 D-1	H-0:05

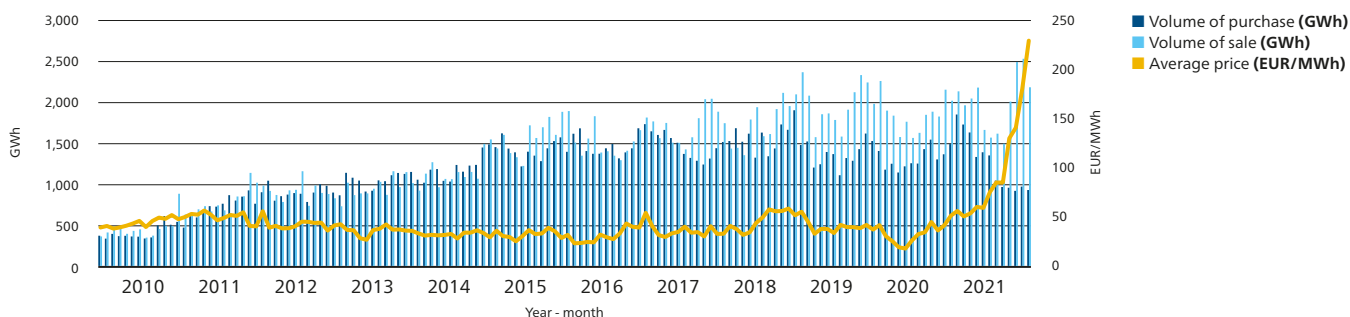


The organized short-term electricity market recorded an overall increase in trades in 2021. The following charts illustrate the evolution of traded quantities and prices on the respective platforms during 2021.

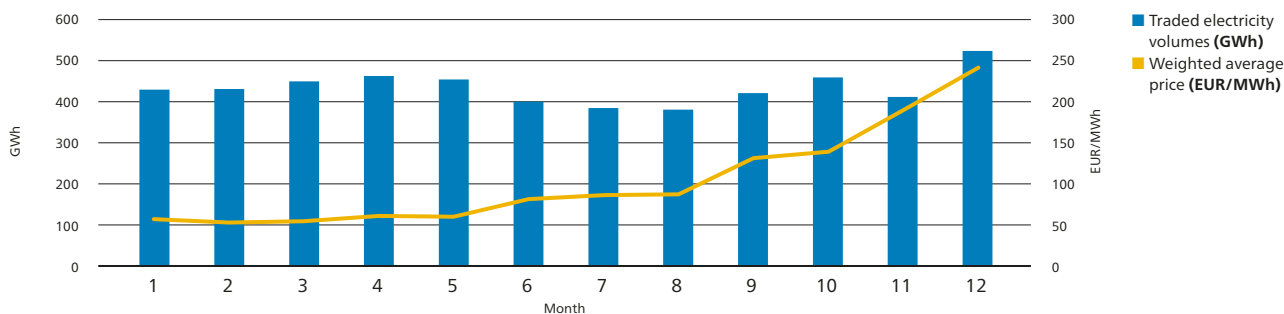
Trend in volumes of electricity traded on the block market in 2008–2021



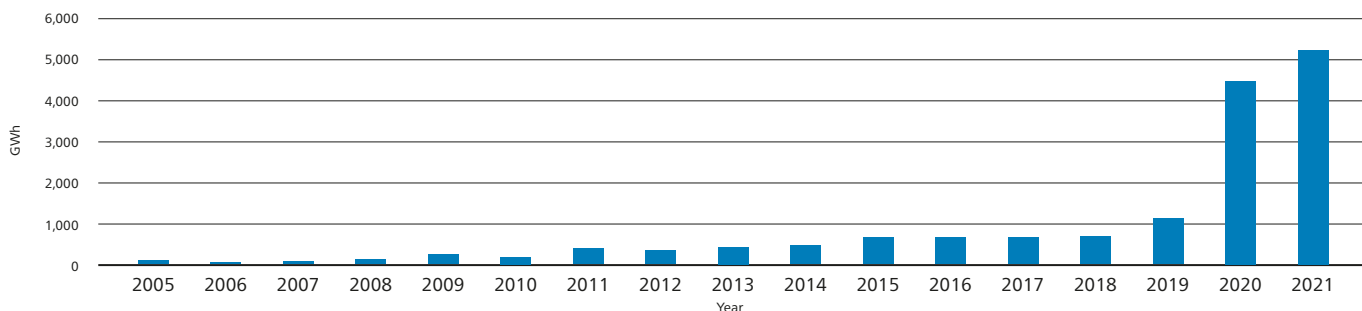
Volumes of traded electricity and average prices on the day-ahead market in specific months of 2010–2021



