



ROMANIAN ENERGY REGULATORY AUTHORITY



NATIONAL REPORT 2017

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Abbreviations

ATC – Available Transport Capacity

BRM - Romanian Commodities Exchange

CPC - Competitive Market Component

ENTSO-E – The European Network of Transmission System Operators for Electricity

ENTSO-G - The European Network of Transmission System Operators for Gas

SoLR – Supplier of Last Resort

HHI – Herfindahl-Hirschman Index

HV - High Voltage

LV - Low Voltage

MV - Medium Voltage

TSO – Transmission System Operator

DSO – Distribution System Operator

CMBC-OTC – Centralized Market of Bilateral Contracts with Double Continuous Trading
CMBC - Centralized Market of Bilateral Contracts

CMBC-CN – Centralized Market of Bilateral Contracts by public auction with Continuous Negotiation

CMBC-EA – centralized market of bilateral contracts with extended auction mechanism

CMUS- centralized market for universal service

PCR - Price Coupling of Regions

BM - Balancing Market

BRP – Balancing Responsible Party

IDM - Intra-Day Market

DAM - Day Ahead Market

NPS - National Power System

NTS - National Gas Transmission System

1. Main achievements regarding the electricity and gas markets

This document represents the national report drawn up by the National Energy Regulatory Authority (RO: ANRE) for similar institutions from Member States and who are members of the Council of European Energy Regulators - CEER, the Agency for the Cooperation of Energy Regulators - ACER and the European Commission for the fulfillment of the reporting obligations stipulated in the provisions of art. 37, par. (1) (e) of Directive 2009/72/EC and Art. 41, par. (1), let. (e) of Directive 2009/73/EC. The report also meets the reporting requirements stipulated by Article 9, par. (1), let. §), par. (4), (5), (6) and (7) of Law no. 160/2012 for the approval of GEO no. 33/2007 regarding the organization and operation of ANRE. The report contains information on the evolution of the electricity and gas markets for the period comprised between 1 January 2017 and 31 December 2017, in accordance with ACER-CEER requirements.

1.1 Electricity market

Significant developments on the electricity market during the analyzed period consisted of:

- The data collected monthly from a number of 125 producers holding dispatchable units for electricity from hydro, nuclear, thermal, wind, photovoltaic and biomass sources (at least one dispatchable group) both state-owned license holders and belonging to the private sector, showed that **61,324 GWh of electricity was produced in 2017 compared to 61,797 GWh in 2016**. A similar ratio is maintained in the case of **electricity supplied to grids** (including own consumption and energy sold directly to power stations), which in 2017 was **57,484 GWh**, approximately 445 GWh lower than last year.
- Regarding the mix of resources, there have been significant increases in electricity production from wind, coal and nuclear fuel, thus offsetting the significant decrease in hydroelectric production due to low hydraulicity compared to 2016, considered a normal year, 2017 being classified as a dry year.
- Overall, 2017 was characterized by **an increase in domestic electricity consumption by more than 3% compared to 2016**, calculated based on the energy supplied to grids by producers with installed capacity of more than 5 MW and the import-export balance. **Trade exchanges with other power systems resulted in exports, but less than in 2016 in terms of quantity**.
- Energy entering the transmission network (RET) in 2017 increased by 1.66% compared to the previous year. **RET's own technology consumption fell by 4.68% compared to the previous year**. Factors that contributed to the reduction of losses were the favorable distribution of physical import/export flows on interconnection lines in the North-West part of the country and the reduction of corona losses on power lines, amid favorable weather conditions.
- **In 2017, the trend of degradation of the ENS and AIT service continuity indicators remained the same, in the category of interruptions caused by TSO**. The degradation of the ENS and AIT indicators over the previous years is explained by the TSO through the emergence of extreme weather conditions that have increased in intensity from one year to the next, while the equipment is in an advanced state of wear due to its long duration of useful life, especially in the case of overhead electric lines. The measures taken by the TSO subsequent to these events were the replacement of the affected equipment and the re-analysis of the technical design and sizing conditions of the

installations, taking into account climate change. ANRE has applied fines for the non-performance of the maintenance and investment programs.

- In the case of the distribution networks, at a country aggregate level, **SAIDI planned interruptions** registers in 2017 an increase in the average value to 193.1 min/year compared to 183.5 min/year in 2016. Also at country aggregate level, **SAIDI unplanned interruptions** registers an insignificant decrease in 2017, namely 283.92 min/year compared to 289.9 min/year in 2016. Both values, however, remain above the range of indicators registered in EU countries.
- **The average durations of the LV and MV connection process had lower values in 2017 compared to 2016, as follows:** 83 days compared to 87 days, and 234 days compared to 255 days, respectively.
- **Producers' access to the promotion scheme for the production of electricity from renewable sources (E-RES)** based on green certificates had as deadline 31 December 2016¹. The number of accredited renewable energy producers at the end of 2017 was 774 (of which 67 use wind energy, 103 use hydraulic power in power plants with installed power of 10 MW or less, 576 use solar energy and 28 use biomass, including waste fermentation gas and sludge fermentation gas from waste water treatment plants). At the end of 2017, the installed capacity accredited in the E-RES production units was 4787 MW, down from 2016, with electric capacities for which the accreditation period expired.
- Starting July 1, 2017, **the average electricity transmission tariff** decreased by 9.8% compared to the tariff approved for the previous year (1 July 2016 - 30 June 2017).
- **Average electricity distribution tariffs** decreased by a variation of - 0.31% for high voltage, - 1.98% for medium voltage and - 0.97% for low voltage, relevant for household customers. The decreasing evolution of electricity distribution tariffs in the third regulatory period (starting with 2014) is explained both by the increase in the amount of distributed electricity and by the reduction in regulated revenues subsequent to the more stringent requirements imposed by methodology for the recognition of costs (reinforcement of checks, request for additional data and supporting documents etc).
- In 2017, the highest value of the degree of utilization for exports calculated as the average of monthly values was recorded for the Serbian border (about 77%), followed by exports to Hungary (54%), while in terms of imports, the most used border was the Bulgarian (35%) and the Hungarian borders, respectively (approximately 29%). On the export relationship with Serbia, the utilization rates were high every month, reaching a peak in March, when over 95% of the capacity was used. The month with the highest utilization rate of the export relationship with Hungary was August (64% of the total assigned capacity).
- Pursuant to (EU) Regulation No. 347/2013, we identified the projects of common interest that Romania is set to perform, leading to the level of interconnection requested by the European Commission in the *Communication on achieving the 10% electricity interconnection objective; preparing Europe's electricity grid for 2020*.

¹ under art. 2554 of the New Civil Code and Regulation (EC, Euratom) No. 1182/71 of the Council of 3 June 1971 determining the rules applicable to periods, dates and time limits

- Currently, the interconnection capacity presented in Romania's Country Report is 7%, resulting from dividing the NTC import value of 1.4 GW to the net generation capacity (NGC - Net Generation Capacity) of 20.23 GW, values valid for January 11, 2017, 19:00 CET. By achieving the interconnection with Serbia in 2018, Romania's interconnection rate would increase from the current 7% to over 9%, thus being closer to the 10% target. With regard to achieving the 15% interconnection target for 2030, this objective is intended to be achieved mainly through the implementation of PCIs and other RET development projects included in the RET Development Plan between 2018-2027.
- **The volume of electricity transactions** carried out on the wholesale market in 2017 is as follows:

Components of the wholesale market	2013 (GWh)	2014 (GWh)	2015 (GWh)	2016 (GWh)	2017 (GWh)	Evolution compared to 2016 - % -	Percentage of internal consumption in 2017 - % -
Regulated contracts market	16755	9058	6413	4152	1741	▼58.1	3.2
Directly negotiated contracts	15386	4611	1509	1283	616	▼52.0	1.1
Other contracts platforms (brokerage)*	5466	-	-	-	-	-	-
Centralized bilateral contracts, of which:	18779	37284	56717	65337	59829	▼8.4	109.6
CMBC -EA**	N/A	34319	31407	21729	22821	▲5.0	41.8
CMBC -CN**	N/A	1621	7915	12718	11474	▼9.8	21.0
CMBC-OTC	-	1344	17394	30890	25534	▼17.3	46.8
Centralized market for universal service	-	-	4592	8046	5601	▼30.4	10.3
Day Ahead Market	16346	21496	22496	25810	24716	▼4.2	45.3
Intra-Day Market	14	64	76	131	152	▲16.0	0.3
Balancing Market	4168	4169	4861	4001	4497	▲12.4	8.2
Export***	2466	8200	10504	8587	6548	▼23.7	12.0

Source: Monthly reports of participants on the wholesale electricity market, OPCOM SA and CNTEE Transelectrica SA - ANRE processing

*After the effective date of the Law on Electricity and Natural Gas no. 123/2012, as further amended and supplemented, and the introduction of the obligation of transparent, public, centralized and non-discriminatory trading, the volume of transactions carried out based on contracts concluded on brokerage platforms other than those managed by OPCOM SA gradually diminished

** For 2013, the data on the volumes traded for the two trading methods existing at that date (CMBC and CMBC -CN) are available only cumulatively

*** The quantity related to the export contracts in 2017 resulted from the reports of the participants to the wholesale market and includes both the quantities exported by the suppliers and those exported through CNTEE Transelectrica, in its capacity as shipping agent for the coupled DAM; export volumes have been verified with DAMAS platform notifications, with minor differences in some cases

- **In 2017, the predominant trading was on centralized bilateral electricity contract markets, organized at OPCOM SA (CMBC-OTC, CMBC EA and CMBC -CN), which mainly provides for transactions on medium or long-term contracts, followed by DAM in the case of short-term transactions.** In the legislative context required by the law, transactions carried out on brokerage platforms were virtually ceased in 2014, the participants being redirected to the centralized continuous double negotiation market at OPCOM SA with various trading instruments. At the same time, **the volume of electricity traded on negotiated bilateral contracts registered a steady decrease**, reaching in 2017 the lowest share as compared to domestic consumption (about 1.1%), the quantities pertaining to contracts concluded by competitive producers and suppliers prior to the entry into force of the Law.
- Also, compared to 2016, there is a **further decrease in the amount of electricity sold on regulated contracts**; this is a consequence of the increase in the deregulation level stipulated in the Memorandum of Understanding approved by the Romanian Government in March 2012, pursuant to the obligations

undertaken in the relationship with the IMF, the World Bank and the European Commission regarding the approval of the calendar for phasing-out regulated electricity tariffs for end-users who do not use their right to eligibility.

- The comparative analysis of the average annual prices resulting from the transactions concluded on components of the wholesale market in 2017 compared to the previous year reveals **the increase of the average annual prices on all components of the wholesale market except for the regulated one**, on the backdrop of an increase in the domestic consumption, a regional context characterized by weather conditions similar to those in Romania, and the market conditions of 2017: water resource depletion, programmed or accidental unavailability of important dispatchable units, increase in the quantities offered for purchase and the participants' willingness to purchase electricity at high and very high prices on the DAM, suspension of tenders on CMUS for the third quarter due to lack of sale quote in June. All this led to a long-term energy shortage on the market, resulting in an acute shortage of supply on the DAM, correlated with an increase in the energy demand to be covered on the BM.
- In 2017, 105 electricity provider license holders activated on the **retail market**, of which 5 are suppliers assigned by ANRE as suppliers of last resort and 25 also hold licenses for the commercial exploitation of power generation capacities.
- At the level of the entire year, out of **a final consumption of approx. 48.4 TWh** (3% higher than last year), 35.8 TWh is the amount of electricity supplied to non-household final consumers (74% of total), while household consumers had an annual consumption of 12.6 TWh (26%). The same ratio (74%/26%) applies to the consumption for customers supplied under a competitive regime compared to those supplied under a regulated regime (real degree of retail opening), 3 percentage points higher than in 2016.
- In 2017, the supplier switching rate for non-household consumers (according to energy supplied) was 4.08%. For households, the supplier switching rate per measuring points was 0.84%, and the renegotiation rate for same supplier contracts was 1.31%. On the total retail market, the supplier switching rate per measurement point was 1.06%.
- According to the schedule for phasing-out regulated tariffs, stipulated by the Memorandum of Understanding signed by the Romanian Government with the European Commission on 13 March 2012, the last two phases of phasing-out regulated tariffs were covered in 2017, the electricity purchase percentages on the competitive market for SoLR customers being 100% for non-household customers and 80% for household customers between 01.01.2017 and 30.06.2017, and 90% between 01.07.2017 and 31.12.2017. Starting with 1 January 2018, the percentage of electricity purchased on the competitive market for SoLR customers will be 100% for household customers.
- At the end of 2017, **666 participants on the wholesale electricity and natural gas markets and 3 RRM (Registered Reporting Mechanisms)** - OPCOM SA, the Romanian Commodities Exchange and Transgaz - had **ACER codes** issued by ANRE, being thus authorized by ACER to report transaction data and fundamental data pursuant to the (EU) Enforcement Regulation No. 1348/2014.
- During the analyzed year, ANRE received **3 notifications of suspicions regarding the infringement of the provisions of art. 3 and/or 5 of the REMIT**, in accordance with the provisions of Art. 15 REMIT related to transactions carried out on the wholesale electricity market. The notified cases are in different stages of analysis, from preliminary analysis to reassignment to the investigations compartment, pursuant

to the regulation developed under the primary legislation and the operational procedure for the management of notifications regarding the infringement of art. 3 and art. 5 of REMIT. At the same time, in certain cases, ANRE collaborates with other national institutions and authorities, providing them with the results of the preliminary analyses.

1.2. Natural gas market

The significant developments on the natural gas market consisted of:

- **The annual gas consumption** continued its growth trend from 2016, reaching about **12.26 billion m³**, with an increase of about 5% in 2017 compared to 2016.
- **The domestic natural gas production** in 2017 from current production as well as extracted from storage and which came into consumption accounted for approximately **89.44%** of total sources, the current **import** and volume extracted from storage representing **10.56%**. The first two producers (Romgaz and OMV Petrom) together covered about 94.91% of this source. The quantities exported during 2017 accounted for 0.24% of the quantities extracted from the production perimeters.
- Natural gas is transported via mains of a total length of over 13,350 km, and the 37 natural gas distribution operators that hold licenses provided by ANRE have in total as of 31.12.2017 gas distribution pipelines and connections in a total length of 49,444 km, of which only 7,3% are more than 30 years old.
- The Development Plan of the National Gas Transmission System (PDNTS) for the period comprised between 2017 and 2026 was approved by **ANRE Decision no. 910/22.06.2017**, and the strategic projects proposed by the TSO for the development of the NTS during 2017-2026 envisaged: ensuring an adequate degree of interconnection with the systems of the neighboring countries, the creation of regional gas transport routes in order to ensure the transmission of natural gas coming from the two new sources, the creation of the infrastructure and the necessary capacity for taking over and transporting natural gas from offshore perimeters of the Black Sea for capitalization on the Romanian and on other markets in the region, the expansion of the gas transmission infrastructure for the improvement of gas provision to areas where there is scarcity, the creation of a single integrated market at European Union level.
- The estimated value of the investments scheduled for 2018 in the transmission network is Ron 687 million, 36% more than the investment program for 2017, which was Ron 505 million. Of this amount, Ron 617 million is the amount programmed for NTS modernization and development works, Ron 155 million higher.
- For 2018 there are plans for new pipelines for natural gas distribution as well as the replacement of pipelines and connections, both steel and polyethylene, in a total length representing 2.3% of the length of the distribution pipes and the connections in operation as at 31.12.2017. The new pipes represent 1% of the length of the pipes and connections in operation at the end of 2017.
- In 2017, all distribution operators registered **an increase in the volume of connection requests**, which is why the average time required to perform a connection increased by more than 40% compared to 2016 and by 60% compared to the average wait in 2015-2016, which was also the basis of the estimation of the expected volumes of work to be contracted with the economic operators performing the works. This increased volume of work, driven mainly by the real estate development

phenomenon, as well as by customer orientation towards the use of natural gas instead of other traditional fuels, had a strong impact on the capacity of authorized economic operators to meet contractual deadlines.

- In 2017, **the quantities traded on centralized markets** amounted to a total volume of **63.6 TWh**, 75% higher than in 2016, of which 62.3 TWh for the wholesale market and 1.3 TWh for the retail market.
- In December 2017, **85 suppliers** were active on the **retail gas market**, of which: 38 suppliers operating on the regulated retail gas market and 85 suppliers operating on the competitive natural gas retail market.
- The total number of final gas customers in December 2017 was approximately 3,714,699, of which 194,426 non-household (about 5.23%) and 3,520,273 household customers (about 94.77%). The total number of regulated customers in December 2017 was **3,429,233**, representing only household customers. **The total number of customers supplied under competitive regime in December 2017 was 265,466.**
- In 2017, there is an **approximately 10% increase in the real degree of openness of the natural gas market** compared to 2016, which has reached about 72% of the total consumption of final customers.
- **The total gas consumption in 2017** was approximately **130 TWh**, showing an increase by about 5% compared to 2016, a trend continued in 2016 from 2015. The total consumption of the natural gas sector is partially accounted for by consumption within sector-specific activities or by operators' consumption in relation to specific technological processes: technological consumption, energy consumption and deviations due to the measuring instruments. Excluding these consumptions from the total, in 2017 the consumption delivered by suppliers to final customers was approximately 120.3 TWh, of which approx. **86.1 TWh** (71.53%) was **non-household consumption** and **34.2 TWh** was **household consumption** (28.47%).
- **The percentage of adjustment of regulated prices for household customers, starting with 1 April 2017**, calculated as an average according to the market share of each economic operator performing natural gas supply activities on the regulated market, **was 2.41%.**
- At the initiative of ANRE and NTSGN TRANSGAZ SA, a working group was set up with the participation of ACER, ENTSO-G, ANRE, NTSGN TRANSGAZ SA and DG ENERGY, its purpose being **to implement harmonized EU market rules regarding the gas NTS entry/exit regime, based on transactions at one single central virtual trading point (VTP)** and transpose them in the NTS Network Code. As a first step, the working group assessed the degree of implementation of European regulations, on the basis of which it drew up a concept document that presents the principles behind the entry/exit system with a central virtual trading point, a system to be implemented on the natural gas market in Romania also.
- In view of the **incremental capacity allocation at the interconnection point of the Romanian Gas Transmission System with the Hungarian Gas Transmission System** in Csanádpalota, the *Handbook of the open-ended seasonal procedure to be carried out jointly by Societatea Națională de Transport Gaze Naturale „Transgaz” – S.A. Mediaș and Földgázszállító Zártkörűen Működő Részvénytársaság - FGSZ ZRT* was drawn up.

1.3. Consumer protection and dispute resolution in the electricity and natural gas sector

- **As of 01.01.2018, subsequent to the completion of the deregulation calendar, there will no longer be any regulated tariffs approved by ANRE**, the price of the energy component in the structure of the final price being determined in the light of market price developments.
- In 2017, ANRE developed two instruments by which final customers can compare the (standard) electricity and gas offers of Romanian suppliers. These applications can be accessed on the ANRE website, at <http://www.anre.ro/ro/info-consumatori/comparator-de-tarife>, and <http://www.anre.ro/ro/info-consumatori/comparator-oferte-tip-de-furnizare-a-gn>. The **comparators** were developed in order to provide users with an independent, equidistant and non-commercial instrument allowing the comparison of supply prices. Between 1 June and 31 December 2017, the electricity comparator was accessed by **81,928 users**, and the natural gas comparator - by **21,345 users**.
- **The total number of consumers integrated in intelligent metering systems** between 2015 and 2017 is 443,000, namely 4.8% of the total number of 9.24 million consumers supplied with low voltage (the percentage varies among operators between 0 and 12%). The investment cost for these works is approx. Ron 164.8 million, and the resulting unit cost is Ron 372. There is a high degree of variation in unit costs between the operators' projects due to the different technical solutions chosen and, after identifying the optimal solution, the unitary cost of the investment may decrease.
- As a result of the control operations carried out, **710 official reports/records of findings and (subsequent) penalties pertaining to contraventions were drawn up** in 2017, and **993 contraventional sanctions were applied**, as follows: 518 in the field of electricity, 439 in the field of natural gas, 36 in the field of energy efficiency.
- **The fines applied by means of the records of findings and (subsequent) penalties pertaining to contraventions amounted to Ron 22,709,359.35.**

2. The electricity market

2.1. Network regulation

2.1.1. Unbundling

Regarding the certification of Compania Națională de Transport al Energiei Electrice "Transelectrica" S.A. as a transmission system operator within the national power system, according to the ownership unbundling model, in 2017 ANRE continued to monitor the compliance with the certification conditions prompted by the changes in the company's management (members of the board of directors and the supervisory board). For each change notified by the operator, ANRE verified that the unbundling conditions were maintained, finding that the relevant legal requirements were met.

CNTEE Transelectrica SA manages and operates the power transmission system and ensures electricity exchanges between the countries of Central and Eastern Europe as a member of ENTSO-E (The European Network of Transmission System Operators for Electricity). The length of the overhead electrical networks operated by Transelectrica SA is approximately 8834.4 km.

The ownership structure of CNTEE Transelectrica SA as at 31.12.2017 was the following: 58.7% - Romanian State, 33.9% - legal entity shareholders, 7.4% - natural person shareholders. As at 31.12.2017, the *legal entity shareholders* position also includes the holding of 5.72% of shares by DEDEMAN SRL (as at 31.12.2016, it was below 5%). The company has been listed on the Bucharest Stock Exchange since August 2006.

In 2017, **51 licensed electricity distribution operators activated in Romania**, of which 8 service over 100,000 customers each. All eight companies have completed the process of legal unbundling of the distribution activity from that of electricity supply. Electricity distribution operators with less than 100,000 customers do not have to separate the distribution activity from the other activities of the company pursuant to the provisions of Directive 72/2009/EC concerning common rules for the internal market in electricity.

ANRE monitored the enforcement by distribution system operators of the provisions of ANRE's Order no. 5/2015 for the approval of the *Regulation on ANRE's monitoring of the compliance programs set up by the electricity distribution operators*.

Analyzing the 2017 compliance agents' reports for 2017, which, according to the above-mentioned regulation, were received from the 8 distribution operators at the end of 2017, ANRE found that the measures included in the compliance programs are in line with the unbundling objectives established by the law and by the ANRE procedure.

In order to emphasize the unbundling process and avoid any confusion with the related supply companies, ANRE found it necessary for distribution system operators to undergo a detailed *rebranding* program as part of the *compliance program*. Thus, this program started in 2016 and is expected to be completed in Q4 2018.

It has been found that all eight distribution operators implemented the rebranding calendar and performed the activities included in the program by the indicated deadlines, namely:

- 1 Updating the compliance program, submitting it to ANRE and publishing on the distributor's website
- 2 Implementation of name, logo. Registration with the Trade Register, change of stamps
- 3 Commencement of customer notification campaign, including contracts
- 4 Signaling of locations to which customers have access: headquarters, branches, customer relations centers, information points
- 5 Workers' identification cards, badges, uniforms for employees providing the user interface at the headquarters, customer relations centers, information points
- 6 Amendment of website content and contact e-mail addresses
- 7 Amendment of name/logo in software programs used by customers
- 8 Amendment of document headers: endorsements, contracts, certificates, invoices, customer correspondence (which shall be printed at the same time as the contents of the correspondence)
- 9 Amendment of licenses
- 10 Workers' identification cards, badges, uniforms for employees not providing user interface
- 11 Change of pre-printed document headers: invoice books, forms, leaflets, stationery etc.
- 12 Signaling of locations to which customers have access: interior elements (banners, stands, other personalized decoration items)
- 13 Working and protective equipment for workers who perform interventions on users' electrical installations interface
- 14 Signaling of vehicles used for interventions on users' electrical installations interface.

The shareholding structure of the 8 distribution operators providing the service to more than 100,000 users is:

1. **Distribuție Energie Oltenia:** CEZ a.s., share on benefit and loss: 99.9999986019%/99.9999986019%; CEZ POLAND DISTRIBUTION B.V., share on benefit and loss 0.0000013981%/0.0000013981%.
2. **E-Distribuție Banat:** Enel Investment Holding B.V., share on benefit and loss: 51.0036%/51.0036%; Societatea de administrare a participațiilor în energie (SAPE) S.A., share on benefit and loss: 24.8683%/24.8683%; Fondul Proprietatea S.A., share on benefit and loss: 24.1281%/24.1281%.
3. **E-Distribuție Dobrogea** (as at 25.08.2018): Enel Investment Holding B.V., share on benefit and loss: 51.003%/51.003%; Societatea de administrare a participațiilor în energie (SAPE) S.A., share on benefit and loss: 24.903%/24.903%; Fondul Proprietatea S.A., share on benefit and loss: 24.094%/24.094%.
4. **E-Distribuție Muntenia:** Enel Investment Holding B.V., share on benefit and loss: 78%/78%; Societatea de administrare a participațiilor în energie (SAPE) S.A. share on benefit and loss: 10%/10%; S.C. Fondul Proprietatea S.A., share on benefit and loss: 12%/12%.
5. **Delgaz Grid** (as at 16.04.2018): ALLIANZ TIRIAC ASIGURARI SA, share on benefit and loss: 1.2292%/1.2292%; ALLIANZ INFRASTRUCTURE LUXEMBOURG I S.A.R.L., share on benefit and loss: 28.7708%/28.7708%; E.ON Romania S.R.L., share on benefit and loss: 56.4853%/56.4853%; MINISTERUL ENERGIEI, share on benefit and loss: 13.5147%/13.5147%.
6. **SOCIETATEA DE DISTRIBUȚIE A ENERGIEI ELECTRICE MUNTENIA NORD S.A.**, (as at 16.04.2018): ENERGETICA ELECTRICA SA, share on benefit and loss: 99.9999696922382%/99.9999696922382%; SOCIETATEA DE DISTRIBUȚIE A ENERGIEI ELECTRICE TRANSILVANIA SUD SA, share on benefit and loss: 0.00002821951748%/0.00002821951748%.

7. SOCIETATEA DE DISTRIBUȚIE A ENERGIEI ELECTRICE TRANSILVANIA SUD S.A., (as at 16.04.2018): SOCIETATEA DE DISTRIBUȚIE A ENERGIEI ELECTRICE TRANSILVANIA NORD SA, share on benefit and loss: 0.01%/0.01%; ENERGETICA ELECTRICA SA, share on benefit and loss: 99.99%/99.99%.

8. SOCIETATEA DE DISTRIBUȚIE A ENERGIEI ELECTRICE TRANSILVANIA NORD S.A., (as at 16.04.2018): SOCIETATEA DE DISTRIBUȚIE A ENERGIEI ELECTRICE MUNTENIA NORD S.A., share on benefit and loss: 0.00002693500685%/0.00002693500685%; ENERGETICA ELECTRICA SA, share on benefit and loss: 99.9999829770757%/99.9999829770757%.

Both the transmission and the distribution companies have their own headquarters, logos and websites.

The general conditions associated to licenses for the electricity distribution service granted by ANRE to distribution operators were approved by Annex 1 to ANRE Order no. 73/2014, published in the Official Gazette of Romania, Part I, no. 599/12.08.2014, the 8 concessionaire operators' obligations to respect them being stipulated by individual administrative decisions issued by ANRE. Art. 49÷51 of Annex 1 to the Order stipulate the obligations of these distribution operators in terms of independence, pursuant to the legal provisions for the unbundling of the power distribution activity from the supply thereof, including obligations regarding the maintenance of separate identities in relation to affiliated economic operators (Article 51: "In carrying out the power distribution service, including communication and advertising, the licensee must avoid creating confusion among affiliated economic operators as to the separate identity.")

The financial statements of TSOs and distribution operators are published separately.

The regulator sets out detailed rules on cost separation. These rules are included in the licensing conditions applicable to transmission and distribution activities as well as in the specific network tariff calculation methodologies. The normative acts in force provide sanctions in case of violation of the requirements on unbundling.

2.1.2. Technical operation

The Balancing Market

The balance between electricity demand and production is established on a commercial basis, in real time, on the **Balancing Market (BM)**.

In order to ensure the availability of enough energy so as to balance the system, TSO contracts reserves (ancillary services) for periods of up to one year (contracts that are regulated or concluded on the ancillary services market). Each reserve contract stipulates the seller's obligation to provide the TSO hourly with a certain amount of reserves of a certain type, the energy corresponding to the reserved power must be available on the BM.

The BM starts the day before, after the physical notifications have been accepted by the TSO, and is concluded at the end of the delivery day. The BM is a mandatory market, which means that participants operating dispatchable units must market all the available electricity here. The BM consists in trades of balancing energy pertaining to the secondary reserve, the fast tertiary reserve and the slow tertiary reserve.

The balancing energy is ensured by:

- a) increase of power, namely by increasing the output of a dispatchable unit or by reducing the consumption of a dispatchable consumer or of a pumping storage plant registered as dispatchable consumption;
- b) decrease of power, namely by reducing the output of a dispatchable unit or increasing the consumption of a pumping storage plant registered as dispatchable consumption.

BM participants have to submit daily bids for the amount of balancing energy they can provide in each dispatch interval (60 minutes) for power increase and decrease.

All bids validated on the balancing market establish the obligation of the BM participant to deliver the quantity offered on the BM upon the receipt of a relevant order from the TSO.

Only the balancing energy quantities that are actually delivered are paid on the BM. Payment for the balancing energy pertaining to the secondary reserve is based on the marginal price of the selected bids, and for the tertiary reserve, the payment is made at the price of the selected bid.

Each license holder must take financial responsibilities to the TSO to ensure the physical balance between the measured output, the scheduled purchases and electricity *imports* on one hand, and the measured consumption, scheduled sales and electricity *exports* on the other, for one or more *connection points* and/or for one or more *transactions*. Responsibility for balancing is taken via the responsible balancing party (BRP), set up by TSO at the request of the license holders. A license holder may register as a BRP or may transfer the balancing responsibility of an existing BRP.

If a BRP is in a negative imbalance, it will pay for the amount of electricity it bought from the TSO for balancing purposes at the hourly energy deficit price, and if a BRP is in a positive imbalance, it will sell to the TSO the surplus energy at the hourly energy surplus price.

The surplus energy price is determined for each dispatch interval as the ratio between the revenue resulted from the balancing of the system and the amount of balancing energy delivered for the decrease in power over the relevant dispatch interval. The energy deficit price is determined for each dispatch interval as the ratio between the system balancing payments and the amount of balancing energy delivered for the increase in power over the relevant dispatch interval.

Imbalances are settled after determining the measured values pertaining to all the participants' measurement points, challenging/settling appeals/ approval of these values by the participants and the aggregation thereof on BRPs, according to the aggregation formulas notified to the measurement operator; under these conditions, the settlement of the imbalances is carried out approximately one month after the end of the month of delivery. The market model leads to net revenues/costs for TSO following the balancing of the system, and the calculation thereof and redistribution to suppliers is carried out on the same date, in proportion to the consumption of the consumers supplied by each of them.

For Romania, a single balancing zone is defined, operated by a sole licensed system operator/ balancing market operator, CNTEE Transelectrica SA. Interaction with other control areas is carried out through inter-TSO mutual assistance exchanges, and not by accepting offers that are integrated in a common merit order.

Likewise, to previous years, in 2017 there were big differences between the quantity of electricity actually supplied by economic operators who commercially operate wind and photovoltaic power plants and the physical notifications thereof, differences that led to the need to balance the production-consumption ratio. The increase was caused to a significant extent by the large imbalances in the system in January and February 2017, mainly due to subcontracting participants on markets prior to IDM and BM, a determining

factor being the unilateral terminations of contracts concluded on centralized markets for contracts managed by OPCOM SA and the related cessation of electricity supply to final customers.

Performance standards and aspects regarding connection to the grid

In order to force network operators to maintain an adequate level of NPS safety, by means of **ANRE Order no. 49/2017** *The Performance Standard for the Electricity Distribution Service* was updated, by **ANRE Order no. 96/2017** it updated the *Regulation for the organization of the maintenance activity*, and by **ANRE Order no. 34/2018** it supplemented the *Procedure for the elaboration and approval of the investment programs for economic operators performing electricity distribution services*. All these amendments and supplementations of the regulatory framework pursued measures that would force network operators to carry out the maintenance and the investment activity at a level necessary so that electrical networks operate safely, reliably and efficiently. Thus, network operators are required to carry out maintenance works of at least 90% of the planned value, and investment works of at least 95% of the planned value. For failure to meet the performance indicators imposed by the performance standard for the power distribution service, an obligation was imposed on network operators to automatically indemnify the users of the electrical network. These amounts are a penalty for operators, because the compensations paid to users are not retrieved by tariff but incurred from profit, and therefore operators are encouraged to avoid them by meeting the required performance level.

The amendment and supplementation of the *Performance Standard for the Power Distribution Service* by **ANRE Order no. 49/2017** was necessary in view of the issues resulting from the enforcement of the provisions of the standard, as well as in view of the fact that distribution operators requested ANRE additional information on the interpretation of certain provisions of this regulation.

The main amendments and supplementations of the standard are:

- Elimination of the provision according to which the standard does not apply in situations of force majeure; force majeure actually suspends contractual obligations, so it is not necessary to include such provisions in the standard. The standard stipulates performance indicators for the electricity distribution service provided by the distribution operators in case of normal operation of electrical distribution networks,
- Establishment of a new definition for special incident, which still refers to the number of 5000 users affected by an interruption of the electricity supply/evacuation path, but refers to long interruptions (more than three minutes), eliminating the duration of 6 hours that used to define the special incident in the previous version of the standard; the defining criterion of the special incident is the large number of interrupted users,
- Notification of special incidents sent to ANRE no later than the following working day,
- The introduction of the 72-hour deadline for restoring the electricity supply/evacuation path at a place of consumption and/or production under special meteorological conditions that generated damages in the electricity distribution network located outside the cities,
- Elimination of accidental interruptions caused by users of the distribution network from the number of unplanned long interruptions, which is one of the performance indicators of the distribution service provided by the distribution operator,
- Introducing the distribution operator's obligation to pay the compensation for non-compliance with the quality of the voltage curve if the complaint submitted by the distribution network user is substantiated; specifications were introduced regarding the amount of the compensation that the distribution operator pays the user if, subsequent to the analysis, the user's complaint regarding the quality of the voltage curve proves to be substantiated,

- Introducing the distribution operator's obligation to respond to all requests/complaints/claims received in regards to the distribution service provided, granting this right to all parties interested in information regarding the distribution service provided by a distribution operator,
- Provision of a waiver from the payment of the compensation for non-observance of the maximum wait time provided by the regulation regarding connections to the network for the design of a connection, the receipt of the construction permit for the connection, the execution and the reception of the connection in case of an express request from the user for the postponement of the connection; the amendment takes into account the exceptional situations encountered in practice where the 90-day term stipulated in the regulation cannot be met by the distribution operator for reasons strictly related to the user,
- Eliminating the obligation of the distribution operator to replace/reprogram the meter upon the change of the contracting party - this amendment is necessary because there are situations where, when the signatory of the supply contract changes, if no change regarding the type of tariff is requested, there is no justification for replacing the existing meter at place of consumption;
- Elimination of the provisions regarding the payment by the distribution operator, at the user's request, of damages for the material loss caused by fault of the distribution operator, since these provisions are subject to contractual clauses,
- Introducing the obligation of the distribution operator to monitor and send ANRE the information regarding the compensations granted annually to users of distribution networks according to a new appendix,
- Amendment in the method of reporting certain commercial quality indicators of the electricity distribution service, in the sense of detailed presentation as per voltage levels.

The amendment and supplementation of the *Performance Standard for the Power Supply Activity* was carried out by **ANRE Order no. 06/2017**.

The *Standard* sets out provisions regarding the quality of the supply activity, the performance indicators that characterize the quality of the supply activity, the guaranteed levels of the guaranteed performance indicators, the compensations that suppliers of last resort pay to the final customers of the universal service in case of non-compliance with the guaranteed performance indicators and the reporting of the performance indicators related to the supply activity.

The main provisions of the *Standard*, with an emphasis on differences from the previous version, are:

- the supplier's quarterly determination of the performance indicators for the power supply activity, by categories of final customers, namely household, small non-household, large non-household;
- the obligation of the economic operators that have a power supply license but do not perform supply services to final customers to publish on their own websites, by the deadlines stipulated in the standard for submission of performance indicator reports to ANRE, a notification justifying why they did not calculate and publish such performance indicators;
- the supplier's obligation to organize and maintain a single point of contact.

The safety level and the technical state of the networks is reflected directly in the annual level of performance indicators for services, especially those related to the continuity of electricity supply. Every year, ANRE draws up a report on the achievement of the performance indicators for the power transmission, system and distribution services and on the technical state of the transmission and distribution networks, which it publishes by June 30th on website www.anre.ro at <http://www.anre.ro/ro/energie-electrica/rapoarte/rapoarte-indicatori-performanta>.

Main findings on the technical state of the electrical networks (further details can be found in the above-mentioned report):

Volume and age of transmission and distribution facilities

The Power Transmission Network (RET) includes: overhead electrical lines (OEL) with rated voltages of 750 kV, 400 kV, 220 kV, and 110 kV, and substations with an upper voltage of 750 kV, 400 kV and 220 kV. The total length of the electric transmission network is 8,834.4 km, of which the interconnection lines are 426.9 km long.

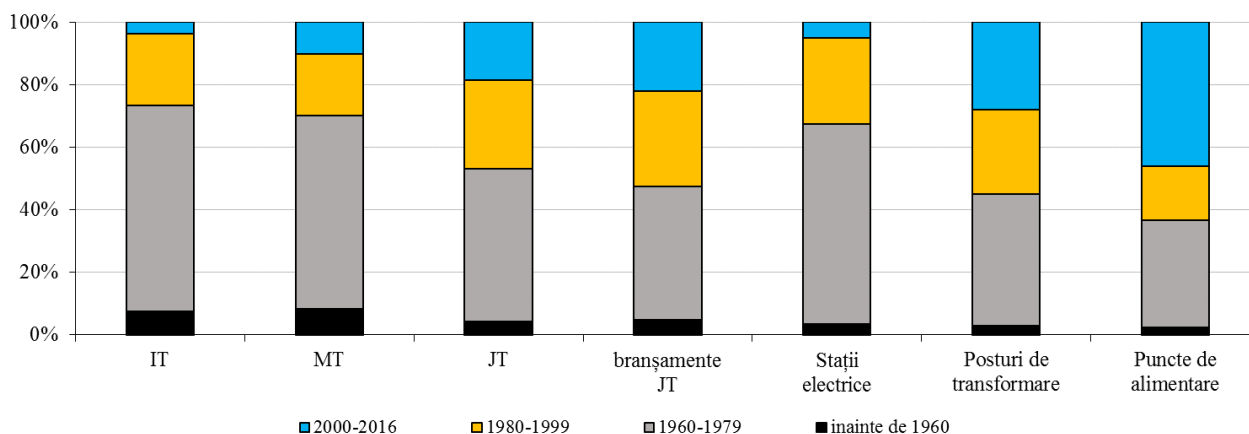
Of the total length of the OEL, 83.6% were commissioned between 1960 and 1979, 14.07% between 1980 and 1999, and approx. 2.3% after 2000. There is a small percentage of OEL commissioned after 2000. The OEL utilization rate is the percentage ratio between their age and the standard duration of useful life (48 years according to the latest edition of the Catalog on the Classification and Normal Operating Time of Fixed Assets), and the analysis carried out in 2017 showed a very high degree of utilization, namely 95.7% for the OEL commissioned before 1979, as they account for 83.6% of the total overhead lines managed by the TSO.

Of the total power installed in transformers/autotransformers, approx. 20.7% was commissioned between 1960 and 1979, 22.1% between 1980 and 1999 and 57.2% after 2000. The degree of utilization of transformers/autotransformers is the percentage ratio between their age and the standard duration of useful life, namely 24 years according to the latest edition of the Catalog on the Classification and Normal Operating Time of Fixed Assets. Approximately 43% of the total power installed in transformers/autotransformers (commissioned before 2000) has exceeded the standard duration of useful life. For the remaining transformers/autotransformers, the average degree of utilization in relation to the installed power is approx. 33%.

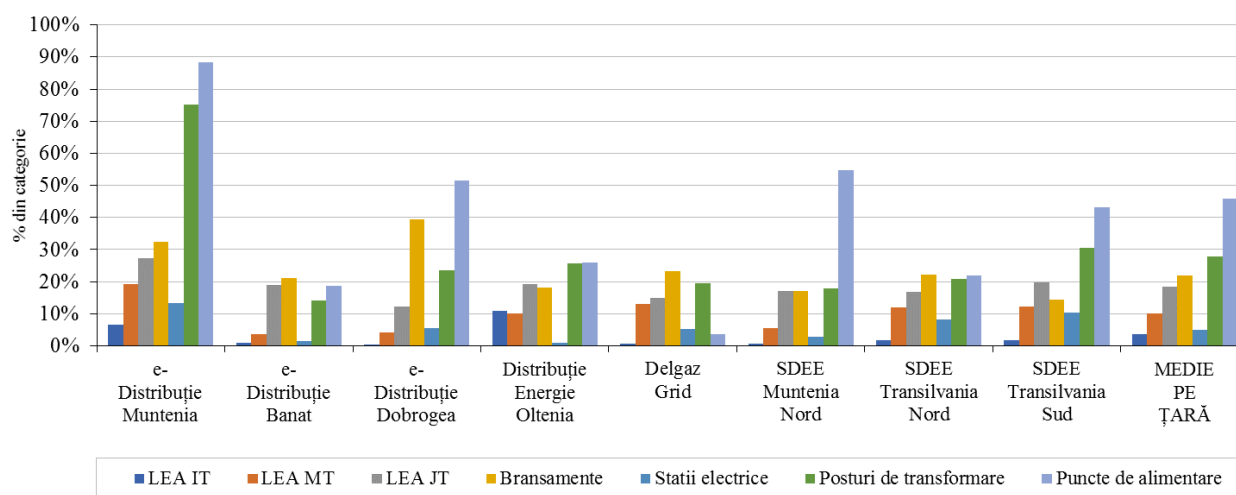
Distribution grids comprise the following capacities at a country aggregate level, according to duration of useful life:

	HV [km route]	MV [km route]	LV [km route]	LV connections [km route]	Substations [pcs]	Transformer substations [pcs]	Supply point [pcs]
Before 1960	1.652	10.032	8.080	8.063	40	2.061	25
1960-1979	14.610	73.899	89.589	70.749	754	30.220	346
1980-1999	5.085	23.721	52.101	50.685	326	19.257	177
2000-2016	836	12.071	33.857	36.328	59	19.946	466
TOTAL	22.183	119.723	183.627	165.825	1.179	71.484	1.014

The following figure illustrates the share of the age groups out of the total, by type of capacity.



The share of energy capacities commissioned between 2000 and 2017 by each distribution operator out of the total capacities in operation at the end of 2017 is:



Most of the installations pertaining to transmission and distribution networks currently in operation have a long duration of useful life, predominantly over 35 years.

High voltage transmission and distribution lines commissioned after 2000 have a small share, on average less than 4%, of the total length of these categories of electrical installations. Medium and low voltage power lines (including connections) commissioned after 2000 represent a larger percentage of the total length of these categories of electrical installations, reaching up to 10% for medium voltage and 20% for low voltage. At the same time, the number of substations in the distribution networks commissioned after 2000 is about 5% of the total, and the number of transformation substations and supply points reached approx. 28% of the total number pertaining to the two categories of electrical installations in 2017. Given that only a small part of the power capacities managed by network operators has been rehabilitated or upgraded, ANRE requested network operators to apply consistent programs for restoring and upgrading existing facilities, enhancing and streamlining maintenance activities for the maintenance of electric appliances at nominal operating parameters and to perform adequate monitoring and assessment of the state of the networks.

The achievement of the maintenance program in RET in 2017 by CNTEE Transelectrica S.A. was 74%, compared with 66% in the previous year. The highest rate of achievement was recorded for minor

maintenance, namely 80% compared to the program, while the major maintenance program was achieved at 64%.

Major maintenance is carried out based on contracts awarded via procurement procedures in compliance with the current sectoral procurement legislation in force, namely Law 99/2016 on Sector Procurement and Government Decision 394/2016 on the rules for the enforcement of this law. The low degree of achievement of the major maintenance program is caused, according to TSO's explanations, by difficulties in obtaining building permits and other necessary approvals, as well as difficulties in carrying out the public procurement procedures. On the other hand, the values awarded subsequent to the procurement procedures and the conclusion of the execution contracts, as well as the amounts deducted, were lower than those estimated and planned in the maintenance program. In many cases, works were delayed as a result of the non-acceptance of the decommissioning of RET equipment and installations, or to adverse weather conditions. Minor preventive maintenance works were carried out in 2017, according to TSO explanations, by more than 97% of the planned value, and minor corrective maintenance reached 82% of the planned value. The purchase and installation of equipment was delayed and therefore reached a low degree of achievement - 29% - compared to the planned value due to delays in the preparation of the public procurement documentation. TSO is of the opinion that the impact of the non-implementation of the entire maintenance program on NPS safety and the quality of the transmission and system service is insignificant in the short and medium term. ANRE is of the opinion that the failure to perform maintenance works affects the state of the RET and for this reason has taken measures to force TSO to complete the planned preventive maintenance works.

The degree of achievement of the maintenance program by categories of works in electrical distribution networks is presented in the following for each concession operator:

- e-Distribuție Muntenia achieved 95.62 % of the value planned in 2017 compared to 80.29% achieved in 2016. Of the performed works, 47.9 % are preventive maintenance works and 52.1 % are corrective maintenance works,
- e-Distribuție Banat achieved 85.9 % of the value planned for 2017 compared to 89.4% achieved in 2016. Of the performed works, 47.11 % are preventive maintenance works and 52.89 % are corrective maintenance works,
- e-Distribuție Dobrogea achieved 79.1 % of the value planned for 2017 compared to 79.4% achieved in 2016. Of the performed works, 58 % are preventive maintenance works and 42 % are corrective maintenance works,
- Distribuție Energie Oltenia achieved 105.3 % of the value planned for 2017 compared to 106.5% achieved in 2016. Of the performed works, 69.58 % are preventive maintenance works and 30.42 % are corrective maintenance works,
- Delgaz Grid achieved 102 % of the value planned for 2017 compared to 82.9% achieved in 2016. Of the performed works, 46.9 % are preventive maintenance works and 53.1 % are corrective maintenance works,
- SDEE Muntenia Nord achieved 92.23 % of the value planned for 2017, similarly to 2016. Of the maintenance schedule, 65.74 % was preventive maintenance and 34.26 % was corrective maintenance,
- SDEE Transilvania Nord achieved 101 % of the value planned for 2017 compared to 88.6% achieved in 2016. Of the maintenance schedule, 53.3 % was preventive maintenance and 46.7 % was corrective maintenance, and

- SDEE Transilvania Sud achieved 92.4 % of the value planned for 2017 compared to 100.5% achieved in 2016. Of the maintenance schedule, 32.61 % was preventive maintenance and 67.39 % was corrective maintenance.

Monitoring of the performance indicators of the electricity transmission, system and distribution service, as well as of the duration of re-connection after planned repairs and unplanned interruptions

The analysis of the quality of the electricity transmission service and of the system service provided by the TSO, as well as of the electricity distribution service provided by the eight licensed distribution operators with a concession contract in 2017 took into account the performance indicators defined in the *Performance Standard for Electricity Transmission and System Services*, approved by ANRE Order no. 12/2016, and in the *Performance Standard for the Electricity Distribution Service*, approved by ANRE Order no. 11/2016. The analysis was based on the data transmitted to ANRE by network operators, pursuant to the provisions of the two standards.

The overall performance and continuity indicators of the power transmission service

The evolution of the *own technological consumption in RET*, calculated as the difference between the power introduced in the RET and the power extracted from the RET, relative to the power introduced in the RET between 2013 and 2017 is presented below.

Year	2013	2014	2015	2016	2017
Power introduced into the RET (GWh)	40,899	42,851	43,762	43,674	44,337
Power extracted from the RET (GWh)	39,868	41,825	42,732	42,662	43,372
Own technological consumption in RET (GWh)	1,031	1,026	1,030	1,012	965
Own technological consumption in RET (%)	2.52	2.40	2.35	2.32	2.18

Power entering the RET in 2017 increased by 1.66% compared to the previous year, amid the increase of domestic net consumption by approx. 2.31%, the increase by 0.9% of the power generated by the electric generator sets that inject directly into the RET, the increase of the physical import flows by approx. 39% (895 GWh).

RET own technology consumption fell by 4.68% compared to the previous year. Factors that contributed to the decrease of losses were the favorable distribution of physical import/export flows on the North-Western interconnection lines and the reduction of corona losses on power lines, amid favorable weather conditions.

The average unavailability of the installations is determined according to planned or unplanned (accidental) events and is related to the length of RET OEL expressed in km, or the apparent power expressed in MVA for transformers and autotransformers in RET stations.

For the period comprised between 2013 and 2017, the values of the average unavailability indicators are as follows:

Year	2013	2014	2015	2016	2017
Total:					
INDLIN (hours/year)	114.52	142.59	184.63	186.79	158.10
INDTRA (hours/year)	171.58	112.18	155.01	204.29	182.01
Unplanned interruptions:					
INDLIN (hours/year)	11.44	27.97	36.68	16.88	11.67
INDTRA (hours/year)	3.28	8.52	8.9	4.91	18.51
Planned interruptions:					
INDLIN (hours/year)	103.08	114.62	147.95	169.91	146.43
INDTRA (hours/year)	168.31	103.66	146.11	199.38	163.50

We find that the average duration of unscheduled interruptions out of the total average interruption time is 7.4% in the case of power lines and 10.2% in the case of transformers and autotransformers. Relative to the total number of hours of operation per year, average line unavailability is 1.8%, and the average unavailability of transformers and autotransformers in RET stations is 2.1%. The INDLIN indicator for unplanned power line interruptions worsened between 2013 and 2015 and improved between 2015 and 2017. In the case of transformers and autotransformers, in 2017 there was an increase in the value of unavailability exceeding last year's average value.

For planned interruptions, after an increase in 2013-2016, unavailability indicators improved in 2017, both in the case of power lines as well as for transformers and autotransformers.

A better correlation of maintenance programs with investment programs has made it possible to reduce the equipment planned withdrawal from operation.

Power non-supplied to users/ not produced in power plants due to long-term interruptions - ENS (Energy Not Supplied) and AIT (Average Interruption Time)

The overall performance indicators for continuity had the following values in 2017:

	2013	2014	2015	2016	2017
ENS (MWh)					
Unplanned interruptions due to OTS	30.89	82.51	38.36	224.69/ 264.70 ²⁾	289.46/1105.55 ²⁾
AIT (min/year)					
Unplanned interruptions due to OTS	0.35	0.82	0.36	2.11/ 2.49 ²⁾	2.762/10.550 ²⁾

Note:

- 1) The reports for the years 2013-2015 were based on the Performance Standard for the Transmission and System of Electric Power, approved by the ANRE Order no. 17/2007, which did not include this chapter.
- 2) The performance standard for the electricity transmission and service system service, approved by the ANRE Order no. 12/2016 requires the recording of the values for non-supplied energy to the users, respectively for the non-supplied energy in the power plants due to long-term interruptions. For 2013-2015, the value refers to non-consumer energy.

In 2017, the degradation of the ENS and AIT service continuity indicators continues, in the category of interruptions caused by TSO. The degradation of the ENS and AIT indicators compared to the previous years is explained by TSO by the occurrence of extreme weather conditions that increased in intensity from one year to the next, while the equipment is in an advanced state of wear due to its long service life, especially in the case of OEL. The measures taken by these TSOs subsequent to these events were

replacing the affected equipment and the analysis of the technical design and sizing conditions of the installations, taking into account climate change. ANRE fined entities for failure to perform maintenance and investment programs, which led to the worsening of these indicators.

General System Performance Indicators

In 2017, no *emergency assistance* was requested/granted. *The deviation of the NPS balance by the ACE frequency correction* is shown in the table below:

Deviation of NPS balance by frequency correction [MWh/h]		
	2016	2017
Average value	1.52	1.67
Maximum value	178	229
Minimum value	-435	-133
Standard deviation	14.64	13.38

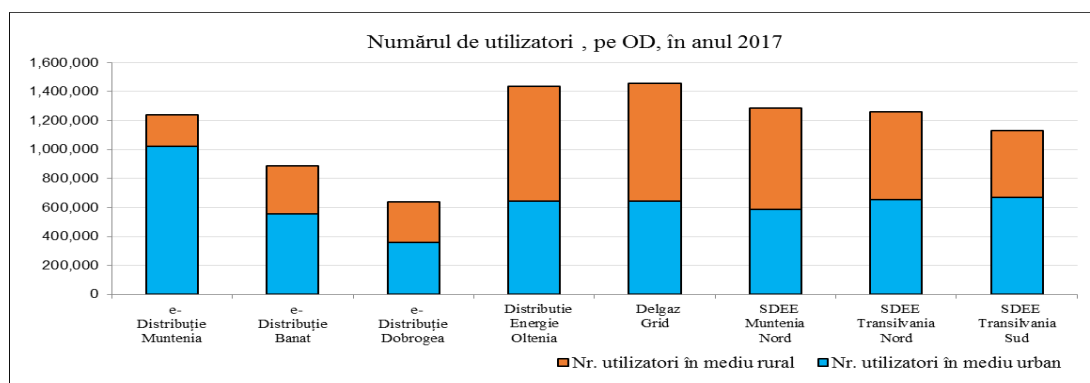
The average value of the balance deviation by frequency offset had comparable values in 2016 and 2017, and the standard deviation had lower values in 2017, while the frequency-power adjustment was better in 2017.

The coordination of NPS operation is presented in the following table:

	Congestion caused by network restrictions		
	in the scheme with N elements in operation in the RET and in the 110kV network of RED	as a result of the withdrawal of RET elements from operation	as a result of the withdrawal of RED elements from operation
Amount of electricity used for network congestion management in 2016 [MWh]	0	21,038	289
Amount of electricity used for network congestion management in 2017 [MWh]	0	2,553	114

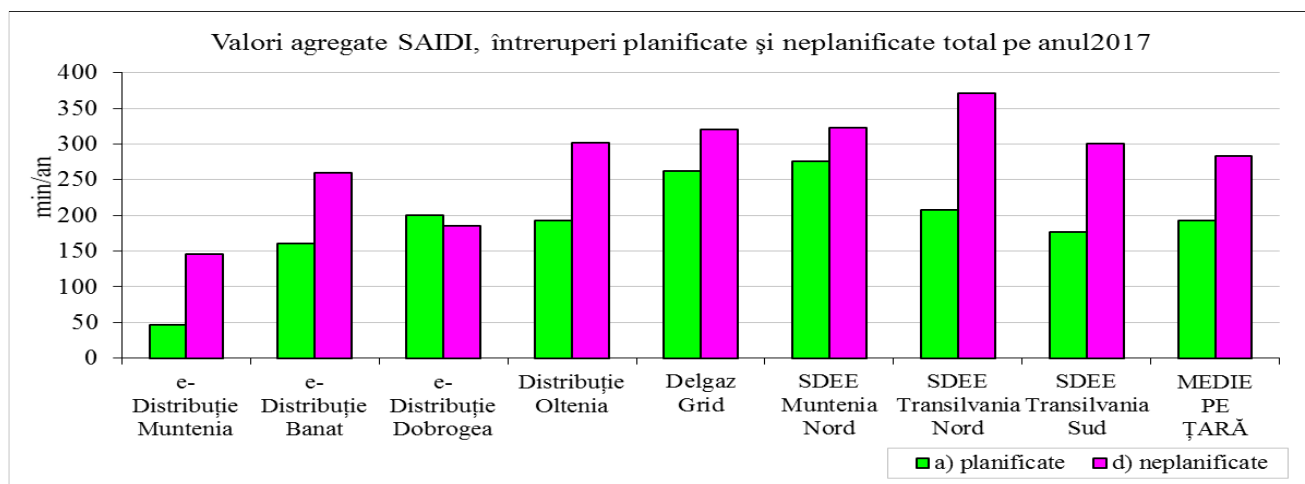
Continuity indicators of the power distribution service

At the end of 2017, 9.3 million users were connected to the power grids pertaining to the eight distribution system operators (DSO), undertakers of the power distribution service - up 0.8% compared to 2016 - of which 5.1 million in urban areas, and 4.2 million in rural areas.



The SAIDI User Supply Continuity Index registered the following values for 2017:

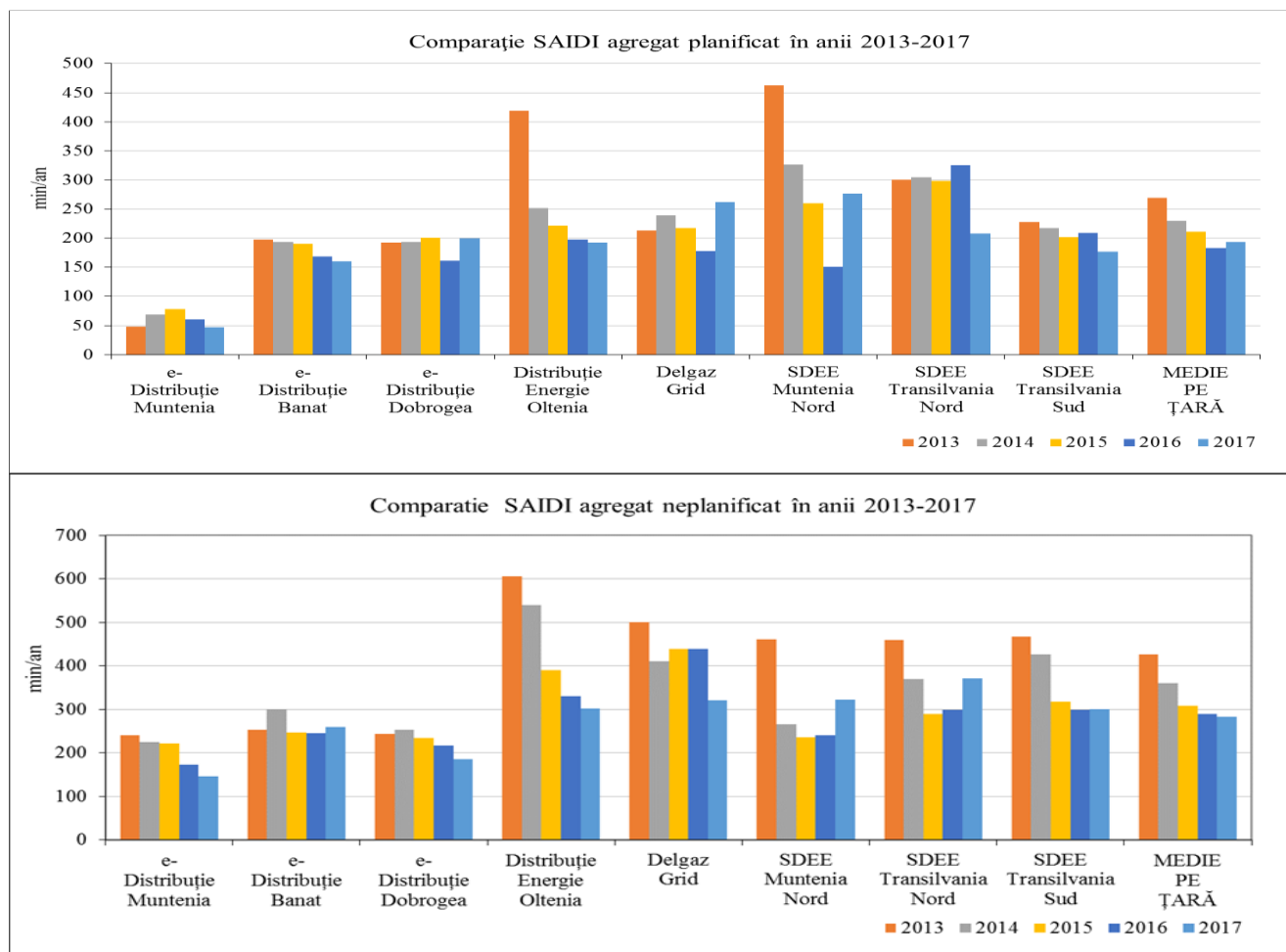
DSO	e-Distribuție Muntenia	e-Distribuție Banat	e-Distribuție Dobrogea	Distribuție Energie Oltenia	Delgaz Grid	SDEE Muntenia Nord	SDEE Transilvania Nord	SDEE Transilvania Sud	Aggregate country value
SAIDI planned interruptions [min/yr]	46.57	160.73	199.89	192.80	261.69	276.07	207.82	176.99	193.10
SAIDI unplanned interruptions [min/yr]	145.44	259.41	185.11	301.46	320.31	323.16	370.89	300.20	283.92



At aggregate country level, SAIDI planned interruptions has in 2017 an increase in average value to 193.1 min/year as compared to 183.5 min/year in 2016. Also at aggregate country level, SAIDI unplanned interruptions registers in 2017 an insignificant decrease to 283.92 min/year as compared to 289.9 min/year in 2016. Both values remain above the range of indicators registered in EU member states.

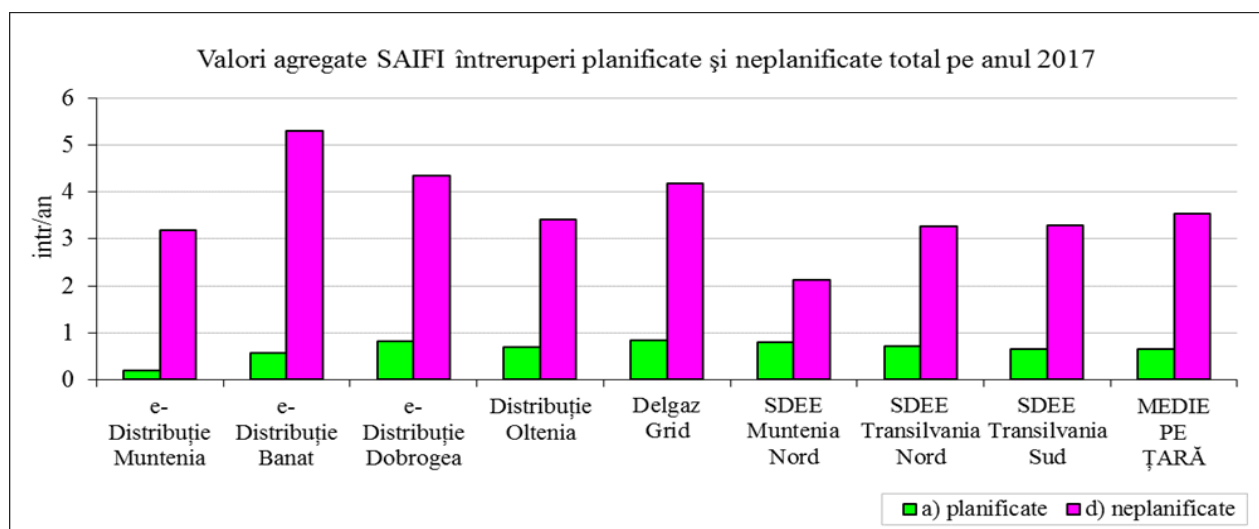
According to the analysis, between 2013 and 2017 there is a trend of improvement in the values of both indicators, with an insignificant deterioration in 2017 for SAIDI planned interruptions.

Year	2013	2014	2015	2016	2017
SAIDI planned interruptions [min/yr]	270	230	211	184	193
SAIDI unplanned interruptions [min/yr]	427	361	308	290	284



The SAIFI User Supply Continuity Index registered the following values for 2017:

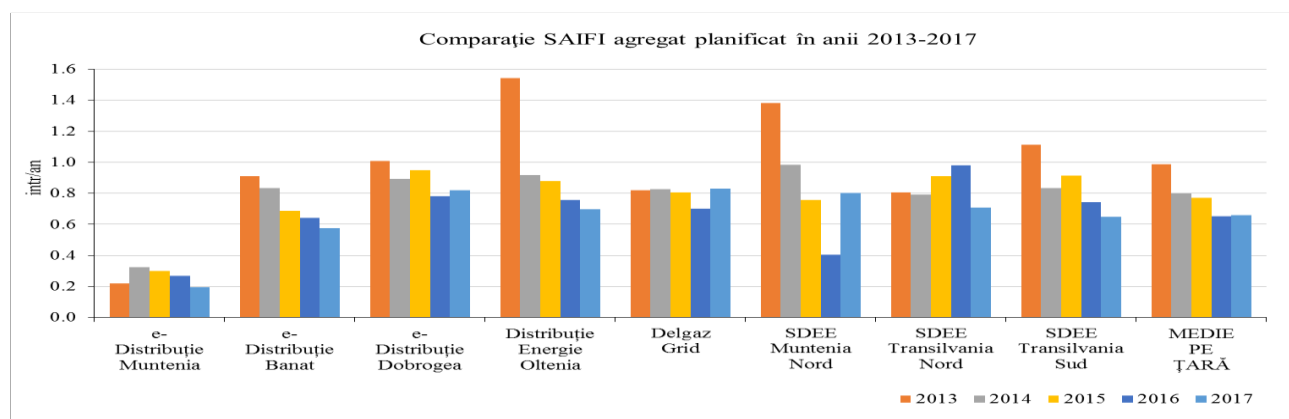
DSO	e-Distribuție Muntenia	e-Distribuție Banat	e-Distribuție Dobrogea	Distribuție Energie Oltenia	Delgaz Grid	SDEE Muntenia Nord	SDEE Transilvania Nord	SDEE Transilvania Sud	Aggregate country value
SAIFI planned interruptions [intr/yr]	0.19	0.58	0.82	0.70	0.83	0.80	0.71	0.65	0.66
SAIFI unplanned interruptions [intr/yr]	3.18	5.30	4.36	3.42	4.19	2.12	3.28	3.28	3.54

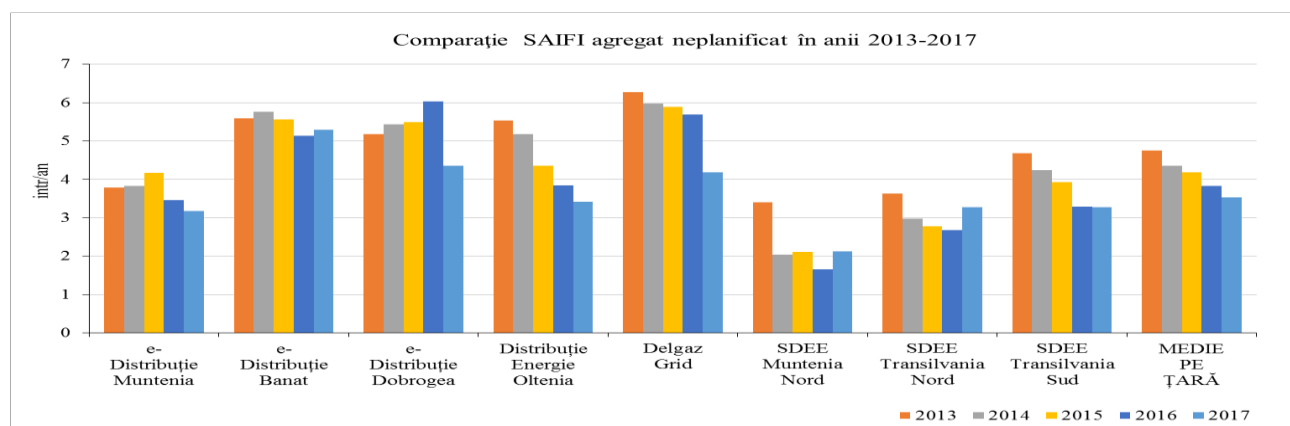


At aggregate country level, SAIFI planned interruptions recorded an average value of 0.66 interruptions/year, compared to 0.65 interruptions/year in 2016. At aggregated country level, SAIFI unplanned interruptions recorded an average value of 3.54 interruptions/year, compared to 3.83 interruptions/year in 2016.

According to the analysis, between 2013 and 2017 an improvement in SAIFI values for unplanned interruptions is observed, but also a slight degradation of the SAIFI values for planned interruptions.

Year	2013	2014	2015	2016	2017
SAIFI planned interruptions (a) [min/yr]	0.99	0.80	0.77	0.65	0.66
SAIFI unplanned interruptions (d) [min/yr]	4.75	4.35	4.19	3.83	3.54





In terms of *electric power quality*, an analysis was carried out in a representative number of substations, using power quality analyzers. Among the distribution system operators, Distribuție Energie Oltenia carried out the most extensive power quality monitoring program, with 65 points of analysis.

Starting with 2017, the performance standard for the power distribution service includes an obligation to extend quality monitoring to at least 25% of the transformation stations owned by the DSOs. This obligation was not fulfilled by all operators.

From the point of view of the **commercial quality of the transmission service**, the relevant performance indicators in the process of connection to the RET fall within the deadlines established by the standard. The average delivery time of the Connection Technical Evaluation Report and the Connection Certificate is close to the deadline set by the standard (10 calendar days). It is also noted that TSO did not register in 2017 any complaints about connection, quality of voltage curve, billing, collection, or other topics.

Regarding the **commercial quality of the power distribution service**, it is noted that:

- the average response time to complaints related to connection/appeals against connection technical evaluation reports was 17 days at LV and 14 days at MV, observing the legal response time of 30 days. No complaints were filed for the HV.
- a maximum number of complaints regarding the quality of the voltage curve was registered for S.D.E.E. Muntenia Nord, for LV (2,028 complaints out of the total of 4,227 in the whole country), and Oltenia Energy Distribution for MV (218 complaints out of the total of 305 in the whole country), respectively.
- the average response time to complaints about the quality of the voltage curve was 15 days for LV, 13.2 days for MV, and 8.6 for HV, falling within the 20 calendar day deadline provided by the performance standard.
- the average response time to requests/complaints or written requests on topics other than those explicitly addressed in the standard had an average value of 14 days for LV and HV and 12 days for MV across the country, within the maximum 30 days' deadline provided by the standard,
- the average response time to the complaints on measured data was 14 days for LV, 9 days for MV and 11 days for HV,
- The average reconnection time of a consumption site from the notification of the payment by the user/supplier to the DSO was 2 days for LV and MV. There were no reconnections for HV.
- At country level, 78.6% of compensations were based on the non-fulfillment of the commercial quality indicators of the service. Compensations for the continuity of the distribution service are 21.7% of total, considering that at LV level, compensations are granted solely at the users' request. The performance

standard requires that, as of 1.01.2019, compensations for non-compliance with performance indicators for the continuity of the power distribution service must be automatically paid for all voltage levels.

Non-fulfilled performance indicators		E-Distribuție Muntenia	E-Distribuție Banat	E-Distribuție Dobrogea	Distribuție Energie Oltenia	Delgaz Grid	SDEE Muntenia Nord	SDEE Transilvania Nord	SDEE Transilvania Sud
Power supply continuity	No.	315	88	46	7	7,359	1	3	7
	Ron	21,860	14,530	6,645	1400	227,260	30	90	1,060
Technical quality of distributed power	No.	1	-	1	-	37	-	-	-
	Ron	195	-	70	-	2,590	-	-	-
Commercial quality of the power distribution service	No.	2,663	2752	1,256	-	3,141	-	-	176
	Ron	238,445	293025	126,960	-	343,750	-	-	10,900
TOTAL compensations	No.	2,979	2840	1,303	7	10,537	1	3	183
	Ron	260,500	307,555	133,675	1400	573,600	30	90	11,960

The procedures and stages of the connection process and the establishment of the connection tariff are regulated by the *Regulation on connecting users to public power grids*, approved by the ANRE Order no. 59/2013, as further amended and supplemented by the *Regulation on the establishment of solutions for connecting users to public power grids*, approved by ANRE Order no. 102/2015, by the *Framework contract for connection to power distribution networks*, approved by the ANRE Order no. 11/2015, and by the *Methodology for establishing tariffs for connecting users to public power grids*, approved by ANRE Order no. 11/2014, as further amended and supplemented. The performance standard for the distribution service also monitors indicators such as **the average delivery time of connection technical permits or the average issuing time of the connection contracts**.

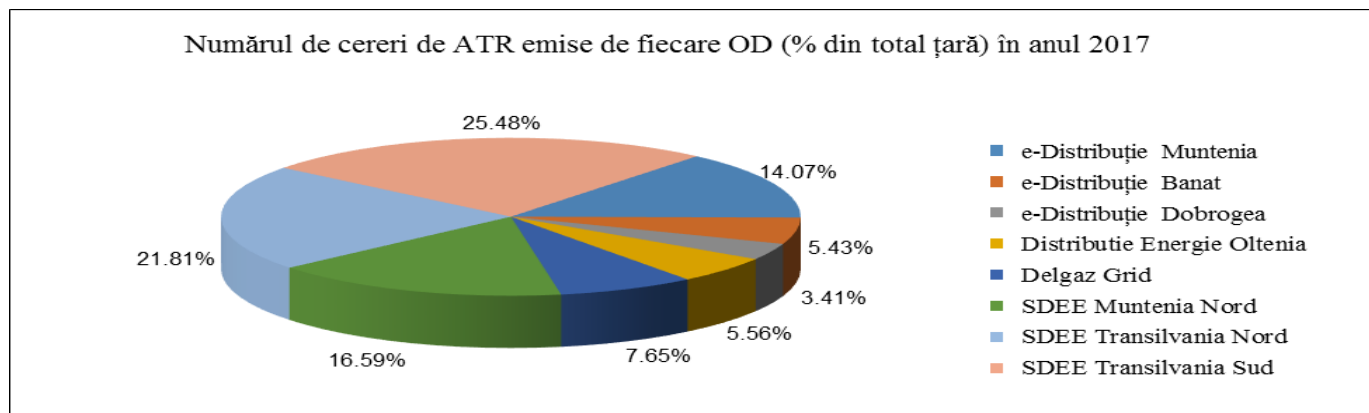
The total number of applications for Connection Technical Permits (CTP) for the public power grid in 2017 was 275,026 (compared to 320,392 in 2016 and 208,670 in 2015), with the following distribution per DSO:

DSO	E-Distribuție Muntenia	E-Distribuție Banat	E-Distribuție Dobrogea	Distribuție Energie Oltenia	Delgaz Grid	SDEE Muntenia Nord	SDEE Transilvania Nord	SDEE Transilvania Sud	TOTAL
No. issued CTP	38,771	15,013	9,487	15,587	20,805	45,138	59,355	70,870	275,026

CTPs could not be issued (due to incomplete documentation or for technical reasons) for 2,923 applications, namely 1.06% of total. The total number of applications that were not answered within the 30-days legal term (due to incomplete documentation, various time mismatches, such as the issuance of the urbanism certificate, etc.) was 4,303, namely 1.56% of the total applications for 2017 (compared to 0.75% of total in 2016 and 4.4% of total in 2015).

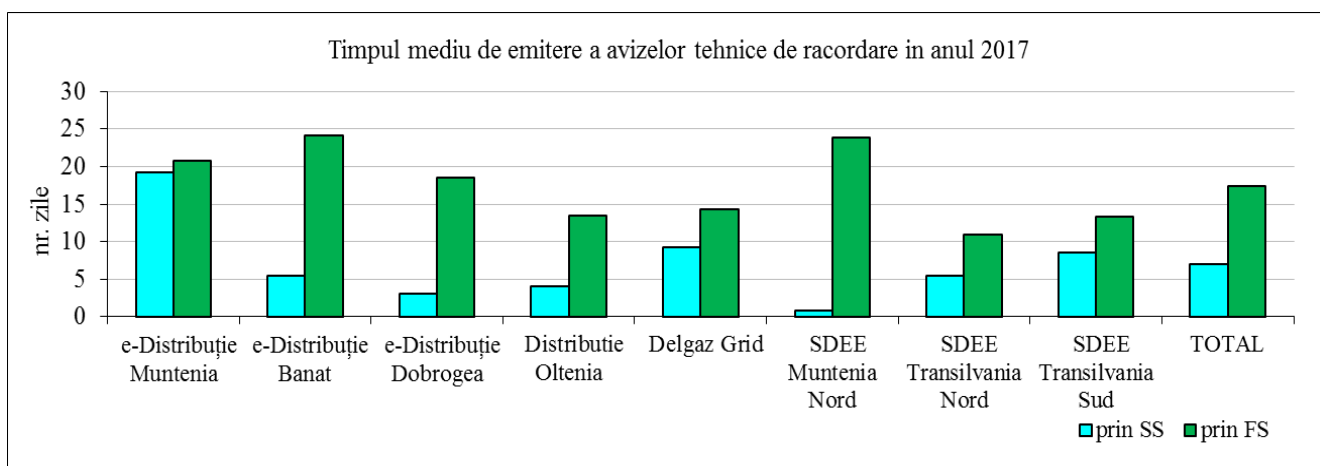
The total number of CTPs *issued* in 2017 was distributed per DSOs as follows:

DSO	E-Distribuție Muntenia	E-Distribuție Banat	E-Distribuție Dobrogea	Distribuție Energie Oltenia	Delgaz Grid	SDEE Muntenia Nord	SDEE Transilvania Nord	SDEE Transilvania Sud	TOTAL
No. issued CTP	38,278	14,774	9,286	15,130	20,805	45,138	59,355	69,337	272,103
Percentage of total number of received applications (%)	98.73	98.41	97.88	97.07	100	100	100	97.84	98.94



The average delivery time of the connection technical permit from the submission of the complete documentation, calculated per country, for the case in which the solution was determined by solution study (SS), was 6.97 days in 2017, and for the case in which the solution was determined by solution file (SF), it was 17.41 days, with the following distribution per DSO:

DSO		E-Distribuție Muntenia	E-Distribuție Banat	E-Distribuție Dobrogea	Distribuție Energie Oltenia	Delgaz Grid	SDEE Muntenia Nord	SDEE Transilvania Nord	SDEE Transilvania Sud	COUNTRY AVERAGE
Average CTP delivery time for the solution established by:	SS	19.25	5.49	3.00	4.01	9.23	0.75	5.50	8.52	6.97
	SF	20.74	24.15	18.50	13.52	14.25	23.88	10.88	13.33	17.41

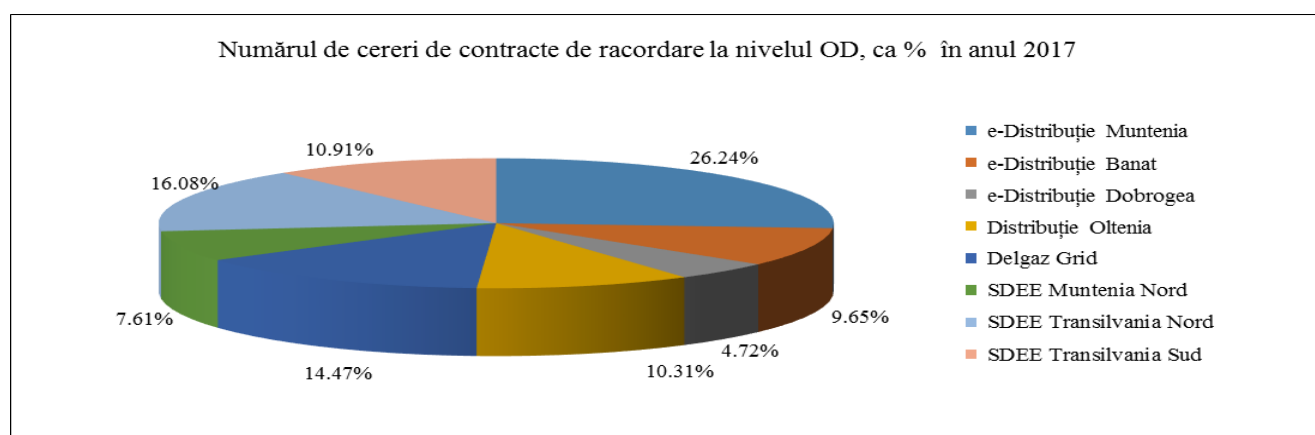


The average CTP delivery time when the solution is based on solution study far exceeded the maximum 10-day deadline allowed by the performance standard for E-Distribution Muntenia.

