ROMANIAN ENERGY REGULATORY AUTHORITY

NATIONAL REPORT 2016

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1 Forward

This document represents the national report issued by Romanian Energy Regulatory Authority – ANRE for the similar institutions in the Member States, members of the Council of European Energy Regulators – CEER, Agency for the Cooperation of Energy Regulators – ACER and European Commission in order to comply with the reporting obligations pursuant to Article 37 (1) (e) of Directive 2009/72/EC and to Article 41(1) (e) of Directive 2009/73/EC. It also complies with the reporting obligations pursuant to Article 9, paragraphs (1) (ș), (4), (5), (6) and (7) of Law no.160/2012 approving Government Emergency Ordinance no.33/2007 on the organization and functioning of ANRE. The report contains information on the evolution of the electricity and natural gas markets for 1 January 2016 – 31 December 2016, in accordance with the ACER-CEER requirements.

In 2016, ANRE has benefited to the maximum of the internal human resources in order to develop a modern and unitary regulatory framework, facile to comply with for all the market participants.

In order to achieve the objectives of strengthening the consumer rights, in 2016, ANRE has reviewed a number of consumer-oriented regulations, such as *Performance Standard for electricity distribution service*, due to which the users of the distribution grid will benefit from a better quality of service, and otherwise, will be able to receive the cash compensations for the failure of the distribution operators to meet the performance indicators foreseen.

Also, in the natural gas sector, one of the most important regulation approved in 2016 is the *Regulation on the gas supply to the final customers*, which considers the latest changes in the natural gas sector, the most important being the total liberalization of the internal gas market for the non-residential customers. By promoting this regulation, ANRE has sought to create a unitary regulatory framework that would ensure the protection of the gas final customers, regardless of their supply regime, on the natural gas regulated market or on the natural gas competitive market.

At the same time, in December 2016, ANRE has begun the implementation of an interactive web-based application, integrated on the website of ANRE, named „Compare deal-types for natural gas supply". It will offer to all users true, accurate, detailed and up-to-date information on the gas suppliers' offers, respectively it will carry out of the offers in the market, returning a ranking of the tenders that matches the requested options of the users. „Compare deal-types for natural gas supply" is an independent, objective and non-commercial tool, developed by ANRE for the benefit of the gas final customers. The access to the application is free of charge and not constrained in any way, the users having fast access to all the gas supply offers in Romania. Correct and complete information contributes to strengthening the capacity and the ability of the final customers to protect their own interests, while stimulating the competition among suppliers who will be forced to offer more competitive prices. Informed customers, prepared to exercise their rights to choose, will benefit from the competition and, on the other hand, they will support it.

Having a decisive role in the transition to a more competitive energy system, safer and more flexible, interconnected with the European energy market, the energy efficiency is one of the pillars of the sustainable development and, in particular, of the energy system development. In 2016, ANRE has carried out an important activity in the field of energy efficiency regarding the implementation of the current legislation for promoting the energy efficiency and elaborating the secondary regulations, and also

activities within the framework of the projects financed by the Intelligent Energy Europe Program and Horizon 2020 and in internal and international working groups. In the context of the Europe 2020 national targets assumed by Romania within the framework of the National Reform Program 2016, increasing of the energy efficiency is one of the three national priorities, and ANRE promotes the constructive dialogue with all the stakeholders in the regulatory activity and the sustained dissemination of the new legislation at national and European level in the energy efficiency sector.

In the view of the progress made by Romania in meeting the national targets in energy efficiency, ANRE will take over, in 2017, the chairmanship of the Association of the National Energy Efficiency Agencies in Europe – EnR, consisting of 24 European agencies in the energy efficiency sector, on which occasion the representatives of the Authority will present the future activities, including the concept of energy poverty defined in the new European legislation published on 30.11.2016, in the context of Europe 2030 targets and Energy Union – clean energy for all the Europeans.

To ensure a competitive regime that works for all customers and to ensure the functioning of the energy sector and market in terms of efficiency, transparency and customer protection, the regulatory authority carried out a sustained monitoring and controlling activity and applies the necessary measures, specific to the regulatory activity in order to prevent and, where appropriate, to correct any possible distortion.

Regarding the priorities that ANRE has established for the year 2017, these are related to increasing the efficiency in the energy market and their integration in the European market, harmonization of the secondary legislation with the provisions of the primary legislation and the European network codes, development of the trading platforms, applying the provisions of the European regulations on market integrity and transparency, ensuring the integration of the renewable energy sources in a secure and reliable way, encouraging smart grid investments, customer information and protection.

NICULAE HAVRILEȚ
PRESIDENT

Abbreviations

ATC – Available Transmission Capacity

BM - Balancing Market

BRM - Romanian Commodities Exchange

CMBC – Centralized Market of Bilateral Contracts

CMBC-CN - Centralized Market of Bilateral Contracts by Public Auction with Continuous Negotiation

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

CMC – Competitive Market Component

DAM – Day-Ahead Market

DSO – Distribution System Operator

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

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

HHI – Herfindahl-Hirschman Index

IDM - Intra-day market

MCP- Market closing price

NPS –National Power System

NTS - Natural Gas Transmission System

PCR – Price Coupling of Regions solution

SoLR – Supplier of Last Resort

TSO – Transmission System Operator

2 Main developments in the electricity and natural gas market

2.1 Electricity market

The main developments on the electricity market in 2016 were:

- ANRE has authorized until 31 December 2016, generation capacities of renewable energy with a total installed power of 4798 de MW. Of the total, 2,963 MW are wind turbines, 1,360 MW — photovoltaic panels and 124 MW — biomass, biogas and landfill gas units. At the same time, 351 MW represents small hydropower plants below 10 MW, new and upgraded.

- In 2016, the electricity production was approximately 1, 7% lower than in 2015. The internal consumption was about 1.2% higher than in 2015. Romania was a net exporter of electricity in 2016, the import-export balance being negative (- 5. 02 TWh) although comparing to 2015, in 2016, the export has decreased approximately by 18%, and the import by 5%.
- Regarding the **mix of resources**, there are no significant differences to 2015. The hydroelectric production registered decreases of 3%, the renewable production of 0.9%, and the nuclear one of 0. 2%. The decreases were compensated by increases in the electricity production from coal (3%) and hydrocarbons (1.1%).

- ANRE approved the **final certification** of the National Company for Power Grid "Transelectrica" - S.A., according to the model of **ownership unbundling,** as transmission system operator of the national electricity system, by ANRE Order no.164/2015. In 2016, there was an important action of rebranding of distribution and supply companies in the electricity sector.

- Decrease by 10.8 % of the average transmission tariff from 1 July 2016 compared to the tariff approved for the previous year (1 July 2015 – 30 June 2016), was due to the increase of the electricity consumption and the export leading to the methodological corrections applied by ANRE, related to the ending of the first year of the regulatory period (1 July 2014 – 30 June 2015) and to the estimation of the second year of the regulatory period (1 July 2015 – 30 June 2016).

- **The tariffs for the electricity distribution service** decreased with a variation of 4.59 % for high voltage, - 5.73 % for medium voltage and – 6.65 % for low voltage, relevant for households.

- ANRE approved new performance standards for transmission and distribution.

- The total duration of transmission service interruption registered in 2016 was of 6.09 hours for consumers and 0.73 hours for the producers.

- Regarding the **state of the distribution networks,** the average duration of the interruptions in the network, **SAIDI planned interruptions**, has decreased as country average value from 211 min/year in 2015 to 184 min/year in 2016. The average duration of the unplanned interruptions in the network,

SAIDI for unplanned interruptions has decreased in 2016 to 290 min/year, compared to the one in 2015, of 308 min/year.

- In 2016, the highest annual average utilization values of the total capacity allocated on a border and direction after the auction (calculated as the ratio between the energy of the notified trades and the energy corresponding to the total capacity allocated by the Romanian side and the neighbor side to all the participants) were registered for the export on the borders with Bulgaria (77.54%), Serbia (71.11%) and Hungary (65.84%). On the import, the use was lower regardless the border, the highest annual average value was recorded on the border with Hungary (33.33%).

- **Electricity transactions volume** achieved on the competitive market in 2016:

Wholesale market components	Volumes traded In 2016 -GWh-	Evolution compared To 2015 - % -	Percentage of internal consumption 2016 - % -
Regulated contracts market	4152	▼ 35.3	7.9
Directly negotiated contracts	1283	▼15.0	2.4
Centralized market of bilateral contracts, from which:	65337	▲15.2	123.5
- CMBC-EA	21729	▼30.8	41.1
- CMBC-CN	12718	▲60.7	24.0
- CM-OTC	30890	▲77.6	58.4
Centralized market for universal service	8046	▲75.2	15.2
Day ahead market	25810	▲14.7	48.8
Intra-day market	131	▲72.4	2.5
Balancing market	4001	▼17.7	7.6
Export*	8587	▼18.2	16.2

*The quantity for the export contracts in 2016 resulted from the reports of the wholesale market participants and includes the quantities exported by the suppliers and those exported through CNTEE Transelectrica, as a transfer agent for couplet DAM; export volumes were verified with DAMAS platform notifications, with small differences in some cases.

Source: monthly reports of the electricity wholesale market participants, OPCOM SA and TRANSELECTRICA SA – ANRE processing -

- According to the data presented, the largest increases were registered in CMBC-CN and CM-OTC, the volume of the electricity traded on the two markets increased by approx. 60%, respectively by approx. 78% compared to the previous year, while the downward trend of CMBC-EA has been maintained. In the same time, in 2016, it is maintained the percentage of approx. 67% of the total transactions on the

three centralized markets managed by OPCOM SA, used predominantly by market participants: CM - OTC, DAM and CMBC-EA, in this year CM-OTC, taking the first place from CMBC-EA.

- Compared to 2015, it is noted **a further reduction of the electricity amount sold on regulated contract**; this is a consequence of the deregulation level established by the Memorandum of Understanding approved by the Government in March 2012 concerning the assumed obligations with IMF, World Bank and European Commission regarding the approval of the timetable for phasing out regulated electricity tariffs to the final consumers that do not use the eligibility right.

- **A comparative analysis of the annual average prices resulting from transactions on the wholesale market components** in 2016 over the previous year indicates the following:
  - decrease of the average annual prices for all the components of the wholesale market, except the average price on deficit registered on the Balancing Market; the most significant decrease was registered on the IDM (7.6%) and CMBC-CN (7%), the smallest decrease was for the price on the contracts directly negotiated;
  - decrease of the average prices on the centralized markets can be explained mostly by the increase of the electricity quantities from the hydroelectric production sold on the competitive market; another factor of influence is the maintenance of the share of production from renewable sources to a level close to the one registered in 2015 and downward trend of the price offer associated with the sale of the green certificates on the centralized markets managed by OPCOM SA, in the current lifetime of the green certificates, and the limitation of the green certificates number allowed for trading;
  - the average annual price on the negotiated bilateral contracts resulting from the transactions directly negotiated concluded prior to entering into force of the Law, applicable in 2016, registered a much lower value than those registered on the contracts concluded on the centralized markets managed by OPCOM SA;
  - the average sales price on the Centralized Market for Universal Service registered a decrease of approx. 4% compared to the previous year, still being the highest average price recorded on centralized platforms managed by the market operator; it reflects the bidding policy of the participants on this market segment, but it is also likely to be influenced by the type/number of the traded products.

- In 2016, the number of electricity suppliers operating **on the electricity retail market** was 105 of which 21 are also electricity generation license holders and 5 suppliers of last resort (SoLR).

- The electricity supplied by SoLR amounted approx.13533 GWh, with a decrease of 4.2% compared to 2015, given the increase of the total final consumption by approx. 1.3%.

- Also in 2016:
  - The electricity final consumption increased by 1.3% compared to the level registered the previous year;
  - The household consumption increased by 0.4% compared to 2015 but its share in the structure of consumption has maintained;
  - The non-households customers consumption who have changed their supplier has increased by approx. 3.8% compared to 2015 and increased its share in the final consumption;
  - The non-households customers consumption under the universal service and of last resort

decreased by approx. 30.3% compared to 2015, while also decreasing its share in the final consumption.

- In December 2016, on the competitive market were present 136046 non-household customers, the energy supplied to them in 2016 represented 33344 GWh, and the degree of market opening was 71%.

- The value of supply switching rate for the retail market in terms of number of consumption places recorded increases compared to the last year values. In 2016 switching the supplier was significant especially for the households, respectively non-households with small contracted power, while the switching percent for the large non households' customers remained approximatively at the same level. In this year, it is noticed an increase in this process, mainly in the households segment, which is in an increasingly interesting category for the competing suppliers, while the preference of the very large non-households customers has diminished.

- According to the timetable for phasing out the regulated tariffs, stated by the Memorandum of Understanding signed by the Government with the European Commission on 13 March 2012, in 2016, steps 10 and 11 for phasing out the regulated tariffs were taken, the percentage of buying electricity on the competitive market for the final customers that have not used the eligibility rights are:
  - 100 % of non-household customers consumption and 60 % of household customers consumption, for step 10 on phasing out regulated tariffs (period 01.01.2016 - 30.06.2016);
  - 100 % of non-household customers consumption and 70 % of household customers
  - Consumption, for the step 11 on phasing out regulated tariffs (period 01.07.2016 - 31.12.2016).

2.2.Natural gas market

The main developments on the natural gas market were:

- Annual consumption of natural gas has increased in 2016 compared to 2015, reaching around 11.7 billion cubic meters, with an increase of approx. 2%, based on a slightly increase on the consumption of the final customers which number registered in 2016, compared to 2015, an increase by 116,000 customers.

- In 2016, the total consumption of natural gas was 124.12 TWh. Of the total, the final customers consumption was 111.7 TWh, of which 80 TWh represented the non-households consumption (71.65%), and 31.7 TWh represented the households consumption (28.35%).

- The total number of customers registered at the end of 2016 was 3,596,574, of which 188,253 non-households (5.23%) and 3,408,321 households (94.77%).

- Natural gas consumption is covered from internal production and imports. Internal production was approx.106.8 TWh, and the import was 15.9 TWh.

- The number of participants on the gas market in Romania has increased steadily as the market was liberalized, especially in the natural gas supply sector;
- Natural gas internal production in 2016, current production and extracted from underground storage, meant for consumption, accounted for approximately 87.5% of total sources. The top two producers (Romgaz and OMV Petrom) jointly covered 93.5% from this source.

- The import entering into consumption in 2016, current import and extracted from underground storage, accounted for 12.5%. The top three importers – internal suppliers – jointly made about 90% of these quantities.

- In 2016, due to the increase of consumption and the competitive prices of the quantities from external sources, a significant quantity of natural gas was injected into the underground storage facilities in the amount of 470,544 MWh. This quantity represents a 100% increase in volumes stored in 2016 compared to 2015, as no quantities of natural gas have been injected from external sources in the previous cycle.

- Given the structure of the Romanian natural gas market with an annual consumption that exceeds the total production, in 2016, the exported quantities had a very low level, of about 0.013 TWh, which represents less than 0.001% of the total production. The quantities exported were very small due to, on the one hand, the increase in consumption compared to the previous year and, on the other hand, the fact that imports registered a significant increase in the total consumed natural gas because of the low prices of natural gas from external sources.

- In 2016, the quantities traded on centralized markets amounted to a total volume of 15.5 TWh, of which 14.1 TWh for the wholesale market and 1.4 TWh for the retail market.

- On January 19, 2016, the European Commission validated the EUR 179 million financing of the works to be carried out by the transmission and system operator for BRUA development - Phase 1. Thus, Transgaz will have some of the necessary financing to execute the works in question in Romania.

- **The adjusted percentage of the final regulated prices** calculated as an average according to the market share of each licensed operator performing natural gas supply on the regulated market were:

- On May 1, 2016, about -1.35%;

- On July 1, 2016 of about -3.00%;

- Cumulative 1 October - 1 December 2016 of about - 0.19%.

  As a result, at the level of 2016, the regulated prices for household customers registered an average decrease of about 4%.

- **On the regulated market**, in 2016, the regulated final customers were supplied by 38 suppliers; the total number of regulated final customers was 3,395,841, representing only only the regulated

household customers, and the quantity of natural gas supplied to them was 31.36 TWh (4% more than 2015).

- **On the competitive market,** 81 suppliers were active. At the end of 2016, 99.1% of non-household customers of E.ON Energie România S.A. and 88.35% of non-household customers of ENGIE Romania S.A. switched to suppliers on the competitive market.

2.3. Consumer protection and dispute settlement in electricity and gas

In 2016, the revision of the Electricity Labeling Regulation was approved by ANRE Order no. 61/2016.

According to the provisions of the *Performance Standard for Electricity Supply*, **approved by ANRE Order no. 118/2015** *(Standard)*, in force during the period under review, suppliers of the last resort are required to pay compensation to the final customers which are beneficiaries of the universal service for failing to provide the guaranteed performance indicators for electricity supply, as set out in the Standard.

In addition, in 2016, actions were carried out to verify the fulfillment of the obligations of suppliers of submitting to ANRE the performance indicators as required by the *Standard* and actions to verify the websites of the electricity suppliers regarding: posting mid-term and annually the centralized data regarding the values of the electricity performance indicators, posting the standard offers for final customers, according to the provisions of art. 23 para. (4) of the *Law* and the publication of the *Procedure on granting customers compensations for damaged receiver appliances due to an accidental over voltage on the network operator fault* approved by ANRE Order no. 177/16.12.2015.

As a result of the actions undertaken, ANRE has detected deviations from the legal and regulatory framework in force and has sent over 260 letters of warning to electricity suppliers to correct their market behavior in order not to prejudice the rights of final customers. In the case of electricity suppliers which did not take into account the authority's warnings, control actions were carried out and the offenders were sanctioned according to the legal provisions

Based of the findings highlighted in the monitoring of pilot projects on smart metering, in 2016, it was considered appropriate and necessary that the implementation of smart metering systems (SMS) should remain at the testing stage through pilot projects, expanding the field of action to the situation of the non-technologically advanced distribution networks in rural and urban areas, given that the degree of re-technology of the low-voltage grids was about 10%, according to the information sent by the distribution operators.

It has also been appreciated that a monitoring period of at least 6 months is required for pilot projects to obtain data that would provide eloquent premise for substantiating decisions on the widespread implementation of SMS.

Another highlighted aspect was the fact that the approach and the results of the cost-benefit analyzes submitted by the distribution operators did not allow a comparative analysis of the results, thus, ANRE considered necessary to carry out a cost-benefit analysis for all distribution operators through a third-party consultant / audit to avoid accusations of lack of transparency or lack of objectivity.

Thus, on 26th February 2016, ANRE Order no. 6/2016 was approved, for the amendment and completion of ANRE Order no. 145/2014 on the implementation of smart metering systems, which took into consideration provisions regarding the following aspects:

- In 2016, monitoring of pilot projects set up in 2015, will continue so that a set of relevant information can be used in later analyzes,

- It was established that in 2016 pilot projects will be carried out in areas of low voltage non-technological networks which will test the degree of realization of the basic functionalities of smart metering systems in this type of networks without modernization works and at the same time, identify and assess the need for work to be done on this type of network in order to create the conditions for implementing smart metering systems with satisfactory performance,

- The deadlines for the elaboration of the national plan and the national timetable for the implementation of smart metering systems were amended, according with the above proposals,

- For 2017 it was agreed to maintain the value of investments in smart metering systems at 10% of the value of the annual investment program approved according to the methodology for setting the electricity distribution tariffs, approved by the ANRE Order no. 72/2013 as amended and supplemented,

- It was agreed that a cost-benefit analysis will be done by ANRE based on a study of an independent consultant, in order to use a single model of analysis and to ensure data verification and validation in a unitary manner for all distribution operators,

- Indicators have been defined for the assessment of smart metering systems - which are a tool for monitoring / evaluating smart metering implementation projects.

According to the provisions of the **ANRE Order no. 145/2014 regarding the implementation of intelligent electricity metering systems**, with the subsequent amendments and completions, based on the established analysis criteria, in April 2016, ANRE approved 22 pilot projects for 6 distribution operators in the estimated value of 67,855.333 lei, including 187,693 consumers.

Out of these, only 18 pilot projects were carried out by 5 distribution operators, the economic operator Oltenia Energy Distribution, renouncing the pilot projects, due to the limitation of the investment costs.

In 2016, *ANRE Order no. 29/2016 for the approval of the Regulation on natural gas supply to final customers* was approved. By promoting the new regulation, ANRE sought to establish the basic principles of the functioning of the natural gas retail market, thus creating a unitary regulatory

framework ensuring the protection of the final customers of natural gas, regardless of their supply regime, either on the regulated market or on the competitive gas market.

As a result of the inspections carried out, in 2016, a number of **767** official reports for finding and sanctioning were drawn up and **1358** sanctions for contraventions were applied, as follows:

• **824** in the field of electricity;

• **496** in the field of natural gas;

• **38** in the field of energy efficiency

By the official reports for finding and sanctioning, fines were imposed in the total amount of **22,374,242.42 RON**.

- During the year 2016, a number of 4668 petitions were registered and settled.

3. Electricity market

3.1. Network regulation

3.1.1. Unbundling

Referring to the certification of C.N.Transelectrica S.A. as national transmission and system operator of the national power system, according to the ownership unbundling model, in 2016, ANRE has continued to monitor the compliance with the conditions for certification, on the occasion of the changes in the composition of the Board (the members of the Executive Board and Supervisory Board). On each modification notified, ANRE has verified the maintenance conditions of unbundling, noting that the legal requirements are met.

CN Transelectrica SA administrates and operates the transmission power system and ensures electricity exchanges among the countries in the Central and Eastern Europe as ENTSO-E member (European Network of Transmission System Operators for Electricity). The length of overhead electricity networks operated by CN Transelectrica SA is of approx. 8834,4 km.

The ownership structure of CN Transelectrica SA at 31.12.2016 is as follows: 58.6882 % – the Romanian state, 35.1932% - other corporate shareholders, 6.1186% - other shareholders, physical persons. The company has been listed on the Bucharest Stock Exchange since August 2006.

In 2016, electricity distribution operators, from which 8 are serving over 100,000 customers. All 8 companies have completed the legal separation of the distribution activities of electricity supply. Electricity distribution operators with less than 100,000 customers do not have the obligation to legally unbundle the distribution activity from other company activities in accordance with Directive 72/2009/EC on common rules for the internal electricity market.

ANRE is monitoring, according to the law, the activity of distribution system operators, part of an economic operator vertically integrated, on the implementation of the measures to ensure excluding discriminatory practices and to establish specific obligations of the employees of such economic operators in order to achieve the independence objective. In this regard it was issued ANRE Order no. 5/2015 approving the Regulation on monitoring by ANRE compliance programs established by the electricity distribution operators. The Regulation contains a set of measures which the distribution system operator must establish, without limitation, on the compliance program. By law, the distribution operator shall appoint a person or a body called/designated as compliance officer to ensure proper monitoring of the compliance program. The Regulation contains the compliance duties and the minimum criteria on this nomination. The Regulation contains rules on the content and rules for format of the compliance program, respectively, of the compliance report, so as to facilitate to ANRE the monitoring process of the compliance programs.

During 2016, ANRE has continued to monitor the application by the distribution operators concessionaires of the ANRE Order no. 5/2015 provisions. The reports of the compliance officers, received from the 8 distribution operators concessionaires were analyzed. ANRE appreciated the measures in the compliance programs are consistent with the pursued objectives of unbundling and ANRE procedure.

To emphasize the unbundling process and to avoid any confusion with the supply related companies, ANRE considered it necessary the distribution operators should adopt a calendar during 2016. Thus, ANRE requested Electricity Distribution and Supply Company „Electrica" S.A. to change the name of the company which contained references both to energy supply activity it performed directly and to energy distribution activity realized through the three affiliated companies: Electrica Distributie Transilvania Nord, Electrica Distributie Transilvania Sud and Electrica Distributie Muntenia Nord. As result, the company has changed the constitutive act and changed also the name to „Electrica" Energy Company S.A.

In the case of the companies in the ENEL group, ANRE was informed that starting with February 2016, the rebranding action has been started both at national and international level in ENEL group. The voluntary action aimed to change the visual identity, respectively the logo and the emblem for the companies in the group. ANRE requested that, in case of the distribution operators, the rebranding elements would be different from those of the suppliers Enel Energie and Enel Energie Muntenia. Thus, at the end of 2016, the companies Enel Distributie Muntenia, Enel Distributie Banat and Enel Distributie Dobrogea were registered with the following names: E-Distributie Muntenia, E-Distributie Banat and E-Distributie Dobrogea.

In case of the companies CEZ Distributie and E.ON Distribuție România, ANRE indicated the main priorities in the rebranding process, being requested a calendar of implementation by the end of 2016. The mentioned companies have complied with and started the rebranding actions changing the names of the companies as Distribuție Energie Oltenia and, respectively, Delgaz Grid.

It should be noted that rebranding is expected to continue during the year 2017. In all cases, ANRE analyzed the sufficiency of the rebranding measures adopted by reference to regulations and European practice in the matter, and with consideration of the costs involved in such measures. In its efforts, ANRE has been reported on the details provided by notes issued by the European Commission interpretative (Interpretative notes on Directive 2009/72/EC concerning common rules for the internal market in electricity and Directive 2009/73/EC concerning common rules for the internal market in natural gas-The unbundling regime, of 22 January 2010), and the ability to act gradually and in co-operation with operators as result of the "Review and Status on the Transposition of Unbundling Requirements for DSOs and Closed Distribution System Operators" conducted by CEER in 2013 and "Status Review on the Implementation of Unbundling of DSOs of the 3rd Energy Package" produced and published by CEER in early 2016.

The ownership structure of the 8 distribution operators with more than 100,000 consumers is as follows:

1. **Distribuţie Energie Oltenia**: CEZ a.s. – holding 99.9999986019 % share capital, CEZ POLAND DISTRIBUTION B.V. - holding 0.0000013981% share capital;
2. **E-Distribuţie Banat**: Enel Investment Holding B.V. - holding 51.0036% of shares, S.C. Electrica S.A. - holding 24.8683% of shares, Fondul Proprietatea S.A. - holding 24.1281% of shares;
3. **E-Distribuţie Dobrogea**: Enel Investment Holding B.V.- holding 51.003% of shares, Societatea de administrare a participațiilor în energie (SAPE) S.A. - holding 24.903 % of shares, Fondul Proprietatea S.A. - holding 24.094 % of shares;
4. **E-Distribuţie Muntenia**: Enel Investment Holding B.V – holding 64.4251% of shares, Societatea de administrare a participațiilor în energie (SAPE) S.A. - holding 23.5749% of shares, S.C. Fondul Proprietatea S.A. – holding 12 % of shares;

5. **Delgaz Grid**: E.ON Romania S.R.L. – holding 61.7905% of shares; MINISTERUL ENERGIEI – holding 13.5147% of shares, Fondul Proprietatea S.A. – holding 18.3474% of shares, Societatea de administrare a participațiilor în energie (SAPE) S.A. - holding 6.3474% of shares;
6. **SC FDEE Electrica Distribuţie Transilvania Sud SA, SC FDEE Electrica Distribuţie Transilvania Nord SA şi SC FDEE Electrica Distribuţie Muntenia Nord SA**, with the
following ownership structure: S.C. Electrica S.A. – holding 78 % of shares and Fondul Proprietatea S.A. - holding 22 % of shares.

The transmission and distribution operators have their own offices, logos and webpages.

The general conditions associated with the distribution service licenses for electricity distribution operators granted by ANRE for the concessionaires were approved by Annex 1 to ANRE Order no. 73/2014, published in the Official Gazette of Romania, Part I, no.599/08.12.2014, the 8 concessionaire obligations to respect them are required by individual administrative decisions issued by ANRE. Art. 49 ÷ 51 of Annex 1 sets the distribution operators duties on ensuring independence, in accordance with the legal requirements for unbundling of the distribution activity in relation to the supply of electricity, including obligations on keeping separate identity for the economic actors affiliates (art. 51: "in performing the service of electricity distribution, including communication and publicity, the licensee is bound not to create confusion about the different identity of the operators affiliated.").

Financial statements of the TSO and distribution operators are published separately.

The regulatory authority establishes detailed rules on costs separation. These rules are included in the conditions of the licenses granted for transmission and distribution activities and in the specific methodologies for calculating network tariffs. The normative acts in force provide for sanctions in case of requirements on unbundling.

3.1.2. Technical functioning

Balancing Market

The balance between electricity demand and production is established on a commercial basis, in real time, on the Balancing Market (BM). Operating rules for the balancing market were established by ANRE Order no. 25/2004 on the approval of the wholesale market Commercial Code, as amended and supplemented.

To ensure availability of enough electricity to balance the system, the TSO contracts reserves (ancillary services) for periods of one year maximum (regulated contracts or concluded on the ancillary services market). Each contract for reserves establishes the obligation of the seller to hourly provide the TSO a certain amount of reserves, of a particular type, the energy corresponding to the power reserved must be available on BM.

BM begins the day before, after physical notifications were accepted by TSO and ends on the end of the day of delivery. BM is a compulsory market, which means that participants who operate dispatchable units are obliged to offer all available electricity on this market. The balancing energy corresponding to secondary, fast tertiary and slow tertiary regulation is traded on BM.

The balancing energy is ensured by:

a) power increase, respectively by increasing production of a dispatchable unit or by reducing consumption of a dispatchable consumer or a pumped storage power plant that is registered as dispatchable consumption;

b) power decrease, respectively by reducing production of a dispatchable unit or by increasing consumption of a pumped storage power plant registered as dispatchable consumption.

BM participants must submit daily offers for the amount of balancing energy they can make available in each dispatching interval (60 minutes) to increase and reduce power. All valid offers on the balancing market establish the obligation of a BM participant to deliver the amount tendered on BM when it receives order from the TSO.

Only actually delivered quantities of balancing energy are paid on the BM. Payment for balancing energy corresponding to secondary regulation is based on the marginal price of the selected offers, and for the tertiary regulation, payment is made at the price of the selected offer.

Each license holder must assume financial responsibilities towards the TSO for ensuring the physical balance between the measured production, the scheduled purchases and imports of electricity, on the one hand and measured consumption, scheduled sales and electricity exports, on the other hand, for one or more points of connection and/or one or more transactions. Balancing responsibility is assumed by the Balancing Responsible Party (BRP), established by the TSO at the license holders' requests. A license holder can register as a BRP or can transfer the balancing responsibility to an existing BRP.

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

Surplus energy price is determined for each dispatching interval as the ratio of incomes resulting from the balancing of the system and the amount of balancing energy supplied to provide reduction of power during the respectively dispatching period. Energy deficit price is determined for each dispatching interval as the ratio of payments to balance the system and the amount of balancing energy supplied to provide power increase in the respectively dispatching interval.

Imbalance settlement is made after determining the measured values for all measurement points of the participants, settling disputes/ approval by the participants of the values and their aggregation on BRPs, according to the aggregation formulas announced to the measurement operator; under these conditions,

imbalance settlement is done within about 2 months after the end of the month of delivery. The market model leads to net incomes/costs for the TSO after the system balancing, and their calculation and redistribution to suppliers are made at the same time, proportionally to the consumption of the consumers supplied by each of them.

A single balancing area is defined in Romania, operated by a single licensed system operator/balancing market operator, CN Transelectrica SA. Interaction with other control areas is made through exchanges of mutual aid between TSOs, and not through the acceptance of offers that are to be integrated into a common merit order.

In the year 2016 there have been big differences between actual energy delivered by traders operating commercial wind power and photovoltaic and their notifications, which have led to the need to balance production-consumption balance, but unlike the previous year it has involved smaller trading volumes of electricity market balancing.

Performance standards and network connection issues

Performance standard for electricity and transport service system has been approved by the **ANRE Order no. 12/30.03.2016** and represents the revised *Standard* approved by the ANRE Order No. 17/2007. The provisions of the new document are adapted to the regulatory and legislative amendments in force (*Law on electricity and natural gas no. 123/2012 concerning connecting users to the public electric networks*, approved by the ANRE Order no. 59/2013, technical standards of electrical networks connecting users of public interest and those relating to the operation of the users connected to the electrical network of transport without the introduction of disturbance as flicker, distorting regime, unbalanced regime in the network).

The standard sets out performance indicators regarding the quality of transport service and electricity service system that OTS must ensure, and the monitoring and reporting mode of these indicators. The standard shall apply in the relationship between the OTS and users who own appliances use connected to the network, or requesting connection to the network.

The document stipulates the obligations to guarantee technical quality parameters of electricity transported at the delimitation points with the network users, as well as users ' obligations to take all appropriate measures to ensure compliance with the limits laid down in national technical regulations and/or quality standards for electricity in force concerning the non-disruption of the operation in the network. In this regard, OTS must establish together with disruptive users a term for limiting the disturbances to the normative values. Disruptive users who do not provide limitation of disturbances to the regulated values after expiry of the period agreed upon, are disconnected from the network by the OTS, with 10 days notice.

The standard classifies performance indicators as general, specific and statistics, depending on the level of guarantee required by the operator, on the obligation to pay compensation for non-fulfilment, on the way of monitoring and how they are or not a criterion for evaluating quality of service.

General performance indicators are determined at the level of all network users and characterize a certain component of the electricity transport service quality and/or of the service system and for which the standard requires, as appropriate, a guaranteed level of the OTS, and also the annual monitoring.

Specific performance indicators are established at the point of demarcation in relation to the network of the plant's use by a user; the standard requires a guaranteed level for these indicators, the level that OTS must respect; if the level guaranteed is not ensured by the OTS, the network user, excepting the distribution operators, is entitled to receive compensations.

The standard sets out statistics *performance indicators* that characterize a particular component of the transmission service or service system, but without imposing a criterion for evaluating the quality of service provided by the OTS. For these indicators, the standard requires monitoring.

Also in 2016, the ANRE approved by the Order no. 11/30.03.2016 *Performance Standard for the electricity distribution* that represents the revised document approved earlier in 2008, in order to adapt the regulatory framework and legislative amendments in force: *Law on electricity and natural gas no. 123/2012, Regulation on connecting users to the public interest electrical networks,* approved by *ANRE* order no. 59/2013, the provisions of the technical regulations relating to the operation of the users installations connected to the electricity distribution network so as to not introduce disturbances in the network (flicker, distorting, unbalancing). On the *standard* elaboration there have been taken into account the changes in the electricity quality set out in Standard EN 50160:2010 *Voltage characteristics in public electricity distribution networks.*

The *Standard* regulates the quality of the electricity distribution service, the performance indicators in the distribution service, as well as their monitoring and registration.

Considering that the revision of the Standard was carried out after 8 years of application of the previous document, approved by ANRE Order no. 28/2007 and in view of the improved performance level reported annually by the distribution operators, as well as CEER recommendations in 2014 regarding the quality of the electricity distribution service, under the new Standard improved performance indicators have been set.

Thus, the *Standard* has reduced and standardized the duration of the urban and rural planned interruptions. Regarding the number of the interruptions, it was envisaged the possibility that for the same consumption/production place, the distribution operator may carry out two planned interruptions during a year, up to 8 hours for each of them, regardless the area, in order to carry out the refurbishment of the electrical network that supply more than 2000 users, but only in cases where there are no technical conditions for feeding through alternative network schemes. The deadline to make the announcements for the planned interruptions was reduced depending on the customer category and on the voltage levels. It is foreseen the progressive reduction of the deadlines for restoring the energy supply/evacuation path to a consumption/production after an unplanned interruption.

It has been introduced the obligation of the operator concessionaire to monitor a new indicator of continuity in the supply of electricity, which refers to the number of unplanned interruptions affecting the a consumption and/or production place, connected to the distribution power grid on low voltage occurring in one calendar year, in normal weather conditions.

A new country indicator has been introduced to measure the average frequency of the short-term interruptions as well as a section on the electricity meter indicators which is part of the distribution service and represents a distinct activity.

The distribution operator shall organize customer service centers, a permanent voice and data center with a free telephone number and its own webpage.

The standard introduces an obligation of the distribution operator to grant compensation to users for non-compliance with the performance indicators stipulated in the standard, which are applied progressively according to the implementation timetable; the method of granting compensation and their value is stipulated. Granting the compensation is made automatically without a user request for that purpose. These amounts are a penalty for the operators because the compensations paid to the users cannot be recovered by the tariff, being supported from the profit, which is why the operators are encouraged to avoid them by meeting the required level of performance.

Automatic compensation granting for non-compliance with the performance indicators is in line with the Romanian Government vision expressed in the Priority Implementation Agreement - the priority area: *Energy* that provides strengthening actions for the protection of the customers rights by improving their compensation mechanisms (in case of non-compliance of the performance standard), which was also applied in the performance standards of the following countries: Italy, France, Great Britain, the Netherlands, Hungary.

Aspects of performance standard to supply can be found in Chapter 5 of the report.

The detailed data describing the technical state of the electrical networks, the maintenance and safety level of the electrical networks in 2016, as well as the fulfilment degree of the performance indicators for the transmission and distribution service according to the quality standards in force, were analyzed by ANRE and also presented in the Report on the Performance Indicators for the Electricity Transmission, System and Distribution Services and the Technical Conditions of the Electricity Transmission and Distribution Networks in 2016, published on ANRE website at http://www.anre.ro/ro/energie-electrica/rapoarte/rapoarte-indicatori-performanta.

Main findings concerning technical condition of the electrical networks:

Volume and age of the installations

Most of the installations of the electrical transmission and distribution network currently in operation have long operating lifetime, mostly older than 35 years (annexes no.1 and no.2).

Transmission power lines and distribution power lines for high voltage put into service after 2000 have a small share, approximatively less than 5% in the total length of these categories of electrical installations.

Medium voltage and low voltage power lines put into service after 2000 present a high percentage of the total length of these categories of installations, reaching up to 18% at low voltage.

Regarding the state of the *transformers/autotransformers from power stations belonging to TSO's*, it is noticed that a percentage of 60% of their installed power was put into service after 2000. Also, it is noticed that the number of the power stations in the distribution networks pit into service after 2000 represent approx. 5% of their total number, and the number of the transformation posts and the power points had reached in 2016 approx. 27%, respectively 42% of the total number for these two categories of electrical installations.

Taking into account that a small part of the energy capacities managed by the network operators has been rehabilitated or upgraded, ANRE has requested to the network operators to apply consistent programs for

upgrading the existing installations, to increase and make more efficient the maintenance activities to maintain the facilities in nominal operating parameters and to perform adequate monitoring and evaluation of the state of the network.

Performance indicators for electricity transmission service, respectively electricity distribution service

The analysis of the quality of the **electricity transmission service and system service** provided by the TSO, as well as of **the electricity distribution service** provided by the eight distribution operators, license holders with concession contract in 2016, has envisaged performance indicators defined in the *Performance standard for electricity transmission and system services*, approved by ANRE Order no.12/2016 and in *Performance standard for electricity distribution services*, approved by ANRE Order no. 11/2016. The analysis was based on the data submitted to ANRE by the network operations according to the provisions of the two standards.

Regarding the specific activities of the **electricity transmission service**, performance indicators analyzed highlights the followings:

In 2016, the amount of electricity introduced in the ETN was 43.674 TWh, and the one extracted from the ETN was 42.662 TWh, both of which are comparable to those for 2015. The loss ratio was 2.32% , decreasing compared to 2015, when a loss ratio of 2.35% was achieved.

The values of the indicators on the average availability of the facilities point to the fact that the average duration of unplanned interruptions is approx. 9% of the total cut-off time for LEA and 2.4% for the transformers.

In terms of continuity of service, there was a degradation of the indicators compared to the previous years, with a 224.69 MWh non-delivered electricity quantity (compared to 38.36 MWh in 2015, 82.51 MWh in 2014, respectively 30.89 MWh in 2013) and an average interruption time (AIT) of 2.11 min/year (compared to 0.36 min/year recorded in 2015, 0.82 min/year in 2014 and respectively 0.35 in 2013). In 2016 there was a non-distributed electricity in the power grids of 264.7 MWh, with an average interruption of 2.49 min/year.

Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Average interruption time (AIT), min/year	4.43	1.19	0.86	1.79	0.82	3.10	1.06	1.53	0.35	0.82	0.36	2.11

The total duration of the transport service interruptions for ETN users recorded at the level of 2016 were 6.09 hours for consumers and 0.73 hours for manufacturers.

The biggest effect on the non-distributed energy indicator was the incident that led to the launch of the 220 kV Bradu - Stupărei LEA and affected a significant consumption area by not delivering an amount of electricity of 135.49 MWh (approx. 60% of the total annual non-distributed energy to consumers) as well as producers in the area by not distributing 209.90 MWh of electricity (about 79% of the total annually non-distributed energy to producers).

Since, in 2016, as compared to 2015, it was an increased number of deviations of the quality parameters of the electricity compared to the normed values, ANRE has requested the TSO to carry out a thorough analysis and to adopt a plan of measures that will lead to the improvement of these parameters.

Regarding the **commercial quality of the electricity transmission service**, in 2016 there were no exceedances of the times for the issuance of the technical connection approval, of the connection contracts and of the offers for the contracting of the transport service and there were no complaints related to the categories provided by the Standard to be monitored.

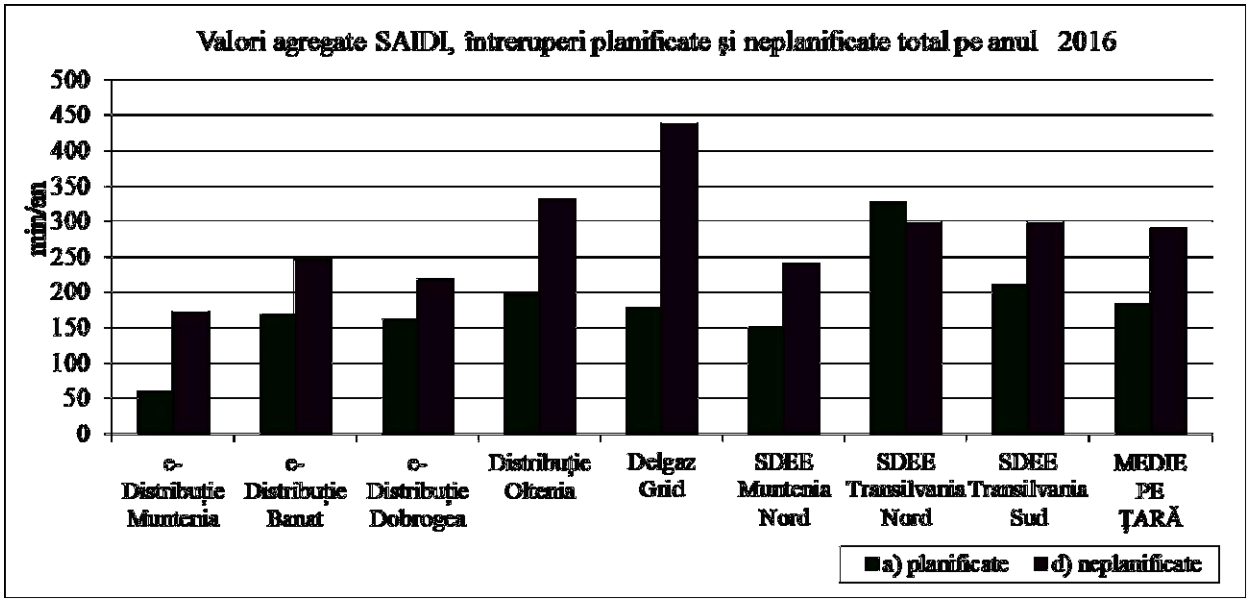
The description of the main incidents that occurred in the transmission and distribution electric networks in 2016 reported by the operators, which give a measure of the technical state of the networks, is presented in the *Report on the accomplishment of the performance indicators.*

For the **electricity distribution service**, the annual report provides service quality indicators regarding the continuity of supply to the users, the technical quality of the electricity and the commercial quality of the distribution service.

Among the conclusions of the report on performance indicators for the distribution service, the most important are still mentioned.

The average time of planned network interruptions, **SAIDI planned interruptions**, decreased as the country average value, from 211 min/year in 2015 to 184 min/year in 2016. The average time of unplanned network interruptions, **SAIDI for unplanned interruptions** decreased in 2016 to 290 min/year, compared with 2015, 305 min/year.

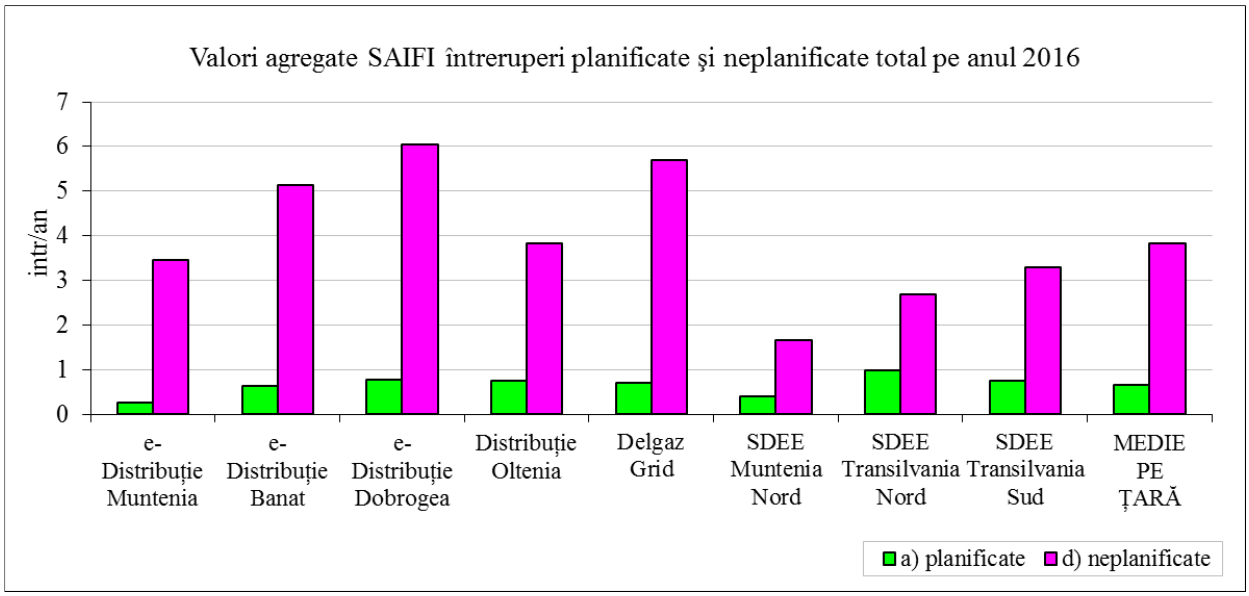
Aggregated data at the level of distribution operators and the country average value of planned and unplanned SAIDI, in 2016, are shown in the following chart:



The average frequency of planned network interruptions, **SAIFI for planned interruptions**, has decreased as a national average value, from 0.77 interruptions/year in 2015 to 0.65 interruptions/year in

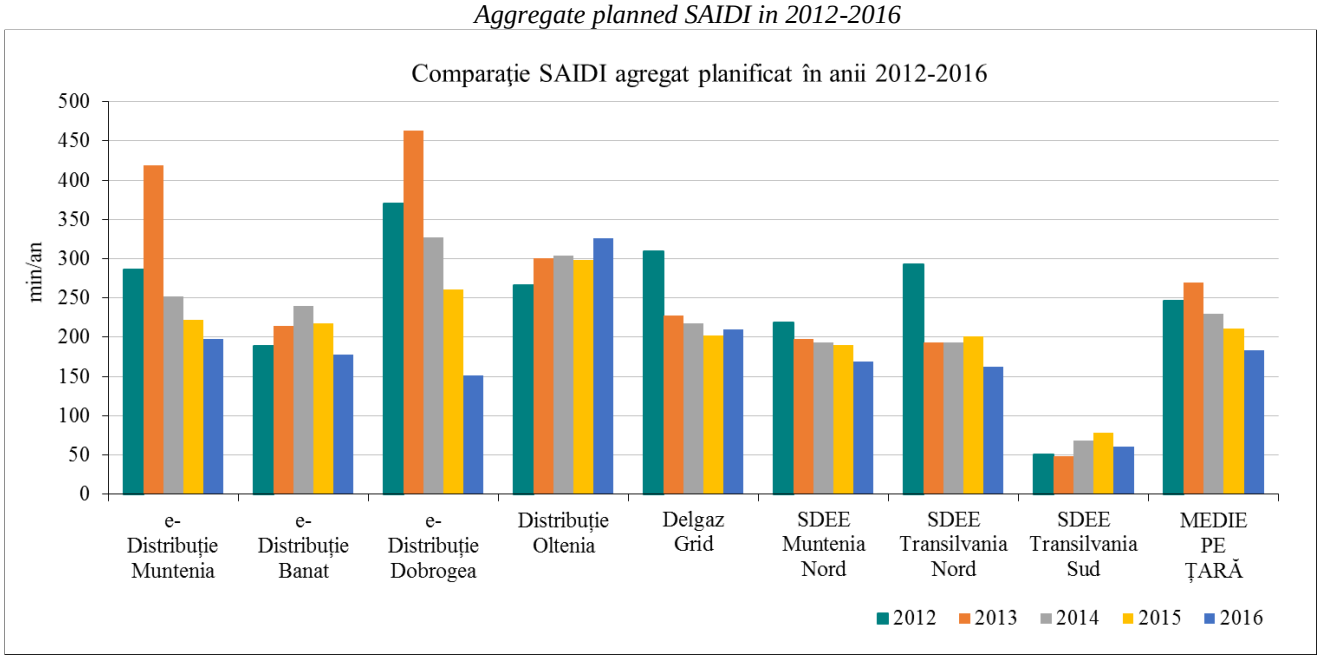
2016, and **SAIFI for unplanned interruptions** has decreased as an average country value from 4.2 interruptions/year in 2015 to 3.83 interruptions/year in 2016.

The aggregated data at the level of the distribution operators and the country average value, in 2016, of planned and unplanned SAIFI are presented in the following chart:

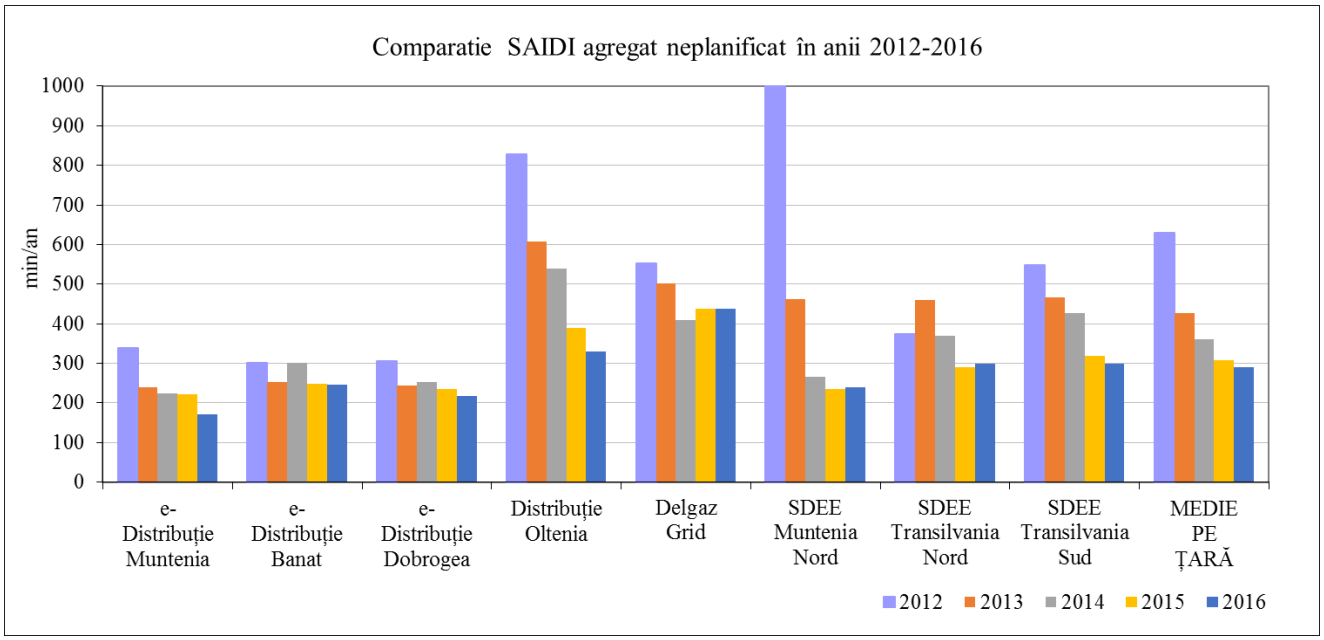


The evolution of the two indicators in the period 2012 - 2016, for each distribution operator and as an average for the country is presented in the chart below:

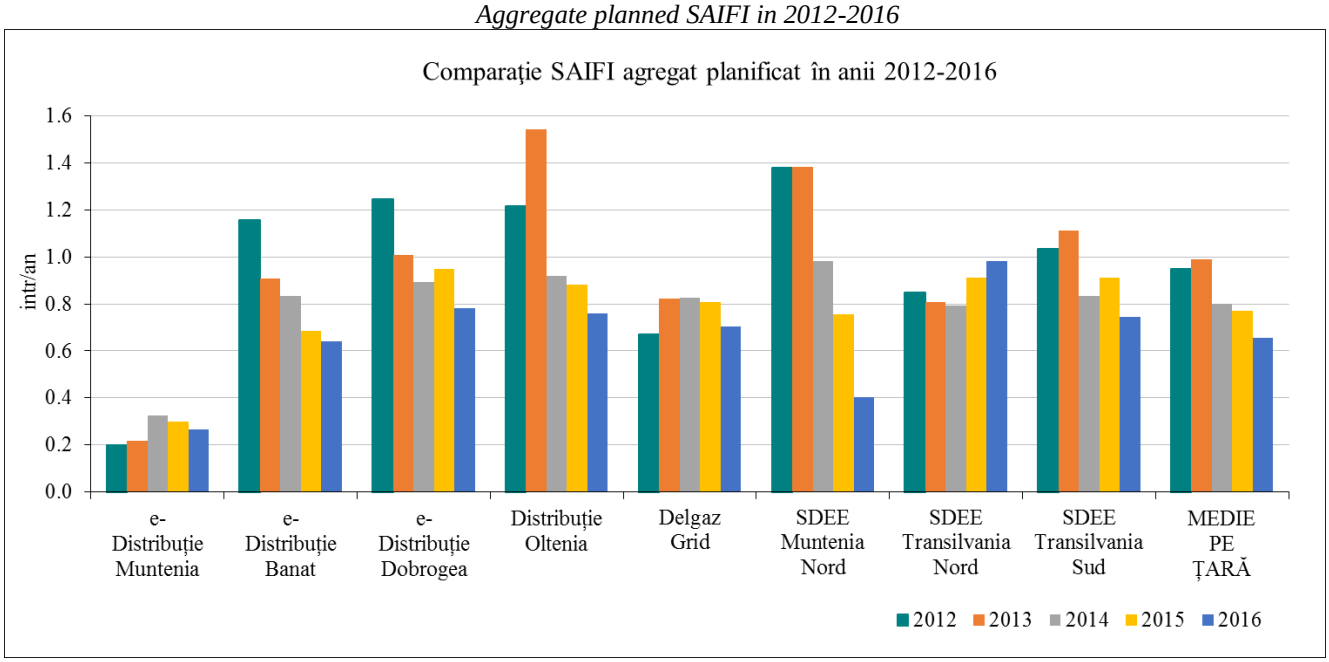
Aggregate planned SAIDI in 2012-2016



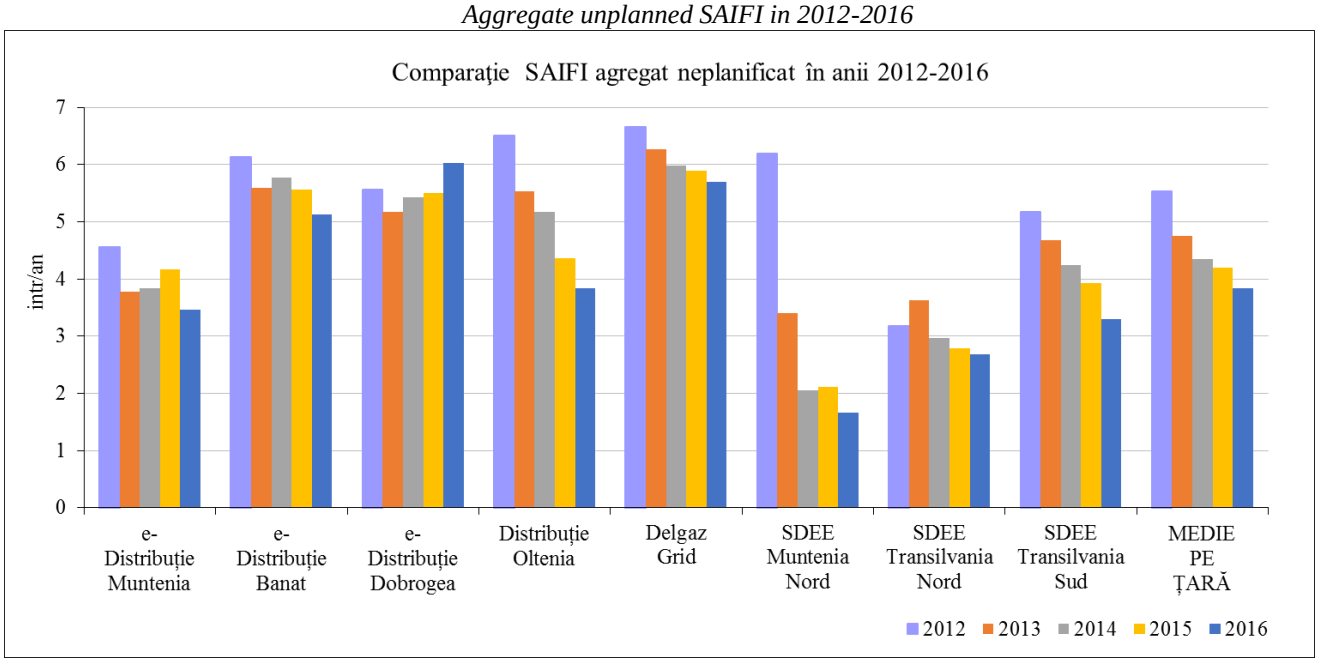
Aggregate unplanned SAIDI in 2012-2016



Aggregate planned SAIFI in 2012-2016



Aggregate unplanned SAIFI in 2012-2016



In 2016, there were exceedances of the technical quality parameters of the electricity imposed by the performance standard, which requires the carrying out of investigations at the level of the distribution operators concessionaires for the detection and elimination of the causes that generated these exceedances. Since network disruptions may be caused by users, network operators must ensure that new users are connected to the network and they have taken all measures to limit the disturbance.

In order to ensure proper monitoring of the quality of electricity and having in view the endowment of the distribution operators, very different as number, with quality analyzers starting with 2017, by the performance standard for the power distribution service, it becomes mandatory to ensure the quality monitoring of electricity in at least 25% of the transformation plants owned by a distribution operator concessionaire.

The analysis of the **commercial quality of the power distribution service** indicates that in 2016 there were no exceedances of the deadlines provided in the Standard to any distribution operator except Delgaz Grid, which exceeded the average time of 20 days required by the Standard to respond to complaints about the low voltage quality, recording an average time of 20.8 days.

According to the provisions of the performance standard for the electricity distribution service, automatic compensation has entered into force on July 1, 2016 and is to be applied progressively. The number and total amount of compensations granted in the second half of 2016 reported by the electricity distribution operators are presented in Annex no. 3 and it is found to be insignificant. In this situation, ANRE has asked operators for explanations and justifications, and will also plan actions to verify the recording and granting of compensation.

The study Poyry Management Consulting Limited& Ciga Energy S.A. for the assessment and monitoring of the technical condition of the electric distribution networks

Independent from the aforementioned report, in order to assess and monitor the technical state of the distribution networks in Romania, Federation of the Energy Utilities Associations (ACUE), in collaboration with independent external developers (consultancy companies Ciga Energy S.A. and Poyry Management Consulting Limited), has achieved the study *Evaluation and Monitoring of the Distribution Networks in Romania.* The study had taken into account historical data on distribution network operators up to 2014.

The aim of the study was to obtain a clearer picture of the technical state and performance of the distribution networks and to pursue the evaluation of the current system of monitoring the performance of the distribution operators, the comparative analysis of the performance of the distribution operators in Romania with those from other countries, data collection and analysis for a new performance monitoring system, evaluation of the current state of the distribution networks at the level of each distribution operator and at national level, proposal and development of a methodology for determining the investment needs and the correlation between the investments made and network performance indicators.

The study highlighted the following:

- There are significant differences in terms of general characteristics of the network managed by the eight distribution operators such as surface area, density and number of the customers, the length of the network, proportion on the rural and urban customers, as well as the history of the development of these networks.
- There are differences in the area of electricity-supplied areas (ranging from about 5.300 km^2 to 34.000 km^2) and in consumer density (ranging from 25 consumers/$km^2$to 223 consumers/km^2).
- Three of the eight DSO have more than 50% of rural customers; at the other end of the spectrum, a DSO has 84% of urban customers.
- The electric networks are generally composed of overhead power lines; a single DSO has the underground electrical lines installed (this can be correlated with the urban area). This difference has an impact on network performance.
- Two distribution operators have electricity networks with a total length almost double the average of the network length of the other six, which can lead to various additional risks related to network continuity and performance.
- There are DSO that manages more than 200 transformation stations. Instead, there is DSO that manages less than half of this number. The situation is also found in the transformation stations. This significant difference may impact on the performance of each distribution network.
- For most DSO, over 50% of the energy capacities were put into operation more than 35 years ago.
- In the last 10 years, half of the electrical transformer stations have been rehabilitated, with the percentage varying between 18% and 60%. Other capacities such as transformation stations have been rehabilitated and / or renewed much less. For these plants, the average rehabilitation percentage in the last 10 years is only 15%, ranging between operators from 7% to 34%.
- There are major differences between DSO in terms of redundancy. This was predictable considering the diversity of the asset base. However, there is a clear need for operators systematically to apply more consistent redundancy measures to improve the performance of the distribution service.

The comparative analysis of the performance of the service provided by the Romanian DSO with operators from other countries:

- Since 2008, Romania has experienced a gradual reduction in the total duration of disruptions per customer, in 2014 SAIDI has a 30% lower value than in 2008. A similar improvement can also be observed for SAIFI. There is a reduction in the average number of interruptions in the customers' electricity supply, from almost 7 interruptions in 2008 to a value of 5 interruptions in 2014.
- The results of the performance of the distribution grids in Romania were initially compared with those of the larger EU Member States and then with those of the neighboring countries of Romania. Compared to EU Member States, SAIDI and SAIFI levels remain very different from European best practices, even if the situation is gradually improving. Romania can be seen among the countries with the lowest level of performance in terms of unplanned interruptions and the number of interruptions (which are higher than the European average). The results for SAIDI in Romania show that interruptions can be five times longer than in the countries with which it was compared, and up to four times more frequent (SAIFI).
- The analysis reveals the correlation between the two indicators: the frequent interruptions (SAIFI) are related to the total annual average of the interruptions duration (SAIDI), considering that the relatively low level of performance in Romania compared to the evaluated countries is rather related to the frequent interruptions than the remediation time.
- At European level, the analysis of the causes of SAIDI due to incidents at different voltage levels revealed that MV has an overwhelming contribution. This analysis highlights that nearly 75% of the SAIDI value is the result of MV network interruptions. The same pattern was also observed in Romania. In the case of SAIDI, the study shows that in Romania the contribution to this indicator is in line with the European average (approximately 75% of the contribution to the value of SAIDI is due to MT networks). In the case of SAIFI, the most significant contribution also comes from MV; in this case, the average contribution in Romania is above the European average, respectively at almost 86%.
- According to the data collected, the study shows that the most frequent cause of incidents on MV lines is 'inadequate quality of materials' and 'technical degradation of materials under standard or end-of-life conditions'.

The recommendations of the study developer refer to the following aspects:

- establishing a clearly defined uniform reporting methodology that includes, in addition to SAIDI and SAIFI, AIT, ENS and the exact number of affected customers, at each failure repair stage;
- the supervision of the performance reports should be performed by an independent party to ensure compliance with the reporting methodology.
- implementing a concept of a Technical Status Indicator (TSI) to provide distribution operators with a powerful asset management tool and providing prudent and much more efficient investment as well as an investment valuation tool.
- developing a framework for the implementation of a risk based management process based on technical state (PMRS), both for the prioritization of investment needs and for the management of current assets, based on a detailed understanding of the state of the network. The risk-based approach focuses on the evaluation of two key factors: the probability of failure (related to the technical condition of the equipment) and the consequences of the failure (the critical character is assessed by the consequences of its failure on the use of the network).

The study shows that this approach to “technical state of the network” has already been implemented by distribution operators in certain countries or is in the process of implementation, for example Spain, Australia, the UK and Canada.

The introduction of the technical status indicator along with the network equipment risk management process will promote good asset management practice.

However, the process of introducing a comprehensive set of technical asset indicators will probably require a significant amount of time and significant effort for the next 2-3 years. Accordingly, it is necessary to develop an appropriate methodology in Romania based on available information (both current and future).

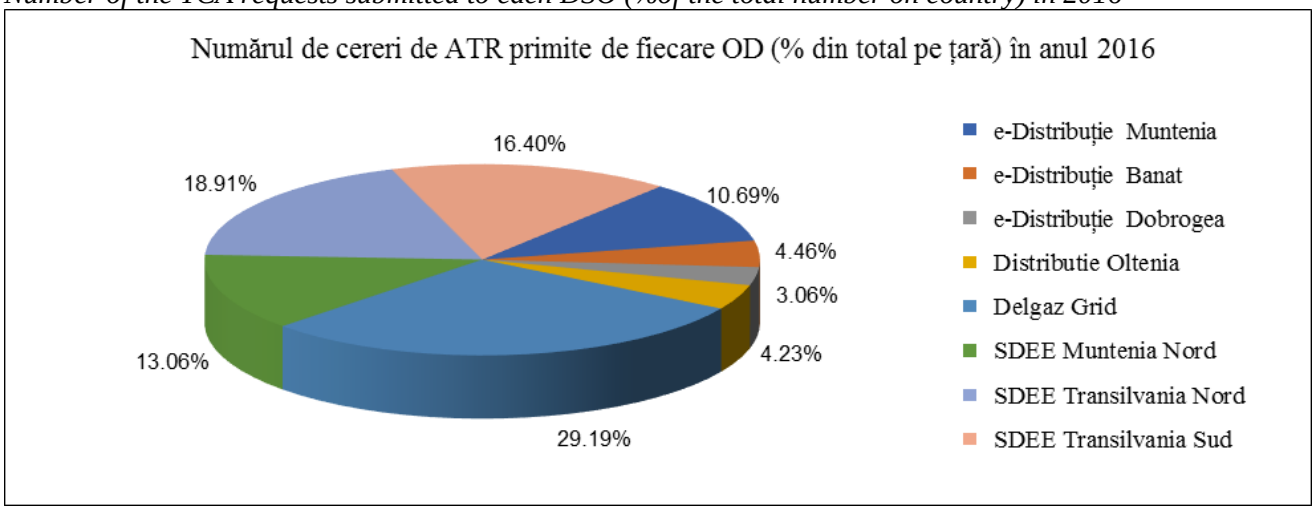
The procedures and stages of the connection process, as well as the way of setting the connection tariff, are regulated by *the Regulation on customers connection to the public electricity networks*, approved by the ANRE Order no. 59/2013, as subsequently amended and supplemented, by the *Regulation on the establishment of the solutions for Connecting the customers to the public electricity networks*, approved by ANRE Order no. 102/01.07.2015, through the *Framework connection contracts to the distribution networks,* approved by the ANRE Order no. 9/2006 and amended by ANRE Order no. 11/2015, and by the *Methodology for setting the connection tariffs for the customers to the public electricity networks*, approved by the ANRE Order no. 11/2014, as amended and supplemented.

Also, based on the performance standard for the distribution service, the indicators such as **the average time for issuing the technical connection approval** or **the average time for issuing the connection contracts**.