Volumes of traded electricity and prices on the intraday market in specific months of 2021



Amount of traded electricity on the intraday market in 2005–2021



Electricity market

Evaluation and Settlement of Imbalances

The balance responsible party's imbalance for every evaluation interval (60 minutes) is the sum of differences between the supplied and contracted volumes of electricity for supply and differences between the consumed and contracted volumes of electricity for consumption.

Legislation defines market participants, for which OTE settles imbalances, as "balance responsible parties" (BRP). It also sets out the method of determining the volume of imbalances of balance responsible parties. The basic rule applied to charges for all imbalances stipulates that **each market participant is either responsible for its imbalances, i.e. is deemed a BRP, or it transfers imbalance responsibility to another BRP.** Any electricity consumption from the power system or supply to the system must be assigned to a market participant.

Imbalance of BRP (=) the sum of production of electricity supplied to the power system (-) the sum of consumption of electricity from the power system (+) the balance of volumes of electricity purchased/sold on organized short-term markets (+) the balance of electricity from bilateral transactions registered with OTE (+) the balance of export and import of electricity to/from abroad.

Contracted electricity volumes to supply to the power system and take from the power system are determined by the Market Operator for each evaluation interval on the basis of registered internal nominations, results of the short-term electricity market, and contracted cross-border exchanges.

Actual volumes of supplied or consumed electricity are recorded on the basis of business metering.

System imbalance in each evaluation interval is defined as the balance of all supplies by balance responsible parties and overall consumption of BRPs. The system imbalance equals the sum of the relevant BRP's imbalances and is covered by balancing energy.

Calculation of imbalance volumes of all BRPs and their financial evaluation is carried out in the OTE system as follows:

- every day of the year for the previous day for each evaluation interval (60 minutes) - daily settlement of imbalances,
- after the end of the month for the previous month (monthly settlement of imbalances),
- in the 4th month after the evaluated month (final monthly settlement of imbalances).

Each BRP can access the results of the calculation via the website <https://portal.ote-cr.cz>; summarized values are posted also on OTE's public website.

The transmission system operator shall provide energy to cover the system imbalance by activating ancillary services or by purchasing balancing energy from abroad. This can be accomplished either through activation within the European platforms for the exchange of balancing energy, or by ensuring the supply of energy from abroad under contracts for the operative supply of balancing energy. The total balance of imbalances and regulating energy cleared at OTE in 2017–2021 is shown in the following table, including the corresponding payments.

As in previous years, in 2021 the expenditure on balancing energy used to offset the positive system imbalance was still significantly lower than the expenditure on balancing energy used to offset the negative system imbalance.

Volumes (in GWh) and payments (in CZK million) – balancing energy, imbalances and settlement surpluses in 2017-2021

Volumes in GWh	2017	2018	2019	2020	2021
Balancing energy +	246 GWh	280 GWh	229 GWh	269 GWh	505 GWh
Balancing energy -	-365 GWh	-312 GWh	-330 GWh	-433 GWh	-243 GWh
Imbalance +	1,171 GWh	1,098 GWh	1,179 GWh	1,192 GWh	1,021 GWh
Imbalance -	-1,049 GWh	-1,066 GWh	-1,078 GWh	-1,028 GWh	-1,283 GWh

Payments in CZK million	2017	2018	2019	2020	2021
Balancing energy +	CZK 601 million	CZK 701 million	CZK 581 million	CZK 662 million	CZK 1,561 million
Balancing energy -	1 million	CZK 8 million	CZK 4 million	CZK 5 million	CZK 2 million
Imbalance +	614 million	CZK 756 million	CZK 736 million	CZK 655 million	CZK 1,275 million
Imbalance -	-1,569 million	CZK -1,809 million	CZK -1,669 million	CZK -1,539 million	CZK -3,999 million
Settlement surplus	354 million	CZK 360 million	CZK 348 million	CZK 217 million	CZK 1,161 million