The total number of *applications for connection contracts* in 2017 was 125,501, distributed on DSO as follows:

DSO	E-Distribuție Muntenia	E-Distribuție Banat	E-Distribuție Dobrogea	Distribuție Energie Oltenia	Delgaz Grid	SDEE Muntenia Nord	SDEE Transilvania Nord	SDEE Transilvania Sud	TOTAL
All consumers	32,929	12,117	5,925	12,940	18,164	9,546	20,183	13,697	125,501
Household	21,711	8,963	5,001	10,040	13,196	7,434	14,870	9,025	90,240

The minimum percentage of applications for connection contracts, registered for all types of consumers, is registered by E-Distribution Dobrogea (4.72% of total) and the maximum percentage, by E-Distribution Muntenia (26.24%).



The total number of *connection contracts concluded* was 116,108 of the 125,501 applications, incomplete applications representing approx. 7.5% of the total (well above the figure of 0.86% in 2016).

DSO	E-Distribuție Muntenia	E-Distribuție Banat	E-Distribuție Dobrogea	Distribuție Energie Oltenia	Delgaz Grid	SDEE Muntenia Nord	SDEE Transilvania Nord	SDEE Transilvania Sud	TOTAL
Number of connection contracts concluded	32,558	11,982	5,878	12,624	17,828	2,112	19,429	13,697	116,108

The average time for the conclusion of connection contracts in 2017 registered a country-wide average of 4 days, distributed per DSOs as following:

DSO	E-Distribuție Muntenia	E-Distribuție Banat	E-Distribuție Dobrogea	Distribuție Energie Oltenia	Delgaz Grid	SDEE Muntenia Nord	SDEE Transilvania Nord	SDEE Transilvania Sud	COUNTRY AVERAGE
Average time for the conclusion of a connection contract	3	2	9	2	3	9	8	4	4

The average closing time of the connection contracts had a maximum value of 9 days for E-Distribuție Dobrogea and SDEE Muntenia Nord, close to the deadline of 10 calendar days from the registration of the application, provided in the performance standard.

The number of applications for connection contracts which were not answered within the legal term was 4,588, namely 3.66% out of the total number of applications, compared to 1721 not answered within the legal deadline in 2016 – 1.43% of total - thus:

DSO	E-Distribuție Muntenia	E-Distribuție Banat	E-Distribuție Dobrogea	Distribuție Energie Oltenia	Delgaz Grid	SDEE Muntenia Nord	SDEE Transilvania Nord	SDEE Transilvania Sud	TOTAL
Number of applications for connection contracts not answered within the legal deadline	2,212	692	1,684	-	-	-	-	-	4,588

The number of applications for connection contracts that remained unfinished/unsettled was 625, or 0.5% of the total number, thus:

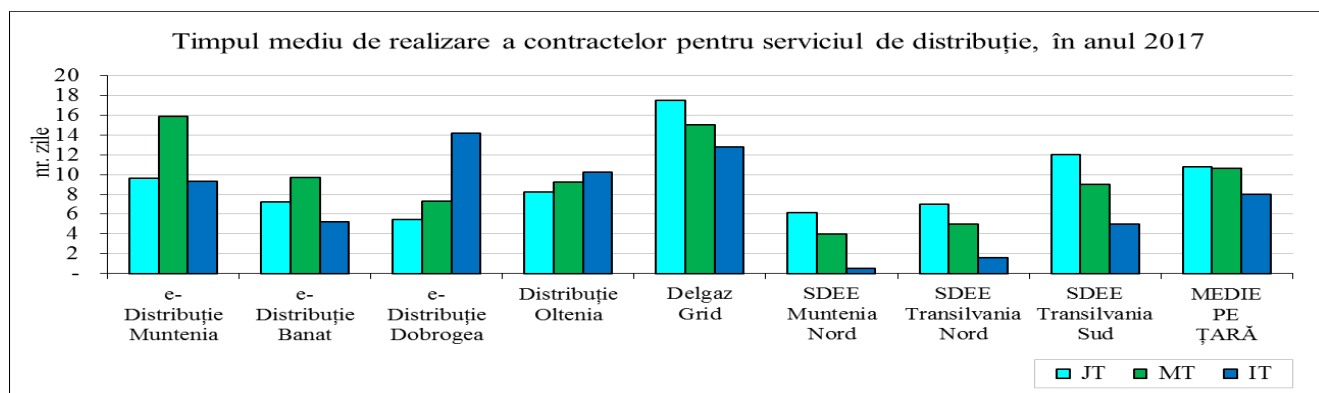
DSO	E-Distribuție Muntenia	E-Distribuție Banat	E-Distribuție Dobrogea	Distribuție Energie Oltenia	Delgaz Grid	SDEE Muntenia Nord	SDEE Transilvania Nord	SDEE Transilvania Sud	TOTAL
Number of applications for connection contracts not completed/ not settled	81	172	54	316	-	-	-	2	625

The total number of applications for the conclusion of distribution contracts in 2017 was 269,343, thus:

DSO	E-Distribuție Muntenia	E-Distribuție Banat	E-Distribuție Dobrogea	Distribuție Energie Oltenia	Delgaz Grid	SDEE Muntenia Nord	SDEE Transilvania Nord	SDEE Transilvania Sud	TOTAL
Number of applications for distribution contracts	39,561	21,140	12,526	44,237	73,919	16,818	38,936	22,206	269,343

The average closing time for distribution contracts was 11 days for LV and MV and 8 days for HV.

DSO		E-Distribuție Muntenia	E-Distribuție Banat	E-Distribuție Dobrogea	Distribuție Energie Oltenia	Delgaz Grid	SDEE Muntenia Nord	SDEE Transilvania Nord	SDEE Transilvania Sud	COUNTRY AVERAGE
Average closing time for distribution contracts [days]	LV	9.66	7.24	5.44	8.25	17.50	6.17	6.97	12	11
	MV	15.90	9.73	7.30	9.25	15.00	3.96	5.03	9	11
	HV	9.33	5.23	14.17	10.25	12.75	0.50	1.61	5	8



The average duration of the connection process, which is the time elapsed between the date the connection application is submitted together with the complete justifying documentation and until the date when the installation is commissioned, per DSOs:

DSO		E-Distribuție Muntenia	E-Distribuție Banat	E-Distribuție Dobrogea	Distribuție Energie Oltenia	Delgaz Grid	SDEE Muntenia Nord	SDEE Transilvania Nord	SDEE Transilvania Sud	COUNTRY AVERAGE
Average duration of connection process [days]	JT	87	110	118	116	109	81	33	42	83
	MT	433	289	466	272	407	145	109	53	234
	IT	-	-	-	1)	-	-	-	-	-

1) Only one case of the IT connection installation. The installation was not commissioned, so the average duration of the connection process could not be calculated.

The average durations of the LV and MV connection process were lower in 2017 compared to 2016 as follows: 83 days vs. 87 days, 234 days vs. 255 days respectively.

The average cost of the connection process has the following distribution per DSO:

DSO		E-Distribuție Muntenia	E-Distribuție Banat	E-Distribuție Dobrogea	Distribuție Energie Oltenia	Delgaz Grid	SDEE Muntenia Nord	SDEE Transilvania Nord	SDEE Transilvania Sud	COUNTRY AVERAGE
Average cost of connection [Ron] ¹⁾	LV	978	2,305	1,667	2,105	2,329	1,602	2,186	2,602	1,884
	MV	132,465	76,790	101,732	47,747	104,822	41,192	49,928	57,172	68,645
	HV	-	-	-	1,814,762 ²⁾	-	-	-	-	-

1) Average connection cost per connected user, paid to the distribution operator (CTP fee + solution study cost + connection fee);

2) Only one connection to HV was registered

The average cost of connection to LV was Ron 1,884 at country level (compared to Ron 1,781 in 2016), and MV – Ron 68,645 at country level (compared to Ron 77,607 in 2016).

Monitoring safeguard measures

The provisions of art. 37, par. (1), let. t) of Directive 72/2012/EC have been transposed in national legislation by Art. 9, par. (4), lit. k) of Government Emergency Ordinance 33/2007 on the organization and operation of ANRE, approved by Law 160/2012, as further amended and supplemented.

Secondary legislation applicable for *unexpected crisis situations on the energy market and in case the physical safety or the persons' security, of the appliances or installations or the integrity of the system is threatened* provided by Art. 24 of the Law on Electricity and Natural Gas no. 123/2012, as further amended and supplemented, contains the *Regulation regarding the establishment of safeguard measures in crisis situations occurring in the functioning of the National Power System*, approved by the **ANRE Order no. 142/2014**, and the *Regulation regarding the suspension of the operation of the wholesale electricity market and the applicable trade rules*, approved by **ANRE Order no. 23/2016**.

The EU approval of the *Network Code for Emergency and Restoration* will lead to the adaptation of secondary legislation for compliance therewith.

In 2017, there were no unexpected emergencies in the energy market that would threaten the physical safety or security of individuals, appliances or installations, or the integrity of the power system.

In luna ianuarie situatia Sistemului Electroenergetic din Romania a fost caracterizata de cresterea semnificativa a consumului de energie electrica rezultat al temperaturilor foarte scazute si de un nivel redus al rezervelor de energie (cauzat de un cumul simultan de factori – dificultati in exploatarea si transportul carbunelui care au condus la diminuarea stocurilor de carbune si debitele reduse de apa pe principalele rauri utilizate in productia de energie hidroelectrica, in special pe Dunare). Notificarile fizice au fost mult deficitare in raport cu consumul intern la nivel de SEN (valoarea medie lunara de 823 MW; 449 de intervale orare cu valori ale deficitului intre 501 si 2683 MW), iar productia eoliana a fost deficitara in raport cu valorile notificate in majoritatea intervalelor orare (79 intervale orare cu valori deficitare mai mari de 500 MW, valoarea orara maxima a deficitului fiind de 1721 MW). In aceste conditii energia selectata la crestere pe piata de echilibrare a reprezentat 89 % din totalul energiei selectate si au fost dispuse numeroase porniri/mentineri in stare de functionare a mai multor grupuri/cazane termo. Pe fondul volumului mare de energie selectata la crestere, preturile pe piata de echilibrare au inregistrat valori foarte mari de pana la 1102,8 lei/MWh (31.01).

In aceasta luna s-a inregistrat cel mai mare volum de energie tranzactionata pe piata de echilibrare (882528,748 MWh) si cea mai mare valoare a costurilor cu echilibrarea sistemului (418206681 lei, din care 4499630 lei, valoarea pornirilor de grupuri) de la inceputul functionarii pietei de echilibrare.

Situatia Sistemului Electroenergetic din Romania din luna ianuarie 2017, nu a fost una singulara, situatii similare inregistrandu-se si in sistemele vecine sau alte sisteme din Europa. Din cauza conditiilor extreme de iarna, in Grecia, Bulgaria, Franta, Italia, Belgia capacitatea transfrontaliera/exporturile de energie electrica catre tarile vecine au fost limitate, masura luata pana la refacerea rezervelor necesare asigurării functionarii sigure si stabile a sistemelor energetice. In cazul Romaniei nu a fost necesara aplicarea masurilor de salvagardare prevazute de HG nr. 10/13.01.2017.

Source: CNTEE Transelectrica – NPS operation report for 2017

Connection, access and dispatching regimes for RES-E. Imbalances payment

Producers' access to the promotion scheme for renewable electricity production based on green certificates was limited to 31 December 2016². During the implementation of the promotion scheme, 778 producers were accredited. The number of accredited renewable energy producers at the end of 2017 was 774 (of which 67 use wind energy, 103 use hydraulic power in power plants with installed power of 10 MW or less, 576 uses solar energy and 28 use biomass, including waste fermentation gas and sludge fermentation gas from wastewater treatment plants).

The table below shows the evolution of the number of RES-E producers accredited by type of renewable source and power installed for 2013, 2014, 2015, 2016 and 2017.

² As per the conditions of Art. 2554 of the New Civil Code and Regulation (EC, Euratom) 1182/71 of the Council of 3 June 1971 regarding the establishment of rules applied to terms, dates and expiry thereof

Surse regenerabile de energie/tehnologie	Producători E-SRE									
	număr					Pi [MW]				
	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017
Centrale eoliene, din care:	60	64	66	67	67	2593	2810	2932	2963	2962
Instalații eoliene re tehnologizate	13	12	4	4	2	11	11	12	9	8
Centrale hidro, $P_i \leq 10$ MW, din care:	69	100	104	103	103	263	295	314	348	342
Centrale hidro re tehnologizate, $P_i \leq 10$ MW	9	15	15	19	19	50	82	88	68	62
Centrale pe bază de biomasă – toate tipurile de tehnologii (inclusiv cogenerare) și gaz de fermentare EE din deșeuri municipale, ape uzate	14	14	25	28	28	66	81	107	124	124
Centrale fotovoltaice	370	403	514	577	576	1124	1217	1296	1360	1359
Total	513	581	709	775	774	4046	4403	4649	4795	4787

At the end of 2017, the installed capacity accredited in the RES-E production units was 4787 MW, less than in 2016, with the capacities for which the accreditation period expired.

The transmission and/or distribution system operators ensure transport and distribution, as well as the priority dispatch of electricity produced from renewable sources for all producers of energy from renewable sources, regardless of their capacity, on the basis of transparent and non-discriminatory criteria, with the possibility of modifying the notifications during the operating day, according to the methodology approved by ANRE, so that the limitation or interruption of the production of energy from renewable sources is applied only in exceptional cases, if this is necessary for the stability and security of the National Power System.

For electricity that benefits from the renewable energy system, contracted and sold on the energy market, **network access is guaranteed**. For electricity that is contracted and sold at a regulated price (produced in power plants with installed capacity of no more than 1 MW per plant or in the case of high efficiency biomass cogeneration of 2 MW per plant) **priority access to the network** is ensured.

Electricity produced from renewable sources is **priority dispatched**.

Production units using dispatchable renewable sources are responsible for the payment of generated imbalances.

2.1.3. Network and connection tariffs

Tariffs for the electricity transmission system

During 2017, ANRE amended by **Order no. 16/24.03.2017** the *Pricing methodology for the power transmission service* approved by ANRE Order no. 53/2013.

Changes to the methodology took into account:

- the phasing-out of zonal transmission tariffs, both for the introduction of into the grid, as well as for power extraction from the grid;
- introduction of provisions on the obligation to set up regulated provisions/reserves to compensate for negative income corrections;
- replacement of the term „*transit tariff*” with the term „*regulated tariff for power exchanges with neighboring countries*”;
- amendment of the provisions on ensuring the efficiency of the investments included in the regulated base of the operator's assets;
- introduction of dynamic tariffs;
- revision of the method to determine the average purchase price of electricity for covering CPT, recognized by the Authority when setting up regulated tariffs for the transmission service.

Thus, by eliminating tariffs differentiated by grid areas and replacing them with a single tariff for power introduction into the grid, and a single tariff for extracting power from the grid respectively, the provision mentioned in the primary legislation was implemented in order to ensure the public service of power transmission for all users of the power transmission network (RO: RET) at the same tariff for the entire national energy system. The methodology was harmonized with the provisions of ANRE Order no. 50/2016 on the approval of the regulated tariff for electricity exchanges with neighboring countries charged by the transmission system operator for the use of the National Power System for the electricity exchanges scheduled with neighboring countries as well as the provision of the scheduled cross-border electricity exchanges with the neighboring countries and of ANRE Order no. 46/2016 for the approval of the Framework Contract for the use of the national power system for electricity exchanges scheduled with neighboring countries, between Compania Națională de Transport al Energiei Electrice „Transelectrica”-S.A. and the beneficiary.

The methodology was also harmonized with the provisions of art. 15 par. (1), (5) and (7) of the Energy Efficiency Law no. 121/2014 on ANRE's obligation to develop regulations whereby transmission system operators as well as power and gas distribution operators are required to provide network users with system services as smart grids are developed, that would enable them to increase energy efficiency, including the energy efficiency of networks. At the same time, ANRE has the obligation to include in the methodologies for the establishment of transmission and distribution tariffs rules by which network operators are stimulated to improve the energy efficiency of the networks, both in terms of planning for their development and in terms of their operation, and that tariffs allow power suppliers to improve end-user participation to system efficiency, including by responding to demand. As a result, in 2019 an obligation was introduced for TSO to provide dynamic transmission rates to RET-connected customers who wish to provide system services, differentiated according to the peak power usage period, increased for critical peak periods and reduced for end customers who lower their charge during critical peak periods, as well as differentiated in real time for peak charge periods. The enforcement of these tariffs facilitates and stimulates demand response.

In order to increase the level of exigence for investments carried out by TSO and the level of transparency from ANRE regarding the recognition of the value of the investments in the transmission tariff, additional provisions were introduced regarding the substantiation of the annual investment plans. Thus, TSO has the obligation to send to the competent authority documents for the promotion and performance of investment projects, aiming to analyze their efficiency based on the ex-ante and ex-post quantification of the benefits obtained in terms of improving the operating safety level and the reliability of the power transmission network, as well as increasing the quality of the service.

The methodology was supplemented by specific provisions regarding TSO's granting of a regulated provision/reserve, which is an amount intended to cover the difference between the revenue achieved by the application of the tariff and the regulated costs of the transmission service in a year in which a negative revenue correction was applied due to the results of the previous years.

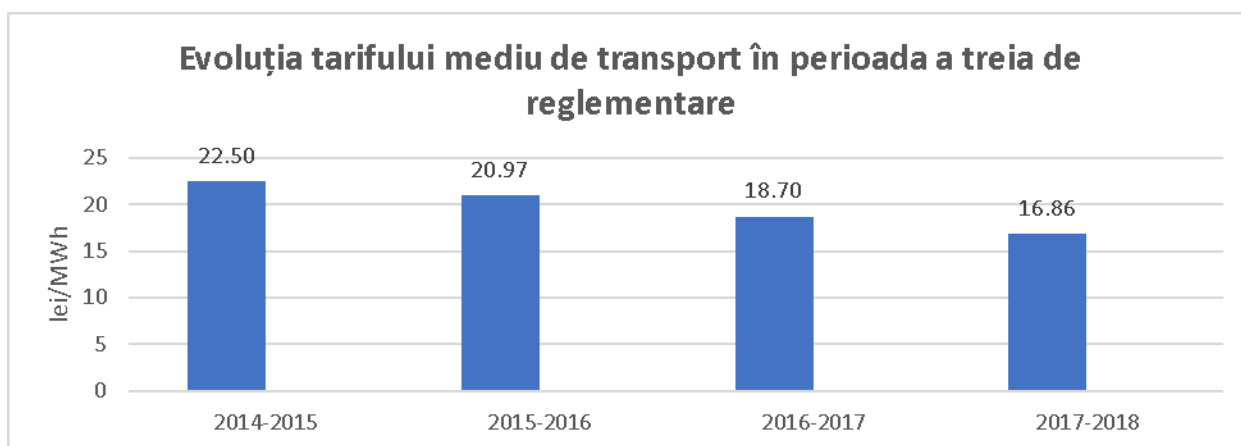
Supplementations were brought to the provisions regarding the average purchase price of electricity for CPT coverage, approved by the Authority when setting the regulated tariffs for the electricity transmission service. As a result of the imbalances in the purchase of power to cover CPT in the RET, the reference price was increased by a recognized imbalance cost, within the limit of a 5% increase in the reference price.

Supplementations were introduced to determine the cost of the annual depreciation of new assets registered in the accounting records as fixed assets over a tariff period, calculated using the straight-line method, with the application of the normal regulated durations of useful life, stipulated in an appendix covering the main fixed assets among the operator's total assets. The purpose of the provision is to establish a longer depreciation period for fixed assets in the RET corresponding to their duration of use, and to harmonize the methodology with similar provisions applicable to the DSOs.

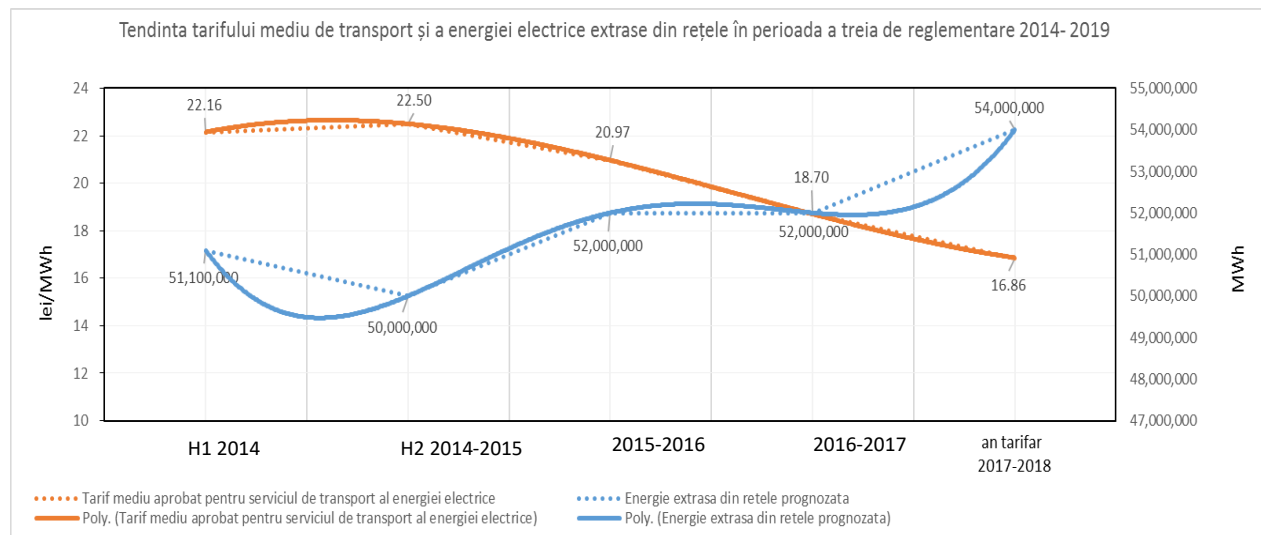
In applying the above-mentioned methodological provisions, the tariffs for the transmission service shall be reviewed starting with the 1st July of each year. Therefore, between April and June 2017, ANRE analyzed the substantiated proposal submitted by TSO, and established and approved by **ANRE Order no. 48/2017** tariffs for the period comprised between 1 July 2017 and 30 June 2018, in the following amounts:

- average transmission tariff – Ron 16.86/MWh; this tariff has decreased by 9.8% compared to the value approved for the previous tariff period, namely 1 July 2016 - 30 June 2017;
- transmission tariff - power supply into the grid - TG – Ron 1.05 /MWh (tariffs differentiated on grid areas were eliminated); this component decreased between 10% and 31% for areas with this component and a 100% increase for areas where this regional tariff was null;
- transmission tariff – power extraction from the grid - TL – Ron 15.73/MWh, (tariffs differentiated on network areas were eliminated); this component registered a decrease of 3%-17% for the consumption areas, with the exception of the Oltenia, where there was a 3.1% increase compared to the regional tariff;

The evolution of the average transmission tariff during the third regulatory period (2014-2019), expressed in nominal terms of each year, is shown in the following figure:



The evolution of the power transmission tariffs presented in the previous figure shows the decrease of the average transmission tariff in the third regulatory period. This evolution was mainly determined by the evolution of the regulated income and that of the electricity consumption in Romania (evolution of power extracted from grids). In support of this statement, the following figure shows by comparison the polynomial trend curves of the average transmission tariff and the amount of power extracted from the grids during the third regulatory period.



It should be noted that for the third regulatory period, ANRE imposed on TSO an increased demand for the substantiation and assignment of the categories of costs related to the transmission service. Thus, the classification of operating and maintenance costs into controllable - which can be subject to streamlining (reduction) and uncontrollable – whose level is set by legal provisions and do not depend on the TSO's management decision – was reanalyzed, and their reference value was reset.

CPT (technological losses) costs, which represent approx. 20% of the total costs of the power transmission service, are subject to a streamlining mechanism by setting out progressively reduced CPT targets from one year to the next during the regulatory period. ANRE recognizes in the regulated tariffs the costs incurred by the TSO for the acquisition of the electricity needed to cover the CPT in the RET only insofar as the amount of electricity falls within the limits previously set as an efficiency target, and the purchase price does not exceed the weighted average price, calculated by taking into account the average price established on the Centralized Market for Bilateral Contacts at a rate of 80% and the price established on the DAM at a rate of 20%. For the third tariff year, at the request of the TSO, which was accepted as justified by ANRE, the average selling price of electricity on the DAM was calculated by weighing the quantities of CPT in RET carried out by TSOs hourly. It was taken into account that the hourly profile of CPT energy carried out in RET is different from the electricity traded on this market, which corresponds to the profile of the electricity consumed in the NPS.

Therefore, ANRE caps both the quantity and the purchase price of the electricity needed to cover CPT using a formula that takes into account the evolution of the competitive trading price on the energy market. No quantitative imbalances exceeding 10% are accepted in the CPT acquisition structure and the cost of imbalances is capped starting with 1 July 2017 to no more than 5% of the reference price.

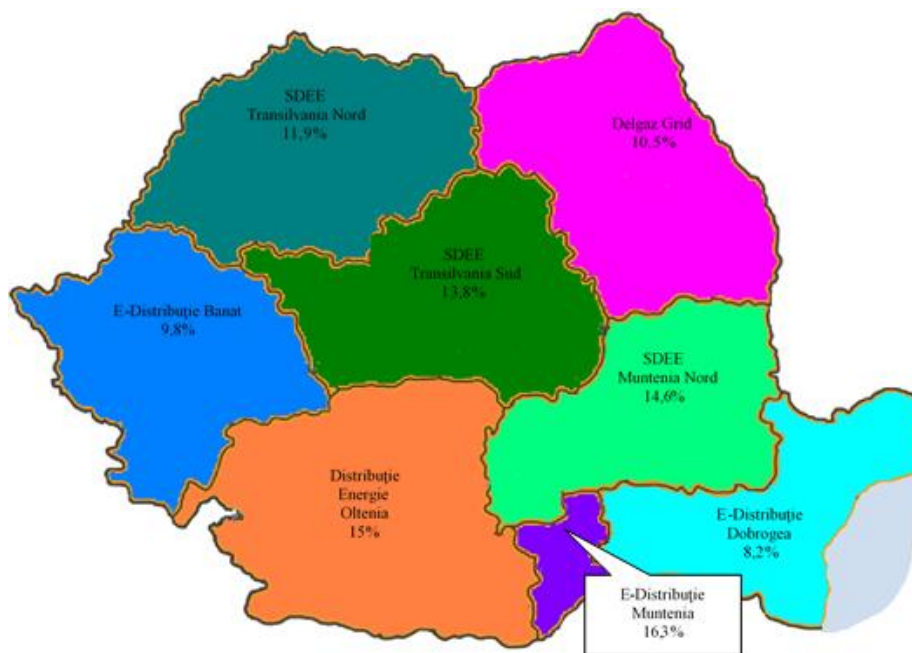
Regarding the financial results of TSOs, they are not determined solely by the regulated tariffs. The difference is that the financial statements show certain costs and revenues which are not recognized in the tariff, such as financial costs and revenue, including those resulting from third party contributions.

Power distribution tariffs

The specific tariffs for the electricity distribution service applied by the distribution system operators in 2018, which is the last year of the third regulatory period (2014-2018), were approved by **ANRE Orders 111 to 118 of 2017**. The following figure shows the distribution of power between the eight DSOs in the country, of approx. 44.3 TWh, distributed in 2017.

In the 4th quarter of 2017 ANRE analyzed the substantiated requests of the operators and approved, by **ANRE Orders no. 111 to 118 of 2017**, the specific tariffs for the electricity distribution service applied by the distribution operators in 2018. When establishing these tariffs, the provisions of the *Methodology for setting tariffs for the electricity distribution service*, approved by the **ANRE Order no. 72/2013**, as amended and supplemented, were applied. Thus, the country-specific average tariffs, by voltage levels, calculated as a weighted average of the specific tariffs approved for DSOs for 2018 with the distributed quantities of electricity are the following:

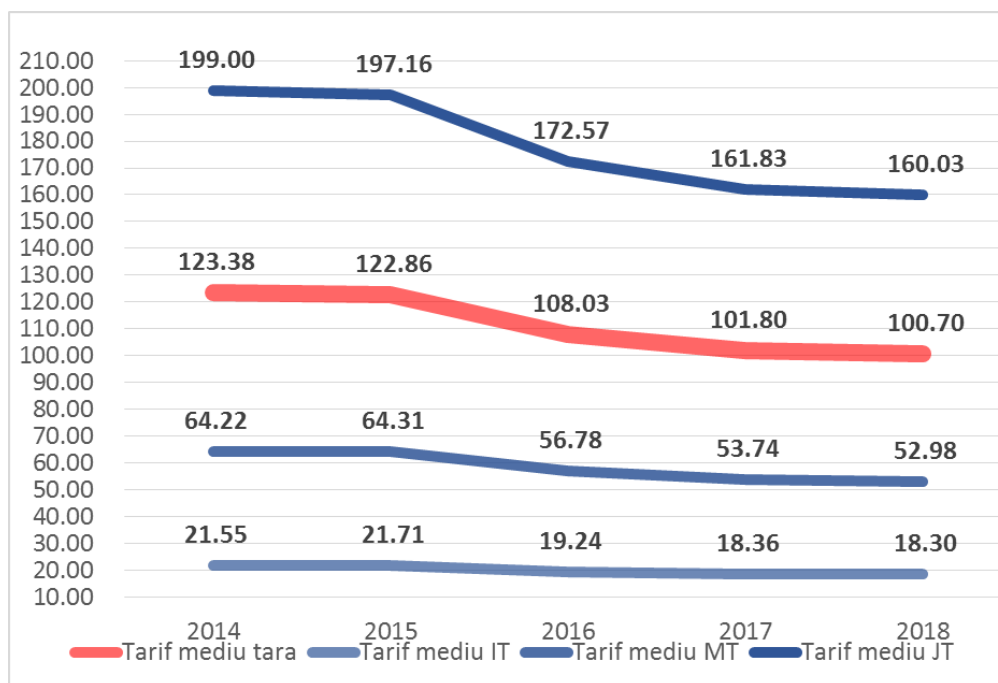
- Average specific HV tariff – Ron 18.30/MWh,
- Average specific MV tariff – Ron 34.68/MWh,
- Average specific LV tariff – Ron 107.05/MWh.



Compared to the average specific tariffs calculated for the previous year, average rates decreased, registering a variation of - 0.31% at high voltage, - 1.98% at medium voltage and - 0.97% at low voltage, relevant for household customers.

The average country price calculated for 2018, of Ron 100.7/MWh, registered a decrease of approx. 1.08% compared to the average country price calculated for 2017, which was Ron 101.8/MWh.

The following figure shows the evolution of the average power distribution tariffs applied during 2014-2018 to final customers, according to the voltage levels at which their consumption points are connected to the distribution grids, expressed in nominal terms:



The downward trend in power distribution tariffs during the third regulatory period (starting with 2014) is explained both by the increase in the amount of power distributed and by the reduction in regulated revenues due to the stricter conditions imposed by the Methodology for the recognition of costs (reinforcement of checks, request of data and additional supporting documents etc).

The current regulatory period is characterized by a lower level of costs recognized in tariffs, both capital costs by adjustment of the regulated rate of return on capital in accordance with current economic conditions, and operating and maintenance costs, which reflect the efficiency of the service accumulated during 2005-2013. Also, for costs related to technological network losses, ANRE included in the methodology a mechanism for incentivizing their streamlining, with an effect both on the quantity and on the purchase price.

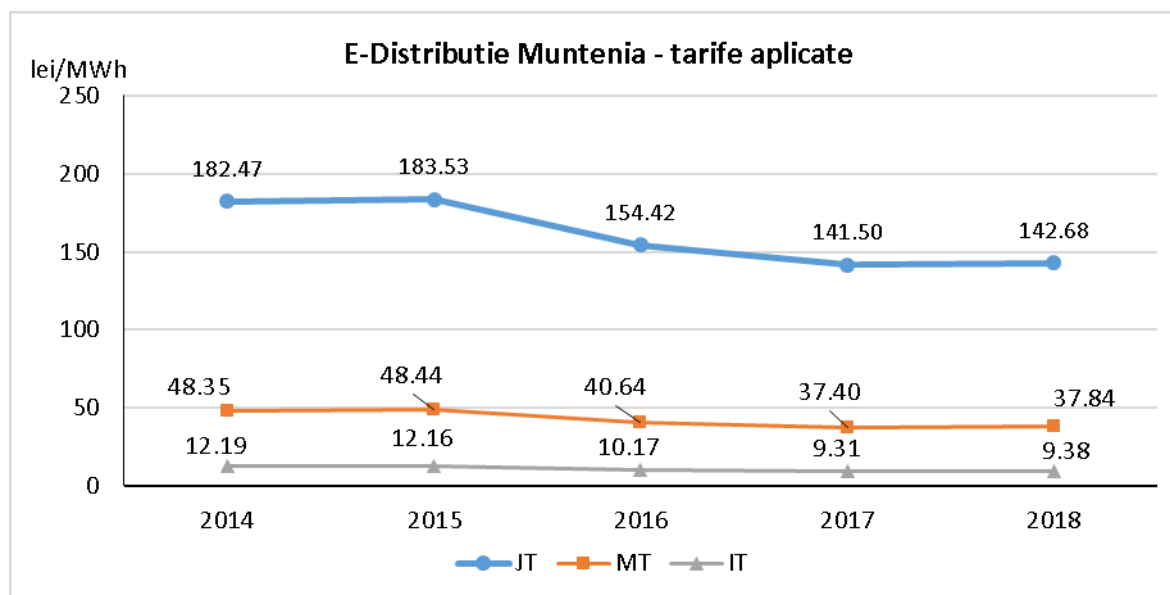
In order to determine the distribution tariffs applied in 2018, the annual closing adjustments for the last four months of 2016 were calculated and applied, as well as those resulting from data generated and estimated to be made in 2017, which were applied to the linearized earnings projected for this year. Significant value adjustments were applied, which reduced the regulated revenues of DSOs. The level of annual negative value adjustments applied when setting tariffs for 2018 was mainly due to the increase in electricity consumed, the reduction of the return on capital by reduction of the regulated profit rate to 7.7% and the elimination of tax on the special building projects starting with 1 January 2017.

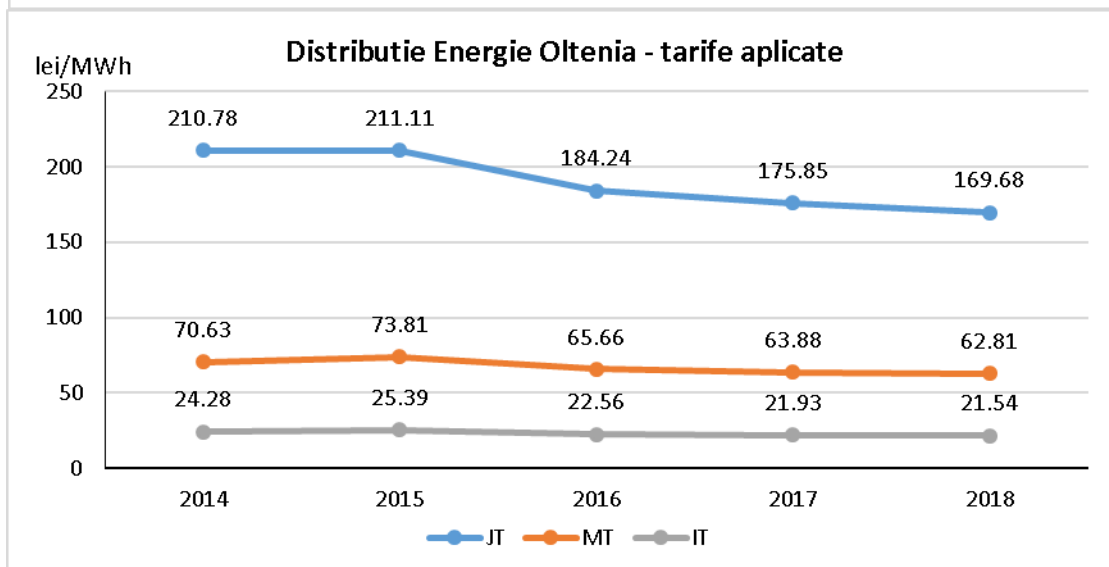
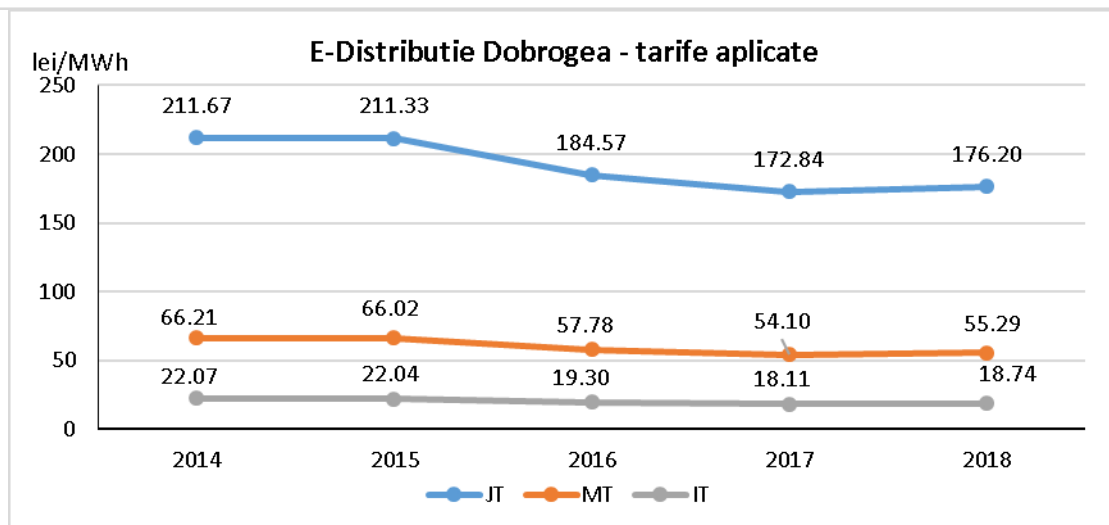
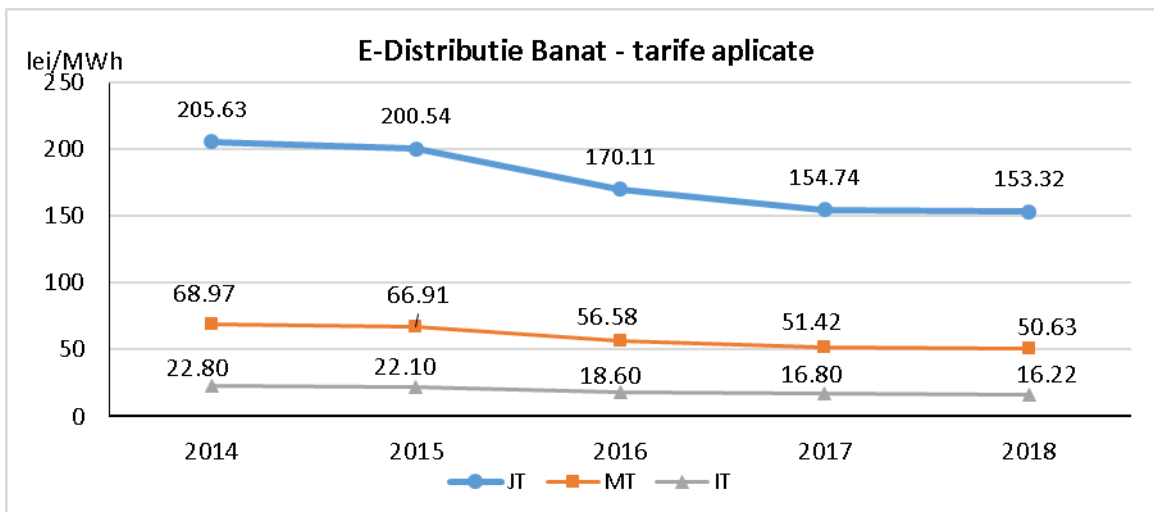
In applying the provisions of art. 48 par. (2) lit. (c) of Electricity Law no. 123/2012, as further amended and supplemented, according to which DSOs, as well as the TSO, must publish the costs related to power grid operation, maintenance and development on their own websites, ANRE approved layout templates for this publication obligation by Decision no. 618/2015.

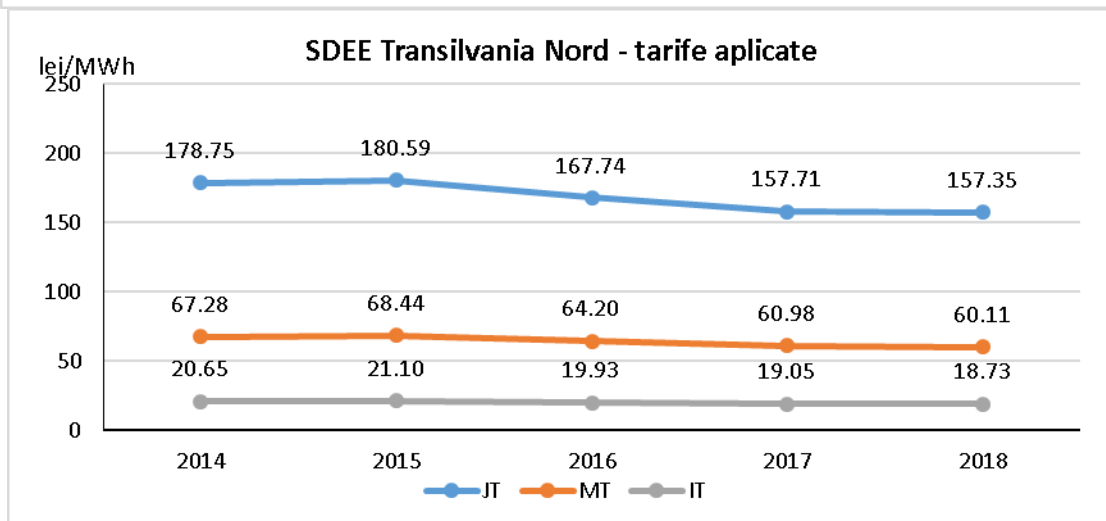
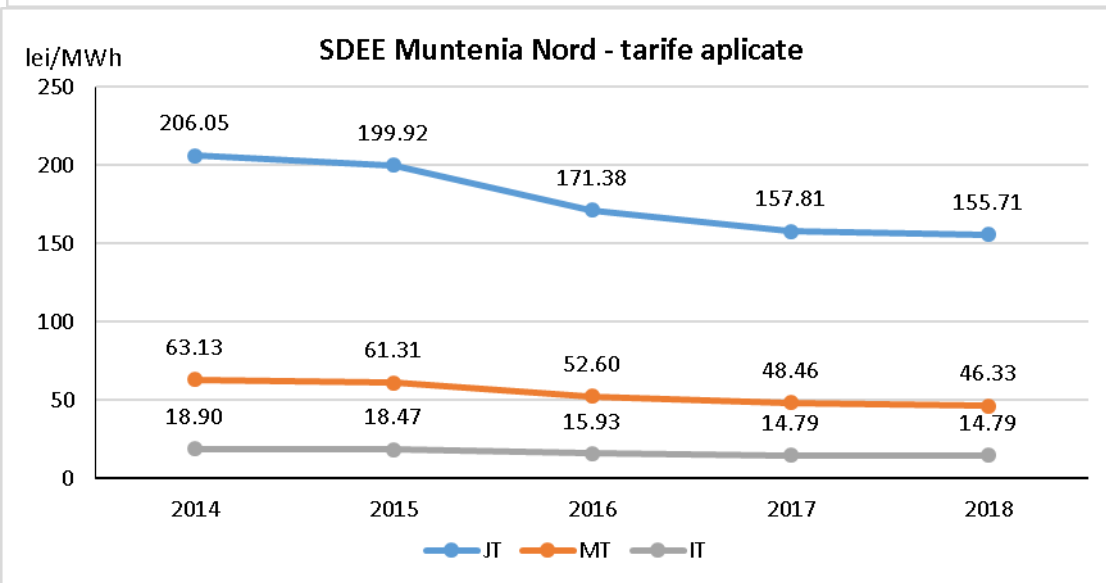
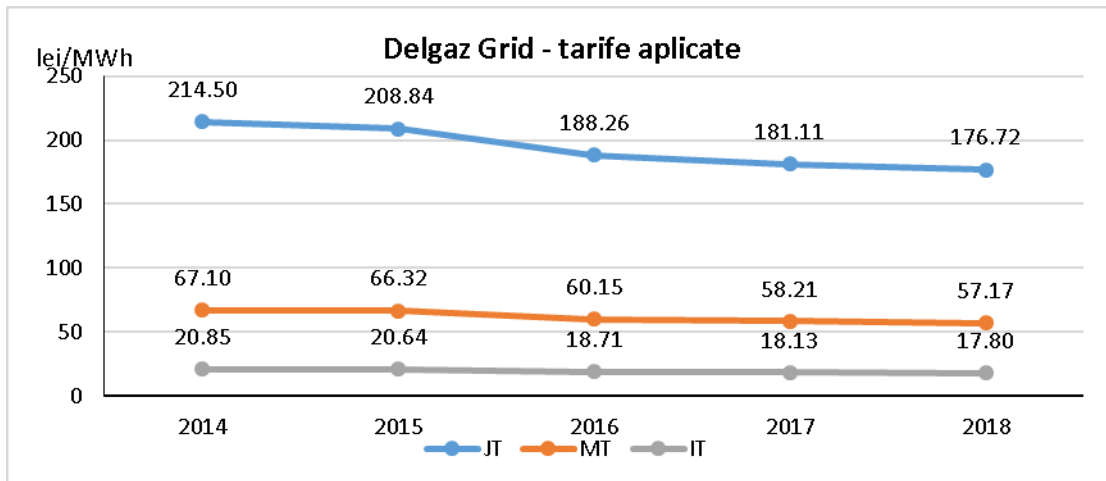
The losses registered in the Romanian electricity distribution networks, including illicit consumption, are 11% of the power entered into the grid; and the CPT comparison in grids for 2014 drawn up by the World Bank shows that our country has average results among East European countries. Countries such as Italy, Germany or the Czech Republic, with losses ranging from 4% to 7%, have a low volume of low-voltage installations (because distribution grids are separate from user installations, which are regularly medium voltage). It should be noted that the total level of losses in electricity distribution network (Ro: RED) does not strictly reflect the efficiency of a country's power grids, as it is heavily influenced by the structure of consumption per voltage levels, considering that losses in high voltage grids are on average approx. 1%, in medium voltage grids - of approx. 4%, while in low voltage grids - approx. 15% of the power entering the DSO's network. Without ignoring the fact that Romania must continue its efforts of reducing RED losses, especially at low voltage, the low level of total losses in grids registered in highly industrialized countries is also explained by a higher percentage of consumption at high and medium voltage.

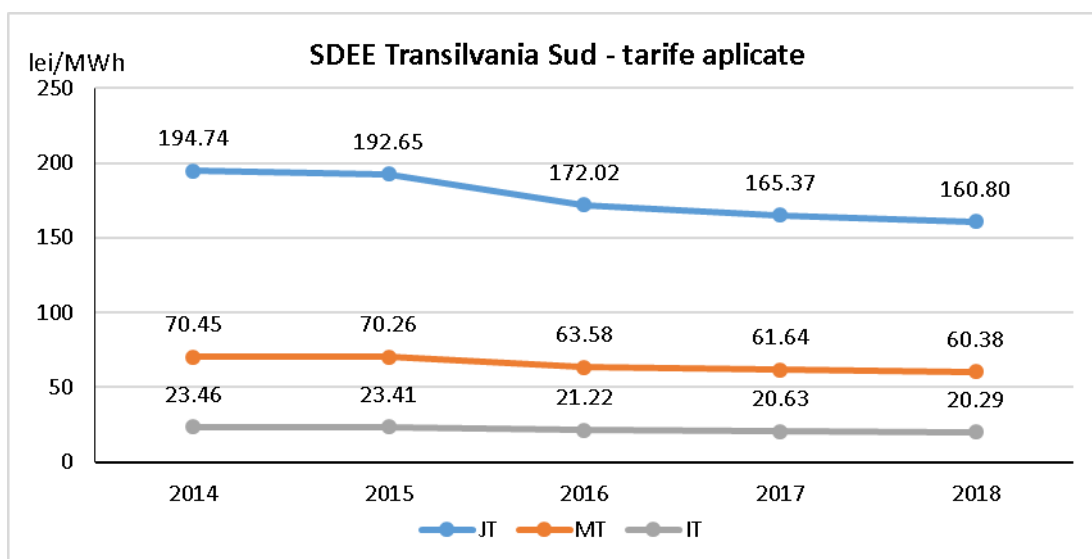
In Romania, following the evolution of the structure of power consumption in RED per voltage levels during 2008-2017, at high voltage, where the level of losses is very low, the share of power distributed decreased during 2008-2017 from 24% to 17 % of the total, while at low voltage, where the level of losses is very high, the share of power distributed increased over the same period from 44% to 48% of the total.

The following figures show the evolution of the distribution tariffs applied by each DSO during 2014-2018, in which the values are expressed in nominal terms and result by summing up the specific tariffs approved by ANRE, which the final customers pay according to the level of voltage to which they are connected.

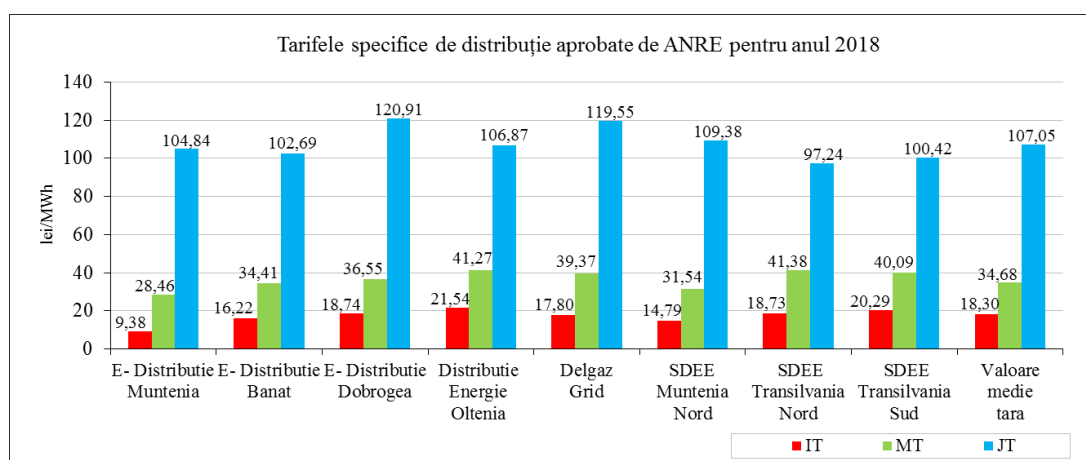








The comparison of the specific distribution tariffs approved by ANRE for 2018 for the eight distribution operators is presented in the following figure, in which the values are expressed in the nominal terms of year 2018.



Tariffs for the distribution service provided by distribution operators other than concessionaire distribution operators

Tariffs for the distribution service provided by distribution operators other than concessionaire distribution operators are approved by ANRE at the request of distribution operators who own, operate, maintain and develop distribution grids within industrial parks and platforms or patrimonial areas and which connect users - recipients of the distribution service.

Tariffs are determined based on the *Methodology for setting the tariff for the power distribution service provided by operators other than concessionaire distribution operators*, approved by the **ANRE Order no. 102/2016**. During 2017, a decision approving the tariff for the power distribution service provided by distribution operators other than concessionaire distribution operators was approved.

Tariffs for connection to public networks

The tariffs paid by users to network operators for connecting their places of consumption/production to the public electricity networks are established by network operators in accordance with the provisions of the *Methodology for setting the tariffs for users' connection to public grids*, approved by **ANRE Order no. 11/2014**, as further amended and supplemented, and comprise the following components of the connection tariff:

- TR - component corresponding to the power grid connection;
- TU - component regarding the verification of the commissioning and power connection file of this installation, for which specific tariffs were determined based on a general itemized estimate for an average case, representative for the type of installation concerned;
- TI - component for participation to the financing of the grid reinforcement works necessary for evacuating the approved power to users (for connecting a production or consumption site), and for which specific "i" tariffs were established, corresponding to the components of a public grid.

In the case of connection of a consumption site to the low or medium voltage distribution network or the connection of a production site to the low voltage distribution network, the size of the TR component of the connection tariff is determined based on the specific indexes for the achievement of the power capacities by category of network elements, possible components of a connection installation, according to standard schemes and conditions. In case of connection of the consumption site to the low or medium voltage distribution network, the value of the TU component of the connection tariff is calculated based on specific tariffs. ANRE did not modify the specific tariffs and indexes used for establishing the tariffs for connecting users to public grids, so that in 2017 the ones approved by **ANRE Order no. 141/2014** were applied.

Tariffs for the issuance/update Connection Technical Permits, Connection Certificates and Site Approvals

In order to avoid unjustified tariffs for the activities related to the connection to the public grids, ANRE approved by **ANRE Order no. 114/2014** the regulated tariffs for the issuance/update of the connection technical permits, connection certificates and site approvals, which were determined according to the provisions of the methodology for setting these tariffs, approved by **ANRE Order no. 61/2014**.

During the year 2017, ANRE drew up and approved **ANRE Order no. 63/2017** for amending ANRE Order no. 114/2014 for the approval of the tariffs for the issuance and update of connection technical permits, connection certificates and site approvals.

Taking into account the amendment of the Methodology by **ANRE Order no. 62/2017**, in order to ensure a more explicit presentation of all types of tariffs established by this methodology, **ANRE Order no. 63/2017** regulated the connected amendment of the appendix to ANRE Order no. 114/2014, which includes the rates applied for the issuance of those documents.

National implementation of European codes for access to public grids in accordance with established programs

Regarding (EU) **Regulation No. 631/2016** establishing a network code on requirements for grid connection of generators, in 2017 the following were approved:

- **ANRE Order no. 5/2017** on the *criteria for granting generators and plants consisting of generator modules exemption from the obligation to fulfill one or several requirements from the technical connection standard* (Article 61 of (EU) Regulation 2016/631),
- **ANRE Decision no. 730/2017** regarding the classification as emergent technology of the technology used by generators manufactured by ÖkoFEN Forschungs-und Entwicklungs Ges.m.b.H.,
- **ANRE Decision no. 755/2017** regarding the classification as emergent technology of the technology used by generators manufactured by Remeha B.V.,
- **ANRE Order no. 72/2017** regarding the *Technical norm regarding the technical requirements for the public grid connection of synchronous electric generator sets* (Art. 13 and 17-19 of (EU) Regulation 2016/631),
- **ANRE Order no. 106/2017** on the *Methodology for checking/withdrawing the classification of generators manufactured in emerging technology in/from the category of power plants classified as emerging technology* (Art. 30, 66, 67 and 70 of (EU) Regulation 2016/631).

Regarding (EU) Regulation 1388/2016 of the Commission of 17 August 2016 establishing a network code on demand connection, in 2017 the following were approved:

- **ANRE Order no. 42/2017** on the *Criteria for granting waivers to consumption sites/nodes connected to the transmission and distribution grids from the obligation to fulfill one or several requirements of the technical connection standard* (Article 51 of (EU) Regulation no. 2016/1388),

Regarding **(EU) Regulation 2016/1447 of the Commission of 26.08.2016 establishing a network code on demand connection for high-voltage DC systems and generator modules**, the following were approved:

- **ANRE Decision no. 473/2017** on the **Implementation Calendar**,
- **ANRE Order no. 46/2017** on the *Criteria for granting waivers for high-voltage DC systems connected to the transmission or distribution grid and for generator modules from a power plant that is connected by a high-voltage DC system to the transmission or distribution grid from the obligation to fulfill one or several requirements of the technical connection requirements applicable to them* (Article 78 (1) of (EU) Regulation 2016/1447).

2.1.4. Cross-border matters

Capacity allocations on the NPS interconnection lines with the neighboring power systems is carried out for the performance of electricity import/export and transit transactions. On Romania's borders with Hungary, Bulgaria and Serbia, the allocation of capacities is achieved through market mechanisms, bilaterally coordinated in both directions, for 100% of the allocation capacity, through long-term (annual and monthly) auctions and short-term (daily and intra-daily) explicit or implicit auctions, depending on the border and the time horizon.

On Romania's Hungarian border, auctions for long-term allocation are conducted explicitly and are organized by MAVIR (Hungarian TSO) based on the Long-Term Harmonized Allocation Rules (HAR EU). The intra-day auctions are carried out explicitly and are organized by CNTEE Transelectrica SA, while daily ones are carried out implicitly, via the 4M MC mechanism (coupled with spot markets in the

Czech Republic, Slovakia and Hungary); if the four day-ahead markets are disconnected, the allocation is made through explicit daily auctions organized by MAVIR (shadow auction).

On Romania's Bulgarian border, capacity allocation is explicit for all time horizons; the organizer of the long-term auctions is CNTEE Transelectrica SA, and for daily ones - ESO-EAD (Bulgarian TSO). As a result of the changes in Bulgarian market rules, no intra-day auctions are conducted.

On Romania's Serbian border, capacity allocation is explicit, the long-term and intra-day auctions are organized by CNTEE Transelectrica SA and the daily ones - by EMS (Serbian TSO).

For auctions organized on the Hungarian and Bulgarian borders, it was agreed for 2017 to reserve a percentage of the cross-border transmission capacity for daily auctions, the capacity offered at monthly auctions being calculated as 80% of the minimum available capacities of the monthly subperiods. As a peculiarity for the Hungarian border, if 80% of the lowest ATC value calculated monthly in subperiods is less than 80 MW, the interconnection capacity for the monthly allocation will be 80% of the ATC calculated for each subperiod, plus the capacity allocated at the annual auction returned to the TSO.

Also, starting with 2017, the UIOSI principle ("use it or sell it") is applied on the Hungarian, Bulgarian and Serbian borders, based on which the interconnection capacity corresponding to the non-nominated physical transmission rights for next day allocation are returned to the transmission system operator for a fee.

On Romania's Ukrainian border, allocation of interconnection capacities is carried out through explicit long-term auctions, the use of these capacities being conditioned by the written agreement with Ukrenergo (Ukraine's TSO). **On the Moldavian border**, the export of electricity can be done as consumption island, with the consent of the distributor in the area; in 2017, no monthly auctions were organized on this border. The establishment of the ATC value available for daily and intra-day auctions (organized for six auctions) uses the "netting" principle and participants are required to observe the exclusive partnership principle (1: 1). The trading currency is the euro.

The data published by CNTEE Transelectrica S.A. shows that the highest prices at the annual auction were registered for exports, similarly to the previous year (between Eur 2.21-2.82 /h*MW depending on the border), while for imports, the participants' interest in obtaining annual capacity was reduced (below Eur 0.5/h * MW). The prices set subsequent to monthly auctions varied according to direction and border. Significant monthly prices were registered on the Hungarian and Bulgarian borders. For the auctions for import from Hungary, the monthly prices were below Eur 0.5/h*MW, while the export prices ranged between Eur 0.87 - 7.78/h * MW. On the Bulgarian border, within the first 6 months, participants' interest was higher for exports (ranging between Eur 0.84 - 2.51/h * MW), then changed to imports from the neighboring country, the monthly prices resulting from the monthly auctions between the two countries rising from Eur 2.05 in July to Eur 6.21/h * MW in December. Average prices during the implied daily auctions on the Hungarian border reached the highest values in January 2017 (around Eur 23/h * MW) and November (Eur 20/h * MW), while the congestion price reached maximum hourly values in January (Eur 215.70/h * MW, on 11.01.2017, 17:00-18:00). The maximum hourly congestion price in November was Eur 88.53/h*MW and was recorded on 30.11.2017.

The highest hourly prices resulting from the daily auctions on the Bulgarian border were for exports in January 2017 (around Eur 39/h * MW) and October (around Eur 32/h * MW), and for imports in August (over Eur 57/h * MW) and November (Eur 50/h * MW). On the Serbian border, high hourly prices were only recorded for exports, the maxim values being in December (around Eur 23/h*MW) and October

(around Eur 21/h*MW). In intra-day auctions organized on the Hungarian and Serbian borders, hourly prices were null or near zero during most of the time slots of the year.

For 2017, the highest value for export, calculated as an arithmetic mean of monthly values, was recorded on the Serbian border (about 77%), followed by exports to Hungary (54%), while for imports, the most utilized border was with Bulgaria (35%) and Hungary (approximately 29%). Regarding exports to Serbia, the utilization rates were high month by month, reaching a peak in March, when over 95% of the capacity was used. The month with the highest utilization rate for exports to Hungary was August (64% of the total allocated capacity).

Most of the revenues obtained by CNTEE Transelectrica SA from the allocation of interconnection capacities came, as in the previous year, from long-term auctions (annual and monthly), the highest values being registered for exports to Hungary and Serbia. Income from intra-day auctions had insignificant values, and revenue from day-to-day auctions was decreased by the amounts payable to participants based on the UIOSI principle used on the Hungarian, Bulgarian and Serbian borders.

Border congestion exists when the access requested by the market participants cannot be guaranteed. For calculating the congestion frequency (FC) in the **annual and monthly allocations**, the following formula was used, by reference to the entire year 2017:

$$FC (\%) = NzC * 100 / (365 - NzR)$$

where:

- NzC is the number of days of congestion at ATC allocation;
- NzR is the number of days in which the ATC value is zero and corresponds to the withdrawals from exploitation on borders with one single interconnection line (Serbia, Hungary).

For calculating the congestion frequency in **daily allocation** (FzC), the following formula was used, with reference to the entire year 2017:

$$FzC (\%) = NhC * 100 / Nh$$

unde:

- NhC is the number of congestion hours;
- Nh is the total number of hours in which auctions were organized.

Depending on the frequency of congestion, a **severity index** is assigned, as shown in the table below:

Severity index	0	1	2	3	4	5
Congestion frequency	0%	1-25%	26-50%	51-75%	76%-99%	100%

In the case of the **annual ATC allocation**, the congestion frequency in 2017 on each border and direction of exchange was 100%.

Licitațiile anuale 2017	Ungaria		Bulgaria		Serbia		Ucraina	
	export RO	import RO	export RO	import RO	export RO	import RO	export RO	import RO
Număr zile congestie	365	365	365	365	360	360	348	348
Număr zile retrageri linii de interconexiune (pe granițele cu o singură linie de interconexiune)	-	-	-	-	5	5	17	17
Frecvența de apariție a congestiei la alocarea anuală (%)	100	100	100	100	100	100	100	100
Indice de severitate	5	5	5	5	5	5	5	5

Congestion frequency at **monthly ATC allocation**:

Licitațiile lunare 2017	Ungaria		Bulgaria		Serbia		Ucraina	
	export RO	import RO	export RO	import RO	export RO	import RO	export RO	import RO
Număr zile congestie	364	357	365	365	344	111	0	212
Număr zile retrageri linii de interconexiune (pe granițele cu o singură linie de interconexiune)	-	-	-	-	5	5	17	17
Frecvența de apariție a congestiei la alocarea lunară (%)	99.4	97.5	99.7	99.7	95.2	30.7	0.0	60.7
Indice de severitate	5	4	5	5	4	2	0	3

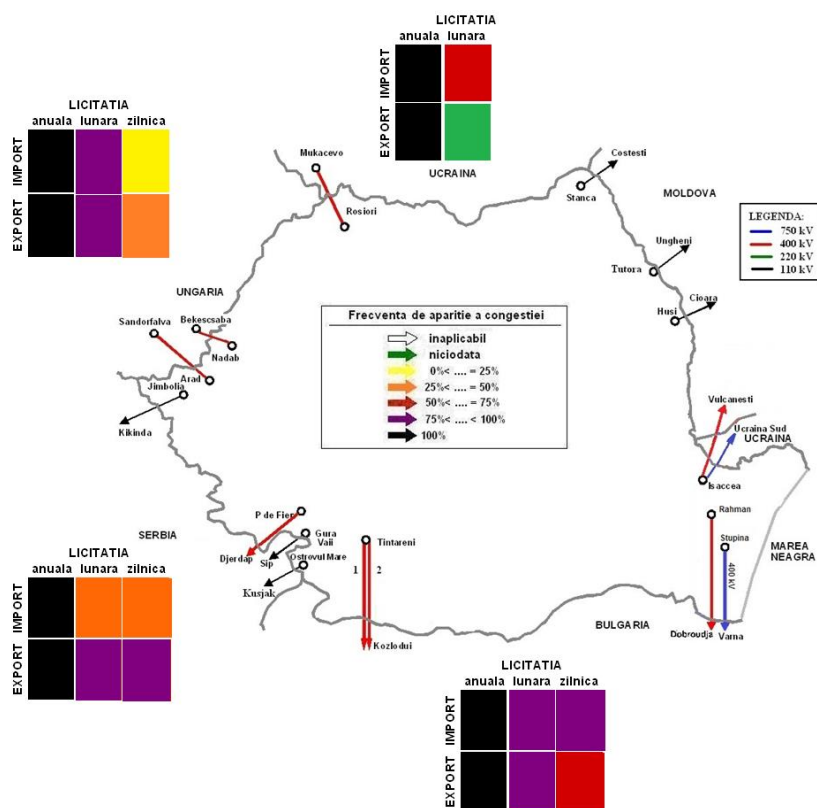
Congestion frequency at **daily ATC allocation**:

Licitațiile zilnice 2017	Ungaria		Bulgaria		Serbia		Ucraina	
	export RO	import RO	export RO	import RO	export RO	import RO	export RO	import RO
Număr ore congestie	1522	276	6201	6581	7884	2731	-	-
Număr ore licitație	3483	5275	8759	8760	8173	8640	-	-
Număr ore retrageri linii de interconexiune (pe granițele cu o singură linie de interconexiune)	-	-	-	-	120	120	408	408
Frecvența de apariție a congestiei la alocarea zilnică (%)	43.7	5.2	70.8	75.1	96.5	31.6	-	-
Indice de severitate	2	1	3	3	4	2	-	-

There are no daily allocations on the border with Ukraine.

In the case of **intra-day ATC allocation**, in 2017 there was no congestion in bilaterally coordinated allocations on the Hungarian and Serbian border, with the exception of 42 time intervals for exports and 39 hourly intervals for imports on the Hungarian border and one hourly interval for exports on the Serbian border.

The representation of the congestion severity index for the annual, monthly and daily allocation per border and direction of exchange for 2017 is shown in the figure below:



Notes for exports:

- the most congested borders were those with Bulgaria, Serbia and Hungary;
- the least congested was the border with Ukraine for monthly auctions;

Notes for imports:

- the most congested borders were those with Bulgaria and Hungary;
- the least congested was the Serbian border for monthly and daily auctions.

The report of the revenues of the transmission and system operator from congestion management during 1 July 2017 - 30 June 2018 is carried out in accordance with the provisions of paragraph 6.5 of Appendix 1 - Guidelines on the management and allocation of the available transmission capacity of interconnections between national systems, (CE) Regulation 714/2009 of the European Parliament and Council of 13 July 2009 on the conditions of network access for cross-border electricity exchanges and for repealing (EC) Regulation 1228/2003.

The report includes **the amount of revenue collected by the transmission system operator** during the 12-month period prior to 30 June 2018 and **the use of the revenue** together with the results of the verification certifying that this use is compliant with the requirements of the Regulation and that all revenue from congestion is aimed at one or several of the three objectives set out in Art. 16 par. (6) thereof.

In accordance with Art. 16 (6) of the *Regulation*, the revenue from the allocation of interconnection capacities shall be used by the transmission system operator for the following purposes:

- ensuring the actual availability of the allocated capacity and/or
- maintaining or increasing interconnection capacities by investments in the grid, in particular in new interconnections; or
- as income to be factored into the calculation of transmission tariffs, up to a maximum amount decided by ANRE, if it cannot be used efficiently for the above-mentioned purposes.

The Romanian transmission system operator, CNTEE Transelectrica S.A., is responsible for congestion revenue management resulting from the allocation of interconnection capacity between Romania and Serbia, Hungary, Bulgaria, Ukraine and Moldova, obtained through annual, monthly and daily auctions. Every year, CNTEE Transelectrica S.A. sends ANRE the monitoring of the revenues obtained from auctions organized for the allocation of interconnection capacities on borders. These earnings, made between 1 July 2017 and 30 June 2018, are shown in the table below.

Interconexiunea	Iul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Ian 18	Feb-18	Mar-18	Apr-18	Mai 18	Iun 18	Total
Romania - Serbia	1,651,309.27	1,513,346.82	1,125,907.80	1,260,945.94	1,371,239.52	1,892,967.12	1,653,940.85	1,740,200.88	1,189,362.86	950,060.90	965,391.22	788,689.47	16,103,362.66
Serbia - Romania	28,719.39	24,109.31	31,519.41	38,135.63	44,891.30	18,534.46	21,246.57	22,817.35	51,569.75	62,548.03	82,584.39	101,018.39	527,693.98
Romania - Bulgaria	505,049.55	528,944.90	534,839.00	634,102.68	506,342.07	645,691.60	480,508.15	680,035.29	1,057,890.29	716,156.39	546,333.66	1,217,959.18	8,053,852.76
Bulgaria - Romania	1,086,695.28	1,862,757.19	1,292,281.22	859,298.02	2,153,712.14	1,846,337.28	904,052.47	545,207.60	597,161.31	505,263.23	524,624.98	765,268.29	12,942,659.01
Romania - Ungaria	2,330,047.70	2,311,432.83	1,939,006.90	1,869,231.92	2,116,274.81	2,660,104.57	2,107,818.72	2,280,642.76	2,305,896.32	2,250,745.73	1,200,678.98	1,522,338.35	24,894,219.59
Ungaria - Romania	215,030.56	333,083.33	554,399.29	267,478.65	223,421.38	240,051.24	325,710.38	271,291.10	249,179.65	242,396.62	345,318.79	246,998.85	3,514,359.85
Romania - Ucraina	45,859.90	45,739.37	25,079.38	44,734.19	44,500.10	46,187.34	22,371.34	0.00	0.00	0.00	0.00	1,008.41	275,480.03
Ucraina - Romania	253,747.24	7,066.01	212,568.37	87,681.82	81,874.31	81,315.88	158,320.22	9,349.00	0.00	0.00	16,500.29	30,213.68	938,636.82
Romania - Moldova		0	0	0	0	0	0	0	0.00	0.00	0	0	0.00
Moldova - Romania		0	0	0	0	0	0	0	0.00	0.00	0	0	0.00
T O T A L	6,116,458.89	6,626,479.76	5,715,601.37	5,061,608.85	6,542,255.64	7,431,189.50	5,673,968.70	5,549,543.98	5,451,060.17	4,727,170.90	3,681,432.32	4,673,494.62	67,250,264.70

* Revenues from the allocation of NPS interconnection capacities to neighboring power systems include revenues from daily and intra-day auctions on the border with Hungary, Bulgaria and Serbia as well as revenues from congestions resulted at market price coupling for the next day markets of Romania, the Czech Republic, Slovakia and Hungary (4M MC Project)

The analysis of the collected amounts indicates that approx. 73% of revenues come from export capacity auctions and approx. 27% for import. The distribution per border indicates that 42.2% of revenues come from the capacity allocated between Romania and Hungary, 25% from capacity allocation auctions between Romania and Serbia and 31% from capacity allocation auctions between Romania and Bulgaria. Only 1.8% of revenues come from capacity allocation auctions between Romania and Ukraine.

Between 1 July 2017 and 30 June 2018, CNTEE Transelectrica S.A. registered congestion revenues totaling Ron 67,250,264, representing an average Ron/Eur exchange rate of Ron 4.6269/Eur, amounting to Eur 14,534,627. Taking into account the provisions of the national law, these amounts are included in the gross annual profit obtained by the company and have been decreased by allocation of profit per destinations, according to the provisions of *Government Ordinance no. 64/2001 on the distribution of profit to national companies, national enterprises and companies partially or fully state-owned, as well as to the autonomous administrations*, as further amended and supplemented. Thus, after applying the 16% corporate income tax and the 5% legal reserve, the amount remaining and submitted between 1 July 2017 and 30 June 2018 in the designated account was Ron 53,665,710 (Eur 11,598,632). The total amount in the separate account, dedicated on 30.06.2018, is Ron 269,905,423 after applying the profit tax and the legal reserve, which is Eur 60,106,207.

This revenue was used as follows:

- to maintain or increase the availability through investments in grids, in accordance with art. 16 (6) let. b) of the *Regulation*, the amount of Ron 14,085,964 (Eur 3,026,831) was used between 1 January 2018 and 30 June 2018, and Ron 162,420,140 (Eur 36,182,877) was used between 1 January 2013 and 30 June 2018;
- to guarantee the actual availability of the allocated capacity, in accordance with art. 16 (6) let. a) no funds resulting from congestion revenues were used;
- upon establishment of the transmission tariff effective starting with 1 July 2018, in accordance with the provisions of paragraph 16 (6), second paragraph of (EC) Regulation 714/2009, ANRE approved the use by CNTEE Transelectrica S.A. of an estimated amount of Ron 17.9 million (Eur 3.87 million) from the revenues generated from congestion management between 1 July 2017 and 30 June 2018, to cover the costs incurred during the same period as cross-border trade in electricity exports (ITC mechanism). This

amount is subject to a correction of RON 0.4 million resulting from the closing of the tariff year 1 July 2016 - 30 June 2017 and recorded in the company's accounts at the end of the current year.