The total number of requests for TCA to the public electricity network in 2016 was 320.392 (compared to 208.670 in 2015), with the following distribution to distribution operators:

DSO	e-Distribuție Muntenia	e-Distribuție Banat	e-Distribuție Dobrogea	Distribuție Oltenia	Delgaz Grid	SDEE Muntenia Nord	SDEE Transilvania Nord	SDEE Transilvania Sud	TOTAL PE ȚARĂ
Number of issued TCA	34,240	14,298	9,805	13,540	93,536	41,840	60,573	52,560	320,392

Number of the TCA requests submitted to each DSO (%of the total number on country) in 2016



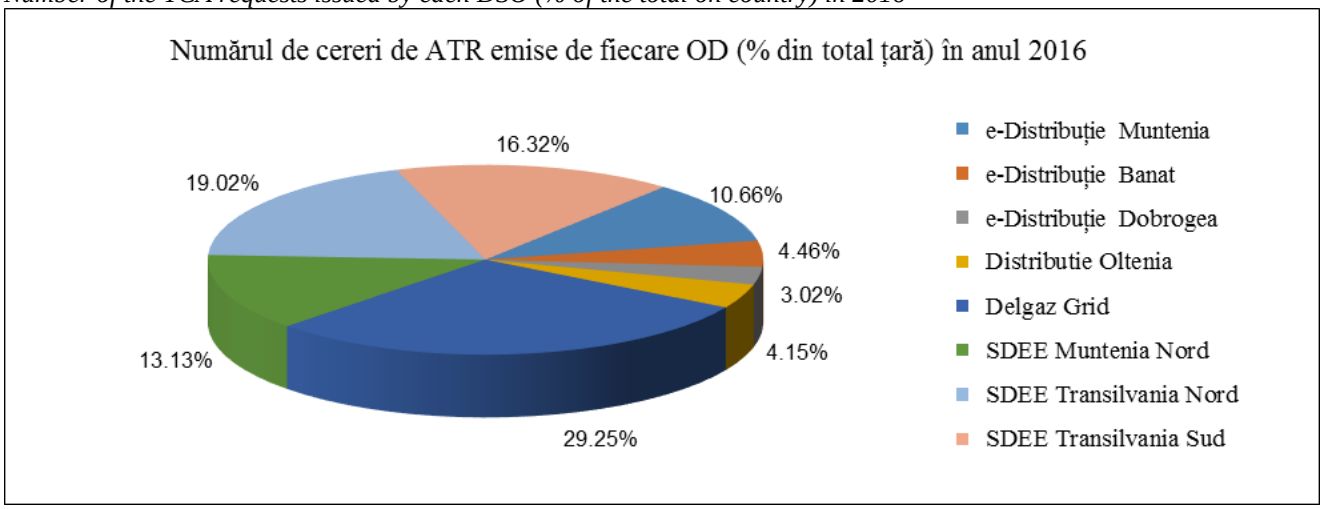
TCA (due to incomplete documentation or technical reasons) could not be issued for 1,846 requests, respectively 0.58 **%** of the total requests.

The total number of non-response requests within 30 days (due to incomplete documentation, various temporal irregularities such as issuance of the urbanism certificate, etc.) was 2,411, respectively 0.75 % of the total requests, lower than the previous years (4.4 % of the total in 2015, 4.6 % of the total in 2014, 5 % of the total in 2013, 6.6 % of the total in 2012).

The total number of TCA issued in 2016 was:

DSO	e-Distribuți e Muntenia	e-Distribuți e Banat	e-Distribuți e Dobrogea	Distribuți e Oltenia	Delga z Grid	SDEE Munteni a Nord	SDEE Transilvani a Nord	SDEE Transilvani a Sud	TOTA L PE ȚARĂ
Number of TCA issued	33,954	14,193	9,619	13,232	93,163	41,840	60,573	51,972	318,546
Percentag e of the total number (%)	99.16	99.27	98.1	97.73	99.6	100	100	09.88	100

Number of the TCA requests issued by each DSO (% of the total on country) in 2016



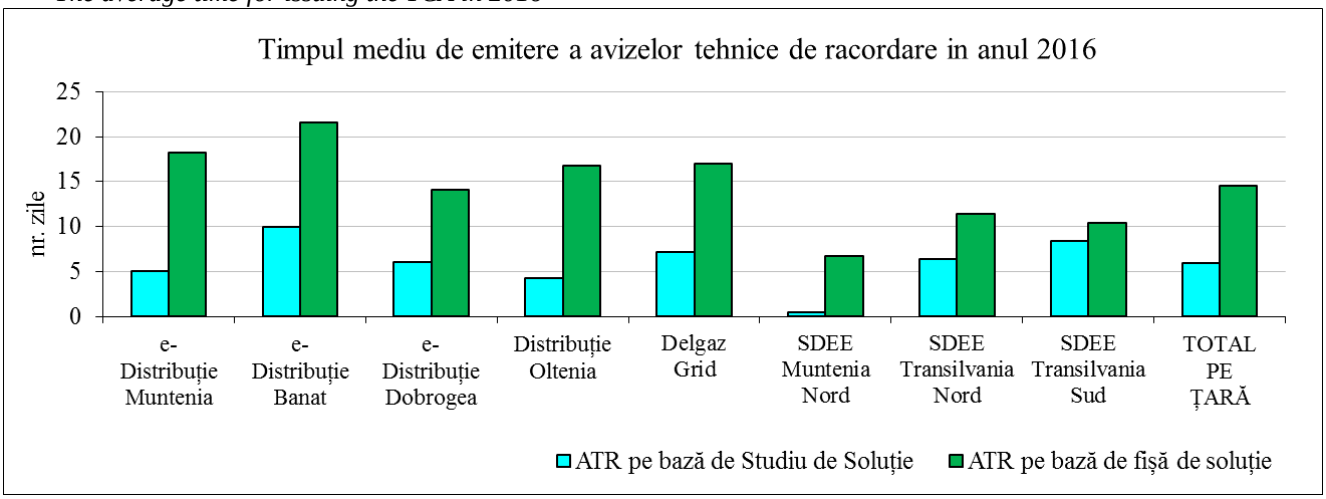
The minimum number of TCA issued was recorded at ENEL Dobrogea (9,619/3.02% of the total), and the maximum number of TCA was recorded in Delgaz Grid (93,163/ 29.25% of the total).

The average delivery time of the technical connection approval from the submission of the complete documentation, on the country, in case where the solution was determined by the solution study was 5.97 days, in 2016, and if the solution was determined by solution file was 14.5 days, with the following distribution to distribution operators:

DSO	e-Distribuție Muntenia	e-Distribuți e Banat	e-Distribuție Dobrogea	Distribuție Oltenia	Delgaz Grid	SDEE Muntenia Nord	SDEE Transilvania Nord	SDEE Transilvani a Sud	The average on the country

Average time for issuing TCA for the solution determine by:	SS	5.00	10.00	6.00	4.29	7.20	0.50	6.35	8.41	5.97
	FS	18.19	21.52	14.08	16.75	16.96	6.68	11.38	10.41	14.50

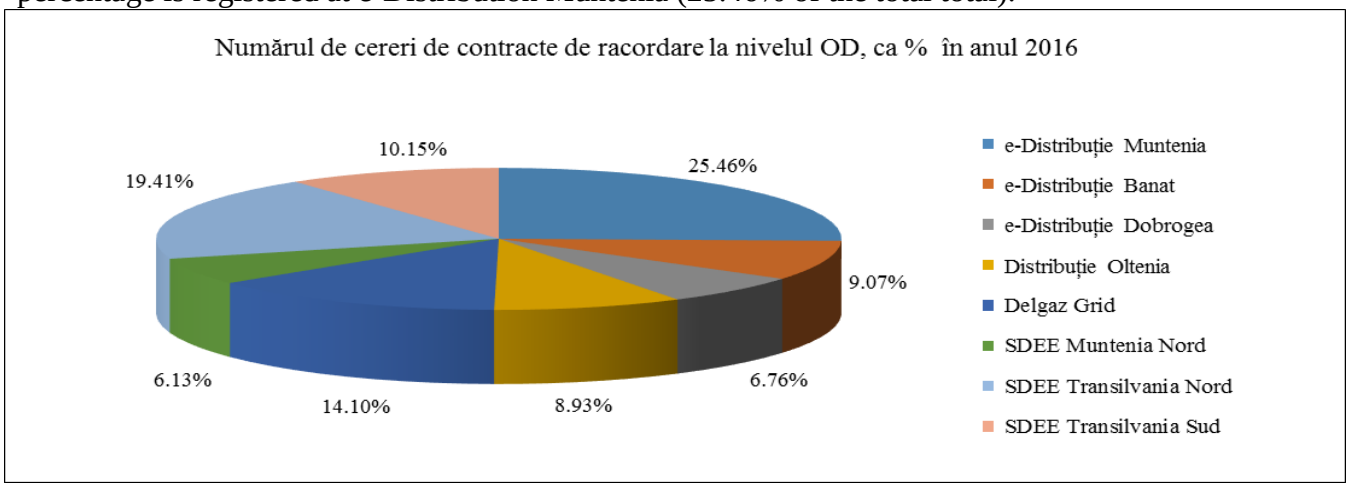
The average time for issuing the TCA in 2016



The total number of the *request for connection contracts* in 2016 was 120.267.

DSO	e-Distribuție Muntenia	e-Distribuție Banat	e-Distribuție Dobrogea	Distribuție Oltenia	Delgaz Grid	SDEE Muntenia Nord	SDEE Transilvania Nord	SDEE Transilvania Sud	TOTAL on country
All consumers	30,623	10,911	8,125	10,735	16,954	7,374	23,342	12,203	120,267
households	28,210	7,723	6,136	8,044	15,119	5,691	15,443	8,511	94,877

The minimum percentage of requests for connection contracts, registered on all types of consumers, is recorded at SDEE Muntenia Nord (6.13% of the total number of applications), and the maximum percentage is registered at e-Distribution Muntenia (25.46% of the total total).



The total number of concluded connection contracts was 119.233 (of 120.267 requests of connection contracts, the unfinished request being approx. 0,86 % of the total).

DSO	e-Distribuție Muntenia	e-Distribuție Banat	e-Distribuție Dobrogea	Distri-buție Oltenia	Delgaz Grid	SDEE Muntenia Nord	SDEE Transilvania Nord	SDEE Transilvania Sud	TOTAL On country
No of the concluded contracts	30,623	10,911	8,124	10,417	17,029	7,374	22,552	12,203	119,233

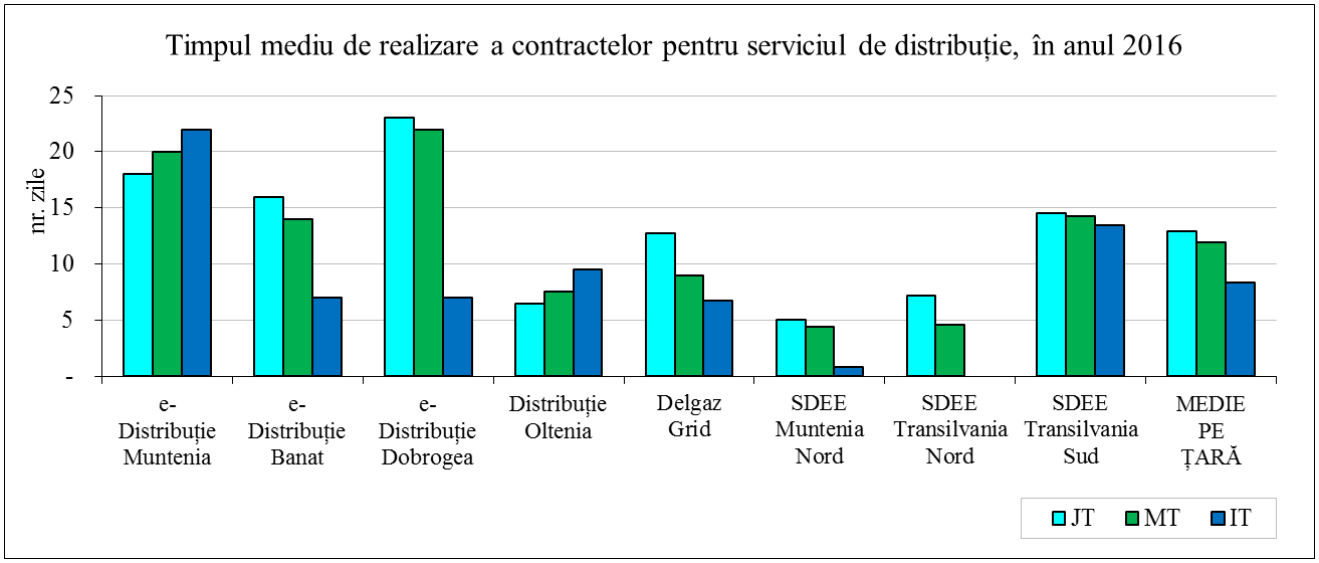
The average time for concluding the connecting contracts in 2016 has registered an average value on country of 4.04 days, distributed on the DSOs as following:

DSO	e-Distribuție Muntenia	e-Distribuție Banat	e-Distribuție Dobrogea	Distribuție Oltenia	Delgaz Grid	SDEE Muntenia Nord	SDEE Transilvania Nord	SDEE Transilvania Sud	AVERAGE on country
Average time for concluding the connection contract	1	1	3	3.45	3.34	9	8.57	3.67	4.04

The total number of requests for concluding the distribution contracts in 2016 was 108.605. *The average time on country for concluding the distribution contracts was* 13 days for LV, 12 days for MV and 9 days for HV.

DSO		e-Distribuție Muntenia	e-Distribuție Banat	e-Distribuție Dobrogea	Distribuție Oltenia	Delgaz Grid	SDEE Muntenia Nord	SDEE Transilvania Nord	SDEE Transilvania Sud	AVERAGE on country
The average time on country for concluding the distribution contracts [days]	LV	14.55	16	23	6.5	12.75	5	7.19	18	13
	MV	14.25	14	22	7.5	9	4	4.61	20	12
	HV	13.45	7	7	9.5	6.75	1	-	22	9

The average time on country for concluding the distribution contracts in 2016



The average time for the connection process, representing the time between the date of filing the connection request and the full justification documentation until the date of the installation powering, has the following distribution on DSOs:

DSO		e-Distribuție Muntenia	e-Distribuție Banat	e-Distribuție Dobrogea	Distribuție Oltenia	Delgaz Grid	SDEE Muntenia Nord	SDEE Transilvania Nord	SDEE Transilvania Sud	AVERAGE on country
The average time for the connection process [days][1)]	LV	94.33	117.88	114.13	87.07	122.91	89.48	33.75	39.61	87.39
	MV	436.33	389.34	431.67	228.61	254.51	101.27	138.23	57.14	254.64
	HV	-	-	933	-	-	-	-	-	933

[1)] The average time for the connection process, from the time of submitting the complete, without a solution study up to the powering of the installation.

The average cost of the connecting process has the following distribution on DSOs:

DSO		e-Distribuție Muntenia	e-Distribuție Banat	e-Distribuție Dobrogea	Distribuție Oltenia	Delgaz Grid	SDEE Muntenia Nord	SDEE Transilvania Nord	SDEE Transilvania Sud	AVERAGE on country
The average cost of the connecting process [lei][1)]	LV	880	1,939	1,612	2,465	1,781	1,622	1,773	1,992	1,758
	MV	143,694	134,573	106,314	36,811	55,389	61,548	56,192	56,192	77,607
	HV	-	-	4,970,193	-	-	-	-	-	4,970,193

[1)] Connecting average cost on connected customer, paid to the distribution operator (tariff for the TCA + cost solution study + connection tariff)

Monitoring safeguard measures

The provisions of Article 37(1) (t) of Directive 2009/72/EC have been transposed in national legislation by Article 9(4) (k) of Law no. 160/2012 on the organization and functioning of ANRE.

In 2016, ANRE approved **Order no. 23/11.05.2016 for approving the regulation for suspending the operation of the wholesale market and the applicable trade rules.** This regulation supplements the applicable secondary legislation for *unexpected crisis situations o 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* referred to in Art. 24 of the Law on electricity and natural gas no. 123/2012, adding to the provisions of the *Regulation regarding the establishment of the safeguard measures in crisis situations occurring in the functioning of the national power system*, approved by ANRE Order no. 142/3.12.2014, which refers particularly to technical measures to be taken for preventing an breakdown situation of the NPS.

In summary, this regulation:

- specify the incidents of extended NPS breakdown where the measure can be taken to suspend the operation of the wholesale market, namely those in which more than 50% of consumption may remain at least one hour without power;
- foresees the suspension of the selection rules of merit orders based of the units on the balancing market, these being respected only to the extent possible, with priority for the compliance with the technical rules for the restoration of the normal functioning of the NPS;
- foresees the suspension of the obligations of the electricity delivery and payment obligations, respectively, contained in the contracts/conventions for the purchase of electricity concluded on the wholesale market, with the exception of those on the balancing market and on the assumption of the balancing responsibility;
- foresees the zero value for internal block exchanges between BRPs and for those with external supply areas as well as for the planned production of the dispatch able units covered by the BRP physical notifications;
- foresees, as a consequence of these changes, that all electricity delivered or purchased in that period is settled at a single price, namely MCP from each settlement interval, and is based on measured values;
- in addition, it foresees considering the start-up costs equal to zero and the cancellation of penalty payments for notification imbalances;
- allows the transmission of ATC with zero value on borders in procedures agreed with neighboring TSOs to establish interconnection capacities for coupled DAM and for intraday auctions for the time intervals in which TSO considers that the extended NPS damage will persist and cross-border transactions could worsen the system status.

The regulation also provides the procedural steps to start and to end the period of suspension of the electricity wholesale market functioning, as well as the criteria for ANRE's approval of this measure after the event, consisting in fact in the approval of the application of the simplified discounting method. It is considered that the rules proposed to be applied in the extended breakdown periods of NPS are likely to reduce, as possible, the financial imbalances that should be borne by some of the participants in case of maintaining the normal rules. At the same time with EU wide approval of the *Network Code for Emergency situation and Restoring the system* (ER Code) developed by ENTSO-E, the national secondary legislation will be adapted to comply with it.

In 2015 there was no unexpected crisis in the electricity market that would threaten physical safety or security of people, appliances or installations or the integrity of the power system.

Report on connection, access and dispatching regimes for E-RES. Imbalances payment

In 2016, the installed capacity in the E-RES power plants recorded an increase of approx. 3% (136 MW). The transmission system operator and/or distribution operators ensure the transmission, distribution, as well as priority dispatching of the electricity generated from renewable sources for all renewable energy sources generators, regardless of capacity, on the basis of transparent and non-discriminatory criteria, with the possibility of amending the notifications within the business day, according to the ANRE approved methodology so that the limitation or interruption of electricity production from renewable energy sources shall be applied only in exceptional cases where this is necessary for ensuring the stability and security of the National Power System. In 2016, there were registered limitations or interruptions due to the network restrictions and excess of production.

Guaranteed access to the network is ensured for the electricity contracted and sold on the electricity market that is benefiting from the support system for renewable energy sources.
Priority access to the network is ensured for electricity contracted and sold at regulated price (generated in power plants with an installed capacity of less or equal 1 MW per plant or in the case of high efficiency cogeneration from biomass, of 2 MW per plant).

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

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

3.1.3. Network and connection tariffs

Tariffs for electricity transmission system

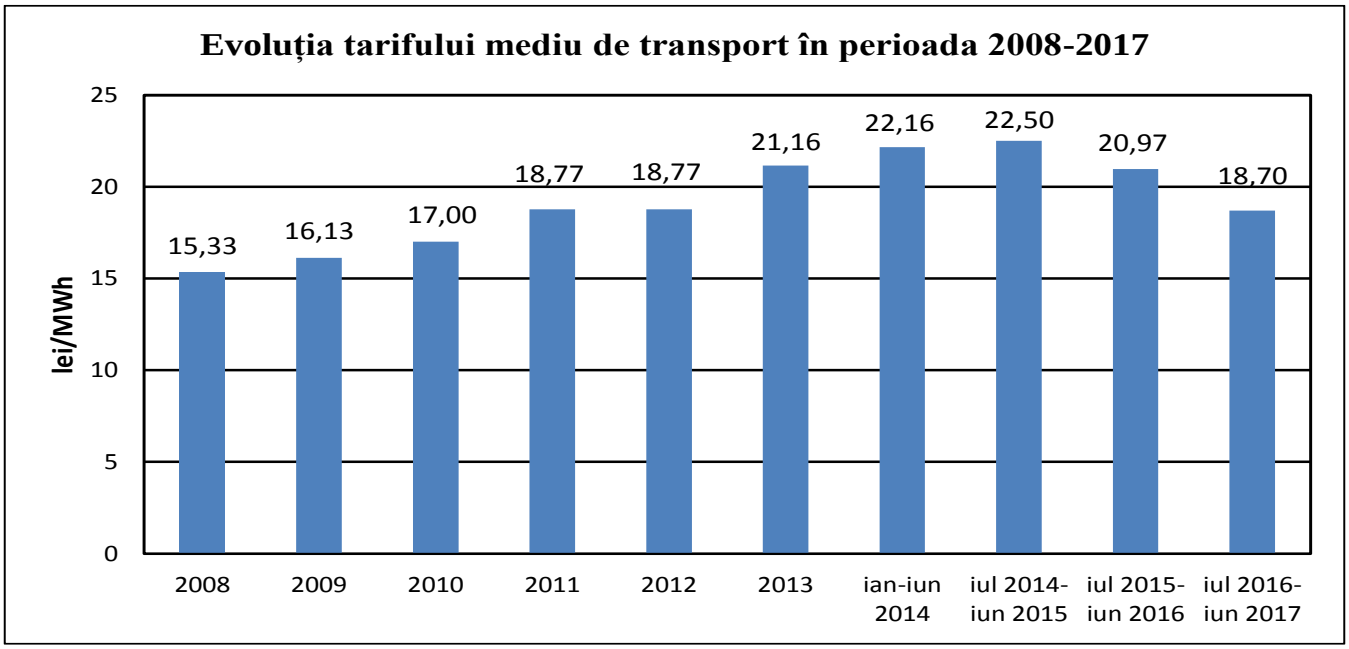
These tariffs are determined based on the *Methodology for setting tariffs for electricity transmission service*, approved by ANRE Order no. 53/2013, as amended and supplemented.
Under methodological provisions, the tariffs for transmission service shall be revised with effect from 1 July each year. Therefore, in the period April-June 2016, ANRE has examined the OTS proposal, established and approved by the Order no. 27/2016 the tariffs applicable from 1 July 2016 to 30 June 2017, with the following values:

- average transmission tariff– 18.70 lei/MWh; representing a decrease by 10.8 % compared to the previous tariff period, respectively1 July 2015 – 30 June 2016;
- average tariff for the injection of electricity in the networks T_G - 0.85 lei/MWh, with a variation between 0 and 1.52 lei/MWh the 7 injection zones; thus, transmission tariff - the component for the injection of electricity in the networks (TG) decreased by a percentage between 67 % for Dobrogea renewables, Dobrogea and Oltenia, and 100 % for Muntenia; T_G tariffs have a nonzero value in the area Dobrogea renewables, Dobrogea and Oltenia, surplus areas from the point of view of the balance production/consumption because the introduction of the electricity in the networks in these areas leads to the increase of the technological consumption CPT in the electricity transmission network ETN; the zonal tariffs for the introduction of the electricity in the

network T_G have zero for Muntenia, Transilvania Nord, Central Transilvania and Moldova, zones that are deficient in terms of production/consumption balance;

- average tariff for the extraction of electricity from the networks (T_L) – 17.77 lei/MWh with a variation between 15.26 lei/MWh and 19.02 lei/MWh for the 8 extraction zones; thus, the component for the extraction of electricity from the networks T_L has decreases by approx. 2.8 % for all extraction zones, except Oltenia and Dobrogea where it remained the previously approved value; in Oltenia and Dobrogea tariff T_L has the smallest value because the consumption in these areas (extracting the electricity from networks), close to the production places, leads to a reduction of the technological consumption CPT in the ETN.

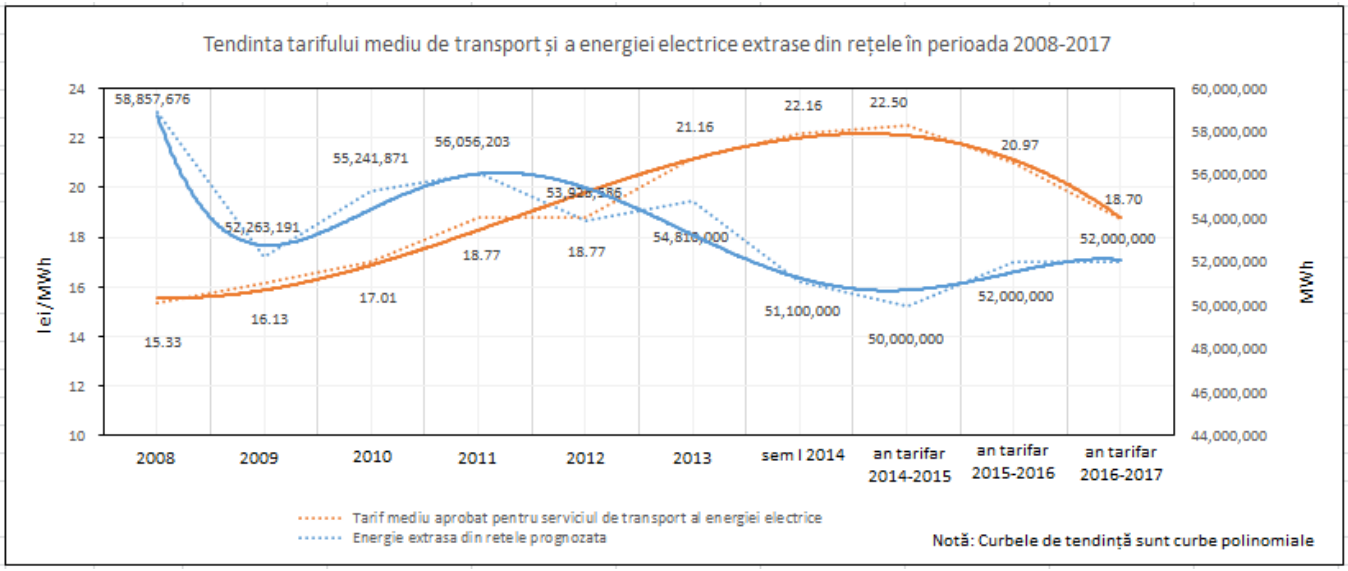
Evolution of the average transmission tariff in the period 2008-2017 is presented in the following figure:



The decrease by 10.8 % of the average transmission tariff starting with 1 July 2015 compared to tariff approved for the previous year (1 July 2015 – 30 June 2016), was caused by the increase of electricity consumption and export leading to the application of the methodological corrections by ANRE, related to the closure of the first year of the regulatory period (1 July 2014 – 30 June 2015) and the prediction of the second year of the regulatory period (1 July 2015 – 30 June 2016).

The evolution of the electricity transmission tariffs presented in the previous figure highlights an increase in the second regulatory period and a decrease in the third regulatory period of the average transmission tariff, which even if it is not applicable in the invoices, it is representative because indicates the unit regulated related to each MWh extracted or consumed from the network.

The recorded evolution was mainly determined by the evolution of the regulated income (projected in progressive increase during the second regulatory period) and of the electricity consumption in Romania (evolution of the electricity extracted from the network). In support of this statement, the following figure presents the polynomial trend curves of the average transmission tariff and the quantity of electricity extracted from the network during the period 2008-30 June 2017.



The factors which determine the evolution of the average transmission tariff, namely the regulated income, electricity introduced in and extracted from the network, the annual conditions and the income collected from the applied tariffs are presented in **Annex no. 4.**

The methodology provides up to 15.06.2015, when it has been amended as shown further, that the tariffs applied by TSO are different on different zones, depending on the impact of the introduction or extraction of the energy in/from the power grid nodes by sending the locational signals designed to determine the location of the energy sources in the deficient areas, respectively the consumption locations in the surplus areas of the PTN.

Both components of the tariff: introduction of electricity into the grid and extracting electricity from the network have included in the period of 2008-2015 both operating costs and maintenance and infrastructure costs, allocation of approximately 60% being of the costs on T_L component and 40 % on T_G component.

In accordance with article 18 (2) of *Regulation (EC) no 714/2009 concerning conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) No 1782/2003. 1228/2003*, ACER has prepared recommendation no. 9/15.04.2014 on guidelines concerning the tariffs paid by electricity producers. In the conclusions of the opinion it is mentioned that the G tariffs applied to the energy introduced in the network must not be used to recover infrastructure costs and, therefore, except in the case where costs for the losses in the network are recovered through G tariffs, these should be equal to zero. Taking into account the recommendations ACER, transposed by the ANRE Order no. 87/2015, the methodology has been changed so that:
- transmission tariff – the component for the introduction of the energy in the T_G network to cover only the marginal costs on short term, respectively the sum of the marginal costs due to the technological consumption in the power transmission network and the marginal cost due to the congestions in the power transmission network;
- transmission tariff – the component for the introduction of the energy in the TG network to be different on different tariff zones, depending on the impact of the introduction of the electricity in power network nodes;
- the difference between the regulated income and the marginal cost on short term is fully recovered by the transmission tariff – the electricity extraction component T_L.

By applying this new cost allocation from 1 July 2015 it has been registered a decrease by approx. 25% of the value of the average zonal tariff for introduction T_G and an increase by approx. 48% of the extraction tariff T_L.

The evolution of the total incomes and costs made by the OTS, as well as the investments related to the electricity transmission service, planned and carried out in the period 2008-2017, is presented in **Annex no.5.** Also in this table it is distinctly presented the evolution of the costs with CPT in the PTN.

Also, in the table it is presented the gross result of the electricity transmission service provided by the TSO as reported to ANRE in the monitoring activity reports and the gross result of the TSO's activity in the financial statements at 31 December every year.

It should be noted that for the third regulatory period ANRE has imposed on TSO an increased demand for the substantiation and assignment of the categories of costs related to the transport service. Thus, the classification of operating and maintenance costs into controllable - which can be subject to efficiency (reduction) and uncontrollable - the level of which is set by legal provisions and are not dependent on the management decision of TSO, has also been reviewed and has also been reset their reference value.

As part of the uncontrollable maintenance costs, the tax on the natural monopoly in the electricity sector, established by Government Emergency Ordinance no. 5/2013 and the special building tax, established by Government Emergency Ordinance no. 102/2013 were included starting with 2013. Although the aim pursued by the Romanian Government by the adoption of Government Emergency Ordinance no.5/2013, set out in the background note, was to adjust the substantial profits of the electricity transmission and distribution operators recorded in the previous years, in the absence of explicit provisions on the payment of these taxes from the profits, ANRE is obliged to recognize the costs imposed by these ordinance and to include them into the transmission tariffs as uncontrollable operating and maintenance costs in the category of taxes, royalties, imposts and assimilated payments, as tax deductible. The effect of these taxes was an increase of the transmission tariff by approx. 2 % in the years when their value reached the highest level (the special construction tax rate was 1.5 % of their net accounting starting with 01.01.2014, 1% starting with 1 January 2015 and it was eliminated starting with 1 January 2017).

CPT costs, representing approx. 20 % of the total costs of the electricity transmission service are subject to a streamlined mechanism by setting out the targets for CPT reduced progressively one year to another in the regulatory period. ANRE recognizes in the regulated tariffs the costs registered by TSO for the acquisition of the electricity to cover CPT in the power transmission network, only when the electricity quantity framed in the previously set targets for the efficiency, and the purchase price is not higher than the reference price calculated as weighted average trading prices of the energy market. Therefore, ANRE limits both the quantity and the purchase price of the electricity needed to cover the CPT, using a formula that takes into account the evolution of the competitive price on the energy market. No quantitative imbalances greater than 10% are accepted in the CPT acquisition structure and the cost of imbalances is limited from 1 July 2017 to no more than 5% of the reference price.

The amount of electricity required to cover CPT in the transmission network is to a lesser extent under the control of the TSO as it is strongly influenced by the operating regime of the transmission network due to the network structure, the production and the consumption. The CPT level is also influenced by the operation mode of the power transmission network on the load for which it has been dimensioned.

Even under these circumstances, TSO is stimulated to streamline CPT costs by improving purchasing strategies in the wholesale electricity market.

Concerning the financial results of TSOs, it is mentioned that they are not determined solely by the regulated tariffs. The difference consists in the financial statements, certain costs are not recognized in the tariff, as in the regulated tariff, the costs and the financial incomes are taken into account, including those resulting from contributions, in particular those from the connection or other public redeemable funds.

Tariffs for electricity distribution service

Specific electricity distribution tariffs charged by the distribution operators concessionaires in 2016 representing the third year of the third regulatory period (2014-2018) were approved by **ANRE Orders no. 168 up to 175 in 2015.**

At the end of 2016, ANRE has analyzed the substantiate requests of the operators and approved by **ANRE Orders no. 107 up to 114 from 2016,** the specific tariffs for **the electricity distribution service, applied to the distribution operators concessionaires in 2017.** To determine these tariffs there were applied the provisions of the Methodology for setting tariffs for electricity distribution service, approved by ANRE Order no. 72/2013, as amended and supplemented.

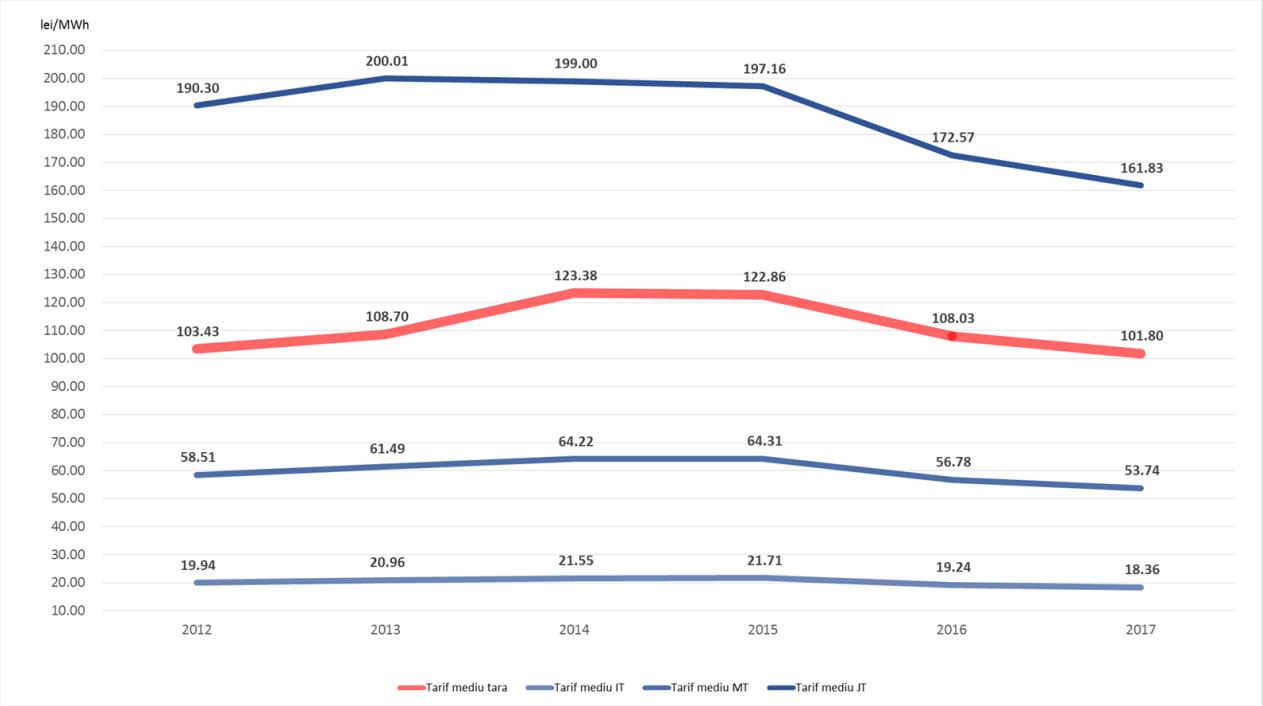
Thus, specific average national tariff, on the voltage levels, approved for the concessionaire electricity distribution operators, for 2017, are:

- specific average tariff for high voltage – 18.36 lei/MWh,
- specific average tariff for medium voltage – 35.38 lei/MWh,
- specific average tariff for low voltage – 108.09 lei/MWh.

Compared to the previous year values of the tariffs, the average tariffs decreased with a variation of – 4.59 % for high voltage, - 5.73 % for medium voltage and – 6.65 % for law voltage, relevant to the households.

The national average tariff for 2017, de 101.80 lei/MWh decreased by approx. 5.77 % compared to the average national tariff in 2016 of 108.03 lei/MWh.

The following figure shows the evolution of the specific average tariffs for electricity distribution for the period 2012-2017 for the final customers, depending on the voltage level of the consumption places connected to the power distribution networks:



The descending trend of the electricity distribution tariffs in the third regulatory period (starting with 2014) is explained both by the increasing of the amount of distributed electricity and the reduction of the regulated revenues as a result of tightening the conditions laid down in the Methodology for cost recognition (strengthening checks, requesting data and supporting documents, etc.).

The share of network tariffs (transmission and distribution of electricity) in the structure of the energy price for the final customer in the third regulatory period is approx. 35%, which represents a decrease compared to the second regulatory period, when the share of network tariffs in the structure of the electricity price for the final customer represented approx. 45%. This period is characterized by a lower level of recognized costs both of the capital charges by adjusting the regulated rate of return on capital in accordance with current economic and operating conditions and of functioning-maintenance which reflects the efficiency of the service acquired in the period 2005-2013. Also, for the costs of network technological losses, ANRE included within the methodology the incentive mechanism for their efficiency, having effect both on the quantity and on the purchase price, the methodological provisions being similar both for the electricity distribution and transport service.

The tariff for the distribution service included the cost of the natural monopoly tax in the electricity sector, established by Government Emergency Ordinance no. 5/2013 and with the special construction tax, established by Government Emergency Ordinance no. 102/2013, which are part of the uncontrollable operating and maintenance costs (not covered by the efficiency process) from the category of taxes, royalties, taxes and similar payments, given that, according to the two ordinances, they are included in the category of the deductible expenses.

For the determination of distribution tariffs to be applied in 2017, the annual closing adjustments for the last four months of 2015 and those resulting from the estimated data to be achieved in 2016 that were applied to linearized revenues projected for this year.

The corrections applied for the determination of the regulated tariffs for the power distribution service approved by ANRE at the end of 2016 for the year 2017 are presented in **Annex no. 6**. The data show that significant value adjustments have been applied that have reduced the regulated revenues of the distribution operators concessionaires and which explain the reduction compared to the tariffs applied in 2016. The level of the negative annual value corrections applied to the tariffs for 2017 was generated as a result of the increase in the electricity consumed, the decrease of the cost of purchasing the CPT based on the fall in the purchase price of electricity on the wholesale market, the reduction of the return on capital by reducing the regulated profit rate to 7.7% and the elimination of the special building tax starting with 31 December 2016.

The detailed analysis of the costs on the basis of which the tariffs for the distribution service were established was presented in the documents for the approval of the ANRE Orders no. 107 up to 114 in 2016.

In **Annex no. 7** there are presented centralizing analyses regarding the factors that influenced the electricity distribution tariffs, as well as the evolution for each distribution operator of the value of electricity distribution tariffs by voltage levels approved by ANRE in 2008-2017, as well as the financial results of distribution dealers, presented in the financial statements on 31 December of each year.

It is mentioned that in applying the provisions of art. 48 par. (2) letter (c) of the Electricity Law no. 123/2012, with the subsequent amendments and completions, according to which the distribution operators, as well as the transmission system operator have the obligation to publish the costs related to the operation, maintenance and development of the electric networks on their own websites, ANRE approved by Decision no. 618/2015 the templates for publishing them.

The losses registered in the distribution networks in Romania including illicit consumption are at the level of 11% of the contracted electricity and, from the comparative situation of the CPT in networks for the year 2014 prepared by the World Bank, it is found that our country is, however, in the average of the Eastern European countries. Countries like Italy, Germany or the Czech Republic with losses ranging from 4% to 7% have a low volume of low-voltage installations (since distribution networks are delimited by users' installations at the medium voltage level) and have a low level of losses through illicit electricity disruption.

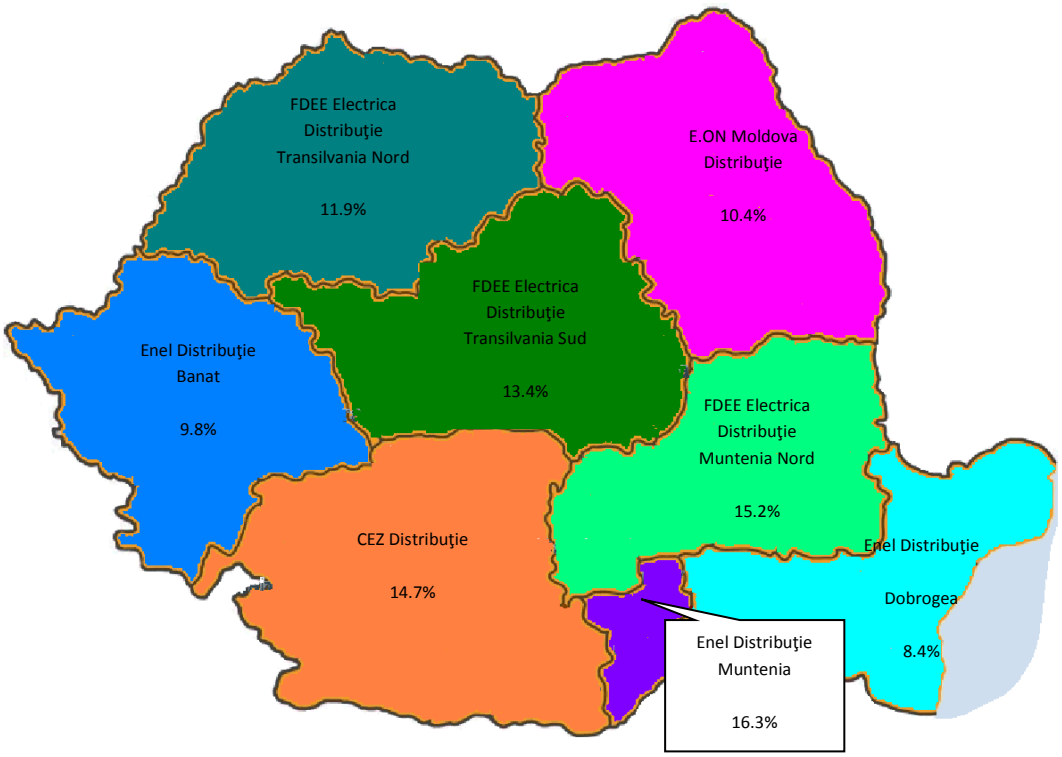
It should be noted that the total level of losses in distribution network does not strictly reflect the efficiency of the electricity grids in a given country as it is strongly influenced by the structure of consumption on voltage levels, while the technical losses in the high voltage networks are on average value of approx. 1%, in the average voltage networks of approx. 4%, while in the low voltage networks there are losses of approx. 7% of the electricity entering the distribution operator's network. Without ignoring the fact that in Romania it is necessary to reduce the losses in distribution network, especially at low voltage, the low level of the total losses in the networks registered in the highly industrialized countries is explicable also by a higher weight of consumption at high voltage and medium voltage.

In Romania, following the evolution of the structure of electricity consumption from distribution network on voltage levels during the period 2005-2016, at high voltage, where the level of losses is very low, the share of distributed electricity decreased during the period 2005-2016 from 30% to 17 % of the total, while at low voltage where the level of losses is very high, the share of distributed electricity increased in the same period from 39% to 49% of the total.

Regarding the share of the cost with the acquisition of CPT in power distribution network in the regulated income, respectively in the total costs covered by the distribution service, in the period 2014-2016, it is noticed a decreasing trend, which follows the decreasing trend of the average price of electricity traded on

the wholesale energy market and is due to the right granted to the distribution operators to purchase electricity to cover CPT under competitive conditions by trading energy on this wholesale market.

The following figure shows the distribution of the electricity in the country of approx. 43.3 TWh, which is estimated to have been distributed in 2016 among the eight distribution operators concessionaires.



According to art. 76, paragraph (1) (c) of the Electricity and Gas Law no. 123/2012 with subsequent amendments and supplements, the methodology for setting the tariffs for the distribution service is incentive type, considering the remuneration of the capital invested by the operators as the recognized cost, through the profitability of the regulated asset base. Starting with the date of application of this principle (2004), the Regulated Rate of Return (RRR) has recorded a quasi-descending trend starting from a value of 12% (value negotiated by the Romanian state in the privatization process) for the privatized operators and 7% Operators with state capital in the first regulatory period, decreasing to 10% (value negotiated by the Romanian state in the privatization process) for the privatized operators and 8.52% for the state-owned operators for the second regulatory period, having the value of 8.52% for all operators in 2013 and 2014 and falling to 7.7%, valid for all operators from 2015 to the present. This RRR is applied to the regulated asset base, which is the accounting value of the fixed assets used to provide the service. In this way, the profit calculated in relation to the total costs reaches a level that can be estimated as being too high in relation to the financial results of other categories of market participants.

It should be noted that the Methodology for setting the tariffs for the distribution service issued by ANRE in 2004 was annex to the Privatization Contracts of the electricity distribution and supply companies

"Electrica Dobrogea" - S.A. and "Electrica Banat" - S.A., approved by Law no. 570/2004, as well as an annex to the Privatization Contracts of the Distributors and Suppliers of Electric Power "Electrica Moldova" - S.A. and Electrica Oltenia SA, approved by GEO no.114/2005, which also was approved by Law no. 277/2005 and became an annex to the Privatization Agreement of the Subsidiary Company for Distribution and Supply of Electricity "Electrica Muntenia Sud", approved by GD no. 528/2007. As the methodology was an integral part of the normative acts approving the privatization contracts of electricity distribution and supply companies, ANRE was legally obliged to observe the principles and calculation methods provided by this methodology.

In assessing the profit level of distribution operators, it must be taken into account that the adjustments of the regulated revenues are made annually as well as at the end of the regulatory periods, which leads to an adjustment of the accomplished annual profit.

The average gross profit from distribution activity in 2013 for example (intermediate year between the second and third regulatory period) was at 12.08%. According to the methodological provisions, at the end of the regulatory period value adjustments of annual revenues of tens and hundreds of millions lei were made. Correcting earnings and profits made in 2013, the average real rate of gross profits from distribution activity in 2013 was in fact at the level of 6.41%.

This approach complies with the legal provision that prices/tariffs must ensure a reasonable return on investment return (RRR), determined according to the regulations issued by the competent authority, is provided in Art. 76, paragraph (1) (c) of the Electricity and Gas Law no. 123/2012 with subsequent amendments and supplements. The rate of return on capital invested in electricity transmission and distribution networks has been set since 2015 at 7.7%, decreasing from 8.52% in 2014. At the request of a network operator who appealed in the court the RRR of 7.7% as too low, this value was audited by Ernst & Young's financial consultant, and he concluded that the value set by ANRE is in the range of confidence, that is, at the lower limit of this range, which demonstrates that RRR applied to the setting of tariffs falls within the reasonable limits.

Also, art. 8 lit. f) of Law no. 160/2012 for the approval of Government Emergency Ordinance no. 33/2007 regarding the organization and functioning of ANRE explicitly states that tariff methodologies should be incentive: "ANRE aims to ensure incentives for electricity/natural gas system operators and other users of electricity networks natural gas systems to increase efficiency in the operation of energy transmission and distribution systems and to accelerate market integration".

From this point of view, the provisions of the methodologies for establishing the network tariffs are in line with the provisions of the Law and the limitation of the profits of the distribution operators concessionaire through a methodological mechanism cannot be achieved unless the legislator would establish an explicit limitation of the profit share.

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

Tariffs for the distribution service provided by operators other than concessionaire distribution operators are approved by ANRE at the request of distribution system operators that own, operate, maintain and develop distribution networks and platforms in industrial parks or designated heritage areas and have connected users - beneficiaries of the distribution service.

During 2016, the distribution tariffs were determined based on the Methodology for determining the tariff for electricity distribution service done by operators other than concessionaire distribution operators,

approved by ANRE Order no. 21/2013. In 07.12.2016, a new *Methodology for determining the tariff for electricity distribution service done by operators other than concessionaire distribution operators was approved by* **ANRE Order no. 102/2016.**

Both of the *Methodologies* provides tariff setting by the "cost +" method, meaning based on justified costs and a regulated rate of return of up to 5%.

During 2016, ANRE approved 11 decisions concerning the tariff for electricity distribution service provided by distribution operators, others than concessionaire distribution operators.

Tariffs for connection to the public networks

The tariffs payed by the consumers to the network operators for the connection to the electricity networks are set by the networks operators according to the provisions of the *Methodology for setting connection tariffs for the users of the electricity public networks*, approved by **ANRE Order no. 11/2014**, amended and supplemented. The connection tariff includes the following components:

T_R - component for achieving adequate connection installation;

T_U - component for the verification of the installation file and commissioning the facility, for which they were set specific rates determined on the basis of general estimate for the average case, representative for the type of installation.

T_I – participation component to the finance of the works for strengthening the grid needed to evacuate the approved power (for connecting a generation place or consumption and generation place), for which were set specific tariffs „i", corresponding to the components of a public electricity network.

In case of the connection of a consumption place to the distribution network of low and medium voltage or connection of a place of production to the distribution network of low voltage, size component T_R of the connection tariff is determined based on the specific indexes for achieving energy capacities on types of network elements, possible components of an installation connection, according to scheme and standard conditions of achievement.

In case of connecting a consumer site to the distribution network of low and medium voltage, the component value T_U of the connection tariff is calculated based on specific rates.

ANRE did not modify the specific tariffs and the specific indicators used to determine the tariffs for the consumers connection to the public electricity networks, thus, during 2016, those approved by **ANRE Order no.141/2014** were published.

At the same time, in 2016, ANRE approved **Order no. 10/30.03.2016** the *Methodology for establishing financial compensations between users connected in different stages, through a common installation, to public electricity networks*, approved by ANRE Order no. 180/2015. The amendment clarified the provisions regarding the duration of the right to receive compensation in accordance with the provisions of the methodology, which was extended to 10 years for household customers.

Tariffs of issuing/updating of the technical approvals for network connection, certificates for network connection and location permits

In order to avoid undue charging of fees for activities related to the process of connection to public electricity networks, ANRE approved by **ANRE Order no. 114/2014**, the regulated tariffs for issuing/updating technical approvals for network connection, connection certificates and location permits,

which were determined according to the *Methodology of calculating these rates*, approved by **ANRE Order no. 61/2014**.

The methodology for the issuance of placement permit by the network operators, approved by ANRE Order no. 48/2008 was revised in 2016, the new form being approved by ANRE Order no. 25/22.6.2016. The revision of the *Methodology* was imposed by the need to harmonize the document with the provisions of *the Law on Electricity and Natural Gas* no. 123/2012 and of the *Regulation regarding the connection of users to the public electricity networks*, approved by the ANRE Order no. 59/2013.

The methodology establishes the necessary steps and procedures for the issuance of placement permits by the network operators, including the conclusion of the contract for the release of the placement and/or the coexistence conditions and the execution of the site release work /the realization of the coexistence conditions between the proposed objective and the electrical networks.

Some of the modifications and additions to the previous *Methodology* provisions have included the explanation of the steps, the actions of the network operator and the way of setting the tariffs for issuing the permits.

Trans-European Transport Infrastructure projects are public investments of strategic importance for Romania, which ensure the connectivity with the European transport corridors and increase the mobility of the population and goods, directly influencing the economic relations and the development of the business environment at national level. The new Methodology contains amendments to the issuance of favourable placement permits for trans-European transport infrastructure projects, which aim at avoiding delays in the implementation of these projects with favourable impact in ensuring the speeding up of the interconnection between the national/regional transport network and the European one.

Another part of the newly introduced provisions is to avoid the occurrence of cases in which individual residences located are built at distances to electricity distribution networks, for which connection it is necessary to extend the electrical networks that result economically ineffectiveness for the network operator and therefore not it is realizing. In these cases, the houses owners cannot get the connection to the grid for supplying the electricity to their homes, but this must be brought to their attention before building them.

National implementation of European access codes to public electricity network

1. The timetable for the implementation of Regulation (EU) No. 631/2016 establishing a network code for the requirements for network connection of generation facilities

The timetable for the implementation of Regulation (EU) No. 631/2016 establishing a network code for the requirements for network connection of generation facilities was elaborated in order to comply with the stages and deadlines stipulated by the Regulation regarding the elaboration of technical requirements/procedures/methodologies regarding the connection of the electricity generation facilities to the grid and was approved by the ANRE Decision no. 1570/10.05.2016.

The timetable contains the obligations regarding the elaboration by TSO, CNTEE Transelectrica SA, in collaboration, as the case may be, with the distribution operators concessionaires, within the established terms, of the regulations resulting from the explicit provisions of the Regulation, necessary for its implementation at national level. The deadlines set in the implementation schedule provide a certain reserve against the deadline set by the Regulation for the elaboration of the technical requirements and the subsequent documents, namely 17.05.2019 (three years from entering into force at 17.05.2016). The

timetable foresees the completion of the implementation of the Regulation at national level by the end of the second semester of 2018.

2. The timetable for the implementation of Regulation (EU) no. 1388/2016 of the Commission of 17 August 2016 establishing a network code for the consumers connection

The timetable for the implementation of Regulation (EU) no. 1388/2016 of the Commission of 17 August 2016 establishing a network code for the consumers connection was adopted by ANRE Decision no.2047/20.12.2016 and was designed to meet the stages and deadlines set out in the Regulation for the development of requirement/procedures/methodologies related to the connection of consumers to the grid.

The timetable contains obligations for the development by the TSO, in cooperation with the distribution operators concessionaires, within the deadlines set in the implementation timetable, of the regulations resulting from the explicit provisions of the Regulation, necessary for its implementation at national level. The timetable foresees the completion of the implementation of the Regulation at national level by the end of the second semester of 2018.

3. Classification of the generating units and the power plants

In accordance with Art. 5 of Regulation (EU) no. 2016/631 of the Commission from 14 April 2016 establishing a network code for requirements for network connection of generating installations, TSO was required to propose the power thresholds used for the classification in 4 significant categories of generating units/power plants connected to the electrical networks, respectively in the categories A, B, C and D specified in the Regulation. The proposal of TSO analyzed and accepted by ANRE has been materialized in the ANRE Order no. 79/16.11.2016 for the approval of the classification of generating units and power plants.

According to the provisions of this order, generating units/power plants are classified in the 4 categories mentioned above, depending on the voltage of the connecting point and their installed power.

For each classification class of generating units and power stations A, B, C and D, the Regulation specifies the technical requirements that they must meet with regard to safety and stability in operation, the possibilities and performance adjustments for the power installed for the generating units, respectively, depending on the installed power and the voltage at the connection point for the power plants.

The Order also refers to the obligations of the managers of the power stations, of the distribution operators and of the transmission and system operator regarding the recording and classification of the existing and new generating units/power stations, as well as the drafting by the TSO of a proposal for new thresholds if the evolution of the NPS requires this change.

3.1.4. Cross-border issues

Allocation of the NPS interconnection capacities with neighboring systems is performed for electricity import/export transactions and transit activities. On the borders with Hungary, Bulgaria and Serbia, the allocation of interconnection capacities is performed based on a market mechanism, bilaterally coordinated on both directions, for 100% of the allocation capacity, through explicit or implicit auctions on long term (annual and monthly) and short term (daily and intra-day), depending on border and term.

On the Romania-Hungary border, the auctions for long term allocation are explicit and are organized by MAVIR (Hungarian TSO) starting from the Harmonized Long Term Allocation Rules (HAR UE). For intra-day auctions, the allocation is also explicit and is organized by CN Transelectrica SA, while in case

of daily auctions the interconnection capacity allocation is achieved implicitly, through RO DAM market coupling with spot markets from Czech Republic, Slovakia and Hungary (4M Market Coupling Project); in the event of the 4 markets decoupling for the day ahead, the capacity allocation is achieved by explicit daily auctions organized by MAVIR (the so-called shadow auctions).

On the Romania-Serbia border, the capacity allocation is explicit, the auctions for long term are organized by EMS (TSO in Serbia), and those for short term (daily and intra-day) are organized by CN Transelectrica SA.

For the auctions organized on the borders with Hungary and Bulgaria, it was agreed for 2016 to reserve a certain percentage of the cross-border transport capacity for short-term auctions (DAM allocation), the capacity offered at monthly auctions being calculated according to a published formula. Thus, each month of the year, the capacity reserved for DAM allocation is determined as the difference between the available interconnection capacity (ATC) calculated monthly for each subperiod and 80% of the smallest ATC value for the subperiods of that month, at which the capacity allocated to the annual auction returned to TSO is added. Also starting this year, the UIOSI principle ("*use it or sell it*") was introduced on the borders with Hungary and Bulgaria, a principle on the basis of which the interconnection capacity corresponding to the non-nominative transport physical rights for the allocation for the next day is returned to the transmission system operator for a fee.

As a peculiarity for the Hungarian border, if 80% of the smallest 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, to which it is adding the allocated capacity to the annual auction returned to TSO.

On the Romania-Ukraine border, the allocation of interconnection capacity is organized through explicit auctions on long term, the use of capacity obtained through bids being subject to the written approval of Ukrenergo, the TSO in Ukraine. In the case of Romania- Moldova border, the use of the interconnection capacity depends on the agreement of the distribution operator on the area where the consumption island is located.

Setting the ATC (available transmission capacity) for daily and intra-day auctions uses the principle of "netting" and participants are obliged to respect the principle of exclusive partnership (1:1). Currency trading is the EUR.

The data published on the website www.transelectrica.ro and communicated by C.N. Transelectrica S.A. in the monthly monitoring reports on the electricity markets show that at the auction organized for the annual allocation of interconnection capacity, the biggest prices registered were on export direction. After the annual auctions for the border with Hungary and respectively Serbia, the prices decreased compared to the previous year values, but over the level of 4 euro/h*MW, on the border with Bulgaria, this price increased from 2.88 euro/h*MW in 2015 to 4.47 euro/h*MW in 2016. On the import, the participant interest to gain capacity at the annual level decreased as evidenced by the very low prices, below 1 euro/h*MW on all the borders.

The prices set from organizing monthly auctions varied depending on the direction. Thus, if for import, the values were most of the time under 1 EUR/h* (but different from zero), on the export, they varied

0.45-6 euro/h*MW on the border with Hungary, on the border with Serbia 0.23-4.75 euro/h*MW and respectively 0.86-3.67 euro/h*MW on the border with Bulgaria.

The prices set on daily explicit auctions on the borders with Bulgaria and Serbia were in general lower on the import than on the export; on the border with Serbia, although prices were low both for export and import, in March 2016 there were maxims of over 9 euro/h * MW in both directions. On the border with Bulgaria, the interest of the participants for the reservation of interconnection capacity on the export direction was higher in all months, registering maxims in the range of 7.69-30.33 euro/h * MW, approximately in the same values as well as the hourly maximums of the previous year. At the implicit daily auction organized on the Hungarian border, the net position as a result of the operation coupled to the 4M MC mechanism was predominantly in the direction of Hungary-Romania, except for December 2016, and the number of hourly intervals on which the electricity flow on the interconnection lines was from Hungary to Romania accounted for approx. 62% of the total number of hourly intervals in the year. With the exception of the maximum and minimum hourly congestion values recorded in 2016 for this type of auction (80.38 euro/h * MW in June 2016 and 13.52 euro/h * MW respectively in April 2016), the hourly maximum in the other months varied within a range close to 18-48 euro/h * MW.

For intra-day auctions organized on the border with Hungary and Serbia, hourly prices were null in most of the hourly schedules of the year, with the requested hourly capacities being lower than those offered, except for some time slots in April 2016, when the price recorded on this type of auction on the border with Serbia on export was 10,18 euro/h * MW, all the capacity offered being thus allocated and also on a timeframe in February 2016, when the price reached 10 euro/h * MW on the border with Hungary.

At the level of 2016, the highest annual average values of the total capacity utilization allocated on a border and auction direction (calculated as the ratio between the energy of the notified trade and the energy corresponding to the total capacity allocated by the Romanian side and neighbor side to all the participants were registered on the export on the borders with Bulgaria (77.54%), Serbia (71.11%) and Hungary (65.84%). At import, the use was lower regardless of the border, with the highest average annual value recorded on the border with Hungary (33.33%).

The highest utilization rates for long-term auctions were on the border with Bulgaria (83.51%), Serbia (77.36%) and respectively Hungary (60.57%), while on import, irrespective of the border, the use of the allocation capacity gained in this type of auction was reduced (10.44% on the border with Serbia, 4.46% on the border with Bulgaria and the lowest, 1.46 % on the border with Hungary).

Calculated as the ratio between total and long-term total and NTC value, the degree of interconnection capacity utilization has been high in both export and import. The highest use level was also recorded on the border with Bulgaria (90.18%), followed by the border with Serbia (81.27%) and Hungary (62.19%). On the other hand, on the import, the use of capacity was higher on the border with Hungary (41.14%) than on the border with Serbia (29.21%) and with Bulgaria (19.55%).

After the allocation of interconnection capacity process, over 89% of the revenues obtained by CNTEE Transelectrica SA came as in the previous year from the long-term auctions (annually and monthly), the highest values being recorded in the auctions for capacity allocation along the border with Hungary, Serbia and Bulgaria. Revenues from daily auctions accounted for approx. 11% of the total revenues obtained at year-end by CNTEE Transelectrica SA on this market, most of them being made from the revenues determined by congestion on the border with Hungary, in the direction of export following the

implicit daily allocation. The calculation of these revenues also results from the application of the UIOSI principle on the borders with Hungary and Bulgaria, whereby those long-term transport rights holders (market participants) were remunerated for non-nominative physical transport rights for long-term auctions and auctioned daily.

In the case of the implicit allocation for the next day, the remuneration of non-nominative capacities is made at the market margin, represented by the difference between the closing price of the spot market in Romania and Hungary for the target time range if the price difference is positive in the direction of reduction of long-term transport rights. In the case of explicit daily allowances, on the Bulgarian border, the price applied is the closing price of the DAM market in Romania.

Revenues from intra-day auctions were made in 4 of 12 months and had insignificant values. Significant values in non-denominated physical transport remuneration were registered mainly on the border with Hungary (about 90% of the total value year-end paid to participants in capacity auctions on the Hungarian border), mainly on export. Also on the same export direction were the most important amounts with which the holders of the physical transport rights on the border with Bulgaria were paid in almost all months of 2016.

Calculation of congestion frequency (FaC) in annual and monthly allocations

For the calculation of congestion frequency (FaC) for annual and monthly allocations, the following formula was used, by reference to the year 2016:

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

Where:

- NzC is the number of days with congestion at ATC allocation;

- NzR is the number of days in which the ATC is zero and corresponds to operating withdrawals on single-line interconnection borders (Serbia, Ukraine).

Calculation of congestion frequency (FzC) at daily allocation

For the calculation of the frequency of congestion occurrence in the daily allocation (FzC), the following formula was used, by reference to the whole year 2016:

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

where:

- NhC is the number of hours of the congestion;

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

The severity index

Depending on the frequency of congestion occurrence, a severity index is assigned according to the table below:

The severity index	0	1	2	3	4	5

frequency of congestion occurrence	0%	1-25%	26-50%	51-75%	76%-99%	100%

Annual allocation of ATC

The frequency of congestions on annual allocation in 2016 on each border and exchange direction was 100 %

Annual auctions 2016	Hungary		Bulgaria		Serbia		Uckraine	
	export RO	import RO	export RO	import RO	export RO	import RO	export RO	import RO
Days of congestion	365	365	365	365	360	360	351	351
Day for withdrawal of the Interconnection lines(on borders with one interconnection line	-	-	-	-	5	5	14	14
Frequency of congestion on Annual allocation (%)	100	100	100	100	100	100	100	100
Severity index	5	5	5	5	5	5	5	5

Monthly allocation of ATC

Monthly allocationa 2016	Hungary		Bulgaria		Serbia		Uckraine	
	export RO	import RO	export RO	import RO	export RO	import RO	export RO	import RO
Days of congestion	366	366	366	366	361	187	0	173
Daya of withdrawal of the interconnexion Linea(on borders with one interconnection line)	-	-	-	-	5	5	14	14
Frequency of congestion on monthly allocation (%)	100	100.0	100.0	100.0	100.0	51.8	0.0	49.1
Severity index	5	5	5	5	5	3	0	2

Daily allocation of ATC

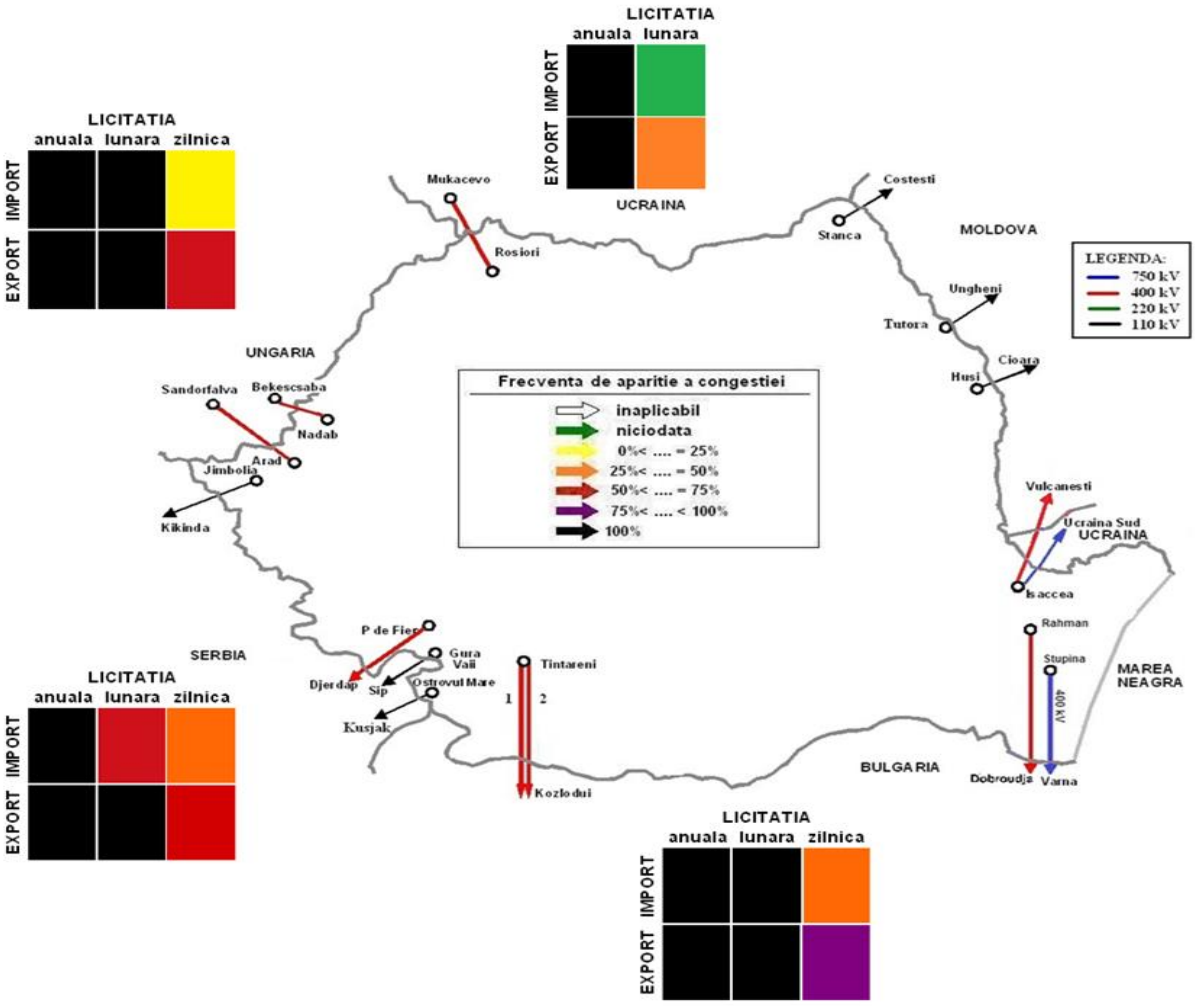
There were no congestions on the border with Ukraine.

Daily auctions 2016	Hungary		Bulgaria		Serbia		Uckraine	
	export RO	import RO	export RO	import RO	export RO	import RO	export RO	import RO
Hours of congestion	1771	301	8328	3226	4346	3497	-	-
Hours of auction	3324	5483	8712	8712	6483	8694	-	-
Hours of withdrawal of Interconnection(on borders With one interconnection line)	-	-	-	-	120	120	336	336
Frequency od congestion on Daily allocation (%)	53.3	5.5	95.6	37.0	67.0	40.2	-	-
Severity index	3	1	4	2	3	2	-	-

Intra-day allocation of ATC

In 2016, there were no congestions on the bilateral coordinated intra-day allocations, except for 8 time slots on the export direction and for 5 time slots on the import direction on the border with Hungary and for 4 time slots on the border with Serbia on the export direction.

The congestion severity index of the annual, monthly and daily allocation on each border and exchange direction for 2016 is presented below:



Remarks regarding export:

- the most congested borders were the borders with Bulgaria, Serbia and Hungary;
- the less congested border was the border with Ukraine.

Remarks regarding import:

- the most congested border was the border with Bulgaria and Hungary;
- the less congested border was the border with Ukraine.

Reporting revenues from congestions in the period 1 July 2016-30 June 2017 of the TSO

The reporting is done in accordance with paragraph 6.5 of Appendix 1 - Guidelines on the management and allocation of available transfer capacity of interconnections between national systems, from the Regulation (EC) no. 714/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the network for cross-border electricity exchanges and repealing Regulation (EC) No. 1228/2003.

The amount of revenue collected by the transmission system operator during the 12-month period prior to 30 June 2017 and the mode of use of the revenue concerned, together with the results of the verification that this use is in accordance with the Regulation and all revenues from congestions are intended for one or more of the three objectives set out in art. 16 par. (6) thereof.

In accordance to Article 16(6) of Regulation, the incomes arising from the allocation of interconnection capacities are used by the TSO for the following purposes:

a) to guarantee the actual availability of the allocated capacity; and/or

b) to maintain or increase interconnection capacities through network investments, especially investments in new interconnections; or

c) as income to be taken into account in calculating the transmission tariff, up to a maximum amount determined by ANRE, where it cannot be used effectively for the purposes mentioned above.

The Romanian transmission and system operator, C.N. 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, C.N. Transelectrica S.A. submits to ANRE the monitoring results for the value of revenues from auctioning for allocation interconnection capacities on the borders. The revenues referred to, made between 1July 2016 - 30 June 2017 are presented in the following table.