Electricity market

Imbalance and Counter-imbalance Price

Legislation defines the method of setting the price which is charged or credited to balance responsible parties for imbalances. From 1 April 2022, the market operator determines the settlement price of the imbalance for each evaluation interval (60 minutes) on the basis of the prices of balancing energy or on the basis of the price of the incentive component according to the following scheme:

Determination of the settlement price of imbalance (SPI) in case of BE activation against the system imbalance (SI) direction:

Condition	Determination of SPI - settlement price of imbalance
(SI ≤ 0) and (max price BE+ ≤ LIM _{BE+})	→ SPI = Max(BE component; IM component; SI component)
(SI ≤ 0) and (max price BE+ > LIM _{BE+})	→ SPI = Max(protective component of BE; IM component)
(SI > 0) and (min price BE- ≥ LIM _{BE-})	→ SPI = Min(BE component; IM component; SI component)
(SI > 0) and (min price BE- < LIM _{BE-})	→ SPI = Min(protective component of BE; IM component)

LIM_{BE} – Marginal price of BE determining the transition to the system of calculation using average prices

LIM_{BE+} = 20,000 CZK/MWh, LIM_{BE-} = (-20,000) CZK/MWh

Determination of SPI if no balancing energy (BE) has been activated:

Condition	Determination of SPI
no activation of BE	→ SPI = The price of the unrealized activation of BE

The price of the unrealized activation is determined as the average price consisting of the first bid with the highest price of negative balancing energy in the local ranking for negative balancing energy from reserves for automatic frequency and power balance and the first bid with the lowest price of positive balancing energy in the local ranking for positive balancing energy from reserves for automatic regulation of frequency and power balance.

Determination of individual components entering into the calculation of the settlement price of imbalance:

Component	System imbalance ≤ 0	System imbalance > 0
BE component (Determination of the price of the delivered BE against the SI direction [CZK/MWh])	CPI _{MaxBE+} = maximum price of positive BE	CPI _{MaxBE-} = minimum price of negative BE
SI component (Basic SI directive [CZK/MWh])	$CPI_{directive\ SI} = BE_{aFRR}^+ - \alpha * SI$	$CPI_{directive\ SI} = BE_{aFRR}^- - \beta * SI$
Intra-Day market (IM) component (Weighted average of prices on IM trades [CZK/MWh])	$CPI_{IM} = WAP_{IM} + k$	$CPI_{IM} = WAP_{IM} - k$

Protective component of BE (Weighted average of BE costs [CZK/MWh])

$$CPI_{PC} = \frac{(\sum C_{BE} + \text{weighted average of BE prices in the opposite direction of SI} * \sum \text{imbalances of BRP against the direction of SI})}{(-\sum \text{imbalance of BRP in the direction of SI})}$$

Legend:

CPI – component price of imbl. entering the formula for SPI

α – price directive for negative SI set by ERO (5.5 CZK/MWh²)

β – price directive for positive SI set by ERO (3.5 CZK/MWh²)

WAP_{IM} – weighted average price on Intra-Day Market (IM) trades

C_{BE} – activated balancing energy costs

BRP – balance responsible party

SI – system imbalance

BE – balancing energy

BE_{aFRR} – marginal price of the standard product from reserves

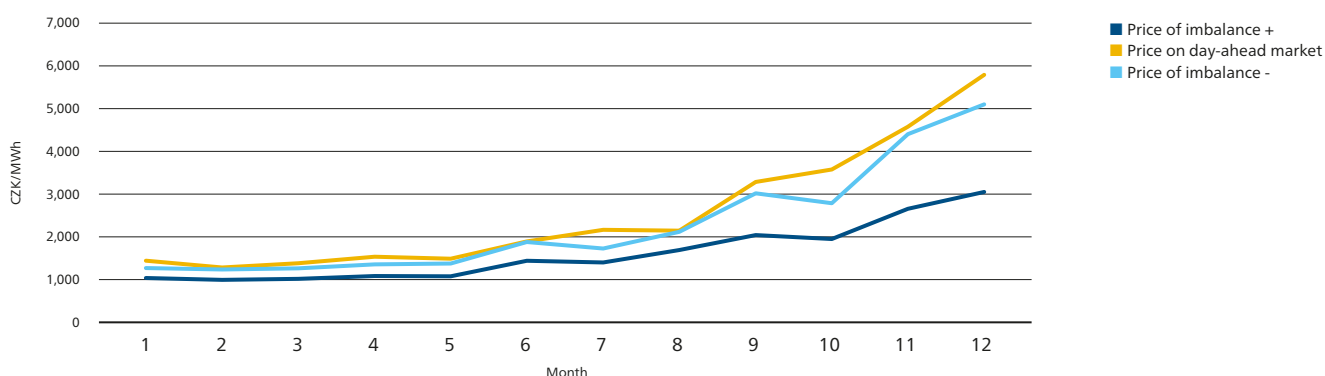
for power balance control with automatic activation