CNTEE Transelectrica S.A. reported during the analyzed period the following expenses for the performance of investments funded from the allocation of the interconnection capacity (Article 16 (6) letter b) of the *Regulation*):

Pozitia din Anexa F2 la Planul de Dezvoltare 2018-2027	Denumire proiect	Plati 2013	Plati 2014	Plati 2015	Plati 2016	Plati 2017	Plati ian-iunie 2018	TOTAL Plati 2013 - 30.06.2018	Observatii
F4	LEA 400 kV de interconexiune Reșița (România) - Pancevo (Serbia) - proiect nr. 25	356,936	4,018,228	34,716,516	21,361,325	26,138,958	13,156,028	99,747,992	In anii 2009-2013 s-a derulat proiectarea. Inceperea executiei conditionata de emiterea HG de aprobare indicatori tehnico-economici si demarare procedurilor de expropriere. TEL a depus documentatia pentru HG in data de 12.02.2013, HG a fost emis in august 2014. Contractul de executie lucrari a demarat in octombrie 2014. Continuarea lucrarilor pe suprafetele impadurite este conditioana de emiterea HG pt scoatere din circuitul forestier. TEL a depus documentatia pt emiterea acestei HG in data de 20.02.2014, HG a fost emisa in 13.10.2015. Intarzieri cauzate de modificarea normelor de aplicare a Codului silvic. - Realizat PIF in perioada 29 - 30.03.2018 -valoare 98.590.975,66 lei

F1	Trecerea la tensiunea de 400 kV a axului Portile de Fier - Resita - Timisoara - Sacalaz - Arad - Etapa I: - LEA 400kV s.c. Portile de Fier - (Anina) - Resita (proiect nr. 26) + extinderea statiei Portile de Fier (proiect nr.382) + Statia Resita (proiect nr.383)	2,278,157	6,881,316	63,605,771	-25,646,091	9,995,497	524,259	57,638,910	<p>Proiectare derulata in perioada 2009-2013 SF integrator pentru cele 3 etape ale Axului Banat Extinderea statiei 400 kV Portile de Fier.</p> <p>Executia lucrarilor pentru Extinderea statiei 400 kV Portile de Fier a demarat in anul 2013, PIF august 2016, valoare totala 13.061.040 lei.</p> <p><u>LEA 400 kV s.c. Portile de Fier - (Anina) - Resita</u></p> <p>Pentru proiectele LEA 400 kV Portile de Fier- Anina - Resita si Statia 400/220/110 kV Resita s-au depus documentatiile pentru emiterea HG pt aprobare indicatori tehnico-economici si demararea procedurilor de expropriere in martie 2014. HG s-a emis in decembrie 2016.</p> <p><u>LEA 400 kV s.c. Portile de Fier - (Anina) - Resita</u></p> <p>In data de 29.10.2015 s-a semnat contractul de executie in valoare de 122.931.480 lei.</p> <p>Tronsonul Anina-Resita: - ; Termenul PIF pentru tronsonul Anina-Resita este data de 03.12.2018.</p> <p>Tronsonul Portile de Fier-Anina: - Pentru acest tronson termenul de PIF este de 24 luni de la data ordinului de incepere care va fi dat dupa obtinerea HG de scoatere din fond forestier.</p> <p>Documentatia pentru HG fond forestier a fost revizuita. Au fost obtinute avizele de la Garda Forestiera TM nr. 3887/04.04.2018 si Garda Forestiera Valcea nr. 4/04.07.2018; Documentatia pentru promovarea HG de fond forestier a fost depusa la Ministerul Apelor si Padurilor in data de 10.07.2018</p> <p><u>Statia 400/220/110 kV Resita</u></p> <p>Contractul de executie pentru statia Resita a fost semnat in 29.07.2015. Lucrarile au fost stopate din decembrie 2016 iar Contractul a fost denuntat de executant in data de 10.07.2017 datorita problemelor financiare ale acestuia (Elcomex SA care a intrat in insolventa in aprilie 2017).</p> <p>Pentru recontractare si reluare lucrari:</p> <p>A) - Contractul de furnizare pentru echipamente secundare și servicii asociate atribuit prin procedura NFIP a fost semnat in 11.05.2018.</p> <p>B) Documentatia de atribuire (pentru partea de licitatie) pentru echipamente primare si servicii adiacente s-a postat in SICAP in data de 14.05.2018 fiind respinsa de ANAP in data de 05.06.2018.</p> <p>Estimare semnare contract si emitere Ordin incepere lucrari: ianuarie 2019</p>
F5	LEA 400 kV d.c. (1 c.e) Gutinas-Smardan (proiect nr.779,133)	13,553	17,485	6,060	40,100	466,920	7,636	551,754	<p>- Studiul de fezabilitate a fost revizuit și avizat în CTES Transelectrica – Aviz nr. 100/07.06.2016;</p> <p>- A fost obținut Acordul de Mediu nr. 8/27.11.2013, actualizat pentru culoarul LEA 400 kV modificat prin Decizia Agenției Naționale pentru Protecția Mediului nr.23/15.10.2015.</p> <p>- A fost obținut Ordinul Ministerului Economiei nr.743/11.07.2017 privind aprobarea indicatorilor tehnico-economici;</p> <p>- A fost obținută Hotărârea de Guvern nr. 844/2017 pentru aprobarea amplasamentului și declanșarea procedurii de expropriere a imobilelor proprietate privată care constituie coridorul de expropriere al lucrării de utilitate publică de interes național;</p> <p>- A fost finalizat proiectul tehnic și caietul de sarcini ca urmare a obținerii HG 844/2017 pentru aprobarea amplasamentului;</p> <p>- Au fost depuse documentațiile pentru aprobarea scoaterii definitive și ocupării temporare din fondul forestier a terenurilor necesare pentru realizarea investiției la Romsilva (pentru județele Bacău și Vrancea);</p> <p>- Au fost emise deciziile de expropriere conform prevederilor Legii 255/2010.</p> <p>- Execuția lucrărilor propusă în Planul de dezvoltare 2018-2027: 2020-2022.</p>
F7	LEA 400 kV d.c. Cernavoda - Stalpu si racord in statia Gura Ialomitei (linie noua) (proiect nr.31)	2,389	3,282	8,159	5,892	1,020	29,302	50,043	<p>- Studiul de fezabilitate (SF) a fost finalizat, aprobat în Consiliul de administrație al CNTEE Transelectrica SA prin Decizia nr. 7 din 06.03.2012 și actualizat (devizul general și indicatorii tehnico-economici) prin Decizia Directoratului nr. 343/16.04.2015.</p> <p>- A fost elaborat studiul topocadastral și situația juridică a terenurilor;</p> <p>- S-a obținut Acordul de mediu nr. 1/07.04.2014;</p> <p>- A fost elaborat Proiectul Tehnic și Caietul de sarcini;</p> <p>- A fost obținut Ordinul MECRMA nr. 1444/2016 de aprobare a indicatorilor tehnico-economici;</p> <p>- Datorită modificării valorii investiției a fost obținut Ordinul Ministrului Economiei nr.745/11.07.2017, de modificare a Ordinului MECRMA nr. 1444/2016 de aprobare a indicatorilor tehnico-economici;</p> <p>- A fost obținută Hotărârea de Guvern nr. 805/2017 pentru aprobarea amplasamentului și declanșarea procedurii de expropriere a imobilelor proprietate privată care constituie coridorul de expropriere al lucrării de utilitate publică de interes național;</p> <p>- Urmare a depunerii aplicației în data de 9 octombrie 2017 la CE, proiectul LEA 400 kV d.c. Cernavodă – Stalpu primit aviz favorabil pentru finanțare sub formă de grant, prin intermediul instrumentului financiar Connecting Europe Facility (CEF). Conform acestui mecanism de sprijin financiar instituit prin Regulamentul UE nr. 1316/2013, cuantumul asistenței financiare din partea UE este de maxim 50% din costurile eligibile ale lucrărilor, respectiv suma de 27 085 000 Euro.</p> <p>- Contractul de finanțare INEA/CEF/ENER/M2017/1509097 pentru grant prin intermediul instrumentului financiar Connecting Europe Facility (CEF) a fost semnat în data de 20.04.2018;</p> <p>- Pentru LEA 400 kV Cernavodă – Stalpu au fost obținute Autorizațiile de construire nr. 10/27.04.2018 emisă de Consiliul Județean Ialomița și respectiv 24/22.06.2018 emisă de Consiliul Județean Constanța;</p> <p>- Procedura de achiziție a lucrărilor de construcție este în curs de derulare; Documentatia postata pe SEAP pentru validare la ANAP din data de 25.06.2018</p> <p>- Execuția lucrărilor propusă în Planul de dezvoltare 2018-2027: 2019-2021</p>
F9	Statia 400 kv Stalpu(statie noua) + Modernizare celule 110 kv si medie tensiune (proiect nr.	0	89,500	64,000	49,556	56,425	6,401	265,882	<p>- Documentatia de Atribuire publicata pe SEAP in 07.05.2018, avand data de depunere oferte 18.06.2018;</p> <p>- In perioada de clarificari. Prolungire termen de depunere oferte: 23.07.2018</p> <p>- Execuția lucrărilor propusă în Planul de dezvoltare 2018-2027: 2019 - 2021</p>
F10	LEA 400 kV Gadalin - Suceava, inclusiv interconectarea la SEN (proiect nr.20)	317,094	5,126	4,679	715,704	14,700	359,854	1,417,157	<p>- In derulare proiectare si obtinere avize. Obținerea avizului de mediu a durat 40 luni. Au avut loc mai multe modificari de traseu solicitate de primariile localitatilor de pe traseul LEA si de MAPN, datorita intarzierilor in emiterea avizului de mediu. A fost necesara reobținerea certificatelor de urbanism. In curs obtinerea Acordului de mediu.</p> <p>- Urmeaza: Avizare PT + CS refacut dupa ultimul traseu al LEA avizat si actualizare PT + CS pentru celule; Elaborare documente pentru HG expropriere</p> <p>Valoare estimata 428.228.000 lei,</p> <p>- Execuția lucrărilor propusă în Planul de dezvoltare 2018-2027: 2022 - 2027</p>
F11	LEA 400 kV Suceava - Balti, pentru porțiunea de proiect de pe teritoriul României (proiect nr.21)	575,207	165,945	940,000	246,374	818,392	2,485	2,748,403	<p>- Studiul de fezabilitate si Avizul de mediu sunt finalizate.</p> <p>- In prezent se deruleaza etapa de obtinere a avizelor solicitate prin CU (Certificat de urbanism) si a Acordului de mediu.</p> <p>- Construcția LEA 400kV Suceava - Balti se va derula intre anii 2019 –2023;</p> <p>implementarea proiectului este condiționată de:</p> <p>- Obținerea avizelor, acordurilor, autorizațiilor, a planurilor parcelare si a hotararilor de guvern pentru expropriere si scoatere din fond forestier;</p> <p>- Continuarea proiectarii de catre Moldelectrica pentru porțiunea de pe teritoriul Republici Moldova</p> <p>- In 6.03.2018 s-a predat la MEC documentatia pentru emitere OM indicatori si HG expropriere;</p> <p>- S-a semnat actul adițional nr.5, de prelungire a duratei contractului cu 6 luni</p> <p>- S-a emis Ordinul Mec. Nr 848/05.07.2018 de aprobare indicatori th-ec</p> <p>- Execuția lucrărilor propusă în Planul de dezvoltare 2018-2027: Estimarea anuala a cheltuielilor si anul de PIF - dupa aprobare finantare Rep. Moldova</p>
TOTAL		3,543,336	11,180,883	99,345,186	-3,227,140	37,491,912	14,085,964	162,420,140	

At the time of this report, the amount of Ron 107,485,283 (Eur 23,096,736) remained available to CNTEE Transelectrica S.A. in the designated account, for use in accordance with the provisions of art. 16 (6) of the *Regulation*.

Calculul explicit al veniturilor din alocarea capacităților de interconexiune realizate în perioada 1 ianuarie 2013 – 30 iunie 2018 și virate într-un cont distinct								
		2013	2014	2015	2016	2017	ian-iunie 2018	Total
		lei	lei	lei	lei	lei	lei	2013-
		(euro)	(euro)	(euro)	(euro)	(euro)	(euro)	iunie 2018
cont 704.05	Venituri din alocarea capacității de interconexiune, din care:	23.459.854	78.213.260	102.160.979	82.232.459	75.726.834	29.756.670	391.550.056
	Venituri utilizate în reducerea tarifului de	-	-	17.729.577	18.845.650	16.747.481	-	53.322.708
	Venituri care urmează să se repartizeze	23.459.854	78.213.260	84.431.402	63.386.809	58.979.353	29.756.670	338.227.347
	Rezerva legală 5%	1.172.993	3.910.663	4.221.570	3.169.340	2.948.968	1.487.833	16.911.367
	Impozit 16%	3.565.898	11.888.416	12.833.573	9.634.795	8.964.862	4.523.014	51.410.557
cont distinct	Venituri virate	18.720.963	62.414.181	67.376.259	50.582.674	47.065.524	23.745.822	269.905.423
		(4.236.470)	(14.042.699)	(15.157.763)	(11.263.622)	(10.303.085)	(5.102.568)	(60.106.207)
	Sold la începutul anului	-	15.177.627	66.410.926	34.442.000	88.251.813	97.825.425	
			(3.414.847)	(14.940.591)	(7.669.458)	(19.319.151)	(21.020.999)	
	Total venituri virate	18.720.963	77.591.808	133.787.185	85.024.674	135.317.337	121.571.247	269.905.423
	(4.236.470)	(17.457.546)	(30.098.354)	(18.933.080)	(29.622.236)	(26.123.568)	(60.106.207)	
	Plati efectuate	3.543.336	11.180.883	99.345.186	-3.227.140	37.491.912	14.085.964	162.420.140
		(801.841)	(2.515.611)	(22.349.873)	(-718.611)	(8.207.332)	(3.026.831)	(36.182.877)
	Sold final=Venituri virate-Plati efectuate	15.177.627	66.410.926	34.442.000	88.251.813	97.825.425	107.485.283	107.485.283
		(3.434.629)	(14.941.935)	(7.748.481)	(19.651.691)	(21.414.904)	(23.096.737)	(23.096.737)

Monitoring the technical cooperation between TSOs and third country operators

Regional cooperation on infrastructure projects represents an important dimension of CNTEE Transelectrica SA's activity in terms of cooperation with neighboring countries' power systems. In this context, TSO's focus has been on continuing the infrastructure projects aimed at increasing the interconnection capacity in order to improve mutual energy exchanges between neighboring systems and eliminate potential congestion. As a result, the projects with Serbia, the Republic of Moldova and Turkey were continued.

Cooperation projects between Romania and the Republic of Moldova

The general cooperation framework in the field of electricity between the two countries is regulated by the **Memorandum of Understanding signed between the Governments of Romania and the Republic of Moldova in 2015**. According to this Memorandum of Understanding, a Working Group was established in the electricity field, attended by specialists from relevant ministries and power transmission companies from the two countries (CNTEE Transelectrica SA and ÎS Moldelectrica SA).

1. Synchronous interconnection of the Moldavian system with that of Continental Europe

The request regarding the synchronous interconnection of the energy systems of the Republic of Moldova and Ukraine with the European system was approved by UCTE (current ENTSO-E) in November 2006. The request for interconnection was made considering that the power systems of Ukraine and Moldova will form a single "block control". CNTEE Transelectrica SA was a supporter of the synchronous interconnection process. The synchronous interconnection process to the European power transmission network is coordinated by ENTSO-E. CNTEE Transelectrica SA is a member of this association and, as such, supports the synchronous interconnection (it is a "supporting party") with the power systems of the Republic of Moldova and Ukraine.

The feasibility study was conducted between November 2014 and February 2016 taking into account the following overhead power lines (LEAs) for interconnection between systems in Romania and the Republic of Moldova:

- OEL 400kV Isaccea (RO)-Vulcănești (RM) simple circuit (existing electrical line),
- OEL 400kV Suceava (RO)-Bălți (RM) simple circuit (project from the 10-year development plan of CNTEE Transelectrica SA)

Given the fact that IS Moldelectrica and Ukrenergo applied for synchronous interconnection aiming to form a control block together, the successful completion and duration of the interconnection process depends on the involvement of both parties throughout the duration of the project, for the implementation of the measures provided in the Measures Catalog as necessary for each system.

In June 2017, Ukrenergo, Moldelectrica and most of TSOs in Continental Europe signed the Agreements on the conditions for the interconnection of the Ukrainian and Moldovan systems with that of the Continental Europe, whereby the following road map of the actions preceding the interconnection was agreed:

- Additional studies will be carried out to define in detail all the necessary technical measures (deadline for completion - two years after signing the agreement). The studies will be carried out by a consortium of ENTSO-E Transmission and System Operators. CNTEE Transelectrica SA will be the consortium leader. Additional studies will analyze the technical feasibility of synchronous interconnection with the current network (without development projects) and will present in detail all the necessary technical measures for system stability. In the Feasibility Study conducted between 2014 and 2016, inter-zone oscillations and system instability hazard were detected at the charge gap, and the proposed measures were theoretical and require detailed presentation and confirmation by the equipment manufacturers;
- The required technical and regulatory measures will be implemented in Ukraine and Moldova (deadline for completion - four years after signing the agreement);
- Isolated testing of the systems in Ukraine and the Republic of Moldova will be carried out (term of completion - one year after the implementation of the technical measures). So, isolated test runs will be done in 2022 at the earliest, but this deadline depends on the speed with which technical measures are implemented;
- Tests ascertaining the operation interconnected with the Continental European system will be carried out (completion time - one year after the completion of the isolated operation test).

The decision on synchronous interconnection will be taken by the TSO in Continental Europe after completing additional studies and operating tests mentioned in the measures catalogs.

2. Asynchronous interconnection of energy systems from Romania and the Republic of Moldova

In July 2016, the Cooperation Agreement between CNTEE Transelectrica SA and IS Moldelectrica was signed for the realization of the three interconnection projects through Back to Back stations mentioned in the Memorandum of Understanding between the Governments of Romania and the Republic of Moldova in 2015, namely:

1. OEL 400 kV Isaccea (RO) - Vulcanesti (RM) (existing line), 400 kV new Vulcanesti-Chisinau double circuit, back to back station in Vulcanesti;
2. OEL 400 kV Suceava (RO) - Balti (RM) simple circuit and back-to-back station in Balti;

3. OEL 400 kV Iasi (RO) - Ungheni - Straseni (RM) simple circuit and back-to-back station in Straseni.

It is apparent from the Memorandum of Understanding that, from a legal standpoint, undertaking obligations to achieve interconnection projects is to be treated differently, as follows:

- The Isaccea-Vulcanesti Interconnection (Vulcanesti-Chisinau line and Vulcanesti back-to-back station) are under the sole responsibility of the Moldavian Government;
- The Iasi-Ungheni-Straseni interconnection and the Suceava-Balti interconnection (including the choice of carrying out both or only one of them) are the joint responsibility of the Romanian and the Moldovan Government.

Cooperation projects between Romania and Serbia

OEL project 400 kV double circuit Resita (Romania) - Pancevo (Serbia)

The project is considered a project of regional relevance and targets the increase of electricity exchanges between Romania and Serbia by increasing the interconnection capacity between the two countries. The total length of the line is 171 km, of which 63 km in Romania and 68 km in Serbia.

According to the agreement with the EMS (Elektromreža Serbia), in December 2017 the 400 kV Resita - Pancevo OEL from the Pancevo station was activated at a 400 kV voltage, considering that the works for the 400 kV Pancevo 1 and 2 cells from the Resita station were suspended due to the insolvency of the contractor for the construction/reengineering of the 400/220/110 kV station in Resita.

Cooperation projects between Romania and Turkey

1. Collaboration of C.N.T.E.E. Transelectrica S.A. And TEIAS (Turkey's Transmission and System Operator) within the ENTSO-E (European Network of Transmission System Operators for Electricity) - Pan-European Association of Transmission and System Operators.

ENTSO-E promotes important energy policy issues, becoming the common voice of all European Transmission System Operators vis-à-vis of the European Commission, regulators (ERGEG/ACER) and stakeholders, through which they express their views on energy issues at Regional and pan-European level, the viewpoints of the association towards Community documents are appreciated by the European Commission as important contributions to the development of future legislative packages in the field of electricity.

In the context of the integration of Turkey's electricity system into the pan-European interconnected system of ENTSO-E, the intensification of the cooperation between C.N.T.E.E. Transelectrica S.A. - TEIAS is of great importance. At present, Turkey's electricity system operates synchronously interconnected with the pan-European system, TEIAS being the observer member of ENTSO-E.

Within this framework, the specialists of C.N.T.E.E. Transelectrica S.A. and those of TEIAS collaborate in the working groups and the coordination and decision structures within the association, contributing to the successful implementation of the projects and initiatives developed within ENTSO-E.

1. Collaboration of C.N.T.E.E. Transelectrica S.A. And TEIAS within the Black Sea Transmission Planning Project

The Black Sea Transmission Planning Project promotes regional cooperation of the Black Sea border countries, coordinating and coordinating stationary and dynamic systems (using the program modules PSS/E - Load Flow, Optimal Power Flow, Dynamics), including training programs common to all the electricity systems involved.

In developing this project, the two companies are members of the BSTPP Working Group, which establishes the cooperation framework at the level of the neighboring countries of the Black Sea regarding the coordinated development of the power systems in the region, identifying the needs for increasing the interconnection capacities, the specialists of C.N.T.E.E. Transelectrica S.A. And TEIAS successfully collaborating to achieve the proposed objectives.

Monitoring the investment plans of TSO and DSOs

Monitoring the investment plans of TSOs

Monitoring the implementation of projects of common interest

(EU) Regulation No. 347/2013 of the European Parliament and the Council on guidelines for the trans-European power infrastructure proposes measures to achieve the following EU objectives: integration and operation of the internal power market, energy security at Community level, promotion and development of energy efficiency and energy from renewable sources energy and promotion of the interconnection of power grids. In accordance with (EU) Regulation No. 347/2013, projects of common interest on the EU list were identified that Romania is going to carry out and which lead to the level of interconnection requested by the European Commission in the Communication on achieving the 10% power interconnection objective; preparing Europe's electricity grid for 2020.

Currently, the interconnection capacity presented in Romania's Country Report is 7%, resulting from the distribution of the NTC import value of 1.4 GW to the net generation capacity (NGC) of 20.23 GW, values considered for 11 January 2017, 19:00 CET.

By achieving the interconnection with Serbia in 2018, Romania's interconnection rate would increase from the current 7% to over 9%, thus being closer to the 10% target. With regard to achieving the 15% interconnection target for 2030, the intention is to meet this objective mainly through the implementation of PCIs and the performance of other RET development projects included in the RET Development Plan for 2018-2027.

In the third European Projects Common Interest (PCI) List, the following PCIs were included:

Project 138 - "Black Sea Corridor" – comprised of:

- OEL 400 kV d.c. Smârdan – Gutinaș;
- OEL 400 kV d.c. Cernavodă - Stâlpu, with an input/output circuit in Gura Ialomiței;

Project 144 – "Mid Continental East Corridor" – comprised of:

- OEL 400 kV d.c. Reșița (RO) – Pancevo (Serbia);
- OEL 400 kV Porțile de Fier – Reșița and expansion of the 220/110 kV Reșița grid by building a new 400 kV station;
- transitioning OEL 220 kV d.c. Reșița –Timișoara – Săcălaz – Arad to 400 kV, including building the 400 kV stations Timișoara and Săcălaz.

The concrete benefits pursued through these projects are outlined in the RET Development Plan for 2018-2027, undergoing public debate.

Based on the periodic reports of the TSO, the current state of the PCIs which are part of the "North-South Power Interconnections in Central and South-Eastern Europe" ("NSI East Electricity") priority corridor is the following:

Overhead Electric Line (OEL) 400 kV Gutinas - Smardan

PCI list code: 3.8.5 - part of cluster 3.8 "Bulgaria - Romania Group, Capacity Building"

Aim of the project:

Investment objective "OEL 400kV d.c. Smârdan - Gutinaş" is part of the consolidation of the power transmission grid (Ro: RET) needed as a result of the development of production capacities in the South-Eastern part of the country. The project leads to the elimination of limitations in the evacuation of electricity produced in CEE in the Dobrogea area and the occurrence of congestions in the RET. For connecting this OEL, it is necessary to extend the Gutinaş station and the Smârdan station with two line cells.

Project description:

OEL 400 kV d.c. Smârdan - Gutinaş will be made up of two distinct sections: a 400 kV underground (400 kV) cableway between the 400 kV Gutinaş station and Terminal No. 1, with a length of approx. 2.5 km and a 400 kV OEL section between terminal post no. 1 and the Smârdan station cell, with a length of approx. 140 km.

Current status and stages of the project:

This project has been selected for accessing European funds through the High Infrastructure Operational Program, Priority Axis 8 - Intelligent and Sustainable Power and Gas Transmission Systems, Specific Objective 8.1 - Increasing the Capacity of the National Power System to Acquire Energy from Renewable Resources.

The feasibility study was revised and approved in CTES Transelectrica - Opinion no. 100/06.07.2016; Environmental Permit no. 8/27.11.2013 was obtained, updated for the 400 kV OEL corridor amended by the Decision of the National Environmental Protection Agency no. 23/10.15.2015; The technical and economic indicators were approved by Order of the Ministry of Economy no. 743/07.11.2017;

The location and commencement of the procedure for the expropriation of the private property that constitutes the expropriation corridor for public utility of national interest was approved by Government Decision no. 844/2017.

The next stages of the project are:

Issuance of the Minister Order for final removal from the National Forest Fund;
Obtaining the Building permit;
Completion of the technical design and tender book following the approval of the site;
Running the procurement procedure and signing the execution contract;
Performance of works: 2019-2020 (24 months).

400 kV Cernavodă - Stâlpu 400 kV Overhead Electric Line (OEL) with entry/exit circuit at Gura Ialomiței Station

PCI list code: 3.8.4 - part of cluster 3.8 "Bulgaria-Romania Group, Capacity Building"

Aim of project:

Investment objective "400 kV d.c. OEL Cernavodă - Stâlpu and connection to Gura Ialomiței station," with a length of approximately 160 km, has the role of developing and improving the transport capacity for taking over the electricity generated by the wind power plants installed in the Dobrogea area as well as for taking over the electricity discharged from the future Units 3 and 4 Cernavoda.

Project description:

400 kV d.c. OEL Cernavodă - Stâlpu will be carried out as a double circuit line; one circuit will be entry-exit at the Gura Ialomiței station, and the second circuit will be continuous up to the Stâlpu station.

The route of the overhead electric line is through the peripheral areas of 34 communes from Constanta, Ialomita and Buzau counties and will cross the Danube River and the Borcea branch.

Current status and stages of the project:

The Feasibility Study (SF) was completed, approved by the Board of Directors of CNTEE Transelectrica SA by Decision no. 7 of 06.03.2012 and updated (general estimate and technical-economic indicators) by Decision no. 343/16.04.2015 of the Managing Board.

The topocadastral study was drawn up and clarified the legal status of the land was clarified;

Some of the permit and approvals required by Urbanism Certificates have been obtained, but some of the documents already obtained have expired and need to be updated;

Environmental Permit no. 1/04.07.2014 was obtained;

The Technical Project and tender book have been developed;

The technical and economic indicators were approved by MECRMA Order no. 1444/2016;

Due to the change in the value of the investment, MECRMA Order no. 1444/2016 approving the technical and economic indicators was amended by Order of the Minister of Economy no. 745/07.11.2017;

The location and commencement of the expropriation procedure for the private property real estate representing the national interest public utility expropriation corridor was approved by Government Decision no. 805/2017.

The next steps of the project are:

Obtaining the building permit;

Issuance of the Ministerial Order for the final removal of said land from the National Forest Fund;

Carrying out the procedure for the acquisition of OEL construction works;

Execution of works: 2019-2020.

400 kV interconnection overhead line (OEL) Reșița (Romania) - Pancevo (Serbia)

PCI list code: 3.22.1 - part of the "Romania-Serbia - Mid Continental East Corridor" cluster

Project Description

The 400 kV Resita - Pancevo Overhead Line (OEL) with a length of 131 km (63 km in Romania and 68 km in Serbia) will be carried out in double circuit and will cross in Romania 11 municipalities from Caras-Severin: Reșița, Ezeriș, Lupac, Dognecea, Goruia, Ticvanu Mare, Berliște, Giudanovița, Gradinari, Vărădia and Vrani.

The current state of the project

The feasibility study was endorsed in CTES Transelectrica - Opinion no. 323/13.12.2010;
 The technical project and the tender book have been finalized and endorsed - Opinion 272/30.08.2011;
 Environmental permit no. 9/01.06.2011 was obtained;
 Natura 2000 Declaration no. 7087/30.11.2011 was obtained;
 Building Permit no. 81/19.06.2012 was obtained;
 For the construction of the 400 kV OEL on the territory of Romania, execution contract no. C 212/04.06.2014 between CNTEE Transelectrica SA and SC Electromontaj SA Bucharest was signed;
 Temporary occupation of land from the national forest fund was approved by Government Decision no. 841/2015;
 An addendum to the execution contract was concluded by which the execution deadline was postponed until March 30, 2018;
 Work is underway. Of the 206 pillars, 203 were mounted on the foundation. 206 foundations were built.
 For the common interest project Rekita (Romania) - Pancevo (Serbia) 400 kV OEL, EU list reference no. 3.22.1, the provisions of Art. 10 par. (1) of EU Regulation 347/2013 on the authorization procedure do not apply. The start date of the authorization process was in 2010, before the entry into force of EU Regulation 347/2013.

400 kV Overhead Electric Line (OEL) Porțile de Fier - Anina - Resita

PCI List Code: 3.22.2 - part of the "Romania-Serbia - Mid Continental East Corridor" cluster

Project description:

The 400 kV OEL Porțile de Fier - Resita project consists of endowing an OEL cell at the Porțile de Fier Station and replacing the control-command and protection system at the Porțile de Fier Station, creating a new 400 kV OEL between Porțile de Fier - Anina, rehabilitating the 400 kV OEL Anina - Resita between terminals 21 - 142, creating the 400/220/110 kV Resita station by building a new 400 kV station and reengineering the old 220/110 kV station.

The current state of the project

The Feasibility Study has been finalized and endorsed - Opinion CTES 405/02.12.2011;
 The technical design and specification were finalized and endorsed - Opinion CTES 352/31.10.2013;
 Environmental permit no. 6/21.11.2013; was obtained
 Building Permit No.141/24.11.2014 for Caraș Severin County was obtained;
 Building Permit No.115/21.08.2017 for Mehedinți County was obtained;
 Execution contract no. C229/10.29.2015 was concluded;

For the 400 kV OEL Porțile de Fier – Anina section, the location and the commencement of the expropriation procedure of privately owned buildings was approved by Government Decision 917/12.2016 for the expropriation corridor of investment objective "Transition to 400 kV voltage of the Portile de Fier - Reșița - Timișoara - Săcălaz – Arad axis/400 kV OEL Porțile de Fier - (Anina) - Resita";

Expropriation decision no. 102/10.07.2017 was issued;
 Rehabilitation works on the 400 kV OEL s.c Anina - Reșița section are ongoing;
 At the 400 kV Resita station, the execution contract was terminated at the request of the contractor's official receiver - ELCOMEX, who is in insolvency.

The next steps of the project are:

Removal from the forest fund of the forest areas affected by the OEL, via a Government Decision;
 Resuming the tender process for contracting works.
 Execution of works: 08/11/2015-30/09/2019.

For the project of common interest 400 kV OEL Portile de Fier - Anina - Resita, EU reference no. 3.22.2, the provisions of Art. 10 paragraph (1) of EU Regulation 347/2013 on the authorization procedure do not apply. The start date of the authorization process was in 2012, before the entry into force of EU Regulation 347/2013.

Transition to 400 kV of the 220 kV OEL Resita - Timișoara/Săcălaz, including the building of the 400 kV station Timișoara

PCI List Code: 3.22.3 - part of the "Romania-Serbia - Mid Continental East Corridor" cluster

Project description:

Transition to 400 kV of the 220 kV OEL on the Resita-Timisoara-Arad section is carried out by means of the following investments:

400 kV section Resita - Icloda of 400 kV OEL Resita-Timisoara;

400 kV section Icloda-Timisoara 400 kV OEL Resita-Timisoara;

400 kV section Icloda-Săcălaz 400 kV OEL Reșița-Timisoara;

Construction of the 400 kV station Timisoara.

Current status of the project:

The Feasibility Study has been finalized and endorsed - Opinion CTES 155/02.08.2016;

The technical project and the tender book were finalized in December 2017 - CTES Opinion no. 172/12.19.2017;

Date of commencement of the national authorization procedure for CIP 3.22.3: 13.10.2017.

Transition to 400 kV of 220 kV OEL Arad - Timișoara/Săcălaz, including the construction of the 400 kV Scălaz station and the expansion of Arad station

PCI List Code: 3.22.4 - part of the "Romania-Serbia - Mid Continental East Corridor" cluster

Project description:

Building the OEL section from Timișoara and Scălaz stations to Arad;

Completing the 400 kV Sacalaz station;

Expansion of Arad station.

The current state of the project

The procurement procedure for design services (SF, PT, CS) was initiated. The procedure was canceled and will be resumed in January 2018.

Monitoring the implementation of the 10-year power transmission grid development plan

The state of the projects included in the RET Development Plan for 2016-2025 at the end of 2017 is detailed in the following table:

Crt. No.	Project name	Estimated PIF year during 2016-2025	Estimated PIF year during 2018-2027	Shift			Project stage during 2018-2027	Reason for shift/postponement of PIF deadline
				years	Stage compared to 2016-2025	as to		
A	REENGINEERING OF EXISTING RET							
1	Improving the safety of the installations pertaining to București Sud station 400/220/110/10 kV - Replacement 10 kV equipment (Batch I+II)	2016	2018	2	delayed	relocation of cables to perform	ENEL delay in relocation of cables	
2	Reengineering of 400/220/110/20 kV station Bradu	2018	2018	0	within time limit	works ongoing		
3	Reengineering 220/110 kV station Turnu Severin Est	2018	2019	1	delayed	works ongoing	Contractor delays	
4	Reengineering 220;110/20 kV station Câmpia Turzii	2017	2017	0	completed			
5	Modernization 110 kV and 20 kV substation Suceava	2017	2018	1	delayed	works ongoing	Contractor delays	
6	Modernization of 400/110/20 kV station Domnești	2019	2020	1	delayed	ongoing - engineering	Long duration acquisition procedures/restart	
7	AT and Trafor replacements in substations (stage 2), of which:							
	<i>Stage I (6 AT 200 MVA; 5 Trafo 16 and 25 MVA)</i>	2018	2018	0	within time limit	works ongoing	according to concluded contracts chart	
	<i>Stage 2 (8 AT 200 MVA; 4 Trafo 16 MVA)</i>	2021	2022	1	delayed	ongoing - design	Delay due to designers	
8	AT and Trafor replacements in substations (stage 3)	2023	2027	4	postponed	has not been started	Starts after the completion of stage II	
9	Reengineering of 220/110/20 kV station Ungheni	2019	2021	2	delayed	ongoing - engineering	faulty design	
10	Modernization 220/110/20 kV substation Arefu	2019	2020	1	delayed	Contract signed in 2017	Contractor delays	
11	Modernizare 220/110 kV substation Râureni	2018	2019	1	delayed	works ongoing	Contractor delays	
12	Modernization 400/110 kV station Cluj Est	2017	2018	1	delayed	PIF 2018 - completed	Contractor delays	
13	Modernizare 220/110 kV station Dumbrava	2019	2019	0	within time limit			
14	Reengineering 400/110/20 kV station Smârdan	2022	2023	1	delayed			

Crt. No.	Project name	Estimated PIF year during 2016-2025	Estimated PIF year during 2018-2027	Shift			Project stage during 2018-2027	Reason for shift/postponement of PIF deadline
				years	Stage compared to 2016-2025	as to		
15	Reengineering 220/110 kV station Craiova Nord	2019	2020	1	delayed		acquisition procedure ongoing	long duration acquisition procedure
16	Reengineering 110 kV station Timișoara	2019						To be carried out within Banat Axis, stage II and III
17	Reengineering 110 kV station Arad	2021						
18	Reengineering 110 kV station Săcălaz	2023						
19	Reengineering 220/110/MT kV station Baru Mare	2020	2023	3	delayed		Undergoing CTES endorsement process	Design amendments were needed for the inclusion of the additional requirements. Will be performed after the Hașdat station
20	Reengineering 220/110 kV station Iaz	2019	2021	2	delayed		acquisition procedure ongoing	conditioned by works in the area
21	Reengineering 220/110 kV station Hășdat	2019	2020	1	delayed		acquisition procedure ongoing	conditioned by works in the area
22	Reengineering 220 kV station Oțelarie Hunedoara	2018	2019	1	delayed		acquisition procedure ongoing	resuming tender
23	Reengineering 220/110 kV station Filești	2019	2022	3	delayed			Amendment technical solution
24	Modernization 400 (220)/110/20 kV station Munteni	2020	2021	1	delayed		ongoing - engineering	long duration acquisition procedure
25	Reengineering Alba Iulia station 220 /110 kV/MT	2023	2023	0	within time limit		has not been started	
26	Reengineering 400/110 kV station Darste	2027	2027	0	within time limit		has not been started	
27	Reengineering Medgidia Sud 110 kV station	2019	2021	2	delayed		acquisition procedure ongoing	long duration acquisition procedure
28	Modernization 220/110 kV station Tihău - Primary equipment	2017	2017	0	completed			
29	Modernization 110 kV stations Bacău Sud and Roman Nord pertaining to 400 kV Moldova axis	2019	2020	1	delayed		ongoing	Long duration acquisition procedure
30	Reengineering 400 kV station Isaccea (stage I - replacement 2 BC, cells and OEL cell 400 kV Stupina)	2019	2019	0	within time limit			
31	Reengineering 400 kV station Isaccea (stage II - reengineering 400 kV station)	2022	2025	3	delayed		ongoing - design	Amendment of technical solution

Crt. No.	Project name	Estimated PIF year during 2016-2025	Estimated PIF year during 2018-2027	Shift			Project stage during 2018-2027	Reason for shift/postponement of PIF deadline
				years	Stage compared to 2016-2025	as to		
32	Reengineering of the 400/110 kV transformer substation Pelicanu	2022	2024	2	delayed		ongoing - design	
33	Modernization of 110 and 400 (220) kV installations at the Focșani Vest station	2019	2020	1	delayed		ongoing	Long duration acquisition procedures
34	Modernization 110 kV cells and medium voltage at the Stâlpu substation	2020						Correlated with 400 kV station Stâlpu
35	LST technology and fast NPS intervention R&D center - stage I	2018	2019	1	delayed		ongoing	delays in design, long duration of acquisition procedure, land permit;
36	Installation of optic fiber on 220 kV OEL Fundeni - Brazi Vest - batch 1	2017	2018	1	delayed			contractor delay/tender economics
37	Connecting Turnu Măgurele , Mostiștea, Stâlpu, Teleajen station to the optic giber network of CNTEE Transelectrica - SA - batch 2	2016	2018	2	delayed			Long duration acquisition procedures
38	Modernization CTSI Craiova by use of the IEC 60870-5-104 communication protocol	2018	2018	0	within time limit			
39	Modernization of the command-control-protection system of the 220/110/20 kV station Serdărești	2018	2018	0	within time limit			
40	Modernization of the 220 kV, 110 kV command-control-protection-metering system at the 220/110/20 kV station and reengineering medium voltage and DC and AC internal services at the 220/110/20 kV station Ghizdaru	2018	2021	3	delayed			Long duration acquisition procedures/restart; update of documentation for correlation primary and secondary equipment
41	Modernization of the control and protection system, and of the 20 kV station from the 220/110/20 kV station Vetis	2016	2016	0	completed			
42	Modernization of the command-control-protection and CTSI integration system of the Drăgănești-Olt station	2018	2022	4	delayed			Will be carried out 9 months after Gradiște
43	Modernization of the command-control-protection and CTSI integration system of the Gradiște station	2017	2021	4	delayed	Preparation of acquisition documentation		Canceled tender
44	Modernization 220/110/20 kV station Vetis		2021		new project			

Crt. No.	Project name	Estimated PIF year during 2016-2025	Estimated PIF year during 2018-2027	Shift			Project stage during 2018-2027	Reason for shift/postponement of PIF deadline
				years	Stage compared to 2016-2025	as to		
	- primary equipment							
45	Modernization control, protection and automation system from the 400/220/110/20 kV station Sibiu Sud		2023		postponed			
46	Modernization 220/110/20 kV station Fântânele		2023		postponed	ongoing - design		Distribution of position 44 and position 45 of PD 2016-2025 Delay due to the improbability of granting simultaneous withdrawals from operation established by DEN.
47	Modernization 220/110 kV station Calafat		2020		postponed			
48	Modernization of the command - control - protection system for the 400 kV station Cernavoda		2025		postponed			
49	Modernization of the command - control - protection system for the 400/110/20 kV station Oradea Sud		2023		postponed			
50	Modernization of the command - control - protection system for the 400/220 kV station Roşiori		2025		postponed			
51	Modernization of the command - control - protection system for the 220/110/20 kV station Sălaj		2024		postponed			
52	Modernization of the command - control - protection system for the 220/110 kV station Baia Mare 3		2025		postponed			
53	Modernization of the command - control - protection system for the 220/110 kV station Cluj Floreşti		2026		postponed			
54	Modernization of the command - control - protection system for the 400 kV station Tântăreni		2023		postponed			
55	Modernization of the command - control - protection system for the 400/220/110 kV/MT station Urecheşti		2025		postponed			
56	Modernization of the command - control - protection system for the 220/110 kV station Paroşeni		2023		postponed			
57	Modernization of the command - control - protection system for the 220/110 kV station Peştiş		2025		postponed			

Crt. No.	Project name	Estimated PIF year during 2016-2025	Estimated PIF year during 2018-2027	Shift			Project stage during 2018-2027	Reason for shift/postponement of PIF deadline
				years	Stage compared to 2016-2025	as to		
58	Modernization of the command - control - protection system for the 400 kV station Nădab		2025		postponed			
59	Modernization of the command - control - protection system for the 400 kV station Calea Aradului		2026		postponed			
60	Modernization of the command - control - protection system for the 400/220/110 kV station Mintia		2028		postponed			
61	Modernization of the command - control - protection system for the 220/110/20kV station Târgoviște		2024		postponed			
62	Modernization of the command - control - protection system for the 220/110 kV station Fundeni		2022		postponed			
63	Modernization of the command - control - protection system for the 400/220/110 kV station București Sud		2026		postponed			
64	Modernization of the command - control - protection system for the 220/110 kV station Turnu Măgurele		2025		postponed			
65	Modernization of the command - control - protection system for the 220/110/20 kV station Gheorgheni		2027		postponed			
66	Modernization power supply at UNO DEN locations		2019		new project			
67	Mobile cells of 110 kV, 220 kV and 400 kV		2019		new project	Tender procedure ongoing		
68	Installation of two modern means of compensating reactive power in the 400/220/110/20 kV Sibiu Sud and 400/220/110/20 kV Bradu stations		2023		new project			
69	Replacement of 3 BC 100 MVAR 400 kV units in Arad, Smârdan and București Sud.		2020		new project			
70	Endowment of interphase reactors and transformer units with monitoring installations (for those which are not already equipped with them)		2020		new project			
C	CONSUMPTION SUPPLY SAFETY							

Crt. No.	Project name	Estimated PIF year during 2016-2025	Estimated PIF year during 2018-2027	Shift			Project stage during 2018-2027	Reason for shift/postponement of PIF deadline
				years	Stage compared to 2016-2025	as to		
1	Installation of trafo T3 - 250 MVA (400/110 kV) at the 400/110 kV station Sibiu Sud	2018	2019	1	delayed		Tender procedure ongoing	Requires 2 tender procedures
2	AT2 Iernut - 400 MVA, 400/220 kV Installation AT2 400 MVA, 400/231/22 kV as well as connected cells in the Iernut station and modernization of the command and control system of the 400/220/110/6 kV station Iernut	2019	2021	2	delayed		Tender procedure ongoing	
3	Increasing the transmission capacity of OEL 220 kV d.c București Sud-Fundeni	2020					This project was suspended, according to Note 40235/30.10.2017	Design expenses were transferred to operating expenses
4	Replacement of trafo T3 and T4 110/10 kV, 25 MVA with 110/(20)10 kV, 40 MVA transformers at the Fundeni substation	2016	2016	0	completed			
5	Replacement AT3-ATUS-FS 400/400/160 MVA 400/231/22 kV from the 400/220 kV station Porțile de Fier		2020			New project	Tender procedure ongoing	
6	Increase in the operating safety of the Argeș-Vâlcea grid area		2022			new project		
D	INTEGRATION OF PRODUCTION FROM NEW PLANTS - DOBROGEA AND MOLDOVA							
1.1	Connection 400 kV OEL Isaccea - Varna and 400 kV OEL Isaccea - Dobrudja to the 400 kV station Medgidia Sud. Stage I - Expansion of the 400 kV station Medgidia Sud	2017	2018	1	delayed			Contractor has entered insolvency
1.2	Connection 400 kV OEL Isaccea - Varna and 400 kV OEL Isaccea - Dobrudja to the 400 kV station Medgidia Sud. Stage II - 400 kV d.c. OEL Connections to Medgidia Sud station	2018	2021	3	delayed		Acquisition procedure	Delayed Government Decision for expropriation /tender appeals
2	400 kV d.c. OEL (1ce) Gutinaș - Smârdan	2020	2022	2	delayed		ongoing - design	Delayed issuance of Government Decision for expropriation
3	Expansion of the 400 kV station Cernavoda, et. I + II (replacement of 2 interphase reactors; connection of new lines)	2019	2021	2				Correlated with the evolution of project "400 kV dc OEL Cernavoda – Stâlpu and connection at the Gura Ialomiței

Crt. No.	Project name	Estimated PIF year during 2016-2025	Estimated PIF year during 2018-2027	Shift			Project stage during 2018-2027	Reason for shift/postponement of PIF deadline
				years	Stage compared to 2016-2025	as to		
								station”
	<i>Stage I: replacement of 2 interphase reactors</i>			0	completed			
	<i>Stage II: connection of new lines</i>	2019	2021	2	delayed			Correlated with the evolution of project “400 kV dc OEL Cernavoda – Stâlpu and connection at the Gura Ialomiței station”
4	400 kV d.c. OEL Cernavoda - Stâlpu and connection at the Gura Ialomiței station (new line)	2020	2021	1	delayed	acquisition procedure ongoing		Delayed issuance of Government Decision for expropriation
5	Expansion of 400 kV station Gura Ialomiței by two cells: OEL 400 kV Cernavoda 3 and OEL 400 kV Stâlpu	2019	2021	2	delayed			Correlated with the evolution of project “400 kV dc OEL Cernavoda – Stâlpu and connection at the Gura Ialomiței station”
6	400 kV station Stâlpu (new station) + Modernization 110 kV and medium voltage cells	2020	2021	1	delayed			Correlated with the evolution of project “400 kV dc OEL Cernavoda – Stâlpu and connection at the Gura Ialomiței station”
7	Transition to 400 kV OEL Brazi Vest - Teleajen - Stâlpu, including: Acquisition AT 400 MVA, 400/220/20 kV and expansion works for the related 400 kV and 220 kV stations, at the 400/220/110 kV station Brazi Vest	2020	2023	3	delayed			Correlated with the evolution of project “400 kV dc OEL Cernavoda – Stâlpu”
7.1	400 kV OEL Brazi Vest - Teleajen - Stâlpu		2021			ongoing - design		
7.2	Expansion of Brazi Vest station (including AT4)		2022			CS - permitting ongoing		
7.3	400 kV station Teleajen and reengineering 110 kV station		2023			ongoing - design		

Crt. No.	Project name	Estimated PIF year during 2016-2025	Estimated PIF year during 2018-2027	Shift		Project stage during 2018-2027	Reason for shift/postponement of PIF deadline
				years	Stage compared to 2016-2025 as to		
8	400 kV d.c. OEL (1ce) Constanta Nord - Medgidia Sud	2022	2024	2	delayed	ongoing - design	
9	Increase in the transmission capacity of 220 kV OEL Stejaru -Gheorgheni - Fântânele	2020	2022	2	delayed	ongoing - design	
10	Increase in the transmission capacity of 220 kV OEL Dumbrava - Stejaru	2021				This project was suspended	According to regime analyses
11	400 kV OEL Stâlpu - Braşov, including interconnection to NPS (new line)	2025	2036	11	postponed		Design starts after the completion of the 400 kV d.c. OEL CNE-Gura Ialomitei-Stâlpu.
12	Increase in transmission capacity of OEL section 400 kV Bucureşti Sud - Pelicanu (8km)	2021	2023	2	postponed		
13	Increase in the transmission capacity of 400 kV OEL Cernavoda Pelicanu (53 km)	2021	2025	4	postponed		Starts after CNE-Stâlpu
14	Transition of 400 kV OEL Isaccea - Tulcea Vest from simple to double circuit		2026		new project		
E	INTEGRATION OF PRODUCTION FROM PLANTS - OTHER AREAS						
1	Ostrovu Mare 220 kV (new station)	2019	2021	2	delayed		Correlated with 220 kV OEL Ostrovu Mare - RET
2	220 kV OEL Ostrovu Mare - RET (new line)	2019	2021	2	delayed		Delayed issuance of Government Decision for expropriation
3	Re-conduction 220 kV OEL (9.6km) Işalniţa - Craiova circ.1	2016	2016	0	completed		
F	INCREASE OF THE INTERCONNECTION CAPACITY AND INTEGRATION OF SRE PRODUCTION						
1	Transition to the 400 kV voltage of the Porţile de Fier - Reşiţa - Timişoara - Săcălaz - Arad axis. Stage I: Expansion 400 kV station Porţile de Fier; 400 kV OEL Porţile de Fier - Reşiţa; 400 kV station Reşiţa	2018	2021	3	delayed		Delay in the issuance of Government Decision for expropriation and removal from the forestry fund
1.1	400 kV OEL Porţile de Fier - Reşiţa		2021			ongoing	

Crt. No.	Project name	Estimated PIF year during 2016-2025	Estimated PIF year during 2018-2027	Shift		Project stage during 2018-2027	Reason for shift/postponement of PIF deadline
				years	Stage compared to 2016-2025 as to		
1.2	400 kV station Reșița		2021			Termination of contract caused by the contractor's insolvency	
1.3	Expansion 400 kV station Porțile de Fier		2016			completed	
2	Transition to the 400 kV voltage of the Porțile de Fier - Reșița - Timișoara - Săcălaz - Arad axis. Stage II: 400 kV d.c. OEL Reșița - Timișoara - Săcălaz + 400 kV station Timișoara + 110 kV station Timișoara	2023	2023	0	within time limit		Correlated with Stage I
2.1	Reengineering 110 kV station Timișoara and transition to 400 kV of the Porțile de Fier - Anina - Reșița - Timișoara - Săcălaz - Arad axis, stage II: 400 kV station Timișoara		2022				Correlated with Stage I
2.2	400 kV d.c. OEL Reșița - Timișoara - Săcălaz		2023				Correlated with Stage I
3	Transition to the 400 kV voltage of the Porțile de Fier - Reșița - Timișoara - Săcălaz - Arad axis. Stage III: 400 kV d.c. OEL Timișoara - Săcălaz - Arad + 400 kV station Săcălaz + expansion station 400 Arad	2023	2027	4	delayed		Correlated with Stage I
3.1	400 kV d.c. OEL Timișoara - Săcălaz - Arad		2025				
3.2	400 kV station Săcălaz and reengineering 110 kV station Săcălaz		2027				
3.3	Expansion 400 kV station Arad and reengineering 110 kV station Arad		2025				
4	400 kV OEL for the Reșița (Romania) - Pancevo (Serbia) interconnection (new line)	2017	2018	1	delayed	PIF 2018 March	Delay in the issuance of Government Decision for expropriation and removal from the forestry fund
5	400 kV OEL Gădălin - Suceava (new OEL)	2023	2027	4	delayed		Resuming permitting/agreements
6	400 kV OEL Suceava - Bălți (new OEL - for the segment on Romanian territory)	2023				ongoing - design	Completion as per agreement with Moldelectrica
G	Integrated operative NPS management platform + Replacement EMS SCADA	2020	2025	5	delayed		

Crt. No.	Project name	Estimated PIF year during 2016-2025	Estimated PIF year during 2018-2027	Shift			Project stage during 2018-2027	Reason for shift/postponement of PIF deadline
				years	Stage compared to 2016-2025	as to		
	AREVA system components							
H	Power measurement data metering and management system on the wholesale market	2018	2021	3	delayed			Amendment of technical solution
J	IT AND TC SYSTEMS MANAGEMENT							
K	CRITICAL INFRASTRUCTURE	2016	2018	2	delayed			

Monitoring of the annual investment plans of the transmission system operator and distribution system operators

Monitoring the implementation of the OTS investment plan for 2017

From the analysis of the investment projects carried out by the TSO compared to the projects planned for 2017 at the beginning of the regulatory period, as shown by the investment activity reporting templates and the information submitted by TSO, we have the following:

	No. of projects with scheduled PIF	No. of projects with completed PIF	No. of delayed projects, in various stages of performance	No. of projects not yet started	No. of projects intentionally suspended
01.01.2017-31.12.2017	24	4	17	2	1

Of the total investment projects in the annual investment plans for 2017, 4 works were completed on time, 17 are delayed and in different stages of performance, 3 were postponed or suspended and 3 projects are outstanding works from previous years, as shown in the following table:

Crt. No. of M15.1	Investment name	Stage of work	Reason for delays, failure to start, abandonment
2	Reengineering of 400/220/110/20 kV station Bradu	PIF completed	
3	Reengineering 220;110/20 kV station Câmpia Turzii	PIF completed	
4	AT and Trafor replacement in	PIF completed	

Crt. No. of M15.1	Investment name	Stage of work	Reason for delays, failure to start, abandonment
	sub-stations (stage II)		
5	Modernization 220/110 kV station Tihău - Primary equipment	PIF completed	
6	Modernization 400/110/10 kV substation Cluj Est	PIF completed in 02.2018	
7	Modernization 220/110 kV station Dumbrava	Construction contract ongoing	Design documentation redone (SF, PT, CS) due to the amendments
8	Modernization 110 kV and 20 kV substation Suceava	Partial PIF	State of NPS at the time of commencement of the works required the conclusion of additional provisional agreements in order to ensure the continuity of consumers' supply Also, unfavorable winter weather conditions led to a delay in the PIF deadline.
9	The connection of 400 kV OEL Isaccea - Varna and 400 kV OEL Isaccea - Dobrudja to the 400 kV station Medgidia Sud, Stage I - Expansion of 400 kV station Medgidia	Ongoing acquisition procedure for the recommencement of works	During the performance of works, the contractor entered insolvency. Therefore, the acquisition procedure was restarted after the completion of the legal formalities regarding the insolvency of the contractor/termination of the contract.
10	400 kV OEL for the Reșița (Romania) - Pancevo (Serbia) interconnection	PIF completed on 30.03.2018	Late issuance of government decisions for expropriation and for removal from forestry fund, lack of access to the forestry fund for the performance of the work.
11	Integrated security systems for stations and branch offices, DEN and DETs - Integrated substation security systems, stage 4 (D. CA no. 16/ 2011)	Completion of investment ongoing.	Long duration of obtaining the building permit from local authorities for Fundeni and București Sud substations.
12	Increase in the transmission capacity of 220 kV OEL Stejaru -Gheorgheni - Fântânele	Design documentation (PT+CS) awaiting approval	Long duration of acquisition of design services + issues when checking the resistance of poles, which required a change of technical solution
13	LST (Ro: acronym for live work) technology and fast NPS intervention R&D center - stage I	Construction contract ongoing	Legal issues regarding the land where the investment is going to be carried out.
14	Modernization BM IT system	In preparation, documentation for the commencement of the	

Crt. No. of M15.1	Investment name	Stage of work	Reason for delays, failure to start, abandonment
		acquisition procedure	
15	Complex monitoring system for the operational parameters of the OEL and the physical integrity of lines	Postponed	Postponed until a final decision is taken.
16	Modernization e-communications network	Not started	Implementation is based on the results of the advisory services Amendment of technical solution and project approach.
17	Consolidation of servers and data storage network (private cloud)	The tender book was approved by MCSI and DA, and is currently with DC for the commencement of the acquisition.	Failure to observe contractual obligations by the advisor who had to determine the solution and draw up the SF and the CS
18	Modernization of the Transelectrica messaging system	Ongoing hardware infrastructure acquisition procedure	Difference in technology for the hardware infrastructure pertaining to the solution to be implemented. For this reason, the hardware infrastructure will be purchased so that an equal treatment of all potential bidders is ensured.
19	Installation of trafo T3 - 250 MVA at the 400/110 kV station Sibiu Sud	Acquisition procedure ongoing.	Complex procedure for establishing an optimal solution + need for market prospecting, prior to the two acquisition procedures, according to the new acquisition legislation.
20	Reengineering 220/110 kV station Oțelărie	Work performance contract ongoing	The low quality of the design documentations required their repeated rewriting. The acquisition documentation was rejected twice by ANAP.
21	Installation AT2 400 MVA, 400/231/22 kV as well as connected cells in the Iernut station and modernization of the command and control system of the 400/220/110/6 kV station Iernut	Completed design, documentation for the commencement of the acquisition procedure currently being drawn up	Long duration of design, as well as the need to correlate the project with the one for the connection of CCC 430 MW Iernut.
22	Connection 400 kV OEL Isaccea - Varna and 400 kV OEL Isaccea - Dobrudja to the 400 kV station Medgidia Sud Stage II - 400 kV d.c. OEL Connections to Medgidia Sud station	Public acquisition procedure ongoing.	Long duration for obtaining the government decision for the expropriation of land (2 years) + long duration of the acquisition procedure.

Crt. No. of M15.1	Investment name	Stage of work	Reason for delays, failure to start, abandonment
23	Data metering and management system for the electricity measurement data on the wholesale market	Design in progress	Changing the TEL strategy in the field of electricity measurement and project approach, caused by the amendment of the electricity measurement code.
24	Expansion of MIS by new functionalities (DM integration, multicash extension, advanced collections)	Multicash & Advanced Collections is completed and used, DM integration is not completed.	Difficulties in negotiations with the Contractor.
25	Modernization power supply at UNO DEN locations	Tender procedure canceled. Tender procedure currently being redone.	Non-compliant bids
26	Security systems integration	Suspended	
27	Installation of optic fiber on 220 kV OEL Fundeni - Brazi Vest - batch 1	Installation ongoing.	Delays in the performance of works by the contractor.
28	Connecting Turnu Măgurele , Mostiștea, Stâlpu, Teleajen station to the optic fiber network of CNTEE Transelectrica - SA - batch 2	Installation ongoing.	Delays in the performance of works by the contractor.

The level of achievement of the annual investment plan for 2017 is presented in the following table, in which the investments correspond to both the transmission and the system service, financed from own sources:

	Planned investments [Ron]	Completed investments [Ron]	Degree of completion [%]
Semester I 2017	165,671,000	35,403,970	21.4
Semester II 2017	411,243,000	161,957,492	39.4
TOTAL 2017	576,914,000	197,361,462	34.2

ANRE requested the TSO to analyze the impact of the postponement of PIF for investment projects in terms of NPS safety, integration of generation from power plants, increased interconnection capacity and technological losses in RET, and propose a set of measures to reduce this impact.

The causes that led to the delay of investment projects, as explained by the TSO, are internal and concern the poor management of the contracts, the late drafting of the tender specifications as well as external, such as:

- difficulties in obtaining permits and agreements (including environmental) for building permits;

- delays in obtaining land and removing it from the forest circuit;
- delays in public procurement of works;
- modification of the constructive solution in case of unfavorable opinions;
- the impossibility of simultaneous withdrawal of the network elements for the performance of works, in order to ensure the safety of the NPS operation.

The impact of investment project delays on the safety of NPS operation, interconnection capacity, technological losses in RET and the integration of power plants, except for wind and photovoltaic ones in the Dobrogea area, is insignificant in the opinion of TSO. The measures that the TSO has to apply to mitigate the impact of the non-implementation of the investment plan on the operation of the NPS are likely to correct, supplement and harmonize incident law by taking action with competent authorities, as well as optimize the investment activity of the company.

The measures taken by ANRE in order to increase the degree of completion of the RET investment program were compliant with the existing methodological provisions, namely the application of a negative correction of the regulated income for the following year, with the effect of reducing the average transmission tariff.

Also, the conditions for the approval of the investment programs and the investments made, as well as the procedure for their reporting, have been tightened.

Regarding the effect of the non-performance of RET investments, ANRE finds that this leads to a deterioration of the performance indicators for the transmission service, which is caused by the extremely low degree of completion of the investment plan. For this reason, ANRE applied fines to TSOs.

Monitoring the completion of distribution operators' investment plans

ANRE performs a yearly monitoring of the investment programs of distribution operators, in accordance with the provisions of the *Pricing Methodology for the Power Distribution Service*, approved by **ANRE Order no. 72/2013**, and the *Procedure regarding the development and approval of the investment programs of economic operators providing power distribution services*, approved by the **ANRE Order no. 8/2016**. The Procedure required that the structure of the investment works meets the condition that at least 90% of the total value of the investment program approved by ANRE should represent the value of the works that result in fixed assets belonging to the power grids, and only 10% should be assigned to investments in facilities, the provisions of which were applied starting with the investment program for 2017. The procedure was a recommendation for the year 2016 and the degree of investment in networks was 85%, and in 2017 it increased to 93%. Please note that **ANRE Order no. 34/2018** amended and supplemented the procedure by introducing the obligation of the DSO to achieve at least 95% of the total value of the annual investment program approved by ANRE. Starting with 2017, the analysis of the investments in the power distribution grids is carried out within a dedicated organizational structure of ANRE, with exclusive attributions in this field.

Operators submit the programs at the beginning of the year, they are analyzed by ANRE on the basis of the documents for the promotion of the works, following their compliance with the structure of works, the value previously approved for that year, the obligation to promote economically efficient investments.

Based on ANRE's observations and requests for updating these programs, operators review the programs, including by making changes that are inherent to investment procedures, following which certain works are postponed and others are advanced.

After the conclusion of the financial statements for the year, ANRE analyzes, by comparison to the previously established program, the investment works completed by operators, accepting or, as the case may be, rejecting certain works that do not meet the necessary criteria provided by the regulatory framework for inclusion in the regulated tariff.

The investments made by the electricity distribution operators in 2014-2017 compared to the undertaken plans, considering that the works for 2017 are still being analyzed, are presented in the following table. From the data presented in the table we can see that in 2016, at country level, the degree of completion of the investment programs forecast by the distribution operators, from own sources, was 90.6%, and in 2017 it increased to 94.8%. Compared to 2016, when the degree of completion of the investment program from own sources ranged between 70.3% and 106.9%, in 2017 all distribution operators achieved over 90%.

The average countrywide level of investment recognition in the distribution tariff was 81.88% in 2016 with variations between operators from 72.72% for Dobrogea e-Distribution to 100.85% for Oltenia Energy Distribution.

Nume distribuitor		2014	2015	2016	2017
Total tara	Investiții totale prognozate*	1,397,216,028	1,588,375,708	1,627,832,190	1,788,598,139
	surse proprii	1,013,712,719	1,237,908,801	1,373,474,698	1,545,347,345
	contribuții financiare	383,503,308	350,466,907	254,357,492	243,250,795
	Investiții realizate	1,454,647,547	1,530,137,578	1,703,783,036	1,884,923,392
	surse proprii	969,535,211	1,143,082,190	1,244,660,888	1,458,127,214
	contribuții financiare	485,112,337	387,055,389	459,122,148	426,796,177
	Investiții recunoscute	869,246,544	1,028,373,126	1,124,641,907	-
E- Distribuție Muntenia	Investiții totale prognozate*	272,835,746	249,134,677	252,645,069	274,013,257
	surse proprii	180,184,462	161,596,865	169,724,309	193,708,065
	contribuții financiare	92,651,284	87,537,812	82,920,760	80,305,192
	Investiții realizate	248,672,218	215,984,939	297,342,638	284,659,243
	surse proprii	166,995,964	137,994,102	162,344,913	180,598,986
	contribuții financiare	81,676,254	77,990,838	134,997,725	104,060,257
	Investiții recunoscute	142,803,647	124,301,881	127,755,878	
Enel Distribuție Banat	Investiții totale prognozate*	113,435,592	129,948,977	140,900,696	149,231,115
	surse proprii	72,313,366	92,353,164	105,190,683	113,817,495
	contribuții financiare	41,122,227	37,595,813	35,710,013	35,413,620
	Investiții realizate	99,492,718	108,443,955	149,350,356	147,744,488
	surse proprii	66,769,654	77,794,436	97,964,559	104,437,254
	contribuții financiare	32,723,065	30,649,519	51,385,797	43,307,234
	Investiții recunoscute	61,040,992	66,768,358	76,491,282	
E-Distribuție Dobrogea	Investiții totale prognozate*	108,314,109	127,395,354	141,618,269	149,068,596
	surse proprii	65,539,109	76,609,455	93,357,621	102,332,268
	contribuții financiare	42,775,000	50,785,899	48,260,648	46,736,328
	Investiții realizate	108,474,749	94,063,754	133,509,247	120,351,147
	surse proprii	61,816,565	64,446,784	86,171,024	93,626,609
	contribuții financiare	46,658,184	29,616,970	47,338,223	26,724,538
	Investiții recunoscute	54,788,830	57,340,329	71,608,189	
Distribuție Energie Oltenia	Investiții totale prognozate*	207,222,559	198,485,254	194,424,505	197,679,191
	surse proprii	155,055,397	160,843,684	162,857,617	166,962,444
	contribuții financiare	52,167,162	37,641,570	31,566,888	30,716,747
	Investiții realizate	211,733,113	200,955,208	200,800,862	216,652,558
	surse proprii	155,055,639	161,030,912	166,211,011	171,588,532
	contribuții financiare	56,677,473	39,924,296	34,589,851	45,064,026
	Investiții recunoscute	138,904,003	156,485,357	164,236,351	
DELGAZ GRID	Investiții totale prognozate*	173,108,764	183,513,064	162,913,979	176,402,817
	surse proprii	173,108,764	183,513,064	162,913,979	176,402,817
	contribuții financiare	-	-	-	-
	Investiții realizate	196,355,397	219,123,909	210,272,328	232,463,779
	surse proprii	155,691,001	178,565,028	174,094,023	172,335,225
	contribuții financiare	40,664,395	40,558,880	36,178,304	60,128,554
	Investiții recunoscute	141,870,708	162,217,590	146,533,115	
SDEE Muntenia Nord	Investiții totale prognozate*	185,098,622	245,720,845	270,936,460	311,408,335
	surse proprii	117,221,622	180,350,659	215,037,277	262,525,496
	contribuții financiare	67,877,000	65,370,186	55,899,183	48,882,839
	Investiții realizate	194,552,449	195,724,577	193,518,695	267,612,025
	surse proprii	120,511,911	144,903,430	159,971,460	240,210,954
	contribuții financiare	74,040,538	50,821,147	33,547,236	27,401,072
	Investiții recunoscute	110,204,443	132,769,343	157,915,062	
SDEE Transilvania Nord	Investiții totale prognozate*	194,762,214	257,544,787	234,084,383	270,779,727
	surse proprii	129,780,000	193,163,110	234,084,383	269,583,657
	contribuții financiare	64,982,214	64,381,677	-	1,196,069
	Investiții realizate	183,142,035	255,701,529	292,211,149	317,196,255
	surse proprii	120,478,435	194,431,718	236,069,320	253,965,560
	contribuții financiare	62,663,600	61,269,811	56,141,829	63,230,695
	Investiții recunoscute	119,980,515	181,379,802	230,409,024	
SDEE Transilvania Sud	Investiții totale prognozate*	142,438,421	196,632,751	230,308,829	260,015,102
	surse proprii	120,510,000	189,478,800	230,308,829	260,015,102
	contribuții financiare	21,928,422	7,153,951	-	-
	Investiții realizate	212,224,868	240,139,708	226,777,761	298,243,897
	surse proprii	122,216,042	183,915,779	161,834,577	241,364,095
	contribuții financiare	90,008,826	56,223,928	64,943,183	56,879,802
	Investiții recunoscute	99,653,406	147,110,466	149,693,005	

The type of works carried out in the distribution grids in 2017 is presented in the following table:

Type	Category	Value (Ron)
		TOTAL, of which:
A	ESSENTIAL - Total (A1+A2+A3+A4)	373,961,879
A1	Reengineering and modernization of existing lines/stations and transformers which are overloaded, considered workplaces with special conditions from an occupational safety standpoint and which have unsuitable technical parameters	318,128,813
A2	Replacement of existing equipment that is worn down and obsolete, for which there are no parts available and no proper maintenance works can be carried out; replacement of equipment so as to observe environmental conditions	53,945,785
A3	Acquisition of equipment in order to ensure occupational security	1,887,281
A4	Installations for compensating the power factor	0
B	NECESSARY - Total (B1+B2+B3+B4+B5+B6)	947,120,429
B1	Replacement of existing equipment that is written off and whose technical parameters no longer comply with current norms and which no longer ensure the observance of performance and quality parameters provided by the law	35,294,239
B2	Replacement of equipment, reengineering and modernization works for decreasing the CPT, replacement of measurement groups	411,445,463
B3	Improvement in the quality of the distribution service	413,468,796
B4	Creation of new capacities, expansion of the existing grid so as to supply power to new users	25,357,615
B5	Implementation of the smart metering systems	44,799,967
B6	New connections, including those imposed by the primary law; consolidation of the network for the new connections, as well as for the part uncovered by the connection tariff	16,754,349
C	JUSTIFIABLE - Total (C1+C2+C3)	137,044,907
C1	Work equipment	36,497,468
C2	Improvement of working conditions	62,887,324
C3	Taking over power distribution capacities from third parties	2,095,161
C4	Modernization works from maintenance	35,564,954

Establishing the need for investment and maintenance work in distribution grids at an extent that ensures their safety, reliability and efficiency is the exclusive responsibility of distribution operators. They can and are legally obliged to set up investment and maintenance programs based on analyses and valuations carried out within the asset management activity.

Other relevant aspects of cross-border cooperation

(EU) Regulation 2015/1222 provides for continuous implicit allocation as a capacity allocation method within the IDM time intervals, the XBID - European Cross Border Intraday Initiative solution being part of the European Commission's objective of establishing a continuous cross-border trading environment, transparent and efficient on the intra-day horizon, under the accelerated growth of intermittent production

capacity (based on renewable resources) recorded in recent years. This solution is based on a common IT system that connects local trading systems operated by the XBID electricity exchanges and takes into account the cross-border transmission capacities provided by the project and transmission system operators for the continuous implicit allocation.

In August 2017, Transmission System Operators and Designated Electricity Market Operators from Austria, the Czech Republic, Germany, Hungary and Romania, namely 50Hertz, APG, ČEPS, EPEX SPOT, EXAA, HUPX, MAVIR, Nord Pool, OPCOM, OTE, TenneT and Transelectrica, signed a **Memorandum of Understanding on the establishment of a local project for the implementation of the cross-border intra-day market solution (XBID)**, so as to couple intra-day electricity markets. Subsequently, the Transmission and System Operator and the Power Market Operator in Croatia (HOPS, CROPEX) joined the Memorandum. All project participants expressed their interest in implementing continuous cross-border trading and introducing implicit allocation of intra-day cross-border transport capacities across the Czech Republic-Germany, Czech Republic-Austria, Austria-Hungary, Hungary-Romania and Hungary-Croatia borders. The Parties established a Local Implementation Project (**LIP 15**) aimed at meeting the requirements of the XBID Cross-border Market at EU level. All parties committed to contribute actively to the achievement of an internal European energy market in accordance with Commission (EU) Regulation 2015/1222 of 24 July 2015 laying down guidelines on capacity allocation and congestion management (the CACM Regulation). The LIP 15 parties are making efforts to launch it as soon as possible, after the successful launch of the first wave of LIPs currently estimated by the XBID project for the first quarter of 2018. Based on the initial schedule of the project that will be further developed, LIP 15 parties intend to launch it in the fourth quarter of 2018 (the second wave of LIPs) according to the evolution of the first wave.

The CORE Capacity Calculation Region was established by the ACER decision of 17 November 2016. According to it, regulatory authorities with competences to approve decisions regarding the CORE Capacity Calculation Region are: ACM (The Netherlands), AGEN-RS (Slovenia), ANRE (Romania), CRE (France), CREG (Belgium), E-Control (Austria), ERU (Czech Republic), HEA (Hungary), HERA (Croatia), ILR and URSO (Slovakia). **The Memorandum of Understanding between all authorities in the Core Capacity Calculation Region** was signed in September 2017. The Memorandum is relevant first of all for implementing the provisions of the Regulation on Capacities and Congestion Management (CACM) and for the Regulation establishing directions on capacity allocation on the long-term market (FCA), but also any other codes and guidelines of the European electricity grid established or to be established in accordance with the third power package which are aimed at decision-making on the proposals submitted by transmission and system operators (TSOs) or the market operators in the field of electricity (OPEED).

Considering ACER Decision no. 6/2016 on the approval of capacity calculating regions, **Romania, Bulgaria and Greece** signed the **Memorandum of Understanding between all Regulatory Authorities in the Southern South-East Capacity Calculation Region**, pursuing the same objectives as the MoU CORE.

ANRE together with the National Regulatory Authority for Energy, Greece - RAE and the Water and Energy Regulatory Commission, Bulgaria - EWRC have decided to sign a **Collaboration Protocol to help improve regulatory activity through the exchange of best practices, as well as to the harmonized regional development of the regulatory framework and to a general framework for long-term cooperation** in view of the membership of the European Union, the existence of common borders, the obligations to implement the energy network codes and other common projects, conditions

similar in these countries, the dynamic processes for the development and integration of the electricity and natural gas markets and the increasing demands for regulators.

2.1.5. Observance of EU law

Observance of ACER and EC decisions

In accordance with the provisions of Law no. 160/2012 on the organization and operation of ANRE, namely art. 9, paragraph (1), letter w), ANRE observes and implements all relevant, legally binding decisions of the Agency for the Cooperation of Energy Regulators - ACER - and the European Commission, and to the extent that they concern ANRE competences, the decisions of the European Commission issued according to art. Article 39 (8) of Directive 2009/72/EC of the European Parliament and Council of 13 July 2009 on common norms for the internal power market and for repealing Directive 2003/54/EC shall apply within 60 days of upon their entry into force.

During 2017, ACER issued the following decisions:

1. ACER Decision no. 04/2017 on the nominated electricity market operators' proposal for harmonised maximum and minimum clearing prices for single day-ahead coupling,
2. ACER Decision no. 05/2017 on the nominated electricity market operators' proposal for harmonised maximum and minimum clearing prices for single intraday coupling,
3. ACER Decision no. 06/2017 on the proposal of the electricity transmission system operators of the South-East Europe capacity calculation region for the regional specific annex for the South-East Europe capacity calculation region to the harmonised allocation rules for long-term transmission rights,
4. ACER Decision no. 07/2017 on the congestion income distribution methodology.

The timelines for the implementation of the decisions are: (1) and (2) after the implementation of the market coupling operator function, (3) from January 1, 2019 or sooner, depending on the commissioning of the Single Allocation Platform, and (4) after the implementation of the capacity calculation methodology. The closest deadline is for ACER Decision 06/2017, its implementation being the responsibility of the TSO.

During 2017, a number of activities were undertaken to implement the provisions of (EU) Regulation No. 1227/2011 of the European Parliament and of the Council on the Integrity and Transparency of the Wholesale Energy Market (REMIT) and of Implementing (EU) Regulation 1348/2014 of the Commission on the reporting of data for the implementation of Art. 8 (2) and (6) of REMIT.

Thus, the awareness-raising activities of the economic operators already registered in the National Register of the participants to the wholesale energy market established by ANRE so as to update the data fields in *Appendix 3 - Information regarding the participant to the wholesale energy market* (e.g. the EIC code, the website, the place of publication of privileged information) and *Annex 7 - Information on parties delegated to report on behalf of the participant to the wholesale energy market* (the sole code of the party delegated to report on behalf of the market participant) of the *Procedure for the Registration of Wholesale Power Market Participants in the National Register*. These actions took place concurrently with OPCOM SA's actions related to the obligation to obtain the ACER code (and implicitly, the necessity of registration in the National Register) for the license holders who want to trade on the centralized markets from its administration. In this way, in 2017, 32 new participants were registered in the wholesale electricity and natural gas markets, according to REMIT requirements.

At the end of 2017, **666 participants** on the wholesale electricity and natural gas markets held ACER codes issued by ANRE, as well as **3 RRM (Registered Reporting Mechanisms) entities**: OPCOM SA, the Romanian Commodities Exchange and Transgaz, third parties authorized by ACER to report transaction data and fundamental data in accordance with the Implementing (EU) Regulation No. 1348/2014.

During the analyzed year, ANRE received **3 notifications on suspicions of violation of the provisions of REMIT art. 3 and/or 5**, in accordance with the provisions of REMIT Art. 15 regarding transactions carried out on the wholesale electricity market. The notified cases are in different stages of analysis, from preliminary analysis to redirection to the investigative compartment in accordance with the regulation developed under the primary legislation and the operational procedure for the management of notifications on violations of REMIT art. 3 and art. 5. At the same time, in some cases, ANRE collaborates with other national institutions and authorities, directing them to the results of the preliminary analyses.

As regards the analysis/investigation phases related to the mentioned cases, ANRE has permanently cooperated with ACER, market participants and the electricity and natural gas market operator. In addition, there were working meetings with Competition Council representatives, in accordance with the cooperation protocol concluded between the two institutions, discussing topics related to the types of manipulations of the energy market and the anti-competitive behavior patterns that can lead to price manipulation on the electricity market.

The analysis of cases of suspicions of REMIT violations is carried out in accordance with the principles, procedures and criteria described in ACER decisions, norms and guidelines, among which the *Guidelines for the Enforcement of (EU) Regulation 1227/2011 of the European Parliament and Council of 25 October 2011 on the integrity and transparency of the wholesale energy market* and the guidelines in which ACER details the enforcement of the definitions in REMIT Art. 2.

In addition, ANRE constantly seeks to improve the cooperation with the trading platform managers in order to comply with the obligations they have in accordance with REMIT art. 15, as persons performing professional transactions, as well as the enforcement of prohibitions on the market abuse of market participants. In 2017, guidance was provided to market participants who asked for clarifications on various aspects of enrollment in the National Register of Wholesale Energy Market Participants, for instance how to report transaction data, fundamental data, reporting exceptions provided by Implementing (EU) Regulation No. 1348/2014 of the Commission.

Observance of the provisions of Community law by transmission system operators, distribution system operators, system owners and economic operators in the sector

The requested aspects were presented in chapter 2.1.1. Unbundling of activities.

2.2. Promoting competition

2.2.1. Electricity wholesale market

Structure of the Romanian wholesale electricity market

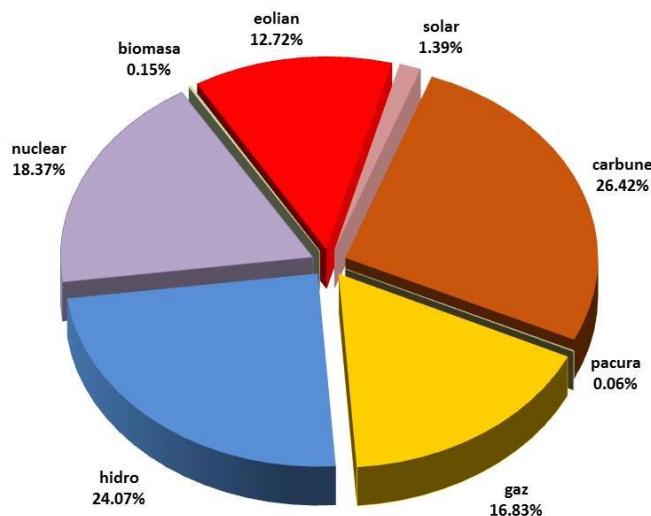
The electricity generation sector is mainly based on the type of primary resource used in the production process (hydro, nuclear, thermal, wind, photovoltaic and biomass). The economic operators in the power generation field, belonging to the state as well as the private sector, operate on the basis of a license for the commercial exploitation of the electricity generation capacities issued by ANRE, participating in the electricity market.