[Lei]

Interconexiunea	Iul. 16	Aug. 16	Sep.16	Oct. 16	Nov. 16	Dec. 16	Ian. 17	Feb. 17	Mar.17	Apr. 17	Mai 17	Iun. 17	Total
Romania - Serbia*	1,249,467	3,210,953	1,701,952	2,235,734	2,138,007	2,905,770	2,209,593	4,384,911	2,568,573	1,822,604	1,295,622	1,166,485	**26,889,671**
Serbia - Romania*	30,818	8,215	13,769	11,591	11,084	15,084	18,917	16,002	17,568	22,459	39,423	34,090	**239,021**
Romania - Bulgaria*	1,360,622	1,499,327	1,039,208	1,178,779	1,098,172	1,458,704	1,125,642	969,622	774,860	789,477	577,316	612,889	**12,484,619**
Bulgaria - Romania*	135,453	142,929	112,258	197,084	167,389	179,005	134,570	240,074	227,123	176,604	321,330	459,047	**2,492,866**
Romania - Ungaria*	3,011,919	3,277,623	2,273,759	3,219,582	3,218,331	4,178,220	3,309,371	3,415,936	3,113,090	2,305,882	1,984,836	1,971,973	**35,280,522**
Ungaria - Romania*	76,926	67,582	190,807	71,745	186,732	156,152	312,349	371,210	181,344	253,402	362,155	206,925	**2,437,329**
Romania - Ucraina	58,836	58,849	56,138	58,088	56,099	58,663	45,218	40,982	45,175	39,807	45,711	44,064	**607,630**
Ucraina - Romania	45,388	45,399	43,308	46,309	48,394	45,254	1,674	3,029	27,885	7,755	76,217	42,565	**433,176**
Romania - Moldova	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Moldova - Romania	0	0	0	0	0	0	0	0	0	0	0	0	**0**
TOTAL	**5,969,429**	**8,310,877**	**5,431,199**	**7,018,912**	**6,924,208**	**8,996,852**	**7,157,334**	**9,441,765**	**6,955,619**	**5,417,991**	**4,702,608**	**4,538,039**	**80,864,833**

* Income derived from NPS interconnection capacitiy's allocation with neighboring power systems includes the income from daily and intra-daily auctions on the border with Hungary, Bulgaria and Serbia, as well as revenues from congestions resulting from price coupling of DAM in Romania, Czech Republic, Slovakia and Hungary (project 4M MC).

Analysis of the collected amounts indicates that 93 % of revenues come from auctions for export capacity and only 7% for import. Analysis on border indicates that 47 % of revenues come from allocated capacity between Romania and Hungary, 34 % from auctions for capacity allocation between Romania and Serbia and 18 % from auctions for capacity allocation between Romania and Bulgaria. Only 1% of revenues come from auctions for the allocation of capacity between Romania and Ukraine.

In the period between 1 July 2016 and 30 June 2017, C.N. Transelectrica S.A. recorded revenues from congestions in a total amount of 80,864,833 lei, which represents, on an average exchange rate leu/euro of 4.556 lei/euro, the amount of 17,749,085 euro. Considering the provisions of national legislation, such amounts are included in the annual gross profit achieved by the company and were reduced by allocating

profits on destinations, according to Government Ordinance no. 64/2001 regarding profit distribution to national societies, national companies and state companies or companies with majority state ownership, and Autonomous Regies, as amended and supplemented. Thus, after application of a profit tax of 16% and legal reserve of 5%, the remaining amount deposited between 1 July 2016 - 30 June 2017 in the special account was 64,530,137 lei (14,163,770 euro). The total amount deposited in the special account at 30.06.2017 is of 229,598,748 lei after applying the tax and the legal reserve, representing 51,425,273 euro.

These revenues were used mainly to:

a) to maintain or increase the availability of the interconnection capacities by investments in networks, in accordance with art. 16 (6) letter b) of the Regulation, in the period 1 January -30 June 2017 the sum used was of 13,142,334 lei (2,897,212 euro) and respectively in the entire period 1 January 2013- 30 Jube 2017 the sum of 123,690,270 lei (27,779,903 euro);

b) to guarantee the actual availability of the allocated capacity, according to art. 16 (6) letter a), no funds resulting from congestion revenues were used;

c) to establish the tariff for the transport service, in force as of 1 July 2017, in accordance with the provisions of paragraph 16 (6), second subparagraph of Regulation (EC) no. 714/2009, ANRE has approved the use of C.N. Transelectrica S.A. of an estimated amount of 19.35 million lei (4.25 million euro) of revenues from congestion management during the period 1 July 2016 - 30 June 2017, to cover the costs incurred during the same period with the cross-border export of electricity (ITC mechanism). This amount is to be corrected at the close of the tariff year 1 July 2015-30 June 2016 and recorded in the company's accounts at the end of the current year.

C.N. Transelectrica S.A. reported in the period under review the following costs for investments financed by the revenues from the allocation of interconnection capacity (art. 16 (6) letter b) of the Regulation):

Denumire proiect	Pl??i 2013 (lei)	Pl??i 2014 (lei)	Pl??i 2015 (lei)	Pl??i 2016 (lei)	Pl??i 2017 (pân? la data de 30 IUNIE 2017) (lei)	TOTAL Pl??i 2013 - 30 IUNIE 2017 (lei)	Descrierea proiectului
LEA 400 kV de interconexiune Re?i?a (România) - Pancevo (Serbia) - (proiect nr. 25) **Planificat? în 2016-2017**	**356.936**	**4.018.228**	**34.716.516**	**21.361.325**	**5.428.686**	**65.881.692**	În anii 2009-2013 s-a derulat proiectarea. Începerea execu?iei a fost condi?ionat? de emiterea HG de aprobare indicatori tehnico-economici ?i demararea procedurilor de expropriere. Transelectrica a depus documenta?ia pentru HG în data de 12.02.2013, HG a fost emis în august 2014. Contractul de execu?ie lucr?ri a demarat în octombrie 2014. Continuarea lucr?rilor pe suprafe?ele împ?durite este condi?ionat? de emiterea HG pentru scoatere din circuitul forestier. Transelectrica a depus documenta?ia pentru emiterea HG în data de 20.02.2014, HG a fost emis? în 13.10.2015, dar accesul în fondul forestier- persoane fizice este înc? limitat. Întârzieri cauzate de modificarea normelor de aplicare a Codului silvic. Valoarea total? a proiectului este de 127,086,680 lei. PIF 2017
Trecerea la tensiunea de 400 kV a axului Por?ile de Fier - Re?ita - Timi?oara - S?c?laz - Arad **Etapa I - LEA 400kV s.c. Por?ile de Fier - (Anina) - Re?i?a (proiect nr. 26)+extinderea sta?iei Por?ile de Fier (proiect 382) +Sta?ia Re?i?a (proiect 383) ?i** **Etapele II ?i III - Trecerea la tensiunea de 400 kV a axului Por?ile de Fier - Re?i?a - Timi?oara - S?c?laz - Arad (proiect 126)** **Etapa I planificat? în 2016-2018** **Etapele II si III planificate în 2019-2023**	**2.278.157**	**6.881.316**	**63.605.771**	**-25.646.091**	**7.673.256**	**54.792.409**	Proiectare derulat? în perioada 2009-2013 pentru Etapa I. Execu?ia lucr?rilor pentru extinderea sta?iei 400 kV Por?ile de Fier a demarat în anul 2013, PIF august 2016, valoare total? 13.061.040 lei. Pentru proiectele LEA 400 kV Por?ile de Fier- Anina -Re?i?a ?i Sta?ia 400/220/110 kV Re?i?a s-au depus documenta?iile pentru emiterea HG pt aprobare indicatori tehnico-economici ?i demararea procedurilor de expropriere în martie 2014. HG s-a emis în decembrie 2016. Sunt în preg?tire documenta?iile pt emitere HG de scoatere din fond forestier. Intârzieri datorit? dificult??ilor de delimitare a traseului în zonele forestiere. În data de 29.10.2015 s-a semnat contractul de execu?ie în valoare de 122,931,480 lei având termen de execu?ie 24 luni. Având în vedere c? pân? la începerea lucr?rilor propriu-zise nu a fost emis? HG pentru a se putea declan?a exproprierile, în februarie 2016 din avansul pl?tit pentru întregul proiect, contractorul a restituit cota parte aferant? tronsonului de linie nou? Por?ile de Fier -Anina, pân? la apari?ie emiterea atât a HG de exproprieri cât ?i a HG de scoatere din fondul forestier. Suma restituit? este de 29,581,391 lei. Termenul de PIF pentru portiunea de LEA Anina - Resita este 2017, iar pentru por?iunea Por?ile de Fier-Re?ita în 24 luni de la data ordinului de începere care va fi dat dup? ob?inerea HG de scoatere din fondul forestier. Contractul de execu?ie pentru sta?ia Re?ita a fost semnat în 29.07.2015. Este incert? punerea în func?iune din cauza problemelor financiare ale executantului Elcomex SA care a intrat în insolven?? în aprilie 2017. Pentru etapa II, în cadrul ST Timi?oara este în curs de elaborare proiectarea (CS ?i PT) pentru LEA Re?ita-Timi?oara-S?c?laz ?i Cs pentru achiz?tia SF-ului pentru LEA S?c?laz-Arad
LEA 400 kV Suceava - B?l?i, pentru por?iunea de proiect de pe teritoriul României (Proiect 21) **Planificat? în 2016-2023**	**575.671**	**165.945**	**942.597**	**246.975**	**38.292**	**1.969.481**	Transelectrica a demarat, în luna februarie 2012, etapa a II-a de proiectare a LEA 400kV Suceava-B?l?i pentru partea de proiect aferent? teritoriului României. S-a ob?inut acordul de mediu dup? 2 ani. Se elaboreaz? PT ?i CS. Probleme în realizarea parcel?rii propriet??ilor, nu exist? documente de proprietate (persoane fizice). Urmeaz? a se depune documenta?ia pentru emitere HG pt exproprieri când se vor clarifica toate problemele legate de proprietate. Pentru coordonarea ac?iunilor România-Moldova privind interconectarea celor dou? sisteme electroenergetice, este necesar încheierea unui nou Memorandum de Întelegere inter-guvernamental, care s? statueze cadrul institu?ional ?i calendarul activit??ilor. Valoarea estimat? este de lei 100,840,000 lei ?i cu PIF estimat în anul 2023
LEA 400 kV G?d?lin - Suceava, inclusiv interconectarea la SEN (proiect 20). **Planificat? în 2016-2023**	**317.117**	**5.142**	**5.602**	**716.727**	**2.100**	**1.046.688**	În derulare proiectare ?i ob?inere avize. Ob?inerea avizului de mediu a durat 40 luni. Au avut loc mai multe modific?ri de traseu solicitate de prim?riile localit??ilor de pe traseul LEA ?i de MApN, datorit? întârzierilor în emiterea avizului de mediu. A fost necesar? reob?inerea certificatelor de urbanism. În curs ob?inerea Acordului de mediu. Valoare estimat? 428,228,000 lei, PIF estimat 2023
Total proiecte capacit??i noi de interconexiune	**3.527.881**	**11.070.632**	**99.270.486**	**-3.321.064**	**13.142.334**	**123.690.270**	

At the time of this report, at the disposal of C.N. Transelectrica S.A. remained the amount of 105,908,478 lei (23,645,372 euros), deposited in the dedicated account, for the use according to the provisions of art. 16 (6) of the Regulation.

Explicit calculation of interconnection capacities allocation made from January 1 to June 30, 2013-2017 and deposited in a separate account

		2013 lei (euro)	2014 lei (euro)	2015 lei (euro)	2016 lei (euro)	Jan-June 2017 lei (euro)	Total Jan 2013 - June 2017 lei (euro)
Account 704.05	Revenue from capacity interconnection allocation	23,459,854 (5,308,860)	78,213,260 (17,597,368)	102,160,978 (22,983,347)	82,232,459 (18,311,316)	38,226,404 (8,426,966)	324,292,956 (72,627,857)
	Revenues used for the reduction of the Transmission tariff	-	-	17,729,577	18,845,650	-	36,575,227
	Revenues to be distributed	23,459,854	78,213,260	84,431,402	63,386,809	38,226,405	287,717,730
	Legal reserve 5%	1,172,993	3,910,663	4,221,570	3,169,340	1,911,320	14,385,886
	tax 16%	3,565,898	11,888,416	12,833,573	9,634,795	5,810,414	43,733,095
Distinct account	Transferred revenues	18,720,963 (4,236,470)	62,414,181 (14,042,699)	67,376,258 (15,157,763)	50,582,673 (11,263,622)	30,504,670 (6,724,719)	229,598,748 (51,425,273)
	Balance at the beginning of the year	0	15,193,082 (3,438,127)	66,536,631 (14,990,021)	34,642,403 (7,814,717)	88,546,141 (19,817,865)	
	Total transferred revenues	18,720,963 (4,236,470)	77,607,263 (17,480,826)	133,912,890 (30,147,784)	85,225,077 (19,078,339)	119,050,812 (26,542,584)	229,598,748 (51,425,273)
	Payments made	3,527,881 (798,344)	11,070,631 (2,490,805)	99,270,486 (22,333,068)	-3,321,063 (-739,526)	13,142,334 (2,897,212)	123,690,270 (27,779,903)
	Final balance=transferred revenues-payments	**15,193,082 (3,438,127)**	**66,536,631 (14,990,021)**	**34,642,403 (7,814,717)**	**88,546,141 (19,817,865)**	**105,908,477 (23,645,372)**	**105,908,477 (23,645,372)**

Monitoring technical co-operation between TSO and third-country operators

Regional cooperation on infrastructure projects represents a significant dimension of the CN Transelectrica SA activity in terms of the collaboration with power systems of neighboring countries. In this regard, the TSO's attention has been focused on continuing infrastructure projects meant to increase interconnection capacity in order to improve mutual exchanges of between neighboring systems and eliminate potential congestions. Thus, the projects with Serbia, Republic of Moldova and Turkey were continued.

COOPERATION PROJECTS BETWEEN ROMANIA AND MOLDOVA

The general framework for cooperation 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 set up in the field of electric energy, involving specialists from the competent Ministries and Power Transmission Companies of the two countries (CNTEE Transelectrica SA and ÎS Moldelectrica SA).

INTERCONNECTION SOLUTIONS BETWEEN THE ENERGY SYSTEMS IN ROMANIA AND THE REPUBLIC OF MOLDOVA

A. A. Synchronous interconnection of the system of the Republic of Moldova with the system of Continental Europe (ENTSO-E)

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 supportive part of the synchronous interconnection process.

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:

- LEA 400kV Isaccea (RO)-Vulcăneşti (RM) Simple circuit (existing electrical line),

- LEA 400kV Suceava (RO)-Bălţi (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 in the idea to form together a control block, the successful completion and duration of the interconnection process depends on the involvement of both parties throughout the project, for the implementation of the measures provided in the Catalog of Measures being necessary for each system.

We estimate that the Catalog of Measures and the Interconnection Agreement will be completed in 2017, Ukrenergo and IS Moldelectrica being about to implement these measures.

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

- **Actions of CNTEE Transelectrica SA**

Asynchronous interconnection schemes have been envisaged, through back-to-back stations in the Republic of Moldova, whereby the Republic of Moldova and Ukraine remain interconnected synchronously with the IPS/UPS system (the system of the former Soviet Union countries).

Until the meeting of the conditions for the contracting of a joint study analyzing the operating regimes on the Romanian and Moldovan electricity systems, based on assumptions agreed by the parties, regarding the level of export and the reservation in case of network unavailability, CNTEE Transelectrica SA has initiated a preliminary study, which was developed by Tractebel Engineering SA In 2014.

The following interconnection projects were analysed through back-to-back stations located on the territory of the Republic of Moldova, namely:

- LEA 400 kV Isaccea (RO) – Vulcăneşti (RM) Simple circuit (existing electrical line);

- LEA 400 kV Suceava (RO) –Bălţi (RM) simple circuit – for which there is a signed Memorandum of Understanding and preliminary studies (feasibility study);

- LEA 400 kV Iaşi (RO) – Ungheni-Străşeni (RM) simple circuit.

Based on the study by Tractebel Engineering S.A. in 2014 it was found that for CNTEE Transelectrica SA the most convenient project is the interconnection through Back to Back station at Vulcanesti because it does not involve significant investments on the territory of Romania.

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.
Also in 2016, SC ISPE SA has developed a feasibility study financed by the EBRD in which system analyses have been carried out for all three proposed interconnection projects, from which it has been found that the most advantageous combination is with Back to Back in Vulcanesti and Balti. As a priority project, the interconnection project through Back to Back station at Vulcanesti and 400kV Vulcanesti-Chisinau LEA is recommended. The feasibility study for the Back to Back Station at Vulcanesti and the 400 kV Vulcanesti - Chisinau LEA showed that the project is feasible from a technical and economical point of view.

Following the project proposals made by IS Moldelectrica to the Energy Community (which has the secretariat office in Vienna), the project to interconnect the back-to-back 500MW interconnection station at Vulcanesti was selected to be included in the list of projects of mutual interest (PMI) and Line 400kV Vulcanesti - Chisinau with completion date 2018.

PMI projects are "encouraged" by the Energy Community because, as a result of analyses carried out by a consultant contracted by its secretariat, it has been shown to bring benefits to member countries in this community.

COOPERATION PROJECTS BETWEEN ROMANIA AND SERBIA

1. The project of the overhead line of 400 kV double circuits 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.

The achievement of the technical and economic performances foreseen in the feasibility study is conditional both on the completion of the project on the territory of Romania and Serbia, as well as on completion of the works at the 400 kV Resita station.

On 6 June 2015, CNTEE Transelectrica SA and JP Elektromreza Srbije-EMS signed Joint Position Paper 6, documenting the next steps for further construction of LEA Resita - Pancevo.

The project is in the execution phase and is due for execution in November 2017.

COOPERATION PROJECTS BETWEEN ROMANIA AND TURKEY

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

Established by unifying the European Transmission System Operators Associations (UCTE, ETSO, NORDEL, BALTSO, UKTSOA, ATSOI), ENTSO-E emerged as a requirement of the 3th Energy Package (Regulation 714/2009 and Directive 72/2009) to strengthen cooperation and coordination between European Transmission System Operators in order to ensure safe operation and quality parameters of synergic interconnected electricity systems, to manage non-discriminatory access to cross-

border transport networks, to integrate electricity markets at Regional and European level (IEM) and to ensure coordinated and forward-looking planning of the pan-European electricity transmission system in the future, while respecting environmental objectives.

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.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.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.

2. 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.

3.Collaboration of C.N.T.E.E. Transelectrica S.A. And TEIAS under the Submarine Cable Project

The project was proposed in the interests of the interconnection of the electricity markets in Romania and Turkey, since the synchronous interconnection between Turkey and ENTSO-E presents technical problems that lead to the limitation of the cross-border energy transfer capacity

From the point of view of C.N.T.E.E. Transelectrica, the main benefits of the project are:
- creating additional energy evacuation opportunities in the highly surplus area Dobrogea (as a result of the increased power installed in renewable resources);
- increasing the electricity trading potential on the Turkish market and the neighboring markets by connecting the electricity markets in Romania and Turkey;
- the need to safely operate the two synchronously interconnected power systems.

In this context, C.N.T.E.E. "Transelectrica" S.A. has assured the realization of a feasibility study on the asynchronous interconnection of the two electrosystems, by building a submarine cable, in direct current, between Romania and Turkey.

The technical solution proposed by the study was a cable with a capacity of 800 MW, a solution estimated to be technically and economically feasible.

Given the fact that in Turkey the current situation of the Power System has changed through synchronous interconnection with Continental Europe in ENTSO-E, further analysis is needed to take into account this situation.

Monitoring the investment plans of TSO and DSOs

The Development Plan for the electricity transmission network for the period 2016-2025

In accordance with Art. 9 par. (4) letters c), i) and g) of the Government Emergency Ordinance no. 33/2007 *on the organization and functioning of ANRE, approved with amendments and completions by Law no. 160/2012,* ANRE shall monitor the development plan of the electricity transmission network and investment plans of the TSO as well as the transmission system operator and those of any other operators regarding the putting into operation of a cross-border interconnection capability.

The planning activity of the electricity transmission network is materialized by the elaboration by the TSO of a prospective plan for every 10 consecutive years, with a 2-year update. The periodicity of the plan development, the provisions regarding the achievement of the objectives of the electricity transmission network development planning activity, as well as the elaboration of the plan for the development of the electricity transmission network are provided in Chapter IV of the Technical Code of the electricity transmission network, approved by the ANRE Order no. 20/2004, as amended and supplemented. At the same time, the development of the TEN Development Plan every two years is in line with the development of the Ten Year Network Development Plan (TYNDP) by the ENTSO for Electricity (ENTSO-E) on every two years. According to the provisions of art. 8 par. (10) of Regulation (EC) No. 714/2009 on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) 1228/2003 (Regulation 714/2009), the ENTSO-E shall adopt and publish, every two years, a community wide network development plan.

Approval by **ANRE Decision no. 1251/27.07.2016** of the Plan confirms that the principles laid down in the Law on the development of the national energy system (SEN) have been complied with by the Plan, it attributes to this document the mandatory nature provided by the Law and provides information to the participants on the electricity market on the development strategy of the NPS under conditions of preserving its operational safety.

The plan presents the analysis of the electricity transmission network status in order to establish the necessary work to ensure the long-term capacity of the transmission network in economical, safety, reliability and efficiency conditions in compliance with environmental protection standards. The necessary work is included, by type of works, in the investment plan and in the transmission network maintenance plan, in accordance with the company's investment and maintenance strategy.

Starting from the hypotheses regarding the evolution of the consumption and of the power generation park, the hypotheses regarding the electricity exchanges with the neighboring power systems, as well as

the hypotheses regarding the evolution of the network structure, TSO carried out sizing analyses of the transmission network on the forecast horizon 2016 – 2025, in order to identify the investment projects needed to ensure the performance of the transport service at normalized parameters during the analyzed period. Thus, it was necessary to ensure the safety of energy consumption, to integrate production from new power plants, including those using renewable energy sources and to increase the interconnection capacity, the same investment projects foreseen in the plan approved in 2014, as well as ten projects of new investments for updating the electricity transmission network. Therefore, the Plan included 65 investment projects foreseen in the previous plan and 10 new investment works, projects presented in **Annex no. 8.**

The new investment projects included in the *electricity transmission network Plan for the period 2016-2025* are presented in the following table:

Work code	Project	Forecasted commissioning year
A8	Autotransformer and transformers replacements in power stations (3)	2023
A26	Updating station 400/110 kV Dârste	2027
A28	Updating station 220/110 kV Tihău – primary equipment	2017
A29	Updating stations 110 kV Bacău Sud and Roman Nord related to the axis 400 kV Moldova	2019
A32	Upgrading the transformer power station 400/110 kV Pelicanu	2022
A34	Modernization of cells 110 kV and medium voltage in the power station Stâlpu	2020
A42	Modernization of control systems - control - protection and integration in CTSI of the station Drăgănești Olt	2018
A43	Modernization of control systems - control - protection and integration CTSI of the station Grădiște	2017
A44	Replace system protection control command in 7 stations	2020
A45	Replace system protection control command in 15 stations	2025

In accordance with Art. 34 par. (1) lit. e) of the Law, the TSO has committed to comply with the ANRE-approved plan and in accordance with the provisions of the Methodology for setting regulated tariffs, TSO has included in the investment plan for the third regulatory period, respectively in the annual investments plans all the projects foreseen in the development plan.

Monitoring the implementation of the Electricity Transmission Network Development Plan for 2014-2023

ANRE carried out in 2016 the analysis of the achievement of the investment objectives of the *Electricity Transmission Network Development Plan for the period 2014-2023* approved by the ANRE Decision no. 1529/01.07.2014, and it was found that the TSO carried out part of the planned works, but it was necessary to put forward the deadline for commissioning term (PIF) investment objectives or to postpone,

depending on the obtaining of the necessary approvals/agreements authorizations or access to funding sources.

The following table summarizes the analysis of the commissioning term timeline for investment projects for the 2014-2015 period set out in the Plan approved in 2014.

A	Updating of the existent electricity transmission networks	1. 7 investment projects of the 11 total were closed according to the deadline of the commissioning term in the Plan approved in 2014; 2. for 3 investment projects of the total of 11, the commissioning term was not respected being delayed/postponed 3. 1 investment project (of 11) was mixed with a project having the commissioning term in 2016, being postponed.
C	Safety of the consum	1 project with commissioning term in 2015, according to the 2014 Plan, was postponed.
F	Increase of the interconnection capacity and integration of the E-RES production	1 investment project with commissioning term in 2015, according to the 2014 Plan, was delayed..

The detailed comparative analysis of the comissioning term and the status of each investment project as well as the justification for postponing /delaying the comissioning term for certain investment projects in the Plan approved in 2014 is presented in **Annex no. 9**.

The main reasons that led to the delay of the deadlines of the commissioning term for investment projects in the electricity transmission network presented by TSO are as follows:

- the actual duration for obtaining the necessary agreements/approvals/authorizations is higher than originally foreseen, in particular for environmental permits,

- modification of the LEA route, as a result of the lack of the approvals and the agreements stipulated in the urbanism certificate;

- the need to update the feasibility study and the specification as a result of the unification of certain investment projects;

- modification of the constructive solution;

- the long duration for the issuance of Government Decisions on the expropriation of land and its removal from the forestry circuit;

- prolongation of the auction procedure following submission of complaints from certain bidders, submission of non-compliant technical offers or other causes;

- the impossibility of simultaneous decommissioning of the electricity transmission network elements necessary for carrying out the works, in order to ensure the safety of the operation of the NPS;

- the actual duration of the works is higher than initially foreseen;

- delay of the execution of the contractor's fault.

From the perspective of the duration of the investment objectives, the usual completion cycle of an investment project, starting from the initial design phase, the elaboration of the feasibility study, the specification and the technical project, to the execution phase and the implementation in operation, is an average of 5 years for the construction/updating of an electric power station and an average of 9 years for the construction of a new power line. The duration of an investment project varies as shown in the following table:

	Project, including obtaining necessary approvals	issuance of Government Decisions on the expropriation of land and its removal from the forestry circuit	Execution
Power stations	2-3 years	0, in the land expropriation is not necessary for the construction of the station	2-6 years, depending on the updating level, new constructions, numbers of voltage levels
Power lines	3-5 years	2-4 years	2-6 years, depending of the route

New power line projects require environmental notices/agreements that require procedures with an average duration of 3 years. This leads, in some cases, to the resumption of the permitting process for obtaining urbanism certificates with an extension period of up to 1 year, or even the resumption of the design phase following the design/execution of works on the route originally designated for a certain electricity line by other entities/authorities.

Regarding the expected impact on the electricity transmission network of the delay/postponement of the commissioning term of the investment projects in the 2014 approved plan, from the point of view of the maintenance safety of consumption, the integration of production from the power plants, including those using renewable Energy, as well as the increase of the interconnection capacity, TSO specified, at ANRE request, the following:

- in the case of existing upgrading/modernization projects for existing power stations, users are not affected as TSO implements alternative fueling schemes;

- in the case of new line projects, the deferral of their commissioning deadlines beyond the deadline for new production capacities leads to a limitation of the power produced in these capacities.

Monitoring the implementation of the TSO's investment plan

The analysis of the realization of the investment plan for the third regulatory period, respectively for each tariff year that passed between 01.07.2014-30.06.2017, shall be performed annually by ANRE in accordance with the provisions of the methodology for setting the regulated tariffs for the transport service, respectively for the system, by reference to the approved investment plan and ex-ante included in the tariffs (by setting the depreciation costs and the return on capital at the value of the forecasted investments).

1.Fulfilling the conditions for the objectives included in the annual investment plans

According to the methodological provisions, the annual investment plan drawn up by TSO must fulfill the condition that at least 80% of the planned investment objectives be included in the 10-year network development plan approved by ANRE.

Under the annual investment plans for the first three years of the regulatory period, all objectives that had commissioning term within this period were included in the approved Electricity Transmission Network Development Plan.

2. Stage of achieving of the investment projects

Based on the analysis of the investment projects carried out by TSO, compared to the planned projects to be made at the beginning of the third regulatory period, as shown by the investment activity reporting templates and the TSO transmission information, the situation presented in **Annex no. 10**. In summary, the situation regarding the timely achievement of the investment objectives is presented in the following table:

	No. of projects with scheduled commissioning term	No. of projects with completed commissioning term	No. of the delayed projects, in different achievement staged	No. of un-started projects	No of projects deliberately dropped out
Period 01.07.2014-30.06.2017	29	11	15	1	2

Of the total investment projects in the three-year annual investment plans that have passed since the start of the third regulatory period, 15 were not made at the commissioning term planned in the annual plans but are delayed and are at different stages of achievement.

The main causes that led to the delay in carrying out these works can be classified into external causes, which are independent of the management of TSOs and internal causes, as set out in **Annex no. 11**. Although TSO presented the external causes that led to the postponement of some investment projects, however, 10 projects of the 15 projects postponed, the causes that led to the delay of their implementation are also internal.

A single investment project was not launched: "Expansion of MIS Transelectrica with a stockpile solution and inventory objects based on the use of barcodes". The reason given by TSO for not starting the investment is that the results of the project implementation analysis are negative, respectively the project costs are higher than the benefits of the project.

The investment projects that OTS renounced at are: "Redundant IT Infrastructure Center" and "Disaster Recovery Center and Ensuring Business Continuity".

The two investment projects have a total estimated value of 12,600,000 lei and are projects for IT infrastructure. The reason for dropping out presented by TSO is related to reanalyzing the opportunity of these projects due to the company's intention to define a clearer and better grounded IT investment strategy.

The "Redundant IT Infrastructure Center" investment project was replaced by the project "Strengthening Servers and Data Storage Network (Private Cloud)", and the "Redundant IT Infrastructure Center" investment project was canceled, with TSO considering the existing data center to meet the needs of this project.

The degree of accomplishment of the annual investment plan for the tariff years of the analyzed period is presented in the following table, where the investments correspond to both the transport service and the system made from own sources:

Tariff year 1 (2014-2015)			Tariff year 2 (2015-2016)			Tariff year 3 (2016-2017)		
Planned investments (lei)	Achieved investments (lei)	Achieved investments%	Planned investments (lei)	Achieved investments (lei)	Achieved investments %	Planned investments (lei)	Achieved investments (lei)	Achieved investments%
137,015,930	107,948,915	79	258,531,507	123,438,322	48	244,589,762	267,231,129	109

The impact of the deferment of the commissioning term of the investment projects on the operation of the NPS

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

The results of this analysis as well as the measures to be taken by the TSO in order to reduce the impact of the delay on the implementation of investment projects on NPS can be found in **Annex no.12**, Tables 4 and 5, and are capable of correcting, supplementing and harmonizing the incidentally legislation, streamline and accelerate internal TSO processes for contracting investment works.

Conclusions resulting from the analysis of the investments made by TSO

In the analyzed period, respectively from the beginning of the third regulatory period to date (01.07.2014 - 30.06.2017), TSO has planned the commissioning of 29 investment projects, which have been approved by ANRE. Of these, 11 projects have been completed, 15 projects are delayed, 1 project has not been started and 2 projects have been dropped.

The annual investment plans include all the investment objectives included in the 10-year network development plan approved by ANRE.

The causes of the delay in investment projects are internal TSOs and mainly concern the poor management of execution contracts, delayed or inappropriate drafting of tender specifications, insufficient and inefficient monitoring of investment projects, and of an external nature such as:

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

- delays caused by the expropriation procedure necessary to acquire land and remove it from the forestry circuit;

- delays caused by public procurement procedures under Public Procurement Law, including the modification thereof;

- modification of the constructive solution in the case of unfavorable opinions;

- the impossibility of simultaneous withdrawal of the network elements for the execution of the works, in order to ensure the safety of the operation of SEN.

The impact of investment project delays on the safety of NPS operation, interconnection capacity, technological losses in networks and the integration of power plants, except for wind and photovoltaics in the Dobrogea area, is insignificant. The integration into the NPS of wind and photovoltaic power plants in the Dobrogea area is significantly influenced. Also, in the medium and long term, there is a significant impact on the NPS integration of Cernavoda groups 3 and 4 and on Romania's targets at European level regarding the level of cross-border interconnection capacity.

The measures that TSO has to apply to mitigate the impact of the failure to implement the investment plan on the operation of the NPS are likely to correct, supplement and harmonize incident legislation by taking action with competent authorities and to optimize the investment activity of the company.

ANRE requires TSO strict monitoring of investment projects, with regular information and involvement of the company's management for compliance with approved plans.

The measures taken by ANRE in order to increase the realization of the investment program in the network were those in line with the existing methodological provisions, namely the application of a negative correction of the regulated income of the following year. This has the effect of reducing the average transport fare. The conditions for approving the investment programs and the investments made, as well as the procedure for their reporting, have been tightened.

Except for the application of penalties in the form of annual corrections, ANRE does not have any other means to determine the TSO to carry out its investments. In order to prevent delays in making investments, we consider that some legislative measures that would reduce the bureaucracy leading to their production would be very useful. Also, since C.N. Transelectrica S.A. is a state-owned company, we consider that measures to comply with investment programs in the network could also be applied by the Ministry of Economy, which is represented in the company's governing bodies.

Regarding the effect of the non-realization of investments in the network, ANRE notes that this leads to a reduction in the performance indicators of the transport service and, unfortunately, some of these indicators, respectively the average time of unavailability of the installations and the number of significant incidents in the electricity transmission network increased in 2016 as compared to 2015.

However, it should be noted that in a European comparison, TSO's indicators fall within the top (they are among the best), as presented in the 2016 Electricity Quality Monitoring Report- CEER (which contains monitoring data only up to 2014)

Country	ENS (Unplanned Energy Not Supplied) * [MWh]												
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Cyprus											202.8		
Czech Republic								52	7	161.3	4.5	167.5	231
France	1,783	3,211	1,891	1,598	1,416	1,815	3,563	5,089	2,429	1,374	1,864	2,499	2,150
Greece									1,245	2,070.7			
Italy					3,477	8,465	2,430	2,372	2,175	3,131	3,886	2,839	1,593
Letonia											2,533	1,395	1,144

Lihuania				57.04	157.55	133.89	15.39	26.32	52.95	51.18	18.79	13.89	37.35
Portugal	75.9	141.78	496	40.2	262.59	75.9	130.16	42.09	116.2	27.00	0	8.6	1.8
Romania			247	387	106	80	167	55	267.9	98.804	102.71	30.89	82.51
Slovenia		2.33	94.54	2.54	156.76	34.02	1.34	7.69	67.94	9.71	8.85	25.69	0.82
Spain	802.69	466.23	1,249.7	548.79	935.8	757.16	573.54	437.5	1,569.5	2,590	113	1.126	204

* excepts the special events

Note:

France: since 2008 included load shedding. It included the major incidents in Southeast France in 2008 and 2009;

Latvia: Values for MV and LV only. The regulator did not have information on the transport system;

Portugal: Interruptions are not attributed to major force or exceptional events. The 2006 figures take into account the European event from 4.11.2006 (204.5 MWh);

Slovenia: does not contain interruptions attributable to third parties. High and very high voltage interruptions are included;

Spain: only the peninsular system.

Country	AIT (Unplanned Average Interruption Time) * [min/year]												
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Belgium							3.02	1.35	4.25	1.67	2.18	1.77	3.47
Cyprus											1,433		
Czech Republic								5.3	5	15.4	4	18.3	15.8
Estonia						234	1,209.8	1,068	2,972	2,983	1,756	2,719	410.3
France	2.4	4.2	2.4	2	1.8	2.3	4.4	6.4	2.9	1.7	2.3	3.0	2.8
Lithuania				1.62	5.11	3.98	0.64	0.78	2.22	2.31	0.87	0.65	1.75
Portugal	1.07	2.02	6.68	0.52	0.78	0.81	1.35	0.44	1.16	0.28	0	0.09	0.02
Romania			3	4.4	1.2	0.86	1.8	0.81	3.1	1.06	1.19	0.35	0.82
Slovenia		0.1	4.03	0.11	6.33	1.35	0.06	0.36	2.95	0.4	0.37	1.08	0.03
Spain	2.006	1.095	2.798	1.176	1.939	1.523	1.147	0.91	3.17	0.42	0.18	0.24	0.441

* excepts the special events

Note:

Belgium: refers only to interruptions for which the TSO is responsible;

Czech Republic: Average time for an interruption;

France: Since 2008, ENS & AIT includes load shedding. Includes major events in Southeast France in 2008 and 2009;

Portugal: Interruptions are not attributed to major force or exceptional events. The values of 2006 take into account the European event of 4.11.2006 (2.75 min);

Slovenia: does not contain interruptions attributable to third parties. High and very high voltage interruptions are included;

Spain: only the peninsular system. The 2014 data is pending when expecting the audit.

Investment projects of common interest (PCI)

1. PCIs included in the 10-year Electricity Transmission Network Development Plan

Investment projects of common interest lead to increased cross-border capacity, impacting the completion of the internal European electricity market; these are foreseen both in the 10-year network Development Plan approved and in the 10-year TYNDP 2014 Electricity Network Development Plan, developed by ENTSO-E in accordance with the provisions of Art. 8 par. (3) lit. (b) of Regulation No. 714/2009.

According to the provisions of Annex I to Regulation (EU) no. 347/2013 *on guidelines for trans-European energy infrastructures, repealing Decision No. 1364/2006 / EC and amending Regulations 713/2009, no. 714/2009 and no. 715/2009,* the priority electricity corridors in which Romania is involved are the north-south interconnections in Central and Southeast Europe (NSI East Electricity), respectively the interconnections and internal lines in the north-south and east-west ,useful for completing the internal market and integrating production from renewable sources.

Investment projects of common interest (CIP) approved in the second list of CIP at European level by Commission Regulation (EU) no. 89/2016 of 18 November 2015 amending Regulation (EU) no. 347/2013 of the European Parliament and of the Council as regards the list of projects of common interest of the Union, also included in the TYNDP 2014, are also provided for in the Network Development Plan for the period 2016-2025, approved as follows:

- from the Bulgaria - Romania group (the Bulgaria - Romania capacity building group now known as the Black Sea Corridor):

  - LEA 400 kV Cernavodă - Stâlpu 400 kV in Gura Ialomiţei power station (PCI No. 3.8.4.) and 400 kV Smârdan - Gutinaş LCP (3.8.5.) belonging to Group 3.8 Romania-Bulgaria;

- within the Romania-Serbia group (now known as Mid Continental East Corridor):

  - LEA 400 kV Reșița (RO) – Pancevo (Serbia) (PCI nr. 3.22.1), LEA 400 kV Porțile de Fier – Reșița (PCI nr. 3.22.2), extension of the station 220/110 kV Reșița by the construction of the new station 400 kV Reșița and the transition to 400 kV a LEA 220 kV Reșița – Timișoara – Săcălaz – Arad, including construction of the stations of 400 kV Timișoara and Săcălaz (PCI nr. 3.22.3 și 3.22.4), included in the Group 3.22. România-Serbia.

The evaluation phase of the proposed projects is currently underway to be included in a new updated list of projects of common interest that is expected to be adopted by the end of 2017. TSO, as project promoter of the PCI, sent the working groups from ENTSO-E work proposals to maintain the same PCI projects included in the current European schedule, and ANRE as the regulatory authority for these projects at the request of ACER. ANRE also participates in the review of the consolidated report at European level on the progress of projects of common interest.

2. Monitoring the implementation of the projects of common interest (PCI)

Based on the periodic reports of the TSO, the current state of PCI that is part of the priority corridor "North-South Interconnections for Electricity in Central and Southeastern Europe (" NSI East Electricity") is the following:

LEA 400 kV Cernavodă -Stâlpu (PCI nr. 3.8.4)

The purpose of the project is to develop the transport capacity for the takeover of the electricity discharged by the future units 3 and 4 of the CNE Cernavoda, as well as the take-up of the electricity generated by the installed wind power plants in the Dobrogea area. LEA 400 kV d.c. Cernavodă - Stâlpu and its connection to Gura Ialomiţei station has a length of about 160 km.

Current stage and stages of the project:

- The Feasibility Study (SF) was finalized and approved in the Management Board of CNTEE Transelectrica SA by Decision no. 7 of March 6, 2012, and the general estimate and the technical and economic indicators were updated and approved by the Decision no. 343/16.04.2015.

- The topo-cadastral study was developed and the legal status of the land was clarified;

- Some of the agreements and approvals required by the Urbanism Certificates have been obtained, but some of the obtained opinions have already expired validity deadlines to be updated;

- The Environmental Agreement no. 1/04.07.2014;

- The Technical Project and Task Force have been developed;

- The technical and economic indicators were approved by the Order of the Minister of Economy no.1444/2016;

- The Order of the Ministry of Economy no. 745/11.07.2017 amending Order no. 1444/2016 approving the technical and economic indicators due to the value of the investment;

- The documentation for obtaining the Government Decision to start the expropriation procedure for the land necessary for the construction of the 400 kV Cernavoda-Stâlpu LEA was submitted to the Ministry of Economy.

Next steps:

- Obtaining GD to trigger the land expropriation procedure;

- Obtaining Construction Authorization;

- Undertaking the procedure for the acquisition of construction works LEA;

- Execution of scheduled works during 2018-2020

Please note that through **the ANRE Decision no. 1626/19.10.2016** was approved the way of cross-border allocation of the costs related to this project. The issued decision implements the provisions of art. 12 of *Regulation (EU) no. 347/2013 of the European Parliament and of the Council of 17 April 2013 on guidelines for trans-European energy infrastructures, repealing Decision no. 1364/2006/EC and amending Regulations (EC) 713/2009, (EC) No. 714/2009 and (EC) No. 715/2009*, in order to support the realization of investments with cross-border impact.

LEA 400 kV Smârdan - Gutinaș (PCI nr. 3.8.5)

The aim of the project is to strengthen the necessary network as a result of the development of production capacities in the south-eastern part of the country. Thus, it is avoided to limit the evacuation of the electricity produced in the wind power plants in the Dobrogea area and the occurrence of congestion in the network. The project includes the expansion of the 400/220/110 kV Gutinaş station and the 400/110 kV Smârdan station with two line cells.

Current stage and stages of the project:

This project was selected for accessing European funds through the High Infrastructure Operational Program, Priority Axis 8 - Intelligent and Sustainable Transmission of Electricity and Natural Gas, Specific Objective 8.1 - Increasing the Capacity of the National Eelectroenergetic System for the take-up of energy produced from renewable resources.

- The Feasibility Study was endorsed in CTES Transelectrica with Opinion 100/7.06.2016;

- The Environmental Agreement no. 8/27.11.2013 following deviation of the LEA 400 kV route;

- The Order of the Ministry of Economy no. 743/11.07.2017 regarding the approval of the technical and economic indicators;

Next steps:

- Obtaining the Government Decision to initiate the expropriation procedure;

- Issuance of the Minister Order for the final removal of the land from the National Forest Fund;

- Obtaining the Building Authorization;

- Completion of the Task Book and the Technical Project (currently the documentation is 78%);

- Proceeding the procurement procedure and signing the execution contract;

- Execution of scheduled works during 2018-2020.

LEA 400 kV Reșita - Pancevo (PCI nr. 3.22.1)

The purpose of the project is to increase the capacities of interconnection with the European power systems and to build a 400 kV double-circuit LEA that will connect Reşiţa and Pancevo power plants from Romania and Serbia.

Current stage and stages of the project:

- The feasibility study was endorsed in CTES Transelectrica with Opinion no. 323/13.12.2010;

- The technical project and specification were finalized and endorsed with Opinion 272/30.08.2011;

- The environmental agreement no. 9/1.06.2011;

- The Natura 2000 Declaration no. 7087/30.11.2011;

- Building Permit No. 81/19.06.2012;

- The execution contract C212/4.06.2014 was signed between CNTEE Transelectrica SA and the contractor Electromontaj SA Bucharest;

- GD no. 984/2015 on permission to temporarily occupy land from the national forest fund;

- The investment will be completed by the end of 2017.

LEA 400 kV Porțile de Fier - Anina - Reșita (PCI nr. 3.22.2)

The purpose of the project is to complete the 400 kV ring on the south-west side of the country and to facilitate the evacuation of the energy produced in the Portile de Fier I hydroelectric power plant.

Current stage and stages of the project:

- The feasibility study was finalized and endorsed with the CTES Opinion no. 405/2.12.2011;

- The Technical Project and the specifications were finalized and endorsed with the CTES Opinion no. 352/31.10.2013;

- The Environmental Agreement no. 6/21.11.2013;

- Building Permit No. 141/11.24.2014;

- The execution contract no. C229/10.29.2015;

- For the section Iron Gates LEA - Anina GD no. 917/12.2016 for the approval of the site and triggering the expropriation procedure of the private property located in the corridor of the line;

- Rehabilitation works on the Anina-Reşiţa LEA section are in progress.

- At the 400 kV Resita station, the contract for the execution of the works was terminated at the request of the legal administrator of the contractor (ELCOMEX), who is in insolvency proceedings.

Next steps:

- Preparation of documentation for HG to remove forest areas affected by crossing the LEA from the forest fund;

- Transelectrica analyses possible options for the continuation and completion of works at the 400 kV Resita station.

The transition to the 400 kV voltage of 220 kV Resita - Timişoara - Săcălaz - Arad, including the construction of the 400 kV Timişoara and Săcălaz stations (PCI No. 3.22.3 and No. 3.22.4)

The purpose of the project is to complete the 400 kV ring on the southwest side of the country, to facilitate the evacuation of the energy produced in the Iron Gates I power plant and to strengthen the interconnection with the ENTSO-E networks.

Current stage and stages of the project:

- The feasibility study for the first stage (LEA 400 kV Resita - Timişoara, Resita - Săcălaz and the 400 kV Timişoara station) was finalized and endorsed with the CTES Opinion no. 405/2.12.2011;

- The design activity, the technical design, the specifications, the documentation for obtaining the approvals and the agreements are carried out.

- The procurement procedure for the second phase design services (400 kV Timişoara - Arad and Săcălaz - Arad) was initiated.

Monitoring the realization of the investment plans of the distribution operators of the concessionaires

The investments of the electricity distribution operators, according to investment programs 2015 - 2016, presented in RON and in nominal terms of each year are as follows:

	2015		2016	
	Forecasted investments	Achieved invetments*	Forecasted investments	Achieved Investments 8months*
ENEL Distributie Muntenia	161,596,866	137,994,102	252,645,069	75,349,957
ENEL Distributie Banat	92,984,767	77,794,436	140,900,695	30,325,189
ENEL Distributie Dobrogea	76,609,455	64,489,997	141,618,268	33,421,343
CEZ Distributie	161,843,711	161,853,684	194,445,974	113,475,631
E.ON Distributie Romania	183,513,064	169,632,197	162,913,979	62,579,326
FDEE Electrica Muntenia Nord	180,350,659	144,903,430	270,936,460	70,946,854
FDEE Electrica Transilvania Nord	193,689,440	194,431,718	234,084,383	75,681,402
FDEE ElectricaTransilvania Sud	189,478,800	183,915,779	230,308,829	50,174,742

* The value includes: the investments planned and realized in the current year, the investments made in addition to the foreseen objectives: upgrades from maintenance and due to exceptional conditions

In the table presented in **Annex no. 13** presents the investments foreseen and realized by the distribution operators for the period 2008-2016.

The network tariff setting methodologies provide for forecasting and ex-ante recognition of the costs of investment programs proposed by operators for a regulatory period, based on the network development plans drawn up in accordance with the provisions of Art. 45 of the Law on Electricity and Natural Gas no. 123/201, with subsequent amendments and additions. These should lead to improved indicators of continuity and technical quality of the service, to improve the energy efficiency of the network by reducing its own technological consumption and operating and maintenance costs, as well as ensuring the capability of connecting new users as required.

In order to increase the efficiency of spending the funds allocated for investments, ANRE approved by **ANRE Order no. 8/2016** *Procedure for the elaboration and approval of the investment programs of the economic operators of the power distribution service concession.* The procedure requires that an ex-ante (annual investment program) and ex-post (annual investment) analysis be carried out for the approval of investments on the basis of their promotion and realization documents. In this way, ensuring the inclusion in the regulated asset base of only the necessary investments (which ensure the safety of the networks), timely (the delay of which would affect the safety of the operation of the networks and the continuity in the electricity supply of the users), (which reduce technological losses, reduce operating and maintenance costs, and increase service performance) and are carried out at costs reflecting the best market conditions existing at the time they are achieved. In addition, starting with 2017, the analysis of investment in distribution networks is carried out within a dedicated organizational structure, which has exclusive attributions in this field.

As a first step from the analysis of the investments made, which is aimed at imposing the full realization of the investments previously considered in the setting of tariffs, is the application of a negative annual correction to both the depreciation costs and the return on capital (profit), if the degree of realization of investments is less than 80% of the programmed value. This correction lowers the approved tariff for the following year.

Except for annual penalty penalties, ANRE does not have other means to determine the operators to undertake their investments.

We believe that the determination of investment and maintenance needs in distribution grids at a level so dimensioned as to ensure 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 performed in the asset management activity.

Other relevant aspects regarding cross-border cooperation

In the period following the launch of the coupled operation of the Romanian electricity market for the next day, the 4M MC constituted the framework of cooperation that facilitated the Romanian parties' involvement in activities under way within the extended framework of the NWE-CEE FB MC project, where the other 4M, with the exception of CNTEE Transelectrica SA and OPCOM SA, were already involved. The NWE-CEE FB MC (North East Europe Coupling) project provides for the coupling of electricity markets in the Central Eastern European region with the already linked Multi-Regional Coupling (MRC) markets and the implicit allocation of capacity Cross-border transport, with its calculation based on power streams. Accession of C.N. Transelectrica S.A. and OPCOM S.A. to this project was permanently supported by ANRE and the ministries involved, being considered a necessary continuation of the previous steps, the NWE-CEE FB MC project being essential for the implementation of the European single market for electricity by managing efficient, non- discriminatory and transparent access to the networks Cross-border transport. Romania's Accession Agreement clauses in this project were negotiated during 2015 and the signing shall be done in 2016.

In order to implement the unique interconnection of the intersection markets according to the European Commission's Regulation (EU) 2015/1222, it is necessary to take steps similar to those undertaken in the market coupling for the next day in Romania and on this time horizon, the commitment of all factors which are also involved decisively for a coherent course in achieving the objectives and obligations of Romania as a member state..

Regulation (EU) 2015/1222 provides for continuous implicit allocation as a method of allocating capacities over time intervals, the XBID - European Cross Border Intraday Initiative being part of the European Commission's goal of establishing a cross-border, transparent and efficient on the intersection horizon, in the conditions of the accelerated growth of the intermittent production capacity (based on renewable resources) recorded in recent years. This solution is based on a common computer system that connects the 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 involved in the continuous implicit allocation.

In order to integrate into XBID, the parties that did not have access to this project, as is the case with C.N. Transelectrica S.A., OPCOM S.A. and other 4M MC partners, an Accession Stream (AS) was set up to help all XBID observer parties have a better understanding of the XBID solution in order to be in to develop local systems for compatibility with this solution, to facilitate the necessary testing activities, and to launch local XBID local markets.

In February 2016, the bilateral cooperation agreement and exchange of best practices in the field of regulation ANRE-EWRC, the Bulgarian Energy and Water Regulatory Commission, was signed to strengthen the Romanian-Bulgarian relations of cooperation between the two authorities. Subsequently, in September, ANRE received the EWRC delegation, led by Prof. Dr. Ivan N. Ivanov, to discuss bilateral issues such as the liberalization of the electricity market, the monitoring of the energy market, the evolution of electricity transactions on the daily market between Romania and Bulgaria, the harmonization of the national legislation with the European legislation in the natural gas sector, the implementation of the provisions of the Network Codes (mechanisms for capacity allocation, balancing), the accomplishment of the cross-border gas interconnections in Bulgaria.

During March-August 2016, meetings of ANRE and RAE, the Greek Energy Regulatory Authority, delegations both in Athens and Bucharest were held to discuss common topics on the development of the electricity market, regional transport projects for the natural gas, the vertical corridor connecting Greece, Bulgaria and Romania, natural gas resources in the eastern part of the Mediterranean Sea. A draft bilateral cooperation agreement and the exchange of good regulatory practice were proposed for signature.

3.1.5. Compliance with the provisions of the European legislation

Compliance with decisions of ACER and European Commission

In accordance to the provisions of Law no. 160/2012 on the organization and functioning of ANRE, respectively Article 9(1)(w), ANRE complies with and implements all relevant and legally binding decisions of the Agency for the Cooperation of Energy Regulators – ACER - and the European Commission; the decisions of the European Commission issued under Article 39(8) of Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC shall be implemented within 60 days after entry into force.

With the approval of the regions capacity calculation (RCCs) through ACER Decision no. 6/2016, the above-mentioned project - NWE-CEE FB MC became a project within the CORE computing region, resulted from the merger of the CWE and CEE regions. CORE governance was established at the implementation group meeting in November 2016, and C.N. Transelectrica S.A., OPCOM S.A. and ANRE are members of the working groups of the newly established region.

In order to apply the provisions of Regulation (EU) no. 1227/2011 and the provisions of ACER Decision no. 01/2012 regarding the register format in accordance with Art. 9, paragraph (3) of REMIT and to the necessity to adapt the national regulatory framework to international developments concerning the REMIT implementation, ANRE issued Order no.1/2015 establishing the National Register of the wholesale energy market participants, published in the Official Gazette of Romania no. 80/30.01.2015.

Thus, as of 18 March 2015, the participants on the energy wholesale market in Romania were required to register on the National Register of wholesale energy market participants, set out and managed by ANRE according to the procedure set out in the Annex to the Order.

During the year 2016, a number of activities were undertaken to implement REMIT and implementing Regulation (EU) no. 1348/2014 on the reporting of data for the implementation of Art. 8 (2) and (6) of REMIT.

Thus, actions were taken to raise awareness of the economic operators already registered in the National Register of Energy Market Participants established at ANRE in order to update the data fields of Annex 3 - information regarding the participant in the wholesale energy market (eg the EIC code, Place of publication of privileged information), Annex 6 - Corporate Structure Information and Annex 7 - Information on Delegated Parties to report on behalf of the Participant to the wholesale energy market in the Register of Participants on the Wholesale Energy Market in the National Registry. These actions took place concurrently with those of Opcom related to the obligation to obtain the ACER code (and hence, implicitly the need to register in the National Registry) for license holders who wish to trade on its centralized markets. In this way, in the year 2016, 99 new participants were registered on the wholesale electricity and natural gas markets, including final customers in the category of those having a consumption capacity exceeding 600 GWh, according to REMIT requirements.

At the end of 2016, ACER code issued by ANRE had 638 participants in the wholesale electricity and natural gas markets and 2 Registered Reporting Mechanisms (RRMs), Opcom SA and Romanian Commodities Exchange, third parties authorized by ACER for the reporting of transaction data and fundamental data in accordance with Implementing Regulation (EU) No. 1348/2014 on the reporting of data for the implementation of Art. 8 (2) and (6) of REMIT. We mention that two other entities are in the process of meeting ACER requirements to become RRMs.

During the analyzed year, ANRE received 5 notifications of suspicions of violation of the provisions of art. 5 of REMIT, in accordance with the provisions of art. 15 of REMIT, relating to transactions carried out on the wholesale electricity market. The notified cases are at different stages of analysis at ANRE level, from the closure of the case to the initiation of the investigative process in accordance with the regulations developed under the primary legislation. As regards the analysis/investigation steps related to the mentioned cases, ANRE is in continuous cooperation with ACER. There were also working meetings with representatives of the Financial Supervisory Authority and of the Competition Council, by virtue of the cooperation protocols concluded by ANRE with the two institutions. There were discussed topics related to the types of manipulations of the energy market correlated with the typologies registered in the financial market and respectively anti-competitive behavior models that can lead to price manipulation on the electricity market.

In 2016, a substantial number of questions/requests for clarification on various issues related to entry in the National Registry of Participants, the reporting of trading data, the fundamental data, the reporting exceptions provided for in the Implementing Regulation (EU) No. 1348/2014, to which ANRE provided guidance.

Compliance of transmission and system operators, distribution operators, system owners and operators in the sector with relevant Community legislation

The required aspects were presented in chapter 3.1.1. Separation of activities.
Transparency of interconnection transactions is ensured by C.N. Transelectrica S.A. through the information published on the company's website www.transelectrica.ro, as per the Regulation (EU) No. 714/2009.

3.2. Promoting Competition

3.2.1. Electricity wholesale market

Structure of the Romanian wholesale electricity market

The wholesale market is defined as all transactions carried out by the market participants, holders of a license issued by ANRE, which includes and resells among participants, performed in order to adjust the contractual position and obtain financial benefits. Volumes traded exceed the physical quantity delivered from production to consumption.

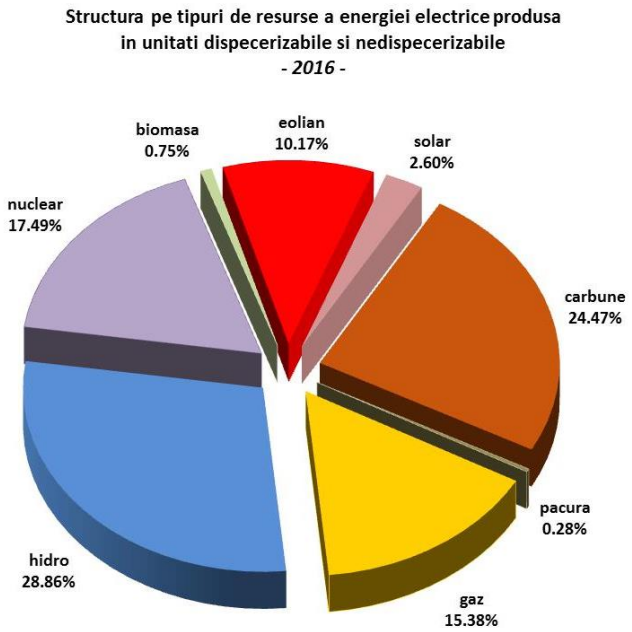
The electricity generation sector is organized mainly from the type of primary resource used in the production (hydro, nuclear, thermal, wind, photovoltaic and biomass). Undertakings in the production sector, including those belonging to the state sector and private ones, operate under the license of production issued by the regulatory authority, participating in the electricity market.

In 2016, under the provisions of the Monitoring Methodology, producers owning dispatchable groups are monitored in terms of energy produced and delivered in NPS and activity on the electricity market in Romania, the producers whose production units were declared dispatchable according to Regulation for scheduling production units and dispatchable customers, approved by ANRE Order no. 32/2013 were monitored. Dispatchables units (DU) are classified by power levels as following:
- hydropower group with installed power greater than 10 MW;
- turbo generator group (including biomass, nuclear) with installed power exceeding 20 MW;
- wind power plant, photovoltaic plant or plant with internal combustion engines with installed power greater than 5 MW.

According to the results obtained in the process of monitoring of the activity of the producers having DU on the electricity market,in 2016, was 57.93 TWh (including the own consumption of some producers and the electricity sold directly to the power plants bars), by about 1% less than the previous year.

According to the results of the national electricity labeling process, the total amount of electricity produced in dispatchable and non-dispatchable units was 64.15 TWh in 2016, out of which 60.13 TWh was delivered to the networks by 732 license holders for the commercial exploitation of the power generation capacities that reported data in accordance with the Electricity Labeling Regulation, approved by the ANRE Order no. 61/2016.

Starting from the data obtained in the process of developing the national label, the following graph presents the structure of the electricity produced in dispatchable and non-dispatchable production units, calculated on the conventional and non-conventional types of resources.



Source: ANRE- Monthly reports of the e electricity producers according to ANRE order no. 61/2016

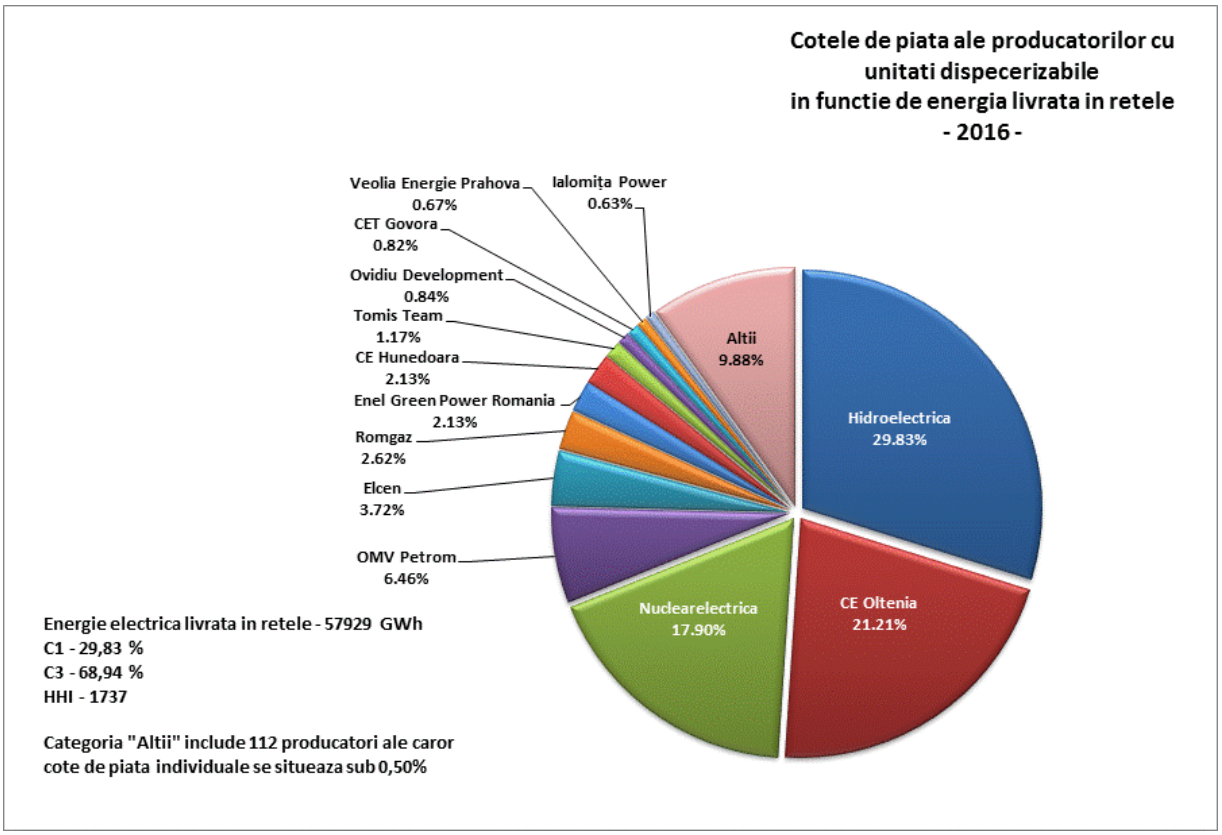
The following table shows the ranking of DU producers depending on the annual amount of electricity produced in their own power plants based on the data reported in the monitoring process conducted in accordance with the *Monitoring Methodologies*.

Dispachable producers	**Electricity produced**	
	TJ	**GWh**
Hidroelectrica SA	4882	17574
Complexul Energetic Oltenia SA	3762	13542
SN Nuclearelectrica SA	3135	11286
OMV Petrom SA	1051	3784
Electrocentrale Bucureşti SA	692	2493
Romgaz SA	452	1628
Complexul Energetic Hunedoara SA	380	1367
Enel Green Power Romania SRL	343	1236
Tomis Team SRL	191	689
CET Govora SA	181	651
Ovidiu Development SRL	136	489
Veolia Energie Prahova SRL	123	444
Ialomita Power SRL	101	363
Other dispachable producers (with market shares under 0.5%)	1736	6251
TOTAL	**17165**	**61797**

Source: ANRE - Monthly reports of the dispatchable electricity producers

The electricity sector is still dominated by conventional energy producers; market shares of over 5% of the total quantity produced are recorded by the first four producers, totalizing approx. 75% of the energy produced in dispatchable units. Quantities of electricity above 1 TWh register a number of 8 producers, which represents cumulatively approx. 86%, situation similar to that of the previous year.

The market shares of UD producers in 2016 are presented below, based on the electricity supplied in networks, and the annual average values of the main structural indicators for 2010-2016. These were calculated on the basis of the existing structure at the level of companies with distinct legal personality, without taking into account the participations held by some economic operators in the shareholding of others.



Source: ANRE - Monthly reports of the dispatchable electricity producers

The most important producer in terms of the amount of electricity produced and supplied in the network was Hidroelectrica this year, with an increase share of almost 3 percentage points compared to 2015 (from 27.11% to 29.83%). The hierarchy of the other two producers in the producers' rankings according to the quantity produced and delivered remained the same as in the previous year, but the individual market shares were slightly modified. At the year-on-year level, the group of the first three producers accounted for 68.94% of the total quantity of electricity delivered, almost equal to the value recorded in 2015.

The comparison with the supplied electricity values reported by the producers with DU in 2015 indicates a slightly decrease (about 1%) of the quantity delivered to the NPS level. Decreases in quantities were recorded mainly in coal production, nuclear fuel (determined by the scheduled shutdown periods of both nuclear units) and wind power, while hydro-power production increased by almost 1.5 TWh (representing a 9% increase compared to the 2015 level), against the backdrop of the previous year's energy reserve in

the main storage lakes. In fact, if at the beginning of 2016, the level in the storage lakes was below the level of the last 3 years, since the second quarter the values of this indicator have been increasing, reaching the level of the years 2013-2014. The decline in coal production can be explained in the context of the financial difficulties faced by CE Hunedoara, insolvency and subsequent bankruptcy proceedings for RAAN, the disappearance of Electrocentrale Oradea (replaced at the local area by Termoficare Oradea, producer focused on gas) and the contracted electricity problems encountered by CE Oltenia.

This year's concentration indicators maintain the electricity sector in the limits that separate the markets with a moderate degree of concentration from those with a high degree of concentration, according to the specialized literature.

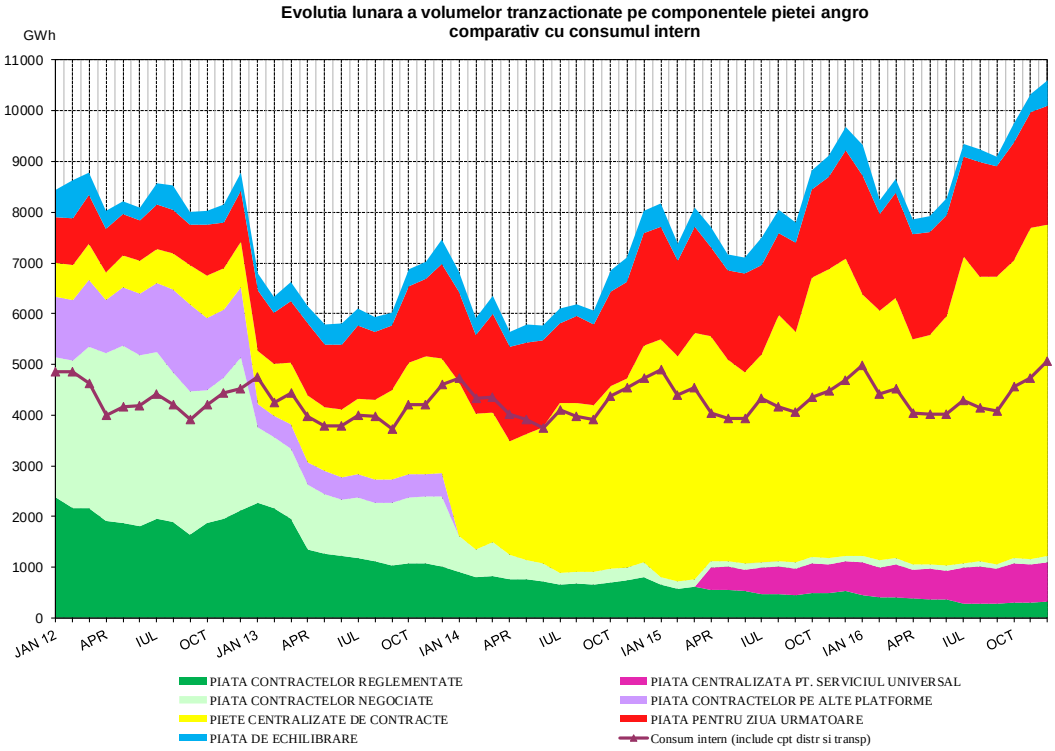
Year	C1	HHI
2010	36%	1947
2011	26%	1469
2012	30%	1914
2013	28%	1759
2014	31%	1826
2015	27%	1826
2016	30%	1737

Source: Monthly reports of the dispatchable electricity producers - ANRE

The operation of the NPS in 2016 was characterized by the increase of approx. 2% of domestic electricity consumption compared to 2015, calculated on the basis of the energy supplied to the grids and the import-export balance, correlated with the continuous increase of the share of the installed power in the power plants operating from renewable sources, in the conditions of a hydrologically favorable year. On a monthly basis, the same indicator varied in excess or minus compared to the 2015 values, with increases of 5% to 8% towards the end of the year.

Electricity wholesale market

Changes in the structure of the wholesale market which occurred with the entry into force of the *Law* have continued to evolve and consolidate as market participants replaced the negotiated bilateral transactions with the obligation to conclude transactions on the centralized markets organized by Opcom SA in a transparently, publicly, centralized and non-discriminatory manner. The chart below illustrates the monthly volumes traded on the major components of the wholesale electricity market in the period 2011-2015 compared to the evolution of domestic consumption.