delivered against the direction of the system imbalance (SI)

k – ERO price directing the IM component (250 CZK)

As of 1 January 2010, there was a closer dependence of the price of the counter-imbalance (imbalance of BRP in the direction of the opposite system imbalance) on the price of balancing energy. The counter-imbalance settlement price is the weighted average of prices from activated balancing energy in the opposite direction to the system imbalance. Progressive imbalance prices (in relation to the volume of system imbalances) and the difference between the imbalance price and the counter-imbalance price provide a sufficient incentive for balance responsible parties to minimize their imbalances.

Average monthly prices of positive and negative imbalances and average monthly prices on the day-ahead market in 2021



Gas market

Organized Short-term Market

The organized short-term gas market allows gas traders to optimize their trading positions at short notice before the close of the gas day in response to the current situation in their production or consumption portfolio.

The short-term gas market is comprised of the following trade platforms:

- Intraday gas market

Other short-term markets:

- Unused flexibility market

Key rules governing trading on OTE's short-term markets:

- ensuring a neutral and secure environment;
- support for market competition and ensuring non-discriminatory conditions;
- provision of market-related information;
- ensuring anonymous trading and acting as a central counterparty;
- hedging risks in respect of financial settlement of transactions and physical supply of the commodity.

Trade platforms

Intraday gas market

The organized intraday gas market allows gas market participants continuous trading in the day before the gas day of delivery, as well as in the course of a gas day of delivery. Only balance responsible parties the transmission system operator, and gas storage operators can trade on this market under the terms laid down in the Energy Act and the Market Rules. The intraday gas market opens at 9:00 on the day preceding the gas day on which gas is delivered.

In 2021, a total of 4,007 GWh of gas was traded on the intraday gas market. The average price of gas traded on the intraday market in 2021 amounted to EUR 46.25/MWh. 113 gas traders were registered to trade on this market.

Transactions are executed in the EUR currency and the trading unit is also one gas day. Financial settlement of the transactions is carried out in EUR or CZK. Delivery point of traded gas is virtual trading point of the Czech Republic (VTP CZ), operated by OTE.

Unused flexibility market

Balance responsible parties may anonymously buy and sell available positive or negative unused flexibility on the unused flexibility market. The market is organized in CZK currency daily for the preceding gas delivery day on the basis of auction principle (matching curves are used to set a marginal prices and traded volumes of positive and negative unused flexibility).