Based on the provisions of the *Wholesale Electricity Market Monitoring Methodology for assessing the level of competition on the market and preventing dominant position abuse* (ANRE Order no 35/2006 as further amended) - PAN Monitoring Methodology - **the monthly electricity generation sector monitoring process** referred to the activity of **the producers of electricity who own dispatchable units (DU)**, irrespective of the type of primary resource used, from the perspective of their participation in the electricity market. From the data collected monthly from a number of 125 DU producers for electricity from hydro, nuclear, thermal, wind, photovoltaic and biomass sources (at least one dispatchable group), both state owned and private sector license holders, showed that in 2017, 61,324 GWh of electricity was produced, compared to 61,797 GWh in 2016.

The same ratio is maintained for the amount of electricity supplied to grids (including own consumption and energy sold directly to power grids), which in 2017 was 57,484 GWh, approx. 445 GWh lower than last year.

In the following, we will present the structure of electricity delivered from dispatchable production units, calculated per types of conventional and unconventional resources.

Structura pe tipuri de resurse a energiei electrice livrate in retele de producatorii cu unitati dispencerizabile - 2017 -



Source: Reports of dispatchable electricity producers – ANRE processing -

Starting from the quantities of electricity reported according to the PAN Monitoring Methodology, we present the dispatchable producers' situation according to the electricity produced in their own power plants in 2017 compared to 2016.

Dispatchable producer	Electricity produced 2017 (GWh)	Electricity produced 2016 (GWh)	Evolution compared to 2016 (%)
Complexul Energetic Oltenia SA	14933	13542	▲10.3
Hidroelectrica SA	14039	17574	▼20.1
SN Nuclearelectrica SA	11509	11286	▲2.0
OMV Petrom SA	3645	3784	▼3.7
Electrocentrale București SA	2841	2493	▲14.0
Romgaz SA	1864	1628	▲14.5
Enel Green Power Romania SRL	1357	1236	▲9.8
Complexul Energetic Hunedoara SA	1199	1367	▼12.3
Tomis Team SRL	777	689	▲12.8
CET Govora SA	723	651	▲11.1
Ovidiu Development SRL	569	489	▲16.4
EDPR Romania (fost Ialomita Power)	522	363	▲43.8
Veolia Energie Prahova SRL	461	444	▲3.8
Crucea Wind Farm*	312	280	▲11.4
Cernavoda Power*	298	260	▲14.6
Other dispatchable producers (with market shares lower than 0,5%)	6275	5711	▲9.9
TOTAL	61324	61797	▼0.8

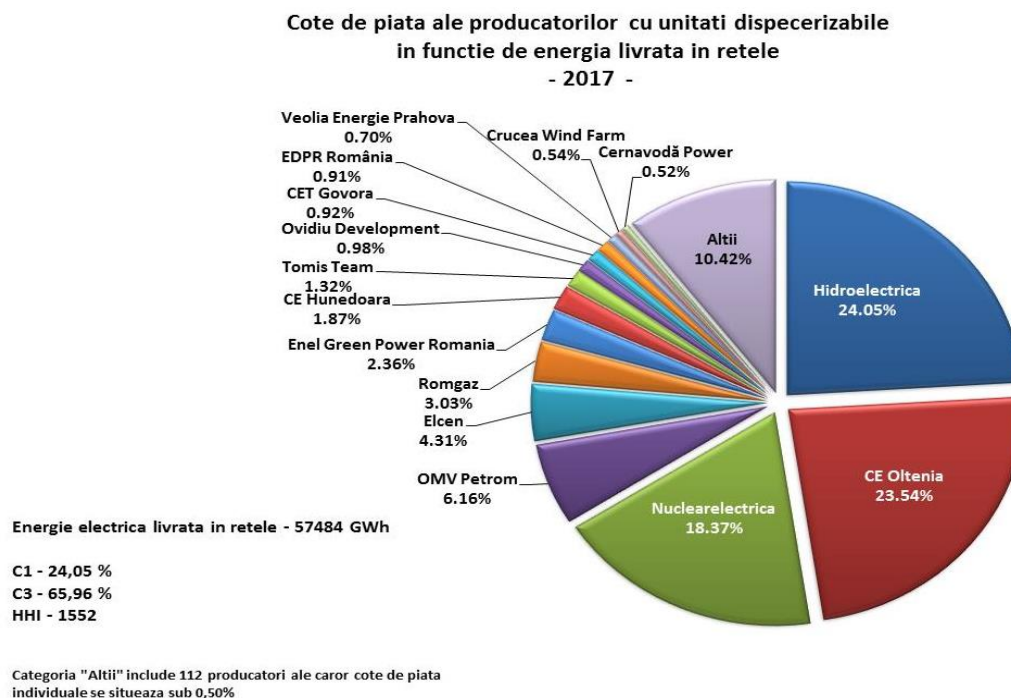
* in 2016, were included in the category "Other dispatcher producers (with market shares below the 0.5% threshold)"

Source: Monthly reports of dispatchable electricity producers – ANRE processing -

The production sector is dominated by producers of energy from conventional sources (hydro, thermal, nuclear), which provide approx. 85% of the energy produced in dispatchable units. Compared to the previous year, the hierarchy of the first large producers has changed, CE Oltenia reaching the first place in terms of electricity produced, but maintaining the second place in terms of electricity supplied to the grids. Market shares of more than 5% of the total quantity produced are achieved by the first four producers (CE Oltenia, Hidroelectrica, Nuclearelectrica and OMV Petrom), representing together approx. 72% of the energy produced in dispatchable units. At the same time, a number of 8 dispatchable producers, including

a wind generator (Enel Green Power Romania), reach quantities of over 1 TWh, meaning approx. 84% of production in dispatchable units, close to the previous year.

In the following graph we present the market shares of 2017, calculated according to the energy delivered in networks, where, although the hierarchy as compared to 2016 is slightly modified for the first two positions, the producers with delivered quantities of over 1 TWh are the same.



Source: Monthly reports of dispatchable electricity producers - ANRE processing

This year's concentration indicator values keep the electricity sector in the area of the delineations which separate markets with a moderate degree of concentration from those with a high degree of concentration.

Overall, **2017 brought an increase by more than 3% in domestic electricity consumption compared to 2016**, calculated on the basis of the energy supplied to grids by producers with installed capacity of more than 5 MW and the import-export balance. At year-end, the energy delivered by the producers was lower than in the previous year, and the trade balance with other power systems was to export and it was less than in 2016.

Although the domestic consumption curve had the expected seasonal evolution, each month in 2017 there were increases in domestic consumption compared to the corresponding monthly values in 2016, except in December 2017, when, although upward in relation to the previous month, the domestic consumption was lower than in December 2016. The biggest differences compared to the previous year's months were recorded in January and August respectively (by about 7% more in 2017 compared to the corresponding month of 2016), while the closest domestic consumption values were in October and November (below 1% between 2017 and 2016). The larger differences in January and August corresponded to months with extreme weather conditions, the winter of 2016-2017 being particularly cold, while the summer of 2017 being characterized by drought over a long period of time.

The comparison with the total electricity delivered in 2016, reported by DU producers, shows a slight decrease in SEN (below 1%) in 2017. At the level of primary sources, the quantities of electricity produced and delivered based on fuel oil were 4 times lower than the previous year, and those obtained from hydro sources were approx. 20% lower compared to the same analysis period. Increases as compared to 2016 were registered for coal and natural gas based power generation (the largest producer being EC Oltenia) and for wind power respectively (due to the emergence of new wind energy producers with dispatchable groups, and favorable wind conditions for this type of resource).

Wholesale electricity market

The wholesale market is defined as all transactions carried out by the market participants, holders of ANRE-issued licenses, which includes resale of electricity among participants, performed in order to adjust the contractual position and obtain financial benefits. Volumes thus traded exceed the physical quantity delivered from production to consumption. Changes in the structure of the wholesale market, which occurred with the entry into force of the Law, continued and strengthened as market participants replaced the transactions on the CMBC with transactions on centralized markets organized by OPCOM SA in a transparent, public, centralized and non-discriminatory manner. In the following, we will present the annual evolution of the volumes traded on each of the wholesale market components during 2013-2017, accompanied by the graphical evolution of the monthly volumes traded, compared to the monthly domestic consumption for the same period. The evolution of the components of the wholesale electricity market compared to the values of the previous year are also included, as well as the share of the domestic consumption registered in 2017.

The monthly evolution of these volumes in absolute figures, including the average prices realized on those wholesale market components, can be accessed at www.anre.ro, in the Monthly Report on the monitoring results for the electricity market.

Components of the wholesale market	2013 (GWh)	2014 (GWh)	2015 (GWh)	2016 (GWh)	2017 (GWh)	Evolution compared to 2016 - % -	Weight from the domestic consumption in 2017 - % -
Regulated agreements market	16755	9058	6413	4152	1741	▼58.1	3.2
Directly negotiated agreements market	15386	4611	1509	1283	616	▼52.0	1.1
Other platforms agreements market (brokerage)*	5466	-	-	-	-	-	-
Centralized bilateral agreements markets, of which:	18779	37284	56717	65337	59829	▼8.4	109.6
CBCM -EL**	N/A	34319	31407	21729	22821	▲5.0	41.8
CBCM -CN**	N/A	1621	7915	12718	11474	▼9.8	21.0
TCO-CM	-	1344	17394	30890	25534	▼17.3	46.8
Centralized universal service market	-	-	4592	8046	5601	▼30.4	10.3
Day Ahead Market	16346	21496	22496	25810	24716	▼4.2	45.3
Intra-Day Market	14	64	76	131	152	▲16.0	0.3
Balancing Market	4168	4169	4861	4001	4497	▲12.4	8.2

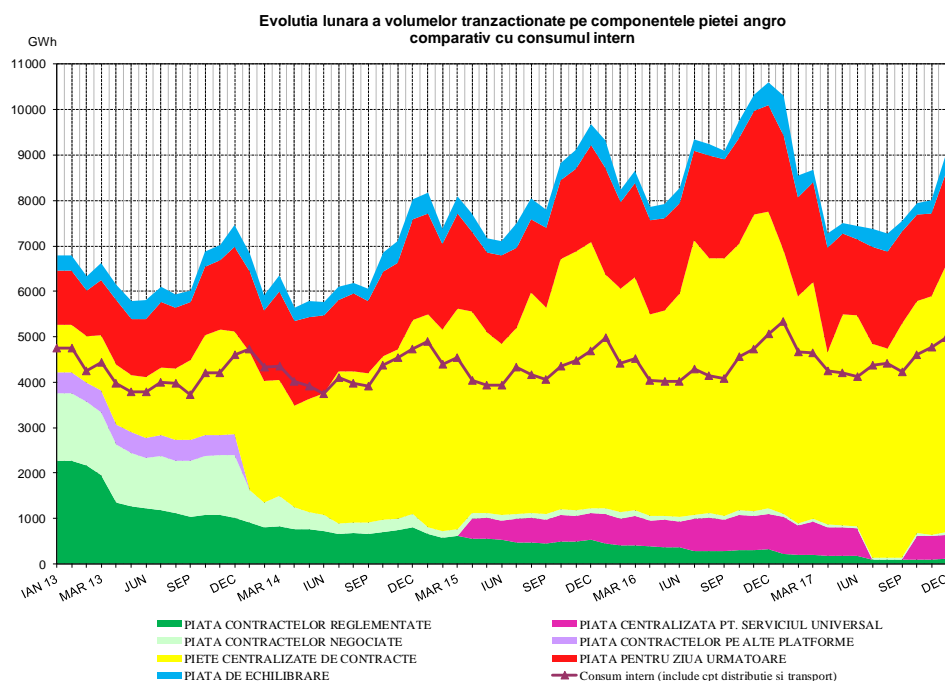
Components of the wholesale market	2013 (GWh)	2014 (GWh)	2015 (GWh)	2016 (GWh)	2017 (GWh)	Evolution compared to 2016 - % -	Weight from the domestic consumption in 2017 - % -
Export***	2466	8200	10504	8587	6548	▼23.7	12.0

Source: Monthly reports of participants to the wholesale electricity market, OPCOM SA and CNTEE Transelectrica SA - ANRE processing

* After the entry into force of the Law on Electricity and Natural Gas no. 123/2012 and the introduction of the obligation of trading in a transparent, public, centralized and non-discriminatory way, the volume of transactions executed on brokerage contracts other than those managed by OPCOM SA gradually diminished

** For the year 2013, the data on the volumes traded for the two trading modalities existing at that date (CMBC and CMBC-CN) are available only cumulatively

*** The quantity related to the export contracts in 2017 resulted from the reports of the PAN participants and includes both the quantities exported by the suppliers and those exported through CNTEE Transelectrica, in its capacity as a transfer agent for coupled DAM; export volumes were verified with DAMAS platform notifications, with small differences in some cases



Source: Monthly reports of participants to the wholesale electricity market, OPCOM SA and CNTEE Transelectrica SA - ANRE processing

In 2017, trading on CMBCs organized by OPCOM SA (CMBC-OTC, CMBC-EA and CMDC-CN) was predominant, which mainly covers transactions on medium or long term contracts, followed by DAM in the case of short-term transactions. In the legislative context required by the law, transactions on brokerage platforms virtually ceased in 2014, with the participants heading to the centralized dual-bargain market at OPCOM SA, with various trading instruments.

At the same time, the volume of electricity traded on negotiated bilateral contracts decreased steadily, reaching in 2017 the lowest share related to the domestic consumption (about 1.1%), these being the quantities under contracts concluded by competitive producers and suppliers prior to the entry into force

of the Law. It is also noted the increase by approx. 12.4% of the volume of electricity traded on the balancing market compared to 2016. In 2017 also, as in previous years, there were large differences between the electricity actually supplied by economic operators that commercially exploit wind and photovoltaic power plants and their physical notifications, differences that led to the need to balance the production-consumption balance. The increase was partially due to large imbalances recorded within the system in January and February 2017, mainly caused by the subcontracting of certain participants on the previous IDM and BM markets, a determinant factor being the unilateral denunciations of contracts concluded on the centralized markets managed by OPCOM SA and the subsequent shutdown of electricity supplied to end customers.

The data show that among the centralized markets for bilateral contracts, the only one that recorded an increase in the traded volume compared to the previous year is CMDC-EA, while CMDC-CN and CMBC-OTC registered decreases in the traded volumes. The electricity market for large end-customers is still inactive by the end of 2017, with no initiating offer being submitted, and IDM continues to have an insignificant weight, despite the increase in volume traded compared to 2016. In regards to the cross-border business activity, the analysis of the data collected from market participants, shown in the following table, shows that it decreased in terms of exports in 2017 compared to the previous year, with a slight increase in terms of imports of electricity.

On the whole, Romania maintains its position as a net exporter in the region, although the difference between the exported and the imported quantities decreases from one year to the next.

Import/export transactions	2015	2016	2017
Export			
Volume (GWh)	10504	8587	6548
Average price (Ron/MWh)	168.05	155.58	189.7
of which, by coupled DAM*			
Volume (GWh)	34	717	804
Average price (Ron/MWh)	157.75	143.57	178.25
Import			
Volume (GWh)	3776	3570	3654
Average price (Ron/MWh)	157.43	149.81	242.53
of which, by coupled DAM*			
Volume (GWh)	2953	2249	2031
Average price (Ron/MWh)	157.93	150.82	252.70

*starting with November 19, 2014

Source: Monthly reports of participants in the wholesale electricity market, OPCOM SA and CNTEE Transelectrica SA - ANRE processing

For a comparative analysis with previous year's figures, the annual average prices per PAN component are shown below:

Average prices per components of the wholesale market	2017 -Ron/MWh-	2016 -Ron/MWh-	Evolution in 2017 compared to 2016 - % -
Regulated agreements market	121.12	136.90	▼ 11.5
Directly negotiated agreements market	158.93	144.67	▲ 9.9
CMBC, of which:	170.69	157.62	▲ 8.3
CBCM -EA	165.97	158.36	▲ 4.8
CMBC-CN	175.17	155.90	▲ 12.4
CMBC-OTC	172.89	157.80	▲ 9.6
Centralized universal service market	187.01	162.94	▲ 14.8
DAM*	219.95	149.74	▲ 46.9
IDM**	178.85	126.12	▲ 41/8
BM**	336.19	272.19	▲ 23.5
Export****	189.70	155.58	▲ 21.9

Source: Monthly reports of participants in the wholesale electricity market, OPCOM SA and CNTEE Transelectrica SA - ANRE processing

* the average annual price is calculated as the average of the daily closing prices published by OPCOM SA.

** the average annual price is calculated based on the volume and the annual trading value published by OPCOM SA; the difference from the prices published in 2016 is due to the modification of the calculation method of the data published by OPCOM SA.

*** the average annual price is calculated as the average of monthly average deficit prices.

**** the average annual price reflects the price information regarding the quantities exported by suppliers, as well as those exported through CNTEE Transelectrica SA, as a courier agent for the coupled DAM.

Regarding the average prices on the wholesale electricity market presented, we would like to make the following clarifications:

- Average prices do not include VAT, excise duties or other taxes and were determined by weighting the prices with the monthly deliveries corresponding to sales transactions reported monthly by market participants, with the above-mentioned exceptions;
- All prices include the TG component of the transmission fee (for centralized markets it is included by the bidders in the price).

The comparative analysis of the average annual prices resulting from transactions concluded on wholesale market components in 2017 compared to the previous year reveals the increase of the average annual prices on all components of the wholesale market except for the regulated one, in the conditions of the increase of the domestic consumption, of the regional situation characterized by weather conditions similar to those in Romania, the market conditions recorded in 2017: water resource depletion, programmed or accidental unavailability of important dispatchable units, increase in the quantities offered for purchase and the willingness of the participants to purchase energy at high and very high prices on the DAM, the suspension of auctions on CMUS for the third quarter due to a lack of a sale offer registered in June. All this led to a long-term energy shortage on the market, resulting in an acute shortage of supply on DAM, coupled with an increase in energy demand to be covered on the BM.

Competitive market

The volume of electricity transactions on the competitive market decreased by 7% compared to 2016. The competitive market includes transactions on centralized markets for bilateral contracts, the centralized market with continuous double negotiation, CMUS, DAM, IDM and BM, but also on the market of directly negotiated bilateral contracts.

The volumes of electricity transactions under import/export contracts are significantly lower than the monthly volumes traded in 2016.

We can see here the different monthly evolution of imported volumes compared to exported volumes. The significant increase in volumes imported in February, May, July, August, September and October, correlated with the drop in volumes exported in February, April, May, June, July, August and November, led to significant variations in the export-import balance in February, May, July, August, September, October and November 2017. In August 2017 the balance was negative, possibly as a result of the coupled operation of the four spot markets, the low prices recorded in the other three countries members of the 4M MC project adversely affecting exports on the DAM.

Considered from the point of view of the dispatchable producers' activity, the competitive market (without considering imbalances) had the following structure of sales:

Total sales of producers on the competitive market		100% (60,734 GWh)
A.	Transactions subsequent to bilateral contracts negotiated directly on the PAN or concluded on the PAM	9.8%
	1. With suppliers	1.0%
	2. With final customers	8.8%
B.	Transactions carried out by means of the mechanisms of the centralized contract markets	57.6%
	1. With suppliers	52.9%
	2. With distributors	3.7%
	3. With other producers	0.4%
	4. With the transmission and system operator	0.6%
C.	Transactions on the CMUS	5.9%
D.	Transactions on the DAM and IDM	26.7%

Source: Monthly reports of participants in the wholesale electricity market, OPCOM SA and CNTEE Transelectrica SA - ANRE processing

Overall, sales of dispatchable producers on the competitive market amounted to almost 61 TWh in 2017, traded at an average annual price of Ron 182.99/MWh (including the TG component of the transmission tariff); compared to 2016 figures, there is a 3% increase in the quantities of electricity sold and a 16.1% increase in the annual average price.

The bulk of this quantity was sold on the centralized markets for bilateral contracts (about 35 TWh), and this was mainly the sale to electricity suppliers (32.1 TWh at the average price of Ron 165.27/MWh).

Large quantities were also sold through short-term markets (DAM and IDM) - approx. 16.2 TWh at an average annual price of Ron 223.84/MWh. Compared to the previous year, the sales structure of dispatchable producers continued to change, increasing the amount traded on CMBC-type markets to the detriment of CMuS, DAM and IDM, markets which recorded reductions of 33.4%, 6.6% and 27.4% respectively.

The following table presents the structure of the competitive market in terms of sales by electricity suppliers (without considering imbalances):

Total sales of suppliers on the competitive market		100% (69,131 GWh)
A.	Transactions subsequent to bilateral contracts negotiated directly or concluded on the PAM	52.7%
	1. With other suppliers	0.0%
	2. With external partners (export)	8.3%
	3. With producers	0.0%
	4. With distribution operators	0.0%
	5. With final customers	44.4%
B.	Transactions carried out by means of the mechanisms of the centralized markets	36.0%
	1. With other suppliers	30.5%
	2. With producers	2.3%
	3. With the transmission and system operator	0.4%
	4. With distribution operators	2.8%
C.	Transactions on the CMUS	2.9%
D.	Transactions on the DAM and IDM	8.4%

Source: Monthly reports of participants in the wholesale electricity market, OPCOM SA and CNTEE Transelectrica SA - ANRE processing

In 2017, except for export contracts, all direct bilateral sales contracts were concluded by active suppliers with final customers on the wholesale market, with no contracts negotiated directly, a situation likely due to the completion of the life cycle of such contracts concluded before the entry into force of the Law or the termination of some of them.

The lowest annual average price of suppliers on sale (including the power injection component in the transmission network) is recorded for the contracts for sale on the market for bilateral contracts concluded through an extended auction – CMBC-EA (Ron 169.48/MWh), and the highest annual average price is recorded on the market of bilateral contracts concluded through continuous double negotiation – CMBC-OTC (Ron 178.71/MWh). It is noted that the average price on the CMUS (Ron 187.29/MWh) registered in 2017 values higher than those on the other centralized markets managed by OPCOM SA.

In 2017, the average price at which SoLR purchased electricity from CMBC-type markets (Ron 216.56/MWh) is lower than the one at which they bought the electricity on DAM (Ron 242.45/MWh).

As about the activity of distribution operators, they acquired 6 TWh of electricity only through the competitive market, mainly through the products existing on the CMBC-EA (approximately 54.7% of the annual purchase volume), followed by the purchase from the DAM (about 30%). We note the following:

- For a distribution operator, the purchase on the CMBC-OTC is approx. 31% of the total acquisition, of which approx. 92% is covered from partners within the same group;
- distribution operators active on the DMA in 2016 maintained this preference in 2017, three of which increased their acquisition of DAM compared to 2016.

Regarding the total transactions performed by the participants on the centralized markets for bilateral contracts, it is worth noting the maintenance of the majority share of trading on the CMBC-OTC in 2017 compared to the previous year. In 2017, there was an increase in the share of CMBC-EA, CMBC-CN maintaining the same values. The final structure of the activity on the centralized markets for contracts is as follows: 19% of the volumes were traded on CMBC-CN, 38% on CMBC-EA, and the remaining 43% on CMBC-OTC.

The Centralized Market for Bilateral Contracts with Continuous Double Negotiation - CMBC-OTC

This market represents a framework organized at OPCOM SA for the purpose of centralized trading under competitive conditions based on predetermined sale and purchase contracts for electricity, based on the eligibility criteria specific to each participant. Trading is based on standard instruments characterized by trading duration (day, week-end, week, month, quarter, semester, year) and delivery profile (band, peak or blank) using framework contracts agreed by parties before trading; some of the transactions were concluded by intermediation procedure (sleeve transactions); starting with November 2014, according to the provisions of the CMBC-OTC Regulation, the use of EFET contracts is mandatory.

Launched in May 2014, CMBC-OTC was also the most important component of the wholesale electricity market in 2017, the electricity supplied to this market having a market share of 46.8% of domestic consumption, and representing approx. 24.6% of all wholesale transactions on the wholesale market.

In 2017, the activity of participants on this market decreased compared to the previous year, registering a reduction in the number of traded contracts from 10,176 to 3,816.

The volumes traded monthly as well as those contracted for the reporting month on the sale contracts concluded on CMBC-OTC decreased compared to the previous year, and by the end of 2017, the traded quantity decreased significantly compared to 2016, by approx. 35%, while the annual quantity contracted for delivery decreased by 3% compared to the previous year.

Simultaneously with the decrease in the volume of transactions, there is an increase of approx. 25% of the weighted average trading price, from Ron 156.24/MWh in 2016 to Ron 195.26/MWh in 2017.

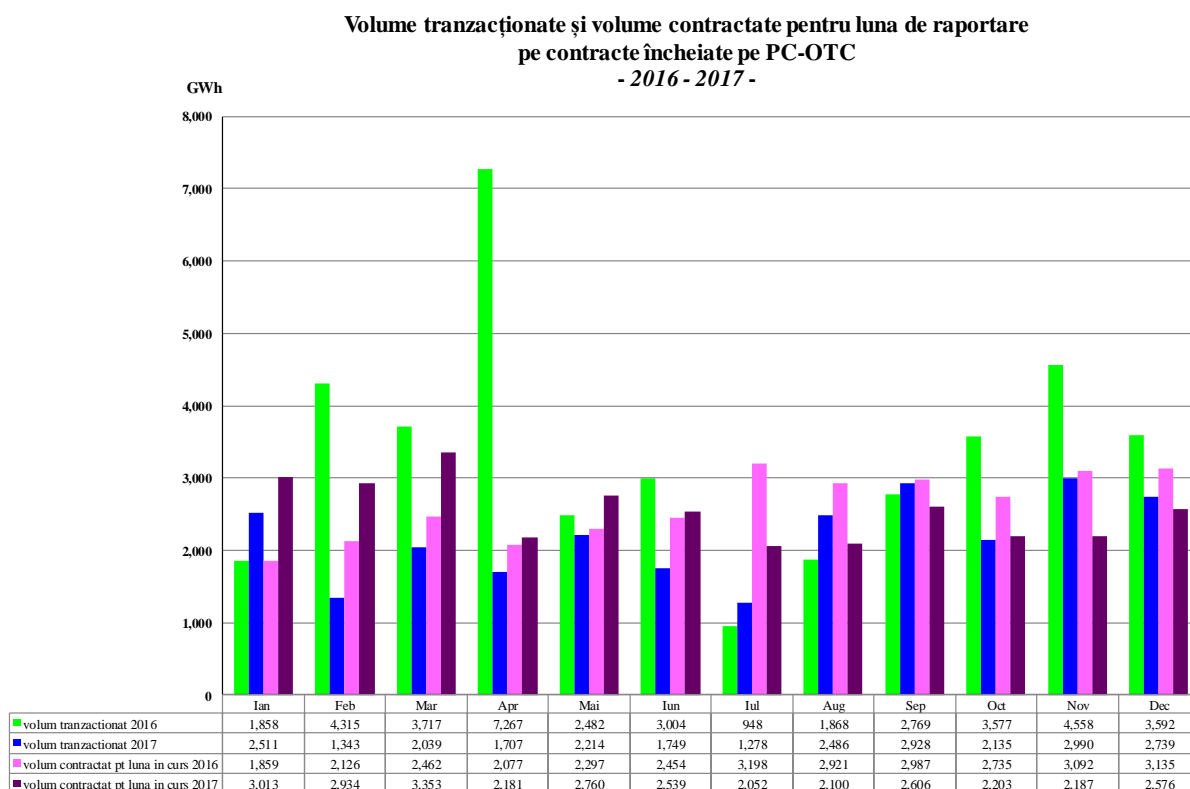
The annual quantity delivered in the reporting month on the sale/purchase contracts concluded on CMBC-OTC was 25.534 GWh, at an average annual price of Ron 172.89/MWh. Quantities delivered monthly varied between a minimum of 1,696 GWh (38.7% of the domestic consumption) in July 2017 and a peak of 2.871 GWh (53.8% of domestic consumption) in January 2017. Monthly average prices varied between Ron 149.16/MWh (in April) and Ron 191.41/MWh (in December).

Supplier sales on this market in 2017 accounted for ca. 66% of the total quantity traded, at the average annual price of Ron 178.71/MWh, while producers sold approx. 34% of the total amount traded, at the average annual price of Ron 161.69/MWh. The data on delivered quantities and related prices were

obtained on the basis of the monthly reports of market participants and refers to the electricity delivered in the reporting month as a result of transactions concluded on CMBC-OTC.

The HHI concentration indicator, calculated by OPCOM SA according to the volume that each participant contracted for delivery, recorded monthly values in the range of 611-865 on sale and in the range 376-450 at purchase and the C3 concentration indicator steadily recorded values of less than 40%.

The following chart shows the information on the traded and delivered volumes in the reporting month on the sale and purchase contracts concluded on CMBC-OTC in the years 2016 and 2017.



Source: Monthly reports of OPCOM SA - ANRE processing

OPCOM SA calculates and publishes daily reference prices for each CMBC-OTC product, calculated as an arithmetic mean of the CMBC-OTC participants' proposals.

Average trading prices, determined as weighted averages of prices with quantities of electricity traded using specific instruments - standard products - that can be traded on CMBC-OTC for each delivery profile (band, void, peak) are also calculated published daily by OPCOM SA on its own website at the Tranzacții-Rezultate (Transactions-Results) section. In the CMBC-OTC section, OPCOM also publishes daily information on traded products and aggregate data, synthesis and statistics, as well as data/information published in accordance with the provisions of Art. 26 of the CMBC-OTC Regulation - in 2017, full information on 701 transactions was published. In January and February 2017, there were record values of maximum closing price variations: 123% and 128%, respectively. From the brief analysis of the information included in the monthly monitoring reports sent by OPCOM SA, we can see the following:

- the average monthly trading price of the same product differs according to its trading month and the specificity of each of the traded products;

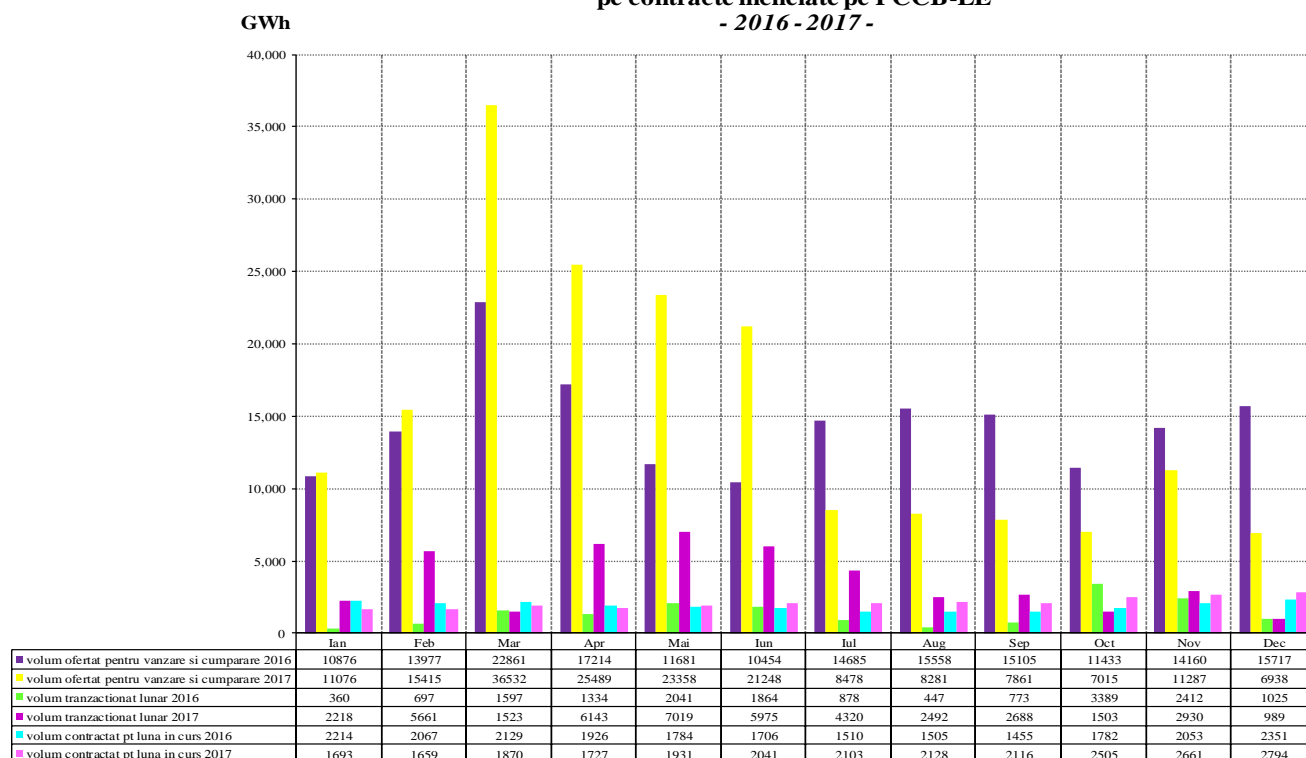
- significant quantities were traded through instruments specific to standard products with ongoing delivery for monthly, quarterly, half-yearly, and annual contracts;
- the large number of transactions between the participants of certain groups of companies and the fact that for one of the groups both the SoLR and the distribution operator concluded contracts with group companies.

Centralized Market for Bilateral Electricity Contracts, with the three methods of trading– CMBC-EA, CMBC-CN and CMBC-FP

In 2017, the centralized trading of bilateral electricity contracts took place in accordance with the provisions of the regulatory framework approved by ANRE Order no. 78/2014, which established three specific trading modalities - extended public auction (CMBC-EA), open-ended public auction (CMBC-CN) and fuel processing contracts (CMBC-FP). The number of participants registered in CMBC-EA in 2017 was constantly above 340, the minimum being recorded in December 2017, and the maximum - 355 participants - in May and August. The energy delivered on CMBC-EA accounted for 41.8% of domestic consumption and approx. 22% of all wholesale transactions on the wholesale market. In 2017, the activity of the participants on this market increased compared to 2016, registering an increase of approx. 5.3% of the volume of electricity offered for trading (sale and purchase) and by approx. 158% of the volume of electricity traded.

The following chart shows the monthly volumes offered, traded and delivered in the reporting month, which characterize CMBC-EA in 2017 compared to 2016.

Situația ofertelor, a volumelor tranzacționate și a volumelor contractate pentru luna de raportare pe contracte încheiate pe PCCB-LE - 2016 - 2017 -



Source: Monthly reports of OPCOM SA - ANRE processing

Offers for sale or purchase of electricity introduced on CMBC-EA have firm characteristics regarding delivery duration, daily delivery profile, total and hourly quantity, the minimum price requested and the maximum price offered. After the transactions are concluded, these characteristics determine precise, fixed, constant values of the quantities and the price at the level established for trading, for the entire period of validity of the contract. Tenders are accepted by both parties, both for sale and for purchase, with the possibility of several bidders on both sides.

The comparative analysis of volumes offered on a monthly basis for sale and purchase reveals that in the first six months of 2017, larger volumes were offered for trading than in similar months in 2016, and their values declined in the second half of 2017.

Monthly trading volumes registered significant increases in most of the months of 2017 compared to similar months in 2016 (reaching 712.5% in February), with the exception of March, October and December 2017.

Regarding the total volumes contracted for the reporting month, we can see the reductions in volumes contracted for January - April 2017 compared to the similar period of 2016, while for the rest of 2017, higher monthly volumes were contracted than those in the previous year. The volumes contracted for the reporting month include the volumes contracted for CMBC by December 2014; they represent approx. 0.8% of the total volume contracted for delivery in 2017, substantially reducing its share (by 83%) compared to 2016.

The most active participant from the point of view of the intention to sell was producer CE Oltenia SA, which offered the largest volumes for sale.

Concerning the concluded sales transactions, there were two major producers: CE Oltenia SA and SN Nuclearelectrica SA, which held the position of first seller (with quotas ranging from 17.7% in January 2017 to 29.1 % in July 2017).

From the analysis of the purchase offers, it appears that between January and February 2017, the most interested in purchasing energy on this market was Arelco Power SRL, without succeeding in realizing its purchasing intentions, because the first buyer in these months was Alpiq Romindustries SRL. For the next 10 months, the most interested in the purchase of electricity was Electrica Furnizare SA, with offered quantities ranging from 8.2% to 13.8%, while in purchasing transactions, the highest monthly market shares, in 8 out of 10 months, were registered by GEN-I trgovanje in prodaja elektricne energije d.o.o.

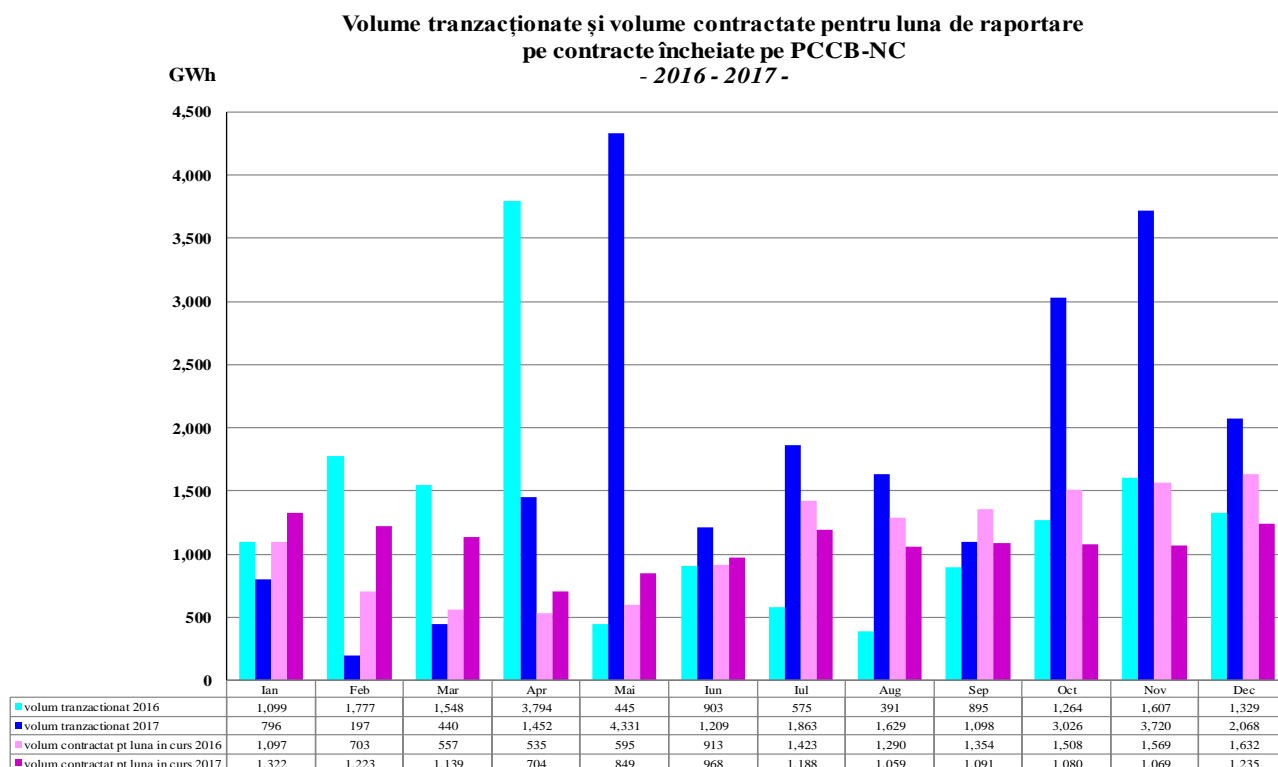
The amount of electricity delivered in 2017 (on contracts traded in 2016 and 2015 on CMBC-EA or previously on CMBC) was 22,821 GWh and increased by approx. 5% compared to 2016 on CMBC-EA, while the average annual price for the total quantity delivered was Ron 165.97/MWh and increased by approx. 4.8% compared to the same period the previous year.

Quantities delivered monthly evolved between a minimum of 1,449 GWh (31.1% of domestic consumption) in February 2017 and a peak of 2,585 GWh (about 52% of domestic consumption) in December 2017. Monthly average prices varied between Ron 155.95/MWh (in April 2017) and Ron 176.54/MWh (in December 2017).

During 2017, the sales of suppliers on this market amounted to approx. 15.5% of the total quantity traded, at an average annual price of Ron 169.48/MWh, while the dispatchable producers sold approx. 84.5% of the total amount traded, at the average annual price of Ron 165.33/MWh.

The HHI concentration indicator, calculated by OPCOM SA, recorded monthly values in the range of 861-1,930 for sale and 325-358 for purchase, and the C3 concentration indicator on the purchasing side consistently had values lower than 30%, while C3 on the sales side ranged between 43.22% and 72.53%.

On CMBC-CN, standard products are traded in terms of bidding power, daily delivery profile and delivery times. The following chart shows the volumes traded monthly and those contracted for delivery in the months of 2017 compared to similar dates in 2016.



Source: Monthly reports of OPCOM SA - ANRE processing

The analysis of data on traded and delivered volumes in the reporting month, based on contracts concluded in 2016 and 2017, shows an increase of approx. 40% of the traded volumes and a decrease in the volume contracted for delivery by approx. 2% in 2017 compared to the previous. In May 2017, a new trading record was recorded for the volume of 4.331 GWh, representing a month maximum for the 2 years, the previous one being recorded in April 2016. The data are those reported in the monthly reports monitoring the operation of the markets managed by OPCOM SA.

CMBC-CN registered in 2017, for the energy delivered on this market, a share of 21% of the domestic consumption, representing approx. 11% of all wholesale transactions on the wholesale market. The number of enrolled participants rose from 170 in January 2017 to 196 in August and November 2017 and the number of contracts traded in 2017 was 16,967 (with a minimum of 498 in February and a maximum of 3,306 in April).

According to the data reported monthly by the economic operators monitored, the electricity sales delivered in 2017 were 11,474 GWh, representing about 19% of the energy supply on the centralized market for bilateral electricity contracts.

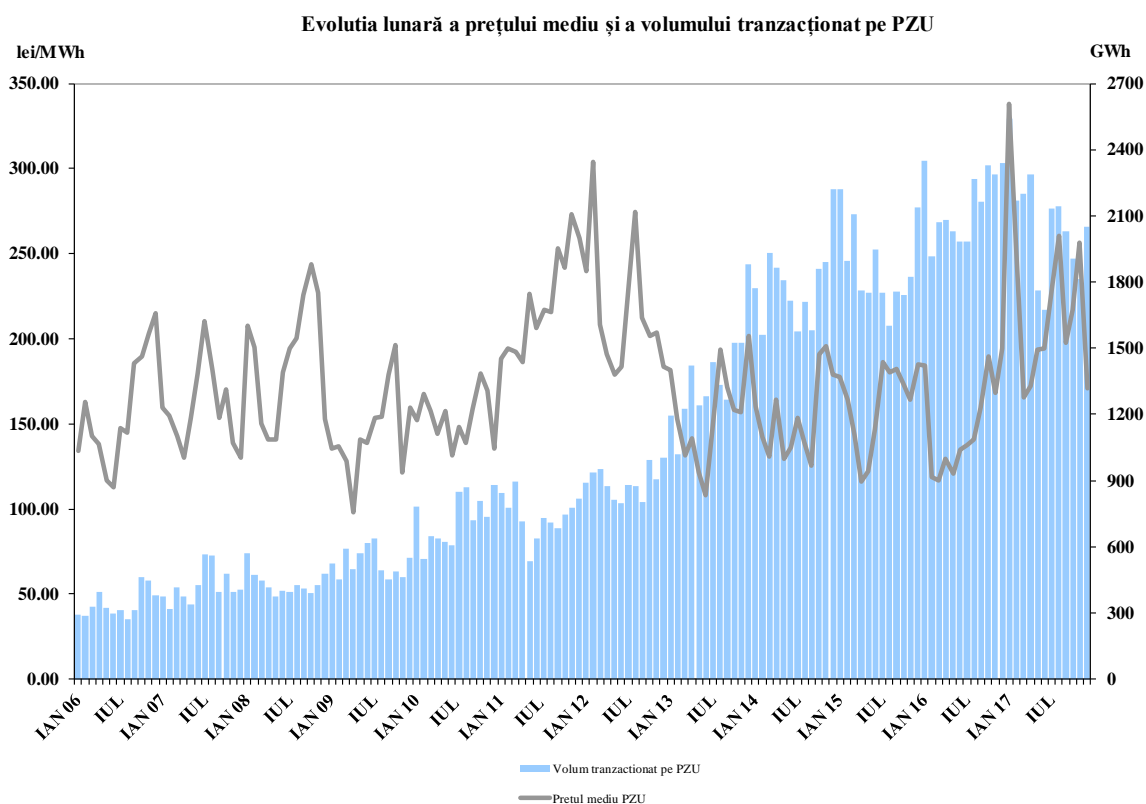
Supplier sales on the CMBC-CN in 2017 represented approx. 39% of the total quantity traded, at the average annual price of Ron 178.50/MWh, while dispatchable producers sold approx. 61% of the total amount traded, at the average annual price of Ron 173/MWh.

Day-Ahead Market - DAM

The volume of electricity traded on DAM in 2017 decreased by approx. 4.2% compared with last year. The monthly share of DAM transactions in domestic consumption varied between 38% (November 2017) and 53.9% (April 2017), lower than in 2016 (45.3% versus 48.8%).

The average DAM closing price (calculated as the arithmetic mean of daily closing prices) increased by approx. 46.9% compared to the average of 2016.

The following graph presents the monthly evolution of the average price and the volume traded on DAM during 2006-2017.



Source: Monthly reports of OPCOM SA and CNTEE Transelectrica SA - ANRE processing

Monthly variations of the average monthly price established on DAM existed in both directions. The minimum value of the period was reached in March 2017 (Ron 165.48/MWh) and the maximum in January 2017 (Ron 337.74/MWh). The average annual price calculated as an average of average daily prices was Ron 219.95/MWh in 2017.

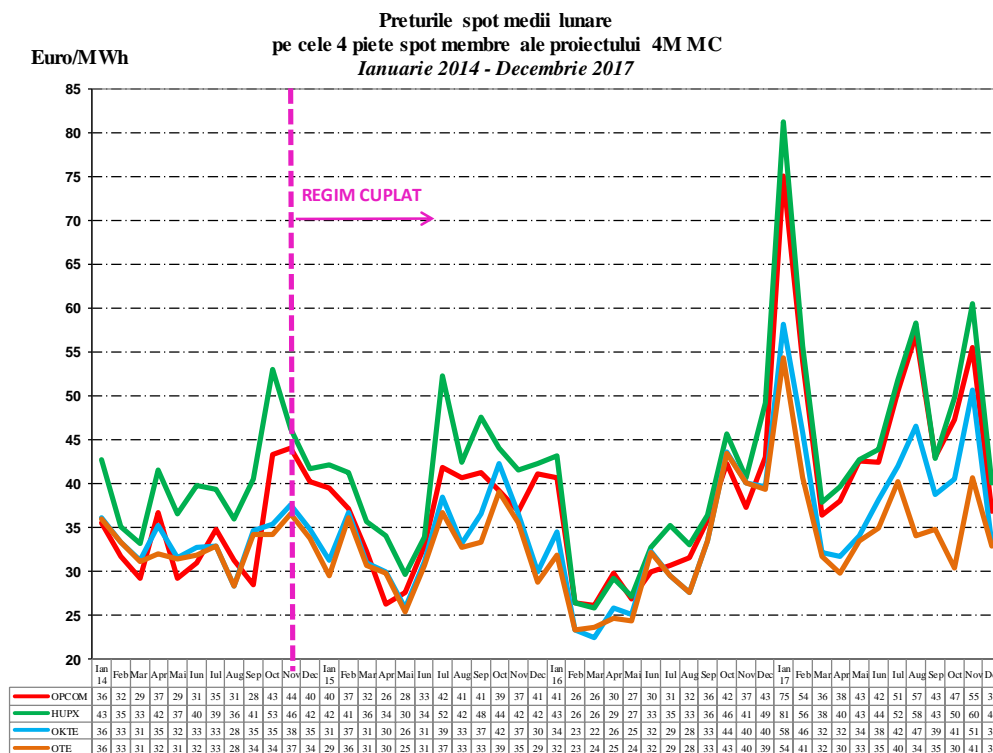
As of November 19, 2014, the DAM in Romania operates in a regime coupled with spot markets in Hungary, Slovakia and the Czech Republic, in the so-called 4M MC project - the day-ahead price-coupling mechanism. This coordinated correlation mechanism uses a uniquely European method of coupling regions by price (Price Coupling of Regions/PCR) in order to harmonize European national

markets and create a European internal market for electricity. Coupled operation is based on ACER's recommended coupling algorithm (Euphemia), which aims to maximize social welfare across the entire area of coupled markets.

The coupling mechanism is implemented through coupling operators OTE-Czech Republic, EPEX Spot (service provider for OKTE-Slovakia and HUPX-Hungary) and since January 17, 2017, OPCOM S.A.-Romania (PCR member since January 2016). Thus, following the successful completion of the process of implementation of the changes and tests carried out, OPCOM operates in its own name the coupling solution implemented in the 4M MC operational mechanism, all processes being carried out in conditions of safe coupled operation of the day-ahead markets from the operational mechanism. Coupling operators act as Coordinators based on the rotation principle.

The coordinated calculation of cross-border allocation capacity is under the governance of transmission and system operators in the four countries, in line with European law, and the allocation model used is that of implicit allocation of the available interconnection capacity on the DAM.

The following chart shows the monthly average spot prices of the 4 day ahead markets involved in the 4M MC coupling mechanism starting with January 1, 2014, before and after the onset of coupled operation.

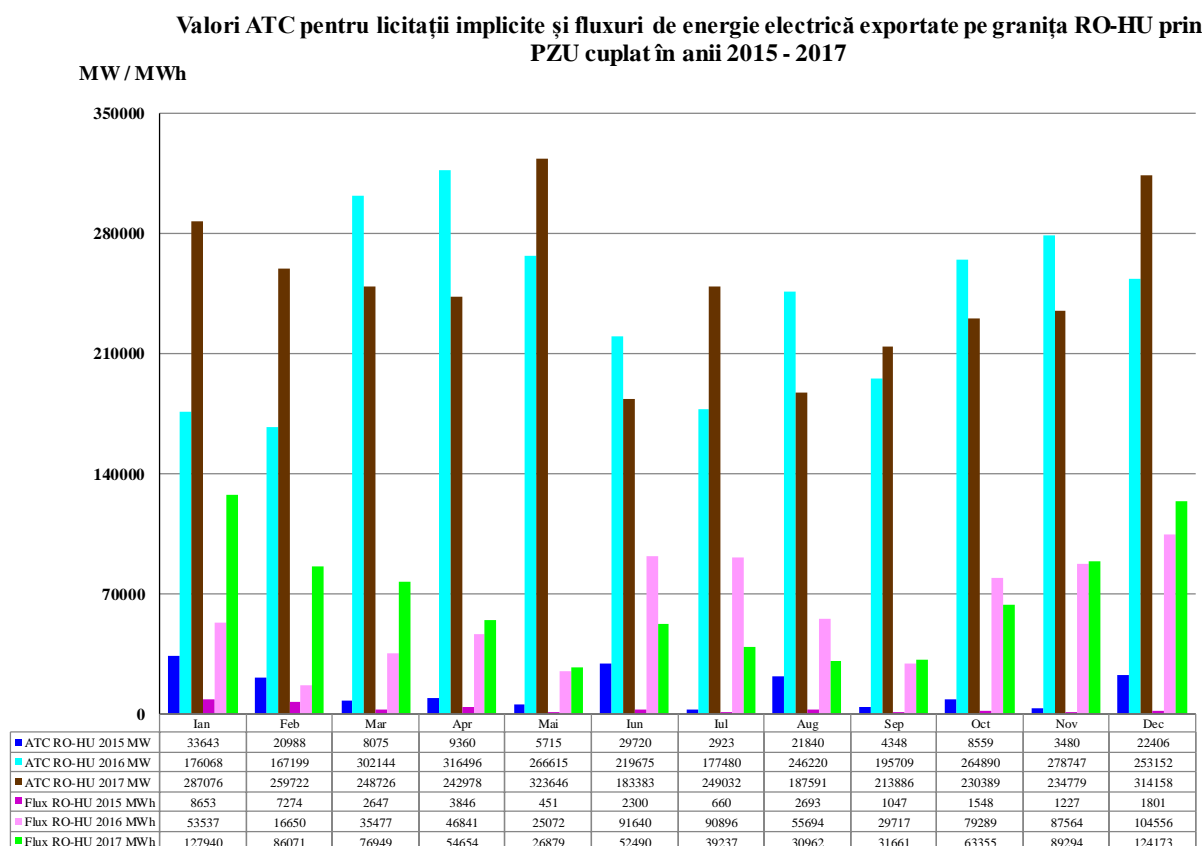


Source: Information published by OPCOM SA - ANRE processing

In order to better meet the purpose for which the DAM coupling mechanism was implemented, i.e. the transfer of energy to the level and in the sense determined by the known production and consumption conditions and depending on the prices of the coupled markets, starting with 1 January 2016, transport in Romania and Hungary, CNTEE Transelectrica SA and Mavir ZRt, following the recommendations of the regulatory authorities of the two states, ANRE and MEKH, agreed to reserve a quota of the interconnection capacity for the DAM allocation. The same rule was adopted for the allocation of interconnection capacity on the border with Bulgaria. Thus, each month of the year, the capacity reserved

for DAM allocation is determined as the difference between the available transfer capability (ATC) calculated monthly for each subperiod and 80% of the lowest ATC value for the sub-periods of that month, to which the capacity allocated to the annual auction returned to TSO is added. As a Particularity for the Hungarian border, if 80% of the lowest ATC value calculated monthly on subperiods is less than 80 MW, the interconnection capacity for monthly allocation will be 80% of the ATC calculated for each subperiod, plus the capacity allocated to the annual auction returned to TSO.

The following chart shows the monthly ATC allocations for export to DAM and electricity exported through DAM coupled in 2017, 2016 and 2015.

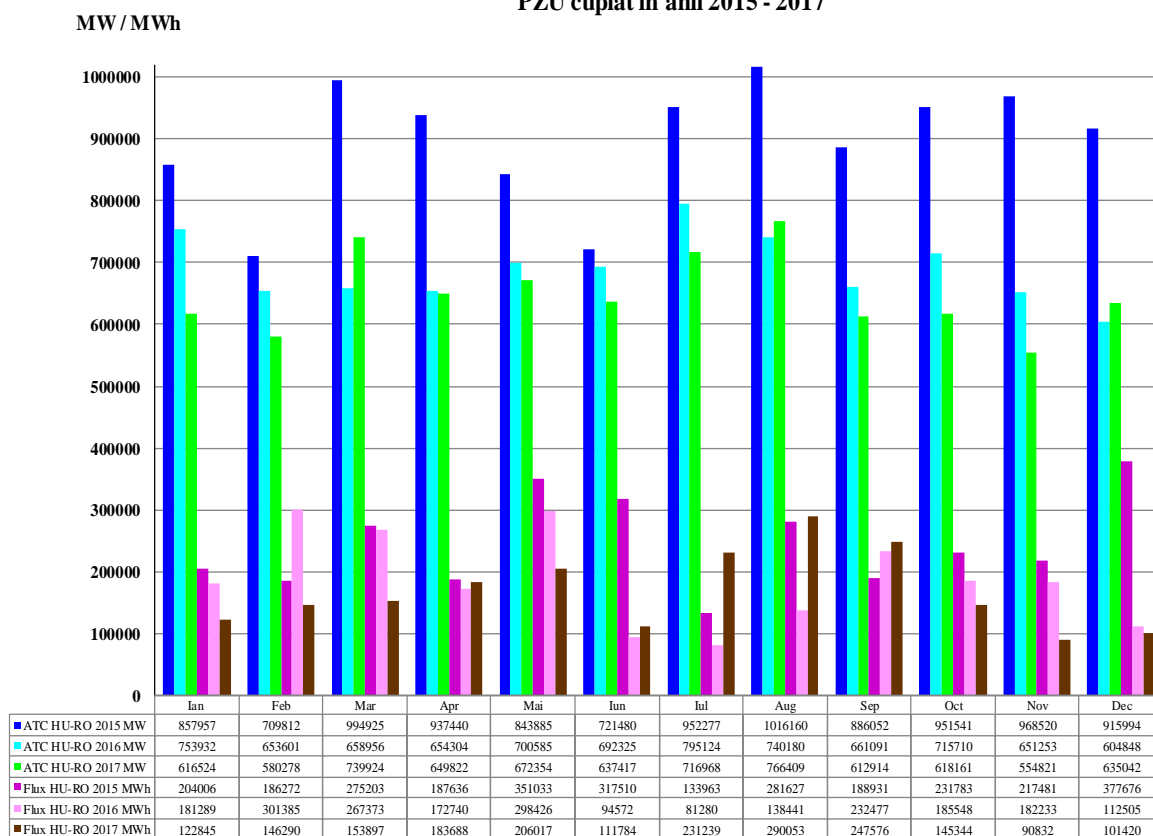


Source: Monthly reports of OPCOM SA – ANRE processing -

Following the implementation of this interconnection allocation mechanism for allocation on DAM, in 2017 there was an increase by approx. 4% of ATC allocated for export on DAM (from 2,864,395 MW in 2016 to 2,975,366 MW in 2017) and an increase of approx. 12% (from 716,931 MWh to 803,664 MWh) of electricity flows exported on the RO-HU boundary through the coupling mechanism, compared to 2016.

As about the ATC allocation for implicit auctioning for imports on the Hungarian border, following the application of the netting principle, lower ATC values for coupled DAM resulted for 2017. The following chart shows the values of the monthly ATC allocated for import on DAM and the electricity flows imported by DAM coupled between 2015-2017.

Valori ATC pentru licitații implicite și fluxuri de energie electrică importate pe granița HU-RO prin PZU cuplat în anii 2015 - 2017



Source: Monthly reports of OPCOM SA - ANRE processing

We can see a decrease in ATC allocated for imports on DAM by approx. 6% compared to 2016 (from 8,281,909 MW to 7,800,634 MW) and the reduction of the electricity flow imported through DAM coupled with approx. 10% (from 2,248,269 MWh to 2,030,983 MWh).

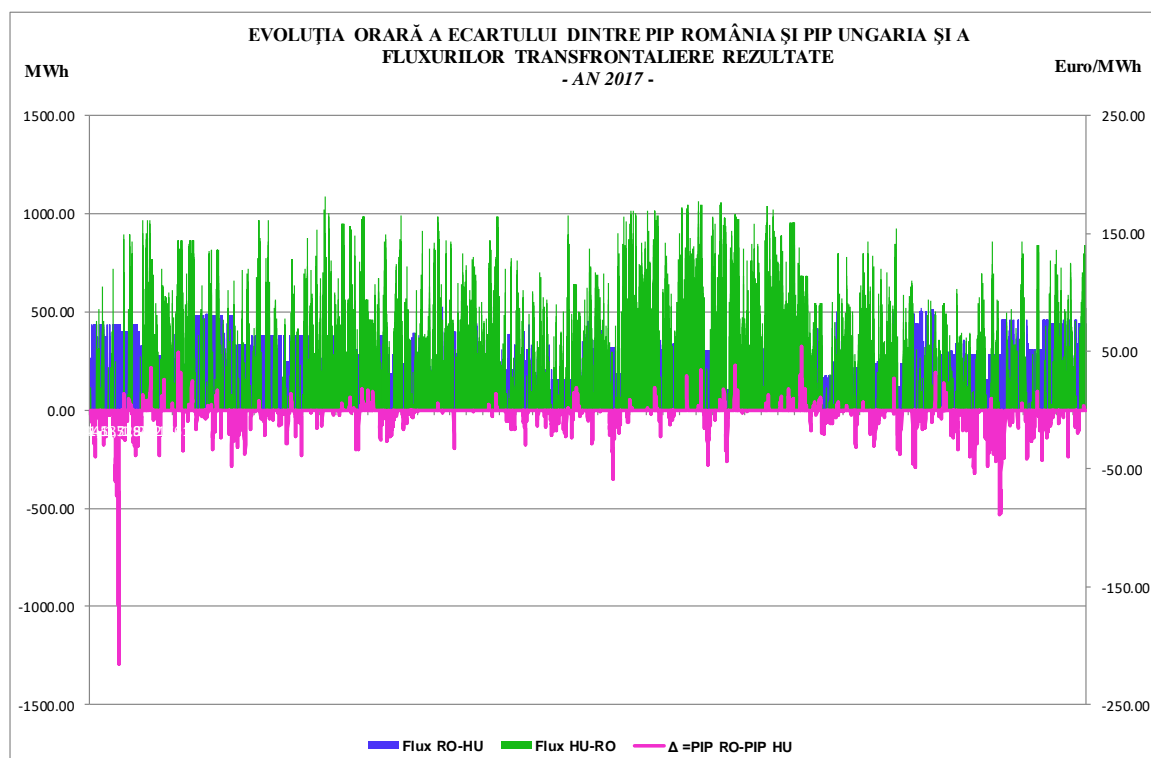
Although there were trading opportunities reflected in price differences between the two areas, cross-border exchanges could not be achieved over many time intervals because of the values set for the two-way ATC (export/import).

The following table shows the monthly situation of the number of hourly intervals in which no larger shifts were made in both directions, given the insufficient values of ATC allocations (the changed flow was equal to the hourly allocated ATC and the difference between PIP DAM in Romania and PIP DAM in Hungary was different from zero):

Month	Number of intervals with insufficient ATC DAM export (RO-HU)	Number of intervals with insufficient ATC DAM import (HU-RO)
January	207	20
February	136	29
March	132	9
April	132	48
May	15	8
June	146	26
July	75	11
August	76	19
September	88	70
October	143	11
November	184	17
December	193	34
Total an 2017	1.527	302

Source: Daily data published by OPCOM SA - ANRE processing

Next, there is the hourly evolution of the difference between the closing prices of DAMs coupled on Romania and Hungary respectively, correlated with the cross-border flows on the Romanian-Hungarian border in both directions in 2017.

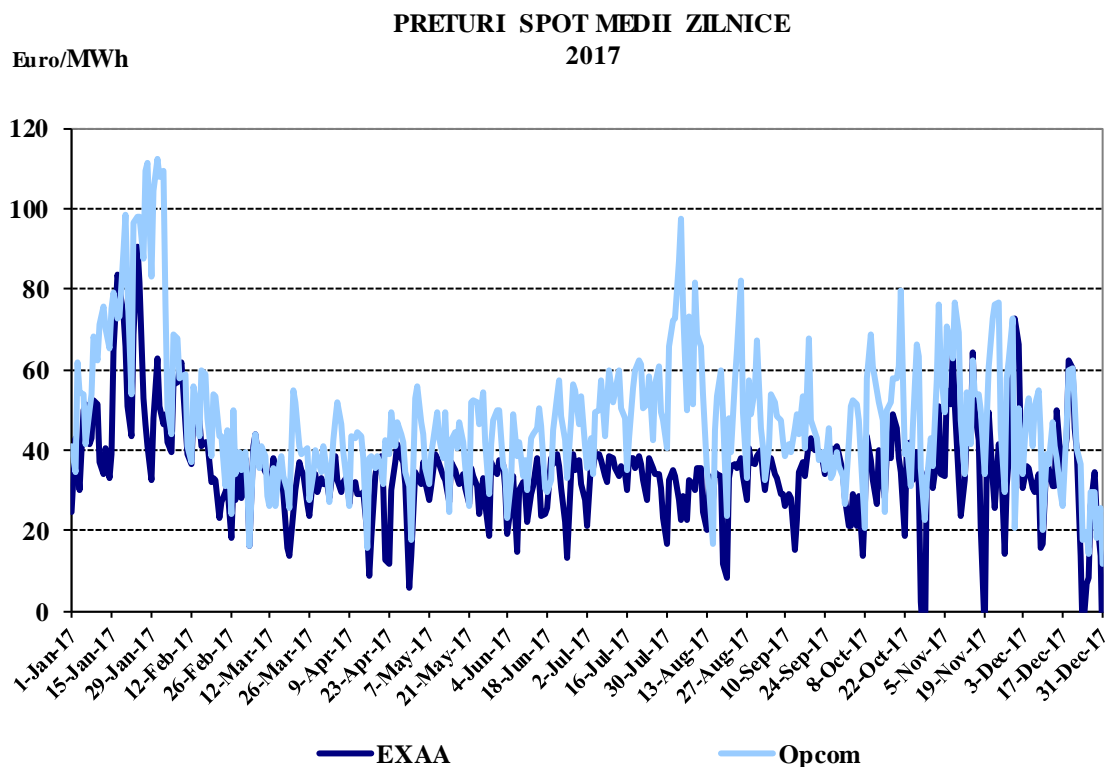


Source: Information published by OPCOM SA - ANRE processing

It is estimated that the price on DAM in 2017 incorporates with sufficient accuracy the available information on the level of resources and the electricity demand corresponding to the moment, while also presenting the specific high volatility.

The HHI concentration indicator had values that generally indicate a lack of concentration, both on the purchase side (monthly values in the 472-771 range) and on the sales side, with monthly HHI values in the 454-870 range.

From the comparison of the closing price of DAM with the spot prices set by other European energy exchanges in 2017, it is noted that the OPCOM SA price values were higher than those on EXAA.



Source: Daily reports of OPCOM SA and information published by EXAA - ANRE processing

Intra-Day Market - IDM

Component of the wholesale electricity market, IDM is a volunteer market that provides participants with standard trading tools designed to facilitate the adjustment of the contract portfolio as close as possible to the moment of electricity delivery and a better management of possible imbalances, thus contributing to a balance between production and consumption.

The volume of electricity traded in the year 2017 on the IDM was approx. 152 GWh, up 16% compared to the previous year and double that of the year 2015. The monthly volumes of the analyzed year exceeded 10 GWh most months, with a maximum of approx. 16 GWh in February 2017, while in June and September fewer volumes were traded, of around 8 GWh.

Out of a total of 133 registered license holders (almost 13% more than the previous year), 96 submitted bids for sale and/or purchase, which shows an increasing interest compared to 2016, when out of the total number of participants, only 60% have been active on this market.

The average weighted price in 2017 was Ron 178.85/MWh, 42% higher than in 2016, and 28% higher than in 2015. At a value level, the transactions represented approx. Ron 27 million, more than 60% of the value of this market registered in 2016 and approx. 2.5 times higher than in 2015. Despite these increases, IDM is still not used to its potential, which is hard to explain in the conditions of growing renewable energy production.

Balancing Market - BM

At the end of 2017, 122 participants were operating on the balancing market, holding a total of 241 dispatchable units in commercial exploitation and 91 Balancing Parties, respectively.

The following table shows a comparison of the annual values for 2010-2017 of the concentration indicators, based on the actual energy delivered by producers on the BM for each type of regulation and sense.

Year	Type of regulation	Sense of regulation	2010	2011	2012	2013	2014	2015	2016	2017
C1	Secondary regulation	Increase	68%	59%	60%	61%	59%	58%	59%	58%
		Decrease	67%	56%	57%	58%	58%	57%	60%	58%
	Fast tertiary regulation	Increase	53%	75%	78%	67%	58%	55%	63%	82%
		Decrease	62%	46%	53%	47%	70%	74%	56%	42%
	Slow tertiary regulation	Increase	45%	30%	46%	39%	61%	37%	41%	34%
		Decrease	34%	42%	46%	37%	63%	36%	39%	39%
HHI	Secondary regulation	Increase	5067	3986	4815	4700	3495	4368	4502	4687
		Decrease	4943	3703	4665	4423	3396	4274	4504	4706
	Fast tertiary regulation	Increase	3320	5729	6250	4841	3400	3626	4432	6811
		Decrease	4204	2868	3926	3202	4836	5779	3942	3488
	Slow tertiary regulation	Increase	2749	1679	2375	2777	3759	2997	2941	2369
		Decrease	2089	2563	3446	2470	3959	2640	3117	2928

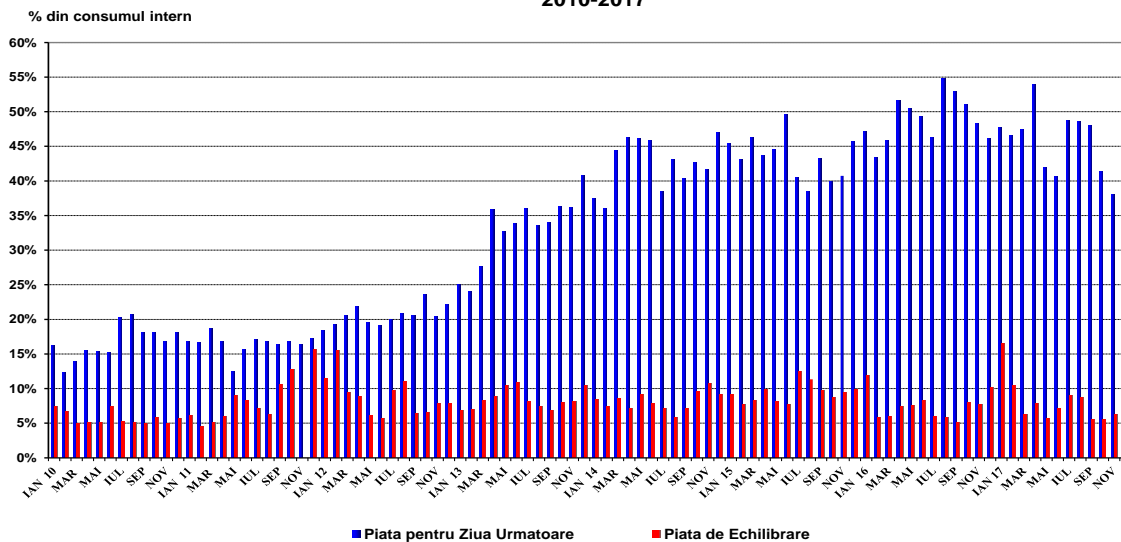
Source: Monthly reports of CNTEE Transelectrica SA - ANRE processing

Concentration indicator values indicate for 2017 also an excessive concentration of the balancing market for all regulation categories, and the existence of a dominant participant on types of fast secondary and tertiary regulation. As compared to 2016, there is an increase in concentration on fast tertiary regulation, at an increase of approx. 20 percentage points.

Monthly volumes recorded on the BM in 2017 were a much below those traded on DAM month by month, with quantitative differences varying between approximately 1,400 - 2,000 GWh per month. At year level, the volume traded on the BM in 2017 increased by approx. 12% compared to the previous year, while at monthly volumes it is evident that the differences compared to 2016 go both ways, the biggest positive differences being in winter months (January and February 2017) and summer months respectively (July and August 2017), periods with problems determined especially by the extreme weather conditions.

In most of the 2017 months, the share of volumes traded on the BM out of domestic consumption recorded small values, between 5-6% (in September, October, November) and 10-17% (in the first 2 months of the year), while summer months (July and August) represent approx. 9% of the domestic consumption of the month.

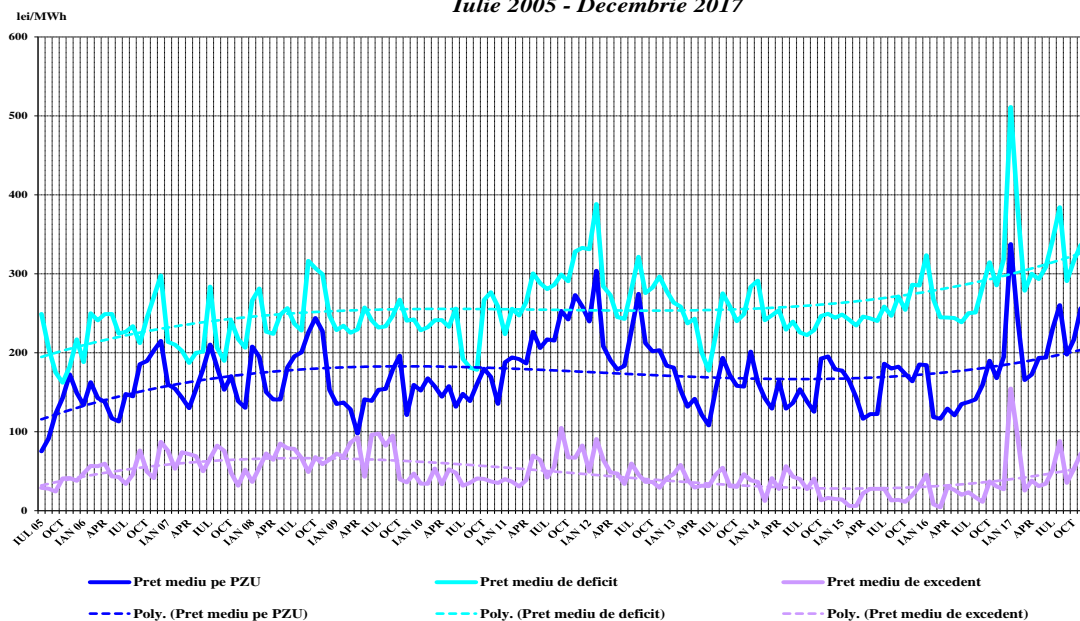
Evolutia ponderii volumelor tranzactionate pe PZU si PE 2010-2017



Source: Monthly reports of OPCOM SA and CNTEE Transelectrica SA - ANRE processing

The most important provider of system services for fast and tertiary regulation, Hidroelectrica, operated under a poor hydrological year, especially in the summer months, and the increase in intermittent renewable energy production as a result of the commissioning of many wind and photovoltaic parks has led to the need to balance significant differences in the production-consumption balance and to the inclusion in the value of the balance programmed by the system operator. The evolution of the average monthly prices for settlement of imbalances recorded by BRPs (the surplus price and the deficit price) for July 2005 - December 2017 is presented below. The average annual settlement prices were Ron 336.19/MWh for the deficit price (about 24% higher than 2016) and Ron 59.33/MWh for the surplus price (2.5 times higher than the previous year). The specified values are calculated as average of the recorded hourly prices.

Preturi medii lunare inregistrate pe PZU si PE Iulie 2005 - Decembrie 2017



Source: Daily/Monthly reports of OPCOM SA - ANRE processing

As with the average price on DAM, the maximum monthly values for the year, both for the average deficit and the surplus, were reached in January 2017, while the minimum values for the same average prices were registered in March of the year under analysis. In 2017, the additional monthly value resulting from the balancing market and the settlement of BRP imbalances had negative values (cost significance) in 5 months, with additional costs of more than Ron 14.5 million monthly in January and February and lower costs, of Ron 2.5 million and 6 million respectively in July and August 2017. In the months when additional revenues were registered, monthly values varied between Ron 2-3 million, with a minimum in March 2017 (about Ron 740 thousand). At year level, the cumulative value represented an additional cost (about Ron 25.7 million).

From the data published by TSO we can see that every month in 2017 there were trading intervals in which power reductions of wind power plants and photovoltaic power plants were registered as units dispatchable to the balancing market. The largest number of days when discounts were applied by dispatcher provisions (output limitation without reductions below notification values and one day of power reduction below notification values) were recorded in March (16 days), August (7 days) and December 2017 (11 days), months with the highest power reductions.

The reasons behind the power reductions were the need to balance the production-consumption balance and to fall within the programmed balance value, provided that the other possibilities for regulation had been exhausted and sporadically for complying with the N-1 safety criterion considering the discontinuity of certain lines. The details of the discounts placed on each interval and power plant are offered by CNTEE Transelectrica SA on its own website, under Transparency/Balancing and STS. During 2017, CNTEE Transelectrica SA identified 3 participants to the balancing market that fulfilled the bidding and trading conditions, as a result of exceeding the limit of 40% of the volume of transactions for a certain type of regulation and sense, for over 3 consecutive months. Thus, each month, Hidroelectrica SA (for secondary regulation upon increase and decrease, and fast tertiary regulation upon increase and decrease) and SNGN Romgaz SA (for slow tertiary regulation upon increase) were identified. In addition, for the first 4 months, OMV Petrom was also present on the list (for slow tertiary regulation upon decrease). Details are published on their own website, under Transparență/Echilibrare (Transparency/Balancing) și STS.

The market for system technology services

Participants to the balancing market that provided system technological services in 2017 were Hidroelectrica SA, CE Oltenia SA, CE Hunedoara SA, Electrocentrale Bucharest SA, SNGN Romgaz SA, Electrocentrale Galati SA, Veolia Energie Prahova SRL, Veolia Energie Iasi SA, Bepco and Electroenergy Sud SRL, the qualified producers for this type of services being the same as the previous year. In 2017, the total volume purchased by CNTEE Transelectrica S.A. on the competitive component accounted for approx. 71% of the required volume established by UNO-DEN, 2.5 times higher than the regulated purchased volume, approved by ANRE decisions. At the level of reserve type, the largest volumes for fast secondary and tertiary reserves were purchased on contracts with quantities and prices resulting from daily, weekly and monthly auctions (approximately 97% of the entire annual purchase for each of these types of reserves), while for the slow tertiary sector, the regulated purchase accounted for 2/3 of the annual total on this type of reserve. Compared to 2016, the ratio between regulated and competitive remained roughly the same (around 30%/70%) in favor of the component acquired through the auctioning process.