Source: Monthly reports from wholesale electricity market participants, OPCOM S.A. and C.N. TRANSELECTRICA S.A - ANRE

In 2016, trading on centralized bilateral electricity contracts organized at the level of Opcom SA (CMBC-EA, CMBCCN and CM-OTC) was predominant, which mainly provides for transactions on medium or long term contracts, followed by DAM and IDM in the case of short-term transactions. In the legislative context required by the Law, transactions on brokerage platforms were virtually ceased in 2014, with the participants focusing on the centralized market with double continuous negotiation at Opcom SA with various trading instruments and the volume of those made on negotiated contracts was steadily decreasing, reaching the smallest share of domestic consumption in 2016 (about 2.4%). There is a decrease of approx. 17% of the volume of electricity traded on the balancing market compared to 2015.

In 2016, 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, but unlike the previous year these involved trading smaller volumes of electricity on the balancing market. It should be mentioned that the electricity market for large final customers is still inactive, and by the end of 2016 no initiating offer was submitted.

In order to ensure reasonable, transparent, easily comparable and non-discriminatory prices for final customers who benefit from the Universal Service as well as with the aim of eliminating the differences between the electricity purchase prices contracted by the last resort suppliers to cover the consumption invoiced at CPC (Competitive Market Component), ANRE developed the regulatory framework of CMUS in July 2014, and the electricity market operator, Opcom SA, implemented the appropriate trading mechanism. Starting with the second quarter of 2015, the purchase of the forecasted electricity necessary

for billing at CPC rates was done quarterly, centralized on the CMUS platform, the hourly differences in consumption being traded on DAM and IDM, as well as the imbalance price resulting from the BM. In order to cover the consumption of last resort supplied final customers, the necessary electricity is purchased from the MBC-EA, CMBCCN, CM-OTC, DAM and IDM centralized platforms as well as at the imbalance price resulting from BM.

The following table presents the volumes traded in 2015 on each component of the wholesale market and their evolution compared to those the previous year:

Wholesale market components	Volumes traded in 2016 -GWh-	Evolution compared to 2015 - % -	Percentage of internal consumption 2016 - % -
Market of regulated contracts	4152	▼ 35.3	7.9
Market of directly negotiated contracts	1283	▼15.0	2.4
Centralized market of bilateral contracts of which:	65337	▲15.2	123.5
- CMBC-EA	21729	▼30.8	41.1
- CMBC-CN	12718	▲60.7	24.0
- CM-OTC	30890	▲77.6	58.4
Centralized market for universal service	8046	▲75.2	15.2
Day ahead market	25810	▲14.7	48.8
Intra-day market	131	▲72.4	2.5
Balancing market	4001	▼17.7	7.6
Export*	8587	▼18.2	16.2

* The quantity of the export contracts in 2016 resulted from the reports of market participants to the wholesale market and include the quantities exported by the suppliers and the exported quantities by CN Transelectrica SA, as a shipping agent on coupled DAM; the export volumes were verified with the notifications on DAMAS platform, there are small differences in some cases

Source: Monthly reports from wholesale electricity market participants, OPCOM S.A. and C.N. TRANSELECTRICA S.A - ANRE

The data presented shows that the highest increases were registered on CMBC-CN and CM- OTC, the volume of electricity traded on both markets increased by about 60%, respectively with approx. 78% compared to the previous year, while the decreasing trend of CMBC-EA has maintained. At the same time, it is noticed that in 2016 it is maintained the percentage of approx. 67% of total transactions on three

of the centralized markets managed by Opcom SA, used predominantly by market participants: CM- OTC, DAM and CMBC-EA, this year CM- OTC taking the first place instead of CMBC-EA.

In comparison with 2015, it stands a further reduction in the quantity of electricity sold on the regulated contracts; it is a consequence of increasing deregulation established by the Memorandum of Understanding approved by the Government in March 2012, in accordance with its obligations in relation to the IMF, World Bank and European Commission approving the roadmap for phasing-out regulated tariffs to the final customers not making use of their eligibility rights. As in the last year, Hidroelectrica and Nuclearelectrica were the only producers who had quantities and prices regulated by ANRE decisions.

The distribution system operators have purchased the same quantity of electricity on the competitive market as in 2015, of approx. 6 TWh (5.96 TWh compared to 6 TWh in 2015).

After processing the data collected from market participants, it was noted that cross-border commercial activity decreaded in 2016, the amount of energy exported on a contractual basis being approx. 8.59 TWh, 18% lower that in the previous year, while imported energy decreased compared to 2015 by approx. 5%, reaching to 3.57 TWh. We mention that the export activity of electricity was achieved mainly by suppliers (approx. 92% of the volume traded on this type of contract), while CNTEE Transelectrica SA, as shipping agent for coupled DAM, recorded 8% of the volume traded on the export and approx. 63% of the volume traded on the import.

The table below presents for each component of the wholesale market, annual average prices and the comparison to the previous year values.

Average prices on the wholesale market	**2016 -lei/MWh-**	**2015 -lei/MWh-**	**Evolution 2016 compared to 2015 - % -**
Market of regulated contracts	136.90	140.56	▼2.6
Market of directly negotiated contracts	144.67	147.89	▼2.2
Centralized market of bilateral contracts of which:	157.62	163.87	▼3.8
- CMBC-EA	158.36	162.01	▼2.3
- CMBC-CN	155.90	167.68	▼7.0
- CM-OTC	157.80	165.50	▼4.7
Centralized market for universal service	162.94	170.52	▼4.4
Day ahead market *	149.74	161.91	▼7.5
Intra-day market **	126.12	139.46	▼96

Balancing market ***	272.19	254.74	▲6.9
Export****	155.58	168.05	▼7.4

* The annual average price is calculated as simple arithmetic average of the daily closing prices of the market published by Opcom SA

** The annual average price is calculated based on the annual traded volume and value, published by Opcom SA; the difference compared to the prices published in 2016 is due to the modification of the data calculating formula published by Opcom SA

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

**** The average annual price reflects price information on the quantities exported by suppliers and also those exported by CNTEE Transelectrica SA, as shipping agent on coupled DAM

Source: Monthly reports from market participants, OPCOM S.A. and C.N. TRANSELECTRICA S.A - ANRE

Regarding average prices on the wholesale electricity market, we make the following comments:
i. average prices do not include VAT, excises or other taxes and were determined by weighting the prices with the quantities corresponding to sales transactions reported monthly by market participants, with exceptions previously mentioned;
ii. all prices include the Tg component of the transmission tariff (for the centralized markets this is embedded in the price by the bidders).

A comparative analysis of the annual average prices resulting from transactions on the wholesale market components in 2016 over the previous year indicates the following:

- Average annual price decline for all components of the wholesale market, with the exception of the average deficit price on BM; significant drop was registered on intra-day market (7.6%) and CMBC-CN (7%), he smallest decrease was for the price on the directly negotiated contracts;
- the decline in average prices on centralized markets can be explained primarily by increased of electricity production from hydropower plants traded on the competitive market; another influencing factor is the maintaining share of the renewable sources production at a comparative level to 2015 and the decreasing trend of its price offer, combined with the sale of green certificates (CV) on centralized markets organized by Opcom SA, in their current period of life, with a limitations of number of CVs allowed for trading;
- the annual average prices of negotiated bilateral contracts, as a result of directly negotiated transactions concluded before the entry into force of the Law , valid in 2016, have been much lower than those of other contracts concluded on the competitive markets managed by OPCOM SA;
- the average selling price on the CMUS decreased by approx. 4% compared to the previous year, being the highest average price recorded on the centralized platforms managed by the market operator; it reflects the offering policy of the participants on this segment of the market, but it is also probably influenced by the type/number of traded products.

The competitive market

The volume of the electricity transactions concluded on the competitive market increased by 12.7% compared to 2015. The competitive market covers transactions concluded on CMBCs, CMBC-NC, DAM, IDM and BM, and also the market for bilateral contracts directly negotiated.

The volume of the electricity transactions concluded on import/export contracts is significantly smaller than the monthly volumes traded in 2015.

It is noted the different monthly evolution of the imported volumes compared to those exported. The significant increase of the volumes in February, March, April and May, as a result of the coupled functioning of the spot markets in the 4 countries, along with the decrease of the exported volumes in February, March, April, May and September, led to significant variations of the export-import sold for February, March, April, May and September 2016. In May 2016, a negative sold has been registered, probably as a result of the coupled functioning of the spot markets in the 4 countries, decreased prices registered in the other 3 countries of the 4M MC project may have a negative influence of the export on DAM.

From the point of view of dispatchable producers, the competitive market (without taking into account the imbalances) had the following sales structure:

Total sales of producers on competitive market			**100%** **(58983 GWh)**
A.	***Transactions made upon bilateral direct contracts or concluded on PAM through type-offers***		***7.3%***
	1.	Transactions made upon auctions on the centralized markets	2.2%
	2.	With final customers	5.1%
B.	***Transactions made upon auctions on the centralized markets***		***54.1%***
	1.	Transactions made upon auctions on the centralized markets	49.4%
	2.	With distributors	3.0%
	3.	With other producers	1.0%
	4.	With the transmission and system operator	0.7%
C.	***Transactions on CMUS***		***9.1%***
D.	***Transactions on DAM and IDM***		***29.5%***

Source: Monthly reporting of wholesale market participants, OPCOM SA and C.N. TRANSELECTRICA S.A. - ANRE

Overall, the sales of the dispatchable producers in the competitive market represented in 2015 an amount of nearly 59 TWh, traded on the average annual price of 157.56 lei/MWh (Tg transmission tariff component being included); compared to the values in 2015 it is noticed an increase by 7.8% of the energy quantities sold and a decrease by 4.5% of the annual average price.

The largest part of that quantity was sold on centralized markets for bilateral contracts (approx. 31.9 TWh), and the selling to the electricity suppliers was predominant (29.2 TWh on the average price of 158.27 lei/MWh). Large quantities were sold also on short term markets (DAM and IDM) - approx. 17.4 TWh at the annual average price of 153.83 lei/MWh. Compared to the previous year, the producer's selling structure continued to change, the quantity traded on CMBC decreased compared to CMUS, DAM and IDM that recorded increases by 88%, respectively 16% and 46%.

The following table presents the competitive market structure in terms of the electricity supplier's sales (without considering imbalances):

Total sales of suppliers on the competitive market			**100%** **(79911 GWh)**
A.	***Transactions made upon bilateral direct contracts or concluded on PAM through type-offers***		***48.0%***
	1.	With other suppliers	0.0%
	2.	With external partners (export)	9.8%
	3.	With producers	0.0%
	4.	With distribution operators	0.0%
	5.	With final customers	38.2%
B.	***Transactions upon auctions on the centralized markets***		***41.8%***
	1.	With other suppliers	37.6%
	2.	With producers	1.0%
	3.	With transmission and system operator	0.3%
	4	With distribution operators	2.9%
C.	***Transactions on CMUS***		***3.4%***
D.	***Transactions on DAM and IDM***		***6.8%***

Source: Monthly reporting of wholesale market participants, OPCOM SA and C.N. TRANSELECTRICA S.A. - ANRE

In 2016, all direct bilateral sales contracts were concluded by active suppliers with final customers on PAM, unlike 2015 when there were contracts negotiated directly on the wholesale market, but these contracts had a low share in total electricity sales, situation that is probably due to the completion of the life cycle of this type of contract concluded before the entry into force of the Law or the termination of some of these contracts.

The smaller annual average price for selling (including the component for the electricity injection in the transmission network) was recorded on negotiated sales contracts with continuous negotiation - CMBC-CN (149.33 lei/MWh), and the biggest one was recorded on CMCB-EA (158.94 lei/MWh). The average price for the sales on CMUS (162.94 lei/MWh) also recorded in 2016 larger values than those recorded on other centralized markets managed by OPCOM SA., but this comparable with the average price on which the last resort suppliers have bought the electricity on the CMCB markets (162.73 lei/MWh) and smaller than the average price on which the last resort suppliers have bought the electricity on DAM (166.73 lei/MWh).

In the contracts for the supply of electricity to end customers, the average annual price was 162.48 lei/MWh, without the network costs (transmission, distribution, services).

Regarding the activity of distribution operators, they bought 5.96 TWh only through competitive market, the acquisitions using mostly the products available on CMCB-EA (approx. 58.5% of the annual purchase volume), followed by the acquisition on DAM (approx. 31.9%), and also sales on DAM of about 0.05 TWh. The analysis of transactions undertaken by distribution operators revealed their tendency to conclude bilateral agreements on centralized markets (mostly on CMCB-EA) and DAM. Thus:

- one of the distribution operators made buying/selling transactions on DAM through the SoLR from the group they belong to;
- another distribution operator closed buying transactions on CM-OTC only from
- partners of the same group, transactions representing approx. 47% of his total acquisition;
- distribution operators active on DAM in 2015 maintained the trend in 2016, four of them increasing the acquisition on DAM compared to 2015.

Regarding the total transactions made by participants in Centralized Bilateral Markets, it is worth noting the magnitude of CM-OTC and CMBC-CN in the year 2016 compared to the previous year. These increases led to a change in the structure of activity in the centralized contracts markets, as follows: 20% of the volumes were traded on CMBC-CN, 33% on CMBC-EA, and the remaining 47% on CM-OTC.

The centralized market of electricity bilateral contracts with continuous double negotiation– CM- OTC

This market is an organized by Opcom SA for centralized trading on a competitive condition based on pre-established contracts for the buying and selling electricity and eligibility criteria set to each participant. Trading is based on standard tools, characterized by the trading duration (day, weekend, week, month, quarter, semester, year) and the delivery profile (band, peak or void) using framework agreements agreed by the parties prior to trading; some of the transactions were terminated through the intermediation procedure (sleeve transactions); since November 2014, in accordance with the regulations approved by ANRE Order no. 49/2013, the use of EFET type contracts is mandatory.

Starting in May 2014, CM-OTC represented in 2016 the most important components of the electricity wholesale market, the electricity delivered on this market recorded a market share of 58.4% of the domestic consumption and representing approx. 26% of the total of the sales transactions on the wholesale market.

In 2016, the activity of the participants on this market increased compared to 2015, there were registered 10176 transactions.

Both the quantities traded monthly and those delivered in the reporting month on the sale-purchase contracts concluded on CM-OTC increased significantly reaching the end of 2016, the traded quantity increased by approx. 72% compared to 2015, while the annual quantity in delivery in 2016 registered an increase of approx. 80% over the previous year.

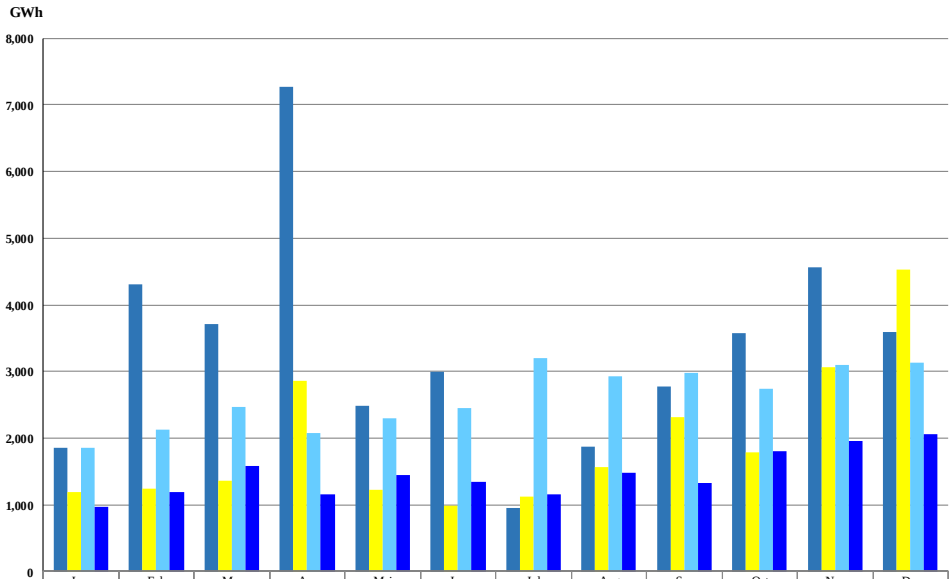
The annual quantity delivered in the reporting month on the sale and purchase contracts concluded on CM-OTC was 30890 GWh, at the average annual price of 157.80 lei/MWh. Monthly deliveries have evolved from 1847 GWh (37.0% of domestic consumption) in January 2016 to 2840 GWh (about 56.0% of domestic consumption) in December 2016, with a peak of 3183 GWh (around 74.3% of domestic consumption) registered in July 2016. Monthly average prices varied between 140.77lei/MWh (in March 2016) - 171.50lei/MWh (in January 2016).

The sales of suppliers on this market in 2015 accounted for approx. 72% of the traded quantity at an annual average price of 157.19 lei/MWh, while the producers have sold approx. 28% of the total traded quantity at an annual average price of 159.38 lei/MWh. Data on quantities supplied and the related prices were obtained on the basis of monthly monitoring reports of the participants and covers the electricity actually delivered during the reporting month as a result of transactions concluded on the CM-OTC.

HHI concentration indicator calculated by OPCOM SA, recorded monthly values between 540-1130 for sale and 361-532 or purchase, and the concentration indicator C3 recorded every month values less than 40% , except July 2016, when indicator C3 for sale recorded the value of 41.18% (one participant made the largest sales on the market with the value of 30.27% for C1).

The following chart shows the information on the traded and delivered volumes in the reporting month on the sale and purchase contracts concluded on CM-OTC in the years 2015 and 2016.

Volume tranzacționate și volume aflate în livrare în luna de raportare pe contracte încheiate pe PC-OTC în anii 2015 - 2016



	Ian	Feb	Mar	Apr	Mai	Iun	Iul	Aug	Sep	Oct	Nov	Dec
volum tranzactionat 2016	1,858	4,315	3,717	7,267	2,482	3,004	948	1,868	2,769	3,577	4,558	3,592
volum tranzactionat 2015	1,188	1,238	1,366	2,860	1,223	992	1,115	1,567	2,308	1,793	3,056	4,535
volum lunar in livrare in 2016	1,859	2,126	2,462	2,077	2,297	2,454	3,198	2,921	2,987	2,735	3,092	3,135
volum lunar in livrare in 2015	966	1,187	1,580	1,159	1,453	1,340	1,148	1,481	1,326	1,808	1,948	2,061

Source: Monthly reporting, OPCOM SA – ANRE

Regarding the average trading prices, calculated as weighted average prices, with the quantities of electricity traded through standardized specific instruments that can be traded on CM-OTC for each delivery profile (band, void, peak), their analysis mainly pointed out that the average monthly trading price of the same product differs according to its trading month as well as the following specific aspects for each of the traded products:

Products for contracts with a monthly base load delivery profile - instruments related to products for contracts with a monthly base load delivery profile were traded for the period February 2016 - March 2017, the minimum trading price (121.00 lei/MWh) being recorded in February 2016 for Base load_May_2016, and the maximum price (185.39 lei /MWh) in December 2016 for Base load_January_2017.

Products for contracts with quarterly base load delivery profile - instruments for 8 products for contracts with quarterly base load delivery profile were traded for the Q2_2016 - Q1_2018 period. The minimum trading price (127.43 lei MWh) was recorded in March 2016 for the base load product with delivery in Q2_2016, and the maximum price (170.54 lei/MWh) was recorded in November 2016 for the base load product delivered in Q1_2017. It should be noted that in October and November transactions were concluded for the base load product delivered in Q1_2018 at prices lower than those with which the similar product of 2017, Q1_2017 was traded.

Products for contracts with an annual base load delivery profile - the minimum trading price (153.28 lei/MWh) was registered in March 2016 for the annual product Base load_Year_2017 and the maximum price (159.96 lei/MWh) was registered in January 2016 for Base load_Year_2017 product. It should be noted that in November a transaction for Base load_Year_2018 was concluded at a price (155.00 lei/MWh), lower than the average price of the Base load_Year_2017 (155.50 lei/MWh) product in the same month.

Products for contracts with half-yearly base load delivery profile - instruments for 3 base load products with semestrial delivery (S2_2016, S1_2017 and S2_2017) were traded. The minimum trading price (143.44 lei/MWh) was registered in May 2016 and the maximum price (161.00 lei/MWh) was recorded in September 2016. Both the minimum and maximum prices were traded for the product base load with delivery to S1_2017.

Products for weekly base load delivery contracts - instruments for weekly base load delivery of the product were traded from a minimum price of 110.31 lei/MWh, registered in March 2016, up to the maximum price of 200.26 lei/MWh, traded in December 2016 for weekly base load delivery instruments in 2017. It is noted that trading prices followed a growing trend since the minimum recorded in March 2016.

Products for monthly off-peak load delivery contracts - the minimum trading price (95.00 lei/MWh) was registered in January 2016, and the maximum price (151.05 lei/MWh) was traded in December 2016 for off-peak load product in January 2017.

Products for quarterly off-peak load delivery contracts - instruments for 7 products for contracts with a quarterly off-peak load delivery profile for the years 2016, 2017 and 2018 were traded. The minimum trading price (107.00 lei/MWh) was recorded in January 2016 for Q3_2016, and the maximum price (162.50 lei/MWh) was traded in November 2016 for the off-peak load delivery product in Q1_2017. In November 2016, instruments were also traded for the off-peak load delivery product in Q1_2018 at a lower price than the average trading price of the similar product for delivery in Q1_2017.

Products for contracts with an annual, half-yearly and weekly off-peak load delivery profile – there were not many instruments traded for these products and there was no rhythmic evolution of these transactions.

Products for monthly peak load delivery contracts - instruments were traded for the products with monthly off-peak load delivery for February 2016 - February 2017. The minimum trading price was 145.00 lei/MWh, registered in September 2016 for the product with delivery in October 2016, and the maximum price of 218.79 lei/MWh was traded in December 2016 for the product with delivery in January 2017.

Products for contracts with quarterly peak load delivery profile - instruments related to the products with quarterly peak load delivery profile for the years 2016, 2017 and 2018 were traded. Minimum trading

price (155.13 lei/MWh) was recorded in March 2016 for the product with delivery in Q2_2016, and the maximum price (202.95 lei/MWh) was traded in November 2016 for the peak load product Q1_2017. It should be noted that in the same month of November 2016 the product Q1_2018 was also traded at a price of 178 lei/MWh, far below the maximum price at which the similar instrument of 2017 was traded.

Products for contracts with an annual and half-yearly peak load delivery profile - no rhythmic trading of the specific instruments of these products was recorded in the transactions concluded on CM-OTC in 2016.

Products for contracts with a weekly peak load delivery profile - the minimum trading price (141.28 lei/MWh) was registered in April 2016 for weekly peak load delivery instruments in 2016 and the maximum price (250.00 lei/MWh) was traded in December 2016 for weekly peak load delivery instruments for 2017.

The information contained in monthly reports transmitted by Opcom SA reflect the large number of transactions between participants - members of groups of companies and in the case of a such group both the supplier of last resort and concessionaire distribution operator have contracts with companies in the group.

The information published on the website www.opcom.ro, chapter CM-OTC, are daily information on products and aggregated data, summaries and statistics as well as data/information published under provisions of Article 26 from the Regulation on the organized trading market framework on the centralized market with continuous double negotiation of the bilateral electricity contracts.

Opcom SA calculates and publishes daily reference prices for each CM-OTC product, calculated as the arithmetic average of participants' proposals to CM-OTC.

Opcom SA has also published in 2016 complete information on 513 transactions of which closing price varied by more than 10% over the reference price fixed for the product (if it is the first transaction of the day) or to the transaction price of the previous day, for products of which the delivery period exceeds one month.

Centralized Market for Bilateral Contracts with three trading arrangements - CMBC-EA, CMBC-CN and CMBC-PC

Centralized Market for Bilateral Contracts with three trading arrangements – CMBC-EA, CMBC-CN and CMBC-PC

In 2016, the trading of centralized market for bilateral contracts was carried out according to the provisions of the regulatory framework approved by ANRE Order no. 78/2014, the organized market regulation framework of the centralized market for bilateral contracts with three ways of trading – by

extended public auction (CMBC-EA), by public auction with continuous negotiation (CMBC-CN) and contracts for fuel processing (PCCB-PC).

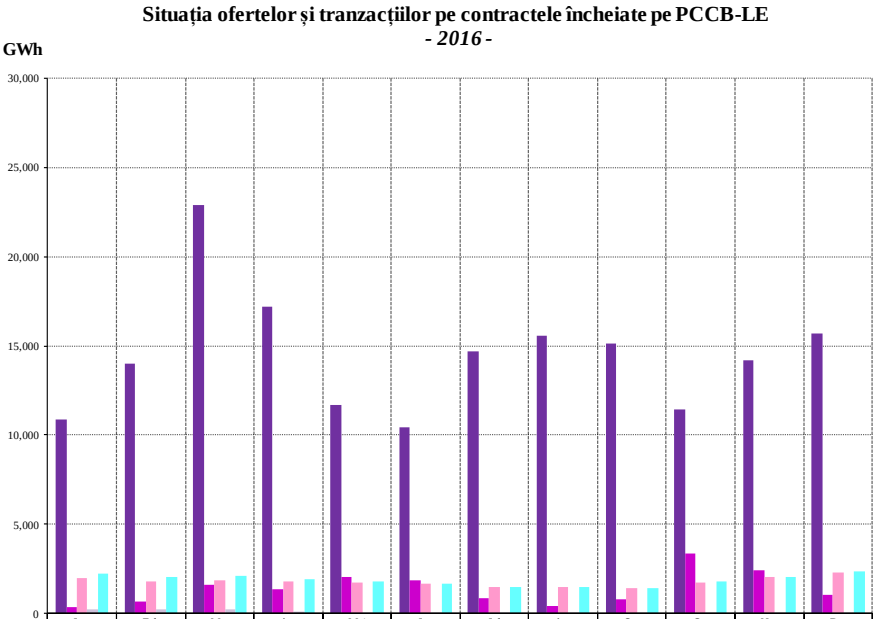
Participants in the three ways of concluding bilateral contracts are holders of the commercial exploitation of power generation capacities of energy, supply, transmission and distribution licenses. In 2016 the number of registered participants of CMBC-EA was consistently above the value of 343, the minimum recorded in February 2016, reaching 358 participants in December 2016.

PCCB-LE is one of the components of the wholesale electricity market, the energy delivered on this market having a market share of 41.1% of domestic consumption and representing approx. 19% of all wholesale transactions on the wholesale market.

In 2016, the activity of the participants on this market has been reduced compared to the year 2015, registering a decrease of approx. 1.5% of the volume of electricity offered for trading (sale and purchase) and approx. 3% of the volume of electricity traded.

The chart below presents the most important information on monthly volumes offered and respectively traded on CMBC-EA during 2016.

The situation of the offers and the transactions on CMBC-EA during 2016.



	Ian	Feb	Mar	Apr	Mai	Iun	Iul	Aug	Sep	Oct	Nov	Dec
volum ofertat pentru vanzare si cumparare	10876	13977	22861	17214	11681	10454	14685	15558	15105	11433	14160	15717
volum tranzactionat lunar	360	697	1597	1334	2041	1864	878	447	773	3389	2412	1025
volum contractat anterior pt luna in curs	1959	1829	1874	1806	1749	1673	1474	1470	1421	1751	2023	2320
volum lunar contractat pana in dec 2014 pt luna in curs	255	238	255	120	34	33	36	35	34	31	30	30
volum total lunar contractat pt luna in curs	2214	2067	2129	1926	1784	1706	1510	1505	1455	1782	2053	2351

Source: Monthly reports of Opcom SA – ANRE's processing

The offers for sale or purchase of electricity on CMBC-EA have firm characteristics regarding the delivery time, daily delivery profile, total and hourly quantity, minimum requested price and, respectively, the maximum price offered. After concluding the transactions, these characteristics determine the accurate, fixed, constant values of the quantities and price level established for trading, for the whole period of validity of the contract. Offers from both sides are accepted in the auction, for sale and purchase, with the possibility of several bidders on both sides.
The most active participant, in terms of sale's offer was the producer CE Oltenia SA, who offered the largest volumes to sell.

Regarding the concluded sales transactions, the three major producers were remarked: Hidroelectrica SA, CE Oltenia and SN Nuclearelectrica SA, who held the position of the first seller one at a time (with decreasing rates between 15.8% in July 2016 and 23.3% in June 2016).

Analyzing the buying offers, it appears that from January to June 2016, the most interested in purchasing energy in this market was Repower Furnizare Romania SRL, with market shares ranging from 10.7 – 13% in the 5th of the first semester, without succeeding in fully realizing its purchasing intentions, because the first buyer in 4 of these months was Transenergo Com SA. For the second half of the year, the most interested in buying energy was Arelco Power SRL, with quantities offered between 10.6% and 11.7%, in all 6 months of the second semester, while, each month, Transenergo Com SA registered the largest monthly market shares to purchase transactions.

Analysing the data obtained from the monitoring process of the market participants, the amounts of electricity delivered in 2016 (the contracts traded in 2016 and 2016 on CMBC-EA, or earlier on CMBC) decreased by almost 30.8% compared to those delivered in 2015 on CMBC, while the annual average price for the total quantity delivered decreased by approx. 2.2% in the same period of comparison.

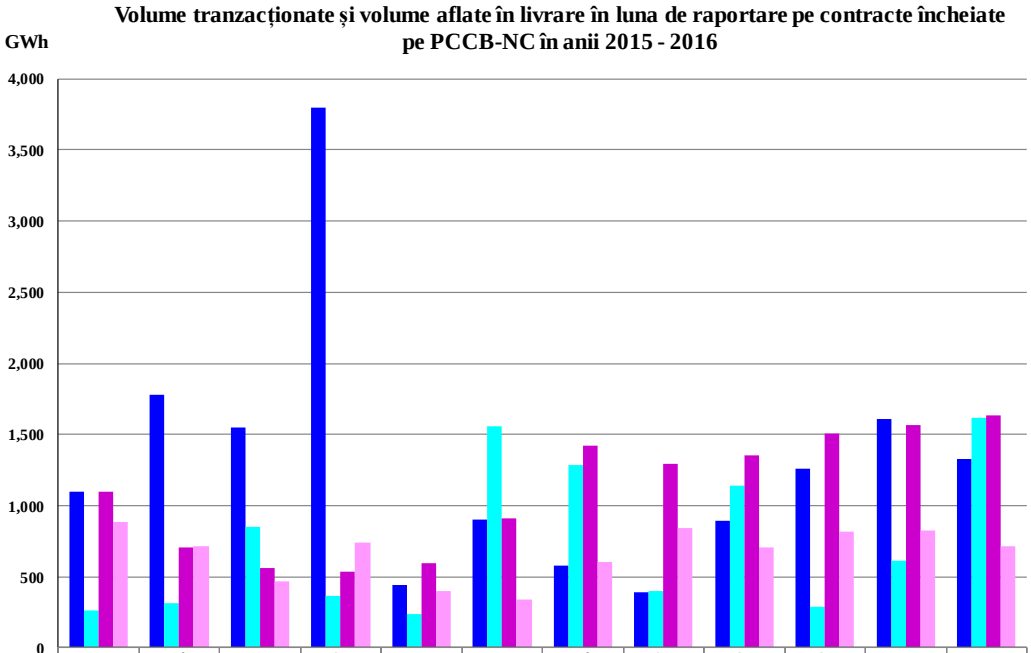
The annual quantity delivered in the reporting month, on the sale-purchase contracts concluded on CMBC-EA was 21729 GWh, at an average annual price of 158.36 RON/MWh. Monthly delivered quantities have evolved between a minimum of 1385 GWh (means 33.9% from domestic consumption) in September 2016 and a maximum of 2223 GWh (approx. 44.6% from domestic consumption) in January 2016. Monthly average prices varied within the range 154.367 RON/MWh – 162.20 RON/MWh (in December 2016).

Sales of suppliers in this market in 2016 were approx. 34% from the entire quantity traded, at the annual average price of 158.94 RON/MWh, while the dispatchable producers sold approx. 66% of the total amount traded, at the average annual price of 158.07 RON/MWh.

The HHI concentration indicator, calculated by Opcom SA, recorded monthly values in the 812-1248 range on sale and in the 334-486 range at purchase, and the C3 concentration indicator on the purchase side consistently recorded lower values 30% and C3 on the sales side ranged between 41.97% and 56.46%.

On CMBC-CN standard products are traded in terms of power offered, the daily profile of supplies and the delivery periods. The chart below presents the monthly trading volumes and those contracted for delivery in the months of 2016, compared to similar data from 2015.

Traded volumes and volumes in delivery in the month on reporting on contracts concluded on CMBC-CN in 2015-2016



	Ian	Feb	Mar	Apr	Mai	Iun	Iul	Aug	Sep	Oct	Nov	Dec
volum tranzactionat 2016	1,099	1,777	1,548	3,794	445	903	575	391	895	1,264	1,607	1,329
volum tranzactionat 2015	262	317	855	365	241	1,559	1,287	397	1,139	286	616	1,613
volum in livrare in luna in curs 2016	1,097	703	557	535	595	913	1,423	1,290	1,354	1,508	1,569	1,632
volum in livrare in luna in curs 2015	880	716	466	737	396	339	601	842	702	813	823	713

Source: Monthly reports of Opcom SA – ANRE's processing

The analysis of data on volumes traded and those in delivery, in the reporting month, based on contracts concluded in 2015 and 2016, indicates both an increase of the traded volumes, 75%, and in increase in delivery volumes, with approx. 64% in 2016, compared to the previous one.

In April 2016, a trading record of 3794 GWh was recorded, representing a monthly maximum of 2 years. The data are reported by Opcom SA in the monthly reports for markets monitoring.

CMBC-CN recorded in 2016, for the energy delivered on this market, a 24% share of internal consumption, representing approx. 11% of all sales transactions on the wholesale market. The number of entrants increased from 150 in January 2016 to 177 in December 2016 and the number of contracts traded in 2016 was 15458 (with a minimum of 279 in July and a maximum of 3164 in April).

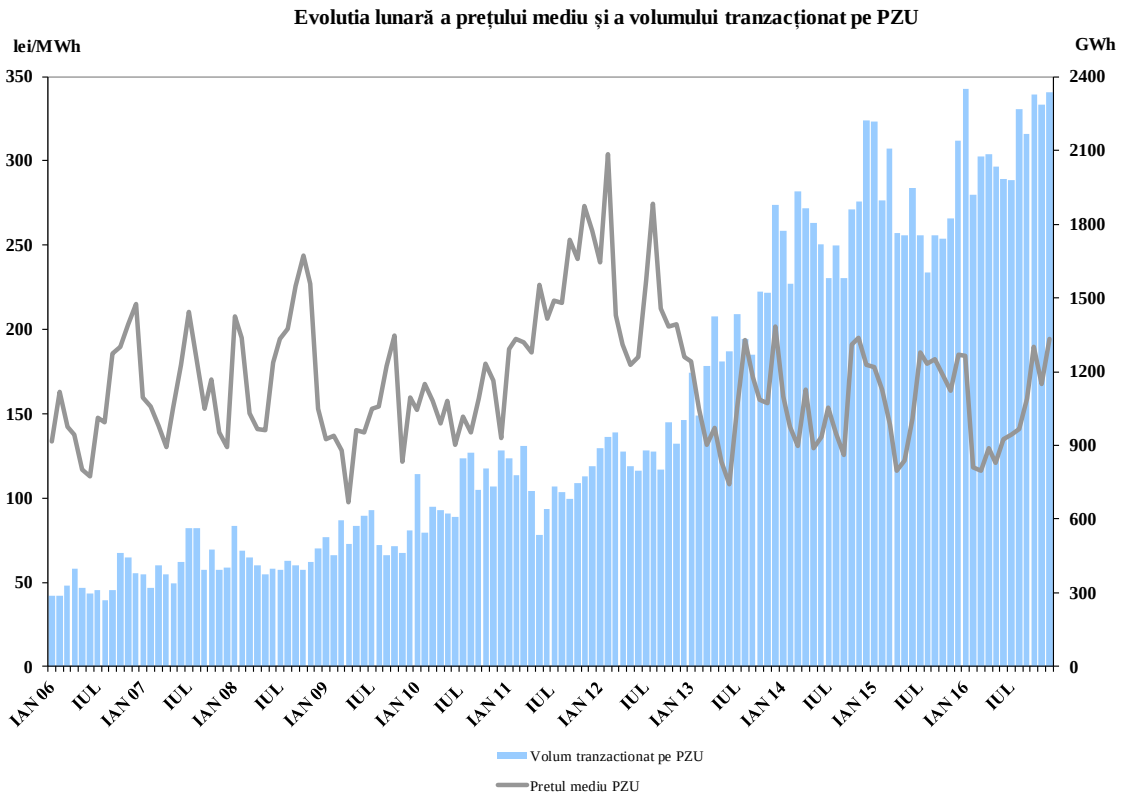
According to the data reported monthly by the monitored economic operators, electricity sales delivered in 2016 were 12718 GWh, representing about 19.5% of the energy supply on the centralized market for bilateral electricity contracts.

Sales of suppliers on CMBC-CN in 2016 accounted for ca. 30% of the total quantity traded, at the average annual price of 149.33 RON/MWh, while the dispatcher producers sold approx. 70% of the total amount traded, at the average annual price of 158.74 RON/MWh.

Day-ahead market - DAM

The volume of electricity traded on DAM in 2016 increased by approx. 14.7% compared to the volume traded the previous year. The monthly share volume traded on DAM, as percentage from domestic consumption, ranged from 43.4% (in February 2016) and 54.8% (in August 2016), registering a year-on-year increase from 2015 (48.8% versus 44.3%).
DAM average closing price (arithmetic average of the monthly closing market prices) decreased by approx. 7.5% compared to the average of 2015.

The chart below illustrates **the monthly average price and the volume traded on DAM** in the period 2006-2015.



Source: Monthly reports of Opcom SA and CNTEE TRANSELECTRICA SA- ANRE's processing

Variations from one month to another month average price established on DAM existed in both ways. The minimum of the period was reached in March 2016 (116.42 RON/MWh), and the maximum in December 2016 (194.45 RON/MWh). The annual average price – arithmetic average of the daily average prices – recorded in 2016 was 149.74 RON/MWh.

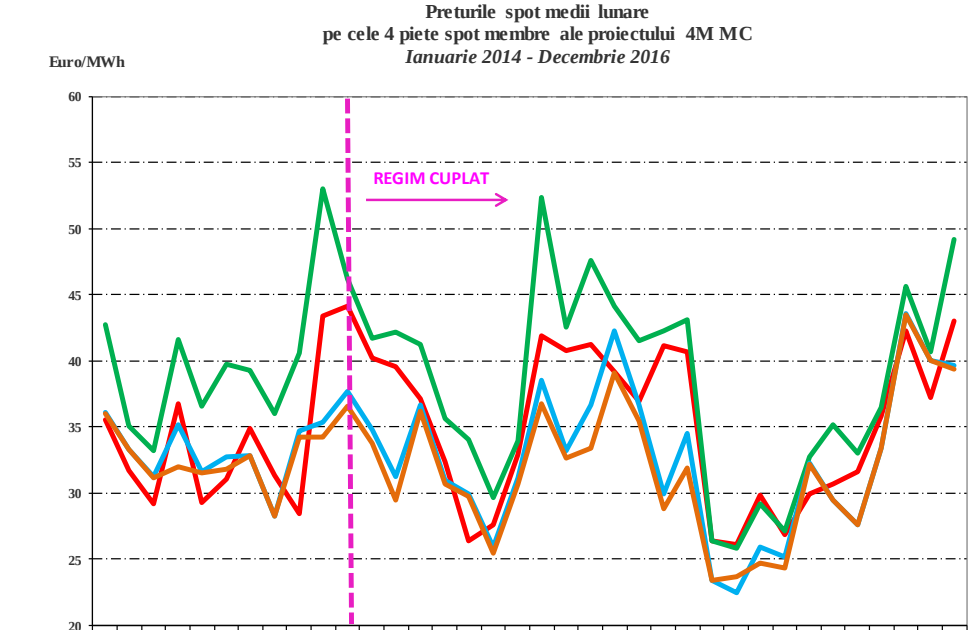
Starting with November 19, 2014, the Romanian DAM operates coupled with day-ahead markets from Hungary, Slovakia and the Czech Republic, the so-called project 4M MC – the coupling mechanism by price for DAM. This correlated and coordinated mechanism uses a method, unique in Europe, the price coupling of the regions (Price Coupling of Regions initiative- PCR) to harmonize European national

markets and to create the European internal electricity market. The coupled operation is based on the coupling algorithm recommended by ACER (Euphemia) which aims to maximize social welfare across the entire area of coupled markets.

The mechanism of coupling is achieved through OTE – THE Czech Republic and EPEX Spot (as members of PCR), the last one acting as a service provider for OKTE-Slovakia, HUPX Hungary (not member PCR) and Opcom – Romania (PCR member starting with January 2016). Market operators act as coordinators on the basis of rotation.

The coordinated calculation of the allocated cross-border capacity is under the governance of TSOs of the 4 countries, in accordance with European legislation, and the allocation model used is the implicit allocation on the DAM of the interconnection available capacity.

In the chart below are presented **the monthly average spot prices of the 4 day-ahead markets on the 4MC coupling mechanism starting with 1 January 2014,** before and after the beginning on the coupled regime.



	Ian 14	Feb	Mar	Apr	Mai	Iun	Iul	Aug	Sep	Oct	Nov	Dec	Ian 15	Feb	Mar	Apr	Mai	Iun	Iul	Aug	Sep	Oct	Nov	Dec	Ian 16	Feb	Mar	Apr	Mai	Iun	Iul	Aug	Sep	Oct	Nov	Dec
OPCOM	36	32	29	37	29	31	35	31	28	43	44	40	40	37	32	26	28	33	42	41	41	39	37	41	41	26	26	30	27	30	31	32	36	42	37	43
HUPX	43	35	33	42	37	40	39	36	41	53	46	42	42	41	36	34	30	34	52	42	48	44	42	42	43	26	26	29	27	33	35	33	36	46	41	49
OKTE	36	33	31	35	32	33	33	28	35	35	38	35	31	37	31	30	26	31	39	33	37	42	37	30	34	23	22	26	25	32	29	28	33	44	40	40
OTE	36	33	31	32	31	32	33	28	34	34	37	34	29	36	31	30	25	31	37	33	33	39	35	29	32	23	24	25	24	32	29	28	33	43	40	39

Source: Published information by Opcom SA – ANRE's processing

In order to better respond to the purpose for which the DAM coupling mechanism was implemented, namely the transfer of energy at the level and in the sense determined by the known production and consumption conditions and depending on the prices in the coupled markets, starting with 1 January 2016,

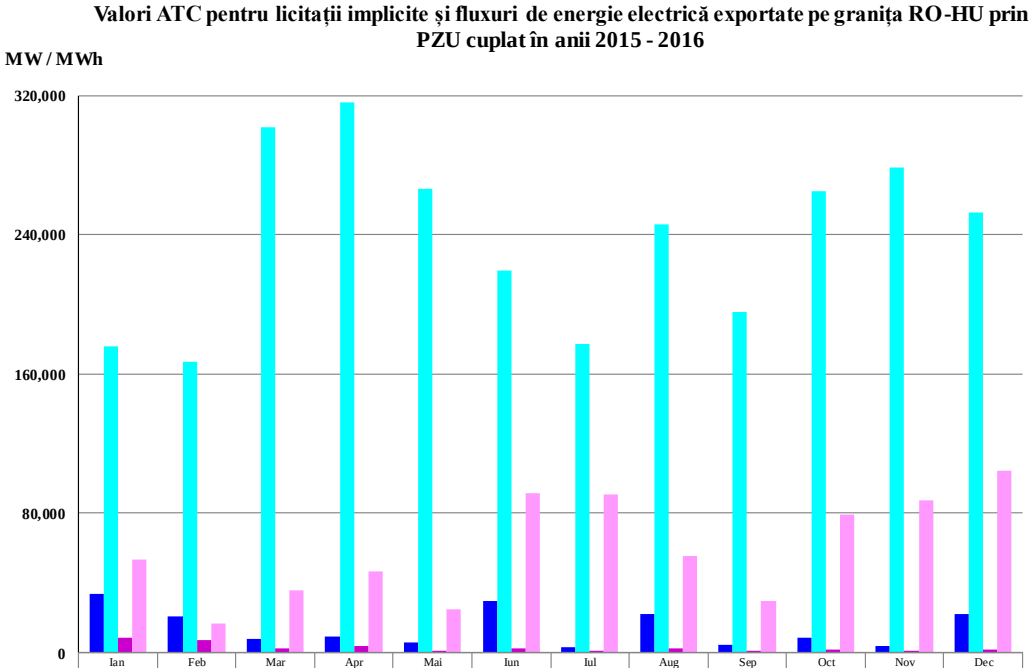
operators from Romania and Hungary, CNTEE Transelectrica SA and Mavir ZRt, following the recommendations of the regulatory authorities of the two states, ANRE and MEKH, agreed to reserve a quota of the interconnection capacity for the DAM allocation.

The same rule was adopted also for 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 interconnection capacity (ATC) calculated monthly for each subperiod and 80% of the smallest 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 peculiarity for the Hungarian border, if 80% of the smallest ATC value calculated monthly in sub-periods is less than 80 MW, the interconnection capacity for the monthly allocation will be 80% of the ATC calculated for each sub-period, to which adds the allocated capacity to the annual auctions returned to TSO.

The chart below presents the **monthly ATC values allocated for export on DAM and electricity exported through DAM coupled in 2016 and 2015**.



	Ian	Feb	Mar	Apr	Mai	Iun	Iul	Aug	Sep	Oct	Nov	Dec
ATC RO-HU 2015 MW	33,643	20,988	8,075	9,360	5,715	29,720	2,923	21,840	4,348	8,559	3,480	22,406
ATC RO-HU 2016 MW	176,068	167,199	302,144	316,496	266,615	219,675	177,480	246,220	195,709	264,890	278,747	253,152
Flux RO-HU 2015 MWh	8,653	7,274	2,647	3,846	451	2,300	660	2,693	1,047	1,548	1,227	1,801
Flux RO-HU 2016 MWh	53,537	16,650	35,477	46,841	25,072	91,640	90,896	55,694	29,717	79,289	87,564	104,556

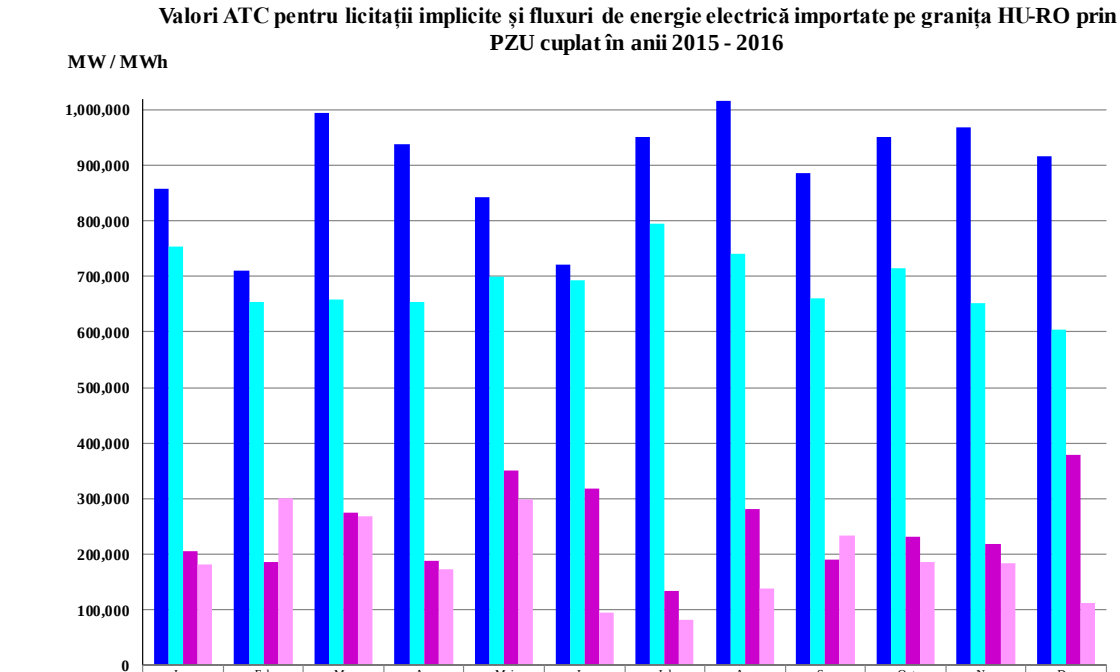
Source: Monthly reports of OPCOM SA – ANRE's processing

Following the implementation of allocation mechanism of this interconnection capacity for allocation to DAM, in 2016 there was an increase of approx. 1675% of ATC allocated for export on DAM (FROM 171,057 MW in 2015 to 2,864,395 MW in 2016) and an increase of approx. 419% (from 34.146 MWh to

716.931 MWh) of electricity flows exported on the RO-HU boundary through the coupling mechanism compared to 2015.

With regard to the allocation of ATC for implicit auctions for the Hungarian border import direction, following the applications of the netting principle, significantly lower ATC values for coupled DAM for 2016 were achieved.

The following chart shows the **monthly ATC values allocated for import on DAM and the electricity flows imported by DAM coupled between 2016 and 2015.**



	Ian	Feb	Mar	Apr	Mai	Iun	Iul	Aug	Sep	Oct	Nov	Dec
ATC HU-RO 2015 MW	857,957	709,812	994,925	937,440	843,885	721,480	952,277	1,016,160	886,052	951,541	968,520	915,994
ATC HU-RO 2016 MW	753,932	653,601	658,956	654,304	700,585	692,325	795,124	740,180	661,091	715,710	651,253	604,848
Flux HU-RO 2015 MWh	204,006	186,272	275,203	187,636	351,033	317,510	133,963	281,627	188,931	231,783	217,481	377,676
Flux HU-RO 2016 MWh	181,289	301,385	267,373	172,740	298,426	94,572	81,280	138,441	232,477	185,548	182,233	112,505

Source: Monthly reports of OPCOM SA – ANRE's processing

It can be noticed the reduction of ATC allocated for import on DAM with approx. 77% compared to 2015 (from 10,756,043 MW to 8,281,909 MW), as well as the reduction of the electricity flow imported through DAM coupled with approx. 21% (from 2,953,122 MWh to 2,248,269 MWh).

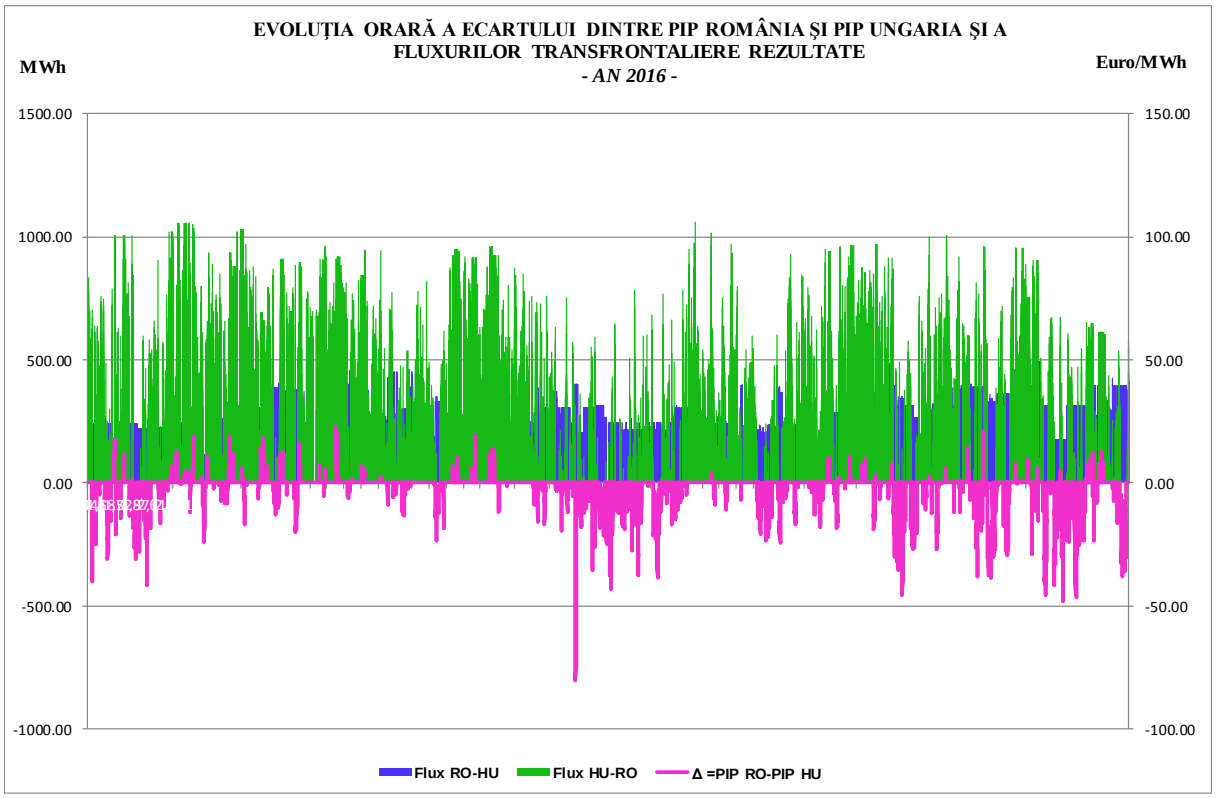
Although there were trading opportunities reflected in price differences between the two areas, cross-border exchanges could not be achieved, over many time intervals, because of the values set for two-way ATC (export/import).

The following table shows the monthly number of hourly intervals in which no higher shifts were made in both directions, due to insufficient ATC allocations (the changed flow equal to the allocated ATC, and the difference of MCP DAM in Romania and MCP DAM Hungary was different from zero).

Month	*Number of intervals with insufficient ATC for export DAM RO-HU*	*Number of intervals with insufficient ATC for import DAM HU-RO*
January	178	15
February	44	56
March	56	61
April	50	14
May	50	53
June	226	0
July	286	0
August	140	3
September	94	25
October	171	8
November	169	32
December	274	34
Total year 2016	***1738***	***301***

Source: Published information by Opcom SA – ANRE's 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 Romania-Hungary border in both directions in 2016.

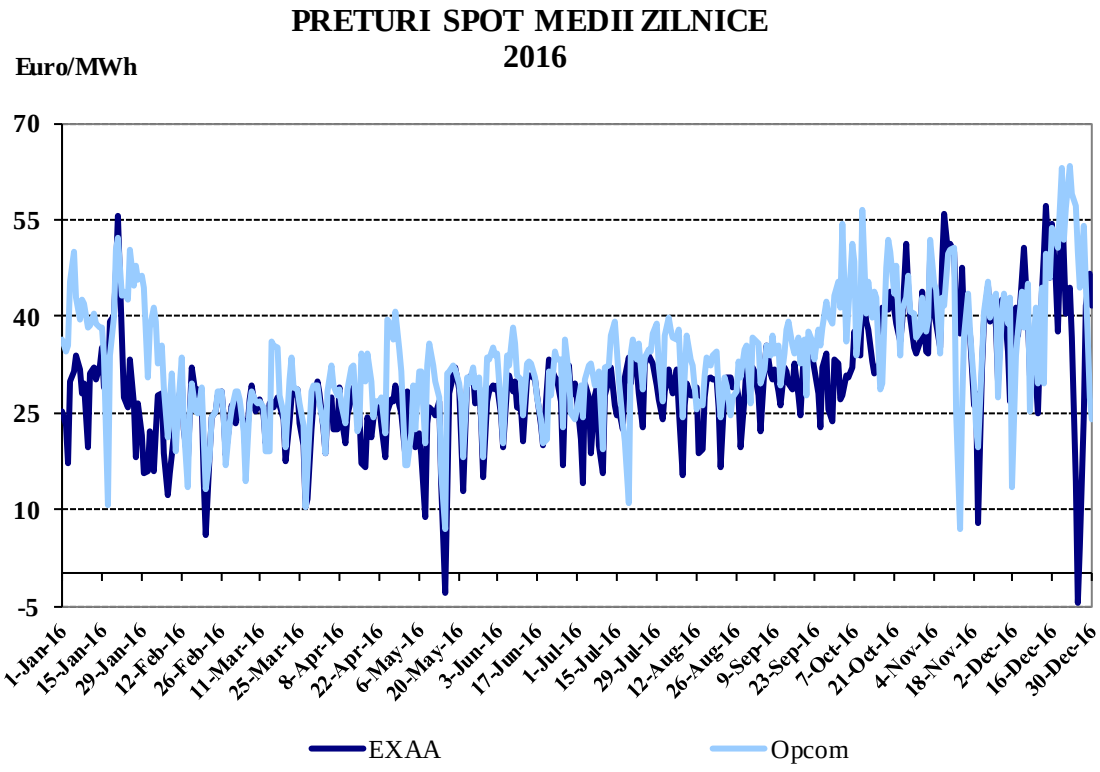


The hourly evolution of the gap between MCP Romania and MCP Hungary and the resulting of cross-border flows
Source: Published information by Opcom SA – ANRE's processing

It is estimated that the price set on DAM in 2016 incorporates accurately the available information on the resource level and electricity demand corresponding to the moment, presenting in the same time, specific high volatility.

Generally, the HHI concentration indicator had values that indicate the lack of concentration on buying (monthly values in the area 338-522); on selling, there is a less concentrated market in nine months of the year, with monthly HHI values between 483-940, and during April, August and September 2016 there is a moderately concentrated market with values of HHI between 1012 and 1290.

By comparing the closing price of DAM with the spot prices set by other European energy exchanges in 2016, it is noted that the price values recorded by Opcom SA were higher than those on EXAA, except for January, February, April, October, November and December.



Daily average spot prices 2016

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

Intra-day market - IDM

The intra-day market, component of the wholesale market, is the centralized electricity trading framework organized by the market operator – OPCOM SA, that is also the counterparty, created for fine-tuning the portfolio of contracts to the production possibilities, demand and cross-border transactions and to reduce potential imbalances. Responding to the principles of non-discrimination, transparency, public and centralized market, IDM is a voluntary market that offers participants standard-tools transaction, for which they may submit offers for sale and/or purchase after the DAM closing time until near the hour of beginning the electricity delivery. On this market, the hourly transactions are secure, independent and are based on anonymous participants.

Although it is still underutilized by market participants, IDM experienced a positive development compared to the previous year as regards the monthly traded volumes, registering at the end of the year as regards the monthly traded volumes, registering at the end of the year a total of 131 GWh, approx. 73% higher than in 2015, the annual value of transactions being approx. 16563 mii RON.

With a number of 118 licensees who signed the contract for participation in the intra-day market, the monthly participation rate (the number of participants who submitted bids out of the total number of those enrolled) varied between 38% (March 2016) and 47% (achieved in November 2016).

Balancing Market - BM

In the beginning of December 2016, 119 producers with 232 dispatchable units in commercial exploitation were acting on this market and 99 Balancing Responsible Parties were registered.

The following table shows **the annual comparatives values for the period 2006-2016 for the concentration indicators** determined based on the actual delivered energy by the producers on BM, for each type of regulation and directions.

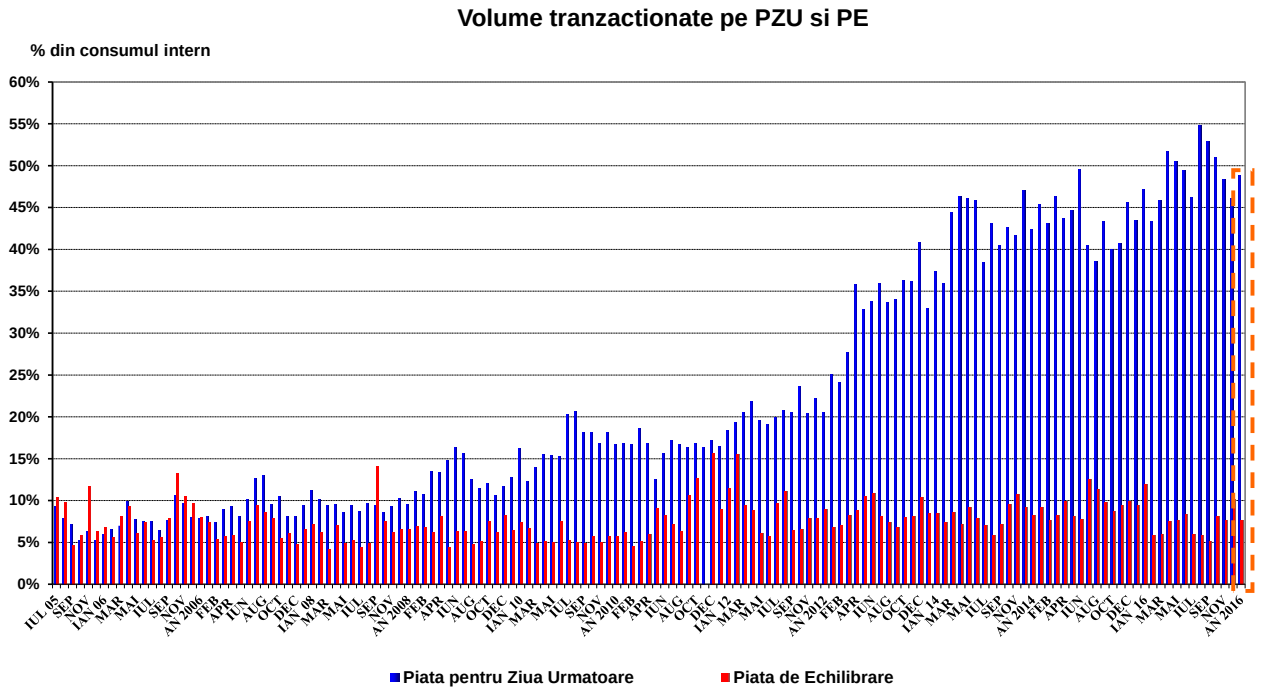
Year	Regulation type	Regulation Direction	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
C1	Secondary	Upward	80%	60%	71%	64%	68%	59%	60%	61%	59%	58%	59%
		Downward	80%	56%	71%	64%	67%	56%	57%	58%	58%	57%	60%
	Fast tertiary	Upward	69%	51%	70%	55%	53%	75%	78%	67%	58%	55%	63%
		Downward	53%	30%	38%	47%	62%	46%	53%	47%	70%	74%	56%
	Slow tertiary	Upward	29%	29%	27%	39%	45%	30%	46%	39%	61%	37%	41%
		Downward	31%	19%	27%	32%	34%	42%	46%	37%	63%	36%	39%
HHI	Secondary	Upward	6510	3915	5438	4526	5067	3986	4815	4700	3495	4368	4502
		Downward	6612	3538	5367	4501	4943	3703	4665	4423	3396	4274	4504
	Fast tertiary	Upward	5061	2979	5065	3543	3320	5729	6250	4841	3400	3626	4432
		Downward	3452	1590	2319	2843	4204	2868	3926	3202	4836	5779	3942
	Slow tertiary	Upward	2203	1769	2021	2478	2749	1679	2375	2777	3759	2997	2941
		Downward	2582	1276	1838	2017	2089	2563	3446	2470	3959	2640	3117

Source: Monthly reports of CNTEE TRANSELECTRICA SA –ANRE's processing

The values of the concentration indicators for 2016, indicates this year as well, a dominant participant and an excessive concentration of the balancing market for all types of regulations. Compared to the previous year, the total volume traded on BM decreased by approx. 17.7%.

Monthly volumes were constantly much below those traded on DAM, the difference between the two types of traded volumes rising from the situation in 2015. In most of the months, the share of domestic consumption of volumes traded on the BM was lower than in the months similar in the previous year, in just two months registering over 10% of that consumption.

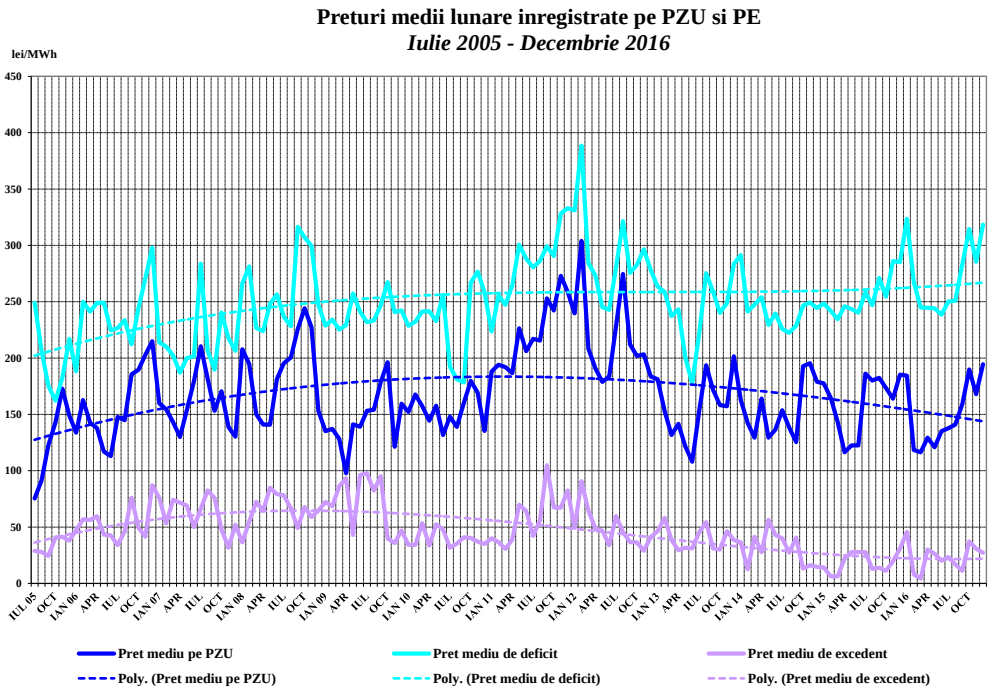
The most important system services provider on secondary and fast tertiary regulation, Hidroelectrica SA, functioned under a normal hydrologic year and the increased production from renewable sources, characterized by intermittent operation, as a result of starting the commercial operation of many wind and photovoltaic units, let to the need to balance some significant differences on the production-consumption balance and compliance with the value of the programmed sold by the system operator.



Traded volumes on DAM and BM

Source: Monthly reports of OPCOM SA and CNTEE TRANSELECTRICA SA – ANRE's processing

The following chart describes the evolution of the monthly average settlement price of the imbalances recorded by BRPs (surplus price and deficit price) for the period July 2005 – December 2016. The average values of settlement prices for 2016 were 272.19 RON/MWh, for deficit price (by about 6.8% higher than in 2015) and 23.42 RON/MWh, for surplus price (by approx. 36.7% higher than previous year). It is noted that the values indicated are calculated as the arithmetic mean of the hourly recorded prices.



The monthly average prices recorded on DAM and BM - July 2005 – December 2016
Source: Daily/monthly reports of OPCOM SA – ANRE's processing

In 2016, the monthly additional value resulting from BM and BRP imbalance settlement had in four months out of 12, negative values, with the significance of cost, but the aggregate value throughout the period representing an income of 0.50 mil. RON.

The monitoring reports submitted by TSO, it results that in each month were recorded trading periods, for which reductions of the wind power plants and solar power plants registered as dispatchable units to BM, have been ordered, the most numerous and the most significant low power values being recorded in February- March 2016. Every time, the reasons were the balancing the generation and the consumption and framing with the value of the scheduled sold, while the other control possibilities had been exhausted. The information on RES curtailments was published on the website at www.transelectrica.ro , link Transparență/Echilibrare și STS, point 21 on the table.

In 2016, CNTEE Transelectrica SA has identified four participants to the balancing market who accomplished the condition to publish the offers and transactions, according to the provisions of art. 4 of the ANRE Order no. 33/2012 and art. 7 of the ANRE Order no. 60/2013. Thus, as a result of exceeding the 40% of the volume of transactions for a type of regulation and meaning over 3 consecutive months, the offers and transactions of the producers: Hidroelectrica (in all 12 months), Romgaz (January 2016 and the period August-December 2016), CE Hunedoara (June-October 2016) and OMV Petrom (September-December 2016). The information was published on the website at www.transelectrica.ro , link Transparență/Echilibrare și STS, point 19 on the table.

The Ancillary Services Market

To ensure safe operation of the NPS and the quality of the transmitted electricity on requested parameters by the regulations, the market for ancillary services (AS).
Through it, the TSO CNTEE Transelectrica S.A. contracts reserves for the secondary control and respectively tertiary fast and slow reserves from the qualified producers for this service.

Participants, holding a generation license, can participate on auctions for AS purchase and can make offers on the units portfolio if they have an EIC code, are enrolled in the BM, are part of a BRP and own dispatchable units qualified by CNTEE Transelectrica S.A. for the service provided. AS producers-provider have a contractual obligation to supply on the BM for each time slot, the control energy corresponding to AS quantities contracted, in which case it is considered that the amounts were made. They shall be paid by CNTEE Transelectrica S.A. at the contract price and for those unrealized, AS providers are those who pay to CNTEE Transelectrica S.A. a penalty representing the double price of the contract price.

The balancing market participants who have provided STS in 2016 were: Hidroelectrica, CE Oltenia, CE Hunedoara, OMV Petrom, Electrocentrale Bucuresti, Romgaz, Electrocentrale Galati, Veolia Energie Prahova, Veolia Energie Iasi, Bepco and Electroenergy Sud.