Short-term markets in the gas sector

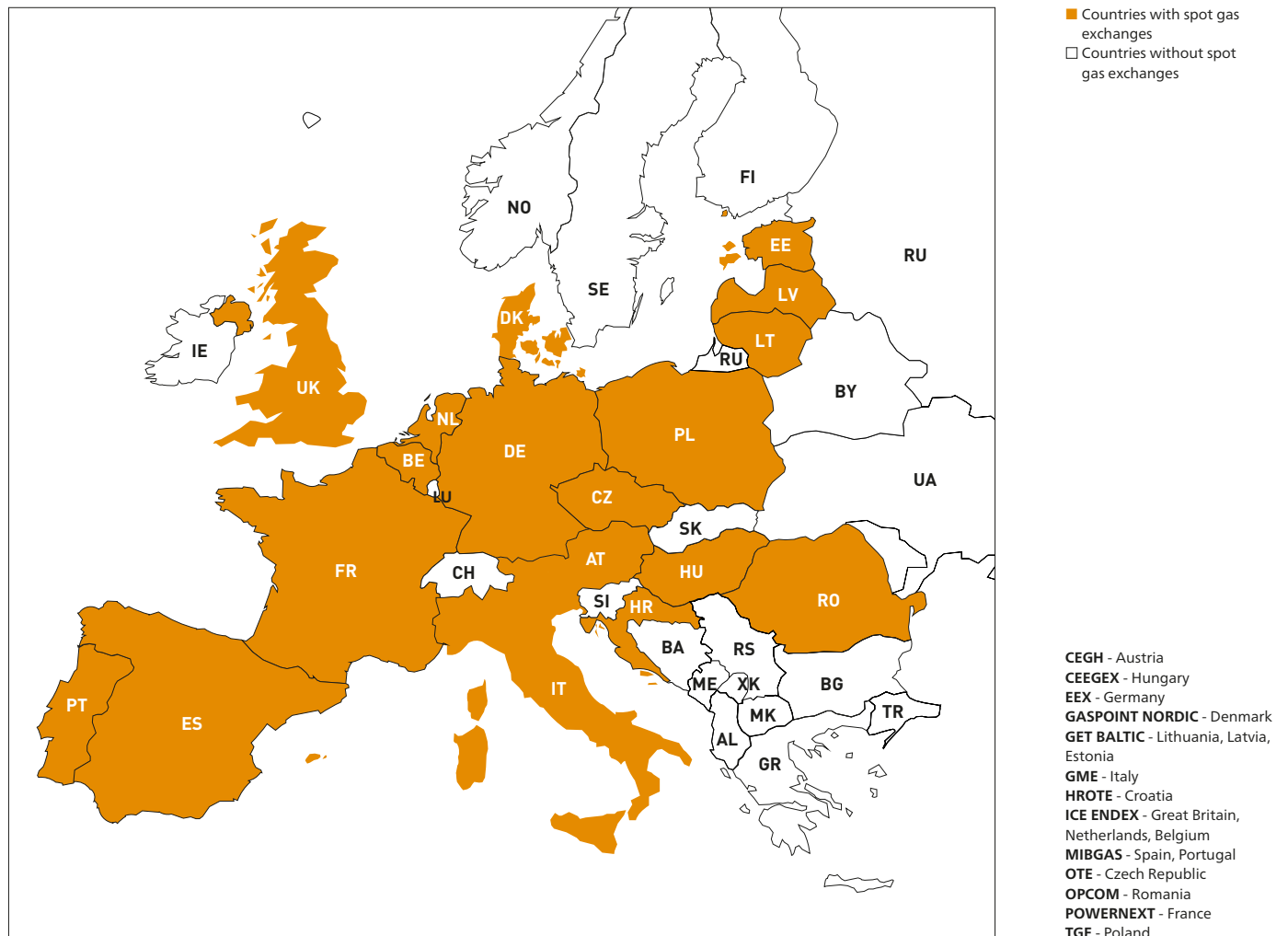
	Intraday gas market	Unused flexibility market
Type of market	continuous matching	auction principle
Traded period	*1 day	*1 day
Minimum tradable volume	0.1 MWh	0.001 MWh
Maximum tradable volume	99,999.9 MWh	not defined
Smallest quantity increment	0.1 MWh	0.001 MWh
Trading currency	EUR	CZK
Delivery point	VTP CZ	VTP CZ
Minimum price	EUR 0.01/MWh	CZK 0.01/MWh
Maximum price	EUR 4,000/MWh	CZK 99,999/MWh
Smallest price increment	EUR 0.01/MWh	CZK 0.01/MWh
Zero price option	NO	NO
Market opens at	9:00 D-1	13:00 D+1
Market closes at	5:00 D+1	13:45 D+1

*Gas day is defined from 6:00 to 6:00 of the following day.