Four of the suppliers took part on the regulated component of this market (CE Hunedoara SA, Electrocentrale Bucharest SA, Electrocentrale Galati SA, Veolia Energie Prahova SRL), who concluded contracts with CNTEE Transelectrica on the basis of regulated quantities and prices established by ANRE decisions. Thus, the participation of CE Hunedoara SA in this market, on all types of reserves, was based on Decision no. 1034/2016 of ANRE President (July 2016 - June 2017), followed by Decision no. 907/2017 of ANRE President (July - December 2017), subject to GD no. 138/2013, as amended by GD no. 941/2014. It is worth mentioning that part of the contracted volumes was transferred to Hidroelectrica SA. The acquisition on the regulated component for the slow tertiary reserve was also ensured by successive decisions for the period comprised between 3 January and 15 February, extended until March 15, 2017 for alternative fuel oil producers, Electrocentrale Bucharest SA, Electrocentrale Galați SA, Veolia Energie Prahova SRL, compliant with GD 844/2016 and GD 55/2017. Some of the contracted quantities have been transferred. The prices resulting from the tenders for the secondary regulation reserve varied throughout the year, starting at prices around the average of Ron 51/h * MW in January 2017 and increasing month by month until August, when maximum monthly average prices were registered for each of the producers who bid for this type of reserve (about Ron 78/h * MW). Since September, monthly prices started to decline, reaching values between Ron 66-68/h*MW in December.

In the case of the fast tertiary reserve, although the price range is lower, the trend was also increasing, reaching the highest monthly average prices per producer in August 2017, with a maximum price of Ron 47.48/h*MW. By the end of the year, individual average prices followed a downward trend, December prices being close to those in January 2017 (between Ron 36-38/h * MW). The monthly prices established in auctions/tenders for the acquisition of slow tertiary reserve varied significantly over the year. If in November 2017 the auction winning price was Ron 4.34/h * MW, the maximum for 2017 was reached in August, namely up to almost Ron 52/h * MW.

The following table shows the concentration indicators that characterize the STS market at the level of 2017, calculated from the quantities achieved (including the contracted quantities and contract assignments) for each type of acquisition and reserve, reported monthly by CNTEE Transelectrica S.A.

Year 2017		Secondary reserve	Fast tertiary reserve	Slow tertiary reserve
Regulated component	Contracted quantity (h*MW)	123360	175200	4417440
	C1 (%)	48.4	98.5	92.3
	C3 (%)	100.0	100.0	98.5
Competitive component	Contracted quantity (h*MW)	3836880	5942450	2049840
	C1 (%)	60.3	81.3	57.1
	C3 (%)	99.9	93.3	99.4
	HHI	4904	6699	4209

Source: Monthly reports of CNTEE Transelectrica SA - ANRE processing

This year there is also a high degree of concentration for all three types of regulation reserves purchased by CNTEE Transelectrica SA, especially on the fast tertiary reserve.

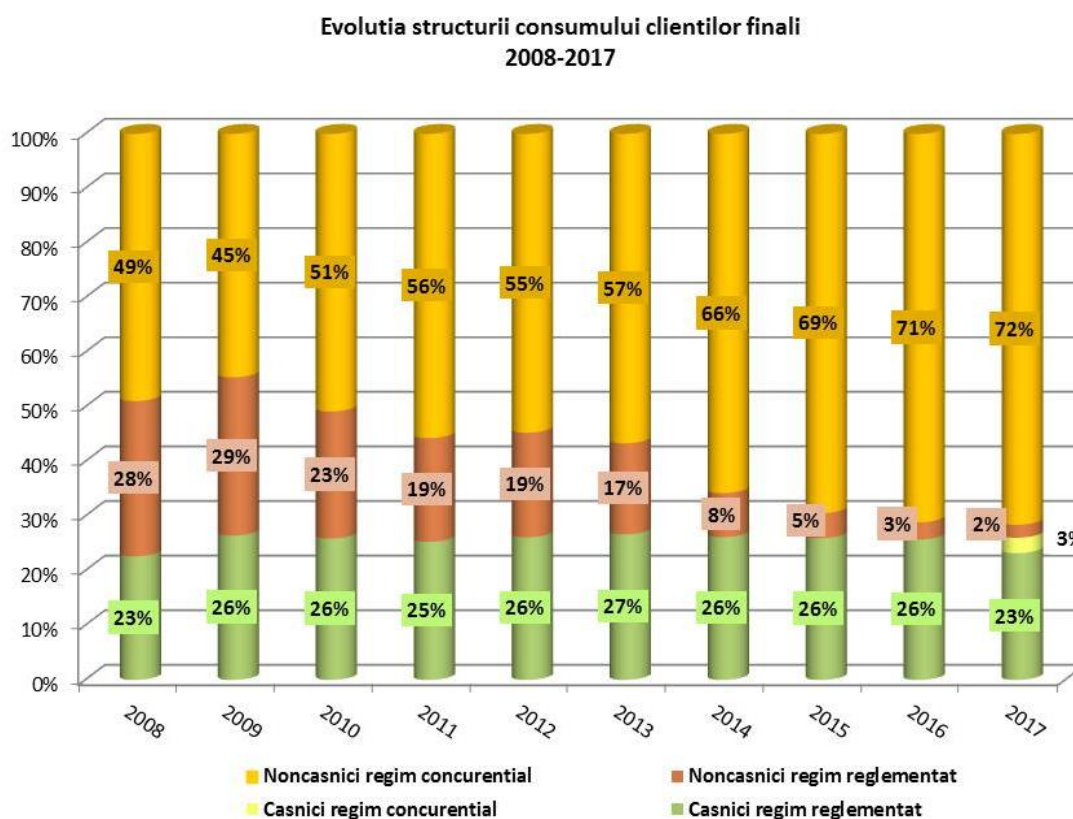
In terms of the competitive component, as during the previous year, the dominant trend was acquisition from Hidroelectrica for the secondary reserve and the fast tertiary reserve, and from Romgaz in the case of the slow tertiary reserve. Besides the dominant participant on each type of reserve, three producers participated in the auctions for the secondary reserve (CE Oltenia, Romgaz and Veolia Energie Prahova), 7 in the case of the fast tertiary reserve (CE Oltenia, Romgaz, Electrocentrale Galati, Bepco, Electrocentrale Bucuresti, Electroenergy Sud, Veolia Energie Iasi) and 4 in the case of the slow tertiary reserve (Electrocentrale Galati, CE Oltenia, Electroenergy Sud and Bepco), the weights of the quantities obtained by them for the provision of system technological services being much lower. Details are published by CNTEE Transelectrica SA on its own website under *Transparență/Echilibrare* (Transparency/Balancing) and STS.

2.2.2. Retail electricity market

2.2.2.1 Monitoring prices, transparency, market openness and competition

During 2017, **105 holders of licenses for electricity supply** were active on this market, of which 5 are suppliers designated by ANRE as SoLR and 25 have a license for the commercial operation of power generation capacities.

At the level of the entire year, out of a final consumption of approx. 48.4 TWh (3% higher than last year), 35.8 TWh is the amount of electricity supplied to final non-household customers (74% of the total), while household customers have an annual consumption of 12.6 TWh (26%). The same ratio (74%/26%) is registered between the consumption for clients supplied in a competitive regime and those supplied in a regulated regime (the real degree of retail opening), 3 percentage points higher than in 2016. The following chart presents the structure of electricity consumption for end customers in 2008-2017. Please note that as of January 2017, the consumption of household customers transferred to the competitive market is reported separately.

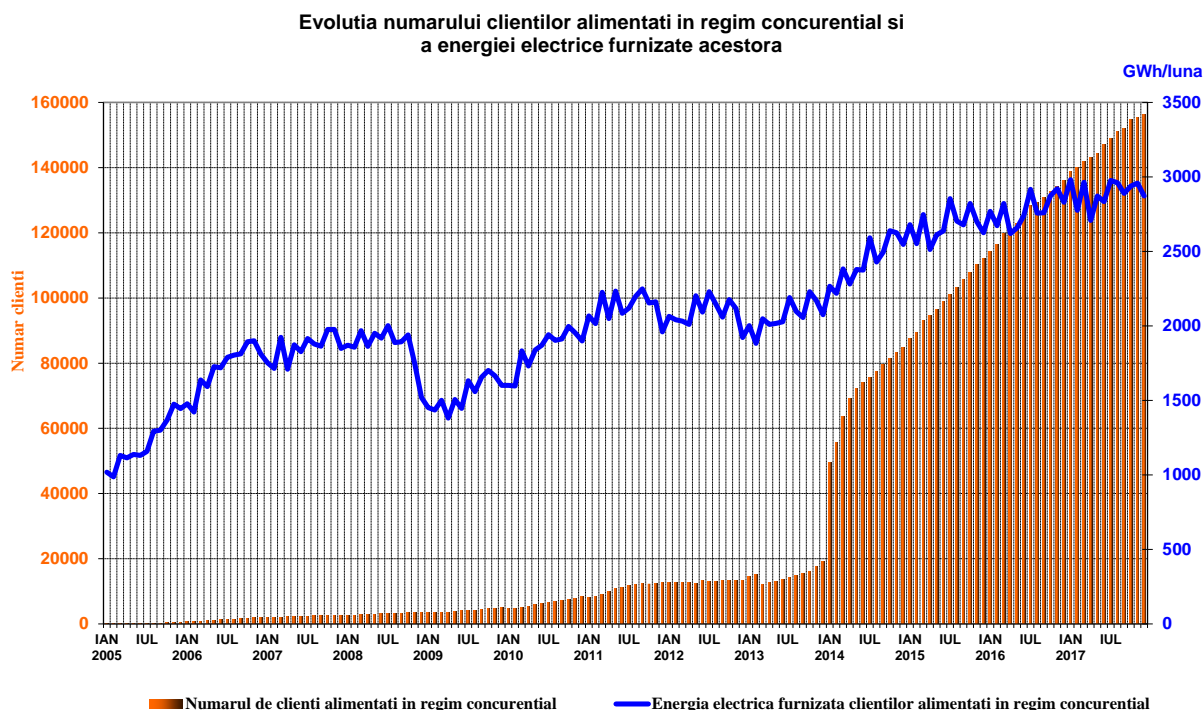


Note: The regulated segment includes electricity supplied to final customers at a regulated tariff, CPC and UI.

Source: Monthly reports of suppliers - ANRE processing

The evolution in the number of final customers to whom electricity is provided under competitive conditions is represented graphically from the start of the market opening process. As shown, the number of those who exercised the right to choose the electricity supplier also registered a strong growth in 2017.

The power supplied also includes the self-supply of dispatchable producers to other places of consumption for which the annual consumption exceeds 200 GWh .



Source: Monthly reports of suppliers - ANRE processing

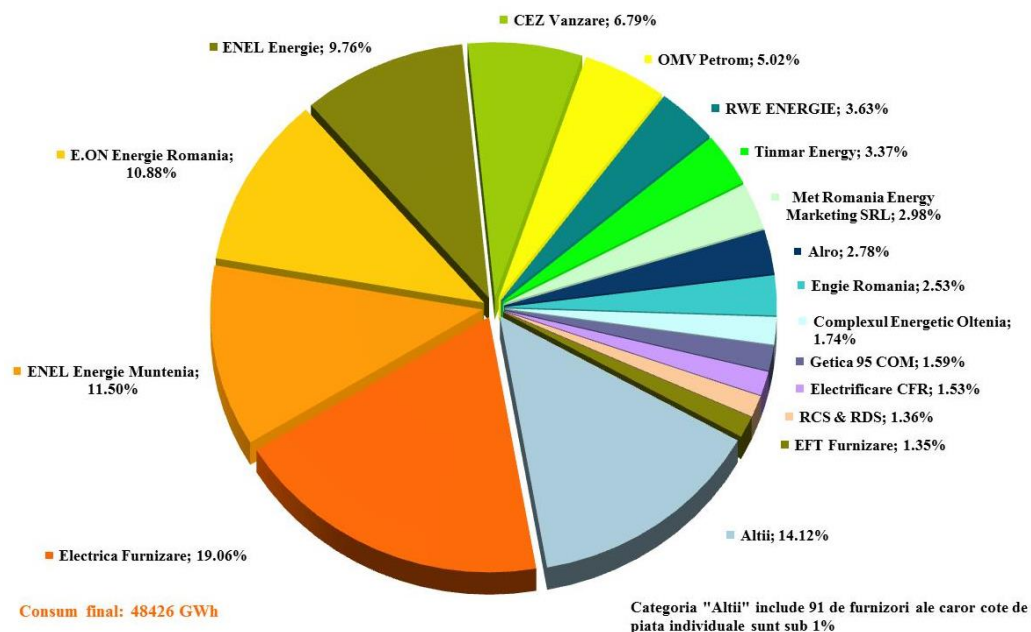
The values of the concentration indicators of the competitive retail market during 2010-2017 showcases the existence of a non-concentrated market for each year, determined by the large number of suppliers that activated on this market and their division as market power.

Year	C1	HHI
2010	14%	562
2011	13%	467
2012	12%	530
2013	12%	570
2014	13%	557
2015	15%	548
2016	16%	572
2017	12%	573

Source: Monthly reports of suppliers - ANRE processing

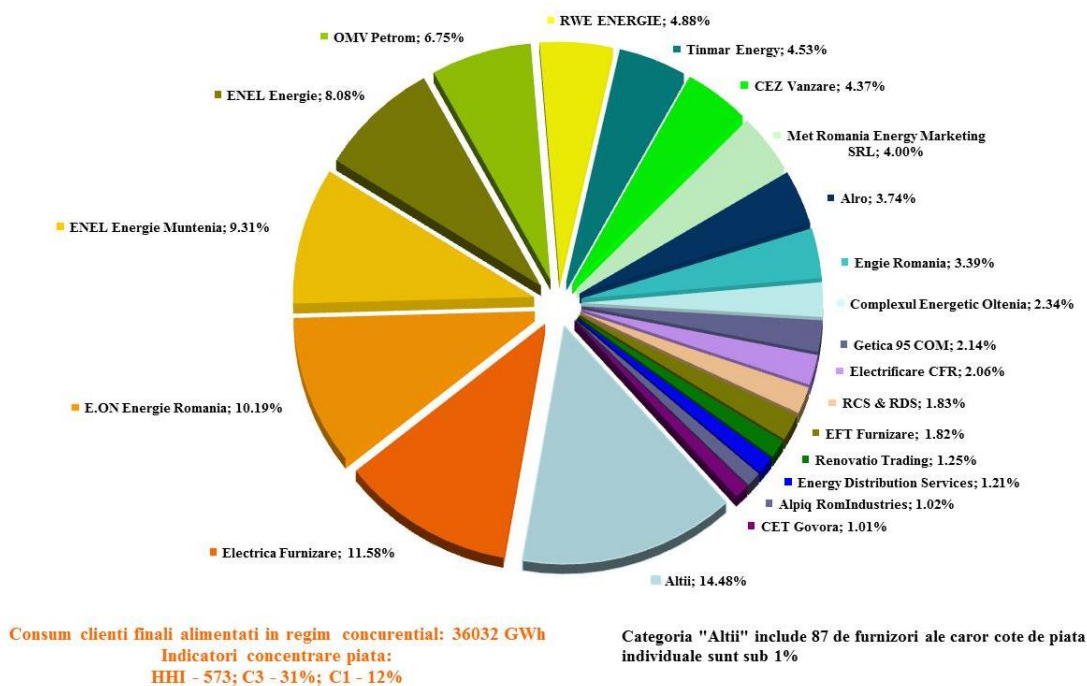
The graphs below show the 2017 market shares of final customer suppliers, calculated for the entire retail power market and separately for the competitive component of this market.

Cotele de piata ale furnizorilor de energie electrică pentru clientii finali
ANUL 2017



Source: Monthly reports of suppliers - ANRE processing

Cotele de piata ale furnizorilor de energie electrica pe piata concurentiala
ANUL 2017



Source: Monthly reports of suppliers - ANRE processing

The supplier with the highest market share on both the competitive segment as well as for the entire market remains, as in the previous year, Electrica Furnizare, although its percentages drop significantly. We can see that compared to 2016, on the competitive market, the market shares of the following two suppliers (E.ON Energie Romania and Enel Energie Muntenia) are much closer to the share of the first ranked.

During the analyzed year, the top 3 suppliers with the largest shares in the entire retail market are also the ones with the highest market shares on the competitive segment (although the order is changed), unlike in 2016, when the overall ranking of the market in terms of market shares did not include the same suppliers as for the competitive segment.

In 2017, the supplier changeover rate for non-household consumers (according to the energy supplied) was 4.08%. For households, the supplier changeover per measure points was 0.84%, and the renegotiation rate for the same supplier was 1.31%.

Per total retail market, the supplier changeover rate per measure points was 1.06%.

2.2.2.2 Recommendations on supply prices, investigations and measures to promote competition

Starting from the provisions of (EU) Regulation 1952/2016 of the European Parliament and of the Council on European statistics on gas and electricity prices and repealing Directive 2008/92/EC in 2017, data was collected separately, on consumption installments for supply to final household customers, compared to non-household customers.

The breakdown by consumption, for both categories, was based on the annual consumption forecast, as detailed in the following tables:

Tranșe de consum clienți noncasnici	Consum anual cuprins in intervalul (MWh):	
Transa - IA		<20
Transa - IB	>=20	<500
Transa - IC	>=500	<2000
Transa - ID	>=2000	<20000
Transa - IE	>=20000	<70000
Transa - IF	>=70000	<150000
Transa - IG	>=150000	

Tranșe de consum clienți casnici	Consum anual cuprins in intervalul (kWh):	
Transa - DA		<1000
Transa - DB	>=1000	<2500
Transa - DC	>=2500	<5000
Transa - DD	>=5000	<15000
Transa - DE	>=15000	

The following tables present the specific dates (quantity, average price) of each category of final customers supplied under competitive regime, as per the block tariffs established by (EU) Regulation 1952/2016. Comparison with the previous year can only be carried out for non-household final customers supplied under competitive conditions, in 2016 there being no cases of household customers broken down by (regulated or competitive) supply regime.

The average sale price per block tariff results from dividing the total value of suppliers' revenues from sales to a given category of customers (including the price for services such as transmission, distribution, system services, imbalances, BRP aggregation taxes, measurement) to the total quantity of the electricity sold in that block tariff. Please note that prices do not include VAT, excise or other taxes.

2017				2016			
Block tariffs non-household customers	Annual consumption (GWh)	Average price (Ron/MWh)	No. of clients	Block tariffs non-household customers	Annual consumption (GWh)	Average price (Ron/MWh)	No. of clients
IA	1399	355.85	113589	IA	1031	379.28	89762
IB	4307	342.69	37763	IB	4178	348.04	35157
IC	3439	295.38	3370	IC	3582	293.61	3371
ID	8433	271.41	1432	ID	8035	273.11	1398
IE	4678	238.37	121	IE	4969	240.67	135
IF	2899	233.16	31	IF		226.38	31
IG	9511	209.51	24	Others	2439	204.44	19
Total	34666	261.41	156330	Total	33344	260.97	129873

Source: Monthly reports of suppliers - ANRE processing

Household clients 2017	Annual consumption per block tariffs (GWh)	Average price (Ron/MWh)	No. of clients
DA	403	371.16	501553
DB	402	371.67	316651
DC	258	369.87	128544
DD	207	365.52	60821
DE	97	356.66	8095
Total	1366	369.18	1015664

Source: Monthly reports of suppliers - ANRE processing

In case of non-household customers, there is an increase of approx. 1.3 TWh of the total annual consumption compared to 2016, with an increase of approx. 20% in the number of customers, while the average price remained relatively constant, around Ron 261/MWh.

Compared to 2016, the highest increases in customer numbers were recorded in the IA and IG categories (over 26%). Of the 26,457 non-household customers who chose their supplier in 2017, most were ranked IA (about 90%). At the same time, consumption increased by 36%, while the average price decreased by 6% (about Ron 23/MWh), demonstrating that the customer segment was of interest to suppliers who made better price offers. For the other categories of customers, the increases or decreases registered did not exceed Ron 7/MWh plus or minus.

Indicatori 2017	Tranșe de consum clienți noncasnici							Total
	IA	IB	IC	ID	IE	IF	IG	
C1 (%)	31	25	18	11	16	20	22	12
C3 (%)	71	52	41	29	33	41	45	31
HHI	1923	1290	843	564	710	884	1045	560
Consum (GWh)	1399	4307	3439	8433	4678	2899	9511	34666

Source: Monthly reports of suppliers - ANRE processing

Although on the whole of the competitive retail electricity market, the structure indicators, similar to the situation in 2016, indicate a non-concentrated market, in terms of block tariffs we can see that the low degree of concentration is characteristic only for IC, ID, IE, IF and IG, while for IA and IB the level of concentration is moderate.

Indicatori 2017	Tranșe de consum clienți casnici					Total
	DA	DB	DC	DD	DE	
C1 (%)	61	43	34	28	34	42
C3 (%)	96	77	71	73	70	81
HHI	4680	2635	2079	2024	2100	2674
Consum (GWh)	403	402	258	207	97	1366

Source: Monthly reports of suppliers - ANRE processing

In the case of household customers supplied under a competitive regime, the concentration is high both on the whole and on each block tariff, the highest concentration being for the category of customers with a consumption below 1000 kWh per year.

Tariffs regulated for household customers

The regulated tariffs for household customers, applicable starting with 01.01.2017, were set at the end of 2016 and approved by ANRE Order no. 115/2016, in accordance with the provisions of the pricing methodology applied by suppliers of last resort to final customers, approved by ANRE Order no. 92/2015. The following justified cost elements for 2017 were taken into account when establishing the regulated tariffs:

- the quantities and prices from the regulated contracts of SoLR for 2017, according to Decisions no. 1959 and 1960 of 14.12.2016 of the ANRE President;

- b) the regulated 1.5% profit from the justified costs;
- c) the unit cost of the supply activity of Ron 4.7/client/month (established for each SoLR for all categories of customers, in Ron/MWh);
- d) the average tariff for introduction of electricity into the grid, determined globally as a weighted average with the quantities set to be delivered on contracts regulated by electricity producers Nuclearelectrica SA and Hidroelectrica SA, the tariff for feeding energy into the grid in the Dobrogea area, applied to Nuclearelectrica SA, and the average tariff for feeding energy into the grid applied to Hidroelectrica SA (approved by ANRE Order No. 27/22.06.2016);
- e) the distribution tariffs published in the discussion document posted on the ANRE website on 28.11.2016;
- f) a unitary average cost of Ron 0.01/MWh for the service provided by the centralized market operator, according to data submitted by SoLR, correlated with the values reached in 2016;
- g) the tariff for the system service and the regional tariffs related to the transmission network for extracting electricity from the grid (TL), approved by ANRE Order no. 27/2016;
- h) the balance of regulated tariff corrections from previous periods.

The calculations of the average price of return of the electricity supplied at regulated tariffs required in 2017 showed that the conditions for the 6.47% decrease of the regulated tariffs applied in 2017 compared to 2016, approved by ANRE Order no. 176/2015, are met.

The calculations of the average price of return of the electricity supplied at regulated tariffs were resumed at the end of the 1st semester of 2017, for the 2nd semester of 2017, according to the provisions of the Methodology approved by the ANRE Order no. 92/2015. The justified cost elements taken into account for the second half of 2017 were as follows:

- a) the quantities covered by SoLR's regulated contracts for July - December 2017 (established in December 2016);
- b) the average purchase price of electricity discounted compared to the average purchase price used to set the regulated tariffs for 2017 at the end of 2016 as a result of the decrease in the average price approved by SN Nuclearelectrica SA;
- c) regulated profit of 1.5% of the justified costs;
- d) the unit cost of the supply service of Ron 4.7/client/month (uniform for each SoLR for all categories of customers, in Ron/MWh);
- e) the tariff for the system service, the transmission tariff - the electricity feeding component (Tg) and the electricity extraction component (TL), according to the draft of the order published on the ANRE website on 06/08/2017;
- f) distribution tariffs approved by ANRE President Order;
- g) a unitary average cost for the service provided by the centralized market operator, as estimated by the SoLR;
- h) the balance of regulated tariff corrections from previous periods.

Subsequent to the calculations, the regulated tariffs applied in the second half of 2017, approved by ANRE Order no. 50/2017, decreased by about 5.16% compared to the values applied in the first half of 2017, approved by the ANRE Order no. 115/2016.

CPC tariffs

According to the schedule for the elimination of regulated tariffs, provided by the Memorandum of Understanding signed by the Romanian Government with the European Commission on March 13, 2012, in 2017 took place the last two stages of the phasing out of regulated tariffs, the percentages of electricity acquisition from the competitive market for SoLR customers being, for non-household customers, 100% and 80% for household customers for the period comprised between 01.01.2017 - 30.06.2017, and 90% for 01.07.2017 - 31.12.2017.

For 01.01.2017 - 30.06.2017, based on the pricing methodology for the tariffs applied by SoLRs to final customers, approved by ANRE Order no. 92/2015, the following CPC tariffs were approved:

SoLR	CPC tariffs January – June 2017 [Ron/kWh]		
	IT (110 kV)	MT (1-110 kV excluding)	JT (0,1-1 kV including)
Electrica Furnizare S.A. (Endorsement no. 46/20.12.2016)			
-Muntenia Nord	0.2608	0.2945	0.4038
-Transilvania Nord	0.2661	0.3080	0.4048
-Transilvania Sud	0.2885	0.3295	0.4332
CEZ Vânzare S.A. (Endorsement no. 45/20.12.2016)			
	0.2684	0.3104	0.4223
E.ON Energie România S.A. (Endorsement no. 49/20.12.2016)			
	0.2765	0.3166	0.4395
Enel Energie Muntenia S.A. (Endorsement no. 48/20.12.2016)			
	0.2341	0.2622	0.3663
Enel Energie S.A. (Endorsement no. 47/20.12.2016)			
- Banat	0.2587	0.2933	0.3966
- Dobrogea	0.2458	0.2818	0.4006

For 01.07.2017 - 30.09.2017, on the basis of the Methodology approved by the ANRE Order no. 92/2015, as further amended, and considering:

- a. the fact that bid/offer prices on CMBC-type markets increased significantly since the last decade of May 2017, reflecting a power deficit on the market, which is also confirmed by the existence of a small indicative offer on CMUS for the third quarter of 2017 that led to the issuance of ANRE Decision no. 819/08.06.2017 regarding the suspension of the CMUS auction for the third quarter of 2017,
- b. the provisions of art. 35 par. (1) of the Methodology stating that: "*By way of derogation from the provisions of Art. 28 par. (1) ANRE may decide to approve separate CPC tariffs for each quarter of a semester, in the following cases:*
 - (a)(...)
 - (b) *Electricity purchase prices reflect conjunctural situations in centralized markets, characterized by supply deficit or surplus;*

The following CPC tariffs were approved:

SoLR	CPC tariffs July– September 2017 [Ron/kWh]		
	IT (110 kV)	MT (1-110 kV excluding)	JT (0.1-1 kV including)
Electrica Furnizare S.A. (Endorsement no. 9/22.06.2017)			
-Muntenia Nord	0.3016	0.3353	0.4446
-Transilvania Nord	0.3058	0.3477	0.4445
-Transilvania Sud	0.2661	0.3071	0.4109
CEZ Vânzare S.A. (Endorsement no. 8/22.06.2017)	0.3056	0.3476	0.4595
E.ON Energie România S.A. (Endorsement no. 12/22.06.2017)	0.3151	0.3552	0.4781
Enel Energie Muntenia S.A. (Endorsement no. 11/22.06.2017)	0.2880	0.3161	0.4202
Enel Energie S.A. (Endorsement no. 10/22.06.2017)			
- Banat	0.2833	0.3179	0.4212
- Dobrogea	0.2884	0.3244	0.4431

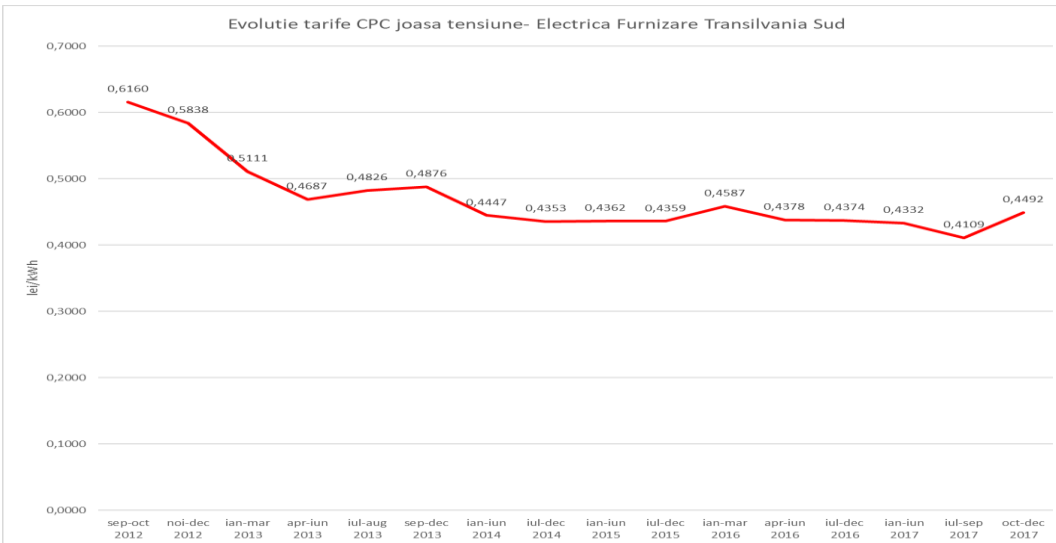
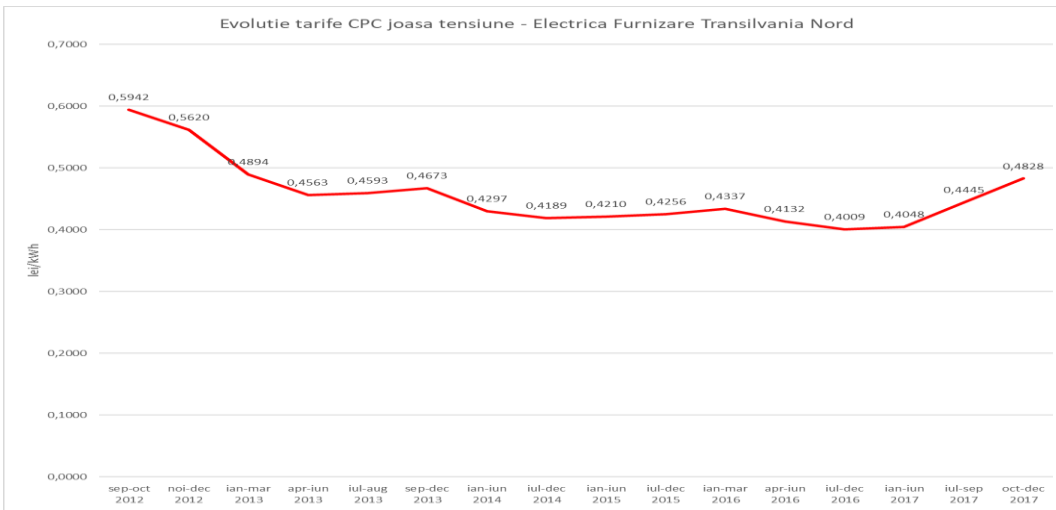
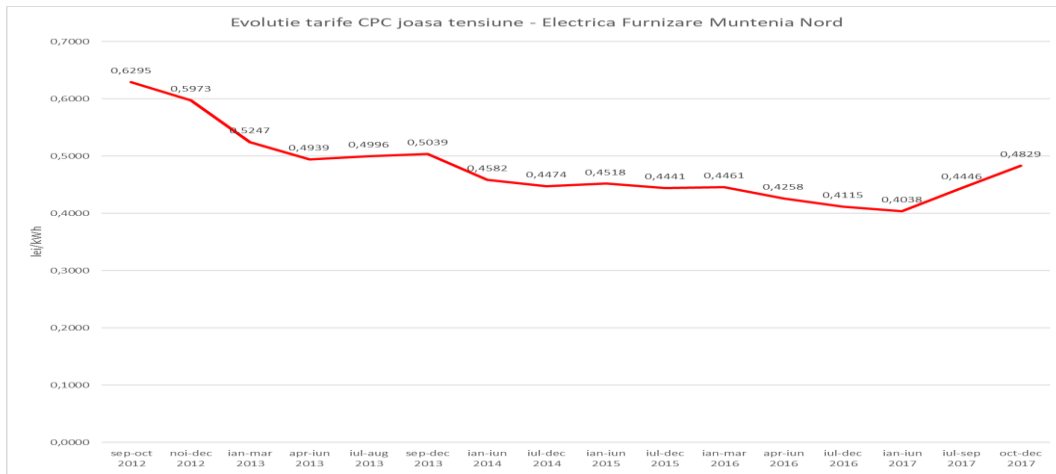
For 01.10.2017 - 31.12.2017, based on the pricing methodology applied by SoLR to final customers, approved by the ANRE Order no. 92/2015, as further amended and supplemented, the following CPC tariffs were approved:

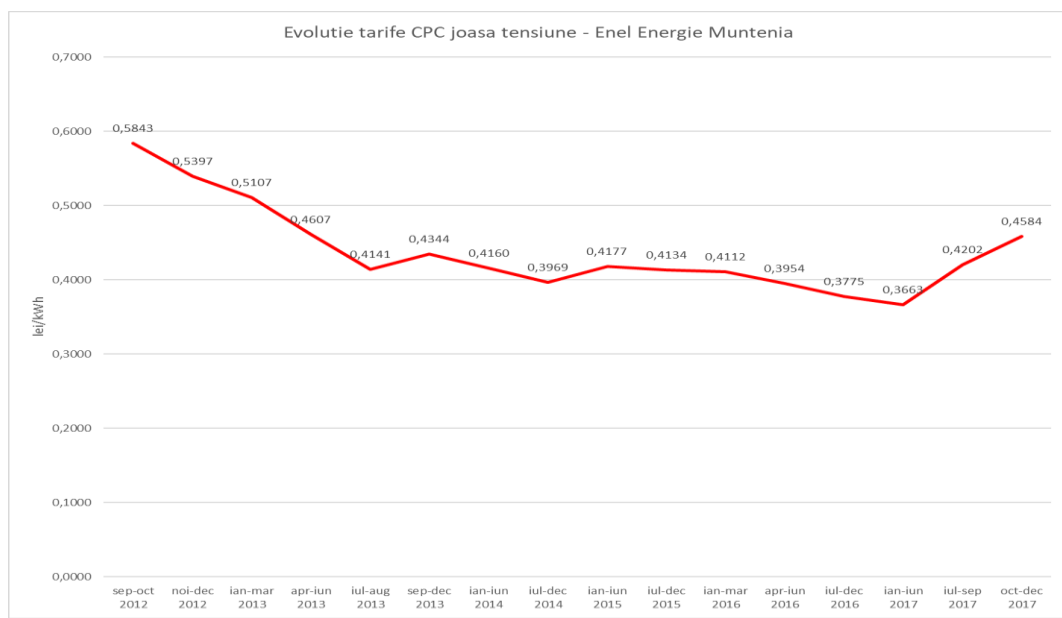
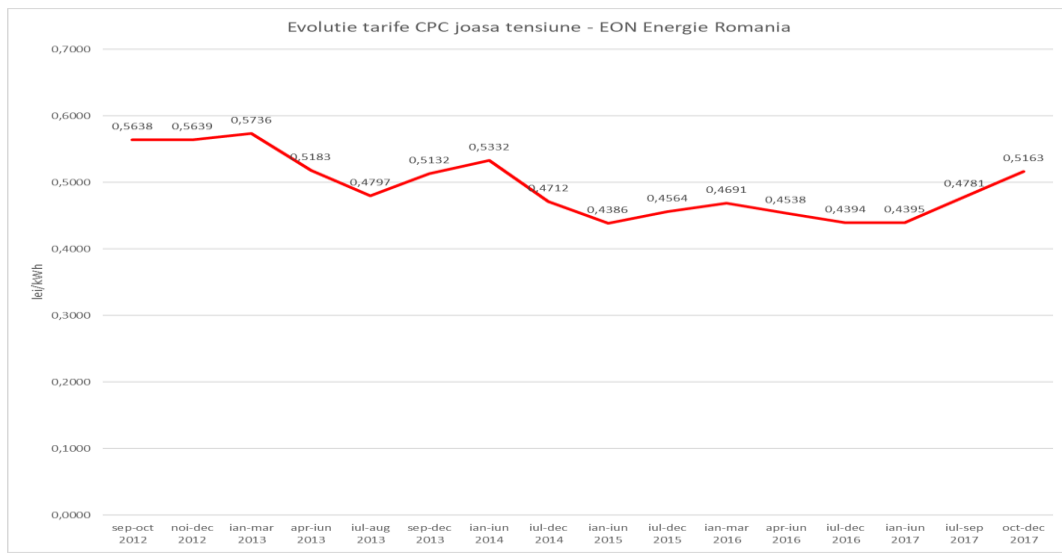
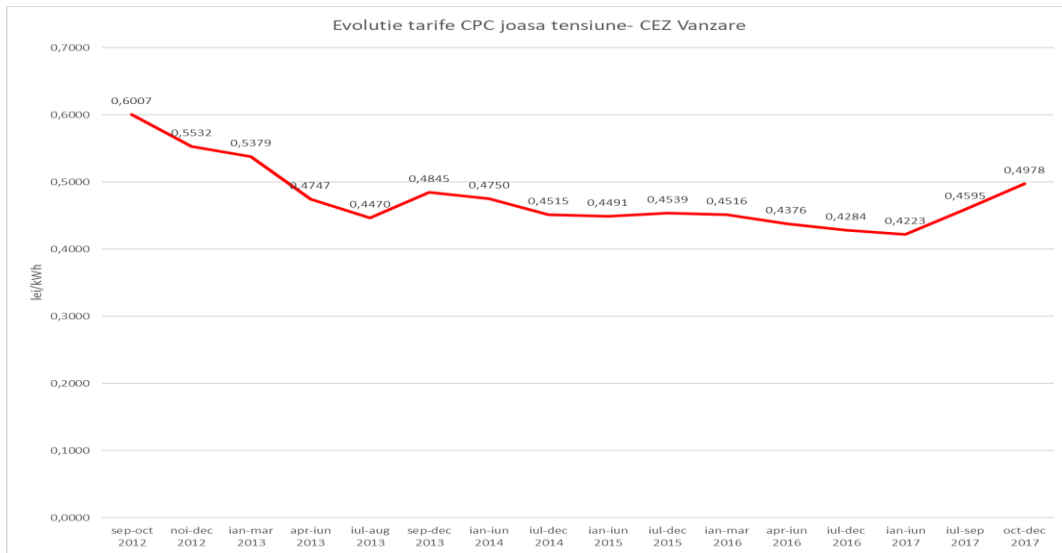
SoLR	CPC tariffs October – December 2017 [Ron/kWh]		
	IT (110 kV)	MT (1-110 kV excluding)	JT (0.1-1 kV including)
Electrica Furnizare S.A. (Endorsement no. 24/26.09.2017)			
-Muntenia Nord	0.3399	0.3736	0.4829
-Transilvania Nord	0.3441	0.3861	0.4828
-Transilvania Sud	0.3044	0.3455	0.4492
CEZ Vânzare S.A. (Endorsement no. 23/26.09.2017)	0.3439	0.3858	0.4978
E.ON Energie România S.A. (Endorsement no. 27/26.09.2017)	0.3533	0.3934	0.5163
Enel Energie Muntenia S.A. (Endorsement no. 26/26.09.2017)	0.3262	0.3543	0.4584
Enel Energie S.A. (Endorsement no. 25/26.09.2017)			
- Banat	0.3217	0.3563	0.4596
- Dobrogea	0.3268	0.3628	0.4816

According to the provisions of the Methodology, the values of the differentiated CPC tariffs for the electricity supplied in both day and night hours were also endorsed.

The purchase of electricity provided at CPC tariffs was made through the Centralized Market for Universal Service (CMUS), until 09.08.2017, when ANRE Order no. 75/2017 entered into force, after which electricity was purchased both from CMUS (for minimum 50% of the total volume needed) and from the other futures markets managed by OPCOM.

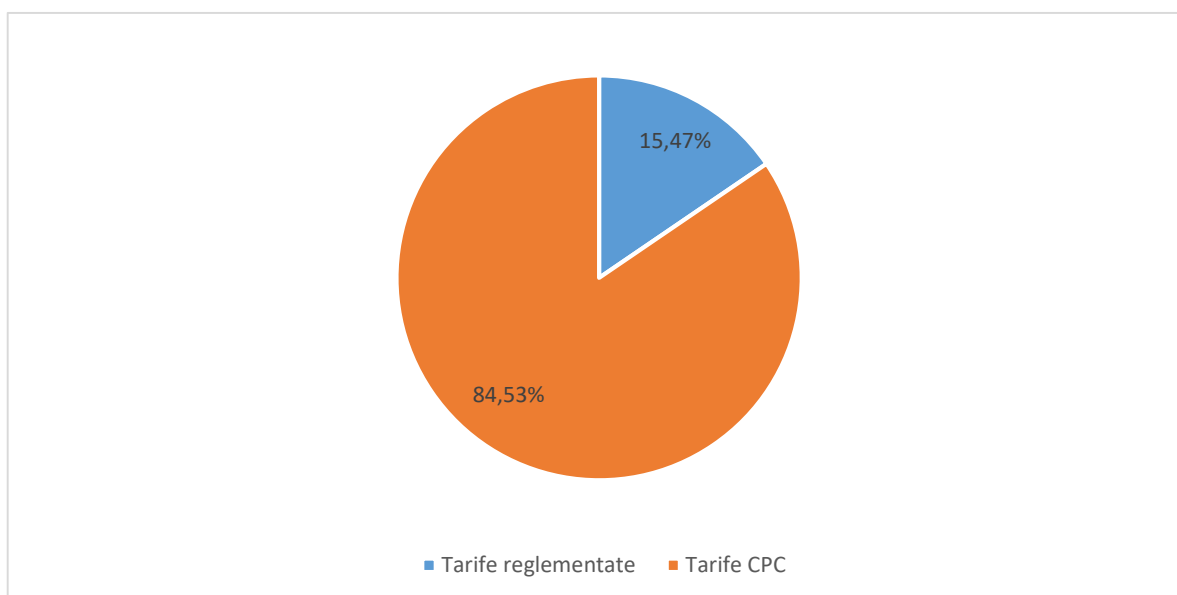
The graphs below show the evolution of low-cost CPC tariffs applied by end-to-end providers to household customers given that most household customers are powered by low-voltage:



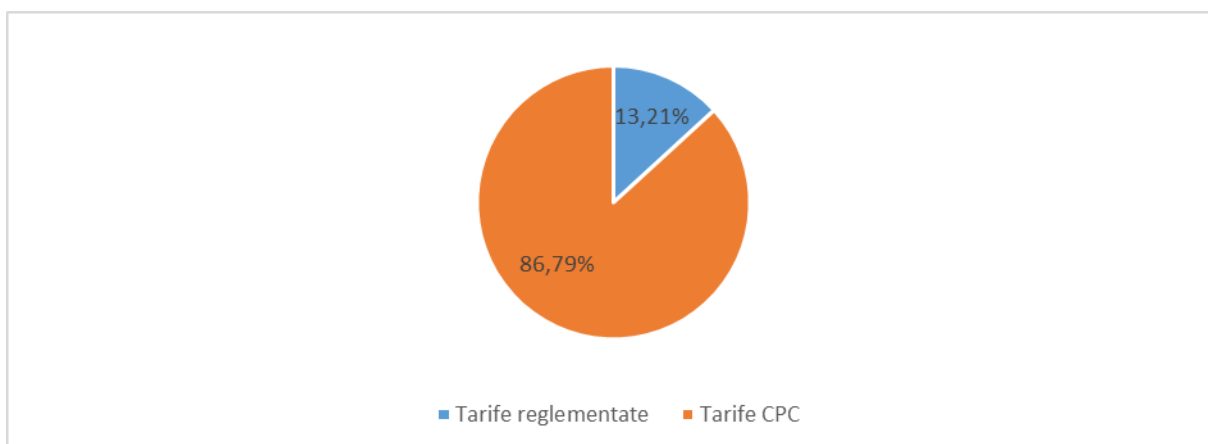




The quantity of electricity supplied to household customers at regulated tariffs, i.e. CPC rates, in relation to the total amount of electricity supplied to household customers in 2017 by suppliers of last resort, is shown in the following graph:



Revenues from the supply of electricity to household customers at regulated tariffs, i.e. CPC tariffs, in relation to the total revenues from the supply of electricity to households in 2017 by the suppliers of last resort are shown in the following graph:



Regulated market monitoring reports

Based on the methodology for monitoring the regulated electricity market, approved by ANRE Order 68/2013 and amended by ANRE Order 42/2016, the monitoring reports for each quarter of 2017 and for the entire year of 2017 were prepared.

Among the indicators determined for 2017 based on the monitoring data received from the five SoLR, the following tables present information on **the number of places of consumption serviced by SoLR, the quantities of electricity sold by SoLR to end customers and the average prices of acquisition by SoLR of electricity on the wholesale market:**

Average number of places of consumption serviced by SoLR in 2016-2017 - In 2017, the downward trend of the average number of consumer places compared to the year 2016 is observed, namely 579,676 locations less, of which 546,865 for household customers.

SoLR	TOTAL average number of consumption locations, of which:	Average number of consumption locations for non-household clients				Average number of consumption locations for household clients		
		Total, of which:	with universal service (US)	without US	Last resort regime, without US	Total, of which:	With social tariff	[%] household with social tariff /total household
S.C. CEZ Vânzare S.A.	1,307,508	8,048	1,485	6,452	111.00	1,299,460	168,034	12.93%
	100.00%	0.62%				99.38%		
S.C. E.ON Energie România S.A.	1,361,465	18,512	875	17,501	136.08	1,342,953	239,920	17.87%
	100.00%	1.36%				98.64%		
S.C. Electrica Furnizare S.A.	3,402,213	115,813	31,173	84,256	385	3,286,400	311,852	9.49%
	100.00%	3.40%				96.60%		
S.C. ENEL Energie S.A.	1,121,949	30,961	2,481	28,351	128	1,090,989	82,672	7.58%
	100.00%	2.76%				97.24%		
S.C. ENEL Energie Muntenia S.A.	1,003,824	19,867	836	18,932	99	983,956	18,844	1.92%
	100.00%	1.98%				98.02%		
TOTAL SoLR - 2017	8,196,959	193,201	36,850	155,491	860	8,003,759	821,322	10.26%
	100.00%	2.58%				97.42%		
TOTAL SoLR - 2016	8,776,635	226,011	50,298	175,360	354	8,550,624	937,337	10.96%
	100.00%	3.25%				96.75%		

Note: The average number of consumption places was determined as the average of the monthly reported amounts of electricity sold by SoLR to final customers in 2017

Correlated with the decrease in the average number of consumption places, **the decrease in electricity consumption in 2017 is observed compared to 2016 by 1,138.88 GWh.**

Structure of sales to clients - total SoLR											
Type of customer	Voltage level	Type of tariff Type Indicator (Quantity and price)	[MU]	regulated tariff	CPC tariff			UI tariff			Total SoLR
				household	household	Non-household with universal service (US)	Total (CPC)	non-household without US	Non-household in last resort regime, without US	Total (Last resort)	
Clients household	HV	Quantity	[GWh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Average price	[Ron/MWh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	MV	Quantity	[GWh]	1.53	7.88	0.00	7.88	0.00	0.00	0.00	9.41
		Average price	[Ron/MWh]	274.50	322.80	0.00	322.80	0.00	0.00	0.00	314.97
	LV	Quantity	[GWh]	1,738.02	9,495.67	0.00	9,495.67	0.00	0.00	0.00	11,233.69
		Average price	[Ron/MWh]	360.88	434.17	0.00	434.17	0.00	0.00	0.00	422.83
	Total sale household	Quantity	[GWh]	1,739.55	9,503.55	0.00	9,503.55	0.00	0.00	0.00	11,243.10
		Average price	[Ron/MWh]	360.81	434.07	0.00	434.07	0.00	0.00	0.00	422.74
Clients non-household	HV	Quantity	[GWh]	0.00	0.00	0.000	0.000	0.454	1.320	1.774	1.77
		Average price	[Ron/MWh]	0.00	0.00	0.00	0.00	303.16	295.20	297.24	297.24
	MV	Quantity	[GWh]	0.00	0.00	15.23	15.23	81.56	20.04	101.60	116.84

		Average price	[Ron/MWh]	0.00	0.00	311.39	311.39	336.99	341.01	337.78	334.34
	LV	Quantity	[GWh]	0.00	0.00	172.93	172.93	845.66	13.23	858.89	1,031.83
		Average price	[Ron/MWh]	0.00	0.00	432.78	432.78	445.30	451.34	445.39	443.28
	Total sale non-household	Quantity	[GWh]	0.00	0.00	188.17	188.17	927.68	34.59	962.27	1150.44
		Average price	[Ron/MWh]	0.00	0.00	422.95	422.95	435.71	381.46	433.76	431.99
Total	HV	Quantity	[GWh]	0.00	0.00	0.000	0.000	0.45	1.32	1.77	1.77
		Average price	[Ron/MWh]	0.00	0.00	0.00	0.00	303.16	295.20	297.24	297.24
	MV	Quantity	[GWh]	1.53	7.88	15.23	23.12	81.56	20.04	101.60	126.25
		Average price	[Ron/MWh]	274.50	322.80	311.39	315.28	336.99	341.01	337.78	332.89
	LV	Quantity	[GWh]	1,738.02	9,495.67	172.93	9,668.60	845.66	13.23	858.89	12,265.51
		Average price	[Ron/MWh]	360.88	434.17	432.78	434.14	445.30	451.34	445.39	424.55
	Total sales clients	Quantity	[GWh]	1,739.55	9,503.55	188.17	9,691.72	927.68	34.59	962.27	12,393.54
		Average price	[Ron/MWh]	360.81	434.07	422.95	433.86	435.71	381.46	433.76	423.60

SoLR/ Sales to final customers										
Type of customer	Voltage level	SoLR Type of indicator	[MU]	CEZ	E.ON	ELF	Enel E	EEM	Total SoLR 2017	Total SoLR 2016
Household clients	HV	quantity	[GWh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Pmed	[Ron/MWh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	MV	quantity	[GWh]	1.70	1.38	2.82	0.96	2.55	9.41	10.26
		Pmed	[Ron/MWh]	330.37	333.81	320.57	305.75	291.72	314.97	302.26
	LV	quantity	[GWh]	1,668.03	1,515.42	4,494.76	1,664.43	1,891.04	11,233.69	12,043.46
		Pmed	[Ron/MWh]	436.35	453.10	423.05	412.23	395.43	422.83	411.65
	Total sale household	quantity	[GWh]	1,669.73	1,516.80	4,497.58	1,665.39	1,893.59	11,243.10	12,053.73
		Pmed	[Ron/MWh]	436.25	452.99	422.99	412.17	395.29	422.74	411.56
Non-household	HV	quantity	[GWh]	1.32	0.00	0.00	0.45	0.00	1.77	0.59
		Pmed	[Ron/MWh]	295.20	0.00	0.00	303.16	0.00	297.24	269.84
	MV	quantity	[GWh]	4.11	5.29	41.71	12.85	52.88	116.84	161.22
		Pmed	[Ron/MWh]	363.71	366.34	351.54	334.15	315.33	334.34	315.68
	LV	quantity	[GWh]	38.89	73.39	515.46	137.55	266.54	1,031.83	1,317.18

		Pmed	[Ron/MWh]	467.27	485.15	448.86	444.52	416.81	443.28	434.75
	Total sale non-household	quantity	[GWh]	44.32	78.68	557.17	150.85	319.42	1150.44	1478.99
		Pmed	[Ron/MWh]	452.53	477.17	441.58	434.69	400.01	431.99	421.71
Total	HV	quantity	[GWh]	1.32	0.00	0.00	0.45	0.00	1.77	0.59
		Pmed	[Ron/MWh]	295.20	0.00	0.00	303.16	0.00	297.24	269.84
	MV	quantity	[GWh]	5.82	6.67	44.53	13.81	55.42	126.25	171.48
		Pmed	[Ron/MWh]	353.94	359.62	349.58	332.18	314.24	332.89	314.87
	LV	quantity	[GWh]	1,706.91	1,588.82	5,010.22	1,801.98	2,157.59	12,265.51	13,360.64
		Pmed	[Ron/MWh]	437.06	454.58	425.71	414.69	398.07	424.55	413.93
	Total sales clients	quantity	[GWh]	1,714.05	1,595.48	5,054.75	1,816.24	2,213.01	12,393.54	13,532.72
		Pmed	[Ron/MWh]	436.67	454.18	425.04	414.04	395.97	423.60	412.67

SoLR average purchase prices of wholesale electricity on the wholesale market:

Acquisition structure – SoLR total										
Type of transaction	Type of tariff Type Indicator (Quantity and price)	[MU]	regulated tariff	CPC tariff			UI tariff			Total SoLR 2017
			household	household	Non-household with universal service (US)	Total (CPC)	non-household without US	non-household in last resort regime, without US	Total (last resort)	
acquisition on regulated contracts	Quantity	[GWh]	1,741.31	0.00	0.00	0.00	0.00	0.00	0.00	1,741.31
	Average price	[Ron/MWh]	121.10	0.00	0.00	0.00	0.00	0.00	0.00	121.10
acquisition on contracts with bilateral negotiation	Quantity	[GWh]	0.00	0.00	0.00	0.00	0.32	0.000	0.3217	0.3217
	Average price	[Ron/MWh]	0.00	0.00	0.00	0.00	79.45	0.00	79.45	79.45
Purchase on CMBM	Quantity	[GWh]	0.00	944.07	20.27	964.33	344.30	5.19	349.49	1,313.82
	Average price	[Ron/MWh]	0.00	228.37	224.87	228.29	184.33	173.99	184.17	216.56
Purchase on CMUS	Quantity	[GWh]	0.00	5,488.78	112.54	5,601.32	0.00	0.00	0.00	5,601.32
	Average price	[Ron/MWh]	0.00	187.06	184.64	187.01	0.00	0.00	0.00	187.01
Purchase on IDM	Quantity	[GWh]	0.00	0.00	0.00	0.00	3.07	0.0416	3.11	3.11
	Average price	[Ron/MWh]	0.00	0.00	0.00	0.00	376.68	287.99	375.50	375.50
Purchase on DAM	Quantity	[GWh]	96.31	3,066.46	58.83	3,125.29	410.70	17.33	428.04	3,649.63

	Average price	[Ron/MWh]	234.55	244.11	244.92	244.12	233.30	201.19	232.00	242.45
Purchase at imbalance price	Quantity	[GWh]	81.14	490.04	5.55	495.58	233.56	13.12	246.67	823.39
	Average price	[Ron/MWh]	268.67	288.31	311.24	288.57	295.97	243.48	293.18	287.99
Total purchase	Quantity	[GWh]	1,918.75	9,989.35	197.18	10,186.53	991.95	35.68	1,027.63	13,132.91
	Average price	[Ron/MWh]	133.04	213.44	210.32	213.38	231.44	212.87	230.80	203.01
Sale DAM + IDM	Quantity	[GWh]	-63.11	-108.74	-3.55	-112.28	-15.13	-0.13	-15.27	-190.66
	Average price	[Ron/MWh]	230.33	168.38	201.42	169.43	140.37	143.15	140.39	187.26
Sale at imbalance price	Quantity	[GWh]	-116.09	-377.06	-5.47	-382.53	-49.13	-0.96	-50.09	-548.71
	Average price	[Ron/MWh]	171.06	165.06	151.42	164.86	149.58	128.69	149.18	164.74
Total sale	Quantity	[GWh]	-179.21	-485.80	-9.01	-494.81	-64.26	-1.09	-65.36	-739.37
	Average price	[Ron/MWh]	191.94	165.80	171.10	165.90	147.41	130.47	147.12	170.55
TOTAL purchase net	Quantity	[GWh]	1,739.55	9,503.55	188.17	9,691.72	927.69	34.59	962.28	12,393.54
	Average price	[Ron/MWh]	126.97	215.88	212.20	215.81	237.28	215.48	236.49	204.94

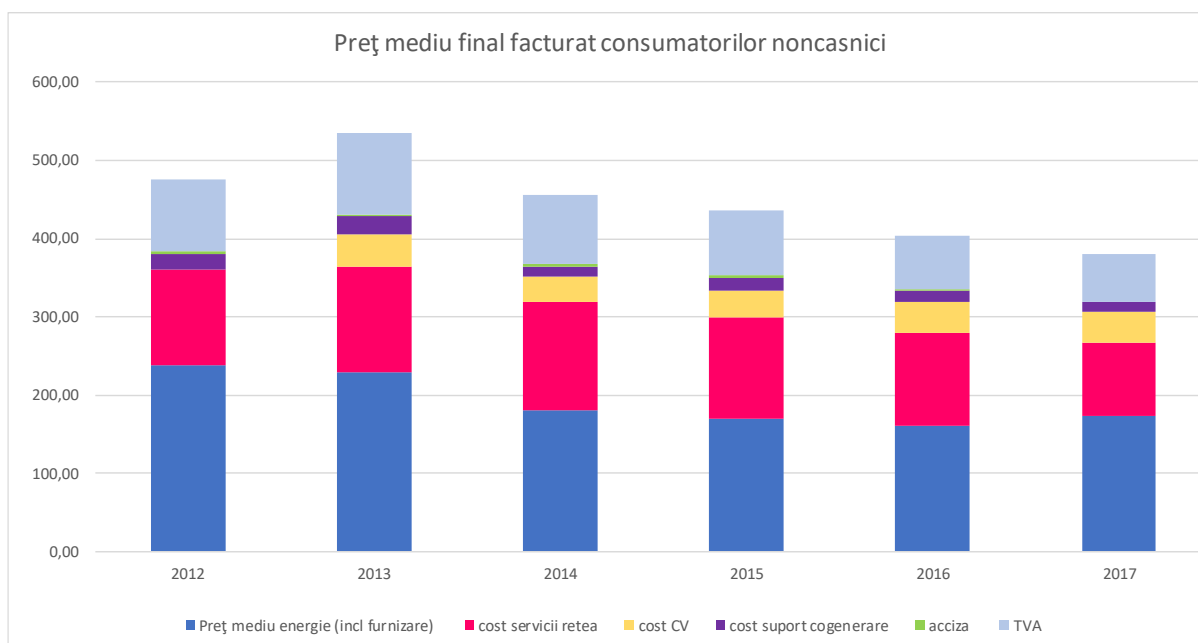
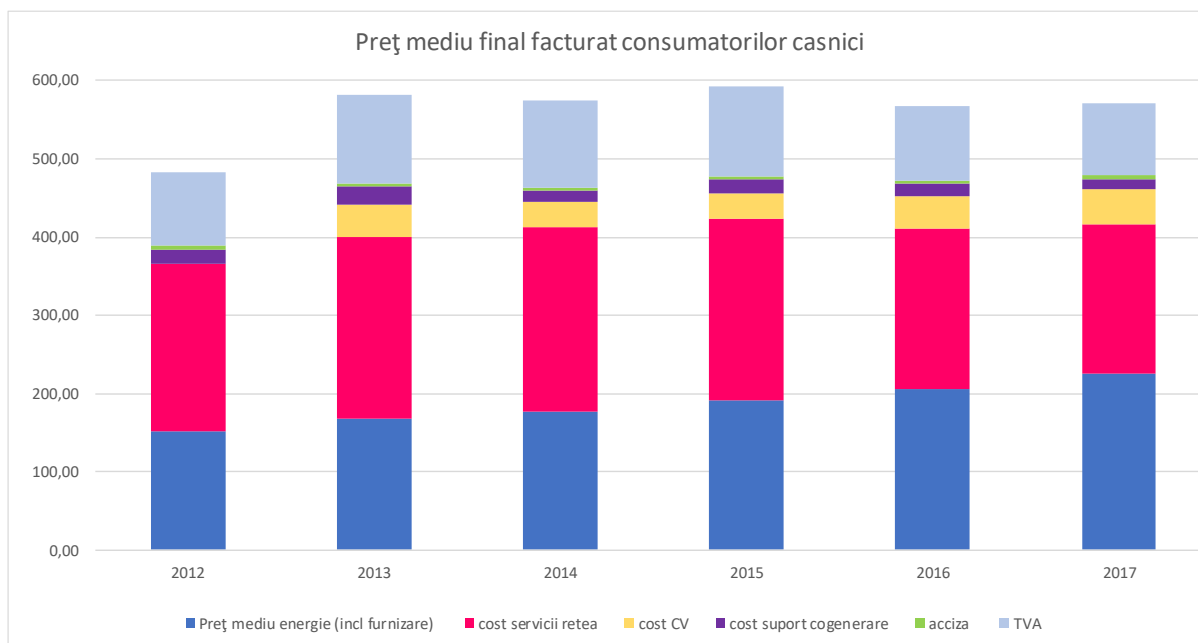
The increase in the average net purchase price was also reflected in the evolution of the average selling price, which grew in 2017 compared to 2016.

Type of transaction	Type of indicator (Quantity and price)	[MU]	CEZ	E.ON	ELF	Enel E	EEM	Total 2017	Total 2016
Purchase regulated contracts	quantity	[GWh]	231.17	232.91	688.16	293.45	295.62	1,741.31	4,152.27
	Pmed	[Ron/MWh]	104.47	118.44	105.28	133.73	160.52	121.10	136.90
Purchase on negotiated contracts	quantity	[GWh]	0.32	0.00	0.00	0.00	0.00	0.32	0.41
	Pmed	[Ron/MWh]	79.45	0.00	0.00	0.00	0.00	79.45	79.37
Purchase on CMBM	quantity	[GWh]	291.19	68.03	590.98	166.36	197.27	1,313.82	731.60
	Pmed	[Ron/MWh]	216.81	210.70	218.73	217.83	210.61	216.56	162.73
Purchase on CMUS	quantity	[GWh]	808.47	760.82	2,362.30	740.06	929.67	5,601.32	8,045.82
	Pmed	[Ron/MWh]	189.88	189.65	186.33	186.85	184.22	187.01	162.94
Purchase on IDM	quantity	[GWh]	0.00	0.00	0.00	1.21	1.90	3.112	0.000
	Pmed	[Ron/MWh]	0.00	0.00	0.00	382.34	371.12	375.50	
Purchase on DAM	quantity	[GWh]	373.05	552.52	1,433.66	623.70	666.69	3,649.63	1,473.08
	Pmed	[Ron/MWh]	250.48	249.83	244.49	239.40	230.28	242.45	166.73
Purchase on BM	quantity	[GWh]	134.44	53.82	203.76	168.40	262.98	823.39	790.00
	Pmed	[Ron/MWh]	309.18	308.92	329.22	249.89	265.33	287.99	202.66

Total purchase	quantity	[GWh]	1,838.64	1,668.10	5,278.86	1,993.18	2,354.13	13,132.91	15,193.18
	Pmed	[Ron/MWh]	204.41	204.35	200.70	203.50	205.71	203.01	158.25
Sale on DAM	quantity	[GWh]	-11.62	-16.06	-84.89	-46.34	-31.76	-190.66	-804.24
	Pmed	[Ron/MWh]	108.16	235.57	166.71	207.42	217.31	187.26	148.64
Sale on BM	quantity	[GWh]	-112.97	-56.56	-139.21	-130.61	-109.36	-548.71	-856.47
	Pmed	[Ron/MWh]	176.76	135.45	137.16	190.31	172.07	164.74	133.41
Total sale	quantity	[GWh]	-124.58	-72.62	-224.10	-176.95	-141.12	-739.37	-1,660.71
	Pmed	[Ron/MWh]	170.36	157.59	148.35	194.79	182.25	170.55	140.78
Total net purchase	quantity	[GWh]	1,714.06	1,595.48	5,054.76	1,816.24	2,213.01	12,393.54	13,532.47
	Pmed	[Ron/MWh]	206.88	206.48	203.02	204.35	207.21	204.94	160.39

Analysis of the average price of electricity invoiced to final customers

This section includes the evolution of the components of the average price for the electricity invoiced to final customers, household and non-household, cumulative for the regulated market and the competitive market, during 2012-2017.



In 2017, the average purchase price of energy (including the supply service) had a slight increase over the previous year, offset by the drop in network service tariffs. In total, a very slight increase in the final average price for household customers and a decrease for non-household customers resulted, as shown in the following table:

	Household			Non-household		
	Price without tax	Price with tax	Tariff network services	Price without tax	Price with tax	Tariff network services
	Ron/MWh	Ron/MWh	Ron/MWh	Ron/MWh	Ron/MWh	Ron/MWh
2012	365.24	482.42	213.84	361.37	475.43	123.02
2013	400.11	581.31	232.74	364.45	534.42	134.35
2014	412.06	575.07	234.66	318.97	455.35	138.77
2015	422.81	592.80	231.73	299.64	436.83	130.54
2016	411.25	566.66	205.56	279.29	403.36	118.67
2017	416.97	570.61	191.77	266.49	383.47	92.62

Regarding the evolution of the average price of electricity in the last six years, we can see the influence generated by the cost of green certificates, the decreasing trend of the average purchase price including supply for non-household consumers and the increasing trend of the same parameter for household consumers, as a result of the phasing out of the regulated component. **It is noted that during 2013 and 2017, the average final price with/without taxes for household consumers varied very little, while the final average price with/without taxes for non-household consumers declined from year to year.**

The main offenses committed by persons subject to control in relation to the final customers for whom sanctions were applied in 2017 consisted in non-observance of the legal provisions regarding:

- enforcement of the termination regime for sale-purchase contracts (suspension of electricity supply);
- obligation for energy suppliers to set up financial guarantees;
- performance of commercial activities without a license, in accordance with the current law;
- obligation to acquire/pay the value of the green certificates not purchased by the economic operators licensed in the field of electricity;
- provision of financial guarantees by energy suppliers for the payment of the power distribution service;
- performance indicators set by performance standards for electricity distribution services, for electricity supply activities, for the power transmission and system service;
- preparation and submission of activity and customer notification reports.

2.3. Security of power supply

In accordance with Art. 24 of the Law on Electricity and Natural Gas no. 123/2012, as further amended and supplemented, in the event of unexpected crisis situations on the energy market and if the physical security or safety of persons, devices or installations or the integrity of the system is threatened, the transmission system operator proposes to ANRE and the ministry to adopt safety measures. Measures taken in these situations must affect as little as possible the proper operation of the European internal market and should be limited to solving the crisis that generated them. The implementation of these measures is done by Government decision, initiated by the relevant ministry.

2.3.1 Monitoring balance between supply and demand

Measures taken in 2017 to cover the peak of consumption as well as energy deficits

According to the legal provisions, CNTEE Transelectrica S.A. as TSO is responsible for ensuring NPS operation safety, frequency and tension stability, continuity in customer service and coordination of electricity exchanges with other power systems.

In order to meet this responsibility, TSO determined the possibility of a crisis situation in the operation of the NPS based on short and medium term analysis of NPS adequacy using information on fuel stocks, the state of the National Gas Transmission System, the volume of water reserves in storage lakes, the availability of power generation units, electricity consumption forecast for NPS or an area of the NPS, availability of RET and RED. As a result of this analysis, if a crisis situation is identified on the energy market, TSO is obliged to propose to ANRE and to the ministry the adoption of safety measures.

For the 2016-2017 winter, TSO analyzed NPS's suitability for the worst case scenario, in the context of an increase in consumption by +2.8% over the period of 15 November 2016 - 15 March 2017 compared to the previous year, and weather predictions for January and February 2017 of meteorological phenomena characterized by negative average daily temperatures for several consecutive days, below -20°C.

Following this analysis, TSO proposed measures necessary to cover the consumption peak and energy shortages in the winter of 2016-2017, which were approved by *Government Decision no. 844/2016 on the approval of measures to achieve NPS fuel safety stocks for the cold season and the volume of water in storage lakes, entitled the Winter Energy Program for the safe operation and stability of NPS between 15 November 2016 and 15 March 2017, as well as other measures regarding the level of safety and security of NPS operations.*

The Government Decision was established that TSO would acquire between 3 January and 15 February 2017, subsequently extended until 15 March 2017 by Government Decision no. 55/2017 amending Government Decision no. 844/2016, from producers Electrocentrale București S.A., Electrocentrale Galați S.A. and Veolia Energie Prahova SRL, quantities of power reserves, in addition to those established in accordance with the provisions of the regulations in force, provided with groups operating with alternative fuel.

Based on H.G. no. 844/2016, ANRE approved the following decisions regarding the acquisition of regulated technological services as follows:

- ANRE Decision no. 2044/20.12.2016 and ANRE Decision no. 185/17.02.2017, for Electrocentrale Bucharest S.A.,
- ANRE Decision no. 2045/20.12.2016 and ANRE Decision no. 186/17.02.2017, for Electrocentrale Galati S.A.,
- ANRE Decision no. 2046/20.12.2016 and ANRE Decision no. 187/17.02.2017, for Veolia Energie Prahova S.R.L.

Similarly, for the winter of 2017-2018, by *Government Decision no. 760/2017 on the approval of the winter energy program for measures to achieve NPS fuel safety stocks for the cold season and the volume of water in storage lakes, entitled the Winter Energy Program to ensure safety and stability of NPS operation between 15 November 2017 and 15 March 2018, as well as other measures concerning the level of safety and security of NPS operations*, it was established that TSO would acquire regulated technological system services from CE Hunedoara, as well as from Electrocentrale Bucuresti SA, Electrocentrale Galati SA and Veolia Energie Prahova SRL, provided with groups operating with alternative fuel.

Based Government Decision no. 760/2017, ANRE approved the following decisions regarding the acquisition of regulated technological services as follows:

- ANRE Decision no. 1814/12.12.2017, for Complexul Energetic Hunedoara;
- ANRE Decision no. 1815/12.12.2017, for Electrocentrale Bucuresti (fuel oil groups);
- ANRE Decision no. 1816/12.12.2017 for Electrocentrale Galați (groups from CET Galați on fuel oil);
- ANRE Decision no. 1908/22.12.2017, for Veolia Energie Prahova SRL (groups of CET Brazi operating with alternative fuel).

2.3.2. Monitoring the achievement of investments in production capacities in relation to supply safety

Forecast of the NPS balance between production and consumption for a period of 10 years

ANRE monitors the adequacy of the NPS based on the information and analyses submitted by TSO in the RET Development Plan and the RET Investment Plan. The RET Development Plan is updated every two years so that at the time of the current Activity Report, the ***RET Development Plan for 2016-2025***, which was approved by ***ANRE Decision no. 1251 of July 27, 2016***, is in force. At the same time, TSO developed the revision of this plan for 2018-2027. The new revision of the Plan is under public debate and is posted on the CNTEE Transelectrica S.A. website at <http://www.transelectrica.ro/web/tel/plan-perspectiva>. After the public debate, the plan will be submitted to ANRE for approval, according to the provisions of art. 35 par. (3) of the Law on Electricity and Natural Gas no. 123/2012.

Within the ***RET Development Plan for 2016-2025***, TSO analyzed the adequacy of the production facilities within NPS in the 2016-2020-2025 perspective, the results of this analysis being integrated by ANRE within the ANRE Activity Report for 2016.

The production park in a system is considered adequate if it can cover the demand for electricity in all stationary regimes in which the national power system (NPS) can operate under normal conditions.

In order to safely cover the consumption, it is necessary to have in the NPS certain available power provided by the power plants, significantly higher than the power consumed at the peak of consumption, since the groups are periodically withdrawn from service for repair and maintenance, are affected by unplanned unavailability or partial temporary or permanent partial reduction of availability for various reasons.

The assessment of the suitability of the generation park for the 2016-2020-2025 timeline in the baseline consumption variation scenario (which saw a cumulative increase in electricity consumption of about 4.6% in the medium run, i.e. by 2020, and about 8% in the long run, i.e. by 2025) and production capacities, leads to the conclusion that the net power surplus available in the system is about 14% in 2016, and in the 2020-2025 timeline, by putting into operation units 3 and 4 in Cernavoda, CHEAP Tarnița and some large thermoelectric groups, rises to around 20%, according to the data in the following table:

		MW			
Putere netă în SEN		decembrie 2013 realizari	decembrie 2016	decembrie 2020	decembrie 2025
1	centrale nucleare	1300	1298	2628	2628
2	centrale termoelectrice conventionale	9490	8415	9489	9615
	• pe lignit	3885	3916	4014	4014
	• pe huila	1179	753	786	786
	• pe gaze naturale	1999	1919	3294	3507
	• hidrocarburi	2427	1827	1396	1307
3	resurse energetice regenerabile	3065	5450	6500	6700
	• eoliene	2451	3300	4200	4200
	• fotovoltaice	565	2000	2000	2200
	• biomasa	49	150	300	300
4	centrale hidroelectrice	6227	6392	6632	7639
5	Capacitatea de producție netă [5=1+2+3+4]	20082	21555	25249	26582
6	Putere indisponibilă totală	6070	10188	11251	11688
	• Putere indisponibilă (Reduceri temporare+conservari)	3428	6586	7298	7511
	• Putere in reparatie planificată	799	1328	1426	1595
	• Putere in reparatie accidentală (după avarie)	1070	1083	1067	1121
	• Rezerva de putere pentru servicii de sistem	773	1191	1461	1461
7	Puterea disponibilă netă asigurată [7=5-6]	14012	11367	13998	14894
8	Consum intern net la varful de sarcina	8114	8330	8890	9750
9	Capacitate rămasă (fără considerarea schimburilor cu alte sisteme) [9=7-8]	5898	3037	5108	5145
10	Sold Import-Export la varful de sarcina	-745	-800	-1200	-1200

In the favorable consumption variation scenario, characterized by an increase in electricity consumption by 1.6% annually in the medium run (2020) and 2.6% in the long term (2025) and a "green" evolution scenario for the production capacities, characterized by increased power installed in renewable energy sources, due to economic and financial conditions conducive to the implementation of energy policies promoted at European Union level, the surplus net power available in the system will be 18% in 2020 and 15% in 2025 respectively, according to the following table:

					MW
	Putere netă în SEN	decembrie 2013 realizari	decembrie 2016	decembrie 2020	decembrie 2025
1	centrale nucleare	1300	1298	2628	2628
2	centrale termoelectrice conventionale	9490	8415	9489	9615
	• pe lignit	3885	3916	4014	4014
	• pe huila	1179	753	786	786
	• pe gaze naturale	1999	1919	3294	3507
	• hidrocarburi	2427	1827	1396	1307
3	resurse energetice regenerabile	3065	5450	7150	8100
	• eoliene	2451	3300	4500	5000
	• fotovoltaice	565	2000	2200	2500
	• biomasa	49	150	450	600
4	centrale hidroelectrice	6227	6392	6632	7639
5	Capacitatea de producție netă [5=1+2+3+4]	20082	21555	25899	27982
6	Putere indisponibilă totală	6070	10219	11823	12933
	• Putere indisponibilă (Reduceri temporare+conservari)	3428	6586	7708	8371
	• Putere în reparatie planificată	799	1328	1430	1603
	• Putere în reparatie accidentală (după avarie)	1070	1113	1134	1258
	• Rezerva de putere pentru servicii de sistem	773	1191	1551	1701
7	Puterea disponibilă netă asigurată [7=5-6]	14012	11337	14076	15049
8	Consum intern net la varful de sarcina	8114	8565	9450	10940
9	Capacitate rămasă (fără considerarea schimburilor cu alte sisteme) [9=7-8]	5898	2772	4626	4109
10	Sold Import-Export la varful de sarcina	-745	-800	-1200	-1200

As the availability of wind and solar power plants is limited during the year and their production is not controllable, as is the case with conventional power plants, in order to ensure adequacy, it is imperative to have a certain amount of power in power plants to ensure a short duration of peak consumption and consistent control of the production park as a whole (gas-fired power plants).

Integration of wind and solar power plants into the load curve requires conventional plants to provide a frequency adjustment function to compensate for power variations produced by them due to variations in primary renewable energy, significantly increasing the frequency of the cases in which thermoelectric groups must work with partial load or be turned off and then turned back on.

It is therefore necessary to install peak power plants in the system because the operation of wind and photovoltaic plants has negative implications on the production costs and the lifetime of the basic operation groups.

Assessment of the evolution of safety in power supply for a period of 15 years

In order to estimate the security of electricity supply, account shall be taken of the evolution of national consumption and installed capacity, as well as the evolution of demand for cross-border exchanges of electricity.

For the time horizon of up to 15 years (2030), the "Ten-Year Power Transmission Network Development Plan" (TYNDP) of 2016 was drawn up, in accordance with Art. 8 par. (10) of (EU) Regulation No. 714/2009 of the European Parliament and of the Council of 13 July 2009 on conditions of access to the network for cross-border exchanges of electricity.

ENTSO-E published for consultation in October 2017 the scenarios analyzed under TYNDP 2018, for both gas and electricity, based on which decisions are made for future investment needs in infrastructure.