They participated in the STS market both on the regulated component, concluding contracts on the basis of regulated quantities and prices established by ANRE president's decision, observing the provisions of GD no. 138/2013 as amended by GD no. 941/2014, as well as on the competitive component, on contracts with quantities and prices resulting from the monthly and weekly auctions organized by CNTEE Transelectrica S.A.

In 2015, CNTEE Transelectrica S.A. purchased quantities for the control reserves (regulated or by auctions) larger than the values for the previous year, by 1.6% for secondary control, by 3.5% for fast tertiary control, respectively by 11.2% for slow tertiary control.

Regulated purchases decreased compared to 2015, especially in the case of fast and tertiary reserves (by 77.1% and 63.5% respectively), the difference to UNO-DEN being acquired on the competitive component, which in 2016 was higher for all types of reserves.

The only producer to receive regulated quantities for the secondary reserve and the tertiary reserve in 2016 was CE Hunedoara, with regulated tariffs of 73.32 RON/h*MW between January and June 2016 and 81.45 RON/h*MW in July – December 2016 for the secondary reserve and for the fast tertiary reserve with tariffs of 35.25 RON/h*MW between January - June 2016 and 29.38 RON/h*MW between July - December 2016.

For the slow tertiary reserve, ANRE issued regulated quantity decisions for several producers, with different tariffs applied. Thus, if for CE Hunedoara, which has received regulated quantities on this type of reserve for all year, the regulated tariff was 33.13 RON/h * MW in first 6 months and 27.21 RON/h * MW in the last 6 months, for the other producers only decisions were issued for the first 2 months of 2016 with regulated tariffs of 28.39 RON/h * MW for CE Oltenia, 25.82 RON/h * MW for Veolia Termo Prahova, 25.10 RON/h * MW for Electrocentrale Bucharest and 24.60 RON/h * MW for Electrocentrale Galati.

The prices resulting from the tenders for the secondary regulation varied throughout the year, with higher values between January and April 2016 compared to those resulting from tenders from May to December 2016, although the quantities purchased by auction on this type of reserve were similar; the range of price variations recorded was 28.97 – 87.83 RON/h * MW. In the case of fast tertiary reserves, the price variation beach is smaller, ranging from 23.81 – 40.43 RON/h * MW; in the first half of the year, the auctioned prices varied around 35-40 RON/h * MW in the second half of the year to drop even below 30 RON/h * MW. For the acquisition of slow tertiary reserve volumes, the auctioned prices varied between 4.99 – 20 RON/h * MW.

The following table shows the concentration indicators that characterize the AS market in the year 2016, calculated on the basis of the information submitted by CNTEE Transelectrica S.A.

Year 2016		Secondary reserve	Fast tertiary reserve	Slow tertiary reserve
Regulated component	Contracted quantity (h*MW)	175.680	175.680	4.775.040
	C1 (%)	84,9	99,7	84,6
	C3 (%)	100,0	100,0	95,6
Competitive component	Contracted quantity (h*MW)	3.791.020	6.185.210	1.762.560
	C1 (%)	65,1	82,6	71,0
	C3 (%)	96,9	93,7	99,7
	HHI	5092	6899	5459

Source: Monthly reports of CNTEE TRANSELECTRICA SA – ANRE's processing

At the level of 2016, the degree of concentration calculated for all three types of control reserves purchased by CNTEE Transelectrica S.A. remains high on both types of components.

On the regulated component, the dominant shareholder for all types of reserves was CE Hunedoara, some of the quantities for the secondary and tertiary reserve being assigned to the hydro producer.
For the tertiary reserve, they received a decision for the contracting of the regulated quantities during January-February 2016 and four other producers (CE Oltenia, Electrocentrale Bucharest, Electrocentrale Galati and Veolia Termo Prahova). In the other months of the year, CE Hunedoara was the only provider of slow tertiary reserve that received regulated quantities by decision of the ANRE President.

The competitive component, as in the previous year, was the acquisition from the producer Hidroelectrica for the secondary and the tertiary reserve and Romgaz in the case of the slow tertiary reserve. In comparison to the dominant participant, four producers took part in the auctioning of the secondary reserve, 8 in the case of the fast tertiary and 3 in the case of the slow tertiary, but the weights of the quantities gained for the provision of system technological services were much smaller.

The data are published on the website www.transelectrica.ro , link Transparență/Echilibrare și STS, point 17 of the table.

3.2.2. Retail electricity market

3.2.2.1 Monitoring the level of prices, the level of transparency, the level and effectiveness of market opening and competition

In 2016, 105 electricity suppliers were active in the retail market, of which 21 holders of production license and 5 suppliers of last resort (SoLR).

Electricity supplied by SoLR was 13533 GWh, with a decrease of 4.2 % compared to 2015, given the increase of the final consumption with approx. 1.3%.

Regarding the evolution of the structure of electricity consumption to final consumer, based on data processed by ANRE, the data presented in the table below, emphasize the next:

	2008		2009		2010		2011		2012		2013		2014		2015		2016	
	GWh	%	GWh	%	GWh	%	GWh	%	GWh	%	GWh	%	GWh	%	GWh	%	GWh	%
Consumatori alimentati in regim reglementat*	23416	51%	23046	55%	21365	49%	20289	44%	20779	45%	18966	43%	15213	34%	14128	31%	13533	29%
Casnici	10376	23%	10990	26%	11246	26%	11590	25%	11987	26%	11670	27%	11626	26%	12005	26%	12054	26%
Necasnici	13040	28%	12057	29%	10119	23%	8699	19%	8792	19%	7296	17%	3587	8%	2123	5%	1479	3%
Consumatori alimentati in regim concurential	22414	49%	18536	45%	22075	51%	25525	56%	25105	55%	24805	57%	29235	66%	32128	69%	33344	71%
Casnici		0%		0%		0%		0%		0%		0%		0%		0%		0%
Necasnici	22414	49%	18536	45%	22075	51%	25525	56%	25105	55%	24805	57%	29235	66%	32128	69%	33344	71%
Consum final total	45830	100%	41583	100%	43440	100%	45814	100%	45884	100%	43771	100%	44448	100%	46256	100%	46877	100%

**Note 1: the regulated segment also includes electricity supplied to final customers at CPC rates for 2012 and 2013*

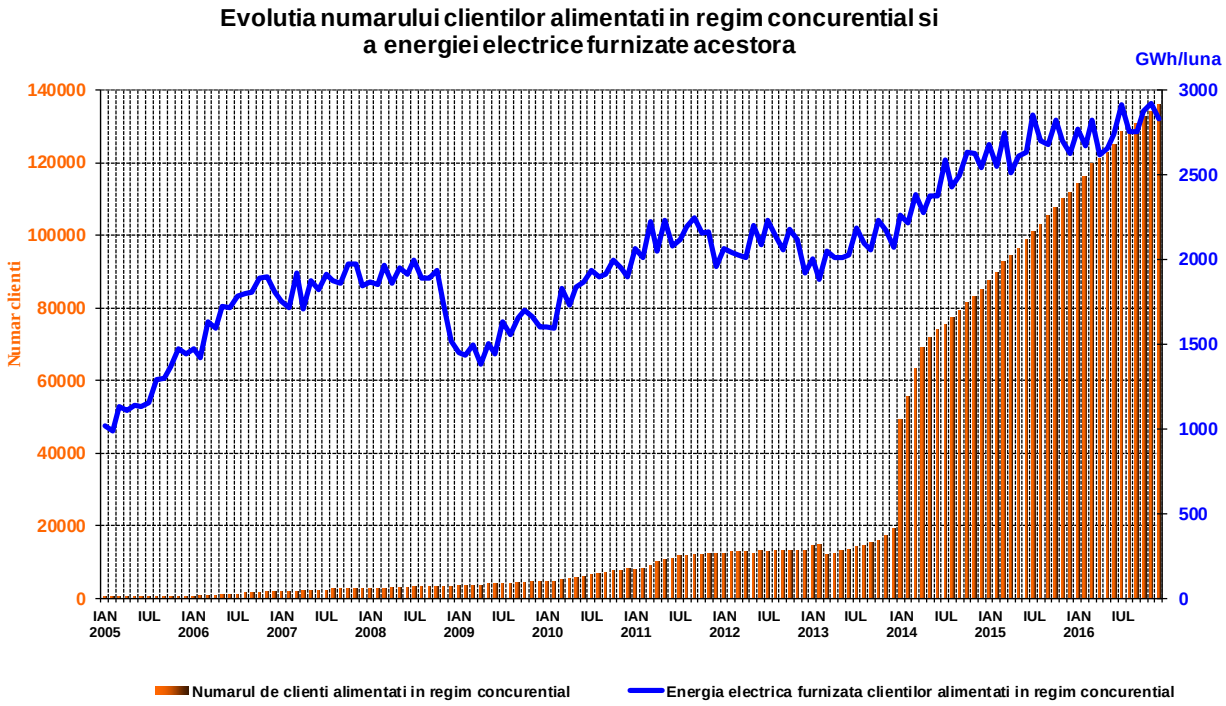
**Note 2: the regulated segment also includes electricity supplied to final customers in universal regim and last resort service for 2014, 2015 and 2016*

Source: Monthly reports of the suppliers – procesed by ANRE

- final electricity consumption recorded in 2016 increased by 1.3% from the level recorded in previous year;
- increase by 0.4% of the household consumption in 2016, compared to 2015, but maintaining its share in the final consumption structure;
- consumption increase by 3.8% for the non-household customers who have switched supplier compared with 2015 and increase of its share in the final consumption;
- decrease consumption for the non-household consumers supplied by universal service and by last resort by approx. 30.3% in 2016 compared with 2015 and also the decrease of its share in the final consumption.

In December 2016, on the competitive market were 136046 non-household consumers, the electricity supplied to them in 2016 being 33344GWh.

The evolution of the number of customers in the supply competitive market is shown graphically from the beginning of the market opening in the following figure. As it can be noted, the number of the customers who has changed the electricity supplier strongly increased also in 2016. The electricity supplied ranged from one month to another, recording higher or equal values to 2600GWh. Since January 2011, the supplied electricity includes the amount of self-supplied electricity to other consumption sites by the dispatchable producers whose self-provided quantities exceeded 200 GWh in previous year.



The evolution of the number of customers in competitive market and the electricity supplied to them

Source: Monthly reports of the suppliers – processed by ANRE

The values of competitive retail market concentration indicators during 2007-2016, showed in the following table, highlights a positive evolution regarding the decrease of the concentration. The year 2016 is characterized by a non-concentrated market, due to the large number of suppliers who competed on this market and their separation as market power.

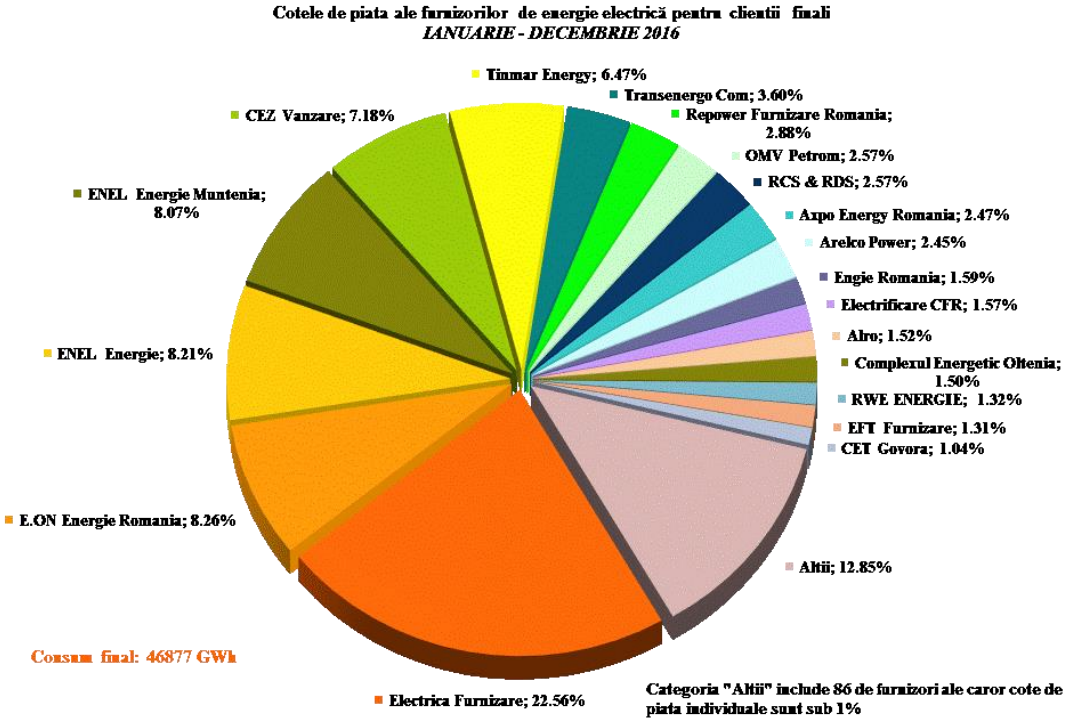
Year	C1	HHI
2007	19%	904
2008	17%	659
2009	16%	669
2010	14%	562
2011	13%	467
2012	12%	530
2013	12%	570
2014	13%	557
2015	15%	548
2016	16%	572

Although on the overall competitive retail electricity market, indicators show a non-concentrated market, at the level on its consumption categories, it is found that the lack of concentration is maintained only for *IC*, *ID*, *IE*, *IF* and *Others* categories, while at the *IA* and *IB* categories is recorded a moderate level of concentration.

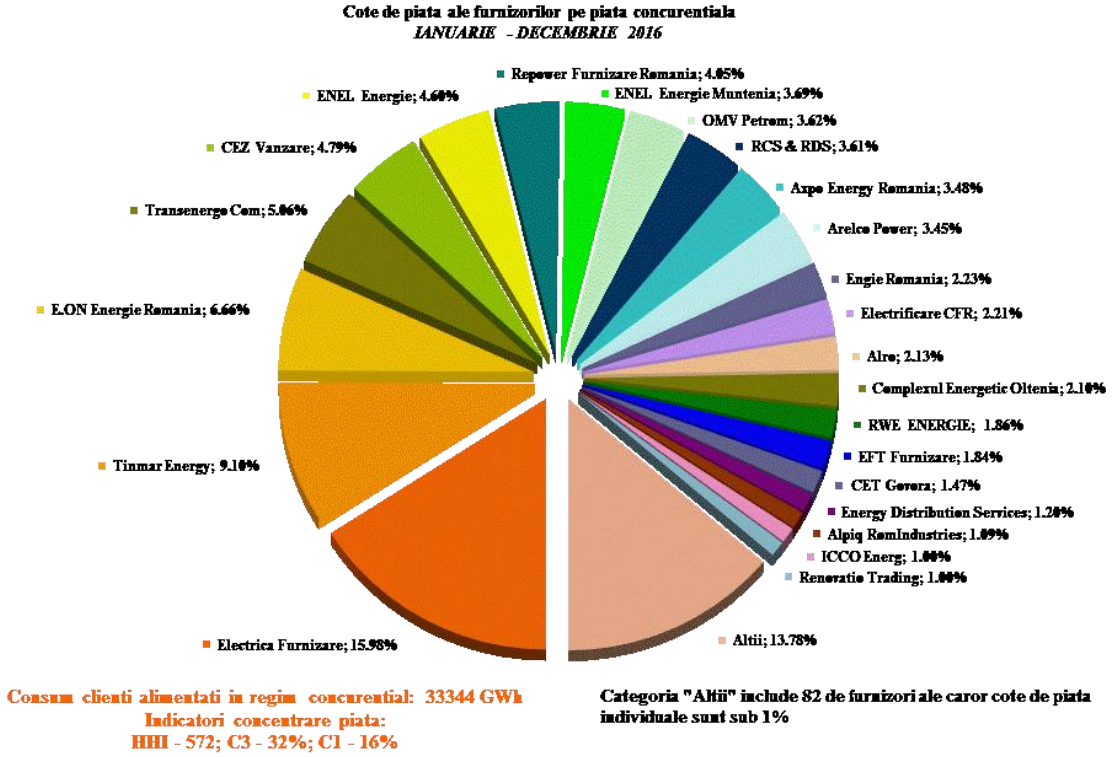
Indicatori - An 2016	Categorie consumator							Total PAM
	IA	IB	IC	ID	IE	IF	Altii	conc
C1 - % -	29	26	20	15	16	18	16	**16**
C3 - % -	61	50	39	32	27	35	35	**32**
HHI	1665	1203	806	607	711	977	935	**572**
Consum - GWh -	1031	4178	3582	8035	4969	2439	9111	**33344**
NR. FURNIZORI	75	86	74	71	36	21	20	**105**
nr. furnizori de ultimă instanţă	5	5	5	5	5	3	3	**5**
nr. furnizori concurentiali	55	67	56	58	28	15	11	**79**
nr. producatori	15	14	13	8	3	3	6	**21**

Source: Monthly reports of the suppliers – ANRE's processing

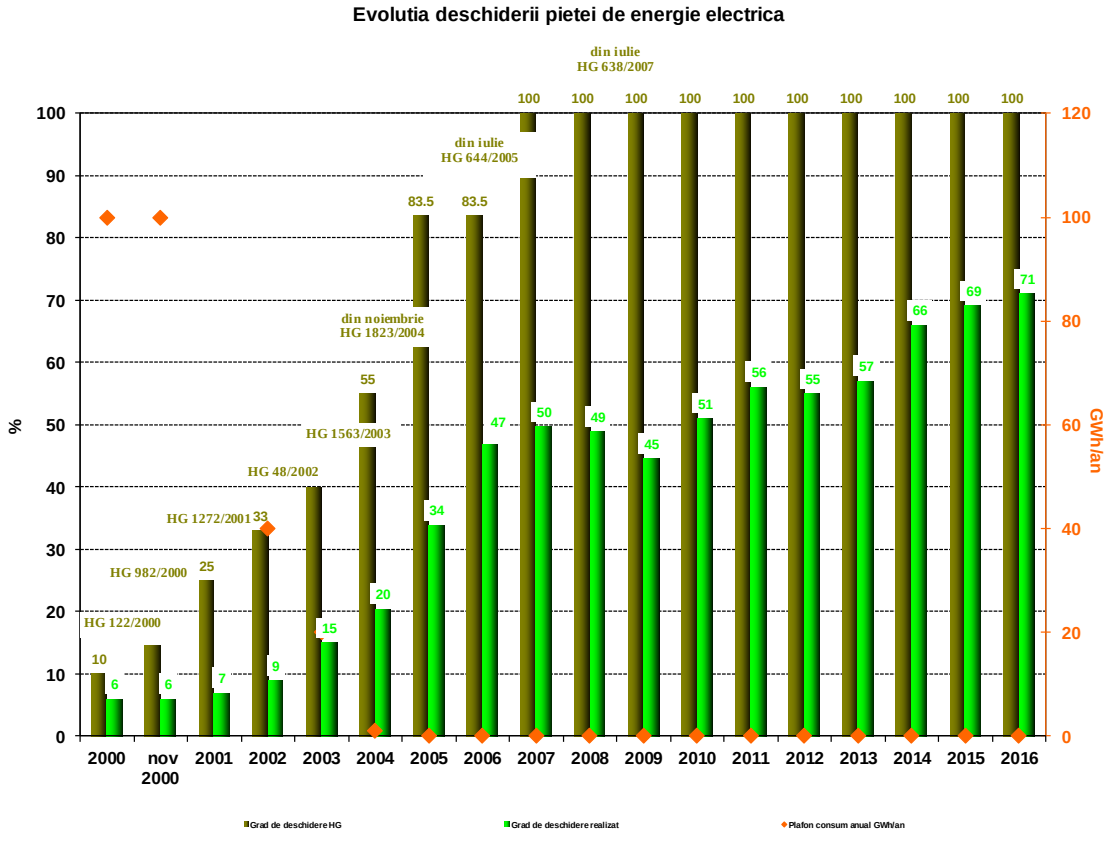
In the following graphs, the market shares for the year 2016 of suppliers of final customers are shown, calculated for the entire retail electricity market (the first graph) and respectively for the competitive component of the retail market (the second graph).



Source: Monthly reports of the suppliers – processed by ANRE



Source: Monthly reports of the suppliers – ANRE's processing



Source: Monthly reports of the suppliers – processed by ANRE

The supplier switching rate for 2016, shown in the following table, is determined for each type of consumer in two ways:

- by the number of consumption sites that have switched supplier in the analysed year and
- according to the energy supplied to those consumption sites.

It is noted that the self-consumption of the largest industrial consumers who also have a supply license and have decided to buy the electricity on the wholesale market, as competitive suppliers, is not included.

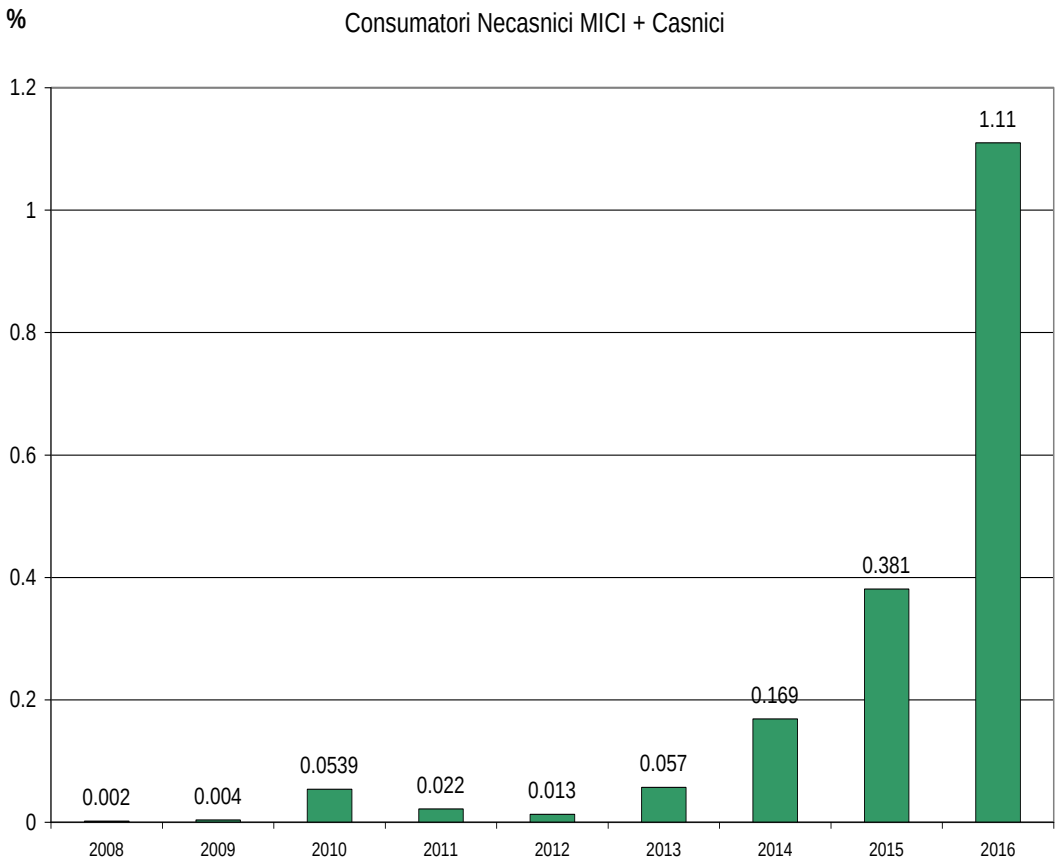
No.	Final Consumer Type	Supplier switching rate (%)	
		No. of consumption sites	Supplied electricity
1.	SMALL non-households +Households (contracted power less than or equal to 100 kW)	1.11	4.70
2.	LARGE Non-households (contracted power between 100 kW and 1000 kW)	13.71	17.55
3.	VERY LARGE Non-households (contracted power higher or equal to 1000 kW)	26.36	14.91
4.	**TOTAL Retail Market**	1.16	10.56

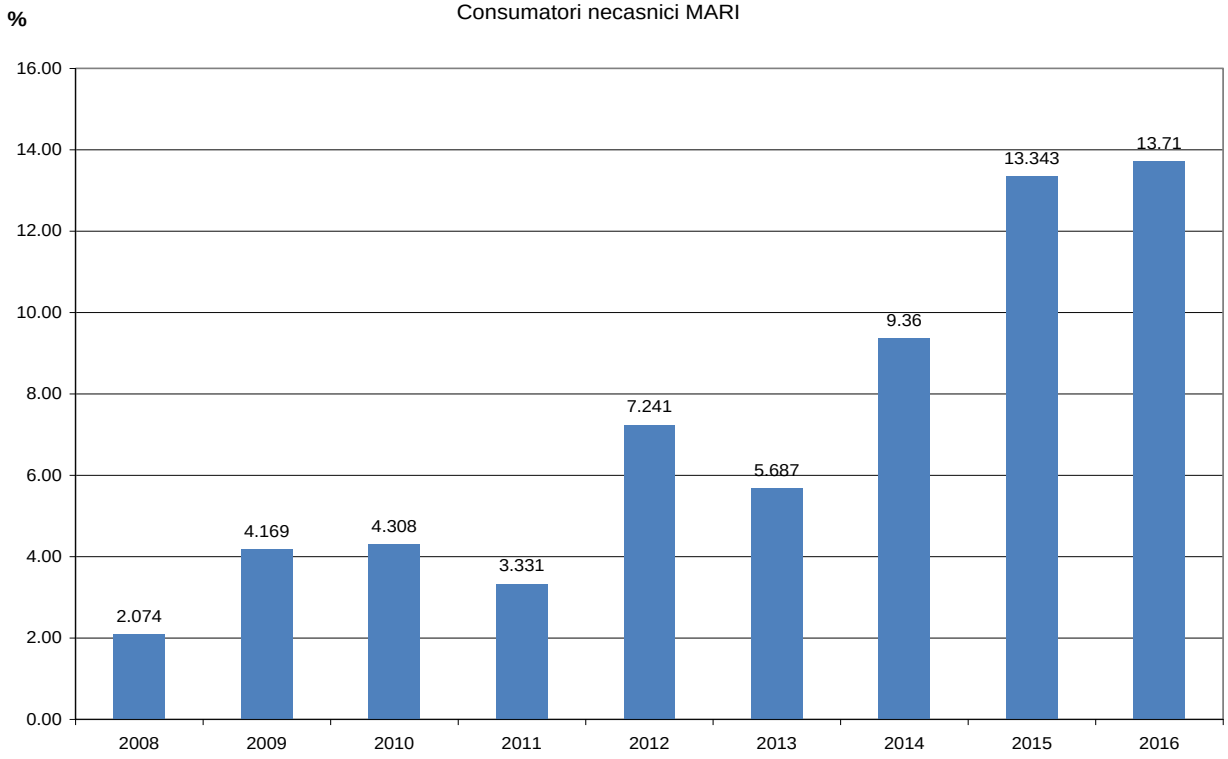
Source: suppliers' data, ANRE processing data

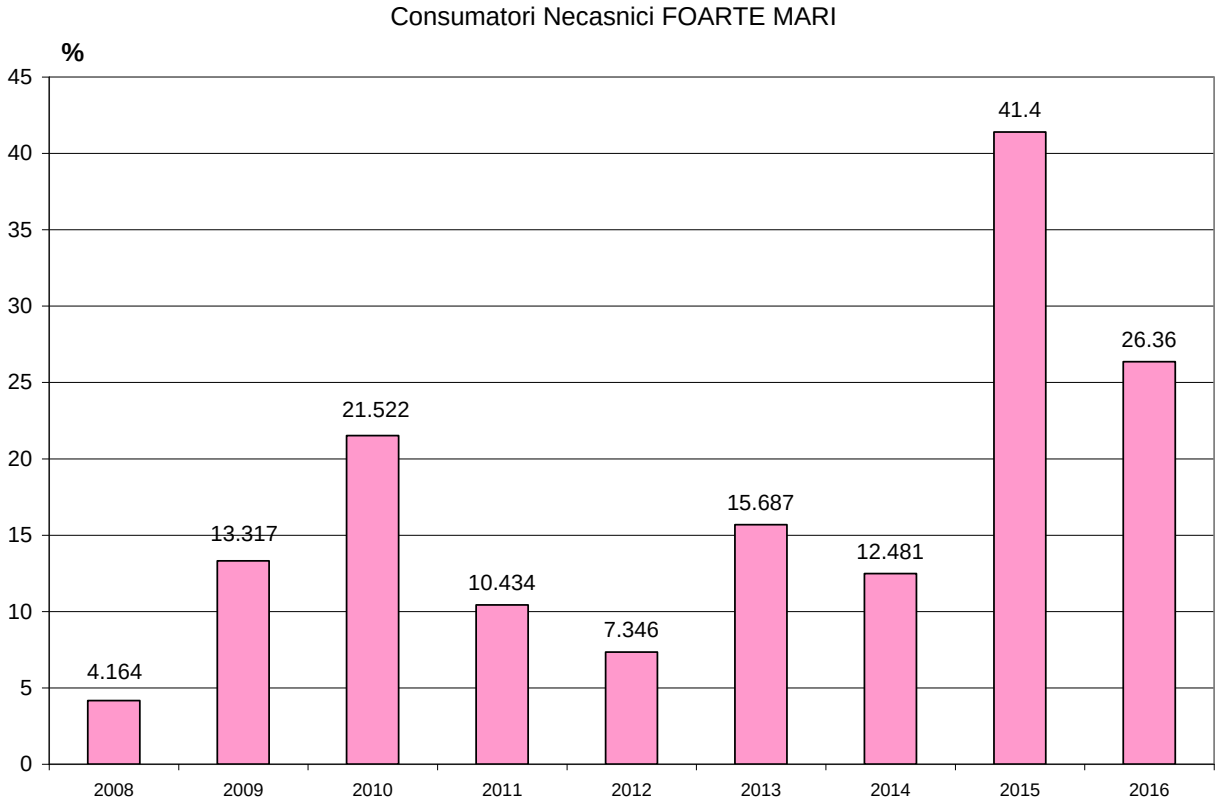
The rate value of supplier switching for the retail market determined on the basis of the number of consumption site has registered increases compared to last year's values. In 2016, the change of supplier was felt mainly on the category of households and non-households with low contracted power, while non-household customers the percentage of supplier change remained at approximately the same level.

There can be noticed significant increases of the indicator for small households category, this being an increasingly interesting category for competitive suppliers, while the preference of very large non-household customers has diminished.

The evolution of the supplier switching rate on the number of consumption sites in 2008-2016 is shown below:


%
Consumatori Necasnici MICI + Casnici
1.2
1
0.8
0.6
0.4
0.2
0
0.002
0.004
0.0539
0.022
0.013
0.057
0.169
0.381
1.11
2008
2009
2010
2011
2012
2013
2014
2015
2016


%
Consumatori necasnici MARI
16.00
14.00
12.00
10.00
8.00
6.00
4.00
2.00
0.00
2.074
4.169
4.308
3.331
7.241
5.687
9.36
13.343
13.71
2008
2009
2010
2011
2012
2013
2014
2015
2016



The next table shows the number of suppliers with market shares above 5% and the retail market concentration indicators for each category of final consumers registered in 2016.

We mention that the dominance principle was taken into account in the calculation of the market indicators values and the delivered electricity based on which was established the market share of each supplier does not include self-consumption of industrial consumers who have a supply license and have decided to buy electricity on the wholesale market, as competitive suppliers.

No.	Consumer Type	Number of suppliers with market share above 5%	C1(%)	C3 (%)	HHI
1.	SMALL Non-households + Households (contracted power less than or equal to 100 kW)	5	24	63	1541
2.	LARGE Non-households (contracted power between 100 kW and 1000 kW)	6	24	45	1067
3.	VERY LARGE Non-households (contracted power higher or equal to 1000 kW)	6	14	37	684
4.	**TOTAL Retail Market**	6	19	41	808

Source: supplier data , ANRE processing data

Values of market structure indicators calculated for 2016 indicate:

- a concentration level similar to that of 2015 on the whole retail electricity market, even if some of the competitive suppliers with quotas above 5% are different from those of the previous year;
- non-concentrated market segment for large non-households and moderately concentrated for the two categories of final customers, the changes as compared to 2015 being insignificant.

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

The following table shows average electricity selling prices for each category of non-households supplied in the competitive market. It is noticed that the average price decreased compared to 2015, when its value was 276.06 RON/MWh.

Categorie clienţi noncasnici	Consum (MWh)	Pret mediu (lei/MWh)
IA	1,031,192.40	379.28
IB	4,178,101.98	348.04
IC	3,582,056.85	293.61
ID	8,034,581.36	273.11
IE	4,968,697.75	240.67
IF	2,438,797.18	226.38
Altii	9,110,774.10	204.44
Total	**33,344,201.617**	**260.97**

The average selling price resulted by dividing the total value of supplier revenues from sales to a certain consumer category (including the value of services provided: transmission TG, transmission TL, ancillary services, distribution, settlement, imbalances, BRP aggregation taxes, measurement), to the total amount of electricity sold to that category. Prices do not include VAT, excise or other taxes.

Framing consumers by categories was done on the basis of their annual forecast of consumption in accordance with the provisions of Directive 2008/92/EC. The following table details the ranges of consumption to each category separately.

Categorii consumatori necasnici	Consum anual cuprins in intervalul (MWh):	
Banda - IA		<20
Banda - IB	20	<500
Banda - IC	500	<2000
Banda - ID	2000	<20000
Banda - IE	20000	<70000
Banda - IF	70000	<=150000
Altii	>150000	

Regulated tariffs for households - 2016

Household's regulated tariffs, applicable starting with 01.01.2016, were set and approved at the end of 2015 by ANRE Order no. 176/16.12.2015, in accordance with the provisions of the *Methodology for establishing prices and tariffs applied by the suppliers of last resort to final consumers*, approved by ANRE Order no. 92/2015.
In determining the regulated tariffs, the following justified costs for 2016 were taken into account:

a) the quantities and the prices from the SoLR's contracts, according with the Decisions ANRE no. 2561 and 2562/16.12.2015;
b) regulated profit of 1.5% from justified costs;
c) the unit cost of the service of 4.7 RON/client/month (uniformized at the level of each SoLR for all categories of customers, in RON/MWh) – determined taking into account the increase of 4.5 RON/client/month used at setting the tariffs applied in 2015 with the average inflation rate estimated for 2016 (0.5%) and the increase of the supply costs due to the SoLR' obligations through the entry into force of the ANRE Order no. 88/2015 (unique invoice implementation and contracting model);
d) the average value of the transport tariff – the injection component (Tg), approved by the ANRE Order no. 89/2015;
e) values of distribution tariff approved by the ANRE Orders no. 168 – 175/2015;
f) the average cost of participation in the centralized market, of 0.05 RON/MWh, estimated on the basis of the data transmitted by SoRL and on the basis of tariffs, approved by ANRE Order no. 167/2015;
g) the values of the transportation tariff extraction component (Tl), approved by the ANRE Order no. 93/2015;
h) the value of the system services tariff, approved by the ANRE Order no. 93/2015;

i) the balance of regulated tariff corrections from the previous periods, which includes:
   - the balance of the adjustments for the period prior to 2014 – the amount of extra profit/loss recorded in 2013 from the activity of supplying electricity at regulated tariffs, the equivalent of the green certificates invoiced additionally between July 26, 2012 – December 31, 2012 and the loss due to the activation of the major force clause in the contracts regulated with SC Hidroelectrica SA in 2012.
   - the extra gross profit/loss (the diference between the realised incomes and the justified costs plus regulated profit) recorded in 2014 from the electricity supply activity at regulated tariffs (determined on the base of the data transmitted by SoLRs – 12 months achieved);
   - extra gross profit/loss (difference between the realised incomes and the justified costs plus the regulated profit) registered in the first semester from the electricity supply activity at regulated tariffs (determined on the base of the data transmitted by SoLRs – 6 months achieved)
   - extra estimated gross profit/loss for the second semester 2015 from the electricity supply activity at regulated tariffs (determined on the base of the data transmitted by SoLR – 4 months completed plus 2 months estimated);

j) The amounts estimated as necessary to compensate for the reduction of the revenues from the booking/subscription component (corresponding to the increase of the deregulation in the first half of 2016 by 10% compared to the second semester of 2015 and in the second half of 2016 by another 10% to the first semester of 2016).

As a result of the calculations of the average price of return of the electricity supplied at regulated tariffs, necessary in 2016, it was proved that the conditions for the 5.36% reduction of the regulated tariffs were met, approved by the ANRE Order no. 157/15.12.2014, in force at the end of 2015.

Calculations determining the average return price of the electricity supplied at regulated tariffs were resumed at the end of the first semester 2016, for the second semester 2016, according to the provisions of the Methodology, approved by ANRE Order no. 92/2015.
Justified costs taken into consideration for the second semester of 2016 were the following:

a) the quantities and the prices in the regulated SoLR contracts during July – December 2016 (established in December 2015);
b) regulated profit of 1.5% of justified costs;
c) supply activity cost of 4.7 RON/customer/month (standardized at the level of each SoLR, for all categories of customers, in RON/MWh);
d) the average value of the transport injection component (Tg), according to the draft of the order published on the ANRE website at the beginning of June 2016;
e) distribution cost, according to ANRE Orders no. 168-175/2015;
f) the average unit cost of participation in the centralized market, of 0.05 RON/MWh, estimated on the basis of the data transmitted by SoLR and the basis of the tariffs approved by ANRE Order no. 167/2015;
g) transport tariff extraction component (Tl), according to the draft of the order published on the ANRE website at the beginning of June 2016;
h) the system service tariff, according to the draft of the order published on the ANRE website at the beginning of June 2016
i) the balance of the regulated tariff corections, from the previous periods, which includes:

- the balance of the adjustments for the period prior to 2014 – the amount of extra gross profit/loss recorded in 2013 from the activity of supplying electricity at regulated tariffs, the equivalent of the green certificates invoiced additionally between July 26, 2012 – December 31, 2012 and the loss due to the activation of the major force clause in the contracts regulated with SC Hidroelectrica SA in 2012.
- the extra gross profit/loss (the difference between the realized incomes and the justified costs plus regulated profit) recorded in 2014 from the electricity supply activity at regulated tariffs (determined on the base of the data transmitted by SoLRs – 12 months achieved);
- extra gross profit/loss (difference between the realised incomes and the justified costs plus the regulated profit) registered in 2015 from the electricity supply activity at regulated tariffs (determined on the base of the data transmitted by SoLRs – 12 months achieved);
- extra estimated gross profit/loss for the first semester 2016 from the electricity supply activity at regulated tariffs (determined on the base of the data transmitted by SoLR – 4 months completed plus 2 months estimated);

j) amounts estimated as necessary to compensate for the reduction in the second semester 2016 of incomes from the reservation/subscription component (corresponding to the increase of the degree of deregulation in second semester 2016 by 10% over the first semester 2016).

k) according to the provision of art. 37 of the Methodology approved by the ANRE Order no. 92/2015, for the determination of the extra-profist/loss realized in 2015, respectively estimated in the first half of 2016, the cost of the electricity supply at regulated tariffs was supplemented with the corresponding share of the value of losses from claims based on Electrica Furnizare and Enel Energie Muntenia (registered in the second half of 2015 and in the first half of 2016); the total value of losses on receivables (about 60 mil RON) was divided into all categories of tariffs applied by SoLR, proportional to the electricity consumption invoiced at respective tariffs.

Following the calculations, the regulated tariffs approved by ANRE Order no. 176/16.12.2015 were maintained throughout 2016, not being met the conditions for their adjustment at the end of the first semester 2016.

CMC tariffs - 2016

According to the road map for phasing out regulated tariffs, provided by the Memorandum of Understanding signed by the Romanian Government with the European Commission on 13 March 2012, in 2016 stages 10 and 11 of phasing out regulated tariffs were concluded. The percentages of purchasing electricity from the competitive market for final customers who have not used their eligibility rigt were:

- 100% of consumption for non-households and 60% of consumption for households, for the 10th stage of phasing out regulated tariffs (01 January 2016 – 30 June 2016)
- 100% of consumption for non-households and 70% of consumption for households, for the 11th stage of phasing out regulated tariffs (01 June 2016 – 31 December 2016).

For the 10th stage of phasing out regulated tariffs (01 January 2016 – 30 June 2016), according to the *Methodology of establishing prices and tariffs applied by SoLR to final customers*, approved by the ANRE Order no. 92/2015, at the end of the year 2015, the values of CMC tariffs were endorsed, as following:

SoLR	CMC Tariffs January – June 2016 [RON/kWh]		
	HV (110 kV)	MV (1-110 kV exclusive)	LV (0,1-1 kV inclusive)
Electrica Furnizare S.A. (Approval no. 37/22.12.2015)			
-Muntenia Nord	0,2906	0,3273	0,4461
-Transilvania Nord	0,2859	0,3301	0,4337
-Transilvania Sud	0,3079	0,3502	0,4587
CEZ Vânzare S.A. (Approval no. 36/22.12.2015)	0,2899	0,2899	0,2899
E.ON Energie România S.A. (Approval no. 40/22.12.2015)	0,2996	0,2996	0.2996
Enel Energie Muntenia S.A. (Appr. no. 39/22.12.2015)	0,2669	0,2669	0,2669
Enel Energie S.A. (Approval no. 38/22.12.2015)			
- Banat area	0,2878	0,3258	0,4393
- Dobrogea area	0,2784	0,3169	0,4437

Considering the fact that the average of the closing prices of the auction session organized on the Universal Service Centralized Market (PCSU) for the second quarter of 2016 was 27% lower than the average closing prices of the auction session organized on PCSU for the first quarter of 2016, based on the provisions of art. 35 para. (1) of the Methodology approved by the ANRE Order no. 92/2015, at the end of the first quarter of 2016, the CMC tariffs for the second quarter of 2016 were revalued and endorsed as follows:

SoLR	CMC Tariffs April – June 2016 [RON/kWh]		
	HV (110 kV)	MV (1-110 kV exclusive)	LV (0,1-1 kV inclusive)
Electrica Furnizare S.A. (Approval no. 7/30.03.2016)			
-Muntenia Nord	0,2703	0,3070	0,4258
-Transilvania Nord	0,2654	0,3097	0,4132
-Transilvania Sud	0,2870	0,3294	0,4378
CEZ Vânzare S.A. (Approval no. 4/30.03.2016)	0,2759	0,3190	0,4376

E.ON Energie România S.A. (App no. 3/30.03.2016)	0,2843	0,3257	0,4538
Enel Energie Muntenia S.A. (App no. 6/30.03.2016)	0,2512	0,2817	0,3954
Enel Energie S.A. (Approval no. 5/30.03.2016)			
- Banat area	0,2710	0,3090	0,4225
- Dobrogea area	0,2634	0,3019	0,4287

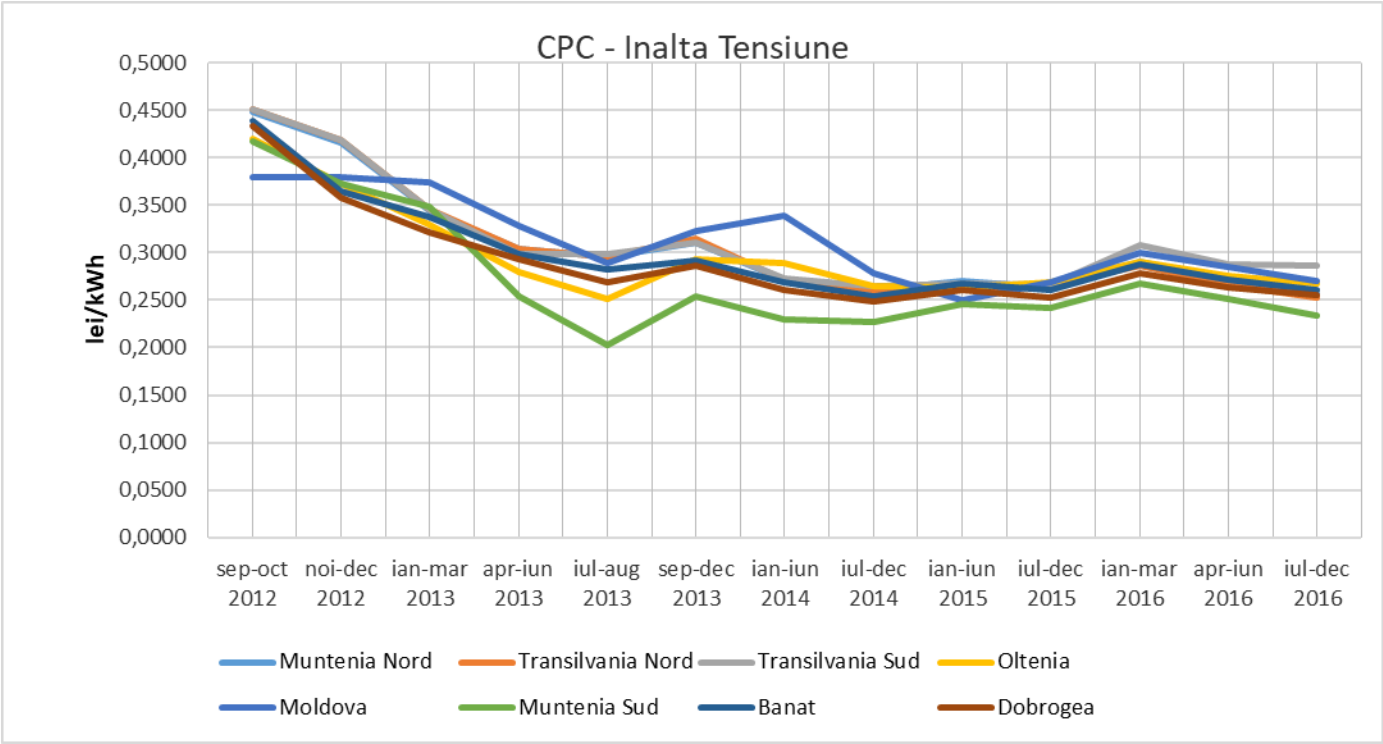
Pursuant to the *Methodology of establishing tariffs applied by suppliers of last resort to final customers*, approved by ANRE Order no. 92/2015, at the end of the first semester of 2016, the values of CMC tariffs were endorsed for the 11th stage of phasing out regulated tariffs (1 July 2016 – 31 December 2016), as following:

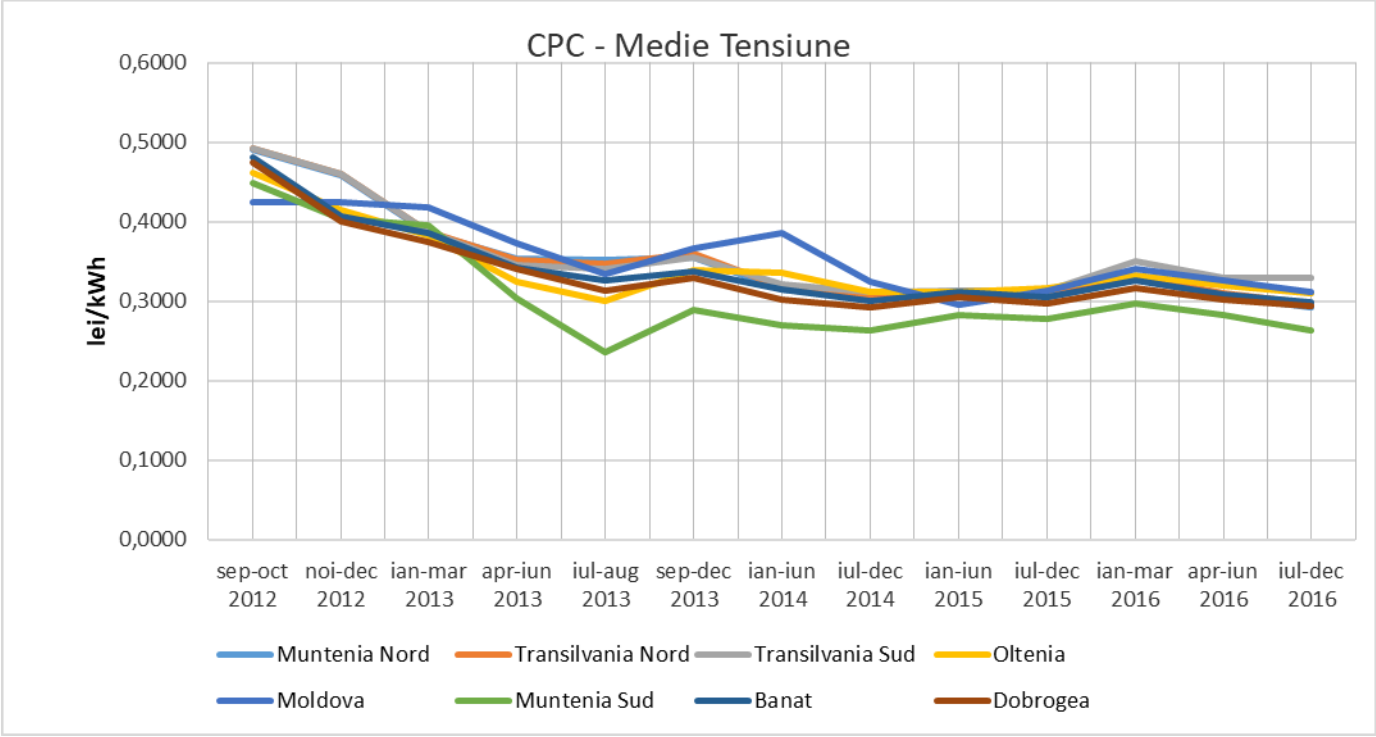
SoLR	**CMC Tariffs July – December 2016 [RON/kWh]**		
	HV (110 kV)	**MV (1-110 kV exclusive)**	**JV (0,1-1 kV inclusive)**
Electrica Furnizare S.A. (Approval no. 25/22.06.2016)			
-Muntenia Nord	0,2561	0,2927	0,4115
-Transilvania Nord	0,2531	0,2974	0,4009
-Transilvania Sud	0,2866	0,3290	0,4374
CEZ Vânzare S.A. (Approval no. 24/22.06.2016)	0,2667	0,3098	0,4284
E.ON Energie România S.A. (Approval no. 28/22.06.2016)	0,2698	0,3113	0,4394
Enel Energie Muntenia S.A. (App no. 27/22.06.2016)	0,2332	0,2637	0,3775
Enel Energie S.A. (Approval no. 26/22.06.2016)			
- Banat area	0,2603	0,2983	0,4118
- Dobrogea area	0,2553	0,2938	0,4206

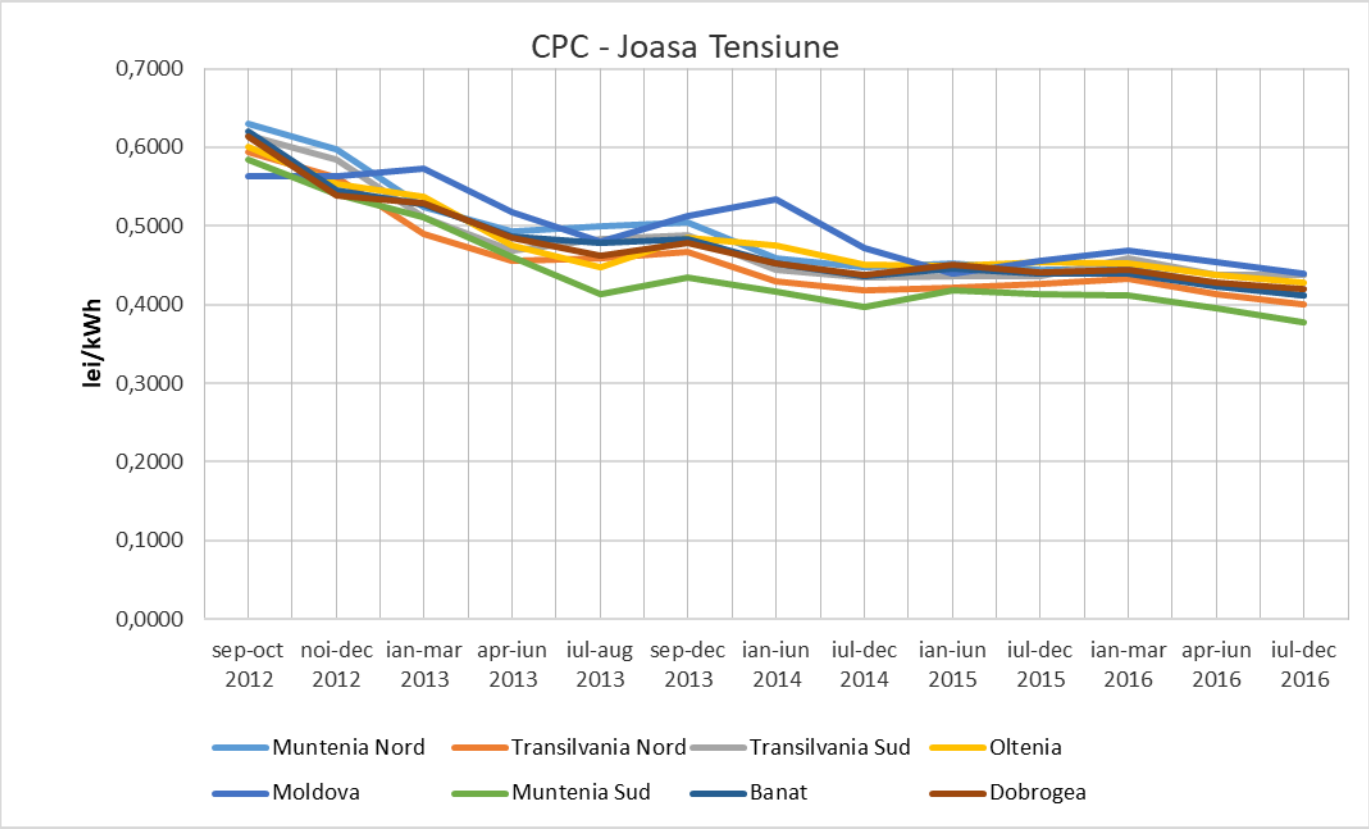
According to the provisions of the Methodology approved by the ANRE Order no. 92/2015, the values of the differentiated CMC tariffs for electricity supplied in the hours of the day, respectively in the night hours.

The purchase of electricity supplied at CMC tariffs was done through the Centralized Market for Universal Service (CMUS), the justified acquisition costs being set based on the closing prices of auctions held quarterly on the CMUS.

CMC tariffs evolution is presented in the following graphs:







Regulated market monitoring reports

Based on the *Monitoring methodology of the regulated electricity market*, approved by ANRE Order no. 68/2013 and amended by ANRE Order no. 42/2016, monitoring reports were prepared for each quarter of 2016 and for full year 2016.

Choosing between the indicators determined in 2016, based on the processing of the monitoring data received from the five SoLRs, the following tables present information on the number of consumption sites served by SoLR, the quantities and prices of electricity sold by the SoLR to end-customers and average acquisition prices of electricity by the SoLR on the wholesale market:

a) number of consumption sites served by SoLR in 2016:

SoLR	TOTAL, of which:	Non-household customers				Household customers		
		Total, of which:	in regime with US	in regime whithout US	in regime last resort, without US	Total, of which:	With social tariff	[%] household with social tariff/total household
CEZ Vânzare S.A.	1.343.294	9.647	1.751	7.896	0,92	1.333.647	190.781	**14,31%**
	100,00%	0,72%				99,28%		
E.ON Energie România S.A.	1.375.368	21.821	1.202	20.617	1,33	1.353.547	279.220	**20,63%**
	100,00%	1,59%				98,41%		
Electrica Furnizare S.A.	3.502.653	127.139	34.555	92.461	122	3.375.515	336.878	**9,98%**
	100,00%	3,63%				96,37%		
ENEL Energie S.A.	1.405.046	39.796	8.892	30.695	208	1.365.250	108.474	**7,95%**
	100,00%	2,83%				97,17%		
ENEL Energie Muntenia S.A.	1.150.274	27.609	3.898	23.691	21	1.122.665	21.984	**1,96%**
	100,00%	2,40%				97,60%		
TOTAL SoLR	**8.776.635**	**226.011**	**50.298**	**175.360**	**354**	**8.550.624**	**937.337**	**10,96%**
	100,00%	**2,99%**				**97,01%**		

b) the quantities of electricity sold by SoLR to end customers in 2016:

Sales customers – total SoLR											
Type customers	Voltage level	Tariff Type / Indicator Type (quantity & price)	[UM]	Regulated tariff	CMC Tariff			Tariff last resort (LR)			Total SoLR
				households	households	Non-households with universal service (US)	Total (CMC)	Non-households without universal service (US)	Non-households in the last resort and without US	Total (LR)	
Households	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]	3,61	6,65	0,00	6,65	0,00	0,00	0,00	10,26
		Average price	[RON/MWh]	294,48	306,49	0,00	306,49	0,00	0,00	0,00	302,26
	LV	Quantity	[GWh]	4.229,10	7.814,36	0,00	7.814,36	0,00	0,00	0,00	12.043,46
		Average price	[RON/MWh]	389,52	423,64	0,00	423,64	0,00	0,00	0,00	411,65
	Total sales households	Quantity	[GWh]	4.232,72	7.821,01	0,00	7.821,01	0,00	0,00	0,00	12.053,73
		Average price	[RON/MWh]	389,44	423,54	0,00	423,54	0,00	0,00	0,00	411,56
Non-households	HV	Quantity	[GWh]	0,00	0,00	0,41	0,409	0,18	0,001	0,18	0,59
		Average price	[RON/MWh]	0,00	0,00	264,46	264,46	281,84	310,77	282,00	269,84
	MV	Quantity	[GWh]	0,00	0,00	27,22	27,22	111,98	22,02	134,00	161,22
		Average price	[RON/MWh]	0,00	0,00	299,23	299,23	316,99	329,34	319,02	315,68
	LV	Quantity	[GWh]	0,00	0,00	269,50	269,50	1.036,85	10,83	1.047,68	1.317,18
		Average price	[RON/MWh]	0,00	0,00	423,98	423,98	437,44	445,79	437,52	434,75
	Total sales non-households	Quantity	[GWh]	0,00	0,00	297,13	297,13	1149,01	32,85	1181,86	1478,99
		Average price	[RON/MWh]	0,00	0,00	412,33	412,33	425,67	367,73	424,06	421,71
Total	HV	Quantity	[GWh]	0,00	0,00	0,41	0,4090	0,18	0,00	0,18	0,59
		Average price	[RON/MWh]			264,46	264,46	281,84	310,77	282,00	269,84
	MV	Quantity	[GWh]	3,61	6,65	27,22	33,87	111,98	22,02	134,00	171,48
		Average price	[RON/MWh]	294,48	306,49	299,23	300,65	316,99	329,34	319,02	314,87
	LV	Quantity	[GWh]	4.229,10	7.814,36	269,50	8.083,86	1.036,85	10,83	1.047,68	13.360,64
		Average price	[RON/MWh]	389,52	423,64	423,98	423,65	437,44	445,79	437,52	413,93
	Total sales customers	Quantity	[GWh]	4.232,72	7.821,01	297,13	8.118,14	1.149,01	32,85	1.181,86	13.532,72
		Average price	[RON/MWh]	389,44	423,54	412,33	423,13	425,67	367,73	424,06	412,67

SoLR/ Sales to final customers									
Customer type	Voltage level	SoLR / Indicator type	[UM]	CEZ	E.ON	ELF	Enel E	EEM	Total SoLR
Households customers	HV	Quantity	[GWh]	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
	MV	Quantity	[GWh]	2,17	1,45	3,14	0,89	2,61	10,26
		Average price	[RON/MWh]	308,98	316,97	310,37	297,54	280,35	302,26
	LV	Quantity	[GWh]	1.714,49	1.561,37	4.578,33	2.085,70	2.103,57	12.043,46
		Average price	[RON/MWh]	420,66	428,81	412,61	411,93	389,24	411,65
	Total sales households	Quantity	[GWh]	1.716,66	1.562,82	4.581,47	2.086,59	2.106,19	12.053,73
		Average price	[RON/MWh]	420,52	428,70	412,54	411,88	389,11	411,56
Non-households customers	HV	Quantity	[GWh]	0,00	0,00	0,00	0,59	0,00	0,59
		Average price	[RON/MWh]	0,00	0,00	0,00	269,84	276,19	269,84
	MV	Quantity	[GWh]	4,50	5,44	56,83	17,17	77,28	161,22
		Average price	[RON/MWh]	339,90	343,44	334,06	326,15	296,47	315,68
	LV	Quantity	[GWh]	47,48	85,87	607,85	207,49	368,49	1.317,18
		Average price	[RON/MWh]	455,16	473,31	439,43	443,92	410,25	434,75
	Total sales non-households	Quantity	[GWh]	51,97	91,31	664,69	225,25	445,76	1478,99
		Average price	[RON/MWh]	445,19	465,57	430,42	434,49	390,53	421,71
Total	HV	Quantity	[GWh]	0,00	0,00	0,00	0,59	0,00	0,59
		Average price	[RON/MWh]	0,00	0,00	0,00	269,84	276,19	269,84
	MV	Quantity	[GWh]	6,67	6,90	59,97	18,06	79,89	171,48
		Average price	[RON/MWh]	329,82	337,86	332,82	324,75	295,94	314,87
	LV	Quantity	[GWh]	1.761,97	1.647,23	5.186,19	2.293,20	2.472,06	13.360,64
		Average price	[RON/MWh]	421,59	431,13	415,75	414,82	392,37	413,93
	Total sales customers	Quantity	[GWh]	1.768,64	1.654,13	5.246,16	2.311,84	2.551,95	13.532,72
		Average price	[lei/MWh]	421,24	430,74	414,80	414,08	389,35	412,67

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

Acquisition structure – total SoLR										
Transaction type	Tariff Type / Indicator Type (quantity and price)	[UM]	Regulated tariff	CMC tariff			LR tariff			Total SoLR
			Household	Household	Non-household with US	Total (CMC)	Non-household without US	Non-household in regim LS and without US	Total (LR)	
purchase on regulated contracts	Quantity	[GWh]	4.152,27	0,00	0,00	0,00	0,00	0,00	0,00	4.152,27
	Average price	[RON/MWh]	136,90	0,00	0,00	0,00	0,00	0,00	0,00	136,90
purchase on bilateral negotiated contracts	Quantity	[GWh]	0,00	0,00	0,00	0,00	0,4105	0,002	0,4127	0,4127
	Average price	[RON/MWh]	0,00	0,00	0,00	0,00	79,36	80,38	79,37	79,37
purchase on CMBC	Quantity	[GWh]	0,00	0,00	0,00	0,00	721,51	10,09	731,60	731,60
	Average price	[RON/MWh]	0,00	0,00	0,00	0,00	162,78	159,11	162,73	162,73
cumpărare pe CMUS purchase on	Quantity	[GWh]	0,00	7.761,68	284,14	8.045,82	0,00	0,00	0,00	8.045,82
	Average price	[RON/MWh]	0,00	162,92	163,65	162,94	0,00	0,00	0,00	162,94
purchase IDM	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	
purchase DAM	Quantity	[GWh]	311,22	665,32	31,61	696,92	441,89	23,04	464,94	1.473,08
	Average price	[RON/MWh]	155,24	169,59	164,45	169,36	171,73	146,96	170,50	166,73
purchase on imbalance price	Quantity	[GWh]	219,18	328,92	9,56	338,48	222,32	10,02	232,34	790,00
	Average price	[RON/MWh]	195,00	205,59	199,34	205,41	207,43	171,30	205,87	202,66
Total purchase	Quantity	[GWh]	4.682,67	8.755,92	325,30	9.081,22	1.386,14	43,15	1.429,29	15.193,18
	Average price	[RON/MWh]	140,84	165,03	164,77	165,02	172,77	155,44	172,25	158,25
Sale DAM + IDM	Quantity	[GWh]	-199,61	-471,26	-14,01	-485,28	-116,59	-2,76	-119,35	-804,24
	Average price	[RON/MWh]	149,19	147,57	139,73	147,34	152,72	165,38	153,02	148,64
Sale at imbalance price	Quantity	[GWh]	-250,39	-463,61	-14,20	-477,81	-120,68	-7,59	-128,28	-856,47
	Average price	[RON/MWh]	134,28	133,04	127,78	132,88	134,98	112,45	133,64	133,41
Total sales	Quantity	[GWh]	-450,00	-934,87	-28,21	-963,09	-237,27	-10,36	-247,63	-1.660,71
	Average price	[RON/MWh]	140,89	140,36	133,71	140,17	143,70	126,57	142,98	140,78
TOTAL net purchase	Quantity	[GWh]	4.232,67	7.821,05	297,09	8.118,14	1.148,87	32,80	1.181,66	13.532,47
	Average price	[RON/MWh]	140,83	167,98	167,72	167,97	178,77	164,56	178,38	160,39

Transaction Type	Indicator type (quantity & price)	[UM]	CEZ	E.ON	ELF	Enel E	EEM	Total
Buying on regulated contracts	Quantity	[GWh]	571,70	534,54	1.562,25	748,89	734,89	**4.152,27**
	Average price	[RON/MWh]	125,82	99,93	143,24	138,39	157,41	**136,90**
Buying on negotiated contracts	Quantity	[GWh]	0,41	0,00	0,00	0,00	0,00	**0,41**
	Average price	[RON/MWh]	79,37	0,00	0,00	0,00	0,00	**79,37**
Buying on CMBC	Quantity	[GWh]	25,96	50,04	280,92	116,64	258,04	**731,60**
	Average price	[RON/MWh]	157,92	163,39	164,03	163,35	161,39	**162,73**
Buying on PCSU	Quantity	[GWh]	1.070,21	1.002,69	3.113,26	1.427,28	1.432,38	**8.045,82**
	Average price	[RON/MWh]	162,84	163,50	163,47	162,49	161,94	**162,94**
Buying on IDM	Quantity	[GWh]	0,00	0,00	0,00	0,00	0,00	**0,000**
	Average price	[RON/MWh]	0,00	0,00	0,00	0,00	0,00	
Buying on DAM	Quantity	[GWh]	231,08	184,80	362,08	320,55	374,58	**1.473,08**
	Average price	[RON/MWh]	163,38	171,36	172,87	162,24	164,43	**166,73**
Buying on BM	Quantity	[GWh]	84,33	88,80	197,26	200,48	219,12	**790,00**
	Average price	[RON/MWh]	219,01	222,96	223,65	178,38	191,45	**202,66**
Total buying	**Quantity**	**[GWh]**	**1.983,70**	**1.860,87**	**5.515,77**	**2.813,83**	**3.019,01**	**15.193,18**
	Average price	**[RON/MWh]**	**154,54**	**148,85**	**160,54**	**157,22**	**163,24**	**158,25**
Sale on DAM	Quantity	[GWh]	-60,98	-120,56	-120,71	-269,06	-232,94	**-804,24**
	Average price	[RON/MWh]	137,63	140,98	151,11	147,45	155,58	**148,64**
Sale on BM	Quantity	[GWh]	-154,09	-86,18	-148,90	-233,17	-234,12	**-856,47**
	Average price	[RON/MWh]	136,09	121,10	123,99	139,10	136,49	**133,41**
Total sale	**Quantity**	**[GWh]**	**-215,07**	**-206,74**	**-269,62**	**-502,23**	**-467,06**	**-1.660,71**
	Average price	**[RON/MWh]**	**136,53**	**132,69**	**136,13**	**143,57**	**146,01**	**140,78**
Total net acquisition	**Quantity**	**[GWh]**	**1.768,64**	**1.654,13**	**5.246,15**	**2.311,60**	**2.551,95**	**13.532,47**
	Average price	**[RON/MWh]**	**156,73**	**150,87**	**161,79**	**160,18**	**166,39**	**160,39**

Eurostat Reporting

According to the Methodology on reporting of information on electricity users, approved by ANRE Order no. 117/2008, completed /revised by ANRE Order no. 33/2013, the data were processed in 2016 and the reports for the second semester 2015 and the first semester 2016 were processed. In the first quarter of 2017 the reports for the 2nd semester 2016 were also transmitted.

The values of the average prices paid for the electricity consumed by the final customers in Romania (**both those on the regulated market and on the competive market**), for the non-households category, except those with consumption higher than 150,000 MWh annually, respectively for the household's category, in the years 2012, 2013, 2014, 2015 and 2016 are presented in the following table:

YEAR	HOUSEHOLDS			NON-HOUSEHOLDS		
	Price without taxes	Price with taxes	Tariff for services	Price without taxes	Price with taxes	Tariff for services
	RON/MWh	RON/MWh	RON/MWh	RON/MWh	RON/MWh	RON/MWh
2012	365,24	482,43	213,83	361,37	468,37	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	321,42	463,83	130,54
2016	411,25	472,64	205,56	279,29	335,40	118,67

Taxes include VAT, excise, cogeneration contribution and the value of green certificates, and the services tariff is the average price for the transmission, distribution, ancillary services and market operation.