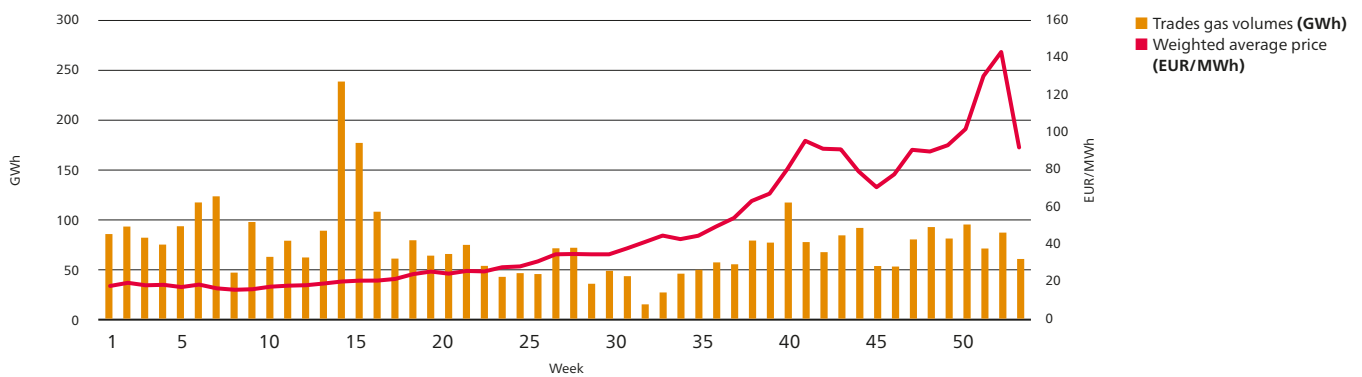


The organized intraday gas market is attractive not only for balancing the traders' positions, but also during sudden climatic changes or complications in the transmission system.

Gas trading platforms



Volumes of traded gas and average prices on the intraday gas market in specific weeks of 2021



Gas market

Evaluation and Settlement of Imbalances

OTE has carried out evaluation and settlement of imbalances on the gas market since 2010 pursuant to the Energy Act. Legislation defines market participants for which OTE settles imbalances as Balance Responsible Parties (BRP) and sets out the method of determining volumes of imbalances pertaining to BRPs.

Imbalances of BRPs are evaluated as follows:

- daily for each preceding gas day (daily imbalances);
- after the end of the month for the previous gas month (monthly imbalances);
- after completed receipt of adjusted data, i.e. the fourth month following the evaluated month (final monthly imbalances).

Daily imbalance of BRP = the sum of gas supplied to the gas system from gas production facilities – the sum of gas consumption by customers of the relevant BRP from the gas system + the balance of gas purchased/sold on organized short-term markets + the balance of bilateral contracts registered with OTE + the balance of gas injection and withdrawal into/from gas storage facilities nominations + the balance of export and import to/from abroad.

System imbalance of the entire gas system on the relevant gas day equals the sum of all traders' imbalances on the same gas day (including gas traders with transit contracts that are not BRPs).

Each BRP will have a flexibility account and a balance account of imbalances (hereinafter the aggregated account of imbalances) registered in the OTE system. The initial balance of the aggregated account of imbalances of a BRP for the relevant gas delivery day is the balance of the BRP's aggregated account of imbalances after the previous gas day. It can be said that the balance of the BRP's aggregated account of imbalances corresponds to the quantity of gas that the relevant BRP is to supply to the gas system or take from the gas system to make its gas balance in the gas system equal zero.

The final balance of the aggregated account of imbalances of a BRP at the end of the gas day is defined as the sum of the initial balance of the BRP's aggregated account of imbalances at the beginning of the gas day and the daily imbalance of the BRP provided the sum is within the flexibility limit of the respective BRP.

In the event the balance of the aggregated account of imbalances of a BRP exceeds the flexibility limit of that BRP and the BRP fails to purchase unused flexibility of another BRP, the excess amount equals the daily imbalance quantity of the BRP and this amount is settled financially at a unit price.

The final balance of the aggregated account of imbalances of a BRP is thus the sum of the initial balance of the aggregated account of imbalances of the BRP at the beginning of the gas day, daily imbalances of the BRP and the daily imbalance quantity of the BRP, while respecting the convention for positive/negative signs.

To determine the amount of unit price for managing the daily imbalance quantity of the balance responsible party (applicable price), the following rules apply:

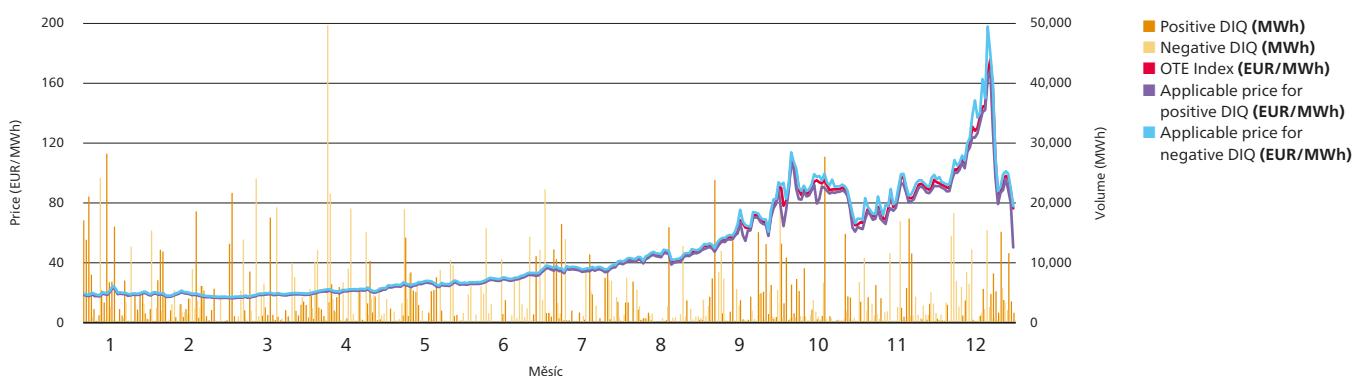
For negative daily imbalance quantity, the higher of the two prices below shall be applied in EUR:

- The highest price of the purchase of the transmission system operator on organized markets associated with a balancing action if such price exists.
- Weighted average daily price for the gas day according to the OTE Index for the relevant day, increased by 2%–5% according to the volume of system imbalance.

For positive daily imbalance quantity, the lower of the two prices below shall be applied in EUR:

- The lowest price of the sale of the transmission system operator on organized markets associated with a balancing action if such price exists.
- Weighted average daily price for the gas day according to the OTE Index for the relevant day, reduced by 2% – 5% according to the volume of system imbalance.

Daily imbalance quantities (DIQ) and their prices in 2021



Gas market

Linepack Flexibility Service

The linepack flexibility service is the only tool allowing balance responsible parties to make use of the inherent capability of the gas system, which is linepack variation with no impact on the smooth and secure operation of the gas system.

Flexibility

The gas system allows for using a linepack flexibility service. It facilitates oscillations of trading positions of balance responsible parties within the set flexibility limit so that no additional costs of offsetting gas imbalances are incurred unless these limits are exceeded. The flexibility service is provided free to those balance responsible parties that have a reserved capacity at border points or at gas storage points (unless the allocation rule ensuring equality of nomination and allocation is applied at these points for the relevant gas day), and those balance responsible parties responsible for imbalances at specific customer points of delivery. The size of the provided flexibility is primarily derived from the size of the reserved capacities at points with continuous measurement of type A and B or alternatively at consumption points with non-continuous measurement of type C and CM. From 1 August 2021, the transmission system operator has the opportunity to adjust the amount of flexibility provided daily (by activating one of the 3 reduced levels compared to the basic level) depending on the utilization of transmission capacities, when the amount of provided flexibility drops with increasing utilization of transmission capacities.

Unused flexibility

Unused flexibility of each balance responsible party is determined for the relevant gas day as the difference between the current balance of the flexibility account of the relevant balance responsible

party (prior to the launch of the unused flexibility market) and the amount of flexibility provided for the relevant day to this balance responsible party, while respecting the direction of the purchased and sold flexibility. This unused flexibility cannot exceed twice the provided flexibility for the relevant gas day.

Unused flexibility market

OTE organizes the unused flexibility market in CZK currency on the principle of matching supply and demand curves on each gas day for the previous gas day. It is a platform that enables individual balance responsible parties to use the market approach for settling imbalances directly between them, even though they exceed the flexibility of the balance responsible party, but in view of the overall position of the gas system these imbalances do not require a balancing action of the transmission system operator. The balance responsible parties are motivated to participate in the unused flexibility market to prevent financial settlement of the daily imbalance quantities. However, if a system imbalance (the sum of all daily imbalances of balance responsible parties) occurs that could lead to a balancing action of the transmission system operator, the rules of the unused flexibility market ensure that such an imbalance cannot be used on the unused flexibility market (i.e. it will not be possible to acquire unused flexibility of other balance responsible parties to cover the imbalance), and the balance responsible party will pay an applicable price for this imbalance exceeding the flexibility limit.

Účet odchylek s dokoupenou nevyužitou flexibilitou a denním vyrovnávacím množstvím