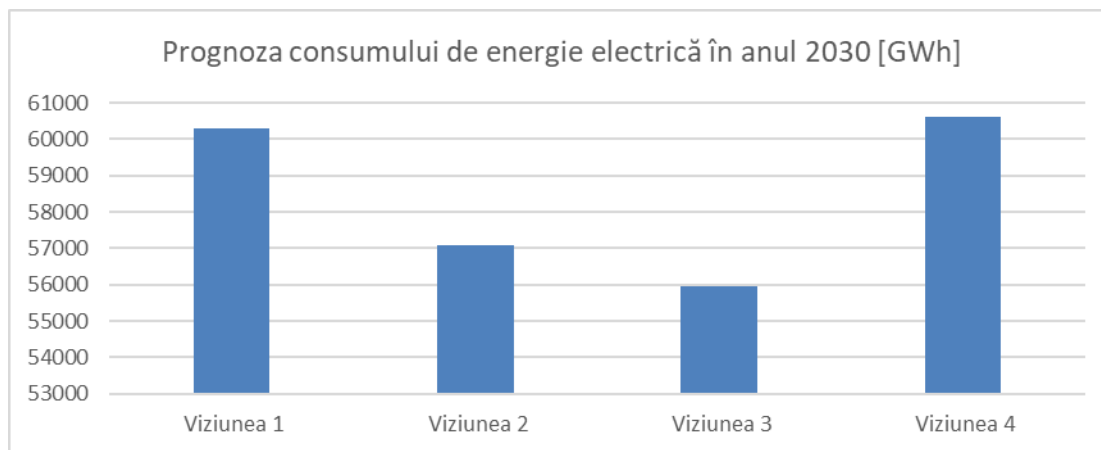
What follows is the assessment of safety in electricity supply for a period of 15 years under TYNDP 2016. It takes into account the integrated model of the European electric grid and is based on the national plans for the development of the power transmission network for 10 years, taking into account regional investment plans as well as Community-wide network planning issues, including projects of European Interest (CIP).

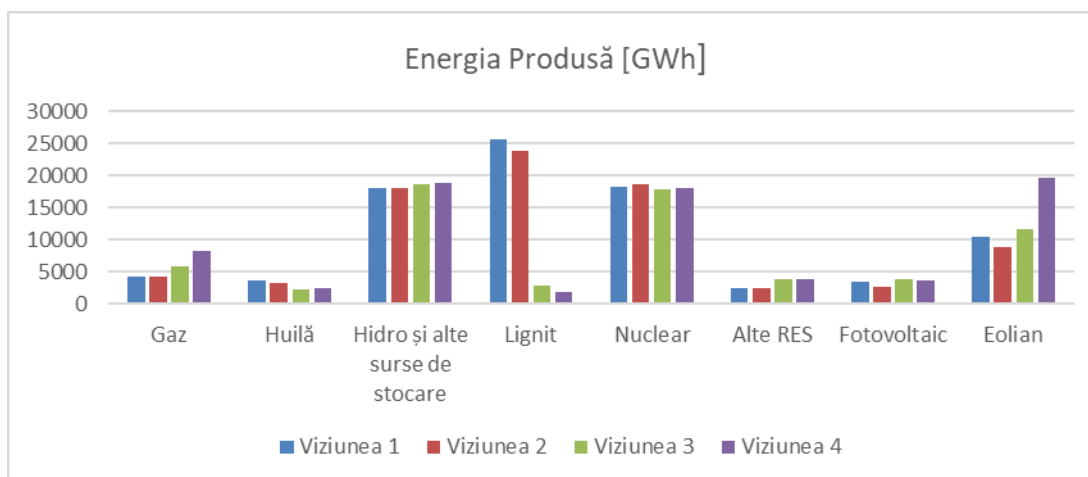
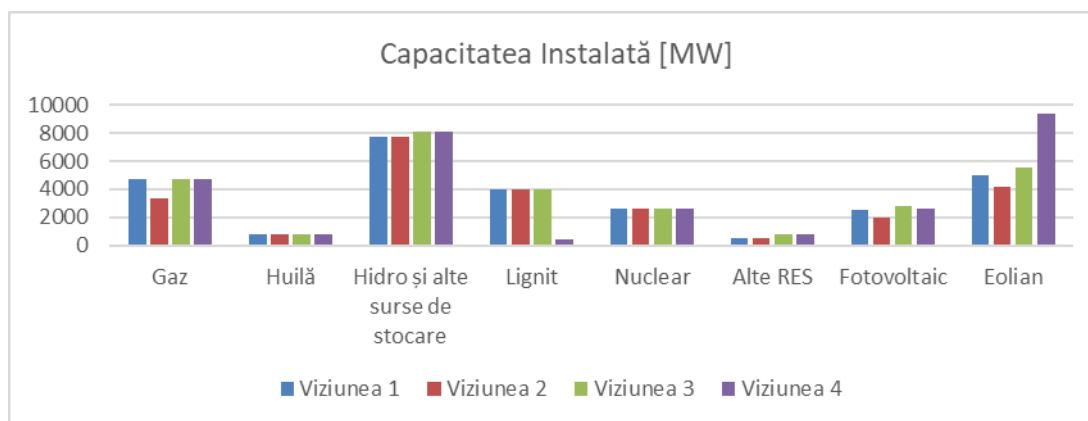
TYNDP 2016, as well as the national and regional plans for the development of the power transmission grids, include the scenario for the development of the electric grids for the 2030 time horizon, taking into account four visions for the evolution of consumption, installed capacity and produced energy.

The four visions envisaged for the year 2030 have been set according to national policies and energy targets of the European Union regarding the evolution of power installed in power plants based on renewable energy sources and the reduction of carbon emissions as follows:

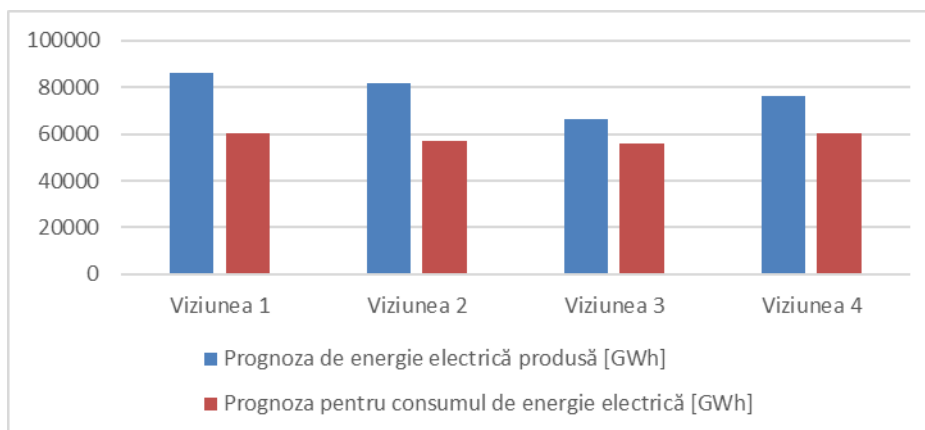
- Vision 1 "Slowest progress" and Vision 3 "National green transition" are built on data provided by European transmission system operators;
- Vision 2 "Constrained progress" and Vision 4 "European green revolution" are built on the assumption of the European Union's energy policy.

In the following, the electricity consumption forecast, the capacity installed in power plants by type of sources and electricity production in the four visions for 2030, for Romania:





We can see that in Romania's case for all four visions, the projected electricity demand for 2030 is covered by the energy produced, as shown in the following graph:



Moreover, for the 2030 horizon, the impact of certain stress factors on the NPS capacity to accommodate the demand for electricity and technological system services and the SEN capacity to maintain export levels and to ensure the imports necessary for safe operation have been determined. These factors relate to the management of a fuel supply crisis in particular weather conditions (prolonged drought, heat, snow, very cold temperatures, etc.).

The results of the determination show that the NPS will not face a production deficit with the impossibility of ensuring full capacity reserves, i.e. the security of electricity supply will not

be compromised. Moreover, in some cases, NPS maintains its ability to export, providing resilience to neighboring countries affected by the same stress conditions.

However, the results of stress test for 2030, winter (temperatures below -20°C , massive snowfall) show that Romania may need imports for short periods (about 25-35 GWh in 24 hours, representing about 15% of the daily average consumption requirements). In such situations, safeguard measures may be used under the regulations in force.

The following table presents information on the structure of electricity generation (GWh) by fuel type over the period 2016-2017.

Type of fuel	2016		2017	
	gross	net	gross	net
Coal	16,091	14,176	17,154	15,102
Hydrocarbon	9,960	9,266	10,803	10,041
Nuclear	11,286	10,368	11,509	10,561
Hydro	18,272	18,077	14,608	14,542
Wind	6,590	6,524	7,403	7,332
Biomass	453	448	401	395
Photovoltaic	1,820	1,802	1,870	1,850
Geothermal	-	-	-	-
Total	64,472	60,661	63,748	59,823

The structure of installed and available capacities by type of fuel over 2016-2017 is presented in the following table:

Type of plant	Installed power [MW]		Available power [MW]	
	2016	2017	2016	2017
Coal	5,785	5,805	4,922	4,931
Hydrocarbon	5,487	5,495	3,738	3,703
Nuclear	1,300	1,300	1,413	1,413
Hydro	6,685	6,700	6,417	6,389
Wind	2,989	2,998	3,008	3,008
Biomass	122	125	126	127
Photovoltaic	1,346	1,314	1,304	1,319
Geothermal	0	0.05	-	-
Total	23,715	23,738	20,928	20,891

The following table shows the evolution of electricity production and consumption in 2016-2017, which shows a slight increase of the values for 2017 compared to those for the previous year:

Month	Gross production [GWh]		Gross consumption [GWh]		Net consumption [GWh]	
	2016	2017	2016	2017	2016	2017
January	6,279	6,468	5,630	5,896	5,217	5,441
February	5,167	5,462	4,971	5,177	4,626	4,812
March	5,156	5,778	5,135	5,204	4,788	4,847
April	4,756	5,134	4,571	4,771	4,268	4,455

May	4,500	4,771	4,546	4,736	4,295	4,442
June	5,126	4,881	4,565	4,659	4,258	4,367
July	5,627	4,983	4,862	4,914	4,533	4,596
August	5,270	4,889	4,627	4,938	4,262	4,621
September	4,846	4,757	4,565	4,677	4,284	4,392
October	5,526	5,197	5,087	5,101	4,742	4,767
November	5,819	5,402	5,258	5,277	4,883	4,912
December	6,399	6,026	5,638	5,502	5,226	5,116
Total per year	64,472	63,748	59,455	60,852	55,382	56,768

In 2017 CHE Bretea was commissioned, with an installed capacity of 2x6,282 MW (the date of commissioning was 18-19.05.2017) and CET Găvana was withdrawn from operation (operating on hydrocarbons) with an installed power of 6 MW (date of withdrawal: September 22, 2017).

The setting up of new production capacities as well as the rehabilitation of the existing ones are carried out based on **establishment authorizations** issued by ANRE. The procedure for granting authorizations and the conditions for granting them: criteria, levels of power, approvals, differentiated by categories of power and activities are specified in the *Permitting Regulation in the Electricity Sector*, approved by the **ANRE Order no. 48/2013**. The refusal to grant the authorization, the absence of a response on time or any decision of the authority deemed unlawful or prejudicial may be challenged with the Bucharest Court of Appeal in accordance with the legal provisions.

Establishment permits granted in 2017 can be found in the table below:

No. crt.	Authorized power plants (per type of primary source of energy)	Number of permits granted	Installed power of authorized capacities [MW]
1	Photovoltaic	1	1.86
2	Hydrocarbon	3	8.22
	Total	4	10.08

In 2017, 5 establishment authorizations - at the request of the holders - were amended in the light of the need to expand the validity of those authorizations and to update certain data on their holders.

Monitoring the planning of the commissioning of new production capacities

The analysis of the plan for the commissioning of new production capacities is carried out by TSO in the 10-year RET Development Plan. According to the information presented in this plan for 2016-2025, 80% of the existing thermo-energy groups have exceeded their duration of useful life. Reengineering and/or modernization works have been carried out for NPS thermoelectric groups, but not all of them are equipped with greenhouse gas emission reduction facilities to enable them to comply with European Union emission standards for sulfur dioxide, nitrogen oxide and dust from large combustion plants.

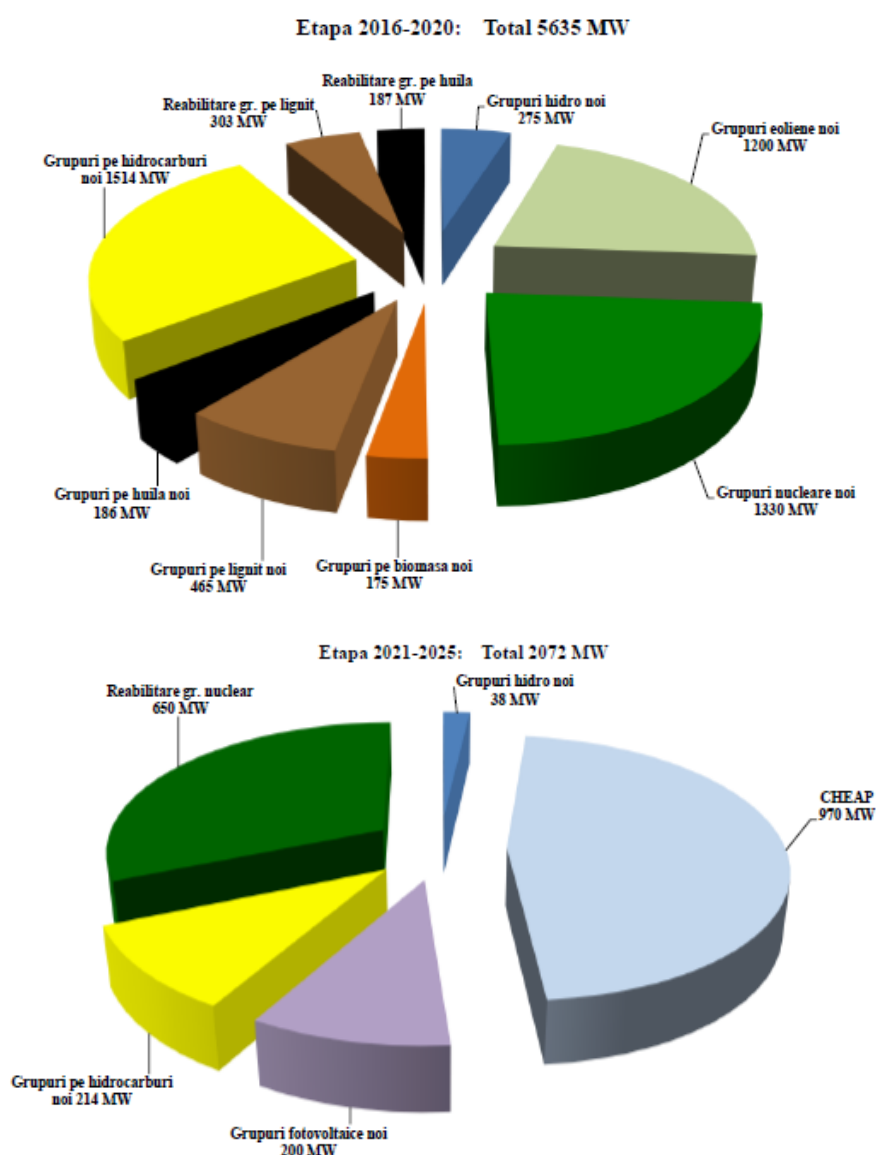
The baseline scenario analyzed in the RET development plan, characterized by a 4.6% increase in electricity consumption by 2020 and a further approx. 8% by 2025, considered

final operating withdrawals of thermoelectric groups totaling 2,082 MW of available net power, of which 1,994 MW by 2020, including. In some cases, group deleveraging is associated with the intention of replacing them with new, more efficient ones.

According to this forecast, a group from Turceni, a group from Deva and a nuclear power plant in Cernavoda will be put back into operation after rehabilitation during the same period, amounting to a net capacity of 1.140 MW.

With regards to plans for installing new groups, according to information submitted to TSO by existing producers, they add up to a net available capacity of about 4,679 MW, excluding renewable power plants.

The following figures highlight the rehabilitation projects and new groups for the forecast horizon 2016-2020, and 2021-2025 respectively, in the baseline scenario.



The new group projects provided in the RET 2016-2025 Development Plan include:

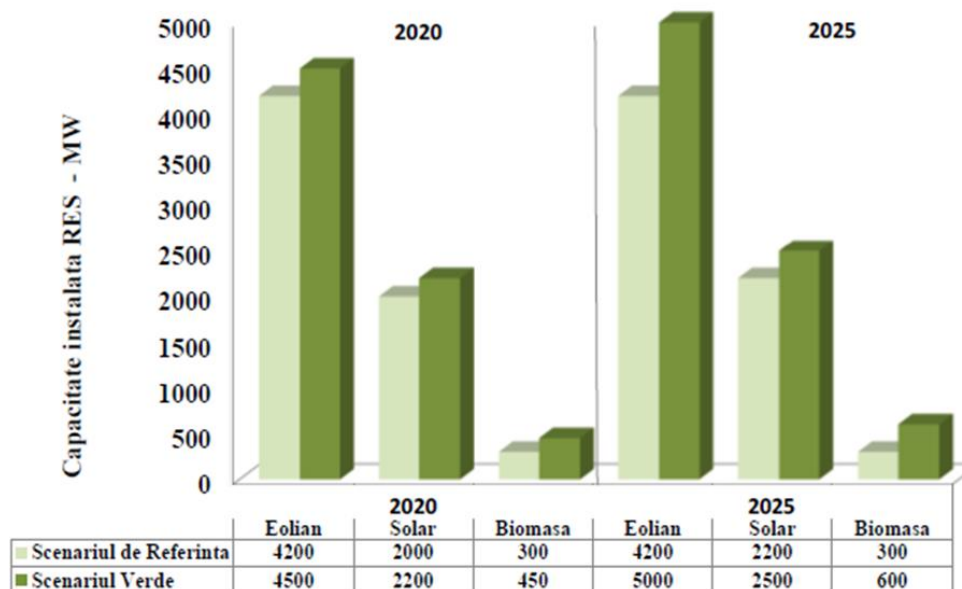
- Completion of hydropower plants currently in different stages of execution;
- Completion of Nuclear Groups 3 and 4 from Cernavoda by 2020;

- new natural gas groups (gas or combined cycle, condensing or cogeneration turbines);
- new lignite groups (Rovinari) and coal (Paroseni);
- new RES groups: wind, solar (photovoltaic) and biomass.

The completion of the project for the construction of the CHEAP Tarnița Lăpușești hydropower plant with 4 groups of 250 MW each by 2025 was also taken into account.

ANRE considers these assumptions to be too optimistic, as it is not possible to put into operation the Cernavoda Group 3 and 4 and the Tarnița Lăpușești pumping plant by 2020 and 2025 respectively, given that works have not even been started yet.

In addition to forecasting the commissioning of new production capacities in the baseline scenario, the following evolution is projected regarding the installed capacity in renewable sources of energy that will take place in the so-called green scenario, namely in economic and financial conditions favorable to the implementation of energy policies promoted at EU level (major investments, integration of renewable sources, increased energy efficiency, reduction of CO₂ emissions, maximum development of Smart Grid solutions and energy storage capacities):



3. Natural gas market

3.1. Issues regarding the regulation of network activities

3.1.1. Unbundling

According to the provisions of *Law no. 123/2012 on electricity and natural gas*, as further amended and supplemented, the transmission system operator is organized and operates according to the **independent system operator** model (ISO). With the entry into force of the *Law no. 117/2014 approving Government Emergency Ordinance no. 6/2014*, ANRE assessed the new certification conditions and approved the certification of the National Gas Transmission Company "TRANSGAZ" – SA Medias, by issuing **ANRE Order no. 72/06.08.2014**. The ANRE Order was notified to the European Commission.

Distribution operators are the holders of the distribution license, which has as its specific activity the distribution of natural gas in one or more delimited areas. At the end of 2017, on the natural gas market in Romania, **37 companies** were licensed to distribute.

Undertakings from the natural gas sector which carry out regulated activities (transmission, storage, distribution, supply) must ensure accounting, legal, functional and organizational separation. Distribution operators that serve a maximum of 100,000 final customers are exempt from the provisions on legal separation.

Undertakings from the natural gas sector have the obligation to submit to ANRE the regulated accounting records by the 1st of July (for the distribution and supply activities) and 31st of August (for the storage and transmission activities), of the regulatory year following the one for which the reporting is done.

The regulated accounting records analyzed contain the following assessment situations:

- Income,
- Expenditures,
- Tangible/intangible assets,
- Inventory assets.

Also, natural gas undertakings have the obligation to submit to ANRE, for review and approval, reports on separation, activity that involves checking assumptions, criteria and rules that will be the basis for the preparation of separate accounting records, which would allow obtaining information on costs, revenues, tangible and intangible assets and inventory items related to regulated activities carried out.

S.C. E.ON Gaz Romania S.A. and S.C. Distrigaz Sud S.A., as distribution system operators had the obligation to establish accounting, legal, functional and organizational separation between the distribution and supply of natural gas. In the case of S.C. E.ON Gaz Romania SA, as a result of legal separation by division of the company, two legally independent companies resulted - E.ON Gaz Romania S.A., specializing in the supply of natural gas and E.ON Gas Distribuție SA (later Delgaz Grid SA), specializing in gas distribution as well as operation and maintenance of the distribution network. The two new companies have different offices. The legal unbundling process of the other large distribution operator S.C. DISTRIGAZ Sud S.A. was completed in April 2008, resulting S.C. Distrigaz Sud Retele

SRL, specializing in gas distribution as well as operation and maintenance of the distribution network, and S.C. DISTRIGAZ Sud S.A. (later S.C. GDF SUEZ ENERGY ROMANIA and ENGIE ROMANIA etc.), specializing in the supply of natural gas.

Regarding the obligation to legally separate the underground storage activity, it was carried out by S.C. DEPOMUREȘ S.A. The process of legal separation of the last storage operator - S.N.G.N. Romgaz S.A. - ended in 2018. The storage activity was separated from SNGN ROMGAZ SA starting with 1 April 2018 by transfer of License no. 1942/2014 and is deployed within a storage operator, a subsidiary, in which SNGN ROMGAZ SA is sole shareholder. SNGN Romgaz SA – Storage Branch of Gaze Naturale Depogaz Ploiești SRL.

Other distribution system operators, servicing less than 100,000 final customers and who do not have the obligation of legal separation, established separate accounting records for regulated activities starting with 2007.

The licensed undertakings of natural gas submit annually to the regulatory authority the financial reports and regulated accounting for the regulated activities carried out by them in the gas sector.

Prior to sending them to the regulatory authority, the required documents must be audited/verified in accordance with the legal provisions in force, checking especially the compliance with the obligation to avoid cross-subsidization between activities.

2018 was the year when **ANRE Order no. 63/2018** was published, for the approval of the *Regulation on ANRE's monitoring of the compliance programs established by distribution operators or natural gas storage operators*. The normative act aims at establishing minimum rules on:

- the compilation of the compliance programs by distribution operators or by the natural gas storage operators which are part of economic operators vertically integrated, according to the provisions of the Law on Electricity and Natural Gas no. 123/2012, as further amended and supplemented;
- the designation and the activity of the compliance officers monitoring the enforcement of compliance programs, prepare and submit to ANRE annual reports on the measures taken.

3.1.2. Technical operation

Balancing services

Compared to the previous year's developments, in 2017, in order to meet the obligations of SNTGN TRANSGAZ SA regarding the balancing of the national natural gas transmission system, in its capacity as a transmission system operator, obligations under *(EU) Regulation no. 312/2014 of 26 March 2014 establishing a network code for the balancing of gas transmission networks* and under the *Network Code for the National Gas Transmission System, the Methodology for the calculation of neutrality balancing tariffs, including distribution thereof to the users of the natural gas transmission network* was drawn up. This Methodology aims at allocating to network users the difference between the expenses and revenues registered by the NTS operator subsequent to the balancing activity of the natural gas transmission network.

The principles underpinning this Methodology were those set out in EU Regulation 312/2014, namely:

"(1) A transmission system operator shall not register gains or losses as a result of the payment or collection of daily imbalance tariffs, daily tariffs, balancing tariffs and other balancing charges, which are in fact all activities carried out by the transmission system operator in order to carry out the obligations laid down in this Regulation, and

(2) The transmission system operator shall transfer to the network users:

(a) all costs and revenues resulting from day-to-day imbalance charges and intra-day tariffs;

(b) all costs and revenues resulting from balancing operations undertaken pursuant to Article 9, unless the national regulatory authority considers such costs and revenues to be ineffective in accordance with applicable national rules."

Monitoring compliance with network security and reliability rules

Technical condition of the natural gas transmission system

The natural gas transmission activity is carried out by SNTGN Transgaz S.A. based on the operating license for the natural gas transmission system no. 1933/20.12.2013 issued by ANRE, valid until 08.07.2032.

The table below shows the quantities of transported natural gas, including those for underground storage during the period 2010-2017.

	MU	2010	2011	2012	2013	2014	2015	2016	2017
Transported natural gas, including those aimed at underground storage (without international transport of natural gas)	billion m3	14.74	15.48	14.94	13.7	13.08	12.38	12.2	12.97
Natural gas transported for internal consumption	billion m3	12.31	12.82	12.27	11.26	11.88	12.29	12.1	12.87

Natural gas transmission is provided by main pipelines with a total length of more than **13,350 km** as well as through the installations, equipment and accessories thereof, the natural gas supply connections having diameters between 50 mm and 1200 mm at pressures between 6 bar and 63 bar, which ensure the take-over of the natural gas extracted from the production perimeters or the imported one and the transmission thereof for delivery to the final customers on the domestic and foreign gas markets.

The main components of the NTS of natural gas are presented in the following table:

Main components of the natural gas NTS as at 31.12.2017
13,350 km gas transport mains and connections, of which 553 km transit pipes
<ul style="list-style-type: none"> ▪ 1,233 gas regulation and measurement stations (directions) ▪ 58 tub command stations (SCV, NT); ▪ 6 imported gas measurement stations ▪ 6 measurement stations located on gas transit pipes (GMS) ▪ 3 gas compression stations (GCS); ▪ 1,042 cathodic protection stations (CPS); ▪ 872 gas odorizer stations (GOS);

The status of the service life of NTS components is shown in the table below:

Situatia privind durata de functionare a principalelor componente ale SNT									
Durata de functionare	Conducte de transport (km) 31.12.2017	Racorduri de alimentare (km) 31.12.2017	Numar directii statii de reglare masurare (SRM-directii) 31.12.2017	Numar de statii de reglare masurare amplaste pe conductele de tranzit (SMG) 31.12.2017	Numar de statii de reglare masurare a gazelor din import (SMG) 31.12.2017	Numar de statii de protectie catodica (SPC) 31.12.2017	Numar statii comanda vane (SCV-NT) 31.12.2017	Numar de Statii de comprimare gaze (SCG) 31.12.2017	Numar de statii de odorizare gaze (SOG) 31.12.2017
≥ 40 ani	6397	339	141	2		11	14	1	26
intre 30-40 an	1996	133	61			4	2	1	61
intre 20-30 an	689	220	164	2	2	4	1		107
intre 10 si 20 a	1723	931	610	2		253	10		206
intre 5 si 10 ar	410	147	196		1	652	7		266
≤ 5 ani	347	18	61		3	118	24	1	206
TOTAL	11562	1788	1233	6	6	1042	58	3	872
Stare tehnica	functionale	functionale	functionale	functionale	functionale	functionale	functionale	functionale	functionale

Technical condition of natural gas distribution systems

The **37 natural gas distribution operators** licensed by ANRE have in total as of 31.12.2017 natural gas distribution pipelines and connections in a total length of **49,444 km**. Of these, 58.1% are polyethylene pipes, which have been developed steadily over the last 20 years.

The following table shows the lifetime of pipelines for natural gas, polyethylene and steel distribution pipes at the end of 2017:

Pipe age	Length Steel objectives	Length Polyethylene objectives	Total length objectives	
years	km	km	km	%
≤40	1627	0	1627	3.3
[30;40)	1996	0	1996	4.0
[20;30)	10125	101	10226	20.7
[10;20)	6362	13658	20021	40.5
<10	587	14986	15574	31.5
Total	20698	28746	49444	100

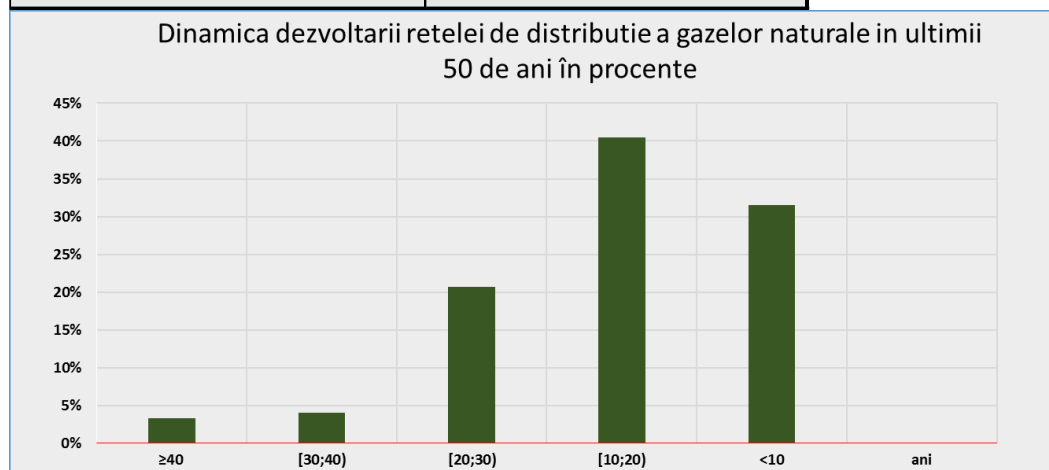
Thus, out of the total of 49,444 km representing the length of the distribution system networks at national level, 31.5% is less than 10 years old, 40.5% is between 10 and 20 years old and only 7.3% is more than 30 years old.

The share of polyethylene and steel pipes, respectively, by category of age out of the total pipe length within the natural gas distribution systems is presented in the following table:

Pipe age (years)	Percentage of steel (%)	Percentage of polyethylene (%)
≤40	3.3	0.0
[30;40)	4.0	0.0
[20;30)	20.5	0.2
[10;20)	12.9	27.6
<10	1.2	30.3
Weight out of total	41.9	58.1

The graph below shows the dynamics of the natural gas distribution network development over the last 50 years:

Vechime conducte și racorduri (ani)	Procent
≥40	3.29%
[30;40)	4.04%
[20;30)	20.68%
[10;20)	40.49%
<10	31.50%



Monitoring the performance indicators of the gas transmission service

In accordance with Art. 8 lit. g) Government Emergency Ordinance no. 33/2007 on the organization and functioning of ANRE, approved by Law no. 160/2012, in fulfilling its attributions and competencies, ANRE must contribute to the protection of the consumer, including through the imposition of quality standards for public services in the natural gas sector. In fulfilling this objective, **ANRE Order no. 161/2015** approved *The Natural Gas Transmission System Performance Standard* that entered into force on 1 October 2016 at the beginning of the 2016-2017 gas year, so that the first reporting of the indicators covered by this standard was carried out by the Transmission System Operator (TSO) until 1 December 2017.

For the gas year 01.10.2016 - 30.09.2017, TSO reported the following performance indicators:

Crt. No.	General performance indicator	Specific performance indicator	Performance achievement condition in %	Abbreviation of term used for calculating the indicator	Term value	Degree of fulfillment of the performance condition %
1.	IP ₀	IP ₀ ¹	90	N _{T0}	0	0.00
				N _{T2}	0	
				N _{inreg}	273	
				N _{clasate}	0	
2.	IP ₁	IP ₁ ¹	95	N _{Rparametrii10}	0	-
				N _{TRparametrii}	0	

Crt. No.	General performance indicator	Specific performance indicator	Performance achievement condition in %	Abbreviation of term used for calculating the indicator	Term value	Degree of fulfillment of the performance condition %		
		IP ₁ ²	95	N _{RCLparametrii}	0	-		
				N _{verificareP24}	0			
				N _{TverificareP}	0			
		IP ₁ ³	95		N _{Rcalitate15}	0	-	
					N _{TRcalitate}	0		
					N _{RCLcalitate}	0		
		IP ₁ ⁴	95		N _{Rmăsurare15}	1	100.00	
					N _{TRmăsurare}	1		
					N _{RCLmăsurare}	0		
		IP ₁ ⁵	95		N _{Vmăsurare2}	1	100.00	
					N _{TRmăsurare}	1		
					N _{RCLmăsurare}	0		
3.	IP ₂	IP ₂ ¹	95	N _{acces}	38	100.00		
				N _{TCacces}	38			
		IP ₂ ²	95		N _{Racces15}	0	-	
					N _{TRacces}	0		
					N _{RCLacces}	0		
		4.	IP ₃	IP ₃ ¹	95	N _{racordare}	12	100.00
N _{TCracordare}	12							
IP ₃ ²	95				N _{RRacordare15}	0	-	
					N _{TRracordare}	0		
					N _{RCLracordare}	0		
IP ₃ ³	95				N _{IR}	0	0.00	
					N _{TIR}	4		
IP ₃ ⁴	95				N _{Rperpif15}	0	-	
					N _{TRperpif}	0		
					N _{RCLperpif}	0		
5.	IP ₄			IP ₄ ¹	95	N _{Rrefacere15}	1	100.00
						N _{TRrefacere}	1	
		N _{RCLrefacere}	0					
6.	IP ₅	IP ₅ ¹	98	N _{U6}	859	78.16		
				N _{Uafectați}	1099			
		IP ₅ ²	98		N _{U24}	0	0.00	
					N _{Uafectați}	9		
7.	IP ₆	IP ₆ ¹	98	N _{U5}	48	10.50		
				N _{Uafectați}	457			
		IP ₆ ²	98		N _{Ureluare}	357	78.12	
					N _{Uafectați}	457		
8.	IP ₇	IP ₇ ¹	80	N _{SSR30}	165	76.39		
				N _{TSSR}	216			
				N _{SSRclasate}	0			
9.	IP ₈	IP ₈ ¹	98	N _{Atimp60}	15	100.00		
				N _{Atotal}	15			
		IP ₈ ²	98		N _{ASC6}	6	100.00	
					N _{ASCtotal}	6		
10.	IP ₉	IP ₉ ¹	90	N _{comp30}	0	-		
				N _{TCcomp}	0			

Degree of achievement of performance indicators:

1. IP0 – Registration of requests/complaints regarding the natural gas transmission system.

Considering the territorial dispersion of the NTS as well as the complexity of the working procedures for monitoring the performance indicators according to the Standard, TSO initiated the development of a separate IT application for the registration of requests/complaints regarding the natural gas transmission system. The application was completed and tested only at the beginning of the current gas year and as such there was no separate management of the unique numbers assigned to the requests/complaints entered, other than the one used for all documents coming into or going out of the company. Currently, all requests/complaints are managed separately through this IT application.

2. IP1 – Observing natural gas delivery-receipt conditions.

The overall performance indicator IP1 is composed of five performance-specific indicators (IP1¹, IP1², IP1³, IP1⁴, IP1⁵), which refer to:

- IP1¹ - TSO's obligation to respond to the written notices/complaints of any NTS user regarding non-compliance with the agreed technological parameters of the delivery-receipt points, within maximum 10 business days from the date of registration;
- IP1² – TSO's obligation to verify agreed technological parameters within 24 hours of the date of registration of the complaint;
- IP1³ - TSO's obligation to respond to the written notices/complaints of any NTS user regarding the quality of natural gas within maximum 15 working days from the date of registration;
- IP1⁴ - TSO's obligation to respond to the written notices/complaints of any NTS user regarding the measurement of natural gas quantities within 15 working days from the date of registration;
- IP1⁵ - TSO's obligation to travel onsite in order to investigate and ascertain the operation of the natural gas metering system/instrument within a maximum of two working days from the registration of the complaint.

The TSO had a single complaint regarding the measurement of natural gas quantities, categorized as IP1⁴, which was answered within the deadline set for this indicator. At the time the complaint was received, the team traveled onsite in order to ascertain the operation of the natural gas metering system/instrument. As a result, these performance-specific indicators were met 100%.

For specific performance indicators IP1¹, IP1², and IP1³, no requests, notices or complaints were registered.

3. IP2 – Access to the NTS

The overall performance indicator IP2 consists of two performance-specific indicators (IP2¹, IP2²), which refer to:

- IP2¹ - TSO's obligation to respond to the written request of any NTS applicant or user within 30 days of registration; the answer being, as the case may be, the agreement or denial of access to the NTS;
- IP2² - TSO's obligation to respond to written notices/complaints of any NTS applicant or user regarding access to NTS within 15 days of registration.

In gas year 01.10.2016 - 30.09.2017 there were 38 NTS access applications which were answered within the 30-days legal deadline as provided by IP2¹. Thus, this indicator was met

100%. There were no written complaints from applicants or users about access to the NTS. The average processing time of the 38 requests for NTS access is 14.21 days.

4. IP3 – Connection to the NTS

The overall IP3 performance indicator consists of four performance-specific indicators (IP3¹, IP3², IP3³, IP3⁴), which refer to:

- IP3¹ - TSO's obligation to respond to the written request of any NTS applicant or user within 30 days of its registration;
- IP3² - TSO's obligation to respond to written notices/complaints of any NTS applicant or user regarding connection to the NTS within 15 working days from registration;
- IP3³ – TSO's obligation to complete the works and commission the connection facility within the term stipulated in the connection contract, if a new installation for NTS connection is built or an existing one is modified/relocated,
- IP3⁴ - TSO's obligation to respond to the written notices or complaints of any NTS applicant or user regarding the design, execution, reception and/or commissioning of the NTS connection facility within a maximum of 15 working days from the date of registration;

In gas year 01.10.2016-30.09.2017 there were 12 applications for connection to NTS. For all 12 connection requests, this deadline was met, which led to the 100% achievement of the IP3¹ specific performance indicator.

There were no complaints regarding the 12 connection requests, which led to the 100% achievement of the IP3² performance indicator. Thus, the average processing time of the 12 requests for connection to NTS is 40.92 days.

According to specific performance indicator IP3³ related to TSO's obligation stipulated in art. 29 of the standard, providing that "in order to develop a new installation for connection to the NTS or modify/relocate an existing one, TSO must complete the works and commission the installation within the term stipulated in the connection contract." At Transgaz level, four connection facilities were commissioned on time, but their commissioning and operation exceeded the contractual term as a result of the non-completion of the distribution network and the delay in obtaining the license and operating authorization issued by ANRE. Thus, this indicator was not met. The average commissioning time of the four connection installations is 134 days.

There were no complaints about the commissioning of the connection installations, so the IP3⁴ indicator was met 100%.

5. IP4 – Restoration of land and/or property affected by the execution of certain works to NTS objectives.

For the IP4¹ general performance indicator there was only one complaint which was answered within the legal deadline of 15 business days. Thus, specific performance indicator IP4¹ was met 100%.

6. IP5 – Notification of unplanned limitations and/or interruptions and resumption of the natural gas transmission system service.

In gas year 01.10.2016-30.09.2017 there were 1099 users affected by unplanned limitation and/or interruption of natural gas transmission system service, of which 859 users were notified in less than 6 hours, which determined the value of the specific performance indicator IP5¹ to be 78.16%.

There were also 9 users affected for more than 24 hours and who not notified in accordance with the contractual provisions.

7. IP6 – Notification of planned limitations and/or interruptions and resumption of the gas transmission service.

In the case of planned interruptions and/or limitations of the provision of the natural gas transmission system, there were 457 affected users, of which only 48 users were notified in writing according to the standard 5 working days prior to the limitation/interruption, thus the IP6¹ specific performance indicator is 10.50%.

Out of the 457 affected users, for 357 users the provision of gas transmission system and transmission system was resumed by the time specified in the notification, which led to an IP6² specific performance indicator of 78.12%.

8. IP7 – Overall performance indicator for Settling requests/notifications/complaints concerning the provision of natural gas transmission and system services other than those separately dealt with in the performance standard.

The IP7 general performance indicator has a specific performance indicator IP7¹ for TSO's obligation to respond to any requests/complaints about the natural gas transmission system other than those separately dealt with in the standard within 30 days of registration.

Within the specific IP7¹ performance indicator there were 216 requests/complaints, of which the legal 30-day deadline was met only for 165.

For the 51 requests/complaints that were not answered within the 30-day legal term, the explanatory information/data was provided late by Territorial Exploitations in the country. Thus, the condition for the achievement of the IP7¹ indicator, which had a value of 76.39%, was not met.

The average processing time of the 216 requests/complaints is 27.56 days.

9. IP8 – Overall performance indicator for Tel Verde.

The overall performance indicator IP8 is composed of two performance-specific indicators (IP8¹, IP8²), which refer to:

- IP8¹ - TSO's obligation to keep for each gas year, for a total period of 3 calendar years, the information on the number of emergency calls with a waiting time of less than or equal to 60 seconds in relation to the total number of emergency calls received;
- IP8² – TSO's obligation to ensure that the intervention team travels to the reported place as soon as possible from the moment of the call, but not more than 6 hours from the moment of the call, in order to fix the malfunction.

As for IP8¹, there were 15 emergency calls in total, all having a waiting time of less than or equal to 60 seconds. Thus, the specific IP8¹ performance indicator was met 100%.

Six emergency calls related to gas leakage were recorded, for which the intervention team traveled to the reported location within less than 6 hours from the call, which means that the IP8² indicator was 100% met.

10. IP9 – Obligation to pay indemnifications due in accordance with the provisions of the natural gas transmission system performance standard.

The fulfillment of the obligation to pay the indemnifications due according to the Natural Gas Transmission System Performance Standard is carried out by the TSO at the justified request of the applicant or NTS user, within maximum 30 days from the registration of the application. For failure to comply with its obligations, the standard sets out indemnifications that TSO is obliged to pay to the claimant at their justified request.

In gas year 01.10.2016 - 30.09.2017, Transgaz did not register any claim for payment of indemnifications. Thus, for each specific performance indicator, the total amount of indemnifications paid was zero.

In order to improve the quality of the natural gas transmission system, we have carried out activities to monitor the satisfaction of NTS applicants and users in accordance with the ISO 9001 family of standards. A report for assessing and determining the satisfaction of SNTGN Transgaz SA with the company for gas year 01.10.2016 - 30.09.2017 was drawn up, based on the questionnaires filled out by them.

Based on the questionnaires received from the 22 respondents, a general satisfaction level of 7.56 was recorded in 2016 compared to 7.76 in 2015, indicating that the services provided by TSO have improved. TSO drew up a corrective action plan, which includes:

- Creating a common area for posting customer complaints and how to settle them;
- Creating a database for monitoring complaints;
- Reviewing the operational procedure PP-15 Customer Satisfaction Assessment;
- Presenting the outcome of the assessment of NTS applicants and users' satisfaction in the analysis entitled Audit for the Diagnosis of the Quality-Environment-Protection and Security Integrated Management System (Ro: SMI CMSSO).

The obligation to observe the performance indicators of the services provided in the performance standard does not apply to emergencies declared in accordance with legal requirements, in the event of force majeure declared in accordance with the legal provisions, or in case of partial or total technical restrictions of the system upstream.

Monitoring the performance indicators of the gas distribution service

The monitoring of the natural gas distribution service performance indicators is carried out in accordance with the *Natural Gas Distribution Service Performance Standard*, approved by **ANRE Order no. 162/2015**, as further amended and supplemented; it entered into force on 1 October 2016 at the beginning of the 2016-2017 gas year, so that the first reporting of the indicators provided in this standard was made by distribution operators (DSOs) by 1 December 2017. The obligation of compliance with the performance indicators of the services provided in the performance standard does not apply to emergencies declared in accordance with the legal provisions; in case of force majeure declared in accordance with the legal provisions; in case of partial or total technical restrictions of the system upstream.

Degree of achievement of performance indicators:

1. IP0 – Overall performance indicator for registering complaints/requests for the gas distribution and system service.

In gas year 01.10.2016 - 30.09.2017, 456,691 complaints/requests were registered for all operators of the natural gas distribution system. Of the 37 natural gas distribution system

operators, 26 met the condition for the achievement of the IP0¹ indicator and 11 sent the registration number of the complaints/requests received immediately, and so the value of the specific performance indicator IP0¹ is zero.

2. IP1 – Overall performance indicator for contracting the distribution service and compliance with natural gas delivery-receipt conditions.

This indicator refers to the following:

- Contracting the gas distribution service;
- Ensuring the pressure of natural gas;
- Ensuring the quality of natural gas;
- Measurement of natural gas.

In gas year 01.10.2016 - 30.09.2017, for all gas distribution system operators:

- 951 applications were received for contracting the natural gas distribution service; of the 37 natural gas distribution system operators, 31 met the condition for the achievement of the IP1¹ indicator, 1 did not meet the condition for the IP1¹ indicator and 5 did not receive any applications;
- 886 complaints of non-compliance with the pressure of natural gas were registered. Of the 37 operators, 13 met the condition for the IP1² indicator and 24 did not receive complaints regarding the non-observance of the pressure;
- there were 60 complaints/notifications regarding the quality of natural gas; of the 37 gas distribution system operators, 6 met the condition for the achievement of the IP1³ indicator and 31 did not receive complaints/notifications regarding the quality of the natural gas;
- there were 1,301 complaints regarding the measurement of natural gas quantities; of the 37 operators of the natural gas distribution system, 15 met the condition for the IP1⁴ indicator and 22 did not receive any relevant complaints.

3. IP2 – Overall performance indicator for access to the natural gas distribution system

The overall performance indicator IP2 consists of two performance-specific indicators. In gas year 01.10.2016 - 30.09.2017, for all operators of the gas distribution system:

- 376,005 requests for access to distribution systems were registered; of the 37 natural gas distribution system operators, 36 met the condition for the achievement of the IP2¹ indicator and 1 did not meet the condition for the achievement of the IP2¹ indicator, the explanation being the delayed transmission of the data by the applicants;
- there were 468 complaints regarding access to distribution systems; of the 37 operators of the natural gas distribution system, 12 met the condition for the achievement of the specific performance indicator IP2², 1 did not meet the condition for the achievement of the specific performance indicator IP2², and 24 did not receive complaints regarding access to the SD.

4. IP3 – Overall performance indicator for connection to the natural gas distribution system

The overall IP3 performance indicator is made up of five performance-specific indicators. In gas year 01.10.2016 - 30.09.2017, for all operators of the gas distribution system:

- 51,118 applications for connection to the distribution systems were registered; of the 37 natural gas distribution system operators, 36 met the condition for the achievement of the IP3¹ indicator and 1 did not, the explanation being the applicants' choice of other economic operators authorized by ANRE for the design and execution of the connections;
- there were 437 complaints regarding the connection to the distribution systems; of the 37 operators of the gas distribution system, 12 met the condition for the achievement of

specific performance indicator IP3² and 25 did not receive complaints regarding the connection to the distribution systems;

- 29,908 DTAC documentations were registered; of the 37 natural gas distribution system operators, 25 met the condition for the achievement of specific performance indicator IP3³, 10 did not and 24 did not submit DTAC documentations;
- 34,688 operating connection installations were registered; of the 37 operators of the natural gas distribution system, 35 met the condition for the achievement of specific performance indicator IP3⁴, and 2 did not;
- 1,945 complaints regarding the design, execution, reception and/or commissioning of the connection facility were registered; of the 37 operators of the natural gas distribution system, 9 met the condition for the achievement of specific performance indicator IP3⁵, 1 did not and 27 did not receive complaints regarding the design, execution, reception and/or commissioning of the connection system.

The explanations provided by the natural gas distribution system operators for their non-compliance with IP3³ and IP3⁴ are the following:

- a) there have been situations in which certain operators performed the design and received the permits stipulated in the Urbanism Certificate and drew up the DTAC documentations with ANRE-licensed natural gas companies, and those companies did not fully meet the contractual provisions regarding the submission of the documents within 90 days so as to obtain the Building Permit;
- b) the delay with which the specific approvals/agreements are granted from the owners of the utilities/institutions/directories/competent authorities required for each objective, in order to obtain the building permit according to the provisions of Law no. 50/1991, republished, as further amended and supplemented;
- c) disputes that extended the deadlines for completing the contracting processes for the design and execution activities of the pipeline and branch expansion works through SEAP;
- d) the increase in the volume of access and connection requests generated mainly by the real estate development phenomenon, but also by customers' orientation to the use of natural gas instead of other traditional fuels.

5. IP4 – Overall performance indicator for the restoration of land and/or property affected by the execution of works for natural gas distribution system objectives.

This indicator refers to the DSO's obligation to restore the affected land and/or assets to the initial state when, in the exercise of its right of use and servitude for the performance of the works necessary for the development, rehabilitation, modernization, operation and maintenance of the natural gas distribution systems or a part thereof, land and/or public property or private property of natural or legal persons is affected.

The overall performance indicator has a specific performance indicator IP4¹, DSO's obligation to respond to the complaints of any applicant or user of the distribution system regarding the restoration of land and/or property affected by the execution of works to the objectives of the distribution system within a maximum of 15 business days from the date of registration.

In gas year 01.10.2016 - 30.09.2017, for all operators of the natural gas distribution system there were 299 complaints regarding the restoration of the land and/or assets affected by the performance of works to the distribution system objectives. Out of the 37 distribution system operators, 12 met the condition for achievement of the IP4¹ specific performance indicator and 25 did not receive complaints regarding the restoration of land and/or assets.

6. IP5 – Overall performance indicator for notification of unplanned limitations and/or interruptions and resumption of the gas distribution service.

The general IP5 performance indicator has a specific IP5¹ performance indicator for DSO's obligation to notify the distribution system users as soon as possible but no more than 12 hours after the limitation/ interruption regarding the expected date and time for the resumption of the service, when the provision of the natural gas distribution and distribution service is limited and/or interrupted without prior planning.

In gas year 01.10.2016 - 30.09.2017, 96,779 users affected by unplanned limitations and/or interruptions were registered for all natural gas distribution system operators. Of the 37 gas distribution system operators, 20 met the condition for the achievement of specific performance indicator IP5¹ and 17 did not have users affected by unplanned limitations and/or interruptions.

7. IP6 – Overall performance indicator for notification of planned limitations and/or interruptions and resumption of the gas distribution service.

The DSO has the right to limit and/or discontinue the provision of the natural gas distribution and system service for the time necessary for the performance of the development, rehabilitation, repair, upgrading, exploitation works. The IP6 general performance indicator has a specific performance indicator IP6¹ for DSO's obligation to notify the affected users if the natural gas distribution service is limited and/or interrupted according to plan at least 2 working days before the date of commencement of the works, including the reason, the date and time of the limitation/interruption and the date and time of resumption of the service.

In gas year 01.10.2016 - 30.09.2017, for all operators of the natural gas distribution system, 1,160,165 users affected by the planned limitations and/or interruptions were registered. Of the 37 natural gas distribution system operators, 17 met the condition for the achievement of the IP6¹ specific performance indicator and 20 did not have users affected by planned limitations and/or interruptions.

8. IP7 – Overall performance indicator for addressing complaints/requests concerning the provision of the gas distribution and system service other than those dealt with separately within the performance standard for the natural gas distribution and system service.

The IP7 general performance indicator has a specific IP7¹ performance indicator for DSO's obligation to respond to any complaints/requests regarding the provision of the natural gas distribution and system service other than those separately dealt with in the standard. The category of complaints/requests mentioned above also include the cases in which the same complaints/requests refer to two or more situations treated differently within the Standard.

In gas year 01.10.2016 - 30.09.2017, for all operators of the gas distribution system, 23,214 complaints/requests were received, other than those separately dealt with in the Performance Standard for the Natural Gas Distribution and System Service, approved by ANRE Order no. 162/2015. Out of the 37 operators, 19 met the condition for the achievement of the specific performance indicator IP7¹, 1 did not and 17 did not receive notifications/complaints/requests, other than those dealt with separately in the Performance Standard.

9. IP8 – Overall performance indicator for 24/7 free emergency telephone service, with voice recording, called *Tel Verde*, for taking notifications and complaints regarding

malfunctions or third party actions endangering the integrity and the safe operation of the distribution system.

The IP8 general performance indicator has a specific performance indicator IP8¹, referring to DSO's obligation to keep the number of calls with a standby time less than or equal to 60 seconds for each gas year, for 3 calendar years.

In gas year 01.10.2016 - 30.09.2017, for all operators, 230,419 emergency calls were received at Tel Verde. Of the 37 natural gas distribution system operators, 26 met the condition for the achievement of the specific performance indicator IP8¹, 2 did not and 9 did not use the Tel Verde service.

10. IP9 – Overall performance indicator for the obligation to pay indemnifications due in accordance with the Performance Standard for the Gas Distribution and System Service.

The obligation to pay indemnifications due according to the provisions of the performance standard is met by the DSO at the written request of the applicant or the user, which can be submitted within maximum 60 days from the date when DSO's obligations become due. The IP9 general performance indicator has a specific IP9¹ performance indicator for DSO's obligation to pay indemnification to applicants or users in accordance with the performance standard for the natural gas distribution and system service within 30 days from the submission of their application.

In gas year 01.10.2016 - 30.09.2017, for all operators there were 7 applications for indemnification. Of the 37 natural gas distribution system operators, 2 met the condition for the achievement of specific performance indicator IP7¹ and 35 did not receive requests for payment of indemnifications. The total amount of compensations paid was Ron 10,035. Thus, S.C. Distrigaz Sud Networks S.R.L. registered 2 requests for payment of indemnifications for which the total amount paid was Ron 5,000, and S.C. Delgaz Grid S.A. had 5 requests for indemnifications, for which the total amount paid was Ron 5,035.

In order to improve the quality of the natural gas distribution and system service, the satisfaction of applicants and users was monitored out in accordance with the ISO 9001 family of standards. In this respect, reports were drawn up for the assessment and determination of customer satisfaction based on questionnaires filled out by them. Subsequently, where necessary, action plans were drawn up for corrective actions.

Monitoring of performance indicators for natural gas supply service

In order to quantify the quality of the gas supply to final customers, by **Order no. 37/2007** regarding the approval of the *Natural Gas Supply Performance Standard*, ANRE set the minimum performance level for this activity.

The table below sets out the conditions to be met as well as the indemnifications that natural gas suppliers are obliged to automatically pay to applicants/final customers, according to the provisions of the aforementioned performance standard:

Crt. No.	Guaranteed performance indicator	Penalties	
1.	IPG1 - Contracting natural gas	Exceeding the 15-day term from the receipt of the request.	Ron 30
		every additional day	Ron 5

Crt. No.	Guaranteed performance indicator	Penalties	
2.	IPG2 - Requests regarding invoices	Exceeding the 15-day term from the receipt of the request.	Ron 30
		every additional day	Ron 5
3.	IPG3 - Quality of natural gas	Exceeding the 15-day term from the receipt of the request.	Ron 50
		every additional day	Ron 10
4.	IPG4 - Requests regarding measurement	Exceeding the 30-day term from the receipt of the request.	Ron 30
		every additional day	Ron 5
5.	IPG5 - Penalties owed for the supplier's failure to meet their payment obligations	Exceeding the 20-day term from the date when the Supplier's obligations became due	Ron 150

ANRE monitored the achievement of the guaranteed performance indicators - IPG, based of the reports of the gas suppliers, in 2017 there being 458,891 requests submitted by final customers, according to the following table:

Guaranteed performance indicator	Number of requests received		Number of requests solved within the deadlines imposed by IPG		Number of applicants/final customers to whom penalties were paid		Amount of penalties paid (Ron)	
	household	Non household	household	Non household	household	Non household	household	Non household
IPG1 - Contracting natural gas	335,407	45,392	335,400	45,392	7	0	610	0
IPG2 - Requests regarding invoices	58,604	13,443	58,603	13,442	1	1	375	80
IPG3 - Quality of natural gas	140	45	139	45	1	0	140	0
IPG4 - Requests regarding measurement	5,128	732	5,128	732	0	0	0	0
IPG5 - Penalties owed for the supplier's failure to meet their payment obligations	0	0	0	0	0	0	0	0
Total	399,279	59,612	399,270	59,611	9	1	1,125	80

From the monitoring of the information provided by the licensed suppliers, it was found that for failure to comply with the performance indicators guaranteed in 2017, natural gas suppliers paid penalties to 9 household customers and 1 non-household customer, totaling Ron 1,205, as follows:

- for non-compliance with IPG 1 - *Contracting*, penalties were paid to 7 household customers, amounting to Ron 610;
- for failure to comply with IPG 2 – *Requests regarding invoices*, penalties were paid to one household customer and one non-household customer, amounting to Ron 455;
- for non-compliance with IPG 3 - *Natural gas quality*, penalties were paid to one household customer, in the amount of Ron 140.

The degree of compliance by gas suppliers with guaranteed performance indicators - IPG - in 2017, broken down between household customers and non-household customers, is illustrated in the following table:

Guaranteed performance indicator	Degree of fulfillment of the guaranteed performance indicators %	
	Household	Non-household
IPG1 - Contracting natural gas	99.998	100.000
IPG2 - Requests regarding invoices	99.998	99.993
IPG3 - Quality of natural gas	99.286	100.000
IPG4 - Requests regarding measurement	100.000	100.000
IPG5 - Penalties owed for the supplier's failure to meet their payment obligations	-	-
Total	99.998	99.998

Monitoring compliance with the time required for connections and repairs to the transmission system

The performance standard for the natural gas transmission system provides that "in order to build a new installation for connection to the NTS or to modify/relocate an existing one, TSO has the obligation to complete the works and commission the installation within the deadline set in the connection contract," and so at Transgaz level, 4 connection installations were commissioned at the request of contractual partners. Transgaz honored its contractual obligations regarding the deadline for completing the objectives, but the commissioning and operation of the projects over the deadline was due to the beneficiary of the investment who did not have all the requirements for the commissioning of a new objective (failure to complete the distribution network, missing license and operating permit issued by ANRE).

The average commissioning time of the four connection installations is 134 days.

Monitoring compliance with the time required for connections and repairs to the distribution system

In 2017 there was an increase in the volume of connection requests for all distribution operators, which is why the average time required to make a connection increased by more than 40% compared to 2016 and by 60% compared to the average in 2015-2016, which was also the basis of the estimation of the expected volumes of works to be contracted with the economic operators performing the works.

This increased volume of work, driven mainly by the real estate development phenomenon, as well as by customer orientation towards the use of natural gas instead of other traditional

fuels, had a strong impact on the capacity of authorized economic operators to meet contractual deadlines.

The economic operators authorized by ANRE, with whom the distribution system operators concluded contracts for the execution of natural gas connections, did not meet the high number of requests which led to the need to conclude new contracts with other ANRE authorized economic operators, in order to perform the connections.

The procedure of concluding works acquisition contracts is lengthy, given the specificity of the processes required by the legislation in force, leading to delays in the contracting of services and in the execution of the works; the deadlines for the issuance of building permits as well as permits, the average time to issue building permits of more than 30 days led to the legal deadlines being exceeded; this situation may also be due to the increasing number of requests for obtaining building permits for buildings, infrastructure works (similar to that of natural gas connection requirements).

The permanent change by the Territorial Administrative Units of the rules for issuance of town planning certificates, building permits for connection to gas distribution systems, with additional documents being requested and specific requirements/procedures being enforced also led to the non-observance of the deadlines required for connections and repairs in the distribution system.

The storage activity is regulated by the *Regulation for Programming, Operation and Dispatching of Underground Natural Gas Storage Facilities* (ANRGN Decision No. 1353/2004). This Regulation establishes technical, technological and commercial rules and requirements designed to ensure that storage processes are carried out in a transparent, objective and non-discriminatory manner.

The planning of the natural gas storage activity is done by storage operators based on the contracts concluded between them and the beneficiaries of the underground natural gas storage service.

For each year of storage, the deadline for the commencement of the programming of the injection/extraction of natural gas into/out of storage is the date of publication of the final capacity reallocation list specified in the Access Regulation. When setting storage schedules for each storage facility at the level of cycle, month, day, and hour, warehouse operators consider the following:

1. observing priority in accordance with the provisions of the Access Regulation;
2. technological regimes agreed with the transmission system operator for each storage facility, both for injection and extraction;
3. technological regimes optimal for the NTS for both injection and extraction.

Storage facility operators publish on their own websites the required public information, including:

- Initial list of available natural gas storage capacities for the respective injection cycle
- Registry of applications for access to underground natural gas storage facilities
- Initial storage capacity allocation list
- Initial storage capacity reallocation list
- Final storage capacity allocation list
- Final storage capacity reallocation list

- List of reallocation capacities left available
- Weekly report on the capacity of underground natural gas storage facilities.

In accordance with Art. 176 of the Law on Electricity and Natural Gas no. 123/2012, as amended and supplemented, in the event of unexpected crisis situations on the natural gas market and where the physical safety or security of persons, appliances or installations or the integrity of the system is threatened, the transmission system operator proposes to the ministry the implementation of safety measures. These measures must affect as little as possible the smooth functioning of the internal European Union market and be limited to resolving the crisis situation that generated them. The implementation of the security measures is done through a Government Decision initiated by the relevant ministry. ANRE monitors the implementation of safeguarding measures for the gas market, if adopted by the state.

In 2017 there were no unexpected crisis situations on the natural gas market.

Please note that in October 2017 *(EU) Regulation 2017/1938 of the European Parliament and of the Council of 25 October 2017 on measures to safeguard the safe use of gas supply and repealing (EU) Regulation No. 994/2010* was approved.

3.1.3. Network and connection tariffs

Natural gas transmission tariffs

The tariff system for the transmission activity includes a set of "entry-exit" tariffs for capacity booking at the entry/exit points of the transmission system, as well as a volumetric tariff for the use of the system, determined as stamp fee. This system ensures the income recognized and allowed by ANRE to a licensee in order to cover the costs considered justified for the performance of natural gas transmission during one year of the regulatory period.

The methodology for determining the regulated income, total income and regulated tariffs for the natural gas transmission activity, through which the "entry-exit" charging system was introduced, was approved by **ANRE Order no. 32/2014**.

The main legislative changes to the regulatory framework applicable in 2017 are:

1. **ANRE Order no. 10/2017** for the amendment and supplementation of the *Methodology for determining the regulated income, the total income and the regulated tariffs for the natural gas transmission activity*, approved by the ANRE Order no. 32/2014, which introduces the following provisions:

- determining the increase of the percentage of allocation of the total fixed income in the fixed component starting with 1 October 2017, starting with 60% of the fixed component, namely by 5% annually up to 85% of total revenue;
- introducing the obligation for the transmission system operator to publish information used to determine the regulated income, the total income and regulated tariffs for the gas transmission activity.

These changes allow transmission network users to predict a level of future transmission tariffs and ensure the correlation of the national regulatory framework with the European one.

2. **ANRE Order no. 55/2017** on the amendment and supplementation of the *Methodology for determining the regulated income, the total income and the regulated tariffs for natural gas transmission activity*, approved by the ANRE Order no. 32/2014.

The purpose of ANRE's adoption of this order is to adapt the national legislation to the new requirements of the European and internal legislation, namely to the provisions of the (EU) Regulations no. 460/2017 and no. 459/2017 and the provisions of the ANRE Order no. 36/31.05.2017 on the completion of the Network Code for the National Natural Gas Transmission System, approved by the ANRE Order no. 16/2013, relating to the development of incremental capacity processes.

The main changes are:

- the extension of the third regulatory period for the natural gas transmission activity until 30 September 2019, so that for the fourth regulatory period, the establishment of regulated tariffs is based on the new methodology for establishing reference prices for the natural gas transmission activity;
- the possibility of modifying the regulated durations for tangible and intangible assets made on the basis of an incremental capacity project of the transmission system included in the 10-year NTS investment and development plans correlated with the provisions of the Network Code for the National Natural Gas Transmission System.

The regulated and the total income approved for 1 October 2017 - 30 September 2018:

The structure of total income is presented in the table below:

Crt. No.	Indicator	Approved revenue October 2017 - September 2018 Ron thousand
1	OPEX	556,564.71
2	CAPEX	446,940.22
3	Regulated revenue (3=1+2)	1,003,504.93
4	Directly undertaken costs	223,891.44
5	Differences, of which:	-273,073.98
5.1	- efficiency bonus redistribution component	-112,099.89
5.2	- total revenue correction component	-173,098.51
5.3	- technological consumption correction component	-5,363.46
5.4	- correction component for directly undertaken costs	17,487.87
6	Total revenue (6=3+4+5)	954,322.39

Revenues approved for October 2017 - September 2018 decreased by 13.37% over the previous year, with the following variation structure of the revenue components:

Crt. No.	Indicator	Approved revenue October 2016 - September 2017 Ron thousand	Approved revenue October 2017 - September 2018 Ron thousand	Evolution of revenue %
	(1)	(2)	(3)	(4=3/2)
1	OPEX	566,602.07	556,564.71	-1.77%
2	CAPEX	435,732.77	446,940.22	2.57%
3	Regulated revenue (3=1+2)	1,002,334.83	1,003,504.93	0.12%
4	Directly undertaken costs	201,851.83	223,891.44	10.92%
5	Differences	-102,519.33	-273,073.98	166.36%
6	Total revenue (6=3+4+5)	1,101,667.33	954,322.39	-13.37%

Operational costs (OPEX) approved for October 2017 - September 2018, amounting to Ron 556,564.71 thousand, include the technological consumption amounting to Ron 65,083.25 thousand.

Capital costs (CAPEX) approved for October 2017 – September 2018 have the following structure:

Crt. No.	Indicator	Capital costs October 2017 - September 2018 Ron thousand
1	Depreciation	164,798.84
2	Return on revenue (invested capital) (ROR)	282,141.38
	TOTAL CAPEX	446,940.22

For the third regulatory period, the ROR rate was established by ANRE Order no. 22/2012 at 7.72%.

For the same regulatory period, a 1.4% supplement to the ROR was set in accordance with the provisions of ANRE Order no. 23/2012.

The increase in the economic efficiency of the natural gas transmission activity established by ANRE Order no. 74/2017 for each year of the third regulatory period between October 2017 and September 2019 and used in the determination of total income for October 2017-September 2018 is 3.5%.

The total revenue approved by ANRE is allocated between the fixed component and the variable component. The ratio between the fixed and the variable component of the total income approved for October 2017 to September 2018 is 1.86, respectively:

No. Crt.	Indicator	Approved revenue October 2017 - September 2018 Ron thousand	Weight in total revenue
1	Fixed revenue	620,309.55	65.00%
2	Variable revenue	334,012.84	35.00%
	Total revenue	954,322.39	

According to ANRE Order no.10/2017 for the amendment and supplementation of ANRE Order no. 32/2014, as of October 1, 2017, the fixed component of the income increased to 65%, used for setting the capacity booking tariffs, and will increase by 5% annually to 85% of total revenue.

According to ANRE Order no.31/2016 for the amendment and supplementation of ANRE Order no. 32/2014, the fixed component of the total approved income is divided equally between the group of exit points and the group of entry points.

The tariffs applied from 1 October 2017 by NTSGN TRANSGAZ S.A., the licensed natural gas operator for gas transmission activity, are approved by ANRE Order no. 74/2017 and are valid until September 30, 2018.

According to the methodology in force, the transmission tariffs are the following:

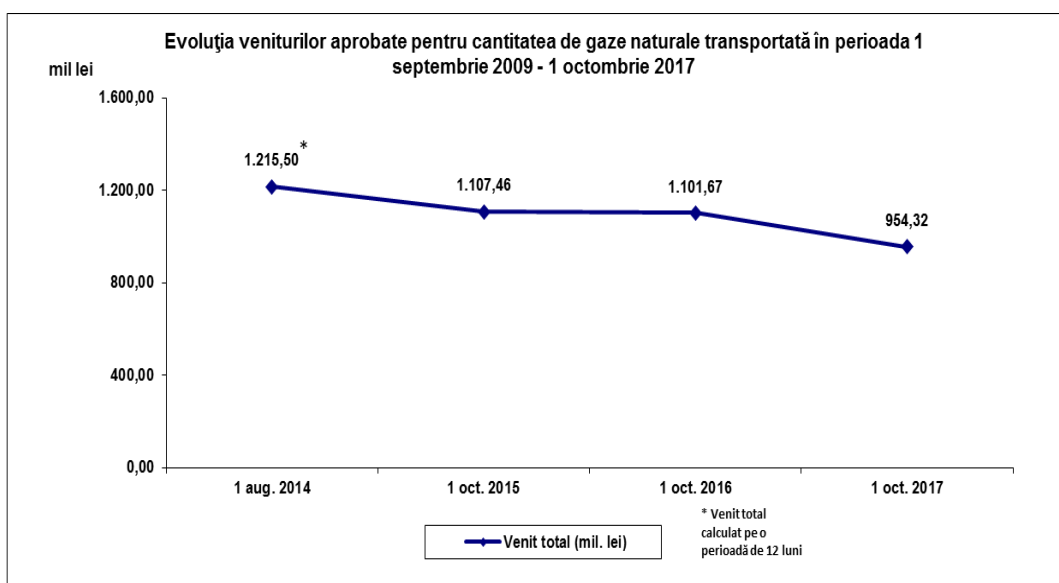
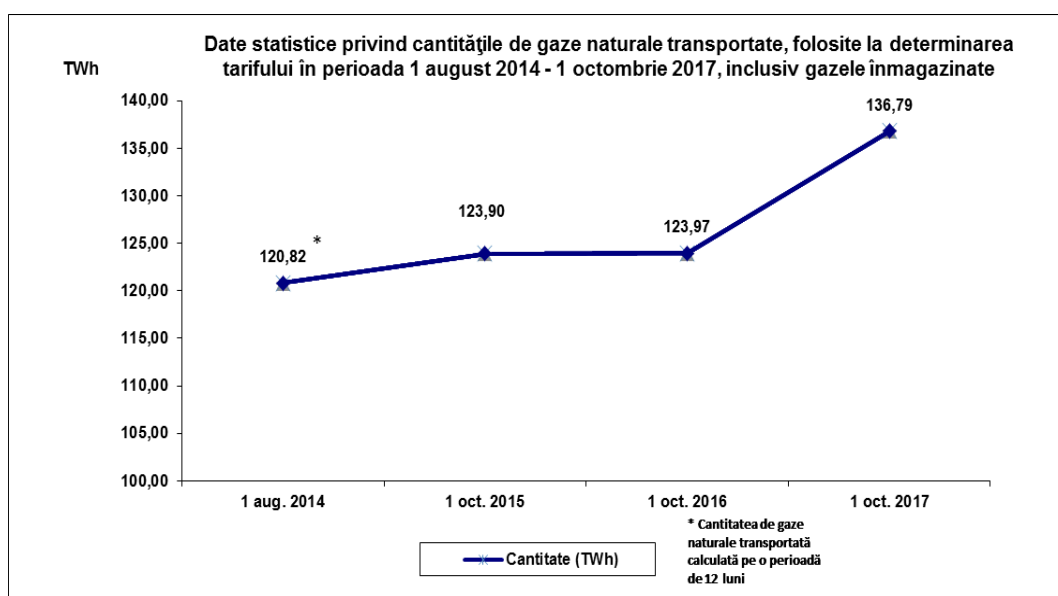
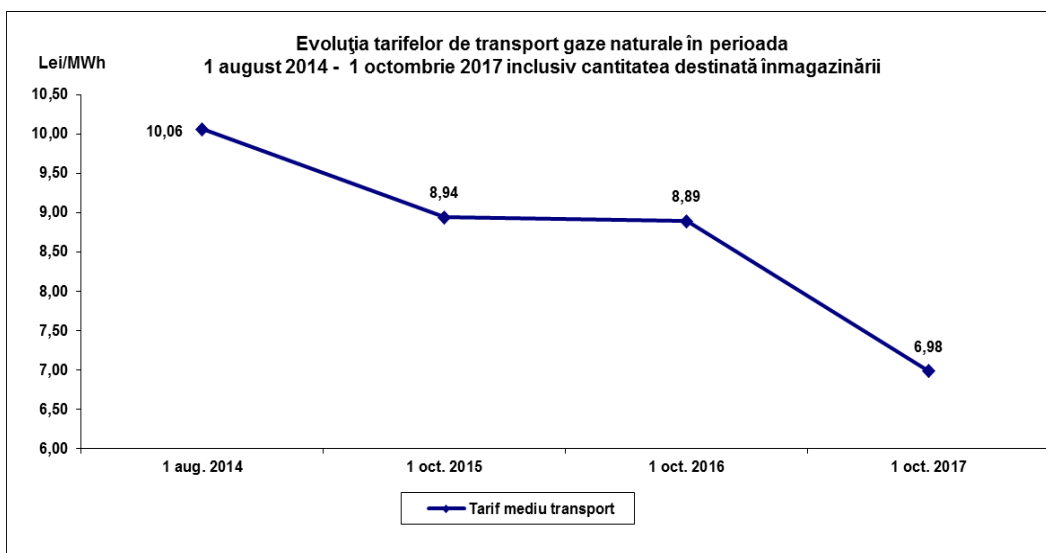
- Capacity reservation tariff per entry/exit point/group of points for firm/interruptible natural gas transmission services through the NTS (Ron/MWh/h)

Group of entry/exit points into/from the NTS		Types of gas transmission services						
		Long term	Short term					
			Annually	Quarterly		Monthly		Daily
		summer		winter	summer	winter	summer	winter
1.	The group of entry points into the natural gas transmission system in production perimeters, LNG terminals and biogas or other gas installations that meet the quality requirements for delivery /transmission to/through the gas transmission system natural gas from interconnection with other natural gas transmission systems and underground natural gas storage facilities;	1.76	1.37	3.23	1.59	3.70	3.16	7.40
2.	The group of exit points from the natural gas transmission system to direct consumers, distribution systems, underground storage facilities, upstream pipelines and other interconnected transport systems	1.74	1.36	3.19	1.57	3.66	3.12	7.32

- **volumetric tariff for the quantity of natural gas transported to the distribution systems: Ron 2.45/MWh transported;**
- **Volumetric tariff for the quantity of natural gas transported only through NTS: Ron 3.20 /MWh transported.**

When setting the tariffs referred to in b) and c) the costs with the value of the monopoly tax provided by the Government Ordinance no. 5/2013 on the establishment of special measures for the taxation of natural gas monopoly activities in the electricity and natural gas sector, with subsequent modifications were also included, representing approximately 4.1% and 26.6% of their value.

The evolution of the average transmission tariff, determined on the basis of the total approved revenue and the quantities estimated to be transported in the year for which the revenue was approved, is the following:



The methodology for reserving transport capacity and setting tariffs for the provision of natural gas transmission services through Isaccea - Negru Voda pipelines was approved by ANRE Order no. 34/2016.

Tariffs valid between 1 October 2017 and 30 September 2018 and practiced by NTSGN TRANSGAZ S.A., the natural gas licensed natural gas transmission company on Isaccea 1 - Negru Voda 1 gas pipelines are:

-Ron/MWh/h-

No. crt.	Types of gas transmission services for reserving the transmission capacity on the Isaccea 1 - Negru Vodă 1 transmission mains		Entry point Isaccea 1	Exit point group Negru Vodă 1 and exit points aimed at providing gas supply to certain municipalities in Romania
1.	Firm/interruptible long-term transmission services, contracted for one year		0.7954	0.7954
2.	Firm/interruptible short-term transmission services, contracted for one quarter	summer	0.8670	0.8670
		winter	1.2010	1.2010
3.	Firm/interruptible short-term transmission services, contracted for one month	summer	1.0022	1.0022
		winter	1.3840	1.3840
4.	Firm/interruptible short-term transmission services, contracted for one day	summer	2.0044	2.0044
		winter	2.7679	2.7679

Natural gas distribution tariffs

The tariff system for the distribution activity includes differentiated tariffs for licensed distribution operators and customer categories.

ANRE Order no. 42/2013 approved the *Methodology for setting the regulated tariffs for natural gas distribution services* starting with the third regulatory period and amending the Methodology for the approval of prices and the establishment of regulated tariffs in the natural gas sector, approved by the ANRE Order no. 22/25.05.2012, which applied from 1 April 2014 for the determination of the regulated tariffs during the third regulatory period (2013-2017).

For distribution activity, a unitary income is determined to cover unit costs for one year of the regulatory period and includes income adjustments from previous years. Based on total unit revenue, distribution tariffs are determined.

The distribution tariffs are differentiated on the following categories of customers, depending on the annual consumption:

- B.1. Consumption up to 23,25 MWh;
- B.2. Annual consumption between 23,26 MWh and 116,28 MWh;
- B.3. Annual consumption between 116,29 MWh and 1.162,78 MWh;
- B.4. Annual consumption between 1.162,79 MWh and 11.627,78 MWh;
- B.5. Annual consumption between 11.627,79 MWh and 116.277,79 MWh;
- B.6. Annual consumption over 116.277,79 MWh .

In accordance with the provisions of the *Methodology for setting regulated tariffs for gas distribution services*, 37 operators submitted to ANRE documents containing the regulated income adjustment data as well as the regulated price and tariff proposals for 2017; for 21 operators the total unit revenue and related charges were approved.