Regulated tariffs for households -2017

According to the *Methodology for establishing the SoLR tariffs for final consumers*, approved by ANRE Order no. 92/2015, regulated tariffs for households were approved, applicable starting with 01.01.2017 (by ANRE Order no. 115/14.12.2016). **After the calculations of the average return price of electricity supplied at regulated tariffs, required in 2017, shows that the conditions for the 6.47% reduction of the regulated tariffs in force at the end of 2016.**

CMC Tariffs - 2017

Under the *Methodology for setting tariffs applied by suppliers of last resort to final customers*, approved by ANRE Order no. 92/2015, the CMC values were approved for the period of 1 January 2017 – 30 June 2017), as follows:

SoLR	CMC Tariffs January – June 2017 [RON/kWh]		
	LV (110 kV)	MV (1-110 kV exclusive)	HV (0,1-1 kV inclusive)
Electrica Furnizare S.A. (Approval 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. (Approval no. 45/20.12.2016)	0,2684	0,3104	0,4223
E.ON Energie România S.A. (Approval no. 49/20.12.2016)	0,2765	0,3166	0,4395
Enel Energie Muntenia S.A. (Approval no. 48/20.12.2016)	0,2341	0,2622	0,3663
Enel Energie S.A. (Approval no. 47/20.12.2016)			
- Banat area	0,2587	0,2933	0,3966
- Dobrogea area	0,2458	0,2818	0,4006

For the period: January – June 2017, the percentages of purchasing electricity from the competitive market for final customers, who have not used their eligibility right, are:
- 100% of non-households consumption,

- 60% of household's consumption.

3.3. Security of energy supply

According to the provisions of Article 24 of *Law no. 123/2012 on electricity and natural gas*, with subsequent additions and modifications, in case of an unexpected crisis in the electricity market and where physical safety or security of persons, appliances or installations or system integrity is threatened, transmission and system operator may propose ANRE and the relevant ministry to adopt safety measures. The measures taken in these situations should cause the least effect on the proper functioning of the European internal market and strictly aim at solving the crisis that generated them. Implementation of these measures is done by Government Decision, initiated by the relevant ministry.

During 2016 there were no crises in the electricity market.

3.3.1 Monitoring the balance between supply and demand

In 2016, electricity generation was about 1.7% lower than in 2015. Internal consumption amounted about 2% higher than in 2015. Romania was a net electricity exporter during 2016, the import-export balance being negative (- 5.02 TWh), although compared to 2015, in 2016, export decreased by approx. 18% and imports by 5%.

Regarding the used resources, big differences have not been registered compared to 2015. Hydro generation registered decreases of 3%, renewable resources of 0.9%, and nuclear generation of 0.2%. Increases were registered in the coal (3%) and hydrocarbons generation (1.1%).
Maximum net consumption was 8752 MWh/h and was registered on 19 December 2016 at 6 pm.

The generation park of a system is considered adequate if it can meet the demand of electricity in all the stationary states of the system under normal conditions. For a perspective evaluation, this capacity is verified for the time of year when NPS reaches the maximum consumption; namely, peak winter evening, using the methodology applied by ENTSO-E at European level.
Installed capacity is required to be significantly higher so that the generation park can provide available power because generation units are periodically removed from operation for repairs and maintenance, are affected by unplanned unavailability or partial reduction of the availability due to different causes. Also, an operational reserve should permanently be kept available to the TSO. Currently, this is sized to quickly balance continuous consumption variations and the unexpected disconnection of the largest units in the system. After the mobilization of the rapid reserve, this must be replaced by loading the slow tertiary reserve so that it can be used in the next incident.

3.3.2. Monitoring the adequacy of generation capacities from SEN in the period: 2016-2020-2025

ANRE monitors the adequacy of NPS based on the information and analyzes submitted by TSO in the TEN development plan and the TEN investment plan. In the framework of the ***RET development plan for the period 2016-2025***, TSO analyzed the adequacy of the NPS production park in the period 2016-2020-2025.

Estimation of the suitability of the production park for the 2016-2020-2025 horizons in the baseline scenario of consumption variation (assuming a cumulative increase in electricity consumption of about 4.6% on medium term (2020) and still about 8% in the long term (2025)), respectively production capacities, are presented in the following table:

MW

	Putere netă in 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 producţie netă [5=1+2+3+4]**	**20082**	**21555**	**25249**	**26582**
6	**Putere indisponibilă totala**	**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 this scenario, the surplus net power available in the system is about 14% in 2016, but then, after the commissioning of units 3 and 4 in Cernavoda, CHEAP Tarnita and large thermoelectric groups, rises to values around 20% in the 2020-2025 horizon.

The following table presents the estimation of the suitability of the production system for the horizons 2016-2020-2025, considering a favorable scenario of variation in consumption (characterized by a cumulative increase in electricity consumption by about 8% in the medium term (2020) and an increase of about 14% in the long term (2025)) and a „green" scenario for the evolution of production capacities (characterized by the increase of the power installed in the renewable energy sources, due to the economic and financial conditions favorable to the implementation of the energy policies promoted at EU level).

					MW
	Putere netă in 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 producţie netă [5=1+2+3+4]**	**20082**	**21555**	**25899**	**27982**
6	**Putere indisponibilă totala**	**6070**	**10219**	**11823**	**12933**
	• Putere indisponibilă (Reduceri temporare+conservari)	3428	6586	7708	8371
	• Putere in reparatie planificată	799	1328	1430	1603
	• Putere in 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

In this scenario, the net power surplus available in the system increases from 13% in 2016 to 18% in 2020 and 15% respectively in 2025 when renewable power is considered to be higher.

The adequacy forecast has taken into account that the installation of wind and solar power plants results in an increase in the share of unavailable power as a consequence of the specificity of the operation of these plants, characterized by a small number of hours of maximum power use.

Since 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, it is imperative to ensure adequacy and the existence of a certain amount of power in power plants to ensure a low service life peak and proper controllability of the production park as a whole.

Integration of wind and solar power plants into the load curve requires that conventional plants provide frequency adjustment function to compensate for power variations produced by them as a result of primary renewable energy variations, significantly increasing the frequency of situations where the thermoelectric groups must operate at partial load or be turned off and then rebooted. It is therefore necessary to install higher-power plants in the system, as the operation of wind and solar power plants has negative implications on the production costs and the lifetime of the basic operation groups.

In 2015 and 2016, according to the information provided by TSOs, the structure of the electricity generation (GWh), by type of fuel is shown in the following tables.

Fuel type	2015		2016	
	gross	net	gross	net
Coal	18.345	16.207	16.091	14.176
Hydrocarbons	9.399	8.756	9.960	9.266
Nuclear	11.638	10.665	11.286	10.368
Hydro	16.622	16.546	18.272	18.077
Wind	7.062	6.993	6.590	6.524
Biomass	529	522	453	448
Solar	2.003	1.982	1.820	1.802
Geothermal	-	-	-	-
Total	65.598	61.671	64.472	60.661

Type of power plant	Installed power [MW]		Available power [MW]	
	2015	2016	2015	2016
Coal	6435	5785	5399	4922
Hydrocarbons	5575	5487	3931	3738
Nuclear	1413	1300	1413	1413
Hydro	6731	6685	6384	6417
Wind	2978	2989	2967	3008
Biomass	121	122	118	126
Solar	1301	1346	1262	1304
Geothermal	0,05	0	-	-
Total	24555	23715	21475	20928

3.3.3. Monitoring investments in generation capacities

The establishment of new generation capacities and the rehabilitation of existing ones are done under **authorizations** issued by ANRE. The procedure for granting authorizations and conditions of their grant: criteria, power levels, approvals, differentiated by power category and activities are specified in the *Regulation for granting authorizations and licenses in the electricity sector*, approved by **ANRE Order no. 48/2013**. Refusal to grant the authorization or absence of a reply within the deadline, or any decision of the authority considered to be unlawful or tortuous may be appealed to the Bucharest Court of Appeal in accordance with legal provisions.

Authorizations granted in 2016 are presented in the table below:

Grating authorizations to set up, 2016

No.	Authorized power plants (by type of energy source)	No. of authorizations granted	Installed electrical power of newly authorized capacities [MW]
1	Solar	1	6,4
2	Hydrocarbons	6	439,261
3	Hydro	8	24,606
4	Biomass	1	0,2
	Total	**16**	**470,467**

Power plants put into service in 2016 and withdrawn from service in 2016 respectively are listed in the following table.

No.	**Power plant name**	**Power plant type**	**Pi [MW]**	**PIF data**
1	CET Făgăras	hydrocarbons (3 thermal engines)	13,14	08.01.2016
2	CEE Babadag 3	wind	30	29.01.2016
3	CET Oradea 1 - TG6	hydrocarbons (gas turbine)	56	26.04.2016
4	CET Bacău - TA5	hydrocarbons (gas turbine)	4,082	14.05.2016
5	CEE Curcubata Mare	wind	11,5	29.06.2016
6	CEF Onești	solar	17,28	27.09.2016
	TOTAL		**132**	
No.	**Power plant name**	**Power plant type**	**Pi [MW]**	**Data withdrawal**
1	CET Oradea 1 - TA4	coal	50	24.03.2016

ANRE approved until 31 December 2016, generation capacities of renewable energy with a total installed capacity of 4,798 MW. Of the total, 2,963 MW are wind turbines, 1,360 - photovoltaic panels and 124 MW - biomass, biogas and landfill gas. At the same time, 351 MW are for small hydro, below 10 MW, new power plants and refurbished power plants.

4. Natural gas market

4.1. Network regulation

4.1.1. Unbundling

According to the provisions of *Law no. 123/2012 on electricity and natural gas*, with subsequent amendments, the transport and 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 Transport Company "TRANSGAZ" – SA Medias, by issuing **ANRE Order no. 72/06.08.2014**. ANRE Order was notified to the European Commission.

Distribution operators are holders of distribution licenses, which have the specific function of natural gas distribution in one or more defined areas. At the end of 2016, on the Romanian natural gas market, **38 companies** had distribution licenses (39 at the beginning of the year, 38 at the end of the year, taking in consideration that on 30 September 2016 the Intergaz Est distributor went bankrupt and the distribution areas served by it were taken over by the Network Development Group).

Undertakings from the natural gas sector which carry out regulated activities (transport, storage, distribution, supply) are obliged to ensure separate 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 until the 1st of July (for the distribution and supply activities) and 31st of August (for the storage and transport activities), of the regulatory year following the one for which the reporting is done.

The regulated accounting records analyzed contain the following assessment situations:

- Incomes,
- 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 separation of accounts, 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 dividing the society, two legally independent companies have resulted - E.ON Gaz Romania S.A., specializing in the supply of natural gas and E.ON Gas Distributie 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 legal unbundling obligation for underground storage activity, the requirement was performed by the storage operator S.C. Depomureş S.A. The legal unbundling process of the largest storage operator – S.N.G.N. ROMGAZ S.A. is still ongoing. Measures were taken to sanction S.N.G.N. ROMGAZ S.A. for noncompliance with the legal unbundling obligation of the natural gas storage activity.

Other distribution system operators, serving less than 100,000 final customers and that don't have the obligation of legal separation, have 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 to the regulatory authority, the required documents should be audited/verified in accordance with the legal provisions in force, checking especially the compliance with the obligation to avoid cross-subsidization between activities.

4.1.2. Technical functioning

The conditions and rules for using the natural gas transport system in Romania and the transparent and non-discriminatory access of third parties are regulated by the Network Code. In 2013, the document was reviewed and approved by ANRE Order no.16/2013.

The European legislative framework evolution, materialized in adopting the European network codes on capacity allocation mechanisms in the natural gas transport systems, congestion management procedures and balancing of natural gas transport systems led to the necessity of starting a comprehensive process of review of the *NTS Network Code*, approved by ANRE Order no. 16/2013 with subsequent amendments and additions, in order to implement on a national level the European regulations taking into consideration the options provided by these regulations (ANRE Order no. 160/2015).

Difficulties encountered both by TSO and network users in the information transmission processes necessary for the proper conduct of the nomination and re-nomination procedures provided by the Network Code and the emergence of unforeseen elements in the conduct of the activities carried out at the S.N.T.G.N. TRANSGAZ S.A., in order to adapt the computer flows so as to ensure the correctness of the calculation of the imbalances at the daily level, led to the necessity to apply provisional measures, for a limited period, regarding the above-mentioned processes.

In this respect, based on the proposal of S.N.T.G.N. TRANSGAZ S.A. Medias, ANRE Order no. 1/2016 which provides for derogations from the applicability of some articles of the Network Code, namely, the continuation of the imbalance determination at the monthly level for a certain period, as estimated by the transmission system operator to be useful completing the necessary actions (adaptation of the GMOIS information platform, supplementation of technical, human and financial resources etc) in order to implement in full the provisions of the ANRE Order no. 160/2015 regarding the modification and completion of the Network Code for the National Transmission System for Natural Gas, approved by the ANRE Order no. 16/2013.

In the process of adapting the GMOIS information platform to the new requirements of the Network Code for the National Gas Transmission System, specialists from the National Strategic Reference Framework (SNNG) TRANSGAZ S.A. have identified a number of situations that may arise in the practice of implementing the Network Code, for addressing and solving where the existing regulatory framework did not contain specific provisions.

In this respect, based on the proposal of S.N.T.G.N. TRANSGAZ S.A. Medias, it was developed ANRE Order no. 14/2016 through which it was provided:

- completing the regulatory framework in such a way that it provides solutions to solve any problematic situations that may arise in the performance of the operations and procedures provided by the Network Code, respectively in carrying out the natural gas transport and balancing activities of NTS.
- the extension of the deadline set by the ANRE Order no. 1/2016 from 1 April 2016 on 1 September 2016, as well as the introduction, in this order, of the provisions of art. 1022-1025 of the NTS Network Code for established the applicable prices to determine the imbalance value recorded by network users, taking into account the tolerance level of 5% and the margin adjustment component of 10%, adjusted to the calculation monthly imbalances.

ANRE Order no. 75/2016 regarding the modification and completion of the Network Code for the National Transmission System for Natural Gas, approved by ANRE Order no. 16/2013 dealt with the following aspects:

- clarifying and detailing the definition of the network user partner in the context in which the existing definition has been frequently qualified as unclear and interpretable by economic operators involved in carrying out activities under the Nework Code, in particular by distribution system operators;
- the unequivocal setting of the stages and deadlines for the annual, quarterly, monthly and daily capacity booking processes at the entry/exist points to/from the NTS, including new points put into operation during the gas year, and clear delineation of the points where capacity booking procedures are distinct, such as, for example, interconnection points with gas transmission system in EU member states neighboring Romania, where the provisions of the Regulation (U.E.) no. 984/2013 establishing a network code for mechanisms for the allocation of natural gas transmission capacity;

- extension of the deadline until which an intra-day nominalization can be made from 14.00 to 17.00;
- postpone the previous daytime allocation date from 14.00 to 15.00 to allow the transmission system operator to go through the allocation process steps at the NTS entry points;
- a detailed description of the new allocation mechanism for the quantities of natural gas at the NTS entry points. According to him, after calculating the quantities introduced into the NTS in units of energy, the participants in the natural gas trading up to the NTS have the obligation to carry out the following operations directly in the online information platform of the transmission system operator:
    - the producers/SO introduce the data about the quantities sold/extracted, respectively handed over to a for transportation by NTS on gas day D;
    - the participants in the transaction confirm/reject the data on the quantities purchased on the gas day D and then enter the data on the quantities sold or handed over to a network user for transportation by NTS on gas day D;
    - the network user confirms/rejects the data regarding the quantities taken from the participants in the natural gas trading up to the NTS entry points on gas day D.
    - on the basis of the information submitted by the participants in the natural gas trading until entry into the NTS the transmission system operator shall allocate the quantities of natural gas at these points of entry to each participant/network user as follows:
        - in the case of producer/SO, the quantity allocated to it is the difference between the quantity produced/extracted and the sold, respectively delivered to a network user for transportation by NTS on gas day D;
        - in the case of the participants in the transaction, the amount allocated to each of them is the difference between the amount of the quantities confirmed by each participant as purchased and the sum of the quantities sold by the respective participant to the other trading participants, its partners, respectively handed over by the participant in the points of entry into NTS to network user for transport through NTS, confirmed by the latter- partners/network user;
        - in the case of network user, the sum of the quantities confirmed by each network in part until the completion of the information input stage in the information platform of the transmission system operator is the initial allocation of that network user to the entry points in the NTS.

- completing the provisions regarding the elements underlying the monthly allocation, with elements such as reading the meter indexes and downloading data from measurement systems – measured values, configuration logs, alarm logs, and events.

Based on the provisions of the ANRE Order no. 75/2016 regarding the modification and completion of the Network Code for the National Transmission System for Natural Gas, approved by ANRE Order no. 16/2013, S.N.T.G.N. TRANSGAZ S.A. submitted to ANRE a proposal regarding the Framework Convention between TRANSGAZ as a transmission and system operator and participants in natural gas trading until entry into the NTS, which was approved by **ANRE Order no. 86/2016**.

The main purpose of ANRE Order no. 86/2016 consisted in the creation of the legal relationship between the TSO and the natural gas trading participants upstream of the NTS, participants who do not have the network user quality, so that transactions in the Virtual Trading Point can be made possible by using the Facility of Gas Transfers, with the quantities of natural gas representing the daily quantitative differences resulting from the allocation process foreseen in art. 67-69 of the Network Code.

Thus, the rights and obligations of the TSO and the natural gas trading participants upstream of the entry into the NTS that do not have the quality of RUs, as well as the means of payment of the transport capacity related to the quantitative differences allocated to each of these participants, have been established.

The legislative framework regulating **the quality of the natural gas transmission system** and through which the performance indicators are established is set by the provisions of the **Performance Standard for transport and distribution services for the natural gas**, approved by the **ANRE Order no. 161/2015**, for the year 2016, reporting on the level of performance indicators being made as follows:

- for the period 01.01.2016 – 30.09.2016, in accordance with the provisions of the Performance Standard for the natural gas transport service, approved by the ANRE Decision no. 1361/2006, as amended and supplemented (Decision no. 1361/2006/1) – reporting deadline – 01 November 2016;
- for the period 01.10.2016 – 31.12.2016, according with the provisions of the Performance Standard for transport and distribution services for the natural gas, approved by the ANRE Order no. 161/2015 (Order no. 162/2015) – reporting deadline – 01 December 2017.

For the period 01.01.2016 – 30.09.2016, S.N.T.G.N. Transgaz S.A. has transmitted, according to the provision of the art. 5 of the ANRE Order no. 161/2015, the reporting presented in the next table:

Performance Indicator	**Objective**	**Accomplished**
IP1 - Solving access requests for connection to the NTS	98%	100%
IP2 - Making the connection to the NTS for the requests for access	98%	100%
IP3 – Renovation of land affected by the execution of some works to the NTS sites	-	-
IP4 - Information on service resumption	95%	100%

IP5 - Notification of planned interruptions in service supply and service resumption		100%	100%
IP6 - Solving the complaints made by the NTS network users regarding the natural gas measurement		98%	100%
IP7- Solving the complaints regarding NTS integrity and operation under safety conditions		95%	100%
IP8 - TSO's obligations to inform the applicants/network users, resulting from other regulations		95%	100%
IP9 – Information regarding performance indicators		-	-
IP10 - Green tel for applicants/network users NTS		Total number of incoming calls	105 (33% regarding the obtaining of certificates for the building permit, 10,5% on the route of a natural gas transport pipeline on personal property, 8,5% on the connection to the natural gas transmission system, 8,5% on the resumption power supply, 39,5% other topics)
IP11 - Safety indicators	the annual percentage of the network subject to control with gas detection devices	maximum 8,3%	7,6%
	the annual number of defects generating gas losses localized per kilometer of verified network	0,8	0,01
	The annual number of defects generating gas losses identified as a result of third parties notifications per kilometer of active network	0,1	0,00

The objectives to be met by the transmission system operator, hereinafter referred to as the TSO, starting with the gas year 2016-2017, as well as the compensation it is obliged to pay to the applicants in case of non-fulfillment of certain obligations arising from the provision of the service, in accordance with the provisions of Order no. 161/2015, can be found in the following table:

General performance indicator	Specific performance indicator	Objective	Compensations
IP0 – Registration of requests/complaints regarding the natural gas transmission system	IP_0[1]	≥90%	For non-sending the registration number of the request/complaint/claim within 2 working days, TSO pays the applicant: a) a fixed amount of 10 RON; b) in addition, 1 RON for each working day of delay starting on the 3rd working day but no more than 60 working days late.
IP1 – Compliance of the natural gas delivery and receipt conditions	-	-	For non-compliance, in points of delivery-take-over, of the technological parameters agreed with the users of the system, TSO pays the applicant 2000 RON.
	IP_1[1]	≥95%	For non-sending, within 10 working days, the response to complains/claims about technological parameters, TSO pays the applicant: a) a fixed amount of 20 RON; b) in addition, 5 RON for each working day of delay, starting on the 11th day working day, but no more than 60 working days of delay.
	IP_1 [2]	≥95%	For non-verification whithin 24 hours of agreed technological parameters and/or for non-restraint, the TSO pays 500 RON to the applicant within 12 hours of the verification.
	-	-	For non-compliance, in points of delivery-take-over, of the required natural gas quality requirements, the TSO pays the applicant 2000 RON.
	IP_1[3]	≥95%	For non-sending, within 15 working days, the response to complains/claim with regard to the quality of natural gas, the TSO pays to the applicant: a) a fixed amount of 20 RON; b) in addition, 5 RON for each working day of delay, starting on the 16th day working day, but no more than 60 working days of delay.
	-	-	For non-sending, in 5 working days, of the chromatographic analysis bulletins and of the results of the specific determinations related to the natural gas quality area, the TSO pays to the applicant: a) a fixed amount of 20 RON; b) in addition, 5 RON for each working day of delay, starting on the 6th working day, but no more than 60 working days of delay.

	IP_1^4	≥95%	For non-sending, in 15 working days, the response to complains/claims, on the measurement of natural gas quantities, the TSO pays to the applicant: a) a fixed amount of 20 RON; b) in addition, 5 RON for each working days of delay, starting on the 16th working day, but no more than 60 working days of delay.
	IP_1^5	≥95%	For non-displacement, within 2 working days, at the place, for checking the operating mode of the natural gas metering system/instrument, the TSO shall pay to the applicant: a) a fixed amount of 500 RON; b) in addition, 5 RON for each working days of delay, starting on the 3rd working day, but no more than 60 working days of delay.
IP2 – Access to TS	IP_2^1	≥95%	For non-sending, within 30 days, the response to the request of access, the TSO shall pay to the applicant: a) a fixed amount of 60 RON; b) in addition, 10 RON for each day of delay, starting on the 31st day, but no more than 60 days of delay.
	IP_2^2	≥95%	For non-sending, within 15 days, the response to the request to access to the system, the TSO shall pay to the applicant: a) a fixed amount of 20 RON; b) in addition, 5 RON for each day of delay, starting on the 16th day, but no more than 60 days of delay.
IP3 - Connection to TS	IP_3^1	≥95%	For non-sending, within 30 days, the response to the request for connection to the system, the TSO shall pay to the applicant: a) a fixed amount of 60 RON; b) in addition, 10 RON for each day of delay, starting on the 31st day, but no more than 60 days of delay.
	IP_3^2	≥95%	For non-sending, in 15 days, the response to complains/claims, about the connection in the system, the TSO pays to the applicant: a) a fixed amount of 20 RON; b) in addition, 5 RON for each working days of delay, starting on the 16th working day, but no more than 60 working days of delay.
	IP_3^3	≥95%	For non-compliance the deadlines for completion of the works and commissioning of the connection installation, established in the connection contract, TSO pays the applicant 200 RON.

	IP_3^4	≥95%	For non-sending, in 15 working days, the response to complains/claims, with regard to the design, execution, reception and/or commissioning of the system connection system, the TSO pays to the applicant: a) a fixed amount of 20 RON; b) in addition, 5 RON for each working days of delay, starting on the 16th working day, but no more than 60 working days of delay.
IP4 - Restoration of land and/or property affected by the execution of works to ST sites	IP_4^1	≥95%	For non-sending, in 15 working days, the response to complains/claims, with regard to the restoration of land and/or property affected by the execution of works to ST sites, the TSO pays to the applicant: a) a fixed amount of 20 RON; b) in addition, 5 RON for each working days of delay, starting on the 16th working day, but no more than 60 working days of delay.
IP5 – Notification of unplanned limitations and/or interruptions and resumption of natural gas transport and system service	IP_5^1	≥98%	For non-compliance the 6th hours deadline, for notification of unplanned limitations and/or interruptions, TSO pays to the applicant: a) a fixed amount of 200 RON; b) in addition, 2 RON for each hour of delay, starting with the 7th hour.
	IP_5^2	≥98%	For non-sending, the deadlines provided in the user agreements, the notifications of unplanned limitations and/or interruptions and resumption, with duration of more than 24 hours, the TSO pays to the applicant 200 RON.
IP6 – Notification of planned limitations and/or disruptions and resumption of gas transport and system service	IP_6^1	≥98%	For non-sending, within 5 days, the notification of the reason, date and time of the planned limitation/interruption, as well as the date and time of the resumption of service, the TSO shall pay the applicant 200 RON.
	IP_6^2	≥98%	For non-compliance of the term for resuming the service, the TSO shall pay the applicant 200 RON.
IP7 - Solving requests/complaints regarding the provision of natural gas transmission and system service other than those separately treated within the performance standard	IP_7^1	≥80%	For non-sending, in 30 days, the response to requests/complains/claims, other than those treated in the Performance Standard, the TSO pays to the applicant: a) a fixed amount of 10 RON; b) in addition, 2 RON for each day of delay, starting on the 31st day, but no more than 60 days of delay.

IP8 - Green Tel	IP_8^1	≥98%	-
	IP_8^2	≥98%	-
IP9 - Obligation to pay compensations due in accordance with the provisions of the performance standard for transport and distribution services of natural gas.	IP_9^1	≥90%	For non-payment, within 30 days and under the conditions set out in the performance standard, at the rightful request of the applicant, the TSO pays the applicant: a)double the compensations due, starting on the 31st day; b) threefold the compensations due, starting on the 61st day.

In addition to the performance indicators presented in the above table, TSO is required to ensure continuity in the system's gas supply. Thus, for the non-fulfillment of this obligation, TSO pays the claimant compensation of 400 RON. These provisions do not apply when the TSO proves, with supporting evidence, that the non-fulfillment of the obligation is the result of third parties' requests/actions, whether or not they have contractual relations with TSO.

The new Performance Standard therefore reconsiders how performance indicators are measured and how they are met, with performance indicators broken down into generic indicators and specific indicators detailing the obligations of the transmission system operator, thus ensuring a cleare evidence of these obligations, as well as the deadlines for their fulfillment, so that deficiencies in the provision of the service can be easily identified in order to remedy them and, implicitly, to increase the quality of the service.

At the same time, for the accountability of the transmission system operator, in addition to the previous regulation, the standard promoted through the ANRE Order no. 161/2015 establishes compensation which the transmission system operator is obliged to pay to the applicant at the rightful request of the latter for failure to fulfill his obligations.

Compensations may amount to 2000 RON for non-compliance of certain obligations, such as the provision of technological parameters agreed with system users or the quality of natural gas at the points of delivery-takeover, or they may have modest values, of the order of ten of RON, for non-compliance with response times, additional for each working day of delay but no more than 60 working days.

The legislative frame work regulating **the quality of the natural gas distribution service** and setting the performance indicators for 2016 is:

- in the period 01.01.2016 – 30.09.2016, the provisions of the **Performance Standard for the natural gas distribution service**, approved by Annex no. 2 of the ANRE **Decision no. 1361/2006**, as amended and supplemented (Decision No. 1361/2006/2) – reporting deadline – 1 November 2016;
- in the period 01.10.2016 – 31.12.2016, the provisions of the **Performance Standard for the natural gas distribution and system service**, approved by the ANRE Order no. 162/2015 (Order no. 162/2015) – reporting deadline – 1 December 2017;

In the framework of Decision no. 1361/2006/2 the next terms have been defined:

a) performance indicators guaranteed (IPG) – indicators that set minimum performance levels for OSD performance, for which non-compliance OSD pays penalties;

b) general performance indicators (PGIs) – indicators setting annual performance levels in service provision.

Concerning IPG provided in Decision no. 1361/2006/2, from the monitoring of the information transmitted by OSD it was found that, for the period 01.01.2016 – 30.09.2016, the level of penalties paid is about 23800 RON.

PGI provided in Decision no. 1361/2006/2 regarding the solving of requests for access to connection to SD within the stipulated deadline, notification of the consumer regarding planned and unplanned service interruptions, OSD obligations to inform the applicants/consumers arising from other ANRE regulations, OSD drafting obligations of the performance indicators and safety indicators (with nine-month reporting) were respected by the OSD.

For the general performance indicator for fulfilling the obligations for Green Tel, the reporting of penalties paid by OSD and the average duration of planned/unplanned interruptions, measures were taken to sanction OSD for non-compliance.

Performance Standard for natural gas distribution service and system service, approved by ANRE Order no. 162/2015, provides for the following general performance indicators:

- IP0 - registration of requests/complains/claims regarding natural gas distribution and system service;
- IP1 - contracting of the distribution service and complying of the natural gas delivery-take-over conditions;
- IP2 - access to natural gas distribution system
- IP3 - connection to the natural gas distribution system
- IP4 – restoration of land and/or property affected by the execution of works to the sites of the natural gas distribution system

- IP5 –notification of unplanned limitations and/or interruptions and resumption of natural gas distribution and system service;
- IP6 - Notification of planned limitations and/or disruptions and resumption of natural gas distribution and system service;
- IP7 - Solving requests/complaints/claims regarding the provision of natural gas distribution and system service other than those separately treated within the performance standard;
- IP8 – Green Tel;
- IP9 - fulfillment obligation to pay compensations due in accordance with the provisions of the performance standard.

The table below sets out the conditions to be met and the compensation that DSO must pay to consumers/applicants, taking into account the provisions of Order no. 162/2015.

No.	General performance indicator	Specific performance indicator	Condition for the performance indicator (%)	Compensation
1.	IP0	IP_0^1	90	For non-sending the registration number of the request/complaint/claim within 2 working days, DSO pays the applicant: a) a fixed amount of 10 RON; b) in addition, 1 RON for each working day of delay starting on the 3rd working day but no more than 60 working days late.
2.	IP1	IP_1^1	90	For non-sending the natural gas distribution contract for signing, within 10 days of the registrations of the application and/or the complete documentation, the DSO pays to the applicant: a) a fixed amount of 20 RON; b) in addition, 5 RON for each day of delay starting on the 11th day but no more than 60 days late.
		IP_1^2	95	For non-sending the reply to requests/complaints/claims of any SD user regarding the non-compliance with the value of natural gas pressure within 15 days from the date of their registration DSO pays the pressure within 15 days from the date of their registration DSO pays the applicant: a) a fixed amount of 20 RON; b) in addition, 5 RON for each day of delay starting on the 16th day but no more than 60 days late.

				Non-spot checking of natural gas pressure, within 5 working days of registration of the complaint/claim, DSO pays the applicant: a) a fixed amount of 20 RON; b) in addition, 5 RON for each working day of delay starting on the 6th working day but no more than 60 working days late.
				Missing SD user notification, within 3 working days of registration of the complaint/claim regarding the date, time and place of the verification, DSO pays the applicant: a) a fixed amount of 20 RON; b) in addition, 5 RON for each working day of delay starting on the 4th working day but no more than 60 working days late.
		IP_1^3	95	No response to written complaints/claims by SD users regarding the quality of natural gas, within 15 days from the date of their registration, DSO pays the applicant: a) a fixed amount of 20 RON; b) in addition, 5 RON for each day of delay starting on the 16th day but no more than 60 days late.
		IP_1^4	95	No response to SD users' complaints/claims about the measurement of natural gas quantities within 15 days of its registration, DSO pays the applicant: a) a fixed amount of 20 RON; b) in addition, 5 RON for each day of delay starting on the 16th day but no more than 60 days late.
				Non-spot verification of the operation of the measuring equipment whithin 5 working days, DSO pays the applicant: a) a fixed amount of 20 RON; b) in addition, 5 RON for each working day of delay starting on the 6th working day but no more than 60 working days late.
				Missing SD user notification, within 3 working days of registration of the complaint/claim regarding the date, time and place of the verification, DSO pays the applicant: a) a fixed amount of 20 RON; b) in addition, 5 RON for each working day of delay starting on the 4th working day but no more than 60 working days late
3.	IP2	IP_2^1	95	No response to access request, within 30 days, DSO pays the applicant: a) a fixed amount of 20 RON; b) in addition, 2 RON for each day of delay starting on the 11th day but no more than 60 days late.
		IP_2^2	95	No response to written complaints/claims of any applicant or SD user, about access request, within 15 days from the date of their registration, DSO pays the applicant: a) a fixed amount of 10 RON; b) in addition, 2 RON for each day of delay starting on the 16th day but no more than 60 days late.

4.	IP3	IP_3^1	95	No response to connection request, within 30 days, DSO pays the applicant: a) a fixed amount of 20 RON; b) in addition, 2 RON for each day of delay starting on the 31st day but no more than 60 days late.
		IP_3^2	95	No response to written complaints/claims of any applicant or SD user, about connection request, within 20 days from the date of their registration, DSO pays the applicant: a) a fixed amount of 10 RON; b) in addition, 2 RON for each day of delay starting on the 21st day but no more than 60 days late.
		IP_3^3	95	For this specific performance indicator, DSO is not required to pay compensation to the applicant.
		IP_3^4	95	For this specific performance indicator, DSO is not required to pay compensation to the applicant.
		IP_3^5	95	No reply to written complaints/claims by any SD applicant or user regarding the design, execution, reception and/or commissioning of the connection facility within 20 days of the date of their registration, DSO pays the applicant: a) a fixed amount of 10 RON; b) in addition, 2 RON for each day of delay starting on the 21th day but no more than 60 days late.
5.	IP4	IP_4^1	90	For non-sending the response to the complaints/claims by any SD applicant or user, in 15 working days, with regard to the restoration of land and/or property affected by the execution of works to SD sites, DSO pays to the applicant: a) a fixed amount of 20 RON; b) in addition, 2 RON for each working days of delay, starting on the 16th working day, but no more than 60 working days of delay.
6.				Non-meet the obligation to ensure continuity in the supply of natural gas to SD users, OSD pays the claimant compensation of 200 RON.
7.	IP5	IP_5^1	95	No notification of users regarding the unplanned limitation and/or interruption of the gas distribution service as soon as possible but no more than 12 hours from the limitation/interruption., DSO pays the applicant: a) a fixed amount of 100 RON; b) in addition, 2 RON for each hour of delay, starting on the 13th hour from the moment of limitation/interruption, and/or from the initial information..
8.	IP6	IP_6^1	98	No notification to users about the limitation and/or discontinuation of the natural gas distribution service at least 2 working days before the commencement of the works, as well as the resumption of the service, the DSO has the obligation to pay the claimant compensation in value of 100 RON.
9.	IP7	IP_7^1	80	For non-sending, in 30 days, the response to requests/complains/claims, other than those treated in the Performance Standard, the DSO pays to the applicant: a) a fixed amount of 10 RON; b) in addition, 1 RON for each working day of delay, starting on the 31st working day, but no more than 60 working days of delay.

10.	IP8	IP_8^1	98	For this specific performance indicator, DSO is not required to pay compensation to the applicant.
11.	IP9	IP_9^1	90	For non-payment, within 30 days, at the rightful request of the applicant, the DSO pays the applicant: a)double the compensations due, starting on the 31st day, from the registration day; b) threefold the compensations due, starting on the 61st day, from the registration day.

By Order no. 162/2015 the number of performance indicators monitored by ANRE increased compared to Decision no. 1361/2006/2, accompanied by an increase in cumulative compensation.

At the same time, with respect to Decision no. 1361/2006/2, by Order no. 162/2015, DSO has the additional obligations as follows:

- to ensure continuity in the natural gas supply of SD users. This obligation does not apply if the DSO proves with supporting documentation, that its non-fulfillment is the result of third parties' requests/actions, whether or not they have contractual relations with DSO. For non-fulfillment of this obligation, DSO pays the claimant a compensation of 200 RON.
- to carry out the activity of annual monitoring of the satisfaction of the applicants and users of the natural gas distribution system, regarding the following criteria:
    - the quality of the gas distribution service, respectively the confidence in the distribution system operator's ability to safely operate the system;
    - the attitude and competence of the distribution operator's personnel with whom the applicant or system user comes into contact:
    - the accessibility of information about the service provided by the distribution operator;
    - the promptness of handling complaints/claims/requests;
    - how to deal with complaints/claims/requests;
    - satisfying the requirements of system users and applicants.
        - displaying on its own website the record of requests for access, respectively connection to the natural gas distribution system, as well as recording of planned limitations and/or disruptions and unplanned interruptions in the provision of natural gas distribution and system service;
        - reporting to ANRE, by December 1st of each year, for the previous gas year, the following:
    - performance indicators for natural gas distribution service and system service;
    - balanced of paid compensation;
    - the total number of requests for access, respectively the connection to the natural gas distribution system and the average duration of their processing;
    - the total number of complaints, claims and requests received, broken down by each specific performance indicator of the natural gas distribution and system service and the average duration of their processing;
    - the number of respondents, the criteria considered, the interpretation of the results, and the plan of measures necessary for the corrective actions taken into account by the DSO in the annual monitoring of applicants' satisfaction;
    - a record of requests for access to, or connection to, the natural gas distribution system;
    - a record of planned limitations and/or disruptions and unplanned interruptions in the provision of gas distribution and system service.

Storage activity is regulated by the *Regulation on programming, functioning and dispatching of natural gas underground storage* (ANRGN Decision no. 1353/2004). By this Regulation are established technical, technological and commercial rules and requirements, designed to ensure the development of the storage processes in a transparent, objective and nondiscriminatory way.

Natural gas storage activity programming is done by storage operators under their contracts with the beneficiaries of the natural gas underground storage service.

For each year of storage, the deadline for the beginning of the programming of injection/extraction of natural gas quantities to/from storage is the date of publication of the Final List for reallocation of available capacities referred to in the *Regulation on access*.

In establishing storage programs on each underground storage at cycle, month, day, hour level, storage operators have to consider the following:
1. compliance with the priority order in accordance with the *Regulation on access*;
2. technological regimes agreed with the TSO for each storage, for both injection and extraction;
3. optimal technological regimes for the NTS, both for injection and extraction.

Underground storage operators post on their webpages the necessary public information, including:
- Initial list of available capacities for natural gas storage for the respective injection cycle;
- Requests Register for access to the underground storage of natural gas
- Initial list for storage capacity allocation
- Initial list for storage capacity reallocation
- Final list for storage capacity allocation
- Final list for storage capacity reallocation
- List of remaining capacity available for reallocation
- Weekly report on natural gas underground storage capacity.

In accordance with the provisions of Article 176 of *Law no. 123/2012 on electricity and natural gas, with subsequent amendments and supplements*, in case of unexpected crisis in the natural gas market and where physical safety or security of persons, appliances or installations or system integrity is threatened, TSO may propose to the relevant ministry to adopt safety measures. These measures should cause the least effect on the proper functioning of the European internal market and be strictly designed to solve the crisis that generated them. Implementation of these safety measures is made by Government Decision, initiated by the relevant ministry. ANRE monitors the implementation of the safeguard measures for the natural gas market, in case these measures were adopted by the state.

During 2016, there were no predicted crisis situations in the natural gas market.

4.1.3. Connection and network tariffs

For the regulated underground storage and transport activities, tariffs and prices are set based on a „revenue–cap" methodology and for regulated distribution and supply activities, tariffs and prices are set based on a „price-cap" methodology.

The regulatory period for any of the regulated activities is of 5 years, except for the first regulatory period (transitory stage), which was established for 3 years.

The tariff system for the transport activity includes a set of "entry-exit" type 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 a postage stamp. This system ensures the realization of the income recognized and allowed by ANRE to a license holder in order to cover the costs recognized for carrying out the natural gas transportation activity within one year of the regulatory period.

The tariff for the transport services through the National Transport System (NTS), for the first and second regulatory period was unique, with a binomial structure.

By **ANRE Order no. 32/2014** was approved the *Methodology for establishing the regulated revenue, the total revenue and the regulated tariffs for the natural gas transport activity,* by which was introduced the "entry-exit" tariff system.

During the year 2016, the ANRE Order no. 32/2014 was revised by ANRE Order no. 31/2016 regarding the modification and completion of the *Methodology for establishing the regulated revenue, the total revenue and the regulated tariffs for the natural gas transport activity*
The amendments brought by the ANRE Order no. 31/2016 were focused on:

- the establishment of transport charges for the reservation of transport capacity for two groups of points of a transmission system, respectively a group of natural gas inlet points in production perimeters, LNG terminals and biogas or other gas meet the quality requirements to be delivered/transported into/through the natural gas transmission system, interconnection with other natural gas transmission systems and underground natural gas storage facilities and a group of natural gas outlet points to direct consumers, distribution systems, underground storage facilities, upstream pipelines and other interconnected transport systems,

- the equal allocation of the fixed costs taken into account for determining the total income by groups of entry and exit points , taking into account the provisions of the draft European Commission Regulation establishing a network code for harmonized charging structures in the field (TAR-NC) and, at the same time, good European practices,

- considering the possibility of returning, prior to the beginning of the regulatory year, to the values of the transport tariffs determined for the respective year, if there is a recovery/non-recovery by more than 5% of the fixed component of the total income for the year for which transport tariffs set, the license holder requests the approval of new capacity booking tariffs for long-term transport services.

Developments of the natural gas transport tariff

Starting with 01 October 2016, by ANRE Order no. 39/2016 were approved the regulated revenue, the total revenue and the regulated tariffs for the natural gas transport activity by NTS.

Following the approval of the ANRE Order no. 31/2016, the capacity booking tariffs recorded a significant drop on interconnection points. Thus, compared to the annual capacity booking tariffs set for the 2015-2016 gas year at 6.70 RON/MWh/h (1.48 EUR/MWh/h*), for the exist through the interconnection points, in 2016-2017 their level was set at 1.81 RON/MWh/h (0.40 EUR/MWh/h*) and for entry through the interconnection points, compared to the value of 2015-2016 at 3 RON/MWh/H (0.66 eur/MWh/h*), a level of 1.84 RON/MWh/h (0.41 EUR/MWh/h*) was set in 2016-2017. Capacity reservation rates ensure 60% of the transport operator's revenue. As for the volumetric tariff, compared to the level of 2015-2016 of 4.38 RON/MWh/h* (0.97 EUR/MWh/h*), in 2016-2017 it was set at 4.31 RON/MWh/h (0.96 EUR/MWh/h*). The volumetric tariff ensures the realization of 40% of the transport operator's revenues. (* Average rate of 4.5 RON/EUR).

Thus, the tariffs valid till 30 September 2017, practiced by the licensed operator SNTGN TRANSGAZ S.A., for natural gas transmission activity, are the following:

a) capacity reservation tariff per point/group of points of entry/exit for firm/interruptible natural gas transport services through the National Transport System

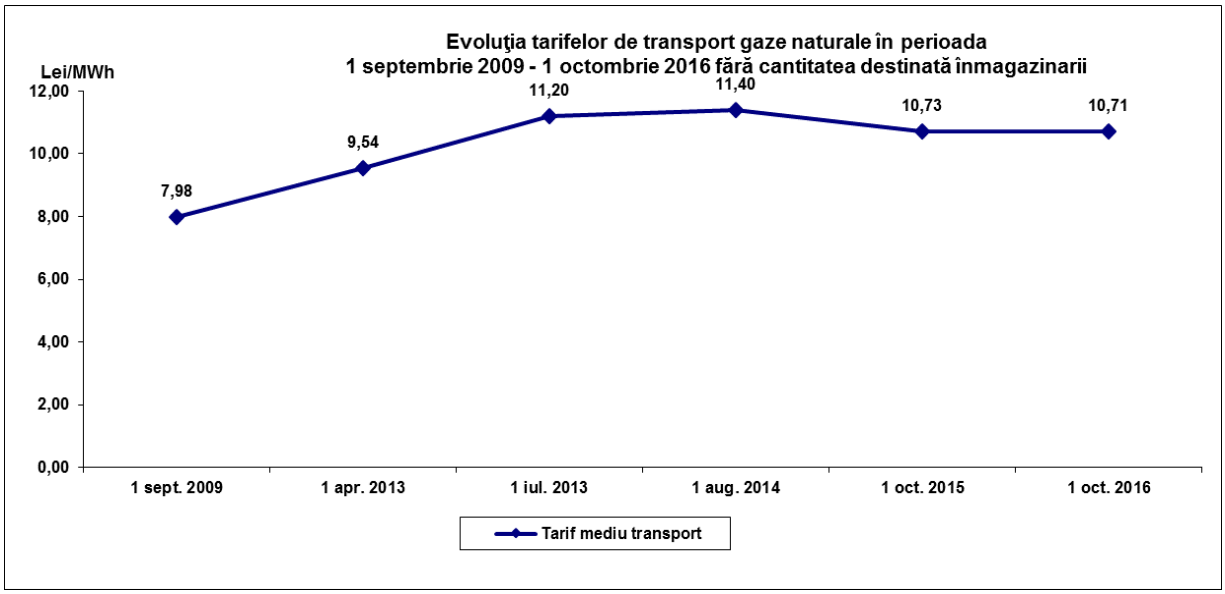
RON/MWh/h

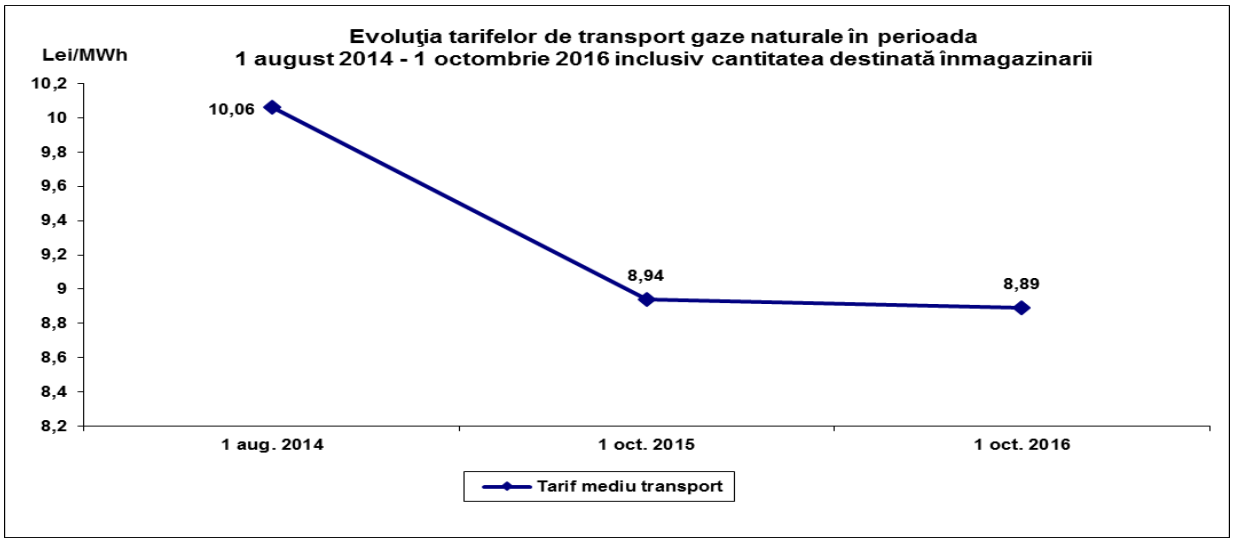
Point / group of points for entry/exit in/from the NTS		Types of natural gas transport services						
		Long term	Short term					
		Annual	Quarterly		Monthly		Daily	
			summer	winter	summer	winter	summer	winter
1.	**Group of entry points** in the production perimeters, from LNG terminals and biogas production facilities or other gases that meet the quality requirements to be delivered/ transported to/from the NTS, from interconnection with other natural gas transmission system and underground	1,84	1,46	3,34	1,68	3,86	3,34	7,71

	natural gas storage facilities;							
2.	**Group of exit points** from the natural gas transport system to the final consumers, distribution systems, underground natural gas storage, upstream pipeline network an other interconnection transport systems	1,81	1,43	3,27	1,65	3,78	3,27	7,56

a) volumetric tariff for the quantity of natural gas delivered to distribution systems: 3,56 RON/MWh;
b) volumetric tariff for the quantity of natural gas transported only through the NTS: 4,31 RON/MWh;
c) volumetric tariff for the quantity of natural gas transported: 3,46 RON/MWh.

Tariffs referred to in points b) and c) contain the tax value on monopoly referred to in the *Government Ordinance no. 5/2013.* The tariff referred to in point d) does not contain this value.




Evoluţia tarifelor de transport gaze naturale în perioada
1 august 2014 - 1 octombrie 2016 inclusiv cantitatea destinată înmagazinarii
Lei/MWh
10,2
10
9,8
9,6
9,4
9,2
9
8,8
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8,4
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8,94
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1 aug. 2014
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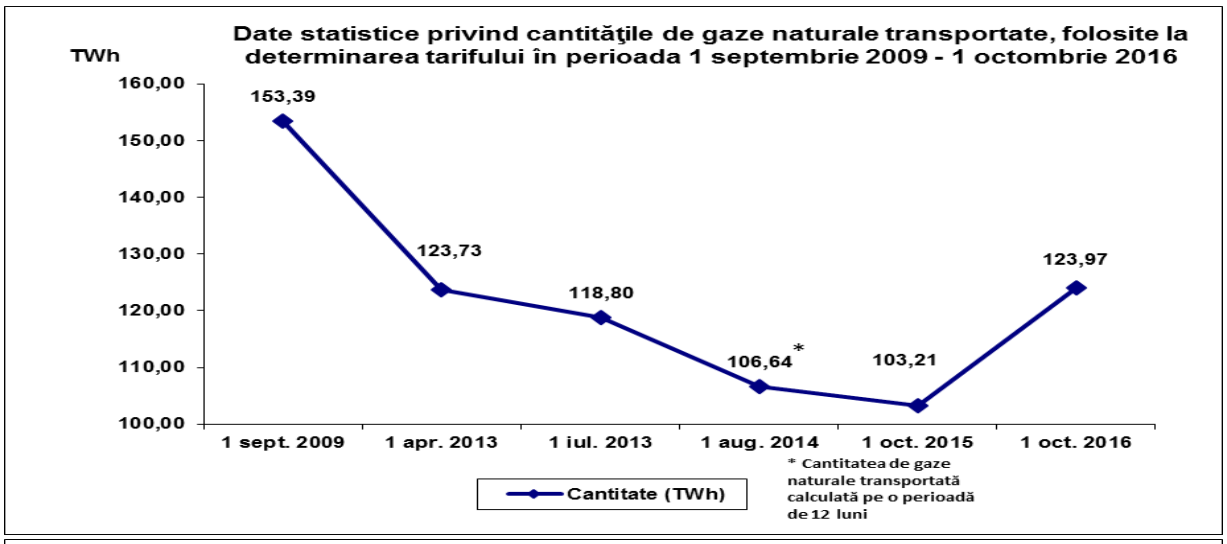
Tarif mediu transport


Date statistice privind cantităţile de gaze naturale transportate, folosite la
determinarea tarifului în perioada 1 septembrie 2009 - 1 octombrie 2016
TWh
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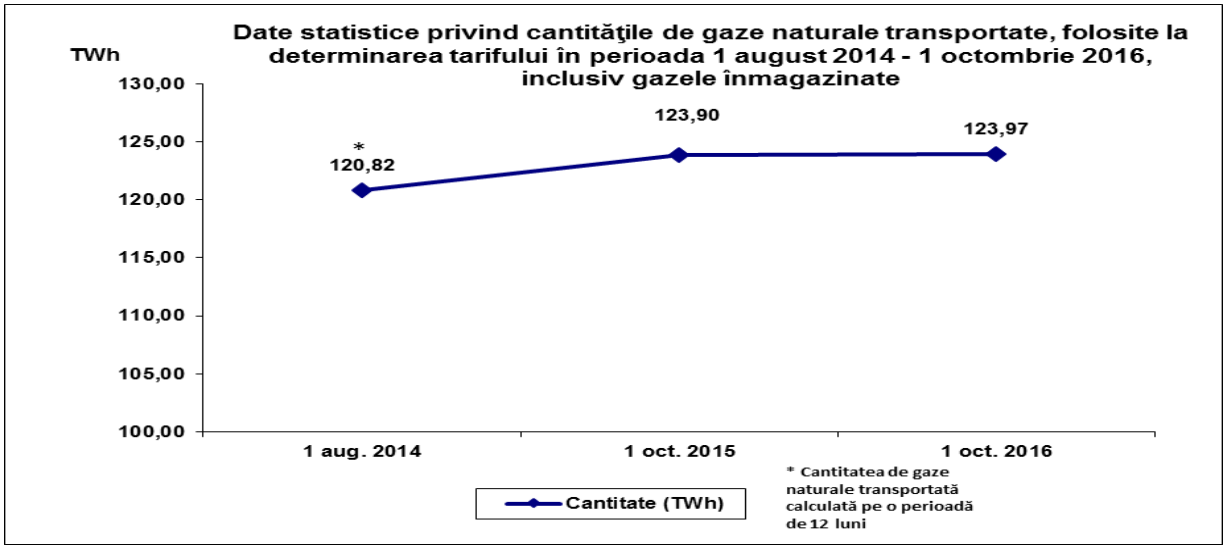
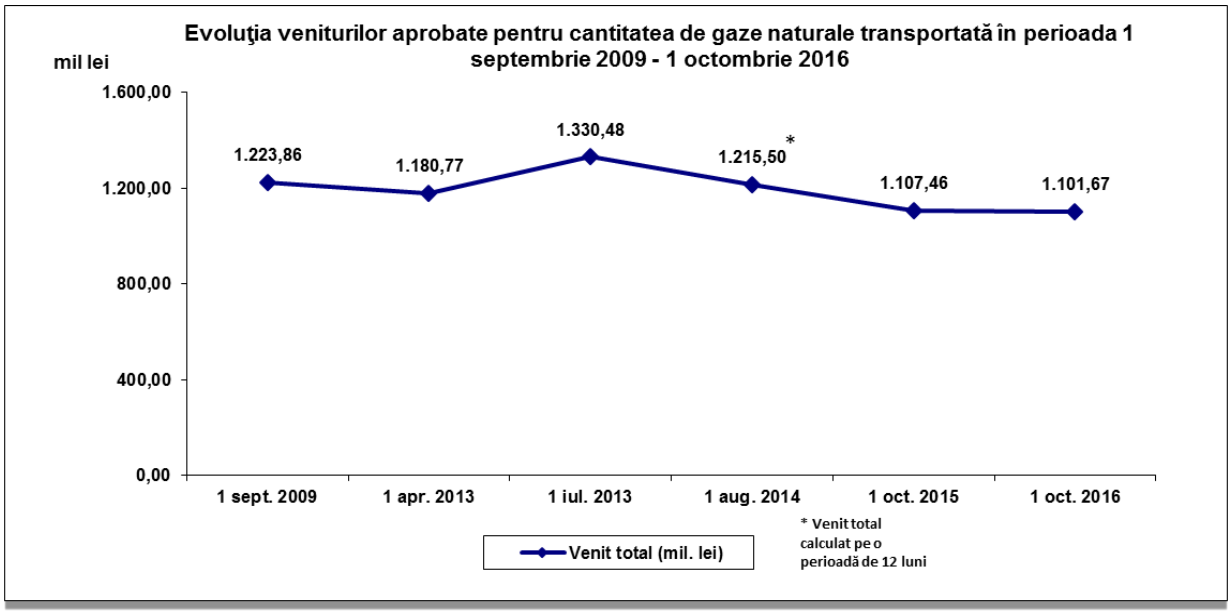
150,00
140,00
130,00
120,00
110,00
100,00
153,39
123,73
118,80
106,64 *
103,21
123,97
1 sept. 2009
1 apr. 2013
1 iul. 2013
1 aug. 2014
1 oct. 2015
1 oct. 2016
Cantitate (TWh)
* Cantitatea de gaze naturale transportată calculată pe o perioadă de 12 luni


Date statistice privind cantităţile de gaze naturale transportate, folosite la
determinarea tarifului în perioada 1 august 2014 - 1 octombrie 2016,
inclusiv gazele înmagazinate
TWh
130,00
125,00
120,00
115,00
110,00
105,00
100,00
* 120,82
123,90
123,97
1 aug. 2014
1 oct. 2015
1 oct. 2016
Cantitate (TWh)
* Cantitatea de gaze naturale transportată calculată pe o perioadă de 12 luni



Evolution of the tariff for gas distribution

The tariff system for **distribution activity** includes differentiated rates for licensed distribution operators and customer categories.

For 2016, the categories of consumers for which the regulator establishes differentiated distribution tariffs are the following:

1. Distribution tariffs
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
2. Proximity distribution tariff
B.6.1. Customers with an annual consumption over 250,000 MWh.

For the distribution activity, a regulated unitary income is set to cover unitary costs related to one year of the regulatory period. The value of distribution services are invoiced monthly for a distribution system user.

In accordance with the legal provisions in force, namely, the *Methodology for setting regulated tariffs for natural gas distribution services,* starting with the third regulatory period and amending the *Methodology for the approval of prices and the setting of regulated tariffs in the natural gas sector,* approved through the ANRE Order no. 22/25.05.2012, a number of 39 operators submitted to ANRE the documents containing the regulated income adjustment data as well as the proposals for regulated prices and tariffs for 2016.

Thus, starting with May 1, 2016, ANRE Order no. 19/2016 which establishes the regulated tariffs for the natural gas distribution service, made by DISTRIGAZ SUD RETELE S.R.L.

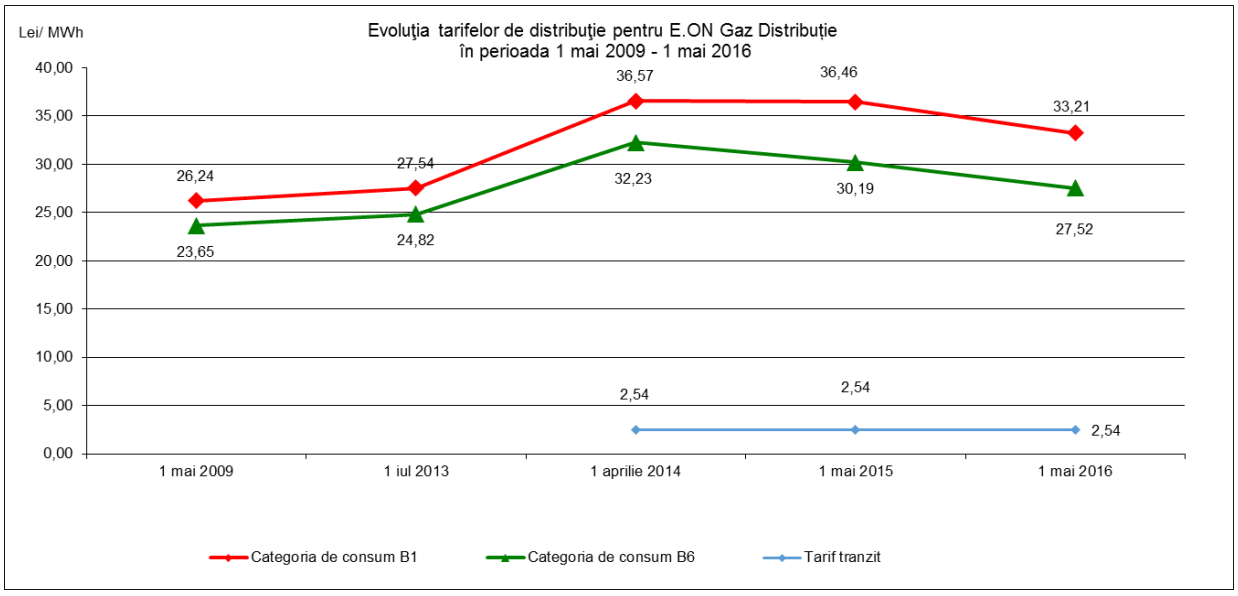
The categories of consumers	*RON/ MWh*
1. Distribution tariffs	
B.1. Consumption up to 23,25 MWh	29,47
B.2. Annual consumption between 3,26 MWh and 116,28 MWh	29,41
B.3. Annual consumption between 116,29 MWh and 1.162,78 MWh	27,15
B.4. Annual consumption between 1.162,79 MWh and 11.627,78 MWh	25,90
B.5. Annual consumption between 11.627,79 MWh and 116.277,79 MWh	24,14
B.6. Annual consumption over 116.277,79 MWh	19,74
2. Proximity distribution tariff	
B.6.1. Annual consumption over 250.000 MWh	11,50

And the ANRE Order no. 21/2016 regrading the setting of the regulated tariffs for the natural gas distribution service provided by E.ON GAZ DISTRIBUTIA S.A., the tariffs approved for the two operators being valid until 31 March 2017.

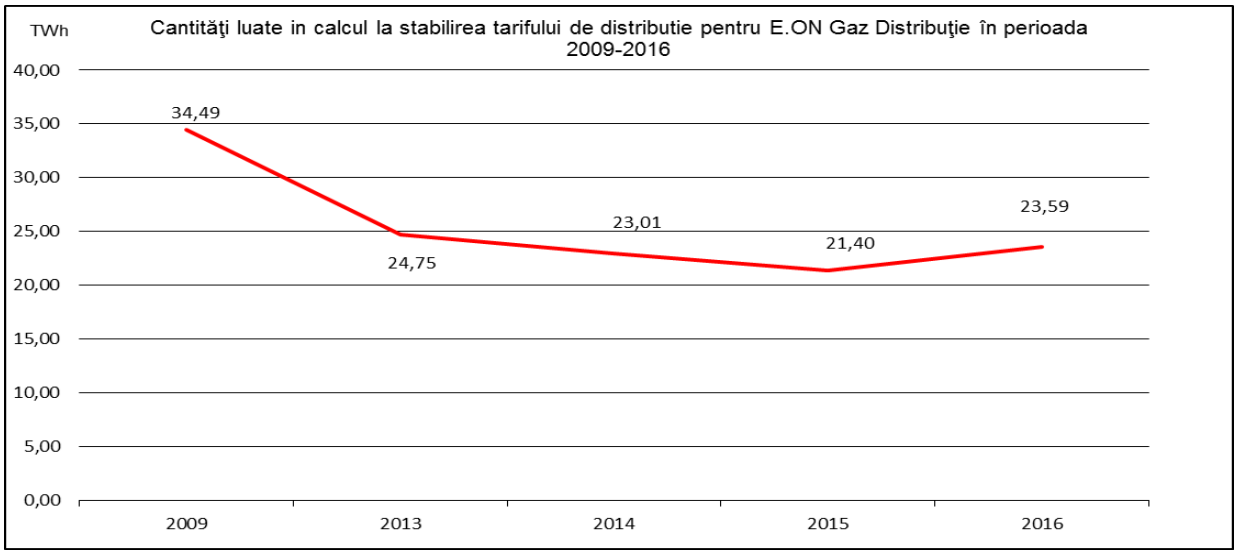
The category of consumers	*RON/ MWh*
1. Distribution tariffs	
B.1. Consumption up to 23,25 MWh	33,21
B.2. Annual consumption between 23,26 MWh and 116,28 MWh	32,06
B.3. Annual consumption between 116,29 MWh and 1.162,78 MWh	31,54
B.4.Annual consumption between 162,79 MWh and 11.627,78 MWh	31,11
B.5.Annual consumption between 1.627,79 MWh and 116.277,79 MWh	30,46
B.6.Annual consumption over 116.277,79 MWh	27,52
2. Proximity distribution tariff*	2,54

* Proximity distribution tariff – tariff for the use of the distribution system of an operator who has been granted access or has approved the access for the purpose of natural gas transportation for the supply of natural gas to the final customers in his own portfolio.
The charts below reflect the evolution over time of natural gas distribution tariffs for both operators from 1 May 2009 to the present.

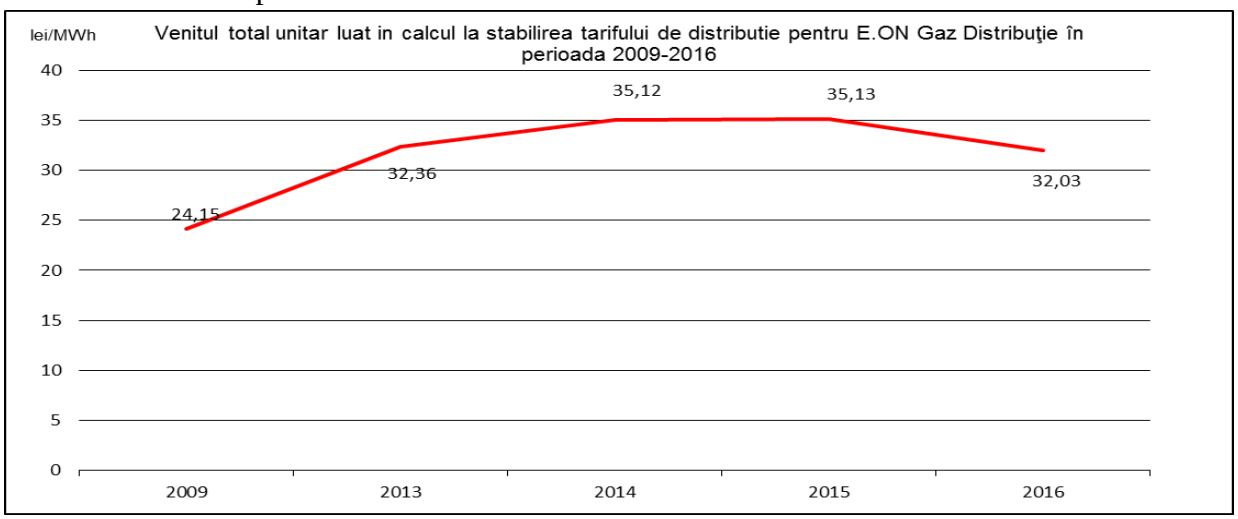
Evolution of distribution tariffs for E.ON GAZ Distributie in the period 1 May 2009- 1 May 2016



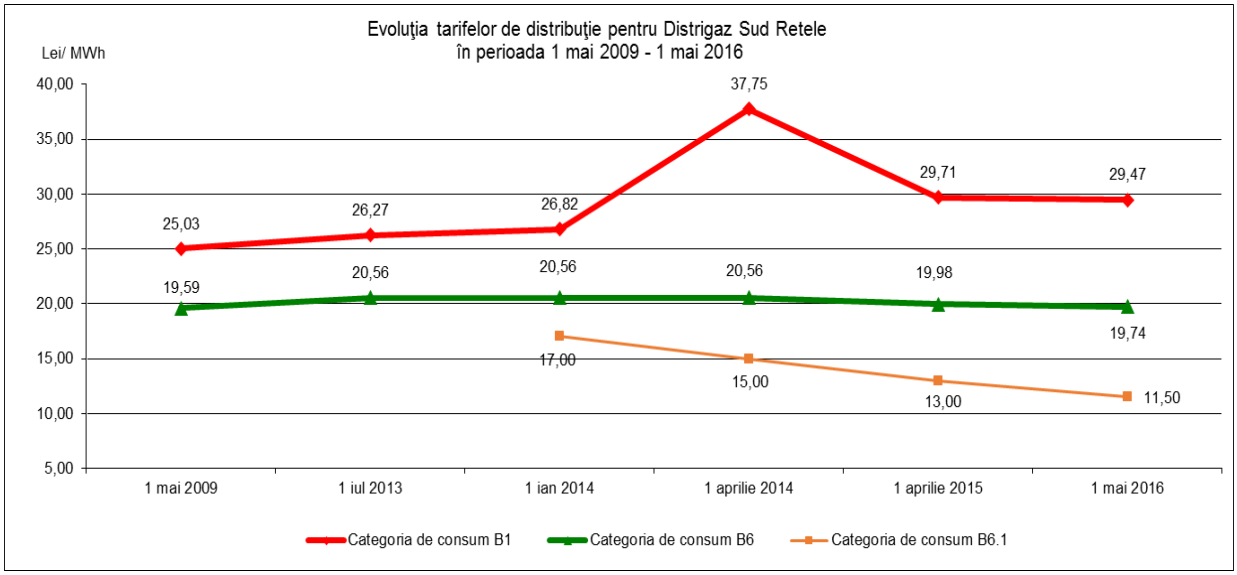
Quantities taken into consideration to establishing the distribution tariff for E.ON Gaz Distributie in the period 2009-2016



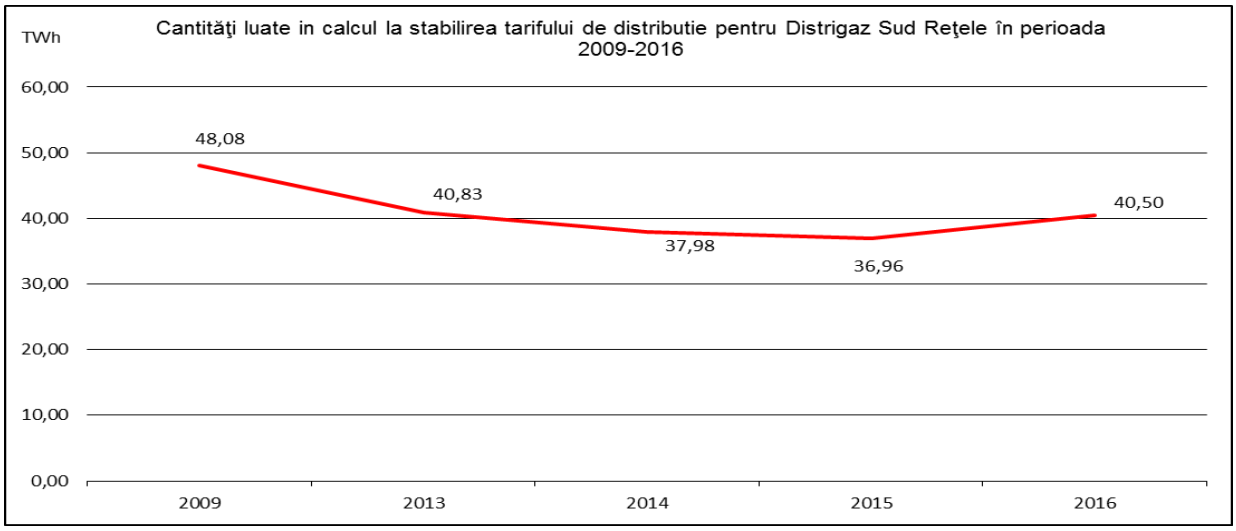
The total unit income taken into consideration to establishing distribution tariffs for E.ON GAZ Distributie in period 2009 – 2016



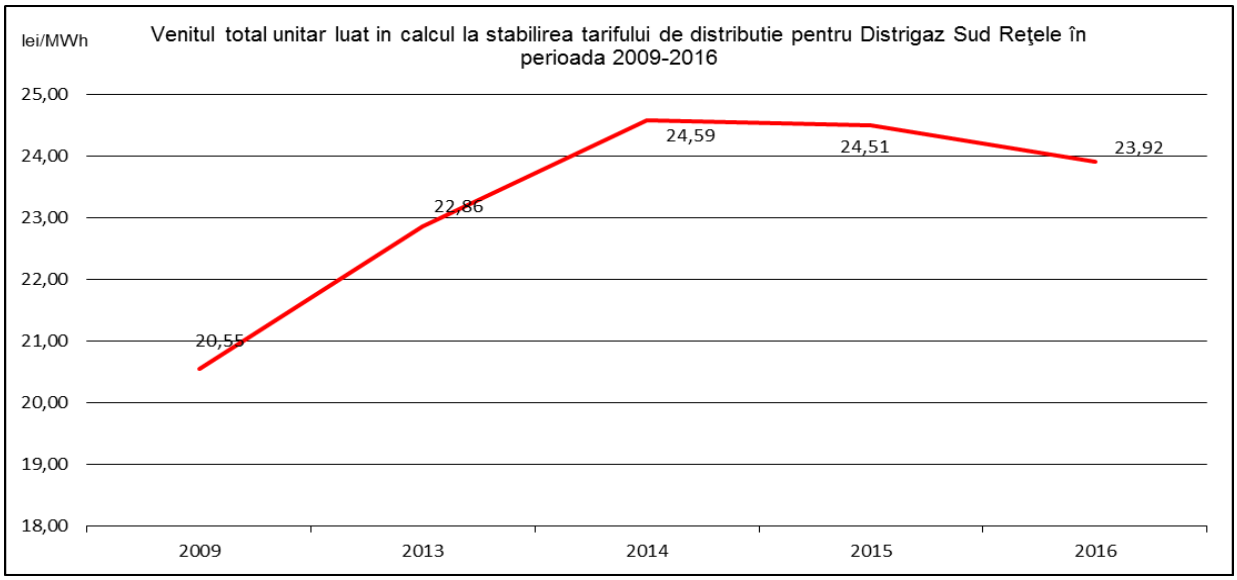
Evolution of distribution tariffs for Distrigaz Sud Retele in period May 2009 – May 2016



Quantities taken into consideration to establishing the distribution tariff for Distrigaz Sud Retele in the period 2009-2016



The total unit income taken into consideration to establishing distribution tariffs for Distrigaz Sud Retele in period 2009 – 2016.