The evolution of the total regulated unit revenues for natural gas distribution services for the 2013-2017 period is:

Crt. No.	Name of the economic operator holding the gas distribution license	2013	2014	2015	2016	2017
		Total revenue per unit	Total revenue per unit	Total revenue per unit	Total revenue per unit	Total revenue per unit
		Ron/MWh				
1	S.C. AMARAD S.A.	32.12	32.41	35.65	36.63	36.66
2	S.C. BERG SISTEM GAZ S.A.	31.59	26.97	31.91	35.84	23.78
3	S.C. CONGAZ S.A.	20.73	21.30	24.53		
4	S.C. CONI S.R.L.**			24.93		24.97
5	S.C. CORDUN GAZ S.A.	30.75	29.25	33.92	22.84	20.35
6	S.C. COVI CONSTRUCT 2000 S.R.L.	35.68	30.84	23.52	21.53	17.00
7	S.C. C.P.L. CONCORDIA FILIALA CLUJ ROMÂNIA S.R.L.	34.08	36.01	38.82	40.48	33.61
8	S.C. DESIGN PROIECT S.R.L.**	36.74	30.84	29.10	27.03	20.13
9	S.C. DISTRIGAZ SUD REȚELE S.R.L.	22.86	24.59	24.51	23.92	21.61
10	S.C. DISTRIGAZ VEST S.A.	38.44	31.00	33.44	31.88	30.51
11	S.C. E.ON GAZ DISTRIBUȚIE S.A./DELGAZ S.A.*	32.36	35.12	35.13	32.03	32.03
12	S.C. EURO SEVEN INDUSTRY S.R.L.**	23.49	23.84	22.51	20.45	16.02
13	S.C. GAZ EST S.A.	25.64	26.08	30.99	35.38	38.32
14	S.C. GAZ SUD S.A.**	27.40	28.09	34.71		36.75
15	S.C. GAZ NORD EST S.A.	10.14	7.52	3.60	1.94	20.27
16	S.C. GAZ VEST S.A.	39.38	38.21	40.45	36.49	31.95
17	S.C. GAZMIR IAȘI S.R.L.**	35.90		36.11	41.29	35.59
18	S.C. GRUP DEZVOLTARE REȚELE S.A.	21.57	21.98	27.86		
19	S.C. HARGAZ HARGHITA GAZ S.A.	25.08	25.72	30.34	24.49	35.14

Crt. No.	Name of the economic operator holding the gas distribution license	2013	2014	2015	2016	2017
		Total revenue per unit	Total revenue per unit	Total revenue per unit	Total revenue per unit	Total revenue per unit
		Ron/MWh				
20	S.C. INTERGAZ S.R.L.	12.47	9.70	3.78		
21	S.C. INSTANT CONSTRUCT S.R.L.	38.39	37.76	39.29	34.23	35.57
22	S.C. MĂCIN GAZ SRL	32.19	34.39	36.96	34.10	31.84
23	S.C. MEGAconstruct S.A.**	27.60	25.76	35.49	38.81	29.76
24	S.C. MEHEDIŢI GAZ S.A.**	28.38	28.05	29.87	36.63	42.49
25	S.C. MIHOC OIL S.R.L.**	21.76	22.83	29.78	27.26	24.86
26	S.C. M.M. DATA S.R.L	33.45	34.39	34.88	35.52	26.02
27	S.C. NORD GAZ S.R.L.**	10.76	10.41	12.11	8.10	8.93
28	S.C. OLIGOPOL S.R.L.	23.44	22.66	21.13	18.17	30.55
29	S.C. OTTO GAZ S.R.L.**	17.76	16.47	16.36	12.15	9.87
30	S.C. PREMIER ENERGY S.R.L.**	43.19	42.32	43.97	36.40	33.59
31	S.C. PRISMA SERV COMPANY S.R.L.**	23.37	24.12	26.84	26.07	28.52
32	S.C. PROGAZ P&D S.A.	25.95	25.55	27.81	22.51	35.08
33	S.N.G.N.ROMGAZ S.A.	41.47	42.15	42.45	47.55	47.99
34	S.C. SALGAZ S.A.	26.81	27.54	31.53	25.23	33.92
35	S.C. TEHNOLOGICA RADION S.R.L	45.62	44.16	43.21	36.24	36.39
36	S.C. TEN GAZ S.R.L/ NOVA POWER & GAS - S.R.L.	43.04	40.30	44.18	44.74	43.92
37	S.C. TIMGAZ S.A.**	30.98	33.92	42.06	42.78	43.16
38	S.C. TULCEA GAZ S.A.	17.62	19.13	24.71	25.83	17.72
39	S.C. VEGA 93 S.R.L.**	34.06	34.60	36.26	38.96	38.86
40	S.C. WIROM GAS S.A.**	24.47	24.07	25.97	23.36	23.38

* For 2017, the regulated tariffs for the distribution service provided by DELGAZ GRID - S.A. remained unchanged

** For these operators, the data related to the regulated tariffs for the provision of the distribution service were analyzed in 2017 but the tariffs were approved on 10 January 2018.

The total unit revenue approved includes the exceptional corrections provided by the regulatory framework.

The evolution of the annual quantities actually distributed by licensed operators during the 2013-2017 period, expressed in MWh, is presented in the table below:

No	Name of the economic operator holding the gas distribution license	2013	2014	2015	2016	2017
1	S.C. AMARAD S.A.	32,779	28,938	32,821	38,418	42,449
2	S.C. BERG SISTEM GAZ S.A.	81,760	61,685	70,133	75,585	80,754
3	S.C. CONGAZ S.A.	2,768,297	2,787,943	2,480,823		
4	S.C. CONI S.R.L.			51	1,016	1,431
5	S.C. CORDUN GAZ S.A.	28,128	39,236	50,885	68,335	70,043
6	S.C. COVI CONSTRUCT 2000 S.R.L.	170,328	240,447	293,136	329,063	338,113
7	S.C. C.P.L. CONCORDIA FILIALA CLUJ ROMÂNIA S.R.L.	281,130	282,181	291,207	324,191	359,254
8	S.C. DESIGN PROIECT S.R.L.	4,461	5,750	6,233	8,007	10,456
9	S.C. DISTRIGAZ SUD REȚELE S.R.L.	40,825,736	36,077,160	42,721,683	43,355,164	46,827,234
10	S.C. DISTRIGAZ VEST S.A.	210,418	398,010	369,456	455,973	352,659
11	S.C. E.ON GAZ DISTRIBUȚIE S.A./DELGAZ S.A.	24,750,901	22,406,324	24,001,267	25,265,046	25,589,555
12	S.C. EURO SEVEN INDUSTRY S.R.L.	44,645	41,806	52,545	64,987	79,486
13	S.C. GAZ EST S.A.	383,234	350,664	339,912	361,926	361,152
14	S.C. GAZ SUD S.A.	422,512	459,450	486,009	496,631	698,467
15	S.C. GAZ NORD EST S.A.	31,374	31,183	31,560	33,386	37,967
16	S.C. GAZ VEST S.A.	339,166	346,963	355,239	395,197	434,376
17	S.C. GAZMIR IAȘI S.R.L.	37,616	59,225	66,678	78,585	82,895
18	S.C. GRUP DEZVOLTARE REȚELE S.A.	153,347	157,406	155,200		
19	S.C. HARGAZ HARGHITA GAZ S.A.	72,965	67,050	71,610	79,615	112,667
20	S.C. INTERGAZ S.R.L.	323,463	272,706	231,015		
21	S.C. INSTANT CONSTRUCT S.R.L.	8,962	9,782	10,431	13,903	16,514

No	Name of the economic operator holding the gas distribution license	2013	2014	2015	2016	2017
22	S.C. MĂCIN GAZ SRL	14,765	15,259	15,484	16,737	18,514
23	S.C. MEGACONSTRUCT S.A.	218,482	281,129	350,965	407,569	409,264
24	S.C. MEHEDIŢI GAZ S.A.	40,131	42,552	57,793	97,963	120,840
25	S.C. MIHOC OIL S.R.L.	12,013	13,875	16,174	20,890	28,604
26	S.C. M.M. DATA S.R.L.	13,312	13,496	14,003	16,059	17,994
27	S.C. NORD GAZ S.R.L.	189,081	179,255	189,500	197,958	203,768
28	S.C. OLIGOPOL S.R.L.	9,892	9,715	10,106	11,054	13,153
29	S.C. OTTO GAZ S.R.L.	181,451	186,990	190,398	203,398	212,612
30	S.C. PREMIER ENERGY S.R.L.	481,772	499,848	507,200	525,004	580,824
31	S.C. PRISMA SERV COMPANY S.R.L.	19,696	28,959	29,527	36,450	41,871
32	S.C. PROGAZ P&D S.A.	41,902	43,835	47,187	54,454	64,872
33	S.N.G.N.ROMGAZ S.A.	2,043	2,363	3,503	7,947	7,625
34	S.C. SALGAZ S.A.	54,754	50,183	57,684	59,164	60,859
35	S.C. TEHNOLOGICA RADION S.R.L.	13,352	19,887	30,193	34,785	33,434
36	S.C. TEN GAZ S.R.L/ NOVA POWER & GAS - S.R.L.	33,648	42,605	44,477	48,679	55,779
37	S.C. TIMGAZ S.A.	32,457	29,520	34,274	42,199	55,491
38	S.C. TULCEA GAZ S.A.	302,021	313,056	327,503	327,027	346,535
39	S.C. VEGA 93 S.R.L.	17,385	18,703	20,521	24,740	29,833
40	S.C. WIROM GAS S.A.	581,652	615,631	669,000	686,238	777,403

For 2017, the regulated tariffs of the two major licensed operators, Distrigaz Sud Retele SRL, respectively Delgaz Grid SA, are the following:

Distrigaz Sud Rețele SRL

Client category	Ron/MWh
1. Distribution tariffs	
B.1. Consumption up to 23.25 MWh	28.24
B.2. Annual consumption between 23.26 MWh and 116.28 MWh	28.23
B.3. Annual consumption between 116.29 MWh and 1,162.78 MWh	26.88
B.4. Annual consumption between 1,162.79 MWh and 11,627.78 MWh	25.81
B.5. Annual consumption between 11,627.79 MWh and 116,277.79 MWh	24.06
B.6. Annual consumption above 116,277.79 MWh	13.83
2. Distribution and proximity tariff	
B.6.1. Annual consumption above 250,000 MWh	5.21

Delgaz Grid SA

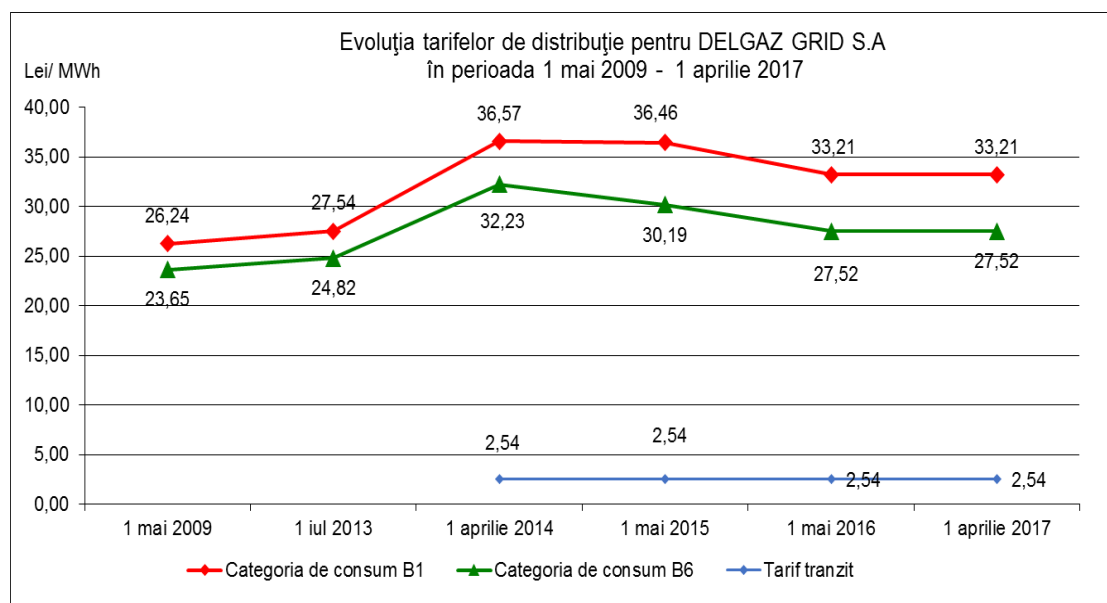
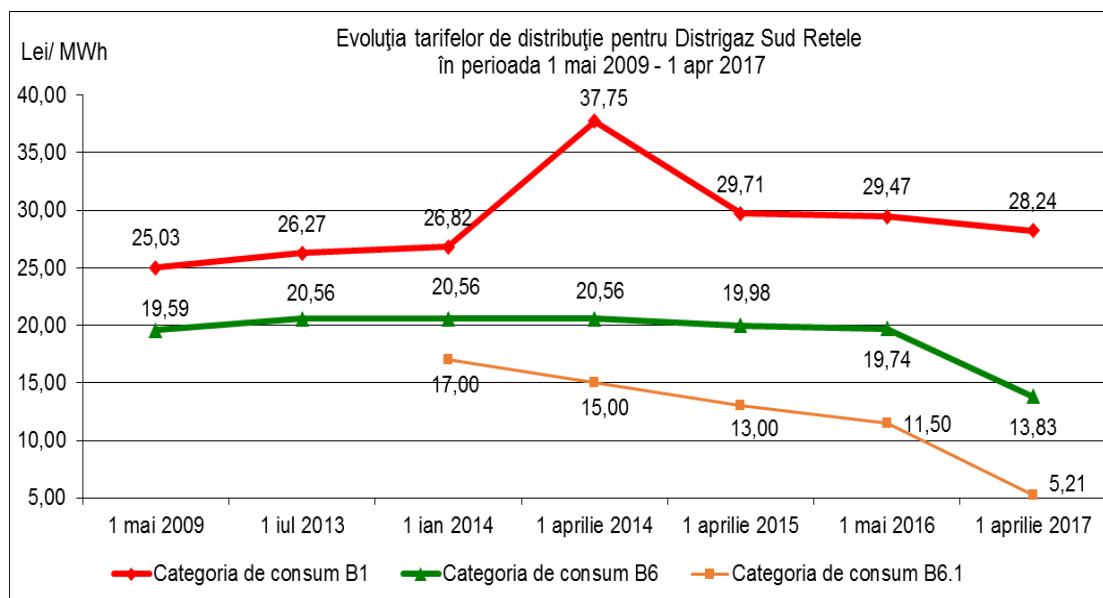
Client category	Ron/MWh
1. Distribution tariffs	
B.1. Consumption up to 23.25 MWh	33.21
B.2. Annual consumption between 23.26 MWh and 116.28 MWh	32.06
B.3. Annual consumption between 116.29 MWh and 1,162.78 MWh	31.54
B.4. Annual consumption between 1,162.79 MWh and 11,627.78 MWh	31.11
B.5. Annual consumption between 11,627.79 MWh and 116,277.79 MWh	30.46
B.6. Annual consumption above 116,277.79 MWh	27.52
2. Transit distribution tariff*	2.54

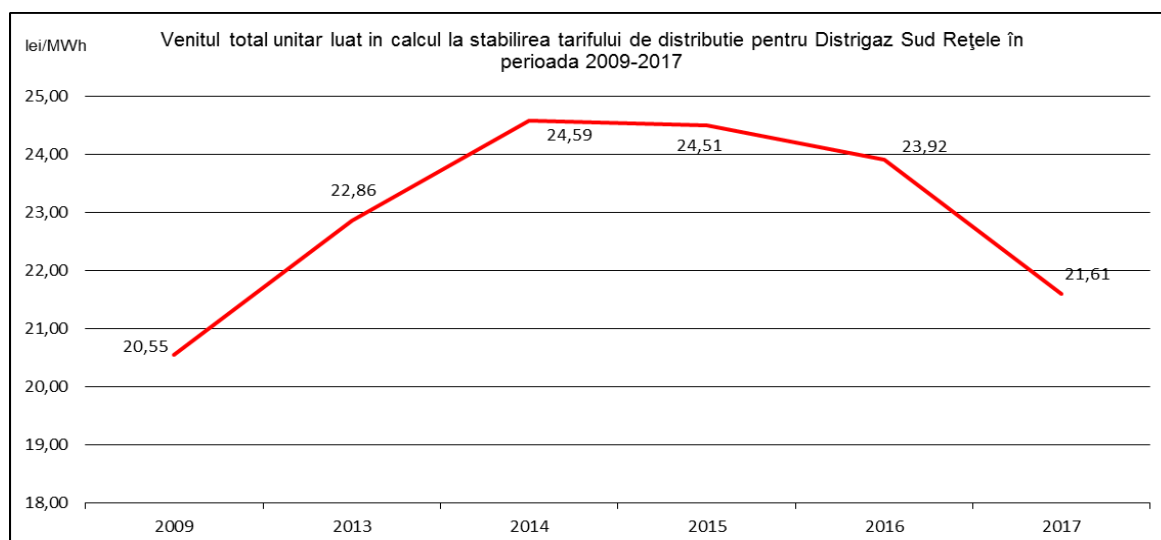
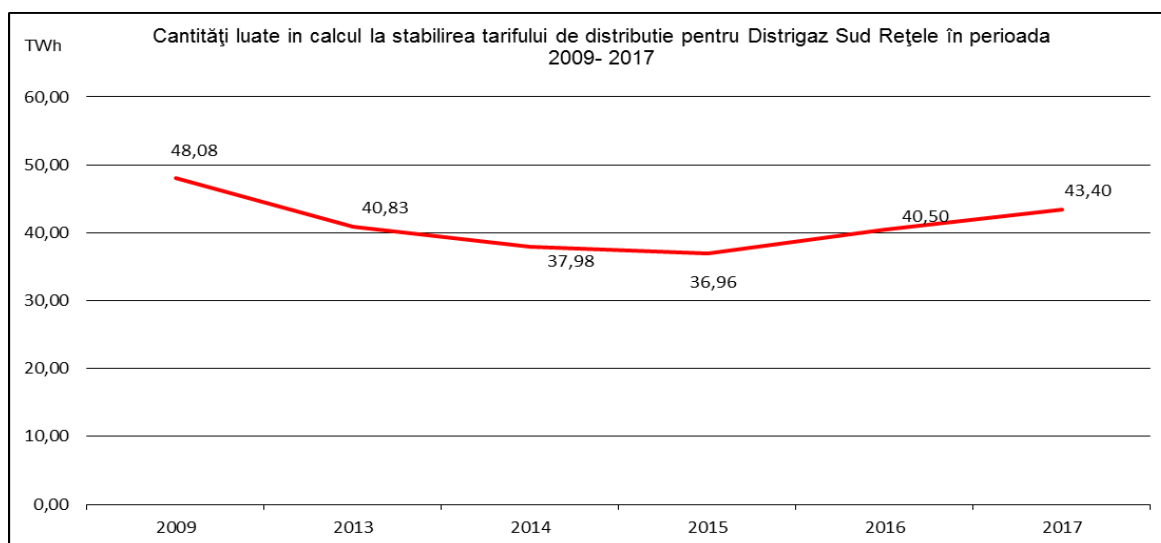
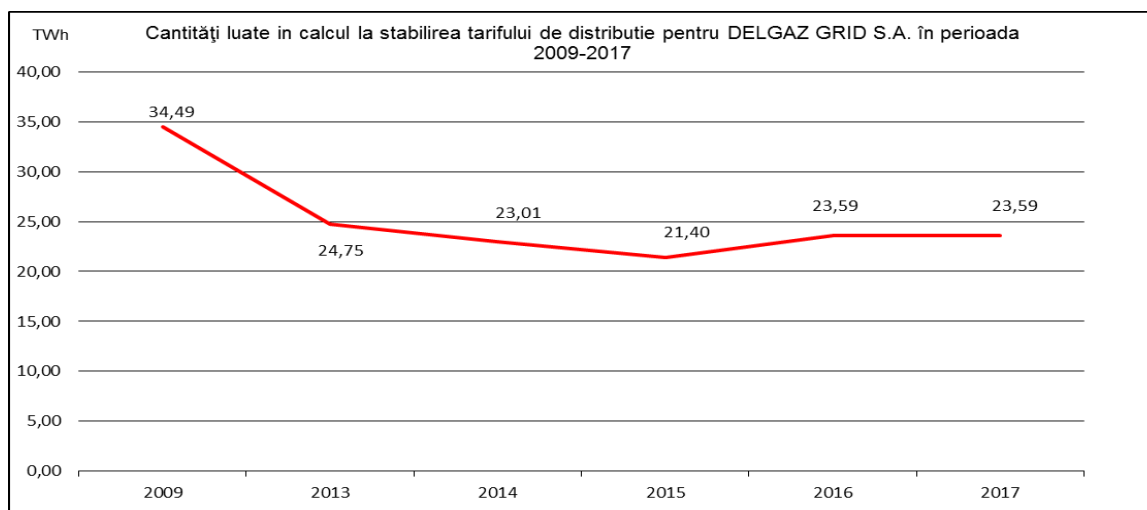
* Transit distribution tariff - Tariff for the use of the distribution system of another operator who was requested access or who approved access for natural gas transmission for the supply to final customers in their own portfolio.

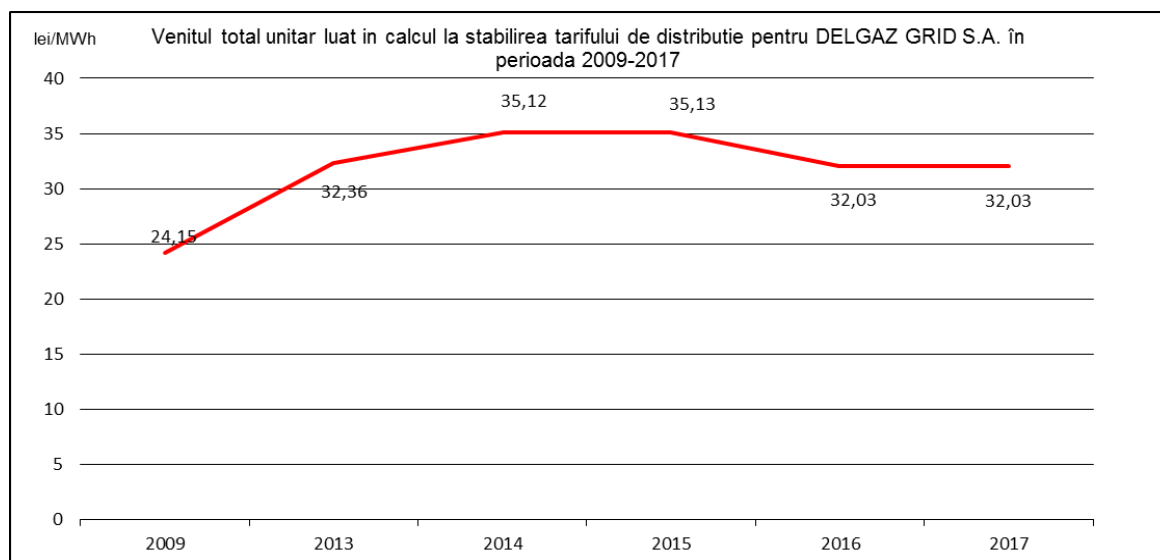
The regulated tariffs for the natural gas distribution service provided by Delgaz Grid S.A. (E.ON Gaz Distribuție S.A.) remained at the level approved for 2016 because during the 2015-2016 period a control was carried out at Delgaz Grid S.A. which aimed to verify the regulated asset base of the distribution activity. The conclusion in the verification report was that the establishment of unitary regulated income, total unit income and distribution tariffs

for each year of the third regulatory period was based on erroneous data transmitted by the operator. According to the provisions of the Methodology approved by the ANRE Order no. 42/2013, as further amended and supplemented, the approved distribution tariffs will be modified by reimbursement.

The charts below reflect the evolution over time of gas distribution tariffs for the two operators from 1 May 2009 to the present day.







Storage tariffs

In 2017, the main legislative amendment was provided by ANRE Order no. 4/2017 regarding the approval of the *Methodology for determining the regulated income, the total income and the regulated tariffs for the natural gas storage activity*. The main changes are:

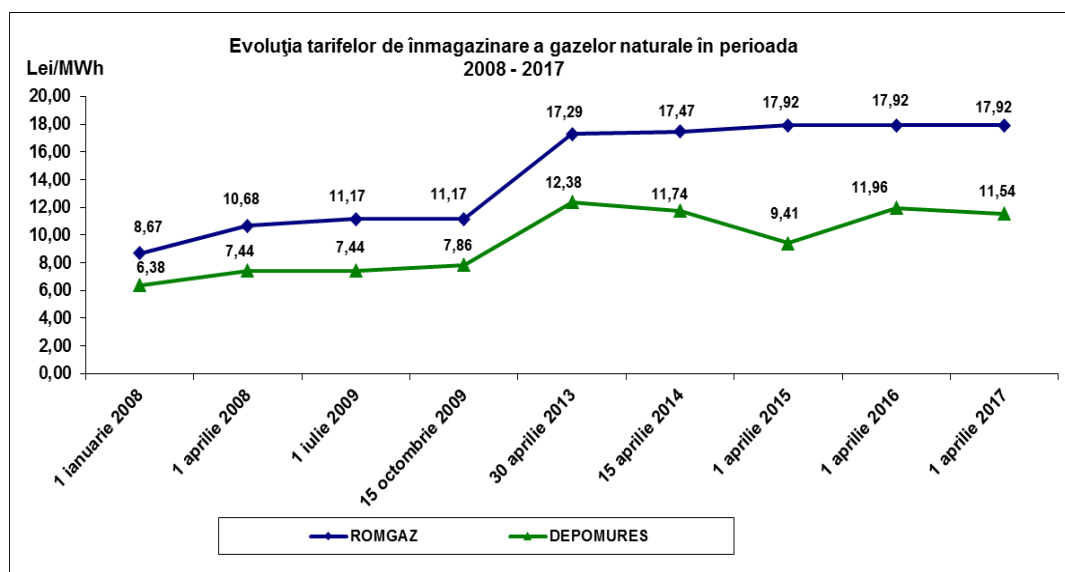
- the extension of the third regulatory period to 31 March 2018,
- the amendment to the deadline for submission of the proposal for determining the total revenue, regulated revenue and underground storage tariffs for the first year of the regulatory period and substantiating them at least 120 days before the start of the regulatory period,
- the determination of the total income and regulated income,
- the establishment of a maximum level of recognition of costs incurred by a licensee for the storage system operation with the leasing of system objectives from the owner,
- the annual recognition of solely the value of the investments received, put into service or put into use and registered in the financial accounting,
- the establishment of a way of determining the capacity booking tariff for short-term natural gas storage services,
- the establishment of a way to determine and treat inflation recognition,
- the two-year adjustment of total income and regulated income, based on closing dates for financial years,
- the request for adjustment of the total income and the regulated income can be achieved if a period of up to 3 years has elapsed between the time when the application was submitted and the occurrence or amendment of the adjustment elements,
- the adjustment elements requested outside the adjustment deadline provided in the methodology, at least 90 days before the beginning of the year of the regulatory period, will not be updated,
- the obligation to request an annual adjustment of the total income, regulated income and underground storage rates for the corrected part of the invested capital, but also in case of elements of adjustment that would reduce the total income and the regulated income.

The Underground Storage Tariff Scheme includes a set of revenue caps that set a total regulated income that covers the total cost of doing business during one year of the regulatory period. ANRE has approved, for the licensed operators for underground storage, namely DEPOMUREȘ S.A. Târgu Mureș and SNGN ROMGAZ S.A. Mediaș through the Ploiesti

branch, the total income, the regulated income, the fixed capacity reservation component and the volumetric, injecting and subterranean natural gas extraction components related to the tariff for the underground storage service, for the April 2017 - March 2018 period, through ANRE Orders no. 19/2017 and no. 20/2017.

The current tariffs for the natural gas storage activity practiced at the date of this report by licensed operators in the natural gas sector are the following:

Tariff component	MU	Societatea Națională de Gaze Naturale Romgaz S.A. Mediaș	Societatea “Depomureș” - S.A. Târgu Mureș
Fixed capacity-reservation component	Ron / MWh / full storage cycle	13.68	7.37
Volumetric component for gas injection	Ron/MWh	2.37	2.93
Volumetric component for gas extraction	Ron/MWh	1.87	1.24



For the 2014-2015 period, for SNGN Romgaz SA Mediaș, the total annual revenue, the revenue representing the sum of the costs recognized by the operator, remained constant, equal to the one approved for 2013, the average unit tariff variations being generated only by the structure of the capacity level reservation, available injection capacity and extraction capacity.

3.1.4. Cross-border matters

Access to cross-border infrastructure, issues related to cooperation in the field

During 2017, in order to facilitate access to cross-border infrastructure, ANRE issued a series of orders and decisions;

- **ANRE Order no. 36/17.05.2017 approving the supplementation of the Network Code for the National Natural Gas Transmission System, approved by the ANRE Order no. 16/2013**, aligned the domestic rules to the European ones, meeting the requirements of the planned investments in this sector. Increasing the capacity of a point or creating new points of entry into the NTS is the transmission operator's response to demands that come to bring new sources of supply, be it new gas production points or an increase in cross-border exchanges.

When drawing up this regulation, ANRE took into account the proposals of S.N.T.G.N. TRANSGAZ S.A. on the processes of allocating the incremental transport capacity envisaged in the NTS development projects for taking over natural gas from the Black Sea production perimeters as well as those of *(EU) Commission Regulation 2017/459 of 16 March 2017 establishing a network code for mechanisms for allocation of capacity in the transport of gas and repealing (EU) Regulation No. 984/2013*, describing the mechanisms for allocating the incremental transport capacity as well as the related processes for the interconnection points.

- **Decision no. 772/29.05.2017 - approving the provisions within the competence of ANRE within the Handbook of the open-ended season procedure to be carried out jointly by Societatea Națională de Transport Gaze Naturale „Transgaz” – S.A. Mediaș, „Földgázszállító Zártkörűen Működő Részvénytársaság” – FGSZ Ltd. and Gas Connect Austria with a view to allocating incremental capacity to the interconnection point of SNTGN Romania with the Hungarian natural gas transmission system at Csanádpalota and the point of interconnection of the transmission system of natural gas in Hungary with the natural gas transmission system in Austria from Mosonmagyaróvár.**

At European level, the process of reserving transport capacity at future points of entry/exit to/from natural gas transmission systems (incremental capacity processes) was not regulated until the adoption of *(EU) Regulation 459/2017 on establishing a network code for the mechanisms for allocating transport capacity in natural gas transmission systems and repealing (EU) Regulation No. 984/2013 (the Regulation)*, which entered into force on 6 April 2017.

Taking into account the provisions of the *Regulation*, SNTGN TRANSGAZ SA, "Földgázszállító Zártkörűen Működő Részvénytársaság" FGSZ Ltd. Hungary and Gas Connect Austria have developed the Handbook of the open season procedure to be developed jointly for the purpose of allocating incremental capacity the interconnection of the National Gas Transmission System in Romania with the Hungarian natural gas transmission system at Csanádpalota and the interconnection point of the natural gas transmission system in Hungary with the natural gas transmission system in Austria from Mosonmagyaróvár.

The final version of the Handbook incorporated the proposals and comments made by economic operators in the gas sector following international public consultation and work meetings. Considering that the final version of the Handbook complies with the content requirements of art. 28 par. (1) of *(EU) Regulation No. 2017/459*, ANRE approved, by Decision no. 772/29.05.2017, the provisions of the Handbook of the open season procedure to be carried out jointly by the three transmission system operators, provisions within its competence, with a view to allocating incremental capacity to the interconnection points between the three transmission systems.

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- **Decision no. 1123/28.07.2017 - regarding the approval of the provisions within ANRE's competence stipulated by the Handbook of the open-ended season procedure to be carried out jointly by Transgaz S.A. Mediaş and "Földgázzállító Zártkörűen Működő Részvénytársaság" - FGSZ ZRT with a view to allocating incremental capacity to the interconnection point of the Romanian National Gas Transmission System with the Hungarian natural gas transmission system from Csanádpalota.**

Following the issuance of ANRE Decision no. 772/29.05.2017, based on a letter from the Hungarian natural gas operator FGSZ sent to all parties involved in the RO-HU-AT project, FGSZ withdrew from further involvement in the project on the HU-AT route due to economic reasons.

At the same time, FGSZ also announced that it remains involved in the RO-HU project, as confirmed by the decision of the Hungarian Regulatory Authority MEKH. Therefore, SNTGN Transgaz SA submitted to ANRE for approval, at the same time as publishing on its own site for public consultation, the Handbook for the open season procedure for the RO-HU project, as part of the extended RO-HU-AT project specifying that, as regards the elements related to the obligations and commitments of the Romanian party, they remain unchanged from the original handbook, the changes being the removal of the references and the conditionalities related to the HU-AT part of the original project. For this reason, and taking into account the circumstances that led to the submission of this new documentation for approval, even if the analysis revealed the retention of the elements considered in the approval of the initial handbook, ANRE approved a new version thereof.

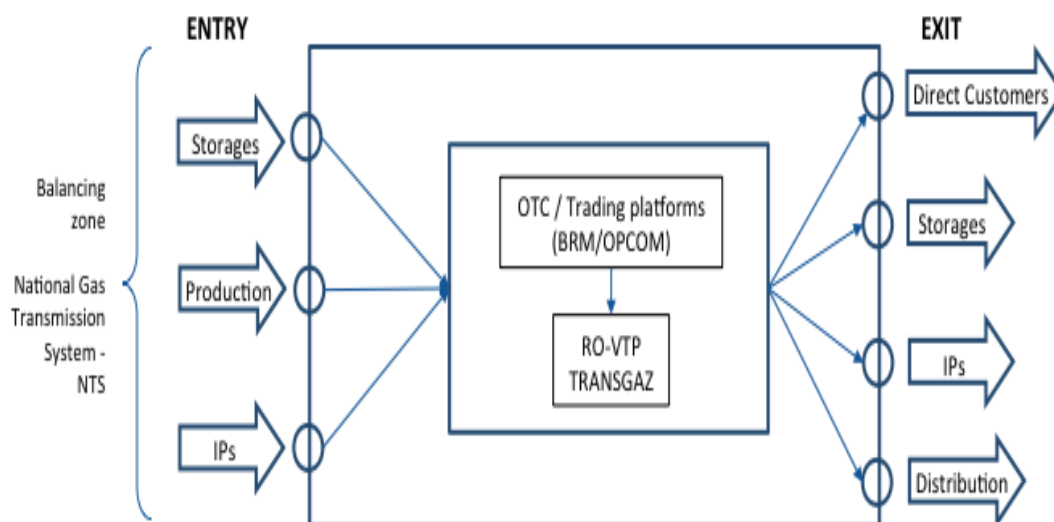
- **Decision no. 1872/19.12.2017 - on the establishment of waivers from the provisions of the Handbook for the Open Season Procedure carried out jointly by Transgaz S.A. Mediaş and "Földgázzállító Zártkörűen Működő Részvénytársaság" - FGSZ ZRT in order to allocate incremental capacity to the interconnection point of the Romanian National Gas Transmission System with the Hungarian natural gas transmission system from Csanádpalota, approved by the ANRE President Decision no. 1123/2017.**

At the initiative of SNTGN Transgaz SA Mediaş, on the basis of the request submitted by "Földgázzállító Zártkörűen Működő Részvénytársaság" - FGSZ ZRT, the extension of the registration deadline for applicants under the open-ended seasonal procedure carried out jointly with the transmission operator system operator Földgázzállító Zártkörűen Működő Részvénytársaság - FGSZ ZRT, Hungary, the remaining parameters considered in the initial handbook remain unchanged.

- In applying the provisions of **ANRE Order no. 36/17.05.2017** regarding the supplementation of the Network Code for the National Natural Gas Transmission System approved by ANRE Order no. 16/2013, as further amended and supplemented, Notice no. 13/22.06.2017 was issued - *SNTGN TRANSGAZ SA Procedure regarding the Incremental Capacity Reservation in the National Gas Transmission System through carrying out of incremental capacity processes whose object is points of entry/exit in/from the national gas transmission system, other than the interconnection points to be created/developed through the projects included in the investment plans and the development of the National Gas Transmission System for the next 10 years.*

Also in 2017, at the initiative of ANRE and SNTGN TRANSGAZ SA, a working group was established with the participation of ACER, ENTSO-G, ANRE, NTSGN TRANSGAZ SA and DG ENERGY, set up to implement the harmonized EU market rules in terms of the regime for the entry/exit of natural gas in/from the NTS, based on transactions at a single central point of virtual trading (PVT) and their transposition into the NTS Network Code.

As a first step, the working group assessed the degree of implementation of European regulations, on the basis of which it drew up a concept paper that presents the principles behind the entry/exit system with a central point of virtual trading, a system to be implemented on the natural gas market in Romania. Schematically, the system was represented in the concept document as such:



The Working Group proposed that the new proposed system be completed by the beginning of April 2019 and fully functional at the beginning of the 2018-2019 gas year.

The document in its various stages has been subject to public consultation, based on the observations and proposals made by a large part of the natural gas market participants (licensed economic operators in the country or other EU Member States, final customers), so as to achieve a clear and simple concept to be implemented in the natural gas market in Romania.

Monitoring of investment plans

Law on Electricity and Natural Gas 123/2012, as amended and supplemented, requires the transmission system operator, natural gas distributors, storage operators and LNG operators to prepare and submit to ANRE investment plans for the development of the transmission, distribution and storage system, safely, economically and environmentally friendly. According to the gas pricing methodologies, the costs of regulated activities, including capital, are recovered through regulated tariffs only to the extent that they have been carried out in a prudent manner, i.e. it is demonstrated that they are timely, effective and reflect market price conditions.

Monitoring the implementation of the development plan for the national gas transmission system

In accordance with Art. 125 of the Law on Electricity and Natural Gas no. 123/2012, the transmission system operator has the obligation to develop 10-year investment and system development plans in line with the current state and future evolution of natural gas consumption and sources, including imports and exports of natural gas. The plans are approved by ANRE.

The development plan proposed by the TSO has to meet the requirements of the European energy policy regarding:

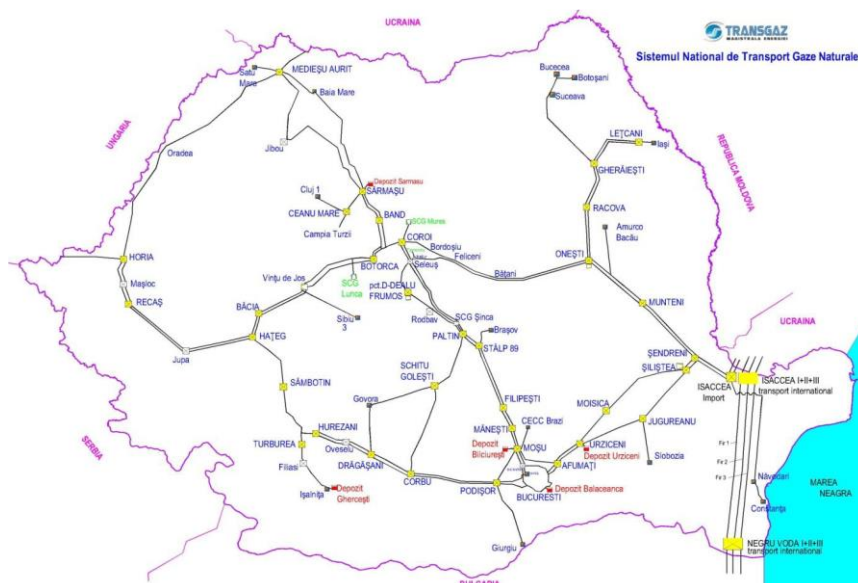
- Ensuring the security of gas supply;
- Increasing the degree of interconnection of the national gas transmission network to the European network;
- Increasing the flexibility of the national gas transmission network;
- Liberalization of the natural gas market;
- Creating a single market for integrated natural gas at the European Union level.

The Development Plan of the National Gas Transmission System (PDNTS) for the 2017-2026 period was approved by ANRE Decision no. 910/22.06.2017. It includes the important projects for the development of the national gas transmission system and for the access of market participants. In view of the latest developments in European natural gas transmission routes, two new sources of natural gas supply, those from the Caspian Sea region and those recently discovered in the Black Sea have been highlighted. Thus, the strategic projects proposed by the TSO for the development of the NTS during the 2017-2026 period considered:

- ensuring an adequate degree of interconnection with the neighboring countries' systems;
- creation of regional gas transportation routes to ensure the transmission of natural gas from the two new sources of supply;
- creating the infrastructure and capacity required for the overtake and transport of natural gas from offshore Black Sea perimeters in order to capitalize on the Romanian market and other markets in the region;
- expansion of natural gas transmission infrastructure to improve the supply of natural gas to deficit areas;
- creation of a single integrated market at EU level.

The major investment projects proposed by TSO in PDNTS 2017-2026 are presented in the following table:

Denumire obiectiv	Dn (mm)	L (km) 2017-2026	Valoare estimată 2017-2026 (Mil. Euro)	Realizări 2013 -2017 (Mil. Euro)	2018 (mil. EUR)	2019	2020	2021	2022	2023	2024-2026	statut proiect
7.1 Dezvoltarea pe teritoriul României a Sistemului Național de Transport Gaze Naturale pe Coridorul Bulgaria – România – Ungaria - Austria	800	529	547,4 din care ETAPA I 478,6	8.52	165.3	260.12	44.65					FID
			ETAPA II 68,80	0.1	0	0	0	27.52	41.28			A non FID
7.2 Dezvoltarea pe teritoriul României a Coridorului Sudic de Transport pentru preluarea gazelor naturale de la țărmul Mării Negre	1000/1200	307	278.3	0.94	0.06	108.7	188.7					A non FID
7.3 Interconectarea sistemului național de transport gaze naturale cu conducta de transport internațional gaze naturale T1 și reverse flow Isaccea	800	77.5	65	0.26	3.4	96.9						FID
7.4 Dezvoltări ale SNT în zona de Nord – Est a României în scopul îmbunătățirii aprovizionării cu gaze naturale a zonei precum și a asigurării capacităților de transport spre Republica Moldova	700	165	131.7	1.59	22.7	128.4						A non FID
7.5 Amplificarea coridorului bidirecțional de transport gaze naturale Bulgaria -Romania - Ungaria - Austria (BRUA faza 3)	800	645	530	0	0	0	110	135	135	150		LA non FID
7.6 Proiect privind noi dezvoltări ale SNT în scopul preluării gazelor din Marea Neagră.	500	25	9	0.12	3.5	5.52						A non FID
7.7 Interconectarea România - Serbia	500	74	40	0.01	1.0	20.7	20.69					A non FID
7.8 Modernizare SMG Isaccea 1 și SMG Negru Vodă 1	0	0	13.9	0.01	0.1	13.8						FID
TOTAL proiecte majore		1,822.50	1,615.30	11.55	196.06	634.14	364.04	162.52	176.28	150	0	



By implementing intelligent control, automation, communications and network management systems, TSO aims to maximize the energy efficiency of the transmission service by creating a reliable and flexible system. To this end, according to the TSO explanations, major projects of common interest were planned in the PDSN for the 2017-2026 period, as a result of analyses of the consumption and production forecasts in the 2016 European Union reference scenario, regarding the evolution until 2050, and the World Energy Outlook 2016, an International Energy Agency document.

1. 1. BRUA Project - Development of the National Gas Transmission System on the Bulgaria - Romania - Hungary - Austria Corridor in Romania.

Project description:

The project aims at interconnecting the NTS with the similar systems of Bulgaria and Hungary and consists in the construction of a new natural gas pipeline linking the Podișoara Technological Node and the Horia Gas Metering Station (GMS). Its implementation is carried out in two phases, as follows:

Phase I „ Development of natural gas transport capacities on the Podișoara - Receaș Corridor”, with a projected value of EUR 478.6 million, consisting of the following investment objectives:

- gas pipeline Podișoara-Receaș 32 "x 63 bar, 479 km long;
- three natural gas compressor stations (SC Podișoara, SC Bibești and SC Jupa) each station being equipped with two compressing aggregates (one in operation and one in reserve), with the possibility of bidirectional gas flow.

Phase II „ Expanding Romania's natural gas transmission capacities from Receaș to Horia”, with a projected value of EUR 68.8 million, consisting of the following investment objectives:

- natural gas pipeline Receaș-Horia 32 "x 63 bar, 50 km long;
- amplification of the three natural gas compressor stations (SC Podișoara, SC Bibești and SC Jupa) by mounting an additional compressing aggregate in each station;

- amplification of GMS Horia Natural Gas Station.

Given the status of a project of common interest from the first PCI list, OTS obtained a grant from the Connecting Europe Facility (CEF) for the design of the three compression stations.

The current state of the project:

- In October 2015, Transgaz filed an application at the grant application session to obtain a grant for the execution work of BRUA Phase I.
- On 12 October 2015, the application for funding was submitted to the Innovation and Networks Executive Agency (INEA) portal.
- On 19.01.2016 the CEF Committee validated the list of projects proposed to receive financial assistance through the CEF mechanism.
- On September 9, 2016, the financing agreement was signed under the Connecting Europe Facility mechanism and received a grant of EUR 179.3 million for the first phase of the BRUA project, accounting for 40% of the eligible expenditure. For the design of the three compression stations, a grant agreement of EUR 1.5 million was signed with the Innovation and Networks Executive Agency (INEA), representing 50% of the estimated total cost of designing the stations compression.
- In May 2016, the design services contract for the 3 compressing stations (SC Podișor, SC Bibești and SC Jupa) was signed with the Polish company Gornicze Biuro Projectow PANGAZ sp. z.o.o.
- The Environmental Impact Assessment Procedure for the BRUA project was completed and in December 2016 the National Environmental Protection Agency issued the Environmental Agreement.
- In December 2016, TSO launched on SEAP public tenders for the procurement of materials and equipment for Phase I of the BRUA Project.
- The loan agreement with the European Investment Bank for the amount of EUR 50 million was concluded on 27 October 2017 and on 23 February 2018 a loan agreement with the EBRD was signed for the EUR 60 million for the first phase of the BRUA project.
- During 2017 and 2018, the activities were continued to prepare for the start of the implementation work of the BRUA Project - Phase I.
- In February 2017 the Ministry of Energy issued Building Permit No. 1/24.02.2017 authorizing the execution of construction works for the "Development of the National Gas Transmission System on the Bulgaria-Romania-Hungary-Austria corridor" (including power supply, cathodic protection and optical fiber) Phase I: Natural gas pipeline Podișor - Recaș in length of 479 km, gas compressing stations Podișor, Bibești, Jupa, Construction site and tubular material deposits.
- On 21 March 2018, the Ministry of Energy, acting as the Competent National Authority responsible for facilitating and coordinating the authorization procedure for projects of common interest (ACPIC), issued the Exhaustive Decision for Phase I of the BRUA project, which concluded the process of issuing individual decisions of the involved authorities.
- For Phase II pre-feasibility studies, feasibility studies and technical projects were completed, as well as documentation for building permits. The final decision on the start of the execution of the investment works will be made in December 2018, depending on the capacity reserve for the Romania-Hungary, Hungary-Austria interconnection points and the available natural gas capacities in Hungary's interconnection pipelines with the neighboring countries (FGSZ estimated the deadline for completion of the project on the territory of Hungary as October 2022).

- The estimated completion time for Phase I is 2019 and for Phase 2 the term was exceeded for 2021-2022 as compared to 2020, provided in PDNTS 2017-2026, approved by ANRE. The completion of Phase II will depend on the successful completion of the Open Season procedure for capacity reserve for the Csanadpalota Interconnection Point between Romania - Hungary.

2. *The development of the Southern Transmission Corridor for taking over the natural gas from the Black Sea shore - PCI Black Sea-Podișor*

Project description:

The project consists of the construction of a natural gas pipeline from the Black Sea coast (from the Tuzla area, Constanta County) to the Podișor technological node, Giurgiu County (307 km long, with a diameter of 1200 mm or 1000 mm), linking the natural gas sources available at the Black Sea coast to the Bulgaria-Romania-Hungary-Austria corridor, thus ensuring the possibility of directing gas to Bulgaria and Hungary through the existing interconnections Giurgiu-Ruse (with Bulgaria) and Nadlac-Szeged (with Hungary). The estimated value is EUR 278.3 million and the estimated completion time is 2020, in correlation with the offshore upstream plans.

The current state of the project:

- The feasibility study was finalized in January 2016, the route of the pipeline was selected and topographic, geotechnical and hydrological surveys were carried out;
- The environmental impact assessment procedure was started according to the Methodology for the implementation of the environmental impact assessment for public and private projects. In this respect, notifications regarding the intention to achieve the Project have been submitted to the three County Environmental Protection Agencies (Constanta, Calarasi and Giurgiu), the presentation memo has been elaborated and the decision was made regarding the stage of the project, according to the legal provisions;
- The procurement procedure for environmental impact assessment and environmental agreement was finalized and the service contract was signed with the selected consultant, who submitted to the National Environmental Protection Agency, the Appropriate Assessment of the Project and the Environmental Impact Report in order to obtain the environmental agreement;
- In order to analyze the quality of the environmental impact report, public debates on the environment were carried out between 27.12.2017-28.12.2017;
- The public consultations were held between 17-27.07.2017 in the following locations: Tuzla, Amzacea, Cobadin, Alexandru Odobescu, Borcea, Frăsinet, Izvoarele, Baneasa and Stoenеști. Following the public consultations, the final synthetic report on the results of the public participation activities was published, including on the company's website;
- The Public Participation Concept for the project of common interest " Black Sea-Podișor Pipeline for the taking over gas from the Black Sea" was elaborated, which was submitted to the Competent Authority for Projects of Common Interest (ACPIC) on 24.05.2017;
- The Urbanism Certificates for the Constanta, Giurgiu and Calarasi counties were obtained; the identification of the owners affected by the project implementation is underway;
- On 19.10.2017, the capacity booking procedure was initiated at the PM Tuzla point of measurement, according to the procedure approved by ANRE under no. 13/22.06.2017 for SNTGN Transgaz SA, upon receipt of a request for incremental capacity;

- The project was proposed and fulfilled the eligibility conditions for inclusion in the Third List of EU Projects of Common Interest issued by the European Commission on 23.11.2017.
- An analysis of the non-engaging process request is currently under way. The technical project is under development by the Research & Design Department.

3. Interconnection of the national gas transmission system with the international natural gas pipeline T1 and reverse flow Isaccea.

Project description:

The project provides the creation of a transport corridor between the systems in Greece, Bulgaria, Romania and Ukraine, provided that a new interconnection between Greece and Bulgaria is achieved. Starting with gas year 2016-2017, the gas transmission capacity of the Transit 1 (T1) international transport pipeline is auctioned according to the European Code for Capacity Allocation Mechanisms at Cross-Border Interconnection Points and ANRE Order no. 34/2016. The project will be able to provide reversible physical flows at Negru Voda 1 (the area of the SM Negru Voda measuring station through the international transit pipelines to the SM Isaccea station), according to the requirements of (EU) Regulation no. 994/2010.

The projected project value in PDNTS 2017-2026 is EUR 65 million and includes the following investment objectives:

- modernization and amplification of the Silistra compression station;
- new compression station Onesti;
- interconnection works between the NTS and the international transport pipeline T1, in the area of the SM Isaccea 1 measuring station;
- rehabilitation of the Cosmești - Onești (66.2 km) and Silicița - Șendreni (11.3 km) pipeline sections;

The deadline proposed in PDNTS 2017-2026 for completion is 2019. For funding, TSO intends to access European non-reimbursable funds.

The current state of the project:

- Transgaz s finalized the feasibility study on the interconnection of the NTS with the T1 natural gas international pipeline in the Isaccea (Isaccea - Siliștea-Onști) measurement area and reverse flow. The endorsement documentation of the intervention works on the rehabilitation of the Onesti-Cosmești pipeline section was finalized.
- Following the completion of the feasibility study, the project was reconsidered and divided into two phases according to the energy infrastructure categories set out in EU Regulation 347/2013, as follows:

Phase I (deadline 2018):

- interconnection works between the NTS and the international transport pipeline T1, in the area of the SM Isaccea measuring station;
- Rehabilitation/repair of the Onesti - Cosmetic pipeline in length of 66.2 km and diameter Dn 800 mm;

Phase II (deadline 2019):

- modernization and amplification of Silistea compression station;
- upgrading of the Onesti compressor station;
- modifications within NT Silistra and NT Onesti;
- works at the NT Șendreni Technological Node.

- The Technical Project for NTS interconnection with the T1 international pipeline in Isaccea was approved. The Technical Project on the rehabilitation of the Onesti - Cosmești pipeline section is under preparation, as well as the Tender Book for the design and execution of the modernization works of the Compressor Stations in Onesti and Silistea;
- All the urbanization certificates related to each phase have been obtained; the identification of the owners affected by the project implementation is underway;
- Environmental Notifications were prepared and submitted to the Environment Protection Agency (APA) Bacău, APM Tulcea, APM Galați, APM Vrancea and APM Brăila and all the decisions for the initial evaluation stage from all mentioned APMs were obtained. Environmental procedures are in progress: preparing the files and submitting them to the APM, attending meetings of the Technical Analysis Commission (CAT), mediatization, etc. The activity of elaborating and submitting the documentation for the obtaining of the approvals required by the urbanism certificates is carried out;
- On 17.01.2018, approval was received for the Notification for the initiation the pre-submission procedure submitted to the Competent Authority for Projects of Common Interest (ACPIC), in accordance with the provisions of (EU) Regulation No. 347/2013;
- The concept of public participation is currently being developed and the locations in which public consultations are to be held.

4. Development of the NTS in the North-Eastern part of Romania in order to improve the gas supply and ensure transmission capacities to/from the Republic of Moldova

Project description:

The project aims to ensure the necessary pressure and transport capacity of 1.5 billion m³/year at the interconnection point between the NTS and the transmission system of the Republic of Moldova. The estimated completion of the project is 2019.

The project consists of the following investment objectives, with an estimated value of 131.7 million Euros:

- Construction of a new natural gas pipeline, having a diameter of 700 mm Dn and a pressure of Pn 55 bar, in the direction of Onesti - Gherăești, 104 km long. The route of this pipeline will be largely parallel to the existing pipes of diameter 500 mm Onști - Gherăești;
- construction of a new natural gas pipeline with a diameter of 700 mm Dn and a pressure of Pn 55 bar, in the direction of Gherăești - Lețcani, with a length of 61 km. This pipeline will replace the existing pipeline Dn 400 Gherăești - Iași on the Gherăești - Lețcani section;
- construction of a new gas compressor station in Onesti, with an installed capacity of 6 MW, 2 compressors of 3 MW, one active and one spare;
- the construction of a new gas compressor station in Gherăești with an installed capacity of 4 MW, 2 compressors of 2 MW, one active and one spare.

The current state of the project:

- The pre-feasibility study was finalized in January 2016, and the feasibility study, completed in January 2018, contains all updates following clarifications on the details of eligibility of costs specified in the Applicant's Guide and the **Joint Assistance to Support Projects in European Regions (JASPERS)**. The feasibility study includes

surveying, geotechnical and hydrological studies, identification of the owners along the pipeline.

- Most of the permits were required to obtain urbanism certificates for the purpose of authorizing the execution of construction works;
- Environmental Agreement no. SB 3/06.07.2017 and Classification Decision no. 2/09.01.2018 were issued by the National Environmental Protection Agency (with revision of the environmental agreement);
- The Technical Project for the Natural Gas Transmission Pipeline, the Technical Projects for the Two Compressing Stations and the Technical Project for Electrical Installations, Cathodic Protection, Automation and Pipe Security were completed in January 2018. Material specifications are finalized and validated by ANAP;
- Building Permit no. 2/15.09.2017 was obtained, according to the provisions of Law 185/2016 on some measures necessary for the implementation of projects of national importance in the field of natural gas;
- • By Gov. Dec. no. 562/2017 "Development of the capacity of the national transmission system in order to ensure the natural gas flow towards Romania - Republic of Moldova", the project was declared a project of national importance, thus benefiting from the provisions of Law 185/2016 on some measures necessary for the implementation of projects of national importance in the field of natural gas.
- The works will be carried out in the 2018-2019 period, according to the PDNTS 2017-2026 calendar.

5. Amplification of the bidirectional gas transport corridor Bulgaria - Romania - Hungary - Austria (BRUA phase 3).

Description of project:

The project aims at developing the natural gas transport capacity on the Onști - Coroi - Hațeg - Nadlac corridor according to the volumes of natural gas available at the Black Sea shore or other onshore perimeters and is composed of two subprojects:

- • Ensuring the reversible flow on Romania-Hungary interconnection, which consists in the realization of the following investment objectives:
 - a new pipeline along the Băcia - Hațeg - Horia - Nadlac route with a length of approximately 280 km;
 - two new gas compression stations along the route.
- Development of NTS between Onesti and Baia, which consists of the following investment objectives:
 - replacing existing pipelines with new pipes with larger diameter and operating pressure;
 - two new gas compression stations along the route.

The completion deadline for the whole corridor is 2023 and the estimated value of the investment amounts to EUR 530 million.

Current state of the project:

So far, the pre-feasibility study has been completed. TSO will start the feasibility study when there will be additional data and information from the oil agreement undertakers in the Black Sea exploration perimeters (capacity requests confirmation, approximate availability of gas on the Black Sea shore, etc.).

6. 6. New developments of NTS for the take-over of gas from the Black Sea coast (Vadu - T1, new project)

Description of project:

Considering the natural gas deposits discovered in the Black Sea, TSO intends to extend the NTS to take over natural gas from the Black Sea submarine exploitation perimeters. The project consists in the construction of a natural gas pipeline with a length of about 25 km and a diameter of 500 mm Dn from the Black Sea coast to the existing T1 international pipeline. The estimated end date is 2019 - 2020, depending on the offshore upstream plans. The estimated value of the project is EUR 9 million.

Current state of the project:

- The feasibility study and the technical project have been finalized;
- The urbanism certificates were obtained, the environmental procedure was finalized and the Environmental Agreement was obtained on 21.11.2017;
- The Building Permit was obtained on December 20, 2017;
- The project was declared a Project of National Importance by Gov. Dec. no. 563 of 4 August 2017;
- The capacity reservation procedure started at the PM Vadu measuring point, according to the procedure approved by ANRE by the approval no.13/22.06.2017, upon receipt of a request for incremental capacity on 21.07.2017;
- The project was proposed and fulfilled the eligibility conditions for inclusion on the Third List of the European Projects of Common Interest issued by the European Commission on 23.11.2017;
- Currently, the contracting stage of the works is ongoing.

7. România – Serbia interconnetion, interconnection of the NTS with the Serbian system.

Description of project:

The project aims to facilitate the export of natural gas to Serbia with take-over from the future BRUA pipeline (Phase I). The closest point of the BRUA pipeline on the border between Romania and Serbia is the Mokrin municipality in Arad County. The project consists of:

- a new interconnection pipeline with a diameter of 500 mm in the direction of Arad - Mokrin in length of 80 km of which 74 km in Romania and 6 km in Serbia;
- the construction of a natural gas measuring station on the territory of Romania or Serbia.

The estimated end date is 2026.

The export of natural gas to Serbia will be done after the BRUA project has been completed. Natural gas can be taken from Serbia to Romania for consumption in the Timișoara - Arad area via DN 600 Horia - Mascolo - Recaș (25 bar), at lower pressures than in the BRUA pipeline.

Current state of the project

- In February 2018, the Pre-feasibility Study was completed and this year the Feasibility Study will be finalized;
- According to PDNTS 2018-2027 the lengths of pipeline sections have been modified at 97 km, 85 km - Romania, 12 km - Serbia, Dn 600 mm, SRM in Romania;
- The estimated value of the project is EUR 50.7 million and the completion deadline of 2020.

8. Modernization of GMS Isaccea 1 and GMS Negru Vodă

Description of project:

In order to increase the level of energy security in the region, Interconnection Agreements for the Isaccea 1 Interconnection Point were signed through the interconnection agreement no. 294/2016 concluded between SNTGN Transgaz SA and PJSC Ukrtransgaz and the Negru Vodă Interconnection Point 1, through the interconnection agreement no. 240/2016 concluded between SNTGN Transgaz SA and Bulgartransgaz. The project consists in the construction of two new gas measuring stations in the existing measuring stations GMS Isaccea 1 and GMS Negru Voda 1 with an estimated value of 13.9 million Eur. The upgraded stations will be equipped with a separation/filtration plant and a measuring installation with dual ultrasound counters.

Current state of the project:

- The elaboration of feasibility studies for the two measuring stations was started.

9. Romania-Bulgaria interconnection project (TRA-F-029)

Description of project:

The interconnection project of the Romanian NTS to Bulgaria and on the Ruse-Giurgiu direction was carried out on the basis of the Memorandum of Understanding signed between SNTGN Transgaz SA and Bulgartransgaz on 01.06.2009, the interconnection being finalized in 2017.

The following investment objectives have been achieved:

- - Ground pipeline (Dn 500 mm, Pn 40 bar, L = 5,1 km) on the Romanian territory between the Giurgiu Natural Gas Station (GMS) Giurgiu and the Transgaz Danube sub-crossing point on the Romanian bank;
- - Ground pipeline (Dn 500 mm, PN 40 bar, L = 15,4 km) on the Bulgarian territory between the Russian Gas Methane Station (GMS) and the Bulgartransgaz Danube sub-crossing point of the Bulgarian bank;
- - Two-pipe Danube sub-crossing (DN 500 mm, PN 50 bar), each of 2,1 km each, representing the Main Pipeline and the Spare Pipeline - the implementation task is common to Transgaz and Bulgartransgaz.

Technical characteristics of interconnection: maximum transmission capacity - 1.5 billion m³/year, minimum transmission capacity - 0.5 billion m³/year, nominal pressure - 50 bar, operating pressure - 21-40 bar, pipe diameter interconnection - DN 500 mm.

The interconnection was technically completed and became operational on 1 January 2017 after capacity allocation tenders were held in accordance with (EU) Regulation No. 2013/984 establishing a Network Code for Capacity Allocation Mechanisms.

In this respect, the parties signed an Interconnection Agreement in accordance with (EU) Regulation No. 2015/703 laying down a network code for interoperability and data exchange rules which provides both for the operation of the Ruse-Giurgiu interconnection point and for the capacity allocation procedure.

Monitoring the implementation of the annual investment plans of the transmission system operator

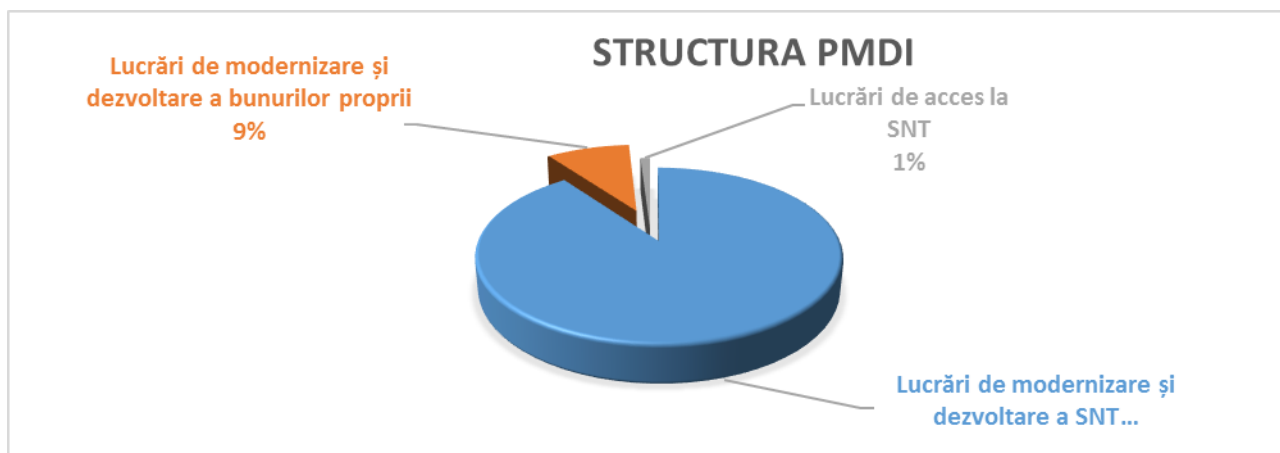
The level of investments in the NTS for the year 2018 has been submitted according to the legal obligations of SNTGN Transgaz S.A, in its capacity as a transmission and system operator, under the Investment Promotion and Modernization Program (PMDI).

The investment program for the year 2018 was elaborated taking into account the obligations of the transmission system operator, stipulated in art. 125 and 130 of the Law on Electricity and Natural Gas no. 123/2012.

The estimated value of investments planned in 2018 is Ron 687 million, up 36% from the value of the investment program for 2017, which was Ron 505 million. Of this value, Ron 617 million is the amount scheduled for modernization and development works of NTS, Ron 155 million higher.

Depending on the type of works planned to be carried out in 2018, their value is thus allocated:

- Ron 137 million - value of new works;
- Ron 491 million - value of the further work;
- Ron 52.6 million - value of the equipment, equipment and endowments;
- Ron 6 million - value of works for access to NTS;
- Ron 0.5 million - value intended for land acquisitions.



Monitoring the realization of investment plans for natural gas storage objectives/systems

The level of annual investments for the period 2018 - 2022, submitted in accordance with the legal obligations stipulated in art. 142 of the Law on Electricity and Natural Gas no. 123/2012 by storage system operator S.N.G.N. Romgaz S.A., varies between 65 and 261 million Ron/year, detailed as follows:

- Urziceni storage facility with annual investments between 3 and 8 million Ron;
- Bilciurești storage facility with annual investments between 25 and 67 million Ron;
- Bălăceanca storage facility with annual investments between 4 and 14.5 million Ron;
- Sărmășel storage facility with annual investments between 14 and 136 million Ron;
- Ghercești storage facility with annual investments between 5 and 43 million Ron;

- Moldova storage facility (newly established deposit) with annual investments between 0.5 and 45 million Ron.

The level of annual investments for the 2018 - 2022 period, submitted in accordance with the legal obligations stipulated in art. 142 of the Law on Electricity and Natural Gas no. 123/2012, as further amended and supplemented, by storage system operator S.C. Depomureș S.A., ranges between 21 and 96 million Ron/year, these amounts being allocated for construction, technological equipment, measuring equipment, land vehicles and other tangible and intangible assets.

Monitoring the achievement of investment plans for natural gas distribution objectives/systems

In accordance with the obligations stipulated by art. 138 of the Law on Electricity and Natural Gas no. 123/2012, the operators of natural gas distribution systems (DSO) sent ANRE their 5-year investment plans.

The total estimated value for 2018 - 2022, according to the investment plans submitted by DSO, is approx. 343 million Ron annually.

From the analysis of these plans, in 2018 new pipelines are planned for the distribution of natural gas as well as to replace other pipelines and connections, both steel and polyethylene, in total length representing 2.3% of the length of the pipelines distribution and connections in operation on 31.12.2017. New pipes represent 1% of the length of the pipes and connections in service at the end of 2017.

The two major distribution system operators, Distrigaz Sud Retele and Delgaz Grid, have planned for the year 2018 investments totaling 160 million Ron and 124.4 million Ron respectively, representing approximately 47%, respectively 44% of the total value programmed for 2018 by all 37 distribution system operators.

For the two major distribution system operators, Delgaz Grid SA and Distrigaz Sud Retele SRL, which operated on 31.12.2017 about 83% of the national distribution system length, the percentage of the new gas distribution pipelines foreseen in the investment plan for 2018, represents only 0.15% of the total length of their distribution pipelines.

3.1.5. Observance of EU law

Observance of ACER and European Commission decisions

In accordance with Art. 102 ^ 1 (1) of the Law on Electricity and Natural Gas no. 123/2012, as amended and supplemented, "*ANRE complies and implements all relevant, legally binding, decisions of ACER ... and the Government, the competent ministry and the other specialized bodies of the central public administration, as the case may be, will take all necessary steps in this respect, according to their attributions and competencies.*"

In 2017 no ACER decisions with mandatory application for the natural gas sector were issued.

Observance of the provisions of Community legislation by transmission system operators, distribution system operators, system owners and economic operators in the sector

The required aspects were presented in chapter 3.1.1. Unbundling.

3.2. Promoting competition

According to the Law on Electricity and Natural Gas no. 123/2012, as amended and supplemented, the Romanian natural gas sector is structured in two segments: the regulated market and the competitive market. This segmentation has the role of clearly defining the specific economic activities that are under continuous surveillance - the regulated market (transmission, storage, distribution, regulated prices for domestic customers) and those that are carried out freely, on the basis of competitive mechanisms.

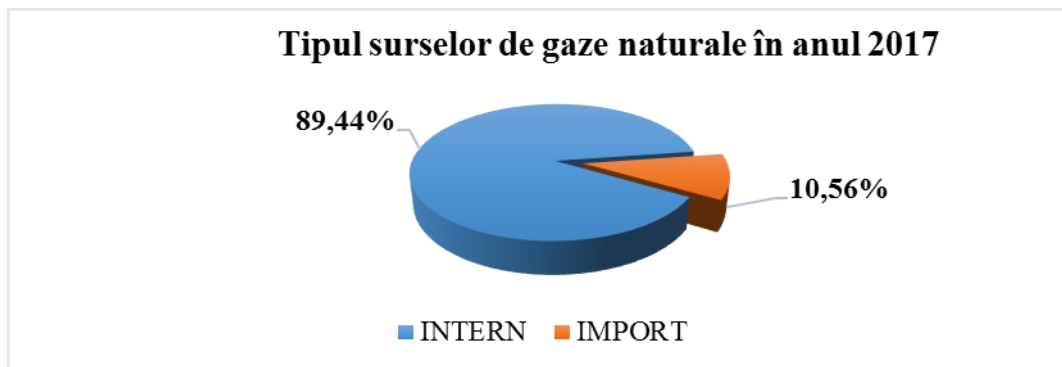
Annual gas consumption continued its growth trend in 2016, reaching about 12.26 billion cubic meters, with an increase of about 5% in 2017 compared to 2016.

The number of participants on the Romanian gas market has steadily increased as the market was liberalized, especially in the gas supply sector, including in 2017:

- an operator of the National Transmission System - Transgaz;
- 8 manufacturers: Romgaz, OMV Petrom, Amromco Energy, Raffles Energy, Hunt Oil, Drill Probe, Stratum Energy and Mazarine Energy Romania;
- 6 external suppliers supplying natural gas from external sources in Romania: Wier AG, Dexia, Imex Oil, Trafigura, Vitol Gas & Power, Future Energy and Gazprom Schweiz AG
- 2 storage operators: Romgaz, Depomureș;
- 37 distribution operators - the largest being Distrigaz Sud Retele SRL and Delgaz S.A.;
- 93 active suppliers present on the natural gas market, of which 38 suppliers operate on the regulated gas market.

3.2.1. Wholesale natural gas market

The domestic production of natural gas in 2017, current production and extracted from storage, which entered consumption consisted of about 89.44% of the total sources. The first two producers (Romgaz and OMV Petrom) together covered about 94.91% of this source.

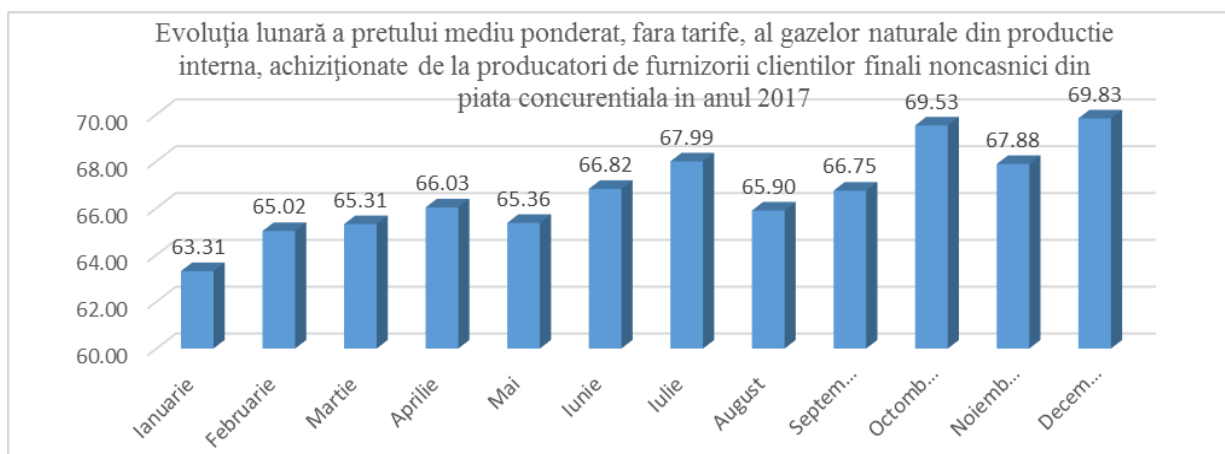


Production extracted from production perimeters in the year 2017 but also that injected into underground storage facilities are presented in the table below:

Month	Current production (MWh)	Quantity injected from internal production (MWh)
January	10,449,525.987	
February	9,371,484.560	
March	9,670,104.175	121,239.950*
April	9,920,136.045	946,705.956
May	9,367,626.187	3,075,421.205
June	8,985,462.683	3,770,151.568
July	9,124,429.982	3,629,331.839
August	9,247,368.326	3,139,862.159
September	9,343,181.653	3,081,840.627
October	9,908,087.273	1,405,971.735
November	9,817,237.589	
December	10,139,861.470	
Total MWh	115,344,505.930	19,170,525.039

* also includes the injection of the previous cycle, as reported by SNGN Romgaz SA

Evolution of the weighted average price of natural gas from domestic production purchased by suppliers who hold non-domestic customers in the portfolio directly from natural gas producers, where the first three months of 2017 do not include the purchase made for producers of thermal energy for the population, PET customers who, for that period, benefited from the price administered by government decision.



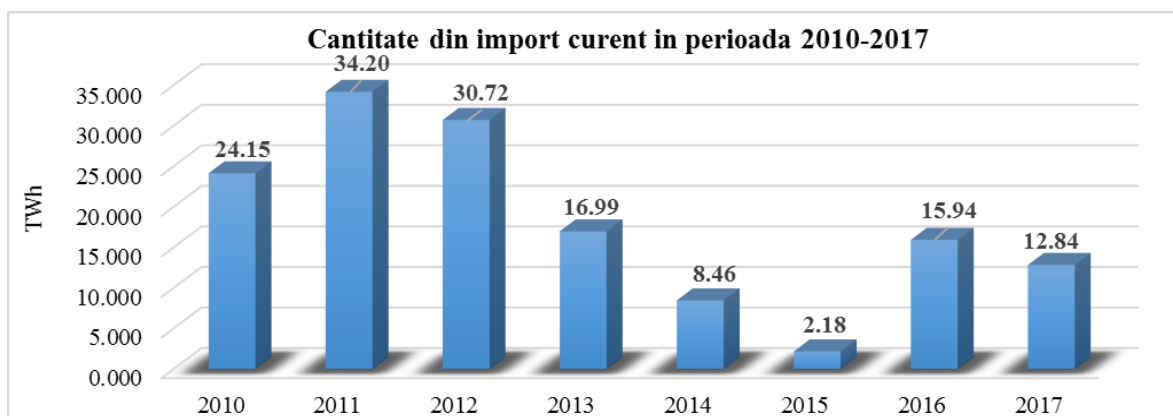
In 2017, natural gas production in Romania was provided by a number of 8 natural gas producers: SNGN Romgaz SA, S.C. OMV Petrom SA, S.C. Amromco Energy SRL, S.C. Raffles Energy SRL, S.C. Foraj Sonde SA, S.C. Stratum Energy LLC, Hunt Oil Company and S.C. Mazarine Energy Romania S.R.L.

The quantity of natural gas produced in 2017 (TWh) was 115.34 TWh, as follows:

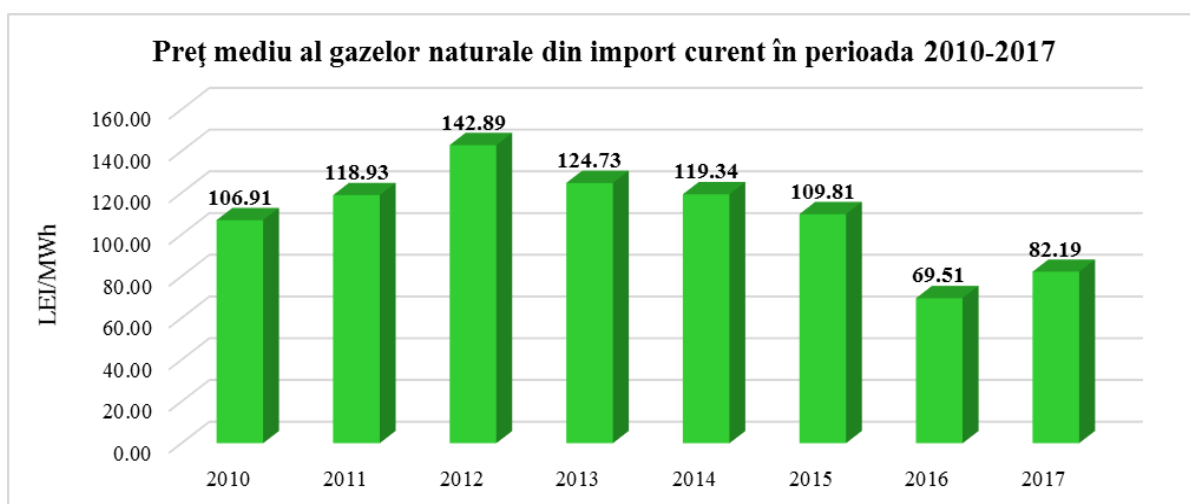
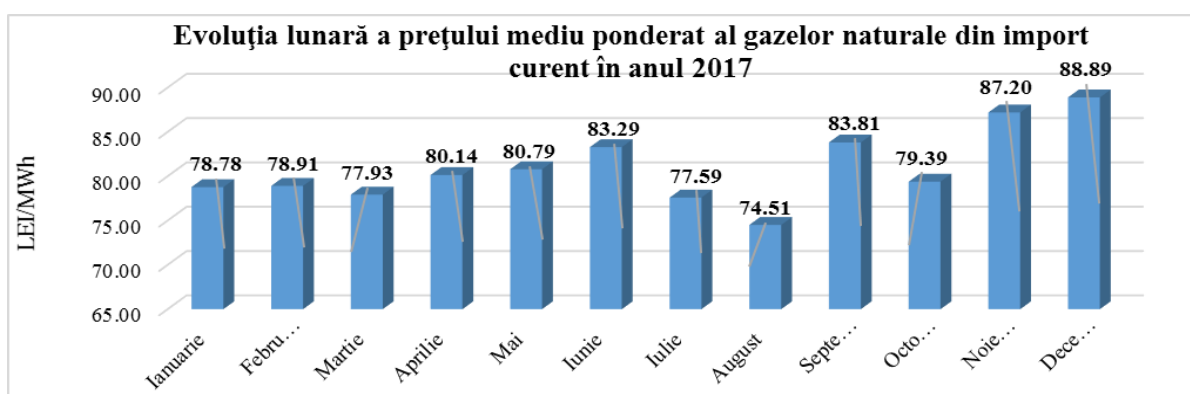
Amromco Energy	Foraj Sonde	Hunt Oil Company	Mazarine Energy Romania	OMV Petrom	Raffles Energy	Romgaz	Stratum Energy Romania	Total
3.22	0.10	0.72	0.05	55.10	0.04	54.10	2.02	115.34

Imports that entered consumption in 2017, current imports and withdrawn from storage accounted for 10.56% of total sources. The first three importers - domestic suppliers - together made up 78.14% of these quantities.

Month	Current domestic production MWh	Direct import MWh
January	10,449,525.987	3,853,722.531
February	9,371,484.560	2,681,639.393
March	9,670,104.175	766,516.218
April	9,920,136.045	57,304.816
May	9,367,626.187	30,944.396
June	8,985,462.683	45,990.604
July	9,124,429.982	5,284.446
August	9,247,368.326	4,660.782
September	9,343,181.653	10,796.261
October	9,908,087.273	901,863.676
November	9,817,237.589	1,263,414.294
December	10,139,861.470	3,220,576.323
Total MWh	115,344,505.930	12,842,713.740



The increase in annual consumption has led to an increase in import consumption over the years 2014 and 2015 (as can be seen from the chart), but not at the level of 2016.



Regarding the prices of natural gas from current imports, we mention that these are weighted average prices and were determined by weighting the prices with the monthly deliveries corresponding to sales transactions reported by the market participants and excluding VAT, excise duties or other taxes.

Quantities exported during the year 2017 accounted for 0.24% of the quantities extracted from the production perimeters.

Month 2017	Exported quantity (MWh)
January	0,000
February	12,013
March	0,000
April	5,766.184
May	10,363.290
June	55,469.047
July	65,540.665
August	70,755.039
September	71,803.220
October	0,000
November	0,000
December	0,000
Total 2017	279,709.458

The natural gas storage activity during the summer period is necessary for the Romanian market to operate smoothly, due to the fact that the current production as well as the current import cannot cover the monthly consumption requirements during the winter period. As the current production is in excess of summer consumption, storage becomes even a necessity for natural gas producers, above the level of the minimum stock requirement calculated annually by ANRE, in the situation when the suppliers do not acquire the storage quantities required for consumption during the cold period.

Type of economic operator	Inventory at the end of the 2017 injection cycle MWh
Producers	10,003,521.771
Remaining market participants	14,106,899.302
Total stored	24,110,421.073

Following the application of ANRE Order no. 35/2016, which approves the methodology for the annual determination of the level of the minimum stock of natural gas for the holders of natural gas supply licenses, the minimum stock obligation for the storage cycle 2017-2018, for each supplier holding the final customers. The following table shows the annual evolution of the total minimum stock which the holders of the supply licenses and the holder of the operating license for the natural gas transmission system must hold in underground storage until 31 October of each year:

Level of minimum annual gas inventory (MWh)	
2013	24,248,110.943
2014	19,765,212.051
2015	17,477,030.807
2016	18,340,862.385
2017	18,649,242.677

The table below shows the monthly evolution of the natural gas stock existing in the underground storage facilities during 2017:

Inventory 2017	Total (MWh)
January 2017	11,637,342.199
February 2017	7,512,893.371
March 2017	5,575,268.609
Inventory at the end of the extraction cycle	5,484,062.898
April 2017	6,107,415.470
May 2017	9,182,836.673
June 2017	12,952,988.240

July 2017	16,582,320.079
August 2017	19,671,429.739
September 2017	22,701,949.326
Inventory at the end of the 2017 injection cycle*	24,110,421.073
October 2017	23,903,592.506
November 2017	20,691,971.563
December 2017	17,013,973.766

*includes extractions during summer

On the national gas market, there are two underground natural gas storage operators, S.C. Depomureş S.A. and SNGN Romgaz S.A. The total capacity and the evolution of the use of this capacity are shown in the table below.

Underground storage operator	Year	Capacity of storage facility (MWh)	Inventory after the extraction activity (MWh)	Injected quantity* (Apr. - Oct.) (MWh)
Romgaz	2013	29,503,400	6,704,018.854	21,188,550.748
	2014		8,141,654.008	18,077,373.958
	2015		5,611,283.576	17,869,463.343
	2016		8,521,425.916	14,894,617.259
	2017		5,311,927.379	16,121,839.816
Depomureş	2013	3,154,550	330,006.289	3,024,810.381
	2014		570,191.740	2,587,221.864
	2015		272,360.874	2,883,003.902
	2016		378,675.860	2,084,214.398
	2017		172,135.518	3,021,150.985

* does not include the stock of natural gas left over from the previous injection cycles after the extraction activity.

Centralized markets

In 2017, the quantities traded on centralized markets amounted to a total volume of 63.6 TWh, of which 62.3 TWh for the wholesale market and 1.3 TWh for the retail market as follows:

Month	Markets	Monthly prices concluded on centralized markets	Traded quantities (MWh)
January	wholesale	76.80	100,428.000
	retail	103.65	7,226.000
February	wholesale	74.04	604,043.600
	retail	108.48	15,152.000
March	wholesale	71.57	3,733,259.000
	retail	114.07	383,098.700
April	wholesale	71.80	10,604,880.000
	retail	111.47	32,038.651
May	wholesale	72.20	11,868,016.000
	retail	99.53	94,185.000
June	wholesale	72.18	16,736,482.000

Month	Markets	Monthly prices concluded on centralized markets	Traded quantities (MWh)
July	retail	112.95	58,974.000
	wholesale	72.04	1,165,631.000
	retail	109.37	96,277.63
August	wholesale	72.07	1,680,691.000
	retail	111.42	17,917.000
September	wholesale	74.96	3,770,910.000
	retail	111.90	124,491.880
October	wholesale	84.54	2,099,076.537
	retail	119.76	149,066.130
November	wholesale	79.81	6,043,319.586
	retail	112.34	202,214.250
December	wholesale	88.64	3,899,565.000
	retail	122.14	162,591.568
Total 2017	wholesale	74.46	62,306,301.723
	retail	113.60	1,343,232.809
			63,649,534.532

The table contains the quantities traded on centralized markets, not the quantities actually delivered that month, and the monthly prices are the result of the trading orders concluded in those months. These orders may have delivery times ranging from 1 month, i.e. the month in which the transaction was concluded, and 12 months. The monthly amounts in this table include the quantities traded on both RCE platforms, available on the STEG platform, and their prices are the weighted average of all transactions concluded on the two platforms.

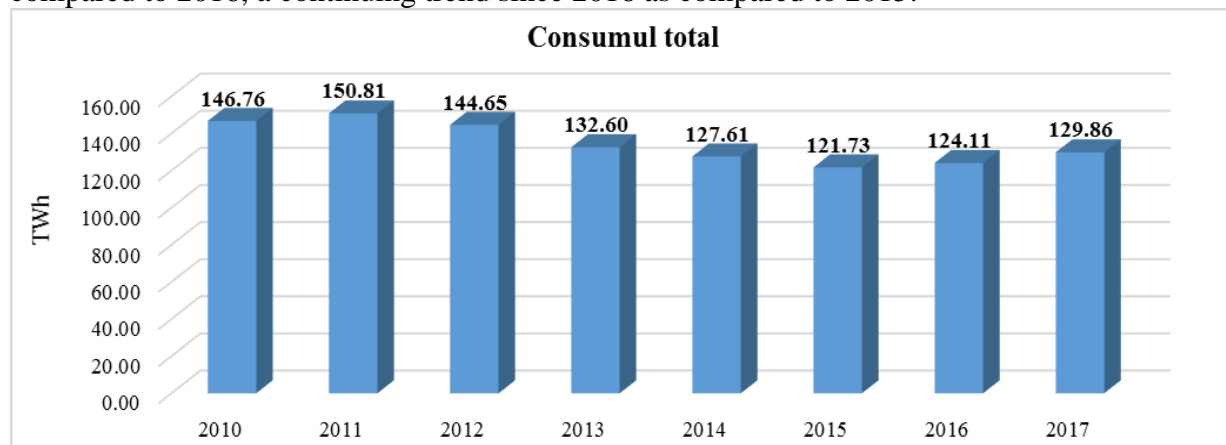
3.2.2. Retail gas market

In December 2017, 85 suppliers were active on the retail gas market, of which:

- 38 suppliers operating on the regulated retail gas market; and
- 85 suppliers operating on the competitive natural gas retail market.

The total number of final customers at December 2017 was approximately 3,714,699, of which 194,426 non-household customers (about 5,23%) and 3,520,273 household customers (about 94.77%).

Total gas consumption in 2017 was about 130 TWh, showing an increase of about 5% compared to 2016, a continuing trend since 2016 as compared to 2015.



Within the total consumption of the natural gas sector, part is represented by specific consumption of the sector's activities or operators' consumption in relation to the specific technological processes: technological consumption, energy consumption and deviations due to the measuring instruments. Excluding these consumptions from the total, in 2017 the consumption delivered by the suppliers to the end customers was about 120.3 TWh, of which approx. 86.1 TWh was non-domestic consumption and 34.2 TWh household consumption as follows:

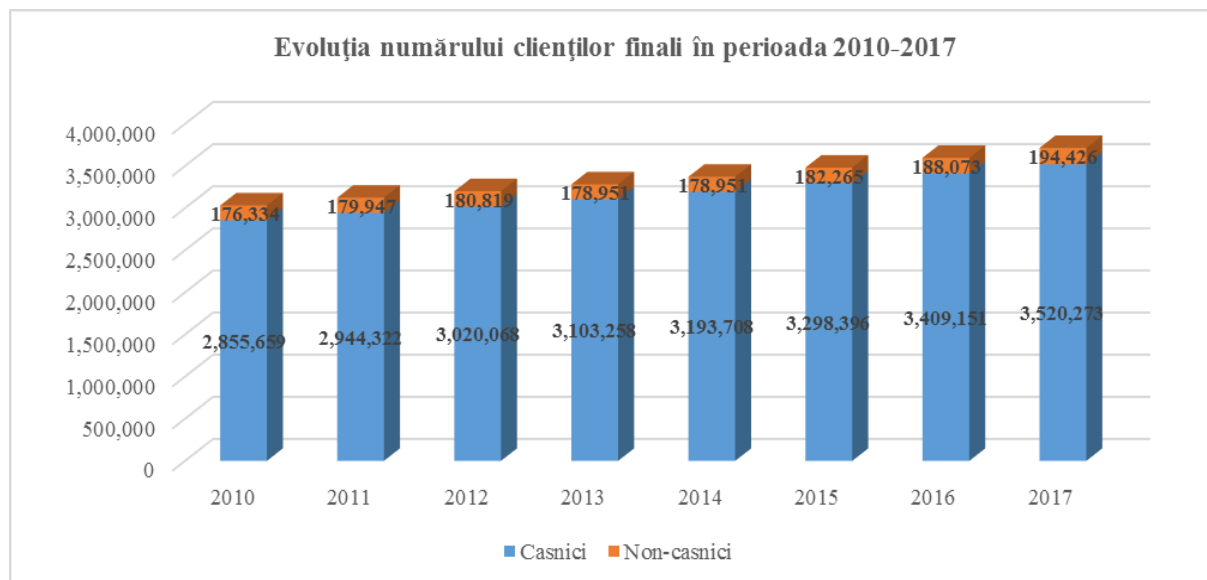
Final customers	Number of clients	Consumption* (TWh)	Weight in total consumption
Household	3,520,273	34.2	28.47%
Non-household	194,426	86.1	71.53%
Total	3,714,699	120.3	

* Total consumption delivered to final customers (does not include technology consumption, energy consumption and deviations due to measuring instruments).

In 2017, the share of quantities consumed by household customers from the total quantity delivered by the suppliers is **28.47%**, and the number of these customers represents **94.77%** of the total final customers of natural gas. Although the number of non-household customer's accounts for only **5.23%** of the total final customers of natural gas, the share of consumed by them amounts to **71.53%** of the total consumption delivered by suppliers in 2017.

Month	No. of clients		Total no. of clients	Total consumption (MWh)
January	Household	3,416,189	3,605,144	21,810,775.954
	Non-household	188.955		
February	Household	3,413,445	3,601,801	16,146,257.126
	Non-household	188.356		
March	Household	3,421,089	3,609,926	12,370,007.301
	Non-household	188.837		
April	Household	3,426,896	3,615,873	9,419,121.844
	Non-household	188.977		
May	Household	3,435,060	3,624,600	6,325,661.945
	Non-household	189.540		
June	Household	3,444,232	3,633,568	5,210,680.754
	Non-household	189.336		
July	Household	3,456,237	3,646,004	5,432,607.590
	Non-household	189.767		
August	Household	3,465,570	3,654,933	6,104,524.617
	Non-household	189.363		
September	Household	3,491,435	3,685,007	6,273,873.108
	Non-household	193.572		
October	Household	3,493,472	3,685,307	9,606,351.431
	Non-household	191.835		
November	Household	3,523,736	3,716,120	14,232,278.047
	Non-household	192.384		
December	Household	3,520,273	3,714,699	16,928,870.823

Month	No. of clients		Total no. of clients	Total consumption (MWh)
	Non-household	194.426		
Total	-	-	-	129,861,010.540



Sales prices by end-user categories, depending on the connection system and the consumption class, are as follows:

Clients on the competitive market		
Connection system	Consumption class	Price without tariffs (Ron/MWh)*
Clients connected to the NTS	A1 (consumption of up to 1,162.78 MWh/year)	83.01
	A2 (consumption between 1,162.79 and 11,627.78 MWh/year)	84.85
	A3 (consumption between 11,627.79 and 116,277.79 MWh/year)	72.51
	A4 (consumption between 116,227.80 and 1,162,777.87 MWh/year)	72.32
	A5 (consumption above 1,162,777.87 MWh/year)	57.59
Clients connected to the distribution system	B1 (consumption of up to 23.25 MWh/year)	98.30
	B2 (consumption between 23.26 and 116.28 MWh/year)	97.70
	B3 (consumption between 116.29 and 1,162.78 MWh/year)	89.16
	B4 (consumption between 1,162.79 and 11,627.78 MWh/year)	78.97
	B5 (consumption between 11,627.79 and 116,277.79 MWh/year)	73.64
	B6 (consumption above 116,277.80 MWh/year)	70.66

* according to the reporting obligations provided by ANRE Order no. 5/2013

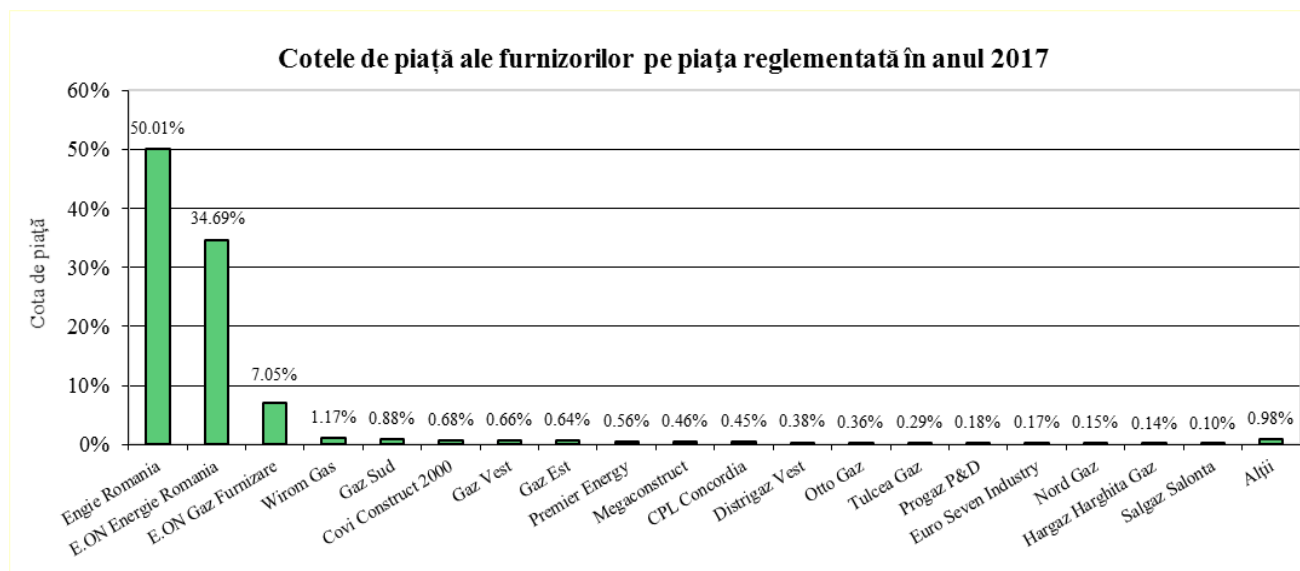
Clients on the regulated market		
Connection system	Consumption class	Price with tariffs (Ron/MWh)
Clients connected to the NTS	A1 (consumption of up to 1,162.78 MWh/year)	92.52
Clients connected to the distribution system	B1 (consumption of up to 23.25 MWh/year)	117.69
	B2 (consumption between 23.26 and 116.28 MWh/year)	115.71

	B3 (consumption between 116.29 and 1,162.78 MWh/year)	111.71
	B4 (consumption between 1,162.79 and 11,627.78 MWh/year)	108.24

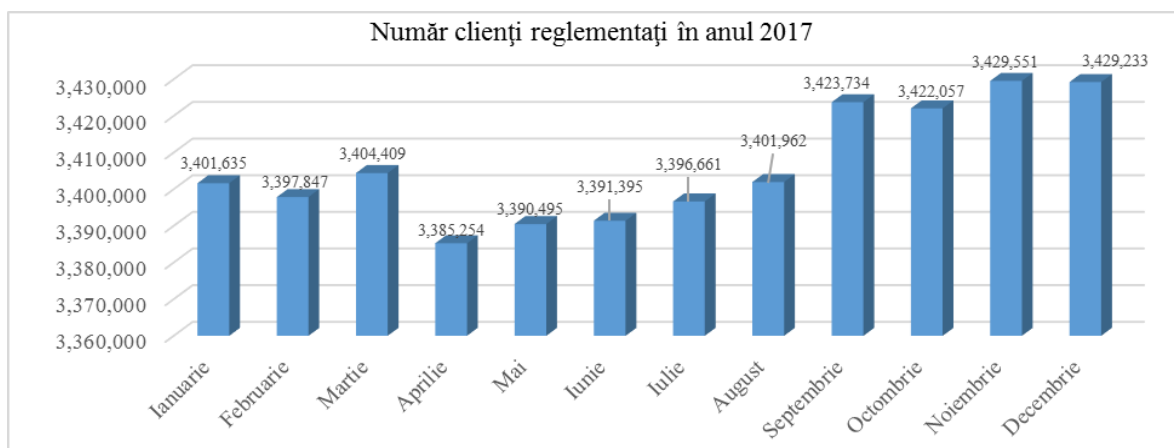
* according to the reporting obligations provided by ANRE Order no. 5/2013

Regulated retail market

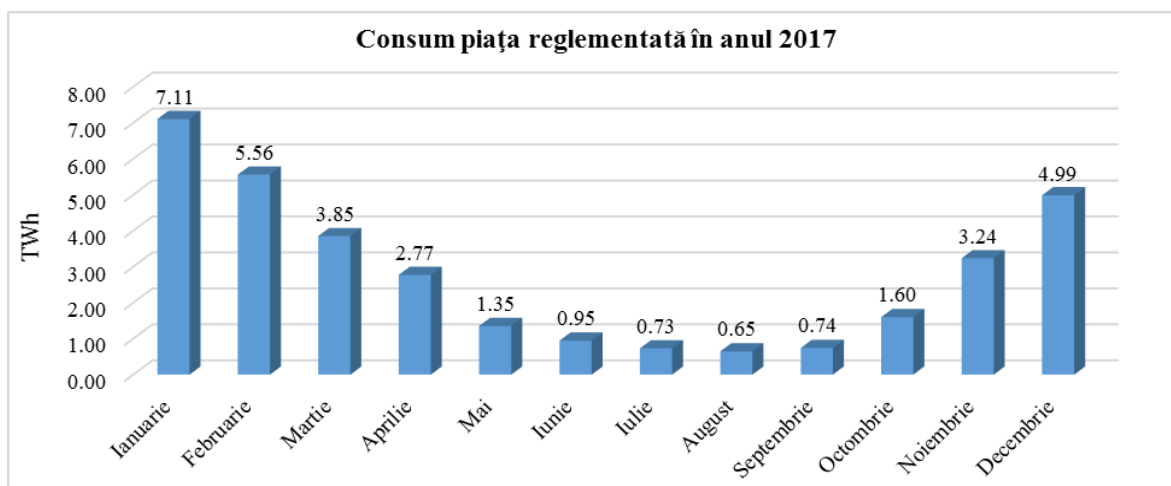
In 2017, on the regulated gas market activated 38 suppliers, the share of which is shown in the following graph:



The total number of customers regulated in December 2017 was **3,429,233**, representing only household customers, and their evolution during 2017 is shown in the following graph:

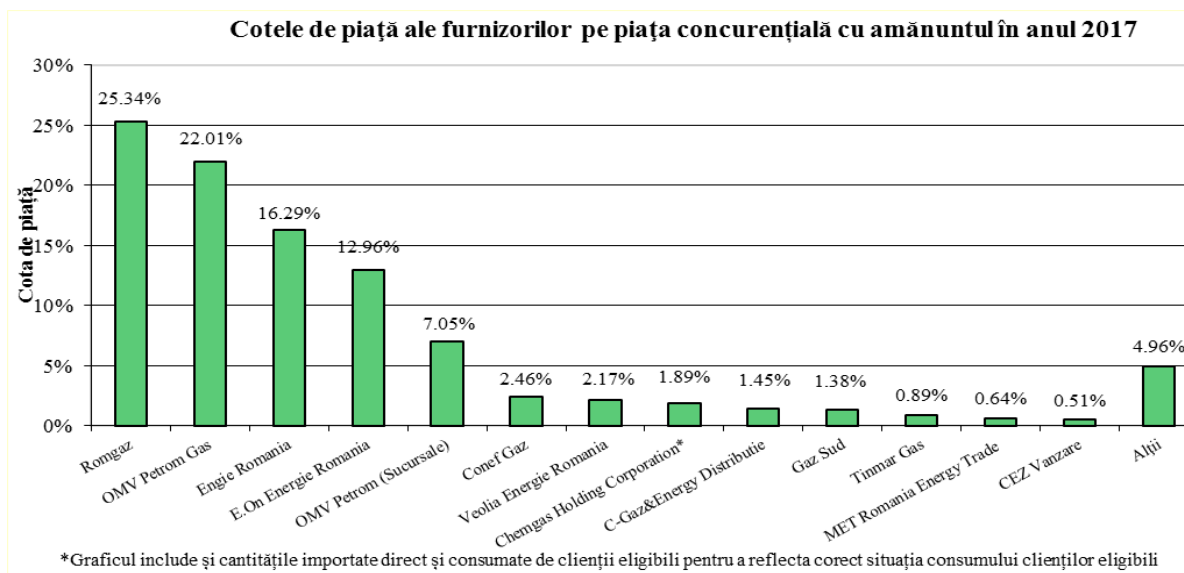


Consumption of regulated customers in 2017 was 33.54 TWh and evolved according to the following chart:

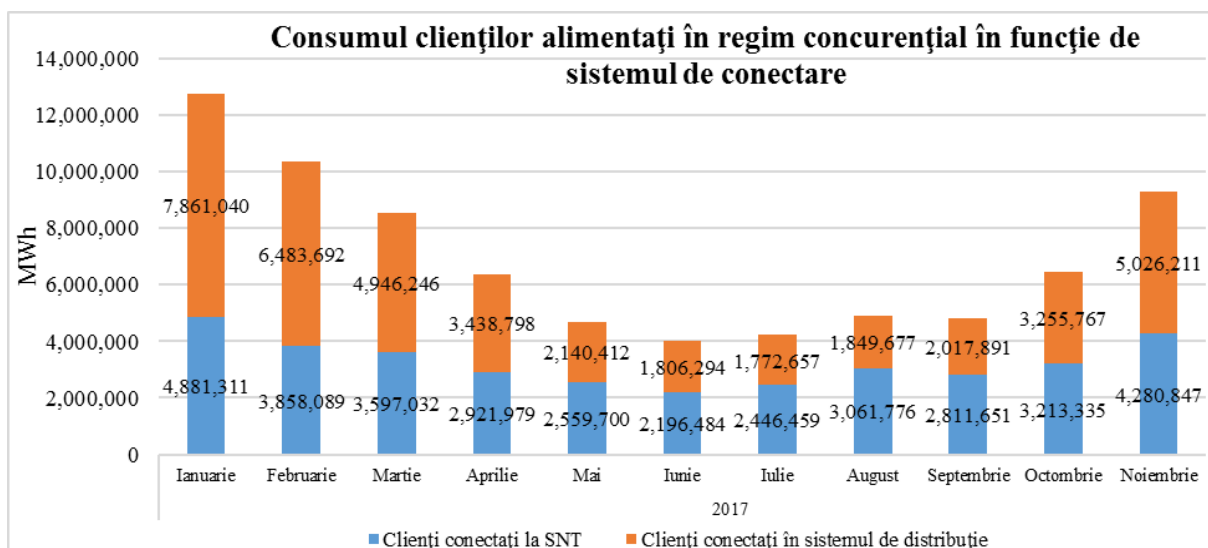


Competitive retail market

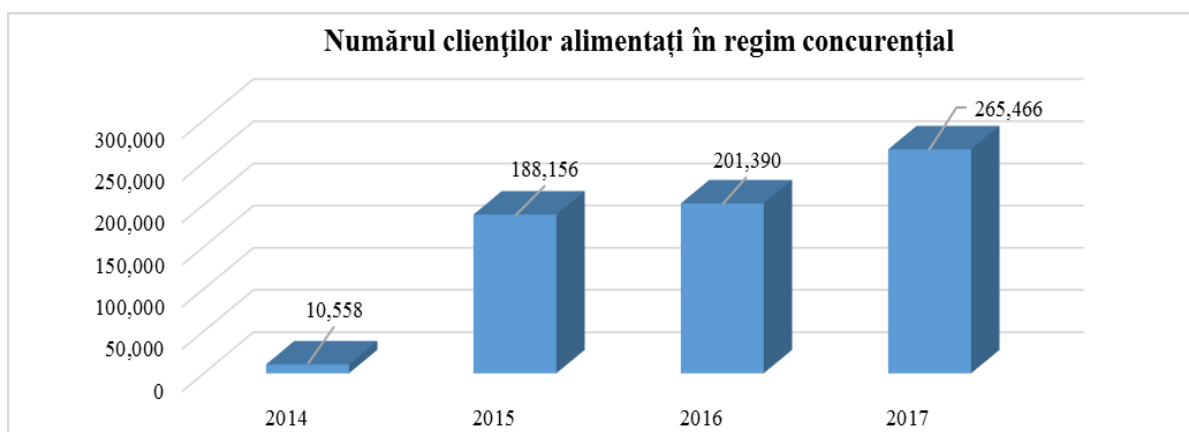
In 2017, 84 suppliers were active on the competitive gas market and their market share is shown in the following graph:



The total consumption of customers supplied under competitive conditions in 2017 was 86,827,616,695 MWh. Analyzing the chart below, showing the evolution of consumption of these customers according to the type of connection to the system, NTS and distribution, we can see a smaller variation in the consumption of the final customers connected to the NTS during the year, industrial sector in the number of 264 at the level of December 2017, compared to the consumption of final customers connected to the distribution, reflecting a consumption curve similar to household consumption; evolution suggests that a large number of non-household customers carry out economic activities where natural gas does not have a significant share.

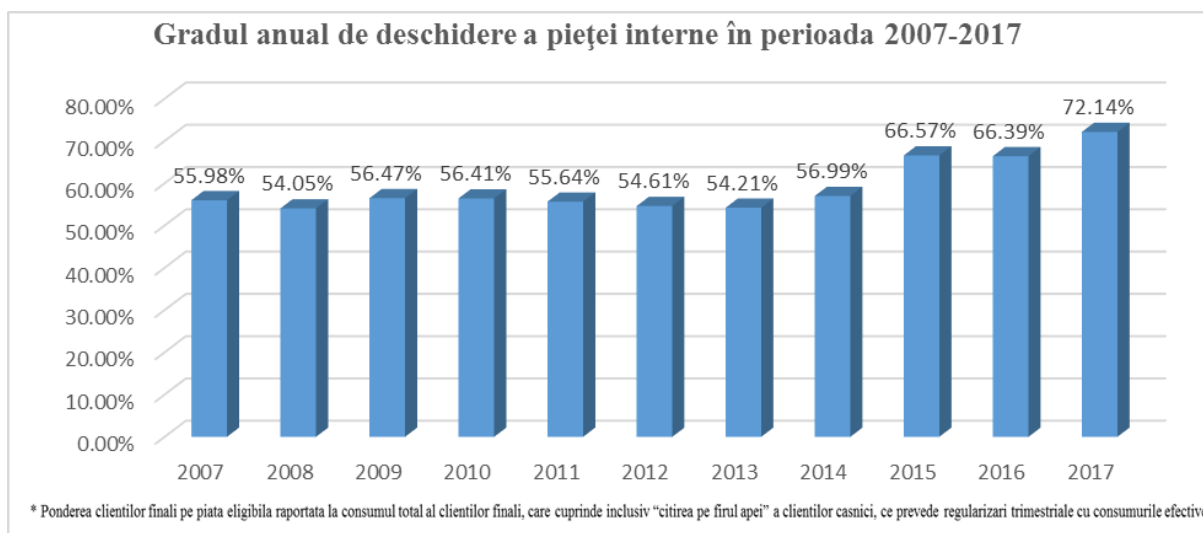


The total number of customers under competitive regime in December 2017 was **265,466**. Considering that since January 1, 2015, the domestic gas market has been completely liberalized for non-household customers, in accordance with the provisions of Art. 179 (2) let. a) from the Law on electricity and natural gas no.123/2012, as further amended and supplemented, the total number of these customers increased compared to 2014. We present an annual evolution of their number, from that moment to present:



In 2017, there is an cca. 10% increase in the real degree of openness of the natural gas market compared to 2016, which has reached about 72% of total customer consumption.

The evolution of the annual degree of openness of the internal gas market is set out in the following graph:



* on January 1, 2015, the regulated price was eliminated for all non-domestic customers on the natural gas market

3.2.3. Recommendations on supply prices, investigations and competition-promoting measures

The method of approving the regulated prices for the provision of regulated natural gas to household customers who have not exercised their eligibility is regulated by the *Methodology for establishing the income per unit related to the regulated supply activity carried out in a regulatory year, and approval of regulated prices in the gas sector, starting with 2016* (hereinafter referred to as Methodology), approved by ANRE Order no. 182/2015, as further amended and supplemented.

Regulated prices cover both the costs related to the purchase and sale of natural gas as the commodity itself, the costs related to the carrying out of the regulated supply activity, as well as all the costs related to the transmission, storage and distribution services, according to the legal provisions in force, performed in a prudential manner, necessary so that natural gas gets from the supplier to the household customer.

The regulated prices are monomial and quantify the fixed and variable costs related to the performance of the regulated supply activity.

Regulated prices shall be differentiated for each supply license holder as follows:

- a) for companies that have legally separated their activity, by categories of clients for which the gas supply is regulated, located in the defined areas where the affiliated undertaking holds the gas distribution license, depending on annual consumption and type of systems (transmission/distribution) through which natural gas is supplied;
- b) for companies that have not legally separated their natural gas supply activity, by categories of clients for which gas supply is regulated, located in the distribution area served as a licensed operator of the distribution system, depending on the annual consumption and type of systems (transmission/distribution) through which natural gas is supplied.

The most important component of the regulated price is the unitary fixed amount to cover the costs associated with the acquisition of natural gas. Within the unit fixed amount, the highest share is the price of gas purchased as commodity.

Evolution of the natural gas purchase price from domestic production

In June 2012, the Government of Romania approved the Memorandum on the Calendar for the phasing out of regulated gas prices, and in June 2015 the Memorandum on the Calendar for the Liberalization of Domestic Production Gas Prices was approved (purchase price of natural gas from domestic production for household customers and thermal energy producers only for the quantities of natural gas used to produce thermal energy in thermal power stations for the consumption of the population).

The two Memoranda of Understanding, undertaken by the Romanian Government, were the basis for the issuance of the following Government Decisions:

- Government Decision no. 22/2013 on establishing the purchase price of natural gas from domestic production for the regulated gas market;
- Government Decision no. 511/2014 on establishing the purchase price of natural gas from domestic production for the regulated gas market;
- Government Decision no. 816/2014 amending the appendix to the Government Decision no. 511/2014 on establishing the purchase price of natural gas from domestic production for the regulated gas market;
- Government Decision no. 488/2015 on establishing the purchase price of natural gas from domestic production for household customers and thermal energy producers only for the quantities of natural gas used for the production of heat in cogeneration plants and in thermal power stations for the consumption of the population during 1 July 2015-30 June 2021;
- Government Decision no. 461/2016 amending the annex to Government Decision no. 488/2015 on establishing the purchase price of natural gas from domestic production for domestic customers and producers of heat only for the quantities of natural gas used for the production of heat in cogeneration plants and in thermal power stations for the consumption of the population during July 1 2015-30 June 2021.

Through these normative acts, the Government of Romania established an annual increase in the purchase price of natural gas from domestic production, these values being taken over by ANRE in the calculation of regulated prices.

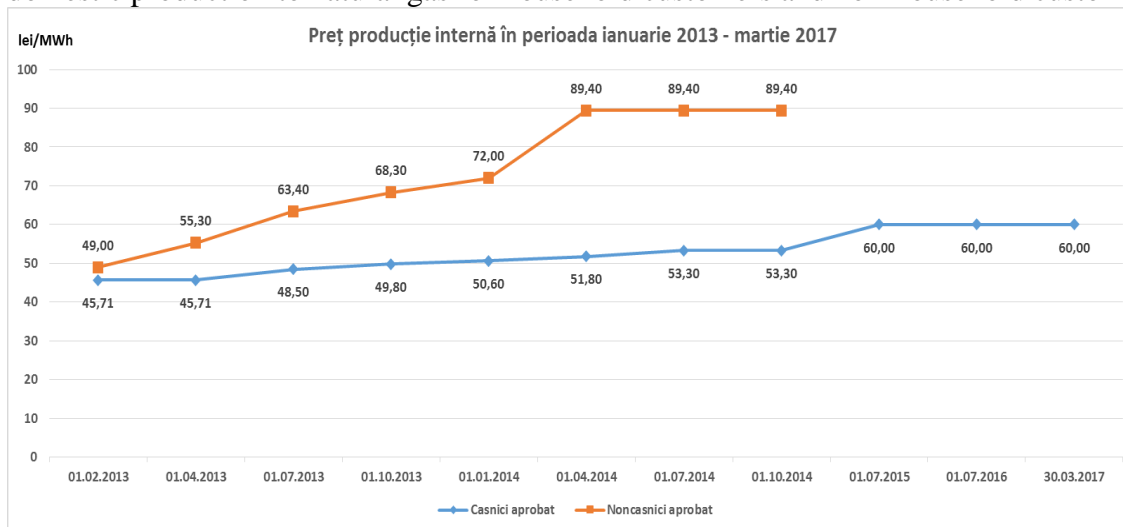
Thus, according to the provisions of Government Decision no. 461/2016, the purchase price of natural gas from domestic production for household customers and producers of thermal energy, only for the quantities of natural gas used for the production of heat in cogeneration plants and in the thermal power stations for consumption of the population (lei/MWh) , was established as follows:

	Household clients and thermal energy producers, solely for the quantity of natural gas used for producing thermal energy in co-generation and thermal plants, aimed at consumption by the population
01.07.2015	60.00
01.07.2016	60.00

At the same time, on October 11, 2016, the Emergency Ordinance no. 64/2016 for the amendment and completion of the Law on Electricity and Natural Gas no. 123/2012. Thus, according to the provisions of art. 181 par. (5) of the Law no. 123/2012, **the purchase price of natural gas from domestic production** for household customers and producers of heat, only for the quantities of natural gas used for the production of heat in the cogeneration plants and in the thermal power stations intended for consumption of the population **shall be**

established by Government Decision, at the proposal of the relevant ministry, by March 31, 2017.

The following graph reflects the evolution in time of the purchase price of natural gas from domestic production to natural gas for household customers and non-household customers.



Evolution of regulated prices in which regulated natural gas is supplied to household customers who have not exercised their eligibility

Taking into account the provisions of Government Emergency Ordinance no. 64/2016 for the amendment and completion of the Law on Electricity and Natural Gas no. 123/2012, which bring:

- changes to the obligations and rights of producers (according to Article 124 (1) (e)), they must prioritize to the suppliers the quantities of natural gas resulting from the production activity necessary to cover the consumption of household customers, for natural gas producers only for the quantities of natural gas used for the production of heat in the cogeneration plants and in the thermal power stations for the consumption of the population in accordance with the ANRE regulations and in compliance with the price liberalization and natural gas insurance until March 31, 2017);
- Changes in the determination of the mix structure (according to Article 181, final customers are entitled to fuel natural gas in the internal/import mix according to the structures approved/established by ANRE until gas price convergence from domestic production to imported natural gas);
- Changes in the determination of the purchase price of natural gas from domestic production for household customers and producers of thermal energy only for the quantities of natural gas used for the production of heat in cogeneration plants and in thermal power stations for the consumption of the population (according to art. 181 paragraph (5), it shall be established by Government decision, at the proposal of the competent ministry, only by 31 March 2017),

it was necessary to modify and complete the Methodology. Thus, at the meeting of the Regulatory Committee on March 29, 2017, an ANRE Order was approved, amending ANRE Order no. 182/2015 for the approval of the *Methodology for establishing the unitary income related to the regulated supply activity in a regulatory year and approving the regulated prices in the gas sector starting with 2016.*

In accordance with the provisions of Art. no. 36-39 of the Methodology, the necessary costs for the procurement of regulated natural gas, including the related services, were estimated for the **April 2017 - March 2018 period, valuing the unit fixed amount at Ron 81.48/MWh.**

Please note that on April 1, 2017, the Delta CUG component was regularized, representing unit component of the correction for the difference between the unit fixed amount recognized by ANRE to cover the costs of purchasing natural gas (CUG), including related regulated services, for resale in the regulated supply activity and the unit costs actually realized and recognized by ANRE to the operator providing the regulated supply.

Thus, the differences in the acquisition cost of natural gas for the period January - September 2016 were analyzed, as well as the values transferred/recovered by the CU Delta component already included in the price for each economic operator carrying out the regulated supply activity.

The percentage adjustment of regulated prices for household customers, starting April 1, 2017, calculated as an average according to the market share of each economic operator performing natural gas supply on the regulated market, was 2.41%.

The price increase of about 2,41% starting April 1, 2017 was due to the adjustment of the unit income related to the distribution activity for DISTRIGAZ SUD RETELE SRL, the establishment of the unit income related to the regulated supply activity for 2017 for ENGIE ROMANIA SA and E.ON ENERGIE ROMANIA S.A., respectively the estimation of the unitary fixed amount for April 2017 - March 2018 (CUG) and the regulation of the Delta CUG for all 39 economic operators.

At the same time, for a number of 20 economic operators, during 2017, the unit revenues related to the distribution activity and the unit revenues related to the regulated supply activity were adjusted. Their share represents, cumulatively, approximately 3.90% of the regulated market.

For suppliers with a representative market share, the regulated prices in force as of 1 April 2017 are as follows:

Regulated prices for regulated natural gas supply by ENGIE ROMANIA S.A. for household customers:

Client category	Ron/MWh
B. Final customers connected to the distribution system	
B.1. Consumption up to 23.25 MWh	111.72
B.2. Annual consumption between 23.26 MWh and 116.28 MWh	111.70
B.3. Annual consumption between 116.29 MWh and 1,162.78 MWh	110.36
B.4. Annual consumption between 1,162.79 MWh and 11,627.78 MWh	109.29

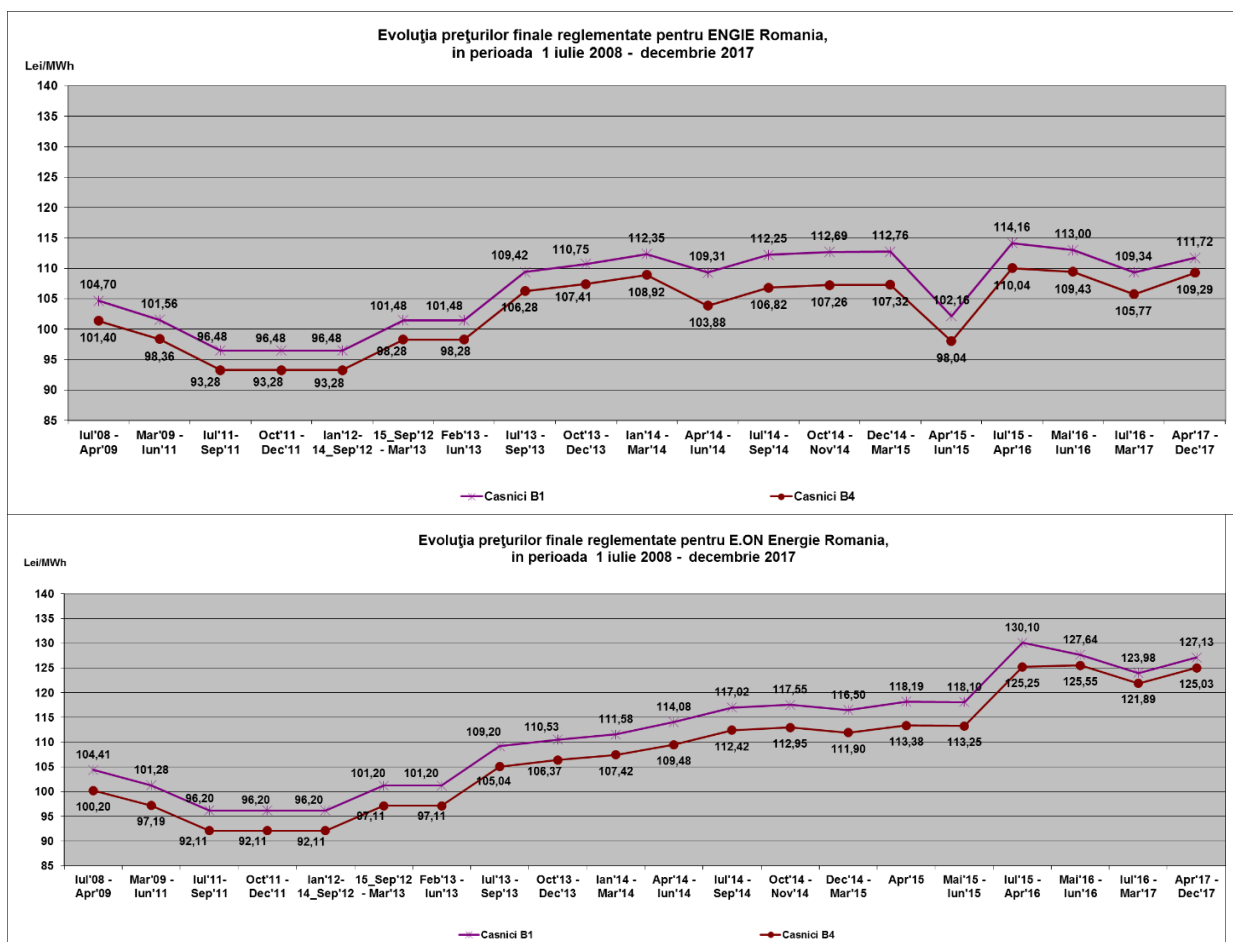
Compared to December 2016, in the year 2017, for the B1 customers category of ENGIE ROMANIA S.A., the regulated prices recorded an increase of approximately 2%.

Regulated prices for regulated natural gas supply by E.ON ENERGIE ROMANIA S.A. for household customers:

Client category	Ron/MWh
A. Final clients connected directly to the transmission system	
A.1 Current consumption up to 1,162.78 MWh	93.92
B. Final customers connected to the distribution system	
B.1. Consumption up to 23.25 MWh	127.13
B.2. Annual consumption between 23.26 MWh and 116.28 MWh	125.98
B.3. Annual consumption between 116.29 MWh and 1,162.78 MWh	125.46
B.4. Annual consumption between 1,162.79 MWh and 11,627.78 MWh	125.03

Compared to December 2016, in the year 2017 for the B1 clients category of E.ON ENERGIE ROMANIA S.A., the regulated prices recorded an increase of approximately 2.50%.

The following charts reflect the evolution over time of regulated prices for regulated gas supply between 1 July 2008 and 31 December 2017:



3.3. Security of natural gas supply

In accordance with Art. 102 of the Law on Electricity and Natural Gas no. 123/2012, the line ministry monitors security of supply issues, in particular on demand/supply balances on the domestic market, expected future demand and available reserves, additional capacity planned, planned or under construction, quality and the level of network maintenance and the measures

needed to cope with supply peaks and supply shortages for one or more suppliers. To this end, it shall publish a report every two years, by 31 July, outlining the findings made in the monitoring of these issues, as well as any measures taken or envisaged to address them, and shall immediately forward this report to the European Commission.

4. Consumer protection and dispute resolution in the electricity and natural gas sector

4.1. Consumer protection

4.1.1. Electricity

The Law on electricity and natural gas no.123/2012, as further amended and supplemented, defines the "vulnerable customer" as the final customer belonging to a category of household customers who, due to age, health or reduced income, are at risk of social marginalization, and which, in order to prevent this risk, benefit from social protection measures, including financial ones. Social protection measures, as well as the eligibility criteria for them, are set by normative acts. Vulnerable citizens are the main beneficiaries of the social aids envisaged in the phasing out of regulated prices/tariffs.

In accordance with the provisions of the "Procedure regarding the conditions and manner of granting the social tariff for household consumers of electricity", approved by the ANRE Order no. 38/2005, as further amended and supplemented, the vulnerable consumers with the average monthly income per family member less than or equal to the minimum wage established by Government Decision have the right to opt for the social tariff. The social tariff has been projected on consumption installments with progressively increasing prices, so that up to the limit of 90 kWh/month the average price of return is lower than that resulting from the application of any other fare for home low voltage household consumers. At the end of 2017, this social benefit was granted to **10.26%** of households in the regulated market, compared to 2016 when this percentage was **10.96%**.

Considering the last stage of the scheduled tariffs for the disposal of regulated electricity tariffs ending on 31.12.2017, the following requirements are necessary for **household customers**:

- The electricity market is fully open, which means that any final electricity customer can conclude a supply contract with any active supplier on the electricity market.
- Domestic customers have the unconditional right to universal service (US), respectively, to provide electricity in reasonable, comparable, and non-discriminatory quality terms and conditions, according to ANRE regulations.
- The retail electricity market activates:
 - SoLR who have the obligation to provide household customers with US electricity;
 - Competitive suppliers, who have the right to supply electricity to all categories of final customers under contractually agreed terms.
- SoLR designated by ANRE are currently:
 - Electrica Furnizare S.A. – for Muntenia North, Transilvania North și Transilvania South
 - CEZ Vânzare S.A. - for Oltenia
 - E.ON Energie România S.A. - for Moldova
 - Enel Energie S.A. - for Banat and Dobrogea
 - Enel Energie Muntenia S.A. - for Muntenia South 2
- The household customer may at any time use this eligibility, having the right to change its electricity supplier in accordance with the provisions of the procedure approved by ANRE Order no. 105/2014: free of charge, subject to the terms of the supply contract in force, no

more than 3 weeks after the customer has sent notice of termination of the supply contract in force.

- Until 31.12.2017, the SoLR applies:
 - for non-eligible households, regulated tariffs approved by ANRE (for the 2nd semester of 2017, for 10% of electricity consumption) and CPC-Components Market (in the second semester 2017 for 90% of electricity consumption);
 - Household customers who, after having spent eligibility, returned to SoLR, CPC tariffs for all electricity;
- **As of 01.01.2018, following the completion of the deregulation calendar, there will be no regulated tariffs approved by ANRE, the consumption of household customers being billed at tariffs/prices for the universal service approved by ANRE.**
- Customers who have used the contract/electricity supply contracts under competitive conditions may return at any time and whenever they wish to be supplied under US, in which case their electricity consumption will be fully invoiced by the SoLR:
- at CPC rates approved by ANRE for the consumption registered until 31.12.2017;
- at tariffs/prices for the universal service approved by ANRE, for consumption registered after 01.01.2018.

Non-household customers with less than 50 employees and an annual turnover or total asset value in the balance sheet according to annual tax reports not exceeding € 10 million are entitled to US, who may benefit from this right on the basis of the request and the supporting documents submitted to the SoLR.

In 2017, ANRE developed an instrument whereby end-users can compare the offers of Romanian suppliers. The application can be accessed through the ANRE website, using the link <http://www.anre.ro/ro/info-consumatori/comparator-de-tarife>.

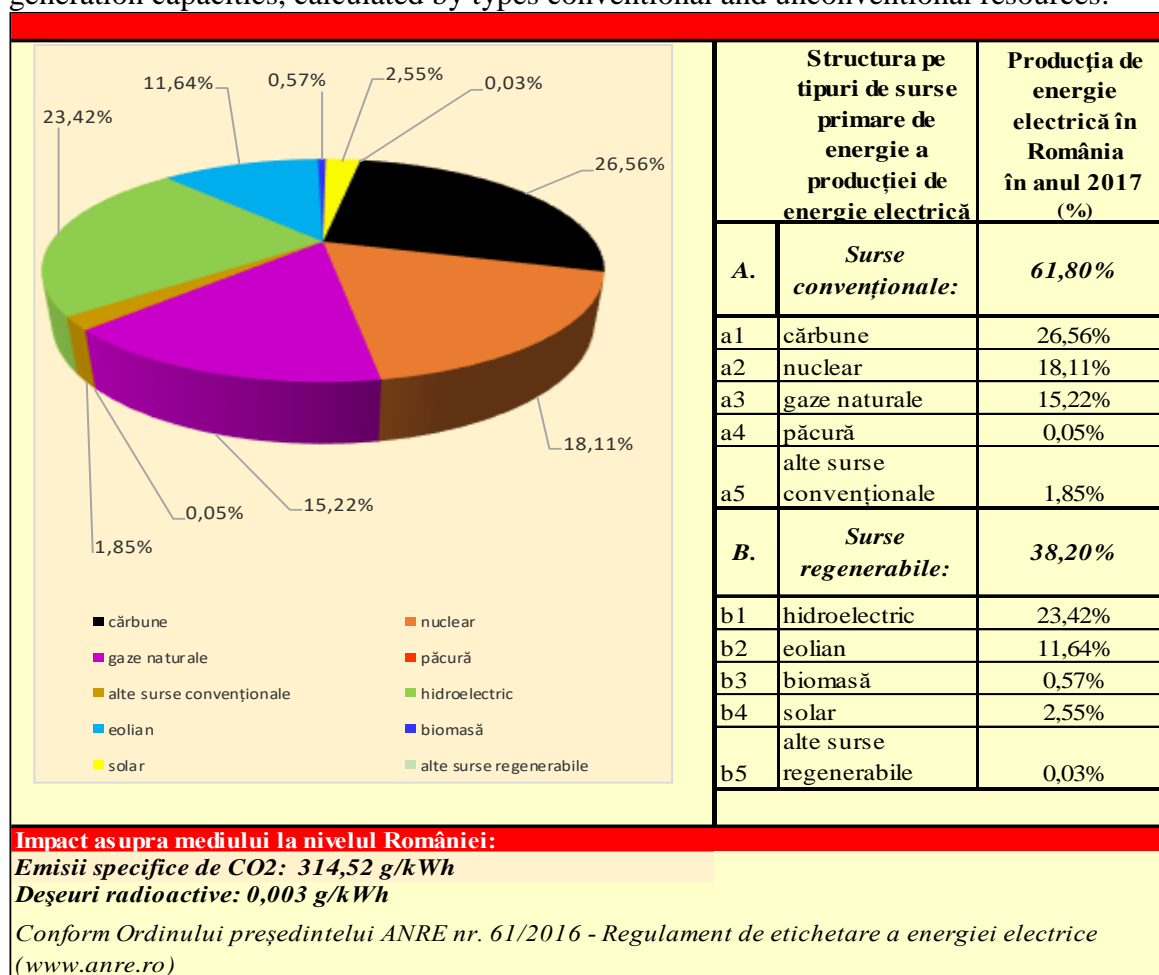
The comparator was developed to make available to users connected to the national energy system an independent, equidistant and noncommercial tool that allows comparison of electricity supply prices.

In order to use the application, users choose the criteria provided in the selection screen, and after completing the selection, the application displays the result as a list of suppliers' offers that meet the user input criteria, ordered by the price of electricity. In addition, the app also displays the ratio of the electricity price of the suppliers' offer to the CPC rate applied by the top-level suppliers. When viewing results, users may also find other relevant details, such as the conditions associated with the offer (payment term, invoice delivery method, duration of the contract, etc.) and the period of validity of the offer. Between 1 June and 31 December 2017, the comparator was accessed by 81928 unique users from: Romania (95.28%), Germany (1.19%), United Kingdom (0.82%), France (0.33%), Italy (0.27%). The average time spent by a user on the page was 4 minutes and 45 seconds, and 82 vendors uploaded data to the price comparator.

According to the provisions of the *Electricity Labeling Regulation*, approved by **ANRE Order no. 61/2016**, on the basis of the electricity producers' declarations referring to the total quantity of electricity produced in 2017, the structure was calculated by types of primary energy sources of electricity production in Romania.

In 2017, the average national average values of CO₂ emissions and radioactive waste resulting from electricity generation were 314.52g/kWh and 0.003g/kWh respectively. By comparison to these values, electricity suppliers specify in their own labels whether the electricity they supplied to final customers in 2017 had an impact on the environment below or above the national average.

Starting from the data obtained in the process of developing the national label, the following graph presents the structure of electricity produced in dispatchable and non-dispatchable production units, reported by 614 license holders for the commercial exploitation of electricity generation capacities, calculated by types conventional and unconventional resources.



The average specific CO₂ emissions by types of primary energy sources presented in the following table are determined as the weighted average of the specific emissions achieved and the electricity produced by each producer per each type of primary source:

Primary energy source	Specific CO ₂ emissions [g/kWh]
Coal	911.14
Natural gas	407.04
Fuel oil	599.74
Other conventional sources	553.15
Renewable sources	0
Sectoral average	314.52

In order to make the electricity suppliers accountable in a correct, complete and accurate manner to their final customers, ANRE set up a unitary reporting system for the purpose of informing the final customers so as to allow for more rigorous monitoring of the fulfillment of their information obligations. The activity of informing final electricity consumers, carried out during the year 2017 by the license holders for the electricity supply activity, according to the Regulation on the activity of informing the final customers of electricity and natural gas, approved by ANRE Order no. 96/2015, is published on the ANRE website at <http://www.anre.ro/en/energy-electrica/information-information-public/support-consumers/portal-information-consumer1434019306>.

In 2017, the share of license holders for the electricity supply activity, which produced and submitted to ANRE reports on the activity of notifying the final customers, was 84%.

The share of final customers informed by licensees for the supply of electricity to final consumers in 2017 is 99%.

From the reports received, it is noted that the consumer information activity during 2017 was carried out as following:

- Consumer notification through national and/or local written media was carried out by 69% of suppliers for which the number of final customers is greater than 1000 for any one month of the calendar year;
- Consumer notification through informative materials was done by 47% of the license holders for the monitored electricity supply activity;
- Consumer information through the website was provided by 93% of monitored suppliers, with the remaining 7% having a website under construction or incomplete.
- The most common areas where end-user licensors have informed their final customers are: Prices and types of applied tariffs (13%), end-user rights and obligations (11%) and the main clauses of the supply contract (10%).
- The most used methods for informing clients were: telephone conversations (23%), publishing information on their own internet page (21%) and distributing informative materials to customer/information points (20%).
- The most common topics on consumer telephone calls paid to the consumer were: information on measurement, invoicing, electricity consumption calculation (48%), requests for information on how to change suppliers (20%); accidental or scheduled interruptions (17%).

Compared to 2016, in 2017 there is an increase in the frequency of consumer inquiries regarding additional energy invoice charges (green certificates), supplier switching procedure, requests for information on disruptions to electricity supply and related questions to power a new place of consumption.

Subsequent to the centralization and analysis of the reports received from the *electricity suppliers*, for 2017, transmitted according to the provisions of the ANRE Order no. 16/2015 for the approval of the Framework Procedure on the Obligation of Electricity and Gas Suppliers to Solve the Complaints of the Final Customers, the following conclusions were drawn:

- out of the total number of **110 monitored electricity license holders, 91 submitted to ANRE reports on the settlement of final customer complaints**. The number of

complaints received from **household consumers** was 26336, and 6850 from **non-household consumers**.

The total number of consumers integrated into **intelligent metering systems** over the 2015-2017 period is 443,000, which represents 4.8% of the total number of 9.24 million consumers supplied at the low voltage level (the percentage varies between operators, between 0 and 12%). The investment cost for these works is approx. Ron 164.8 million, and the resulting unit cost is Ron 372. There is a large variation in the unit costs between the operators' projects due to the technical solution chosen and, after identifying the optimal solution, there is the possibility of reducing the unit cost of the investment (for example, the unit cost of the investment decreased by 52% in 2016 compared to 2015).

4.1.2. Natural gas

In 2017, ANRE developed an instrument by which end customers can compare the natural gas supply offers in Romania. The interactive web application called "Comparison of Natural Gas Supply Types" can be accessed on ANRE website starting June 1, 2017 using the link http://www.anre.ro/ro/info-consumatori/compare_offers_standard-of-supply-to-gn.

The interactive web application called "Comparison of offers for natural gas supply" is to be accessed on the ANRE website in the second quarter of 2017. The interactive application is implemented as a result of the provisions of art. 5 of the ANRE Order no. 106/2014 *on the ways of informing the final customers of natural gas suppliers about the commercial conditions of gas supply*. All natural gas suppliers that develop and publish by their own means standard offers are required to upload information about these in the data base of the application. In addition, suppliers have the obligation to upload in this database any new standard-offer and any change in the existing standard offer within 5 working days since the date of its release or change.

Using the Comparator is very simple, in just two steps: users choose the selection criteria and receive a list of standard offers. Of all the offers uploaded by suppliers, the Comparator displays those that meet the criteria selected by the user and displays them in an ascending order based on the price of the gas supply of each offer. When viewing the results, users may also find other relevant details or conditions associated with the standard offer, like payment term, invoice delivery method, duration of the contract and information on the required guarantees and the period of validity of the standard offer. Additionally, the user has the possibility to enter data for comparison, i.e. the supply price from the current contract and the annual consumption, and then a comparison is made with its current costs.

Since the launch of the Comparator, from June 1 until December 31, 2017, it has been accessed by a total of **21,345 users** who have spent an average of approx. 4 and a half minutes in it. Of these, about 95% of users were from Romania, and the remaining 5% from outside the country, of which 1.63% from Germany, 0.83% from Great Britain, 0.27% from France and 0.23% % from the US.

The total number of natural gas supply offers available for consultation within the Comparator developed by ANRE was 161, which were introduced by 91 suppliers.

The notification activity for final natural gas consumers carried out during 2017 by the license holders, according to the *Regulation on the activity of notifying final customers of electricity and natural gas*, approved by the **ANRE Order no. 96/2015**, is published on the

ANRE website at <http://www.anre.ro/ro/gaze-naturale/informatii-informatii-pentru-public/furnizori-gaze-naturale/raport-informare-consumatori>

In 2017, the share of natural gas suppliers who produced and submitted to ANRE reports on the activity of informing the final customers was 88%. The share of final consumers notified by natural gas suppliers in the year 2017 was 99.31%.

From the reports received, it is noted that the consumer notification activity during 2017 was carried out as following:

- Notifying consumers through national and/or local written media was carried out to an extent of 84% by license holders for the monitored natural gas supply activity,
- 69% of consumers were notified through the information materials distributed by the natural gas license holders,
- Consumer information through the website was conducted by 92% of monitored suppliers, with the remaining 8% having a website under construction or incomplete,
- The most common methods chosen by providers were: information on the site (28%), telephone conversations (27%) and the distribution of informative materials to customer/information points (21%).
- Suppliers paid increased attention to the rights and obligations of final customers (12%), prices and types of regulated tariffs (12%), metering methods, invoicing, invoice content and means of payment (10%), the steps necessary for the changeover process (9%).

Compared to 2016, in 2017 there is an increase in the frequency of consumer questions regarding applied tariffs, the technical verification/mandatory revision (once every 2 years) of the natural gas installation, questions about the connection of a new place of consumption, requesting information on the procedure, steps and documents necessary for the process of changing the natural gas supplier.

Following the centralization and analysis of the reports received from the natural gas suppliers, related to the year 2017, transmitted according to the provisions of the ANRE Order no. 16/2015 for the approval of the *Framework Procedure on the Obligation of Electricity and Gas Suppliers to Settle the Complaints of Final Customers*, the following conclusions were drawn:

- out of the total of 82 monitored natural gas supply license holders, **61 reported to ANRE on the settlement of final customer complaints**. The number of complaints received from **households** was **23335**, and from **non-household consumers** were **6168**.

4.2. Dispute resolution

Final client complaints

Obligations of settling final customer complaints are included in the licensing conditions, in framework contracts as well as in supply standards. Supply license holders must ensure the registration, investigation and resolution of complaints made to their end-users. It is mandatory to have a compartment to take over any complaint made to the licensee by an end-customer who considers himself/herself to be harmed by the licensee's practices. A register of records of applications, complaints and complaints addressed by final customers, as well as of how to deal with them, shall be established and maintained.

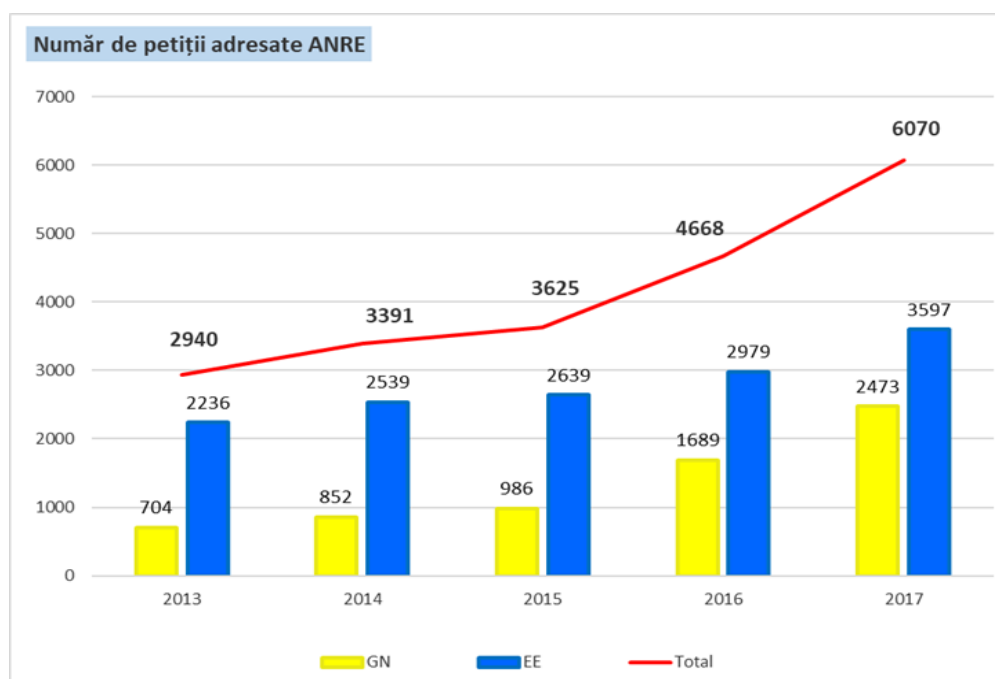
If the final customer is not satisfied with the answer received from the economic operator, he may address ANRE which, based on the provisions of GO no. 27/2002, as subsequently amended and supplemented, analyzes and formulates responses to the issues raised in the petitions. For complaints requiring additional checks, control actions are required.

Settling these claims differs, depending on the issues addressed: from written answers including clarifications, explanations and references to the legislation in force, on-site checks, to direct discussions with the parties involved.

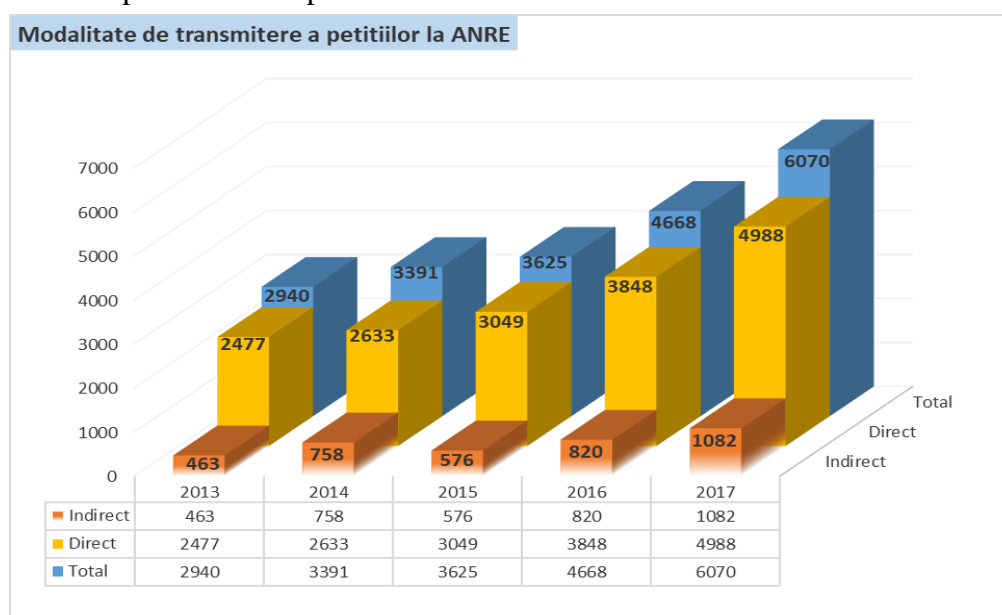
In the event that the issues raised in the complaints regarding the non-observance of certain legal provisions are proved by the economic operators, ANRE shall send to them warning letters setting out measures of compliance with the legal provisions in force and/or legal measures enforcing sanctions are applied.

In 2017, **6070** complaints, formulated by natural and legal persons receiving/requesting the services provided by the economic operators in the sectors of electricity, natural gas and thermal energy, were registered and solved. Of the total, **3597** complaints were registered in the electricity and thermal energy sector and **2473** complaints in the gas sector. The evolution of the number of complaints is presented in the following table and graph:

Crt. No.	Sector/ Year	2013	2014	2015	2016	2017
1	Electricity	2236	2539	2639	2979	3597
2	Natural gas	704	852	986	1689	2473
	Total	2940	3391	3625	4668	6070



4998 complaints were forwarded for analysis and settlement to ANRE directly, and **1082** were indirectly redirected through other public institutions. The situation of indirectly addressed complaints is thus presented:



Complaints redirected from other public institutions to ANRE:

Crt. No.	Institution	Number of petitions
1	Romanian Presidential Administration	7
2	The Romanian Government	55
3	The Romanian Parliament	18
4	Ministries	104
5	National Anti-corruption Directorate (RO: DNA)	2
6	National Consumer Protection Authority (RO: ANPC)	745
7	National Regulatory Authority for Community Public Utility Services (RO: ANRSC)	100
8	Prefectures, county councils, municipalities	25
9	Ombudsman	3
10	Other	23
	Total	1082

In order to identify the main issues presented by petitioners, a classification of complaints was developed to identify the legislative provisions that need to be modified, if necessary, and to improve the services provided to clients in order to increase satisfaction.

The main categories of problems identified in solved complaints in the electricity sector:

Crt. No.	Main issues flagged	Number of petitions	[%]
1	Electricity contracting/invoicing	1259	35
2	The quality of electricity	645	17.9
3	Network access	332	9.2
4	Thermal energy	274	7.6

5	Electricity measurement	179	4.9
6	Suspicious of electricity theft	164	4.5
7	Supplier changeover	130	3.6

The main categories of problems identified in the complaints solved in the natural gas sector:

Crt. No.	Main issues flagged	Number of petitions	[%]
1	Usage installations (checks/revisions, detectors)	1010	41
2	System connection	435	18
3	Contracting, invoicing	390	16
4	Supply (cessation, quality)	143	6
5	System access	150	6

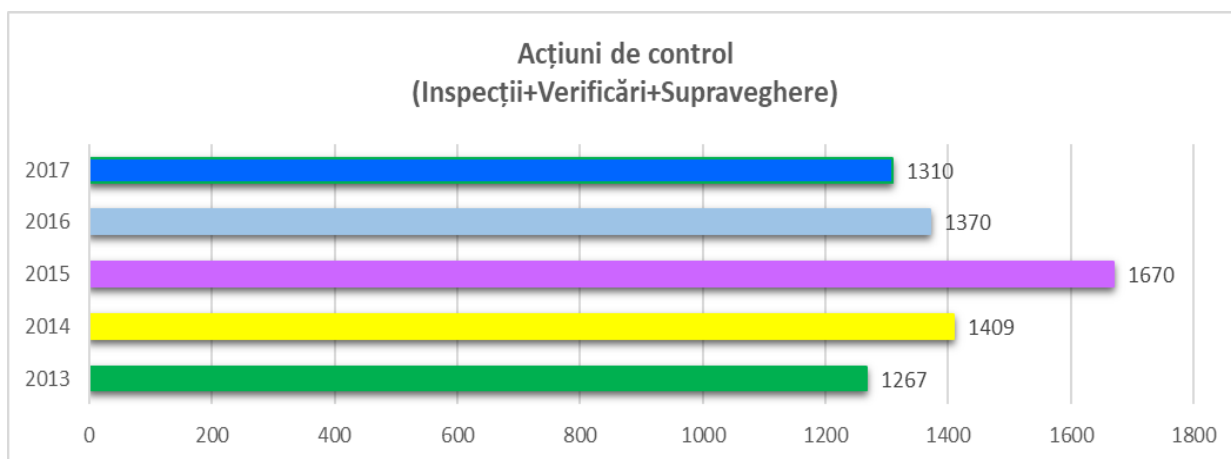
The control activity of ANRE was carried out on the basis of the attributions established by the legislation in force and was carried out in accordance with the annual control program, approved by the president of ANRE, through the control actions of the inspection type and additionally by means of checks and surveillance, resulting from the current activities of the specialized departments within ANRE.

In 2017, 646 inspection actions were carried out. In addition to inspection-type inspection activities, provided for in the control program for 2017, additional checks were carried out: 200 control-type checks and 464 supervisory controls. The control actions focused mainly on the license/authorization/attestation holders issued by ANRE.

The situation of the control actions by category of economic operators controlled is shown in the table below.

Type of controlling action	Licensed		Certified/Authorized		Energy efficiency		Others
	Electricity	Natural gas	Electricity	Natural gas	Labeling	Large consumers	
Inspection (646)	46	154	207	123	39	77	
Check (200)	94	75	2	17	-	-	12
Supervision (464)	273	185	-	6	-	-	
Subtotal	413	414	209	206	39	77	12
Total	827		415		116		12

The evolution of the total number of control actions carried out by ANRE in the last five years is shown in the chart below:



The subjects of the control actions carried out by license holders in the field of electricity and natural gas consisted mainly in verifying the observance of the legal provisions in force concerning:

- verification of the application of the sale-purchase contract termination (disconnection of electricity supply) for all buyers in the portfolio of the company and for all the final customers in the portfolio of the company;
- allocating the quantities of natural gas resulting from the production activity necessary to cover the consumption of household customers and thermal energy producers, only for the quantity of natural gas used for the production of thermal energy in cogeneration plants and in thermal power stations, intended for the consumption of the population;
- the obligation to trade natural gas on centralized markets;
- the obligation to acquire green certificates;
- the obligation to provide financial guarantees by energy suppliers;
- performance indicators set by performance standards for electricity and natural gas distribution services, electricity and natural gas supply activities for the transmission of electricity and natural gas transmission systems;
- updating the technical characteristics of natural gas distribution systems;
- displaying on the licensee's websites the information/documents provided by the regulations in force;
- resale of electricity;
- connection to public electricity networks;
- connection to the gas distribution system;
- access to the natural gas distribution and transmission system;
- certification of compliance of photovoltaic and/or wind power plants;
- design, verification, execution, reception and commissioning of natural gas installations;
- design, verification, execution, reception and commissioning of electrical installations;
- preparing and submitting activity reports and informing consumers;
- compliance with the conditions of validity of the attestations and authorizations held;
- obtaining licenses for the LPG supply activity;
- energy efficiency of large energy consumers;
- energy efficiency and labeling for placing appliances on the market.

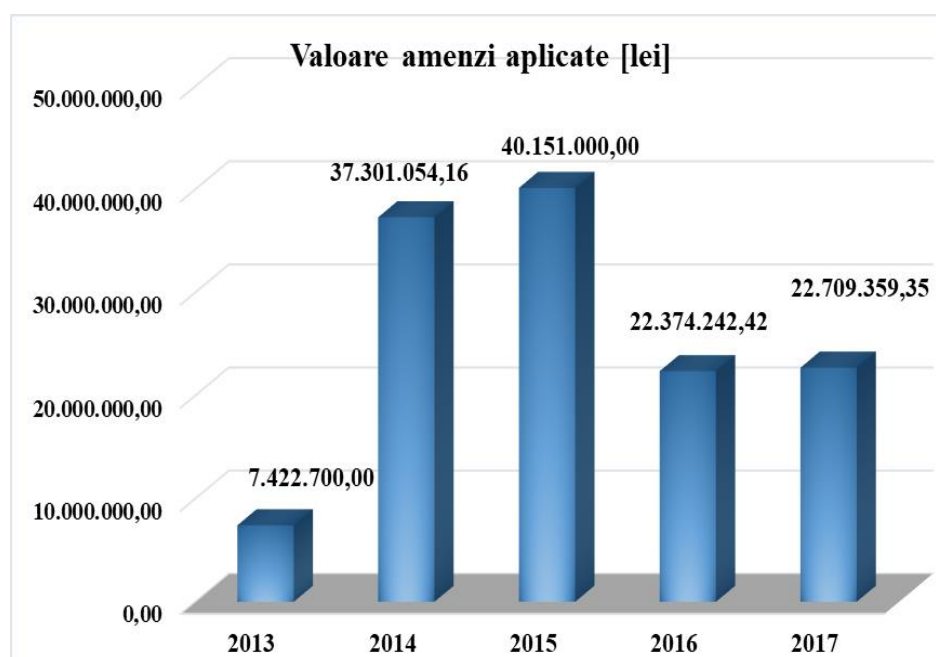
As a result of the control actions carried out, in 2017, **710 penalties reports** were drawn up, and for the irregularities found **993** sanctions were applied, as following:

- **518** for electricity;
- **439** for natural gas;
- **36** for energy efficiency.

Fines of Ron 22,709,359.35 were applied through the penalties reports.

Of the 710 reports, 16 were applied to individuals and 694 were applied to economic agents. The distribution of the sanctions and the amount of the fines applied is outlined in the table below:

Distribution of sanctions per economic operators		
Type of economic operator	Total no. of applied sanctions	Total amount of applied fines (Ron)
EE Licensed	450	16,478,152.02
GN Licensed	344	5,145,798.30
EE Certified	21	54,000.00
GN Authorized	86	627,000.00
CV Accredited	11	2,163.12
Energy efficiency	36	93,245.91
Other EE (sole traders, developers)	36	230,000.00
Other GN (sole traders, developers)	9	77,000.00
Total	993	22,709,359.35



Settlement of pre-contractual disagreements

In 2017, a single request for mediation of disagreements at the conclusion of a gas contract was registered and solved, by issuance of an ANRE response under the conditions and deadlines established by the provisions of the ANRE Order no. 35/2013.

Settlement of complaints against network operators

Two complaints against electricity grid operators have been registered and solved by ANRE responses under the conditions and deadlines established by the provisions of the ANRE Order no. 105/2015.

Settlement of disputes on the wholesale and retail markets

In order to solve the disputes arising from the contracts unfolded between the participants to the wholesale and retail electricity and natural gas markets, **ANRE Order no. 61/2013** was issued, for the approval of the *Regulation on the organization and operation of the Committee for the settlement of disputes on the wholesale and retail market between participants to the electricity and natural gas market.*

During the year 2017, **10 disputes between the electricity market participants** on the wholesale market and on the retail electricity market were settled.

Following the analysis of the documentation attached to the dispute settlement requests, the hearings that took place, and the debates, 6 judgments were issued. For 4 claims, the settlement procedure could not be commenced since the documents submitted did not show the performance of the conciliation stage between the parties; after the responses, the parties to the dispute did not return with new requests.

During 2017, **23 dispute settlement claims were received in the natural gas sector.**

The possibility of challenging individual administrative acts or normative acts of the regulator is an important factor in ensuring its accountability to consumers. Thus, orders and decisions issued by ANRE may be appealed against by natural or legal persons who are of the opinion that their rights were violated by these regulations.

The current situation regarding case management in court in 2017 is as follows:

Fines concerning the cancellation of inspection reports:

- 94 files on docket, on merits/in appeal
- 95 files with final sentences issued, favorable to ANRE
- 13 files with final sentences issued, lost by ANRE.

Fines concerning the annulment of administrative acts:

- 212 files on docket, on merits/in appeal
- 14 files with final sentences issued, favorable to ANRE
- 4 files with final sentences issued, lost by ANRE
- 3 files with final sentences issued, lost by ANRE on documents of the Court of Accounts.