Evolution of storage tariffs

The tariffs Scheme for underground storage includes a set of revenue caps tariffs that set a total regulated income that covers the total costs of doing business during one year of the regulatory period.

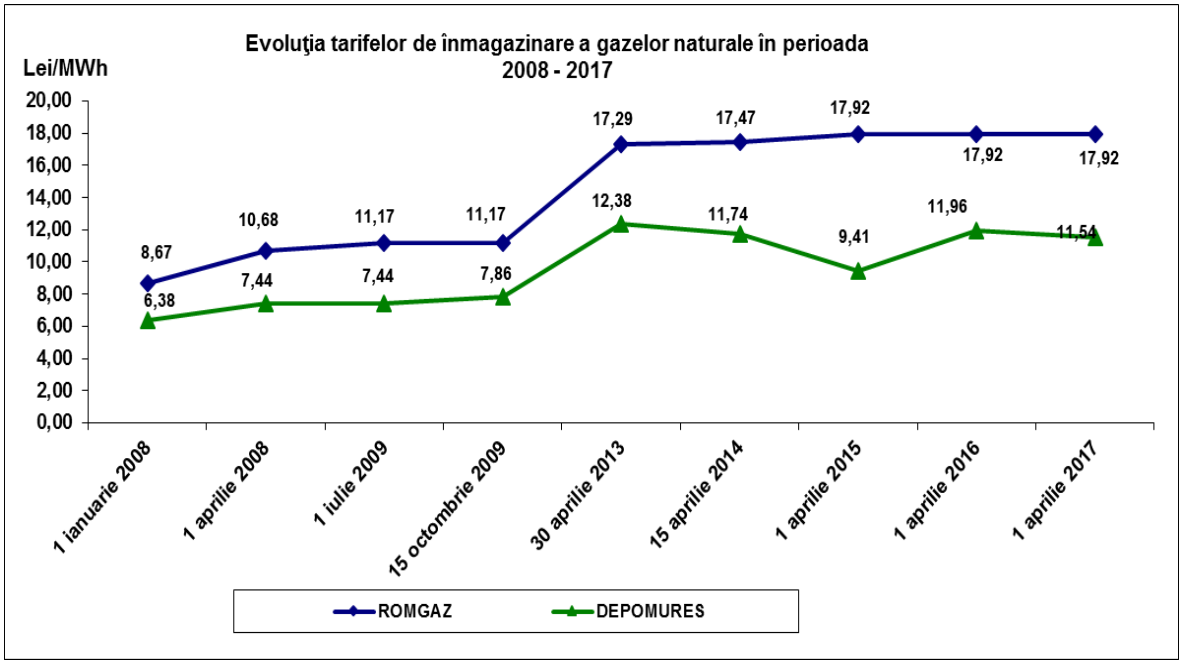
Based on the provisions of the ANRE Order no. 22/2012 approving the Methodology for the approval of prices and the establishment of regulated tariffs in the natural gas sector, with the subsequent modifications and completions, ANRE approved, for the operators licensed for underground storage, namely DEPOMURES S.A. Targu Mures and SNGN ROMGAZ S.A. Medias through the Ploiesti branch, the total income, the regulated income, the fixed capacity reservation component and the volumetric, injecting and underground natural gas extraction components related to the underground storage service tariff for April 2016 – March 2017, the fifth year of the third regulatory period, through ANRE Orders no. 13/2016 and no. 9/2016.

Please note, that through the **ANRE Order no. 7/2016 regarding the modification and completion of the Methodology for approving prices and setting regulated tariffs in the natural gas sector,** approved by the ANRE Order no. 22/2012, having regard to the legal separation process of SNGN ROMGAZ S.A. Medias in progress in order to avoid unclear/controversial situations in the economic and commercial activity of the aforementioned company, it was proposed to present a clear presentation of how the depreciation and the rate of return on the invested capital represents the profits of the owner of the tangible and intangible assets necessary to carry out the operation of the underground storage facilities for the natural gas leased to SNGN Romgaz – Subsidiary for Natural gas storage Depogaz Ploiesti S.R.L., will be recognized when the storage operator's tariff is substantiated. The legal separation process should not lead to an unreasonable increase in operator costs, meaning the level of operations costs and directly incumbent costs should not exceed the level achieved by the vertically integrated economic operator in the last year prior to the legal separation of the underground storage of natural gas.

Tariffs in force for natural gas storage activity, charged at the date of this report by the licensed operators in the natural gas sector are the following:

Tariff component	U.M.	Societatea Națională de Gaze Naturale Romgaz S.A. Medias	Societatea "Depomureş" - S.A. Târgu Mures
Fixed component for capacity reservation	RON / MWh / complete storage cycle	13,68	7,64
Volumetric component for natural gas injection	RON/ MWh	2,37	3,11
Volumetric component for natural gas extraction	RON/ MWh	1,87	1,21

Evolution of storage tariffs in the period 2008-2017



Also during the year 2016, has been developed and approved the **Regulation about connection to the upstream pipelines**, approved by ANRE Order no. 60/2016. the regulation comes into force at the moment of abrogation of the Government Decision no. 2199/2004 regarding the modification and completion of the Government Decision no. 1043/2004 approving the Regulation on Access to Natural Gas Distribution System and the Regulation on access to upstream pipelines, as subsequently amended and supplemented.

The regulation was drafted on the basis of the provisions:

- Art. 148 par. (1) of the Law on electricity and natural gas no. 123/2012, as subsequently amended and supplemented, regarding the regime of connection to

natural gas targets stipulating that „ *The connection of third parties to the upstream pipelines, to the transport systems, storage facilities, LNG facilities/terminals and natural gas distribution systems shall be carried out in a regulated regime, according to the specific regulations developed by ANRE"*;

- Art. 10 par (1) lit. J) of Government Emergency Ordinance no. 33/2007 on the organization and functioning of ANRE, approved with amendments and completions by Law NO. 160/2012, according to which ANRE „*elaborates and approves the regulations regarding the connection and the access of third parties to the upstream pipelines, to the storage facilities, to the natural gas transmission and distribution system".*

The normative act includes:

- the possibility of an applicant to achieve:
  - technical documentation for the authorization of the construction works for the connection facility;
  - technical project for the execution of the construction works related to the connection facility;
  - the execution of connection facility.
- the obligation of the applicant to submit to ANRE a request for the authorization for setting up/design/execution/operation for the natural gas system/natural gas/natural gas/closed distribution system connected to the upstream pipelines before submitting the application connection to the upstream pipeline operator;
- approval by the upstream pipeline operator of the technical design of the connection facility;
- the possibility that several technically viable connection solutions can be specified in the technical connection, giving the applicant the possibility to choose the most advantageous solution.

The Regulation on the connection to the natural gas distribution system and the Regulation on the connection to the natural gas transmission system were also elaborated and submitted to the public consultation process in 2016, to be approved in 2017.

4.1.4. Cross-border issues

Access to cross-border infrastructure, cooperation issues in the field

By **ANRE Order no. 15/2016** established the obligation to reserve the transport capacity at te interconnection point of the Romanian National Gas Transmission System with the Hungarian natural gas transmission system from Csanadpalota through auctions organized within the Regional Capacity Reservations Platform (PRRC), operated by "Foldgazszallito Zartkoruen Mukodo Reszvenytarsasag" - FGSZ Ltd, in compliance with the PRRC Operating Rules and the auction calendar published annually by the European Network of Transmission System Operators for Natural Gas - ENTSOG

Also, this order set out both the general terms and conditions of the applicable framework transport contract as a result of the auctions for capacity booking at the Csanadpalota interconnection point organized within the PRRC platform, as well as the terms and conditions specific to each of transport products (annual, quarterly, monthly and daily) as necessary elements for the conclusion of a full transport contract.

Given that starting with 2015, the deadlines provided for in the NTS network code for the annual capacity booking could no longer be applied for the carrying out of the reservation of the capacity process due to the change in the starting date of the gas year, adopted by ANRE Order no. 54/2014 on some measures for the development of the natural gas market, ANRE made a schedule for the process of the reservation of transport capacity at the points of entry/exit into/from the National Transmission System for Natural Gas only for the 2015 gas year – 2016 adopting the ANRE Order no. 131/2016.

For the gas year 2016-2017, on the basis of the proposal of S.N.T.G.N. TRANSGAZ S.A. Mediaş, ANRE has developed the ANRE Order no. 38/2016 which took into account all the stages of the reservation of capacity process provided for in the NTS network code in force (transmission of the capacity reservation requests, their analysis by transmission system operator, their approval or rejection, the wording of the objections to the rejection of requests for capacity reservations, formulating the response of the transmission system operator to the objections submitted by the transport capacity applicants, sending the transmission contracts by the transport and system operator to the applicants whose applications for Reservation of capacity were approved, respectively, the re-transmission of transport contracts signed by the transport capacity applicants), so that the capacity reservation could start as close as possible to the starting date of the gas year, namely 1 October 2016, and end before this date.

The new order has promoted both the principle of sequential allocation of natural gas transmission capacity products in decreasing order of their duration and the principle of simultaneous allocation of quarterly transport capacity, principles laid down in European legislation in the field, the capacity reservation calendar already established, based on the ANRE Order no. 15/2016 for the interconnection point of the NTS with Hungary's Csanadpalota gas transmission system and the capacity reservation for Isaccea 1,2,3 and Negru Voda 1, 2 and 3 interconnection points and for exit points Negru Voda and Mangalia, located along the transport pipeline connected to Isaccea 1- Negru Voda 1 natural gas transport pipeline for the transport of natural gas on the Russian Federation- Bulgaria aisle.

Considering that the ANRE Order no. 15/2016 on the establishment of measures for booking the transport capacity at the interconnection point of the Romanian National Gas Transmission System with the Hungarian natural gas transmission system from Csanadpalota had the sole object of reserving capacity at the interconnection point Csanadpalota , As well as the fact that the commissioning of the interconnection between the natural gas transmission systems in Romania and Bulgaria in the Giurgiu-Ruse direction was foreseen for the end of 2016, and the first deliveries will be made in the shortest possible time Commercial through this interconnection point, ANRE proceeded to extend the scope of application of ANRE Order no. 15/2016 at the level of all the interconnection points of the National Gas

Transmission System with the natural gas transmission systems in the neighboring member states of our country through the adoption of the **ANRE Order no. 88/2016**.

In this respect, the amendments to the contents of the ANRE Order no. 15/2016 mainly aimed at replacing the phrase "Csanádpalota interconnection point in Hungary" with "points of interconnection with natural gas transmission systems in the Member States of the European Union neighboring Romania" and making the text adjustments necessary to ensure the general applicability Of the order at the level of all the interconnection points of the national transport system with the transport systems in the EU Member States Neighboring our country.

Clarifications have also been included on the deadlines for the submission of tenders for the capacity booking auctions, distinguishing between the applicable deadlines for the daily capacity auctions and those applicable to auctions for other capacity products, as well as on the possibility of providing collateral in euro at the European Central Bank on the day of issue of the guarantee.

The methodology for reserving transport capacity and setting tariffs for the activity of providing natural gas transport services through Isaccea - Negru Voda pipelines was approved by **ANRE Order no. 34/2016**.

The methodology applies to Isaccea - Negru Vodă natural gas pipelines, respectively:

1. Natural gas pipeline Isaccea 1 - Negru Voda 1 for the transport of natural gas on the Russian Federation - Bulgaria corridor and natural gas supply to some localities on the territory of Romania;

2. Natural gas pipelines Isaccea 2, 3 - Negru Voda 2, 3 for the transport of natural gas on the avenues of the Russian Federation - Turkey, Greece and other countries.

Standard capacity products are provided subject to the principle of equality of requested / reserved capacity for the Isaccea point / group of interconnection points and the requested / reserved capacity for the Negru Voda interconnection point / group, given that these pipelines Of natural gas are not yet physically connected to the National Transmission System.

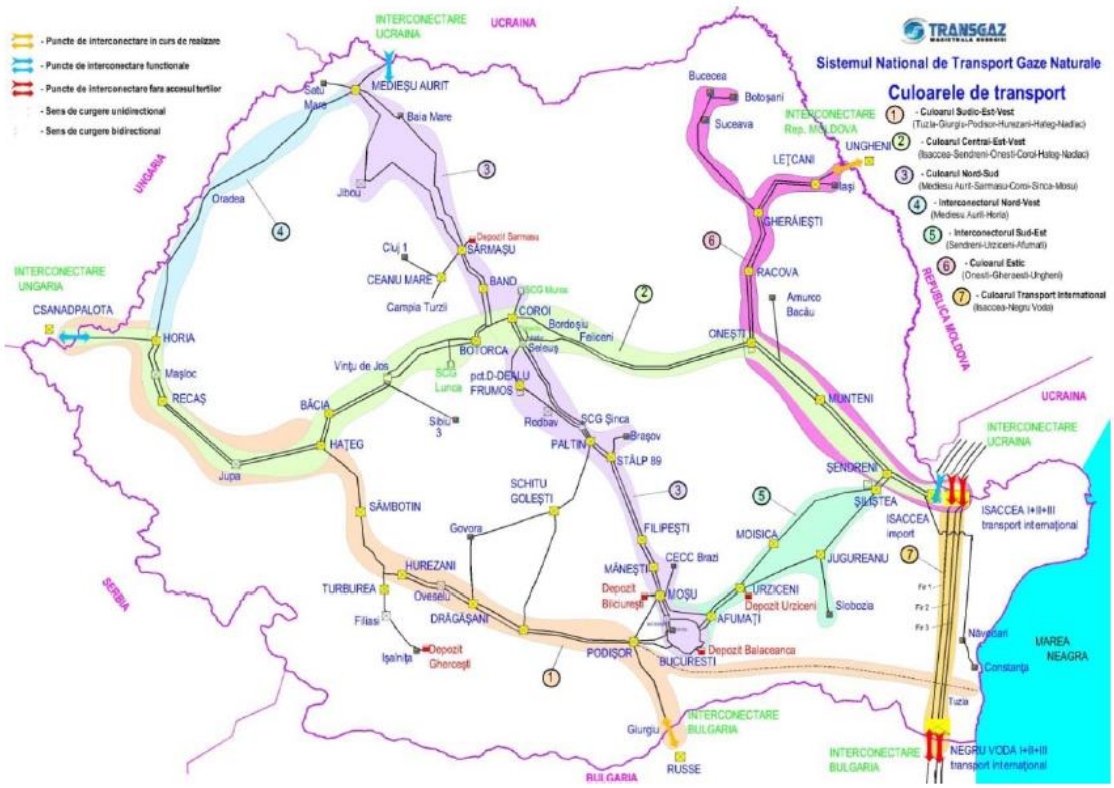
The allocation of capacity on interconnection points related to Isaccea 1 - Negru Vodă natural gas pipeline 1 is done separately from the allocation of capacity for the group of points related to the gas pipelines Isaccea 2, 3 - Negru Voda 2, 3.

Monitoring investment plans

Concerning the approval and monitoring of the TSO investments plans by the regulatory authority, we mention that these attributions are provided to the regulator by the provisions of the *Law no. 123/2012 on electricity and natural gas*.
Natural gas transport system development plan during 2014-2023 period provides the development directions of Romanian natural gas transport network and the main projects that SNTGN Transgaz SA intends to implement over the next 10 years in order to achieve a

maximum degree of transparency regarding the development of the national natural gas transport system and the possibility of updated information for market participants regarding existing and planned transport capacities, so that, through public consultation, decisions on investment in the gas transport network meet market requirements.
The Development Plan meets the requirements of the European energy policy regarding:

- ensuring security of supply of natural gas;
- increasing the interconnection level of the national natural gas transport network to the European network;
- increasing the flexibility of national natural gas transport network;
- liberalization of the natural gas market;
- creating an integrated natural gas market in the European Union.



Source: SNTGN Transgaz SA

TSO sent this plan to ANRE and it was approved by ANRE Decision no. 2819/2014.

The European Commission validated on 19 January 2016 funding to the sum of 179 million Euros the works to be carried by the TSO for the development of BRUA - Phase 1. Thus, Transgaz will have some of the necessary funding to execute, on the Romanian territory, the works in question.

The project involves the development of a natural gas transport capacity between existing interconnection points with natural gas transport systems in Bulgaria (at Giurgiu) and Hungary (Csanadpalota) by building a new pipeline. The pipeline would have a total length of 550 km, on the corridor Giurgiu - Plateau - Corbu - Hurezani - Haţeg - Recaş - Horia and three compression stations located along the pipeline (SC Corbu, SC Haţeg, SC Horia). After

commissioning, the project will ensure a natural gas transport capacity of 1.5 bln.cm/y towards Bulgaria and 4.4 bln.cm/y towards Hungary. Project implementation deadline is 2019 and the estimated value amounts to 560 million euros.

Regarding the Program for Modernization and Delepomen of Investments for 2016, Transgaz reports show that it was fulfilled in a proportion of 16.6%, with the mention that in the natural gas sector, when setting the transport tariff, the investments made are considered, not the forescasted investments.

4.1.5. Compliance with the provisions of the European legislation

Compliance with decisions of ACER and the Commission

According to the provisions of Article 102(^1) of *Law no.123/2012 on electricity and natural gas, with subsequent amendments and additions „ANRE shall respect and implement all relevant decisions, legally binding, of ACER ... and the Government, line ministry and other specialized agencies of the central government, where appropriate, will take all necessary steps in this regard, according to their tasks and competences*".

In 2016, there were not issued binding ACER Decisions.

4.2. Promoting competition

According to *Law no. 123/2012 on electricity and natural gas, as amended and supplemented*, the natural gas sector in Romania is divided into two segments: the regulated and competitive market. This segmentation is designed to set clearly the specific economic activities that are under continuous surveillance: the regulated market (transport, storage, distribution tariffs and regulated prices for households) and those that function freely, based on competitive mechanisms. In fact, since this is a regulated area of the economic sector, it needs to be noted what falls under the scope of supervision by the regulator, the rest of the economic relations being carried on freely as part of the mechanisms of a market economy.

Annual consumption of natural gas increased in 2016 compared to 2015, reaching around 11.7 billion cubic meters, with an increase of about 2%, due to a slight increase in the consumption of final customers, the number of which registered in 2016 as compared to 2015 also an increase of about 116.000 customers.

In 2016, total natural gas consumption was 124.12 TWh, of which the final natural gas consumption was 111.7 TWh, of which non-household consumption accounted 80 TWh (71.65%) and household consumption represented 31.7 TWh (28.35%).

Total number of natural gas final customers was 3,596,574, of which 188,253 non households (5.23%) and 3,408,321 households (94.77%).

Natural gas consumption is covered by domestic and imported production. The domestic production was about 106.8 TWh and the import of 15.9 TWh.

The number of participants in the gas market in Romania grew steadily as the market was liberalized, especially in the supply of natural gas, including, in 2016:

- a national TSO – Transgaz;
- 7 producers: Romgaz, OMV Petrom, Amromco Energy, Raffles Energy, Foraj Sonde, Stratum Energy și HUNT OIL Company;
- 5 external suppliers that bring natural gas from foreign sources in Romania: Engie Energy Management, Imex Oil, MET International AG, Alpiq Energy SE and Wiee AG Elvetia;
- 2 storage operators: Romgaz, Depomureș;
- 39 distribution operators – the largest being Distrigaz Sud Retele and E.ON Gaz Distributie, 38 distribution operators starting beginning with September 30, 2016, because Intergaz Est went bankrupt, the distribution areas served by it being taken over by the Grup Dezvoltare Retele;
- 79 suppliers active on the competitive natural gas market, out of which 38 suppliers are active in the regulated natural gas market, respectively 37 suppliers starting with September 30, 2016, because Intergaz Est went bankrupt, its regulated customers being taken over by the Grup Dezvoltare Retele as a SoLR for a period of 3 months.

The number of supply operators operating on the regulated market is different from that of the distribution operators because Coni Măneşti operator has chosen to carry out only the natural gas distribution service, the supply in the area served by it being carried out by another licensed supplier.

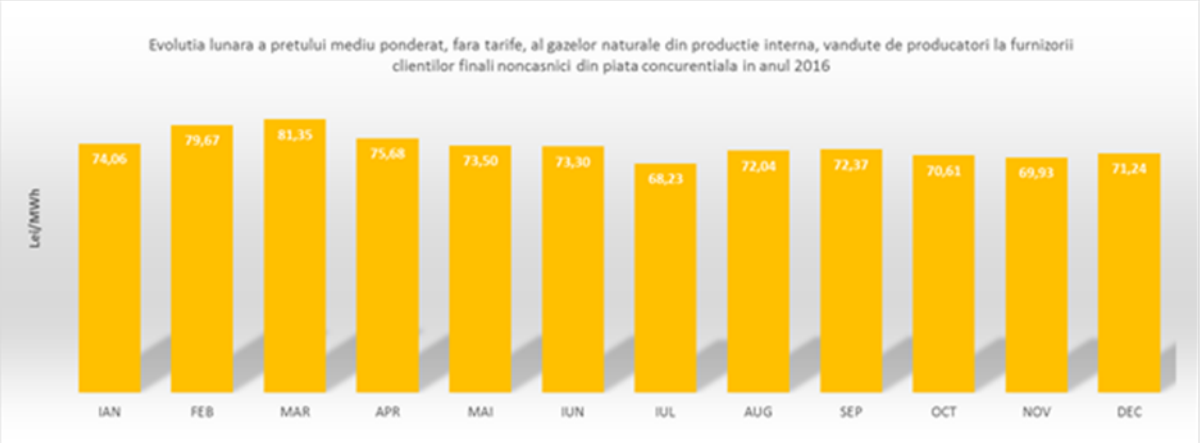
4.2.1. Wholesale natural gas market

In 2016, natural gas domestic production, current and extracted from storage, which entered into consumption accounted for 87.5% of total sources. The first two producers (Romgaz and OMV Petrom) covered together 93.5% of this source.

Month	Production (MWh)	Injected quantity from domestic production (MWh)
January	10.448.219,302	
February	9.531.312,683	
March	9.837.923,229	
April	8.564.373,728	2.238.587,446
May	8.221.528,746	2.429.930,279
June	7.659.953,843	2.742.327,619
July	8.084.478,353	2.675.092,040
August	8.378.335,008	3.242.844,208
September	7.985.496,763	2.308.052,50
October	8.660.343,962	999.528,66
November	9.250.673,776	1.980,924

December	10.201.206,190	
Total MWh	**106.823.845,584**	**16.638.343,674**

The monthly evolution of the weighted average price, without tariffs, of natural gas from domestic production, sold by producers to suppliers of non-domestic final customers on the competitive market in 2016.



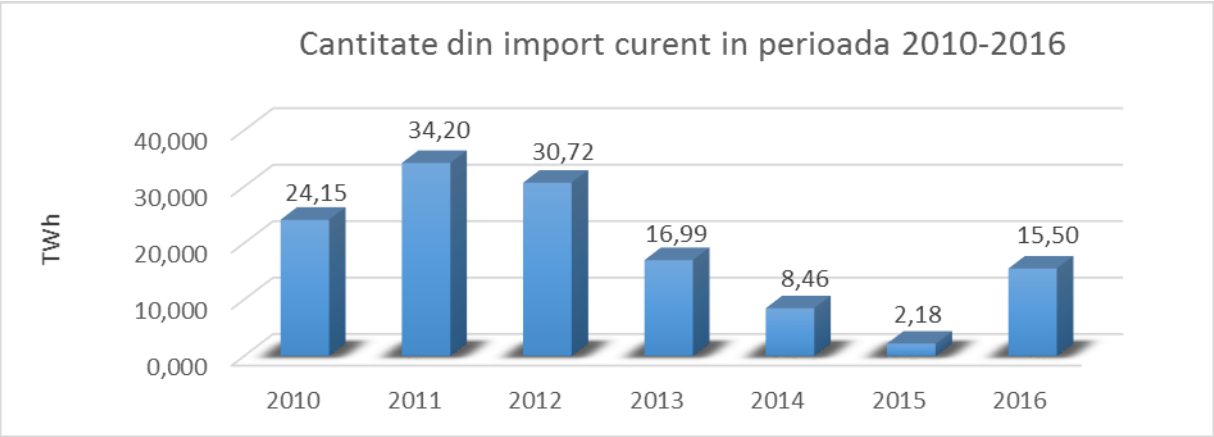
In 2016, gas natural production in Romania was assured by 7 producers: SNGN Romgaz SA, S.C. OMV Petrom SA, S.C. Amromco Energy SRL, S.C. Raffles Energy SRL, S.C. Foraj Sonde SA, S.C. Stratum Energy LLC and Hunt Oil Company.
The natural gas quantity produced in 2016, was 106,82 TWh, as is shown in the table below:
TWh

Amromco Energy	OMV Petrom	Romgaz	Rafless Energy	Foraj Sonde	Stratum Energy	Hunt Oil Company	Total
4,22	55,86	44,29	0,04	0,13	2,15	0,13	106,82

Imports that entered in consumption in 2016, imported current and extracted from storage, accounted for 12.5%. The first three importers - domestic suppliers - together made about 90% of these quantities.

Month	**Domestic production (MWh)**	**Direct import (MWh)**
January	**10.448.219,302**	**1.029.066,620**
February	**9.531.312,683**	**491.253,605**
March	**9.837.923,229**	**169.428,450**
April	**8.564.373,728**	**407.374,053**
May	**8.221.528,746**	**478.577,997**
June	**7.659.953,843**	**406.009,106**
July	**8.084.478,353**	**589.422,908**
August	**8.378.335,008**	**695.118,333**
September	**7.985.496,763**	**853.850,069**
October	**8.660.343,962**	**3.204.526,395**
November	**9.250.673,776**	**3.439.669,802**
December	**10.201.206,190**	**4.175.255,764**
Total MWh	**106.823.845,584**	**15.939.553,102**

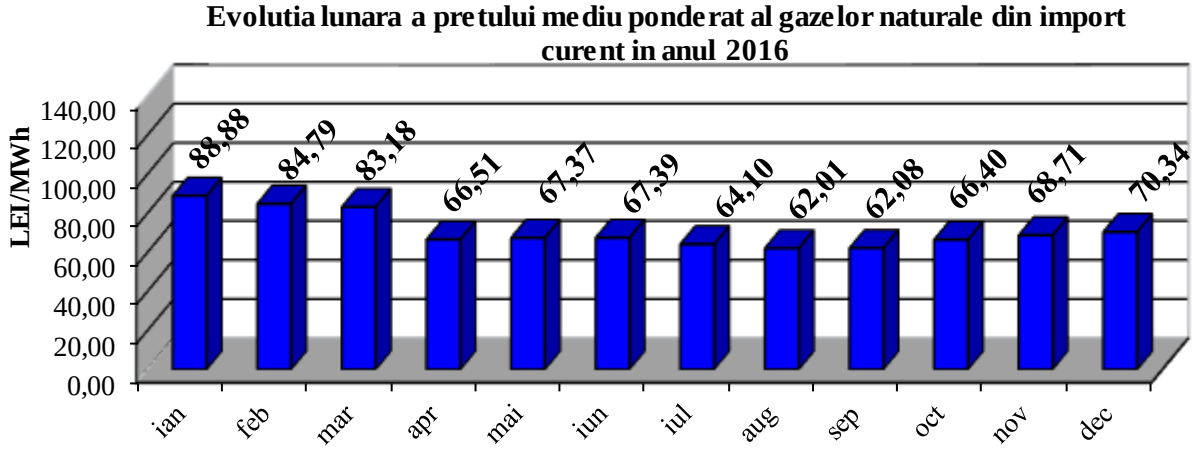
Quantity directly imported in period 2010-2016



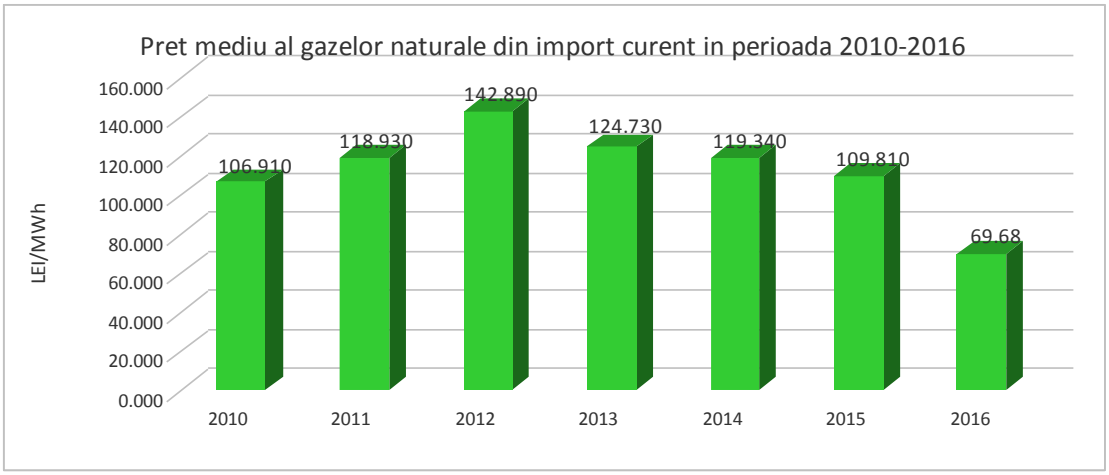
In 2016, there is a significant increase in import consumption (as can be seen from the previous graph) made against the background of a decrease in domestic production quantities but also of lower prices for quantities imported during the summer period of 2016.

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 the sales transactions reported monthly by the market participants and excluding VAT, excise duties or other taxes.

Monthly evolution of the average weighted price of natural gas from currently import in 2016



Average price of natural gas from currently import during the period 2010-2016



The storage of natural gas is necessary for the Romanian market due to the fact that during the summer period, the production exceeds the current consumption, and in the winter season, the consumption peak, additional quantities to cover the consumption. Since current production is in excess of summer consumption, storage becomes even a necessity for producers in the situation where suppliers do not acquire quantities for storage at the production level.

Following the adoption of *Government Emergency Ordinance no. 28/2016 amending and supplementing the Law of Electricity and Natural Gas no. 123/2012*, the primary legislation regarding the natural gas sector has undergone some additions which led to the need to adapt/update some of the regulations issued by ANRE.

Thus, by completing art. 143 of the Law no. 123/2012, it was attributed to ANRE the determination of the minimum level of natural gas stocks that license holders of natural gas supply have the obligation to set up for the purpose of guaranteeing the security of gas supply.

For this purpose, the ANRE Order no. 35/2016 which established the methodology for the annual determination of the level of the minimum natural gas stock for the natural gas supply license holders and at the same time the ANRE Order no. 14/2015 on the basis of which was approved the old *Methodology for the annual determination of the level of the minimum natural gas stock for the natural gas license holders and for the holders of the operating licenses for the natural gas transportation systems.*

This minimum stock reflects for each supplier the consumption of the clients in the portfolio and, at the same time, the total annual consumption, an annual evolution of this total minimum stock is presented below:

The level of the annual minimum natural gas stock that each natural gas supply license holder and each operator license holder of natural gas transmission system must hold in the underground storage until 31 October	
2013	24.248.110,943 MWh
2014	19.765.212,051 MWh
2015	17.477.030,807 MWh
2016	18.340.862,385 MWh

The table below shows the evolution of the natural gas stock by sources in the year 2016:

Stock 2016	Domestic (MWh)	%	Import (MWh)	%	Total (MWh)
Stock at the end of the injection cycle (October 2015)	25.956.308,343	97,45%	679.803,352	2,55%	26.636.111,695
January (extraction)	13.287.569,074	99,29%	94.441,552	0,71%	13.382.010,626
February (extraction)	10.816.011,079	99,22%	84.915,758	0,78%	10.900.926,837
March (extraction)	8.828.671,194	99,05%	84.915,758	0,95%	8.913.586,952
April (extraction)	8.815.186,018	99,05%	84.915,758	0,95%	8.900.101,776
Stock at the end of the extraction cycle (March 2016)	**8.815.186,018**	**99,05%**	**84.915,758**	**0,95%**	**8.900.101,776**
April (injection)	11.053.773,464	99,24%	84.915,758	0,76%	11.138.689,222
May (injection)	13.483.703,743	99,37%	84.915,758	0,63%	13.568.619,501
June (injection)	16.226.031,362	99,48%	84.915,758	0,52%	16.310.947,120
July (injection)	18.901.123,402	99,34%	125.756,771	0,66%	19.026.880,173
August (injection)	22.057.915,092	98,51%	333.358,609	1,49%	22.391.273,701
September (injection)	24.321.963,638	98,06%	480.010,215	1,94%	24.801.973,853
October (injection)	25.321.492,293	97,85%	555.460,215	2,15%	25.876.952,508
Stock at the end of the injection cycle (October 2016)	**25.321.492,293**	**97,85%**	**555.460,215**	**2,15%**	**25.876.952,508**
October (extraction)	25.265.094,747	97,85%	555.460,215	2,15%	25.820.554,962
November (extraction)	23.744.223,672	97,85%	555.460,215	2,15%	24.299.683,887
December (extraction)	18.569.195,531	97,85%	555.460,215	2,15%	19.124.655,746

There are two storage operators in Romania: S.C. Depomures S.A. and SNGN Romgaz S.A. The total capacity and the evolution of the use of this capacity is shown in the table below.

Storage operator	year	Storage capacity (MWh)	Stock after extraction (MWh)	Injection (April-Oct) (MWh)	Capacity used (MWh)
Romgaz	2013	29,503,400	6,704,018.854	21,188,550.748	27,892,569.602
	2014		8,141,654.008	18,077,373.958	26,219,027.966
	2015		5,611,283.576	17,869,463.343	23,480,746.919

	2016		8.521.425,916	**14.894.617,259**	23.416.043,175
Depomureş	2013	3,154,550	330,006.289	3,024,810.381	3,354,816.670
	2014		570,191.740	2,587,221.864	3,157,413.604
	2015		272,360.874	2,883,003.902	3,155,364.776
	2016		378.675,860	**2.084.214,398**	2.462.890,258

In 2016, due to the evolution of the consumption increase and the competitive prices of the quantities from external sources, a significant quantity of natural gas was injected into the underground storage facilities in the amount of 470.544 MWh. This quantity represents a 100% increase in volumes stored in 2016 compared to 2015, as no quantities of natural gas have been injected from external sources in the previous cycle.

Given the structure of the Romanian natural gas market with an annual consumption that exceeds the total output, the exported quantities have a very low level in 2016, of about 0.013 TWh, which represents less than 0.001% of the total production. The quantities exported were very small due to the increase in consumption compared to the previous year and on the other hand, the imports registered a significant increase in the total consumed natural gas on the background of low prices of natural gas from external sources.

Centralized markets

By *Government Emergency Ordinance no. 35/2014 amending Law no. 123/2014 on electricity and natural gas, approved with amendments and additions by Law no. 174/2014*, it was established the obligation of trading natural gas on centralized platforms for Romanian natural gas producers and suppliers of natural gas acting on the Romanian natural gas market.

According to these rules of law, ANRE issued **Order no. 118/2014** *approving the Methodology for establishing the obligation of natural gas producers and suppliers to conclude transactions on the centralized natural gas markets in Romania,* by which were set annual quotas specific to the two categories of operators, producers and respectively suppliers for natural gas trading on centralized platforms in Romania.

Along with the amendments made to the ***Law of electricity and natural gas no. 123/2012,*** by the adoption of the ***Emergency Ordinance no. 64/05.10.2016*** imposed obligations for natural gas producers and suppliers to trade within the centralized Romanian markets a certain percentage of the quantity of traded natural gas, a percentage established by the ***Government Decision no. 778/26.10.2016.***

The mandatory percentage shares traded on the centralized market during the period 01.01.2015 – 30.11.2016 were the following:

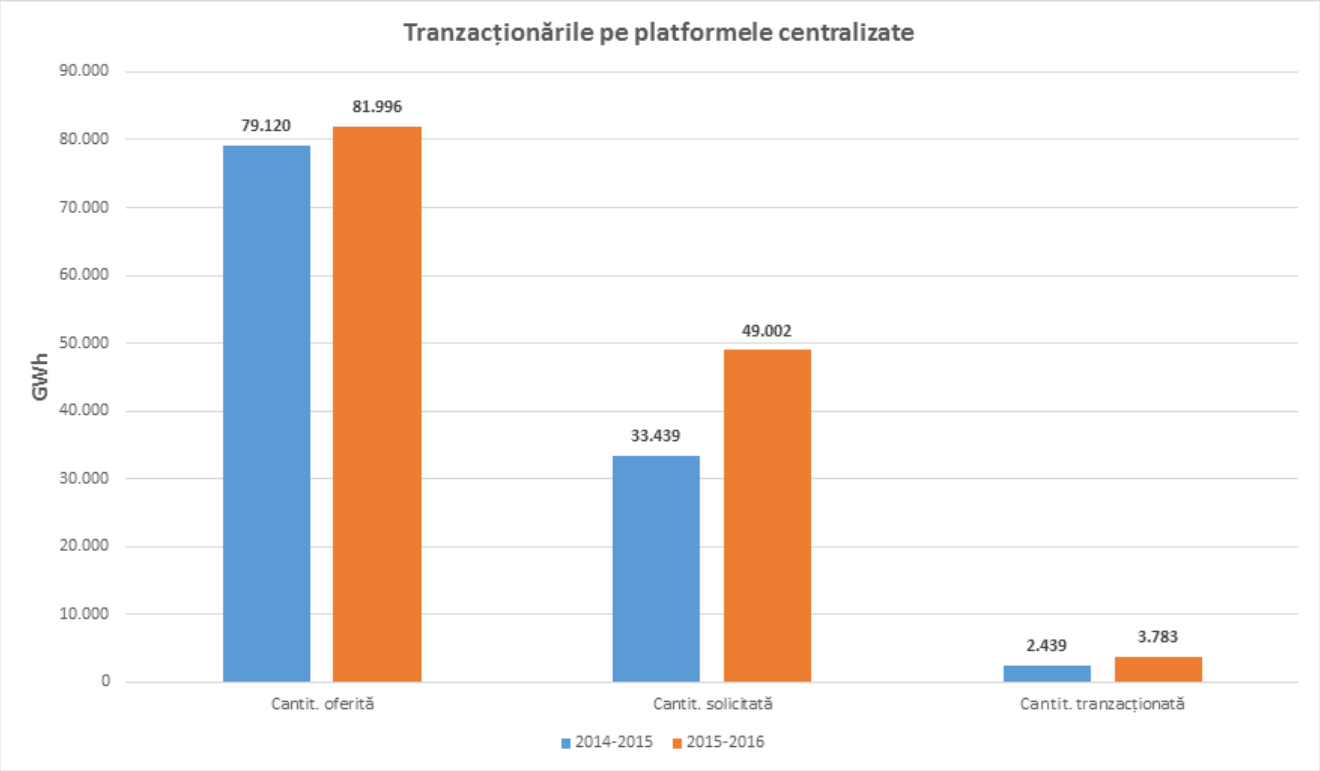
Year	Producers	Suppliers
2015	35%	30%
2016	30%	25%

The mandatory percentage quotations to be traded on the centralized market during the period 01.12.2016 – 31.12.2017, according to the percentages established by the ***Government Decision no. 778/26.10.2016***, taking into consideration the moment of ocurrence and the provisions of OUG no. 64/2016, have been established since December 1, 2016, with the previous timetable setting forth obligations set at the level of a calendar year:

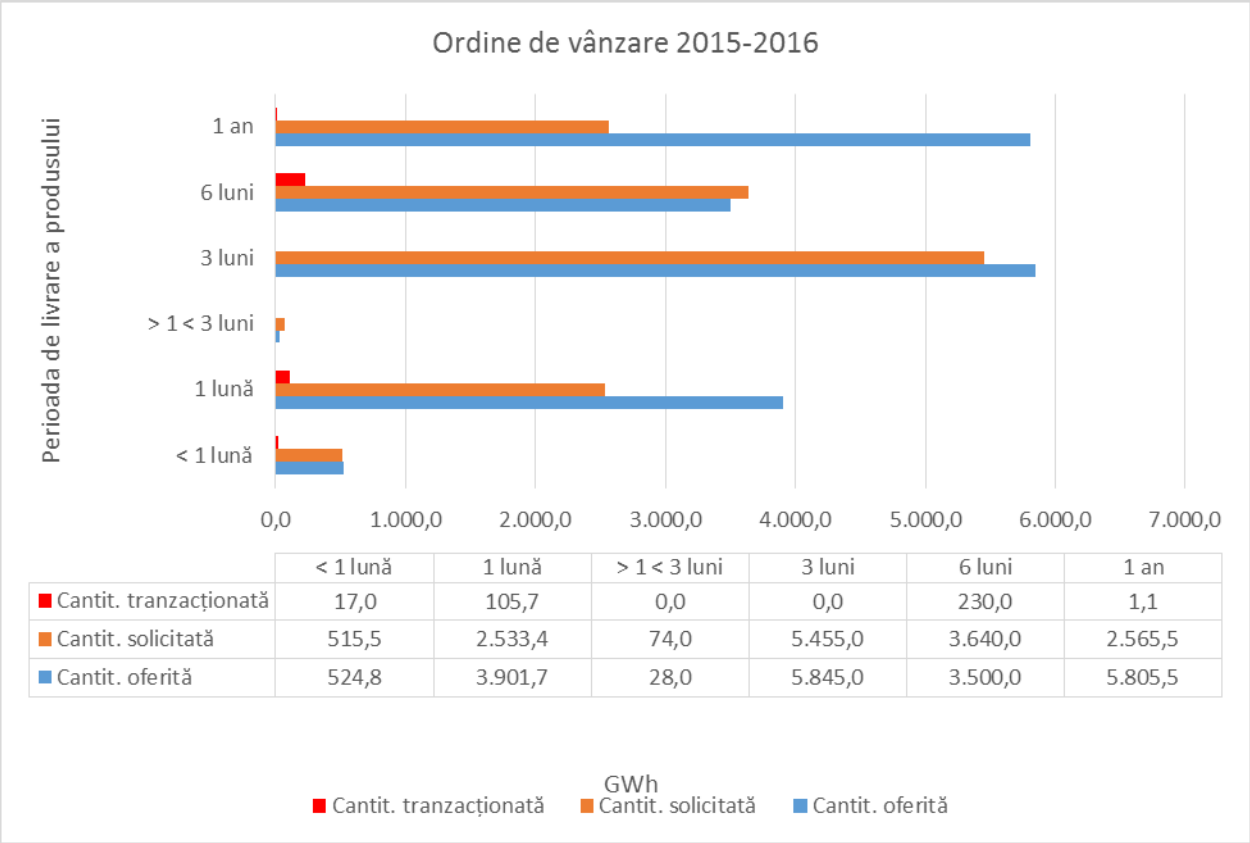
Year	Producers	Suppliers	
		purchase	sale
Dec 1, 2016- Dec 31, 2017	30%	20%	30%

In 2016, on the centralized platforms operated by two economic operators holding the centralized market management licenses, respectively Bursa Română de Mărfuri S.A. –BRM S.A. and Operatorul Pieței de Energie Electrică și de Gaze Naturale - OPCOM S.A., natural gas transactions were performed according to the table below, which also illustrates a comparative evolution compared to the previous period:

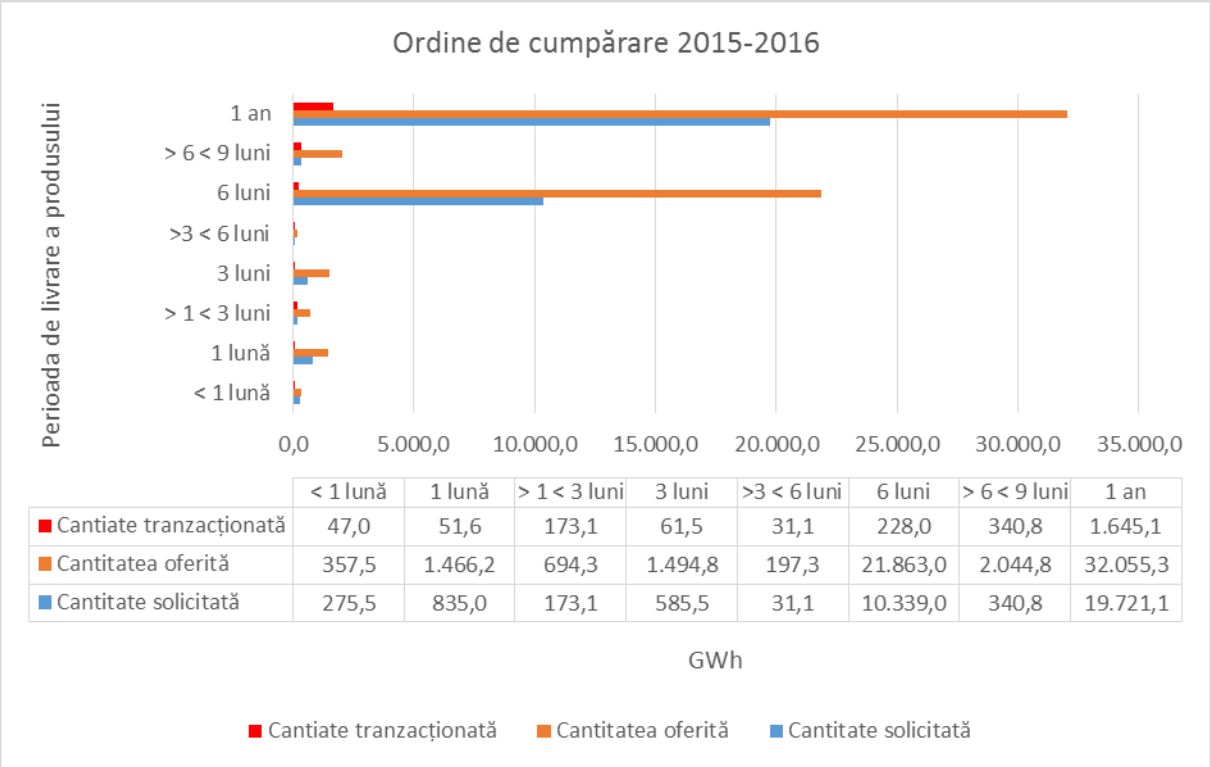
Transaction on centralized platforms



From which:

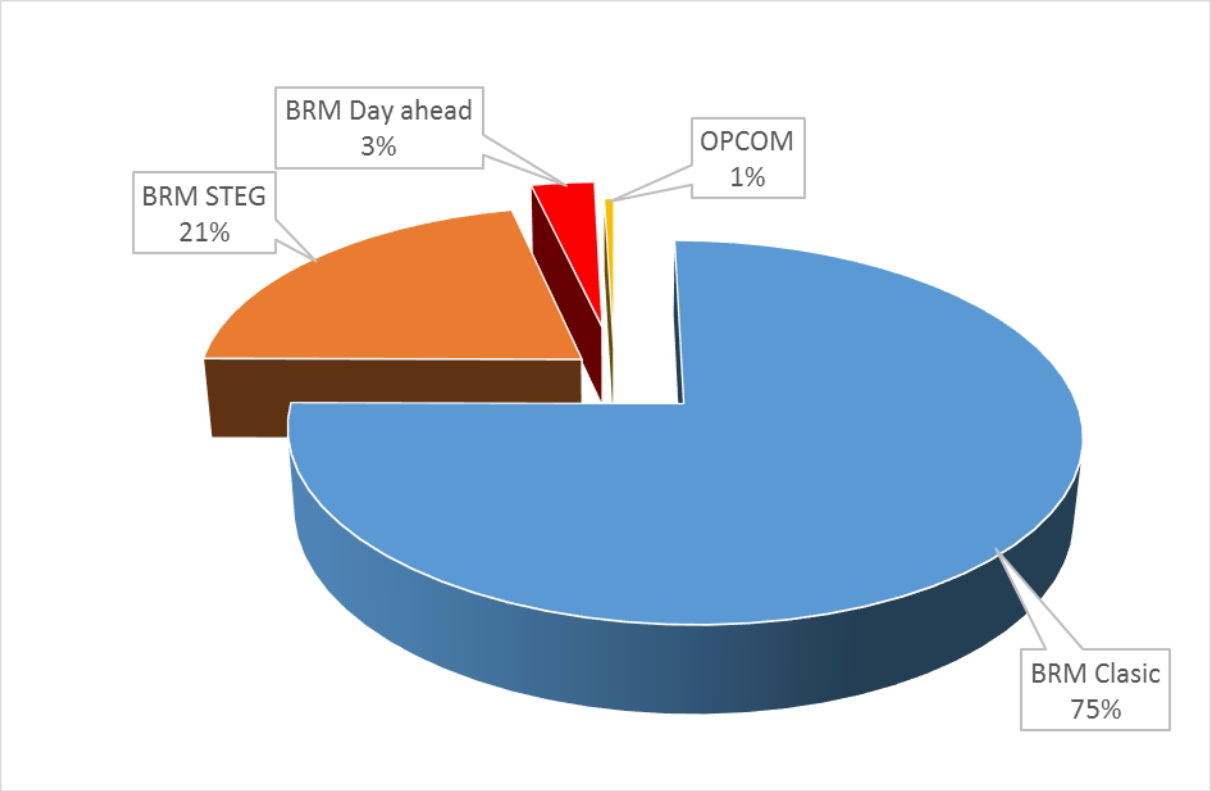


	< 1 lună	1 lună	> 1 < 3 luni	3 luni	6 luni	1 an
Cantit. tranzacționată	17,0	105,7	0,0	0,0	230,0	1,1
Cantit. solicitată	515,5	2.533,4	74,0	5.455,0	3.640,0	2.565,5
Cantit. oferită	524,8	3.901,7	28,0	5.845,0	3.500,0	5.805,5



	< 1 lună	1 lună	> 1 < 3 luni	3 luni	>3 < 6 luni	6 luni	> 6 < 9 luni	1 an
Cantiate tranzacționată	47,0	51,6	173,1	61,5	31,1	228,0	340,8	1.645,1
Cantitatea oferită	357,5	1.466,2	694,3	1.494,8	197,3	21.863,0	2.044,8	32.055,3
Cantitate solicitată	275,5	835,0	173,1	585,5	31,1	10.339,0	340,8	19.721,1

The situation of the quantities of natural gas traded in 2016, broken down by the two holders of the centralized market management license, is the following:



The data presented in the previous graph reflects quantities of natural gas traded in the gas year 2015-2016 (between October 1, 2015, 06.00 – October 1, 2016, 06.00 hour), destined for the wholesale market.

Depending on the time of the transaction and the type of product traded, the delivery periods of some of the transactions exceed the reference range kept in side when the chart was drawn up (for example, two transactions concluded in September 2016, covering deliveries of natural gas in the following year – October 2016 – October 2017 – were taken into account in the graph presented in the Report on page 176, even if the delivery was made in the next gas year, respectively, between October 1, 2016, 06.00 – October 1, 2017, 06.00).

With the exception of a quantity of 224,387 MWh, all other quantities offered (on the basis of an initiating sales order), requested (based on an initiating purchase order) and traded, were gas from domestic production.

The processed data included both the quantities purchased by S.N.T.G.N. TRANSGAZ S.A., in order to cover their own technological consumption and those purchased by the same company in order to balance the National Gas Transmission System.

By the *Regulation on the organized trading framework on the centralized natural gas markets administered by Societatea Bursa Română de Mărfuri (Romanian Commodities Exchange) - S.A., approved by ANRE Order no. 51/201, subsequently amended and supplemented,* the products that can be traded within the centralized markets managed by BRM have been established. According to the Regulation, these products are as follows:

a) natural gas from domestic production, with standard delivery period of 1/3/6/12 months or with **another delivery period**;

b) natural gas in a mixing import-domestic production with standard delivery period of 1/3/6/12 months or with **another delivery period**;

c) natural gas from import, with standard delivery period of 1/3/6/12 months or with **another delivery period**;

d) natural gas destined for export, with standard delivery period of 1/3/6/12 months or with **another delivery period**.

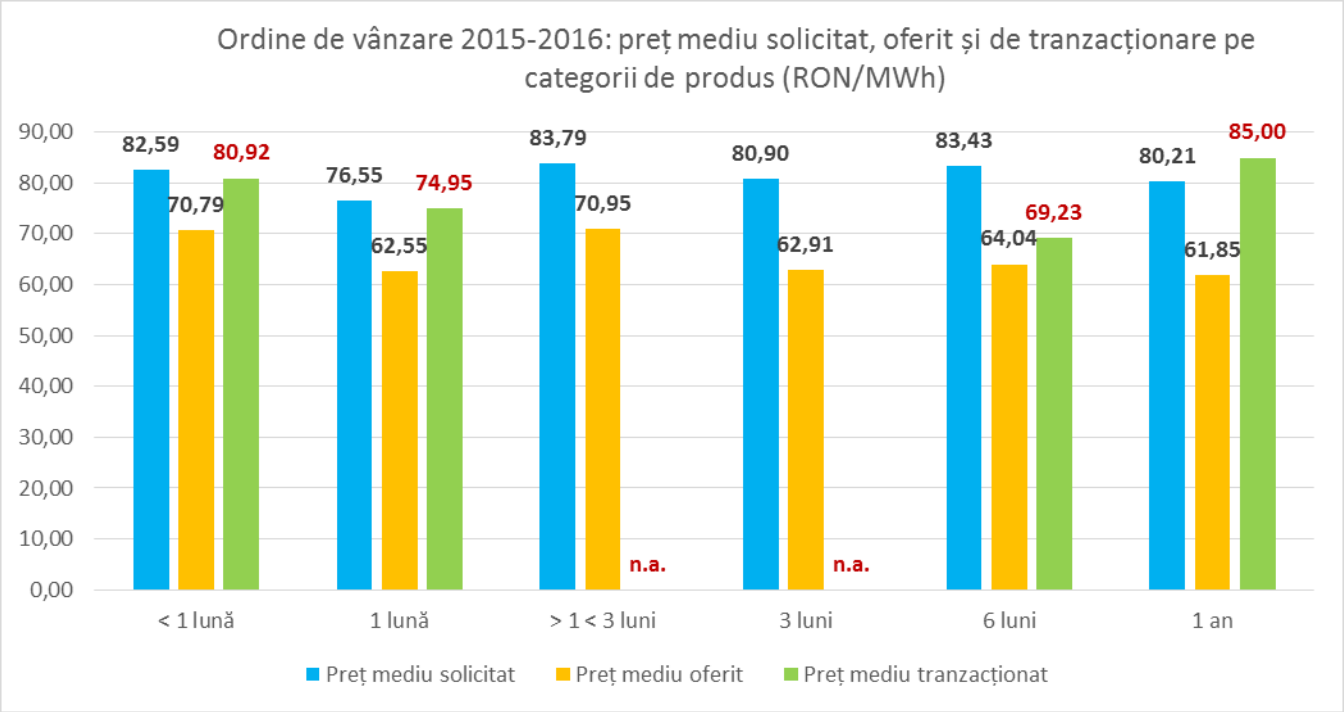
Thus, according to the Regulation, BRM may also include commodities with a duration of one day, respectively deliveries on the day following the trading day.

The concept of "BRM Clasic" used in the previous chart identifies the transactions made in the BRM public auction trading ring (characterized by the launch of the initiating orders, which are then expected to offer feedback from the interested participants), while the notion of "BRM Day ahead", ANRE identified those transactions in centralized markets managed by BRM (especially in the Electronic Trading System for natural gas – STEG) which had as their object the delivery of natural gas the day after the trading day.

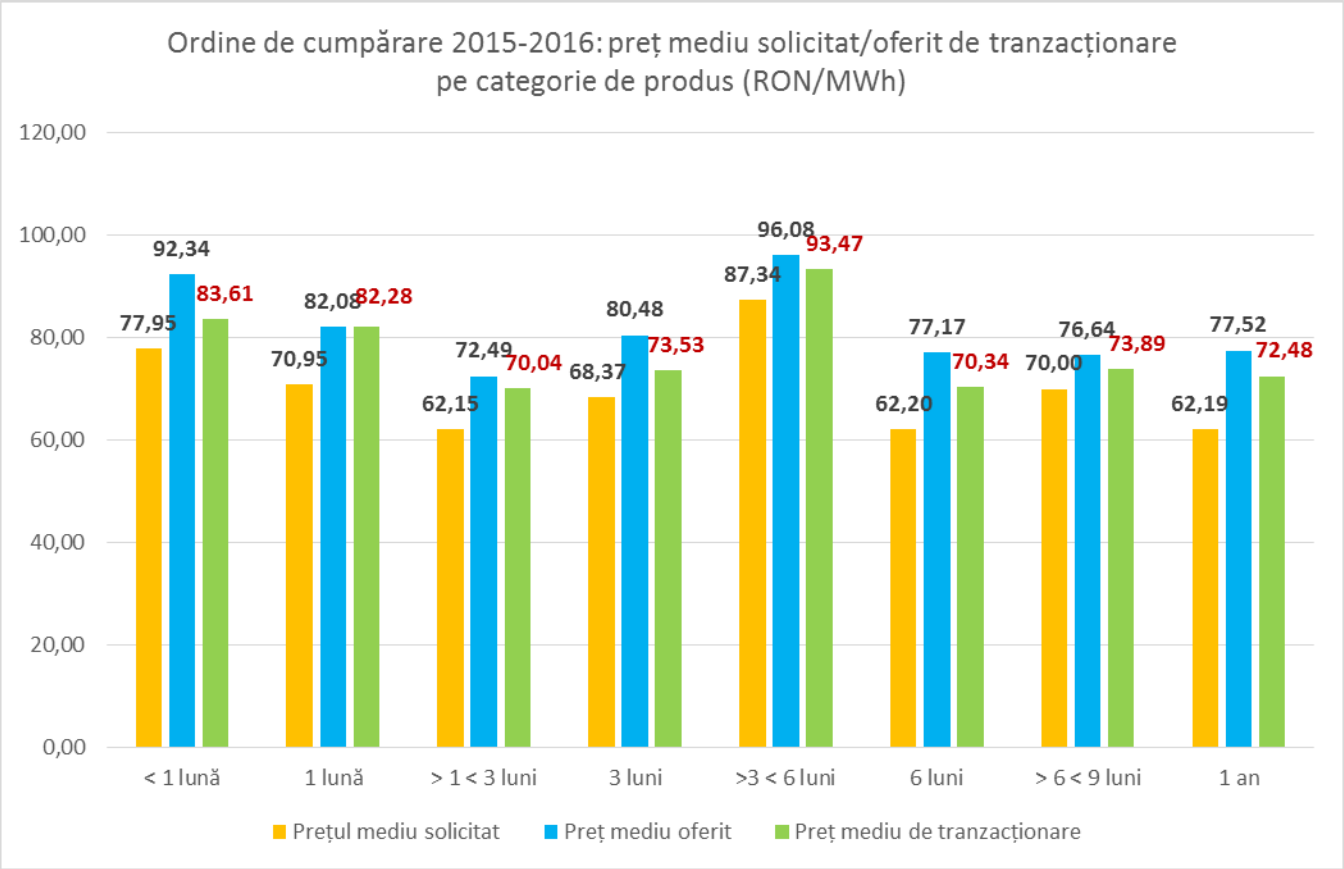
Both the public auction trading ring managed by BRM and the STEG platform operate on the basis of the Regulation approved by ANRE Order no. 51/2013, as amended and supplemented, and the specific procedures approved by ANRE.

In terms of the prices underlying transactions, they varied as follows, depending on the product traded:

Sale orders 2015-2017: required, offered and trading average price, by product categories (RON/MWh)



Buying orders 2015-2017: required, offered and trading average price, by product categories (RON/MWh)



The centralized natural gas markets administered by BRM operate on the basis of the public auction principle, which involves the launch of an initiating order (which may be a sales or a purchase order) which is expected to receive response orders („aggressors" of the initiating order, in the sense that an offer to respond to a sales order can only be a buying aggressor order, whereas a response to a purchase order can only be an „aggressor" order sale).

Within the graph „**Sale orders 2015-2017: required, offered and trading average price, by product categories"** had been taken into account **sales initiating orders** (and therefore the **average asking price** is the weighted average price demanded by sellers under **the originator orders** generated by them), **purchase aggression orders**, which are the offer responses to sales promoters generated by sellers (and therefore **the average offered price** is the weighted average price of the „aggressor" buyer's response) and **the prices of the transactions actually concluded** (the average transaction price being the weighted average price of the transactions actually concluded).

Similarly, **purchase orders** were considered in the ***"Purchase orders 2015-2017: required, offered and trading average price, by product categories (RON/MWh)"*** (and therefore the **average asking price** is the weighted average price offered by buyers within **the originator orders** generated by them), **„aggressor" sales orders**, representing buyer-initiated buy-back offer bids (and therefore **the average offered price** is the weighted average price of the

„aggressors"), as well as **the prices of the transactions actually concluded** (the average transaction price being the weighted average price of the transactions actually concluded).

The two graphs reflect **the differentiated behavior of the two parties** (seller or buyer) **according to the dual position in which they can be** (originator or aggressor). Thus, in the case of short-term products (up to one month), sellers tend to ask for a higher price if they are in the position of an aggressor, compared to the price offered by the originator, while the buyers offer a lower price as an aggressor than the requested price as initiator.

It also reflects the availability of each of the two parties to review their prices in the transaction bids (aspect reflected by the differences between the average price requested by the initiating order and the average transaction price, respectively the differences between the average price offered by the "aggressor" order and the average trading price, the average trading price being, ultimately, the price accepted by both parties).

For example, in the case of **contracts for delivery periods <1 month: average selling price 80.92 RON/MWh, average purchase price 83.61 RON/MWh**, the above average trading prices are influenced by the time of the gas year in which actually made the transactions. Thus, in the context of the transactions concluded on the basis of **initiating sales orders** were made in the second part of the gas year (when prices dropped, and sellers had no other options to sell orders were made in the second part of the gas year (when prices dropped and seller had no other options to sell natural gas, such as export, and the storage option was too expensive due to the anticipated price developments in the coming winter) and the transactions concluded on the basis of **initiating purchase orders** were made in the first part of the gas year (when prices were higher and the buyers had need for natural gas to cover the winter consumption of clients in their own portfolios), it is normal the average selling price is lower than the average purchase price.

In 2016, quantities traded on the centralized markets summed up a volume of 15.5 TWh, of which 14.1 TWh for the wholesale market and 1.4 TWh for the retail market, in this way:

Month	Markets	Monthly prices on centralized markets (RON/MWh)	Traded quantities (MWh)
January	wholesale	103,98	226.400,00
	retail	88,50	4.000,00
February	wholesale	83,43	38.700,00
	retail	116,61	296.850,00
March	wholesale	73,89	346.800,00
	retail	110,35	92.721,69
April	wholesale	69,53	47.975,00
	retail	105,85	331.582,46
May	wholesale	63,11	14.650,00

	retail	96,36	83.285,41
June	wholesale	61,90	12.650,00
	retail	89,08	75.564,64
July	wholesale	70,00	170.400,00
	retail	99,00	79.900,90
August	wholesale	71,64	7.000,00
	retail	105,88	43.346,00
September	wholesale	68,42	2.209.180,00
	retail	104,50	89.286,00
October	wholesale	69,79	5.182.750,00
	retail	104,38	117.074,61
November	wholesale	69,44	1.933.196,88
	retail	101,09	116.232,18
December	wholesale	69,97	3.902.100,00
	retail	93,96	90.937,00
Weighted average price in 2016	wholesale	70,25	14.091.801,88
	retail	105,15	1.420.780,89
Total			**15.512.582,77**

The table contains the quantities traded on the centralized markets and the monthly prices are the trading orders concluded in the respective months and not the quantities actually delivered in that month. These orders may have delivery terms ranging from 1 month, respectively the month in which the transaction was concluded, and 12 months. Please note that these mnthly amounts in this table also include the quantities traded on both BRM platforms, available on the STEG platform, and their prices are the weighted average of all transactions concluded on the two platforms.

4.2.2. Retail natural gas market

In 2016, a number of 85 suppliers were active on retail natural gas market, out of which:

- 39 suppliers were active on regulated natural gas market;
- 81 suppliers were active on the competitive market.

The total number of final natural gas customers at December 2016 was about 3,596,574, of which 188,253 non-household customers (about 5.23%) and 3,408,321 household customers (about 94.77%).

The total natural gas consumption was about 124 TWh, recording an increase of about 2% about 2015.
In total consumption of natural gas sector a part is represented by the specific consumption of the sector's activities or the consumption of the operators in relation to the specific technological processes: technological consumption, energy consumption and deviations due to the measuring instruments. Excluding these consumption out of the total, in 2016 the consumption delivered by the suppliers to the end customers was approximately 111.7 TWh, of which approx. 80 TWh was non-household consumption, 31.7 TWh was household consumption, as follow:

Final customers	**Number of customers**	**Consumption* (TWh)**	**% in total consumption**
Households	3.408.321	31,7	28,35%
Non-households	188.253	80,0	71,65%
Total	3.596.574	111,7	

*Total consumption delivered to final customers (not including technological consumption, energy consumption and deviations due to the measuring instruments).

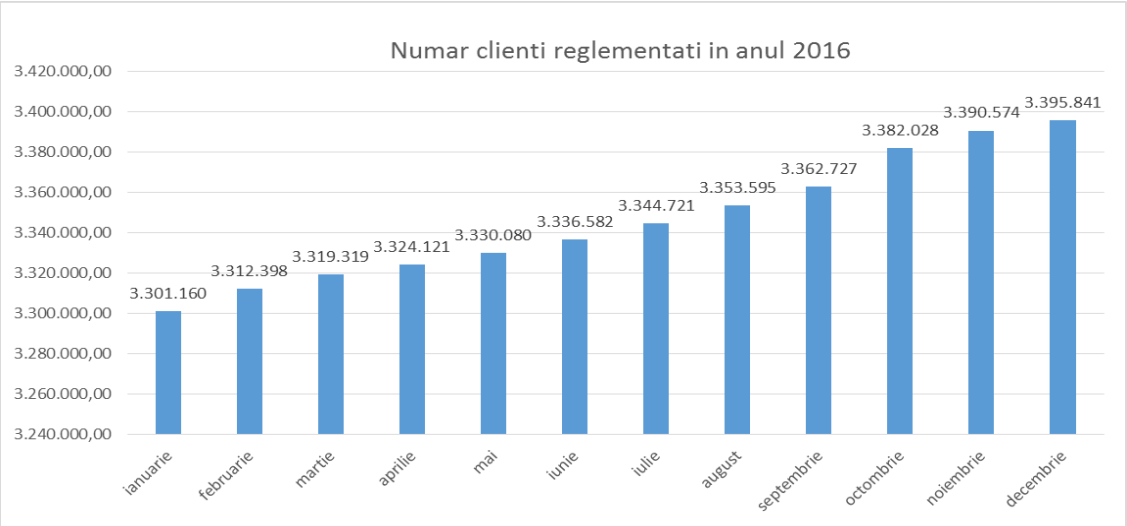
In 2016, the share of quantities consumed by households of total consumption delivered by suppliers was **28.35%** and the number of these customers represents **94.77%** of the total natural gas final customers.

Although the number of non-households represents only **5.23%** of all final customers of natural gas, the share of quantities consumed by them is **71.65%** of total consumption delivered by suppliers in 2016.

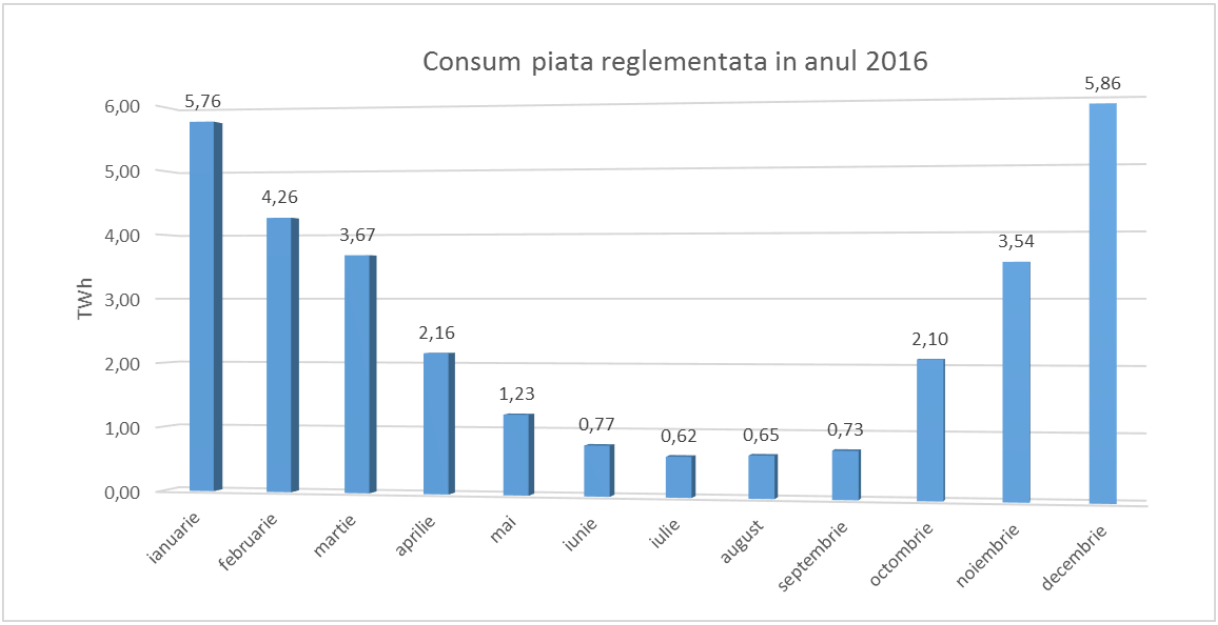
Regulated retail market

In 2016, 38 suppliers were active on regulated natural gas market

The total number of regulated natural gas customers, in December 2016, was 3,395,841, these representing only household customers in a regulated regime, and their evolution is presented in the chart below:



The regulated customers consumption, in 2016, was 31.36 TWh and is presented in the chart below:



The competitive retail market

In the competitive market, natural gas supply is made on the basis of the supply contract concluded between the supplier and the final customer, at the supply price and under the commercial conditions negotiated between them or established by standard offers.

The final customer may conclude the natural gas supply contract in a competitive regime with any of the holders of the gas supply license issued by ANRE.

In order to conclude a gas supply contract under competitive conditions, the final customer may accept a standard offer published by a natural gas supplier or may ask him for an offer regarding the commercial conditions and the supply price for negotiation with him, as the case may be, or may choose to select the supplier through specific auction/public procurement procedures.

In order to support final customers and to ensure that they can choose knowingly the natural gas supplier, in the context of an increased competition between suppliers, ANRE aims that all suppliers who have B1-B4 and A1-A2 final customers in their customer portfolio have standard updated offers available, so that customers who have not yet taken the step towards the conclusion of a negotiated contract of sale-purchase to have sufficient information available for this step. Standard offers are published by each supplier on its webpage and the links to this information are posted by ANRE on its webpage as a list, permanently updated and verified. Also, on ANRE website a list of undertakings, holders of natural gas supply license can be accessed.

Considering the stage of concluding gas supply contracts by non-household customers by August 31, 2015, which marked the end of the transition period, in 2016, ANRE continued monitoring non-household customers that had not concluded contracts for competitive supply and which were to be supplied with gas, starting September 1, 2015 on the basis of tacitly accepted sales and purchase agreements. The evolution of this process, as reported by suppliers, is presented in the following table:

	1 September 2015	31 December 2015	31 December 2016
No. of non-household customers which are supplied with gas on the basis of tacitly accepted sales and purchase agreements	46,134	42,749	10,423

The graphic below shows that, at December 31, 2016, gas supply was done on the basis of tacitly accepted sales and purchase agreements for 6.03% of the total number of non-household customers which were to exercise their eligibility right until January 1, 2015, the moment of liberalization.

Stage of non- household customers which were to exercise their eligibility right and conclude contracts for sale and purchase of natural gas for negotiated supply

Considering that 91% of the total non-household gas customers which were to exercise their eligibility right were in the portfolios of the natural gas suppliers E.ON Energie România S.A. and ENGIE România S.A., based on the data reported by these, the evolution of the process of concluding the sale and purchase contracts related to natural gas supply under negotiated regime during the period 1 January 2015 - 31 December 2016 was the following:

Denumire furnizor	% din total clienți noncasnici care au optat pentru furnizarea în regim negociat în perioada 2015 - 2016									
	ian 2015	feb2015	mar 2015	apr 2015	mai 2015	iun 2015	iul 2015	aug 2015	dec 2015	dec 2016
E.ON Energie România S.A.	36,23%	47,65%	52,78%	58,58%	63,02%	63,94%	65,27%	67,63%	70,15%	99,10%
ENGIE România S.A.	44,10%	46,87%	53,12%	58,87%	65,19%	72,20%	76,27%	76,92%	77,49%	88,35%*)

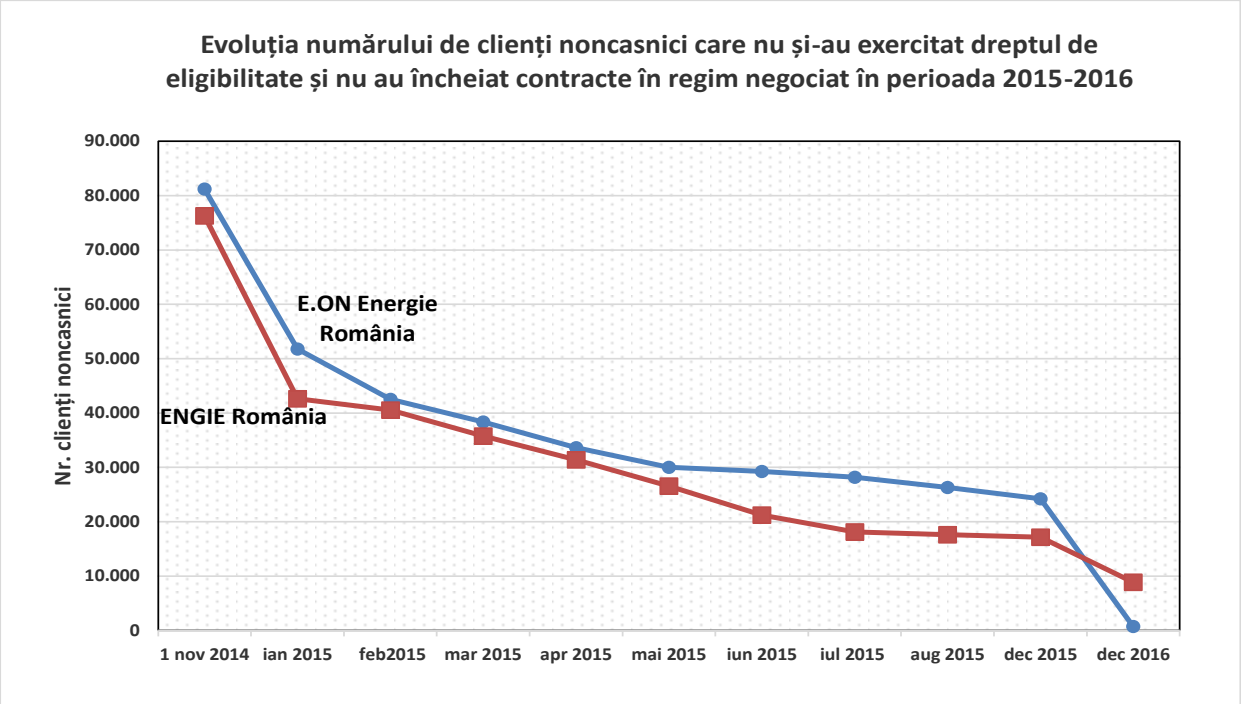
*) include și clienții noncasnici preluați de la Congaz S.A.

The monthly evolution of the number of non-household customers, in the portfolios of the above mentioned suppliers, which did not exercise their eligibility right, for the period between 1 January 2015 - 31 December 2016 is presented below:

Denumire furnizor	Număr clienti noncasnici din portofoliul propriu pentru care furnizarea gazelor naturale se realiza în regim reglementat la data de 1 noiembrie 2014	Numărul clienților noncasnici care nu și-au exercitat dreptul de eligibilitate în perioada 2015 - 2016									
		ian 2015	feb2015	mar 2015	apr 2015	mai 2015	iun 2015	iul 2015	aug 2015	dec 2015	dec 2016
E.ON Energie România S.A.	81.197	51.778	42.503	38.341	33.632	30.030	29.280	28.196	26.284	24.240	732
ENGIE România S.A.	76.276	42.637	40.522	35.761	31.369	26.552	21.204	18.099	17.601	17.170	8.884*)

*) include și clienții noncasnici preluați de la Congaz S.A.

The evolution of non-household customers which did not exercise their eligibility right and did not conclude negotiated contracts between 2015 – 2016



4.2.3. Recommendations on supply prices, investigations and measures to promote competition

Price of natural gas from domestic production

Under the provisions of *Law no. 123/2012 on electricity and natural gas, with subsequent amendments and additions*, *Government Decision no. 488/2015* was issued on establishing the purchase price for natural gas from domestic production for households and heat producers, only for the natural gas quantities used to produce heat in cogeneration plants and heating plants for household consumption, during 1 July 2015 – 30 June 2021, by which it was established an annual increase in the purchase price of natural gas from domestic production, values that were included by ANRE in the calculation of regulated prices.

On June 28, 2016, *Government Decision no. 461/2016 on amending the annex to the Government Decision no. 488/2015 on establishing the purchase price for natural gas from domestic production for households and heat producers, only for the natural gas quantities used to produce heat in cogeneration plants and heating plants for household consumption, during 1 July 2015 – 30 June 2021* was approved.

As such, according to the provisions of Government Decision no. 461/2016, the purchase price of natural gas from domestic production was set as follows:

Purchase price for natural gas from domestic production for households and heat producers, only for the natural gas quantities used to produce heat in cogeneration plants and heating plants for household consumption:

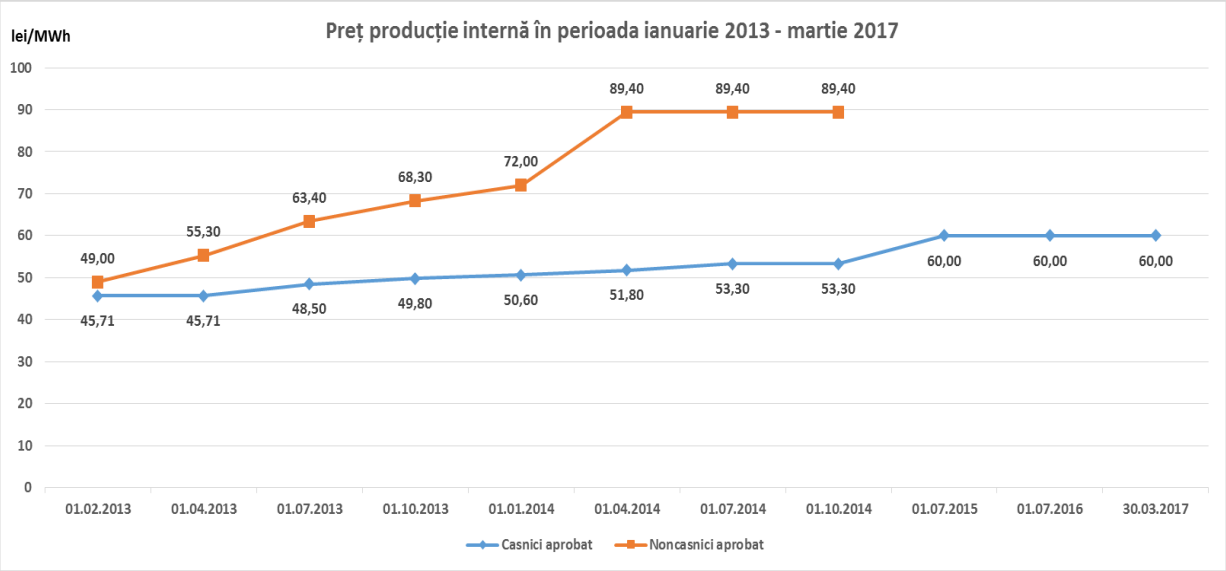
RON/MWh

	Households and heat producers, only for the natural gas quantities used to produce heat in cogeneration plants and heating plants for household consumption
01.07.2015	*60.00*
01.07.2016	*60.00*
01.04.2017	*72.00*
01.04.2018	*78.00**
01.04.2019	*84.00**
01.04.2020	*90.00**

*) Purchase price for natural gas from domestic production for households and heat producers, only for the natural gas quantities used to produce heat in cogeneration plants and heating plants for household consumption starting April 1, 2018 is to be reassessed following an analysis conducted by the end of March 2018.

The following graph reflects the evolution in time of the purchase price of natural gas from domestic production for household and non-household customers.

Price of natural gas from domestic production between January 2013 – March 2017



On October 11, 2016 Emergency Ordinance *no. 64/2016 for amending and supplementing the Law on Electricity and Natural Gas no. 123/2012* was approved. Thus, according to the provisions of art. 181 para. (5) of the Law, 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 cogeneration plants and heating plants for household consumption is established by Government decision, at the proposal of the relevant ministry, until 31 March 2017.

Setting regulated prices for customers who have not exercised their eligibility right

According to the provisions of the *Law on Electricity and Natural Gas no. 123/2012*, as amended and supplemented, the natural gas market is composed of the regulated market and the competitive market.

Regulated prices are differentially set for each licensed supplier and customer category, depending on the configuration of the natural gas supply systems.

Prices are monomial and quantify the fixed and variable costs related to the regulated supply activity. Regulated prices apply to natural gas quantities supplied in a regulated regime and are differentially set for every holder of supply license, as follows:

a) for companies that have legally separated the natural gas supply from the distribution - by type of customer category for which the supply of natural gas is done in a regulated regime, customers placed in established areas for which the affiliated undertaking has the license for natural gas distribution, based on the annual consumption and type of systems (transport/distribution) by which the supply of natural gas is done;

b) for companies that have not legally separated the natural gas supply from the distribution - by type of customer category for which natural gas supply is made in a regulated

regime, placed in the distribution area where the company acts as licensed distribution operator, based on the annual consumption and type of systems (transport/distribution) by which the supply of natural gas supply is done.

According to the provisions of Government Decision no. 488/2015 and its amendment by Government Decision no. 461/2016, for 2016, 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 cogeneration plants and heating plants for household consumption, was set at 60.00 RON / MWh.

For the period between 1 January and 30 June 2016, the fixed unitary amount intended to cover the costs for the purchase of natural gas only for household customers and producers of heat, only for the quantities of natural gas used for the production of heat in cogeneration plants and heating plants for household consumption, was the one rated by ANRE in June 2015 for the period July 2015 - June 2016, respectively 80.30 RON / MWh.

For the period between 1 July and 31 December 2016, the fixed unitary amount intended to cover the costs for the purchase of natural gas for regulated households was the one rated by ANRE for the period July 2016 – March 2017, respectively 76.64 RON/MWh.

All document regarding assessing the unitary fixed amount intended to cover the cost for purchase of natural gas for household customers were posted on the ANRE's webpage.

It is worth mentioning that during 2016, GUC component, *representing the unitary correction component for the difference between the fixed unitary amount recognized by ANRE to cover costs of purchasing natural gas, including related services, designed for resale in the regulated supply, and the actually incurred costs recognized by ANRE to the operator performing the regulated supply*, was regulated.

Thus, the differences in the purchase price of natural gas for the period between January and December 2015 were analyzed, and the values ceded / recovered through the GUC component already included in the price for each regulated supply operator were updated.

The adjusted percentage of the final regulated prices calculated as an average according to the market share of each licensed operator performing natural gas supply on the regulated market were:

- **On May 1, 2016, about -1.35%;**
- **On July 1, 2016 of about -3.00%;**
- **Cumulative 1 October - 1 December 2016 of about - 0.19%.**

The decrease in prices by about 1.35% as of 1 May 2016 was due to the adjustment of the unitary income related to the distribution activity for the DISTRIGAZ SUD REȚELE S.R.L. and for E.ON GAZ DISTRIBUȚIE S.A., respectively, establishing the unitary income related

to the regulated supply activity for 2016 and the correction of GUC component for ENGIE ROMANIA S.A. and for E.ON ENERGIE ROMÂNIA S.A, operators whose share represents approximately 91% of the regulated market.

The decrease in prices by about 1.35% as of 1 July 2016 was due to to the change in the GUC component (the fixed unitary amount to cover the cost of natural gas purchases for domestic customers assessed by ANRE) included in the regulated prices, from 80.30 RON / MWh to 76.64 RON / MWh.

The decrease of the GUC component included in the price was due to the following changes:

- the evaluation period of 9 months, compared to 12 months for the previous evaluation;
- decrease of the unitary transport cost.

The decrease in prices by about 0.19% for the period October 1 – December 1 2016 was due to the regularization of GUC component, adjusting the unit revenue related to the distribution activity and setting the unit revenues related to the regulated supply activity for 2016 for a number of 35 operators.

As a result, in 2016, the regulated prices for household customers registered an average decrease of about 4%.

The regulated prices for suppliers with a representative market share, in force from 1 July 2016 until 31 March 2017, are as follows:

The prices for the regulated natural gas supply by ENGIE ENGIE ROMÂNIA S.A. for household customers:

Category of customers	RON/ MWh
B. Final customers connected to the distribution system	
B.1. With a consumption up to 23.25 MWh	109.34
B.2. With annual consumption between 23.26 MWh and 116.28 MWh	109.27
B.3. With annual consumption between 116.29 MWh and 1,162.78 MWh	107.01
B.4. With annual consumption between 1,162.79 MWh and 11,627.78	105.77

For B1 customers of ENGIE ROMÂNIA S.A., in 2016, the regulated prices registered a 4.23% decrease, compared to December 2015.

The prices for the regulated natural gas supply by E.ON ENERGIE ROMÂNIA S.A. for household customers:

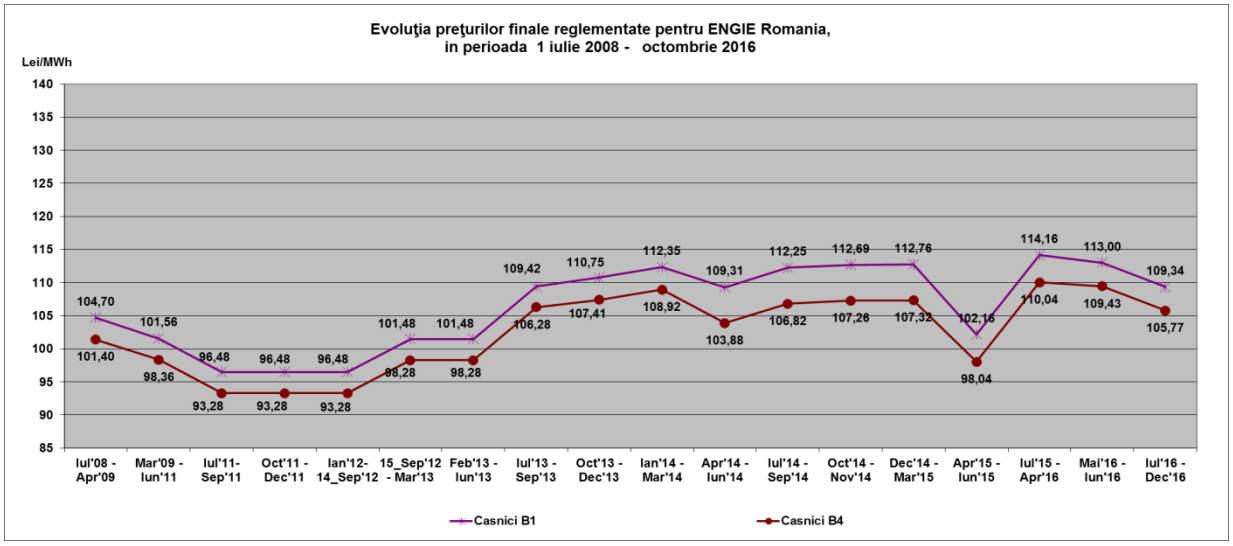
Category of customers	RON/ MWh
A. Final customers connected directly to the transmission	
A.1 Annual consumption up to 1,162.78 MWh	90.78

B. Final customers connected to the distribution system	
B.1. With a consumption up to 23.25 MWh	123.98
B.2. With annual consumption between 23.26 MWh and 116.28 MWh	122.84
B.3. With annual consumption between 116.29 MWh and 1,162.78 MWh	122.32
B.4. With annual consumption between 1,162.79 MWh and 11,627.78	121.89

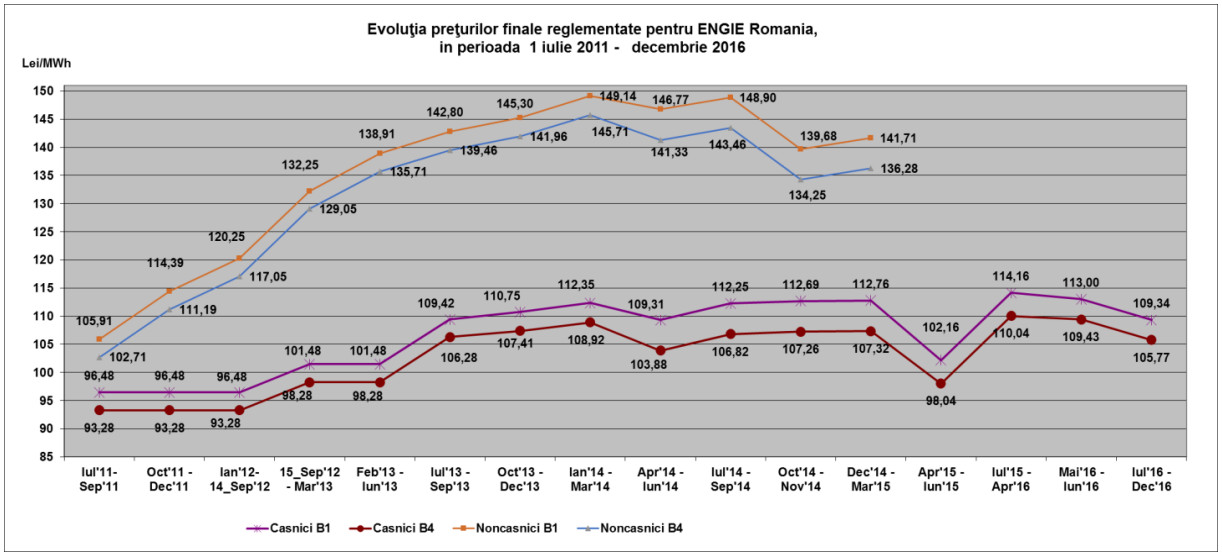
For B1 customers of E.ON ENERGIE ROMÂNIA S.A., in 2016, the regulated prices registered a 4.70% decrease, compared to December 2015.

The following charts reflect the evolution over time of regulated gas prices from 1 July 2008 up to the end of 2016.

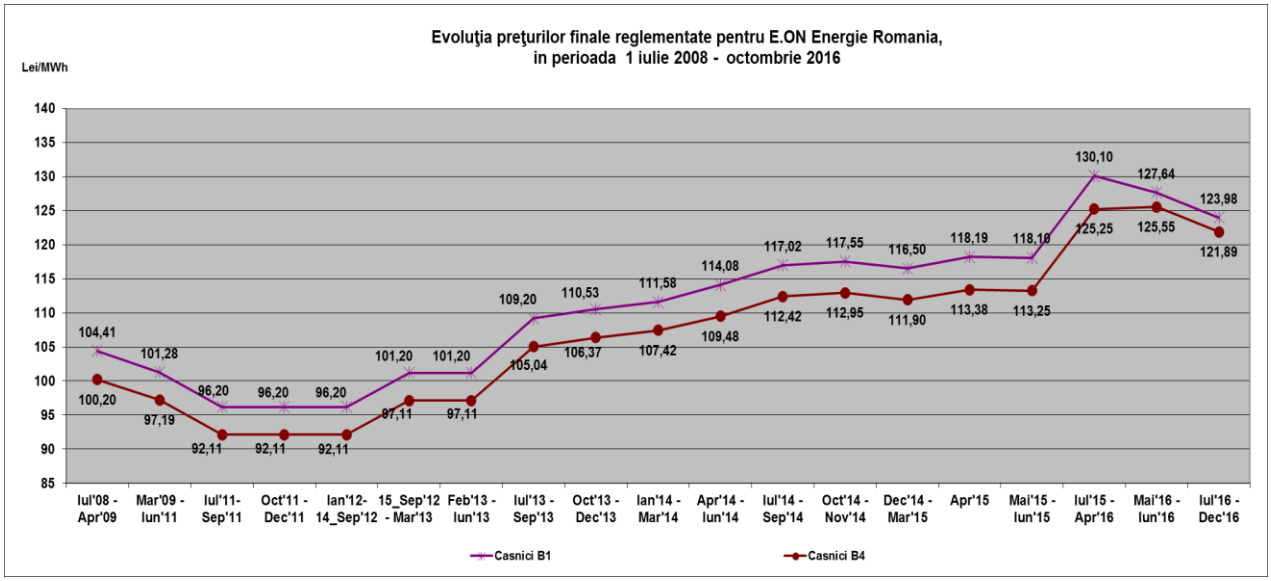
The evolution of final regulated prices for ENGIE Romania between 1 July 2008 – October 2016



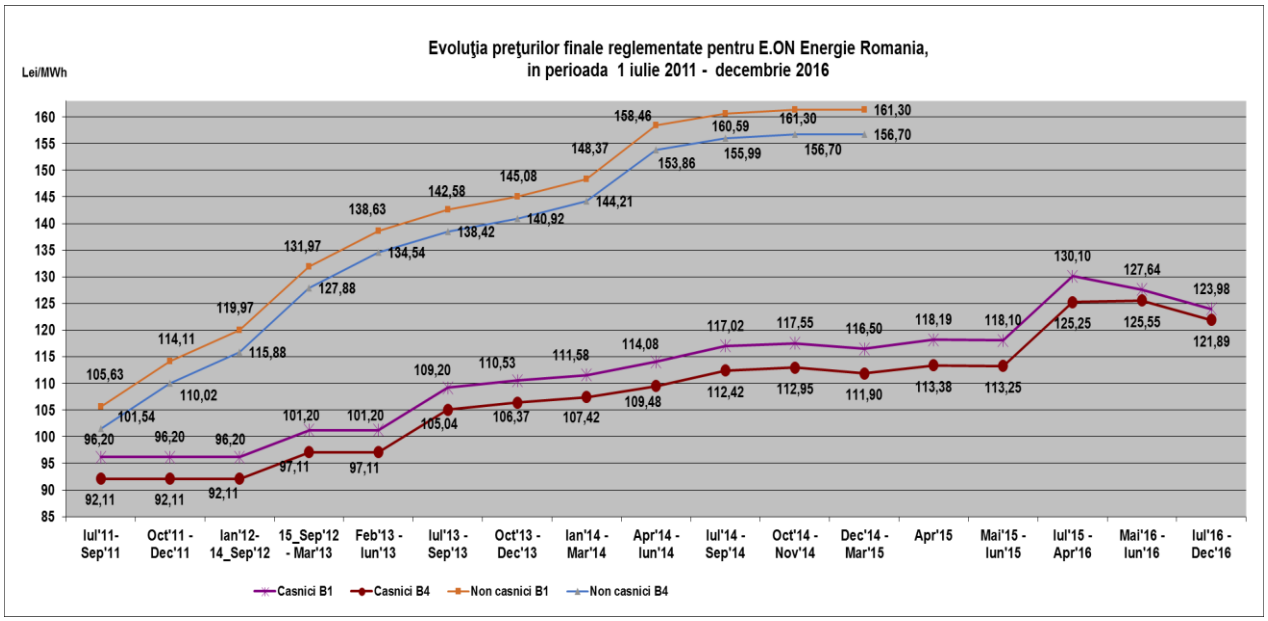
The evolution of final regulated prices for ENGIE Romania between 1 July 2011 – December 2016



The evolution of final regulated prices for E.ON Energie Romania between, between 1 July 2008 – October 2016



The evolution of final regulated prices for E.ON Energie Romania between 1 July 2011 – December 2016



4.3.Security of supply

According to Article 102 of *Law no. 123/2012 on electricity and natural gas*, the line Ministry monitors security of supply issues, particularly regarding the supply/demand balance on the national market at the level of expected future demand and available supplies, envisaged additional capacity, planned or under construction, quality and maintenance of networks and measures necessary to meet peak demand and shortfalls of one or more

suppliers. In this respect, every two years, before 31 July, it publishes a report outlining the findings of monitoring these issues, and any measures taken or envisaged to address them and forwards the report to the European Commission.

5. Consumer protection and dispute settlement in electricity and gas

5.1. Consumer protection

5.1.1. Electricity

Law no. 123/2012 on electricity and natural gas defines the *"vulnerable customer"* as the final customer being part of a household group that, for reasons of age, health or low income, is at risk of social exclusion, and in order to prevent this risk, benefits from social protection measures, including financial ones. Social protection measures and eligibility criteria for them are established by norms and regulations. The vulnerable customers are the main beneficiaries of the social aids envisaged in the process of the gradual phasing out the regulated prices/tariffs.
In accordance with the *"Procedure regarding terms and conditions for granting the social tariff to electricity household consumers"*, approved by ANRE Order no. 38/2005 as amended and supplemented, vulnerable consumers with average monthly income per family member less than or equal to the minimum wage set by Government Decision have the right to apply for social tariff. The social tariff was designed based on the consumption quota with increasing progressively differentiated prices, in such a way that up to the threshold of 90 kWh/month the average return price is less than that resulting from the application of any other tariff for households supplied at low voltage. About **937,337 consumers** (1% less than in 2015) of the total of **8,550,624 households,** benefited of this social tariff, at the end of 2016.

In 2016 the revision of the Electricity Labeling Regulation was approved by ANRE Order no. 61/2016. The document was drafted in accordance with the provisions of art. 57 paragraph (3) of the Law on Electricity and Natural Gas no. 123/2012 (Law), as amended and supplemented and art. 93 of the Regulation on the supply of electricity to end customers, approved by ANRE Order no. 64/2014, as amended. The main changes refer to:

- the obligation of the last resort supplier to separately design the label of electricity supplied to customers which are beneficiaries of the universal service, to end-users who have exercised their eligibility right and to those which are supplied as a last resort in accordance with their own purchasing power structure,

- publication, by ANRE in the *Report on the results of December electricity market monitoring* of the data regarding the contribution of each primary energy source to the structure of electricity production at national level, as well as data on the impact of the national electricity supply on the environment, data used in electricity labeling by suppliers,

- include the electricity trader's responsibilities, whose rights and obligations are detailed by the *Law* and *ANRE Order no. 13/2015 on the approval of the general conditions associated with licensing for the activity of the electricity trader*, as a participant in the wholesale electricity market, in accordance with the provisions of *Law no. 127/2014 for the modification and completion of the Law on electricity and natural gas no.123 / 2012.*

Having revised the *The Regulation on informing final customers of electricity and natural gas* (ANRE Order no. 96/2015) by which it was intended to determine greater accountability of suppliers of electricity and natural gas in order to ensure the correct, complete and accurate information of final customers, in 2016, ANRE monitored the level of compliance with the Regulation's requirements, based on the submitted reports.

In 2016, the share of license holders for electricity supply activity, which produced and submitted to ANRE reports on the activity of informing the final customers was 90%. The share of final customers informed by licensees for electricity supply to final consumers in 2016 was 99%.

From the reports received, it is noted that the consumer information activity during the year 2016 was as follows:

- Consumer information through national and / or local written media was provided by all suppliers for which the number of final customers is greater than 1000 for any of the calendar month;
- Informing the consumers through the informative materials was done by 53% of the monitored license holders for the electricity supply, the percentage of final consumers receiving information in this way being 95%**;**
- Informing consumers through the website was carried out by 93% of monitored suppliers, the remaining 7% having a website under construction or incomplete.

Compared to 2015, in 2016 there is an increase in the frequency of consumer inquiries regarding the supplier's switching procedure, requests for information on interruptions in electricity supply and questions about the supply of electricity to a new consumption site. There were also questions about the terms of the supply contract, the measurement and billing arrangements, the costs of electricity consumption and the general conditions for contracting the supply service.

After centralizing and analyzing the reports received from the electricity suppliers, related to the year 2016, submitted according to the provisions of the ANRE Order no. 16/2015 for the approval of the *Framework procedure on the obligation of suppliers of last resort of electricity and natural gas to settle final customers' complaints*, the following conclusions were drawn:

- out of the total **of 107 monitored electricity suppliers, 77 suppliers of electricity sent ANRE final customer complaints reports (representing 98% of the final customers of electricity).** We mention that out of the total number of electricity suppliers monitored by ANRE**,** a number of *15 electricity suppliers* did not carry out the electricity supply to final consumers in 2016. The number of complaints received from **household consumers** was **180,566,** and from **non-household consumers** was **25,799.**

According to the provisions of the ***Performance Standard for Electricity Supply***, **approved by ANRE Order no. 118/2015** *(Standard),* in force during the period under review, the suppliers of last resort are required to pay compensation to the final customers which are beneficiaries of the universal service for failing to provide the guaranteed performance

indicators for electricity supply, as set out in the Standard. The chart below shows the number of compensations paid to final customers receiving universal service by the suppliers of last resort in 2016:

NR.	DENUMIRE FURNIZOR	NR. COMPENSAŢII PLĂTITE CLIENŢILOR FINALI
	FURNIZORI DE ULTIMĂ INSTANŢĂ CARE ACTIVEAZĂ PE PIAŢA CU AMĂNUNTUL	
1	CEZ Vânzare SA	0
2	ELECTRICA Furnizare SA	1
3	ENEL Energie SA	276
4	E.ON Energie România SA	291
5	ENEL Energie Muntenia SA	454

An important measure taken by ANRE to increase the compliance with the performance indicators was the publication on the website of the Benchmarking comparative annual reports starting in 2013, presenting the performance indicators of active suppliers. The publication of these comparative analyses is a tool for improving the level of quality of services provided by electricity suppliers.

In order to find the best way to prepare the annual reports, based on the Interinstitutional Collaboration Protocol, ANRE has collaborated with the Competition Council specialists for fair and non-discriminatory treatment of the suppliers and in order not to disturb the mechanisms of the competitive market or to negatively affect the commercial image of suppliers. Thus, ANRE prepared and published on the website www.anre.ro the reports on the performance indicators for electricity supply for 2013, 2014 and 2015.

In 2016, ANRE also carried out actions to verify the fulfillment of the suppliers' obligations to submit ANRE the performance indicators required by the Standard and actions to verify the websites of the electricity suppliers regarding: posting mid-term and annually the centralized data regarding the values of the electricity performance indicators, posting the standard offers for final customers, according to the provisions of art. 23 para. (4) of the *Law* and the publication of the *Procedure on granting customers compensations for damaged receiver appliances due to an accidental over voltage on the network operator's fault* approved by ANRE Order no. 177/2015.
As a result of the actions undertaken, ANRE has detected deviations from the legal and regulatory framework in force and has sent over 260 letters of warning to electricity suppliers to correct their market behavior in order not to prejudice the rights of final customers. In the case of electricity suppliers which did not take into account the authority's warnings, control actions were carried out and the offenders were sanctioned according to the legal provisions.

Based of the findings highlighted in the monitoring of pilot projects on smart metering, in 2016, it was considered appropriate and necessary that the implementation of smart metering systems (SMS) should remain at the testing stage through pilot projects, expanding the field of action to the situation of the non-technologically advanced distribution networks in rural

and urban areas, given that the degree of re-technology of the low-voltage grids was about 10%, according to the information sent by the distribution operators.

It has also been appreciated that a monitoring period of at least 6 months is required for pilot projects to obtain data that would provide eloquent premise for substantiating decisions on the widespread implementation of SMS.

Another highlighted aspect was the fact that the approach and the results of the cost-benefit analyzes submitted by the distribution operators did not allow a comparative analysis of the results, thus, ANRE considered necessary to carry out a cost-benefit analysis for all distribution operators through a third-party consultant / audit to avoid accusations of lack of transparency or lack of objectivity.

Thus, on 26th February 2016, ANRE Order no. 6/2016 was approved, for the amendment and completion of ANRE Order no. 145/2014 on the implementation of smart metering systems, which took into consideration provisions regarding the following aspects:

- In 2016, monitoring of pilot projects set up in 2015, will continue so that a set of relevant information can be used in later analyzes,
- It was established that in 2016 pilot projects will be carried out in areas of low voltage non-technological networks which will test the degree of realization of the basic functionalities of smart metering systems in this type of networks without modernization works and at the same time, identify and assess the need for work to be done on this type of network in order to create the conditions for implementing smart metering systems with satisfactory performance,
- The deadlines for the elaboration of the national plan and the national timetable for the implementation of smart metering systems were amended, according with the above proposals,
- For 2017, it was agreed to maintain the value of investments in smart metering systems at 10% of the value of the annual investment program approved according to the methodology for setting the electricity distribution tariffs, approved by the ANRE Order no. 72/2013 as amended and supplemented,
- It was agreed that a cost-benefit analysis will be done by ANRE based on a study by an independent consultant, in order to use a single model of analysis and to ensure data verification and validation in a unitary manner for all distribution operators,
- Indicators have been defined for the assessment of smart metering systems - which are a tool for monitoring / evaluating smart metering implementation projects.

In April 2016, according to the provisions of the **ANRE Order no. 145/2014 regarding the implementation of intelligent electricity metering systems**, with the subsequent amendments and completions and based on the established analysis criteria, , ANRE approved 22 pilot projects for 6 distribution operators in the estimated value of 67,855.333 lei, including 187,693 consumers.
Out of these, only 18 pilot projects were carried out by 5 distribution operators, the economic operator Distribuție Energie Oltenia renouncing the pilot projects, due to the limitation of investment costs.

In 2016, ANRE monitored the pilot projects made in 2015 and 2016 by the electricity concessionaires distribution operators and analyzed their results both technically and economically, following and identifying the technical problems generated by the structure and degree of technology of the distribution network, as well as the structure and level of implementation costs, the estimated benefits, in order to establish the conditions for the large-scale implementation of smart metering systems in Romania.

The following table shows the centralized situation of the pilot project regarding the implementation of intelligent electricity metering systems in 2015 and 2016:

Operatorul de distribuţie	2015			2016			TOTAL		
	Nr. de proiecte pilot	Nr. clienti incluși în proiectele pilot	Valoare totală a proiectelor pilot SMI [lei]	Nr. de proiecte pilot	Nr. clienti incluși în proiectele pilot	Valoare totală a proiectelor pilot SMI [lei]	Nr. de proiecte pilot	Nr. clienti incluși în proiectele pilot	Valoare totală a proiectelor pilot SMI [lei]
E-Distribuție Banat	3	10.126	4.083.403	6	31.122	8.305.562	9	41.248	12.388.965
E-Distribuție Dobrogea	4	10.227	3.928.854	4	26.565	7.936.769	8	36.792	11.865.623
E-Distribuție Muntenia	1	11.016	3.940.472	4	50.539	13.215.654	5	61.555	17.156.126
Distribuție Energie Oltenia	2	20.150	15.816.050	0	0	0	2	20.150	15.816.050
Delgaz Grid	2	22.622	7.913.352	2	48.721	14.265.570	4	71.343	22.178.922
SDEE Transilvania Sud	2	23.024	21.167.273	0	0	0	2	23.024	21.167.273
SDEE Transilvania Nord	2	5.470	3.232.573	2	8.210	2.480.500	4	13.680	5.713.073
SDEE Muntenia Nord	2	2.139	1.429.431	0	0	0	2	2.139	1.429.431
TOTAL	**18**	**104.774**	**61.511.408**	**18**	**165.157**	**46.204.055**	**36**	**269.931**	**107.715.463**

Through pilot projects, smart metering systems have been tested for approximately 270000 consumers from all eight concession areas of the electricity distribution service. Also, several technical solutions implemented in urban and rural areas with different electricity consumption densities, in low-voltage electrical networks recently upgraded and in non-upgraded electrical networks have been tested.

The main issues highlighted in the monitoring process carried out in 2016 on the results of the pilot projects for the implementation of SMS made in 2015 and 2016 according to the provisions of the regulations in force are:

- the level and the variation of the unitary investment costs (RON/consumer) in the SMS - compared to the pilot projects approved by ANRE in 2015, the unitary cost of investments in SMS of the pilot projects endorsed by ANRE in 2016, decreased by 52% taking into account that only 5 operators carried out pilot projects, 4 of which applied the same technical solution;

- considering the unitary cost of the investment from the A.T. Kearney study for which the cost-benefit analysis had a positive result (99 euro / client), the pilot projects implemented in 2016 by the distribution operators according to the notice issued by ANRE are within that limit;

- considering the short monitoring period (1-1.5 years), the lack of the (initial) reference data needed to quantify the benefits, and the lack of experience in managing and

monitoring such projects, it has been shown that not all predicted benefits can be confirmed at the level estimated in the AT Kearney study;

- some of the technical solutions implemented proved to be unreliable and costly - for example, in the case of technical solutions for communication between the meters and the concentrator, a significant number of auxiliary devices (repeaters, signal filters) were necessary to ensure communication, which has led to an increase in the cost of investment to values that are not economically viable;

- Efficient information of the consumers is needed in order to reach the estimated benefits.

Based on the conclusions of the pilot project analysis reports drawn up in 2015 and 2016, in 2017 ANRE will establish the framework conditions for the implementation of smart metering systems in Romania and the implementation calendar.

5.1.2. Natural gas

Given the removal of regulated prices (for non-households at 1 January 2015, and on 1 July 2021 for households) and competition development on this market, it was neccesary to develop legislative measures to ensure access of final customers to information on commercial terms for the supply of natural gas in the pre-contractual and contractual phase.

Regarding this regulatory field, considering the amendments on the Law on Electricity and Natural Gas no. 123/2012 through Law no. 127/2014 and Law no. 174/2014 regarding the rights and obligations of natural gas suppliers and customers as well as recent changes in the gas sector, one of the most important being the full liberalization of the gas market for non-household customers on January 1, 2015, it was neccesary to replace the Regulation of natural gas supply to the final customers, approved by the ANRE Order no. 42/2012, with a new regulation. Thus, in 2016 ANRE approved *Order no. 29/2016* regarding the Regulation on natural gas supply to final customers.

By promoting the new regulation, ANRE aimed to establish the basic principles for the functioning of the natural retail gas market, thus creating a unitary regulatory framework ensuring the protection of the final customers of natural gas, irrespective of their supply regime, either regulated or competitive.

The main changes introduced by this Regulation are:

- Specific non-financial protection measures were provided for vulnerable customers due to age / health and low income reasons. For vulnerable customers due to low income, in the period in which the state social protection institutions grant these customers financial aid for the housing heating using natural gas, the monthly invoicing of natural gas consumption will be made by the supplier only on the basis of actual gas consumption, determined by the reading of the operator or self reading of the measuring equipment index. For vulnerable customers due to age / health, the aim was to provide access to the services provided by the supplier in ways tailored to the needs of these customers;

- The minimum documents necessary for the conclusion of a gas supply contract, which the applicant must submit to the supplier, have been detailed;

- the necessary framework has been established in order to ensure that end-users and suppliers have access to consumption data managed by the operator, in a secure and confidential manner;

- A separate chapter with billing provisions was introduced detailing the general principles, the billing period, how to determine natural gas consumption for a billing period, the minimum information to be included in the invoice, and how to issue, send and pay the bills;

- With regard to the information contained in the invoice, it was taken into account that the invoice is an essential source of information for the final customer, necessary to manage their own consumption and costs. In order to guarantee a minimum level of quality with regard to the invoice for natural gas to all final customers irrespective of the supply regime, a minimum set of information that the supplier has the obligation to include in the invoice and / or in the attached documents was approved. Thus, for an easier and faster viewing of the information, the gas bill will have a first page that will contain the elements necessary to understand how natural gas is invoiced and how much the final customer must pay for this consumption, this being accompanied, in the following pages, by other invoicing information that periodically provides the final customer with a comprehensive view of actual consumption and actual gas cost so that it can adjust its own consumption or other information that may be useful to the end customer during the supply contract (for example: information on the final customer's right to benefit from a minimum quality of gas supply, information on the ways an end customer can submit a complaint as well as their available options in case they are not satisfied with the way the complainant was dealt with by the supplier, information on the final customer's right to switch the supplier);

- The alternative measures which the supplier may turn to, upon request, in the event that the final customer encounters difficulties in making the payment of the invoice in the manner provided for in the natural gas supply contract were defined. As such, there is the possibility to offer another way of payment when the final client is faced with financial difficulties in paying the invoice like negotiating a plan for rescheduling the amounts for a certain period, established by the supplier, based on the total amount and the final customer's financial ability to pay. The supplier will analyze the final customer's request and, on a case-by-case basis, will decide on the opportunity to provide alternative measures;

- A separate chapter on interruption / restraint / resumption of gas supply at the final customer's consumption site was introduced, detailing the steps to be taken;

- If the contract with the pipeline/system operator is concluded by the final customer, taking into account that there is no contractual relation between the supplier and the operator, it was introduced the obligation to conclude a multi-party agreement between the pipeline / system operator from which consumption site is supplied, the supplier(s) carrying out the

supply activity to that consumption site and the final customer, assumed by signature by all parties, which will be the annex to the gas sale and purchase contract concluded by the final customer with the supplier, and the contract concluded by the end customer with the operator of the pipeline / system.

- it was set the operator's obligation to establish by June 30, 2017, a single national alphanumeric coding for the places supplied by the pipeline/system in its own operating license area, each consumption site being assigned a consumption site code. At the same time, the criteria to be considered for this coding were set, namely: the singularity at the level of the operating license area, the clear identification of the consumption site, the alphanumeric coding method, the code used in the exchange of data with the suppliers of end customers;

- It was set, for optional use, the format for data review regarding the consumption pattern of the end customer;

- Specific provisions have been introduced for end customers which have at the consumption site a prepay measuring system;

- The organization and function of the single point of contact which coordinates the regional info points was detailed. Also, it was introduced the obligation of the supplier to inform the customer, when signing the contract for natural gas supply, the contact details of the single point of contact and the regional info point closest to the consumption site.

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 re about levant 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.

In order to quantify the quality of natural gas supply to end customers, through *Order no. 37/2007 regarding the approval of the Performance Standard for Natural Gas Supply*, ANRE has established the minimum level of performance for carrying out this activity.

Quality of supply activity is evaluated based on the performance indicators for the following activities:

a) contracting natural gas;

b) billing natural gas supplied;

c) settlement of final customers complaints relating to quality requirements of natural gas supplied;

d) informing final customers in accordance with the requirements of this performance standard;

e) settlement of complaints brought by applicants/final customers against the supplier for not complying with the performance standard;

f) settlement of other complaints and demands of applicants/final customers.

ANRE monitored the achievement of guaranteed performance indicators – GPI, based on the reports of licensed natural gas suppliers. In 2016, there were a total of 464106 final customers' requests, 13.6% more than in 2015, as stated in the table below:

Guaranteed performance indicator	Number of requests received		The number of requests solved within the deadlines imposed by IPG		**Degree of achieving the guaranteed performance indicators%**		Number of applicants/final customers who were paid penalties		The amount of penalties paid (RON)	
	households	Non-house holds	households	Non-households	**households**	**Non-house holds**	house holds	Non-house holds	households	Non-house holds
GPI 1- Contracting natural gas	342,238	40,640	342,238	40,640	**100.00**	**100.00**	0	0	0	0
GPI 2- Requests on bills	63,867	10,690	63,764	10,682	**99.84**	**99.93**	103	8	7,360	960
GPI 3- Quality of natural gas	206	37	206	37	**100.00**	**100.00**	0	0	0	0
GPI 4-Requests on measuring	5,428	1,000	5,419	1,000	**99.83**	**100.00**	9	0	1,430	0
GPI 5-Penalities due to failure of supplier's payment obligations	0	0	0	0	-	-	0	0	0	0
Total	411,739	52,367	411,627	52,359	**99.97**	**99.98**	112	8	8,790	960

It is worth mentioning the increase in the amount of penalties paid by suppliers, in 2016 their value is of 9750 lei compared to 430 lei in 2015.

In order to increase compliance with the guaranteed performance indicators, the proposed control theme for a number of 14 natural gas suppliers for the year 2016 also included the verification of compliance with the provisions of the approved *Performance Standard for Gas Supply* by ANRE Order no. 37/2007.

At the same time, it should be noted that in the context of inspections carried out in 2016 on the natural gas suppliers, where it was found that the legal deadline for replying was not respected, payment of the corresponding penalties to the respective applicants / end customers was ordered.

Considering the vulnerable customer definition in Law no. 123/2012, *Regulation on natural gas supply to final customers,* approved by ANRE Order no. 29/2016, laid down the

conditions that household gas customers have to meet in order to be classified as vulnerable customers. Thus, according to art. 8 of the above Regulation, *"(1) The end customer belonging to the household customers category shall be registered as a vulnerable customer if at least one of the following conditions are met:*

A) has low incomes, up to a threshold established by the state institutions with social protection attributions;

B) at the consumption site lives a person who, due to health/age, requires special conditions for the supply of natural gas.

(2) If a vulnerable customer fulfills both conditions set out in paragraph (1), it shall benefit from the facilities corresponding to each category. "

With regards to the criteria for separating vulnerable customers due to low income or health/age reasons, these are set by state institutions with social protection responsibilities.

The *Regulation*, also, introduces specific non-financial protection measures for vulnerable customers due to age/health and low income.

At the same time, low-income vulnerable customers benefit from financial aid for heating using natural gas granted by the state social protection institutions, which set the amount, the income limit for which such aid is granted and the arrangements for granting it. The amount for aid for home heating with natural gas is reduced monthly by the natural gas supplier from the amount of the natural gas consumed by this vulnerable customer.

Currently, for the cold season (1 November of current year and 31 March of the following year), the method of granting housing heating aid is governed by Government Emergency Ordinance no. 70/2011 on social protection measures during the cold season, approved by Law no. 92/2012, amended and supplemented and the Methodological Norms for its implementation, approved by the Government Decision no. 920/2011.

On April 1, 2018, Law no. 196/2016 on the Minimum Income of Inclusion, published in the Official Gazette of Romania, Part I, no. 882 of 3 November 2016, which will repeal Government Emergency Ordinance no. 70/2011 on social protection measures during the cold season, with subsequent amendments and completions, will enter into force. For the purposes of this Law, a vulnerable consumer is defined as "*a household client, a single person or a family who can not fully cover their heating expenses and whose income is within the limits of this law.*"

In accordance with Art. 20 of this law, a supplement for housing will be granted in differentiated amounts depending on the framing of the adjusted monthly net income, within the income limits established by the present law, for a single system used for heating the home or residence during the cold season, declared by the family or the single person, in the application. Where appropriate, the supplement consists of the following categories of aid for heating the dwelling:

a) support for centralized system heating;
b) aid for natural gas;
c) aid for electricity;
d) aid for solid fuels or petroleum fuels.

Vulnerable consumers with adjusted monthly net income of up to 600 RON, or 1,200 SRI (Social Reference Indicator), and vulnerable consumers of at least 60 years of age with adjusted monthly net income of up to 800 RON, respectively 1,600 SRI benefit from the state budget supplement for vulnerable consumers.

As far as natural gas is concerned, the amount of the housing supplement is calculated by the percentage compensation of the heating expenses applied to the reference value of the monthly gas aid of 260 RON, respectively 0.520 SRI. The amount of the housing supplement is reduced monthly by the natural gas suppliers in the invoice showing the equivalent of the amount of natural gas consumed by the vulnerable consumer. The level of compensation percentage is 100% for families and individuals benefiting from inclusion aid established under the provisions of this law or with adjusted monthly net income of up to 260 RON, respectively 0.520 SRI.

Having revised *The Regulation on informing final customers of electricity and natural gas* (ANRE Order no. 96/2015) by which it was intended to determine greater accountability of suppliers of electricity and natural gas in the correctly, completely and accurately information of their final customers, in 2016, ANRE monitored the level of compliance with the Regulation's requirements, based on the submitted reports.

In 2016, the share of natural gas suppliers that have prepared and submitted to ANRE reports on the activity of informing the final customers was 91%. The share of final consumers informed by natural gas suppliers in the year 2016 is 99.92%.

From the reports received, it is noted that the consumer information activity during the year 2016 was as follows:

- Consumer information through national and / or local written media was provided by all suppliers for which the number of final customers is greater than 1000 for any of the calendar month, *with the exception of 3 suppliers in this category*;
- Informing the consumers through the informative materials was done by 70% of the monitored license holders for the electricity supply, the percentage of final consumers receiving information in this way being 99.69%**;**
- Informing consumers through the website was carried out by 96% of monitored suppliers, the remaining 4% having a website under construction or incomplete.

Compared to 2015, in 2016 there is an increase in the frequency of consumer inquires regarding the technical verification / mandatory revision (once every 2 years) of the natural gas installation, inquires regarding the natural gas consumption calculation, respectively information on the procedure, steps and documents necessary for switching the natural gas supplier. There were also questions about the rates applied, the measurement, the billing, the invoice content, the means and the payment terms, the balances and some relating to the connection of a new consumption site.

After centralizing and analyzing the reports received from the natural gas suppliers related to the year 2016, submitted in accordance with provisions of the *ANRE Order no. 16/2015 for the approval of the Framework Procedure on the obligation of the electricity and natural gas suppliers to solve the complaints of the final customers*, the following conclusions were drawn:

- out of the total of **79 monitored natural gas suppliers, 61 natural gas suppliers sent reports to ANRE on the settlement of final customer complaints (representing 99% of the final customers of natural gas).** The number of complaints received from **households was 38,331** and **7358 from non-household consumers**.

5.2. Dispute settlement

Final customer's complaints

Final customer's complaints handling obligations are included in the license conditions, framework contracts and supply standards. Supply license holders must ensure the recording, investigating and resolving of complaints made against them by the final customers. It is mandatory to have a department that handles every complaint against the license holder by a final customer who considers oneself wronged by the practices of the license holder. It shall be established and maintained a register of requests, intimations and complaints addressed by the final customers, and the way to solve them.

If the final customer is not satisfied with the response received from the undertaking, it may notify ANRE, which, based on the provisions of *Government Ordinance no. 27/2002, as amended and supplemented*, assesses and formulates responses to issues raised in the complaints. For complaints that require additional verifications, control actions are requested.

Depending on the issues addressed, dealing with complaints is different: from written answers including explanations and references to legislation in force, to checks on site and direct talks with the parties involved.

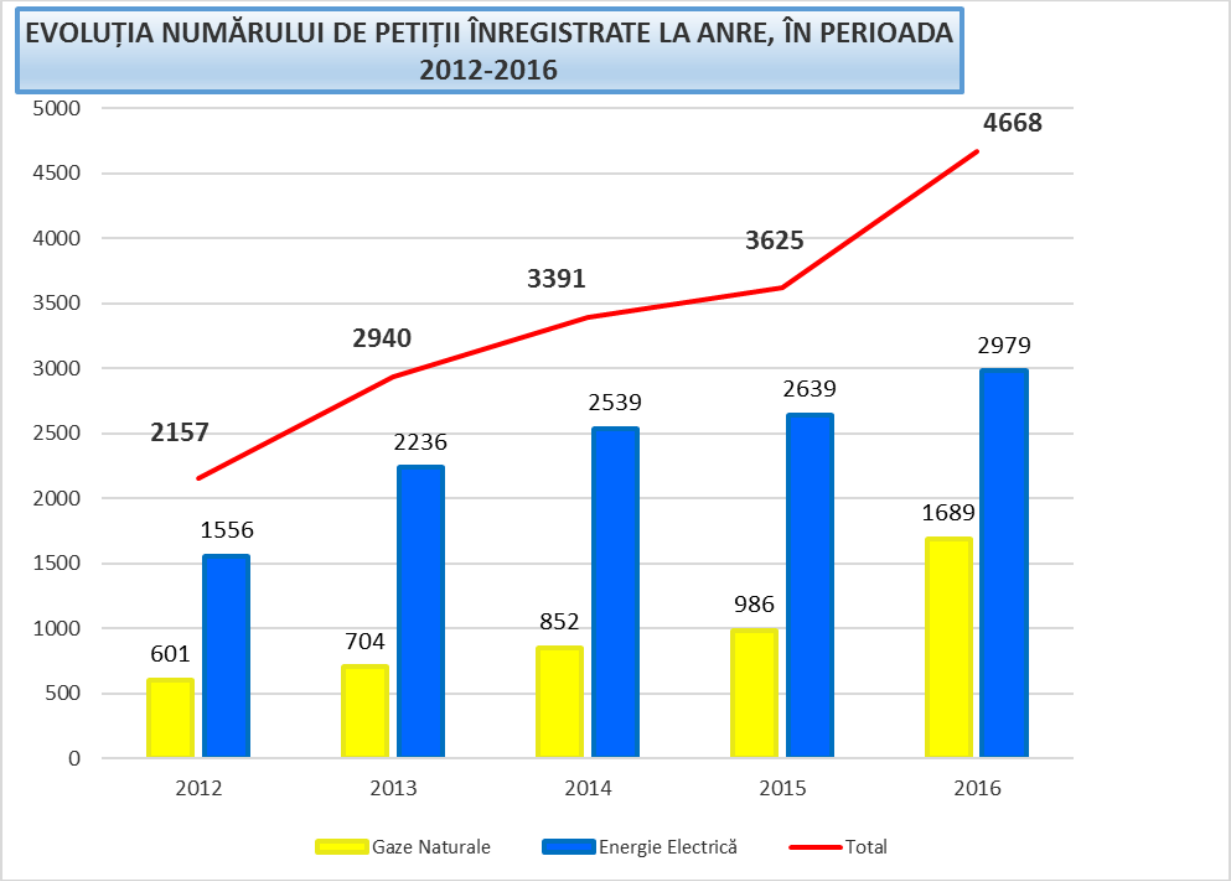
In case the issues notified in the complaints, relating to non-compliance with legal provisions by the undertakings, are proving justified, ANRE sends them reminder letters setting out measures for compliance with legal provisions in force and/or legal measures are taken for imposing sanctions.

In 2016, **4668** petitions, formulated by natural and legal persons receiving/requesting the services provided by economic operators in the sectors of electricity, natural gas and thermal energy, were registered and solved. Of the total, **2979** petitions were registered in the electricity and thermal energy sector and **1689** petitions in the gas sector.

The evolution of the number of petitions is presented in the following table:

No.	Sector / Year	2012	2013	2014	2015	2016
1	Electricity	1556	2236	2539	2639	2979
2	Natural Gas	601	704	852	986	1689
	Total	**2157**	**2940**	**3391**	**3625**	**4668**

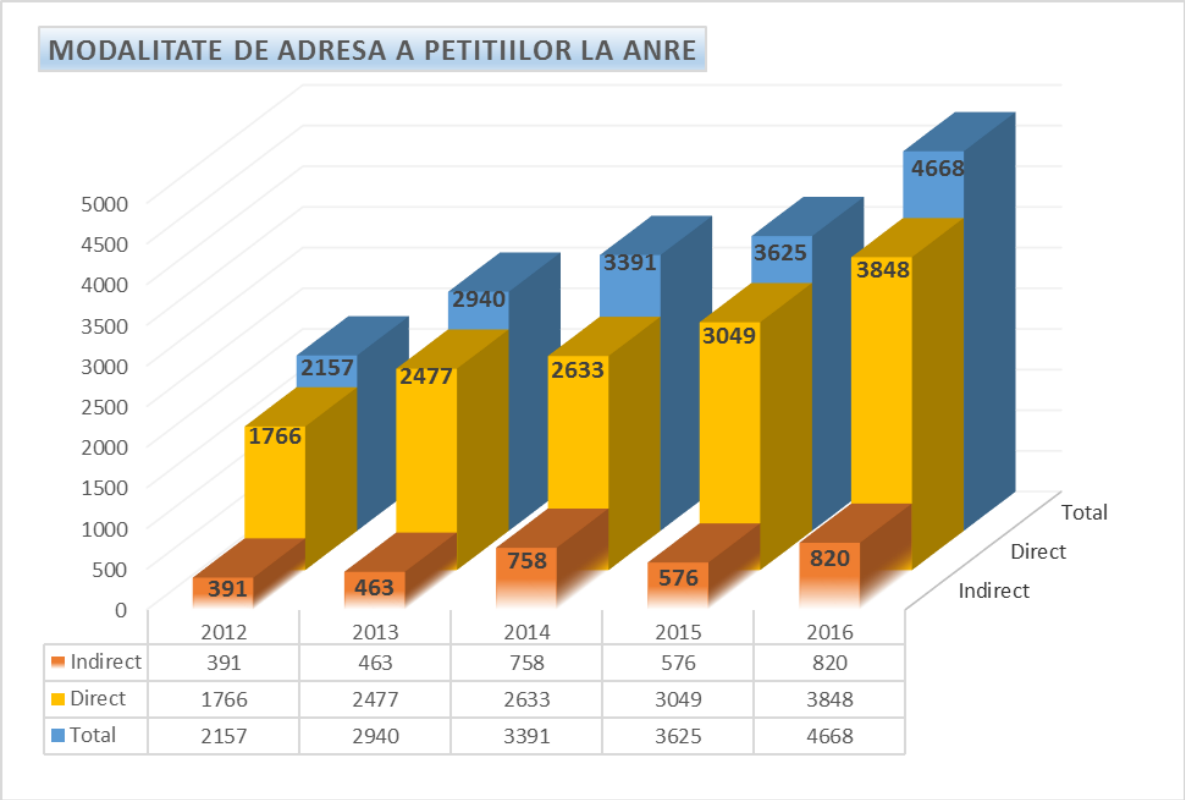
Evolution of the number of complaints registered by ANRE during 2012 – 2016



Petitions were forwarded to ANRE directly (**3848**) or redirected through other public institutions (**820**) as follows:

No.	Institution	Electricity	Natural Gas	TOTAL
1	Romanian Presidential Administration	4	3	7
2	Romanian Government	26	15	41
3	Romanian Parliament	1	2	3
4	Ministries	23	30	53
5	National Authority for Consumer Protection (ANPC)	540	140	680
6	National Regulatory Authority for Community Utilities Services (ANRSC)	2	10	12
7	Romanian Ombudsman	1	0	1
8	Prefectures, County Councils, Town Halls	3	0	3
9	Others	19	1	20
	Total	**619**	**201**	**820**

Ways of addressing petitions to ANRE:



In order to identify the main issues raised by petitioners, a classification of petitions was developed with the purpose of identifying the legislative provisions that need to be modified and to improve the services provided to clients in order to increase their satisfaction.

The main categories of problems identified in the complaints settled were the following:

No.	Main problems reported in the field of electricity	2016	[%]
1	Billing of electricity	753	25.28
2	Quality of electricity	600	20.14
3	Issuing Technical Connection Notice	199	6.68
4	Suspicion of stealing electricity	189	6.34
5	Assembly of measuring group	133	4.46

No.	Main problems reported in the field of natural gas	2016	[%]
1	System access	69	4
2	System connection	306	18
3	Contracting, billing	237	14
4	Supply (suspension, quality)	131	8
5	Installations	610	36

The control activity of ANRE was carried out on the basis of the attributions established by the legislation in force and was done in accordance with the annual control program, approved by the ANRE's president, through control actions like inspection and additionally by means of checks and surveillance, resulting from the current activities of the specialized departments within ANRE.

In 2016, ANRE carried out 684 inspections.

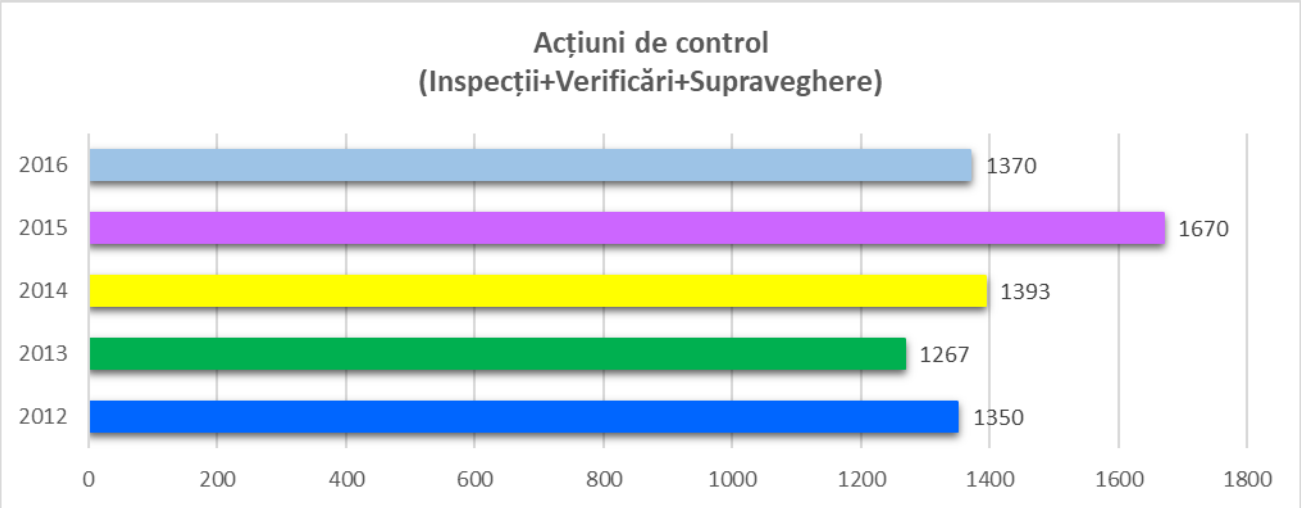
Besides inspections foreseen in the annual control program, in 2016 were carried out 309 checks and 377 surveillances.

The control actions focused mainly on the holders of licenses / permits / certificates issued by ANRE.

The situation of the control actions by category of economic operators controlled is shown in the table below.

Type of control action	License holders		Permits / Certificates holders		Energy efficiency	
	Electricity	Natural gas	Electricity	Natural gas	Labelling	LARGE non-households
Inspections	43	177	184	149	37	94
Checks	193	73	18	24	1	-
Surveillance	172	166	6	8	-	25
Subtotal	408	416	208	181	38	119
Total	**824**		**389**		**157**	

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 themes of the control actions carried out at the holders of licenses in the field of electricity and natural gas consisted mainly in verifying compliance with the legal provisions in force regarding:

- switching the electricity supplier;
- recalculation of electricity consumption in case of fraudulent consumption;
- pre-invoicing of electricity and natural gas;
- allocating the quantities of natural gas resulting from the production activity necessary to cover the consumption of household customers and heat producers, only for the quantity of natural gas used to produce heat in cogeneration plants and heating plants for household consumption;
- the obligation to trade natural gas on centralized markets;
- the obligation to purchase green certificates;
- the obligation of energy suppliers to provide financial guarantees to pay for the electricity distribution service;
- performance indicators set by performance standards for electricity and natural gas distribution services, for electricity and natural gas supply activities and for the electricity and natural gas transmission system;
- updating the technical characteristics of natural gas distribution systems;
- displaying on the licensee's websites the information / documents provided by the regulations in force and the supply standard offers;
- connection to the electrical networks of interest;
- access to the natural gas distribution and transmission system;
- certification of compliance of photovoltaic and / or wind power plants;
- the design, verification, execution, reception and commissioning of natural gas installations;
- the design, verification, execution, reception and commissioning of electrical installations;
- preparing and submitting activity reports and informing consumers;
- establishing the single points of contact by electricity suppliers;
- obtaining licenses for the LPG supply activity;
- energy efficiency of large non-households;
- energy efficiency and labelling for placing appliances on the market.

As a result of the inspections carried out, in 2016**, 767** official reports for finding and sanctioning were drawn up and **1358** sanctions for contraventions were applied, as follows**:**

- **824** in the field of electricity;
- **496** in the field of natural gas;
- **38** in the field of energy efficiency

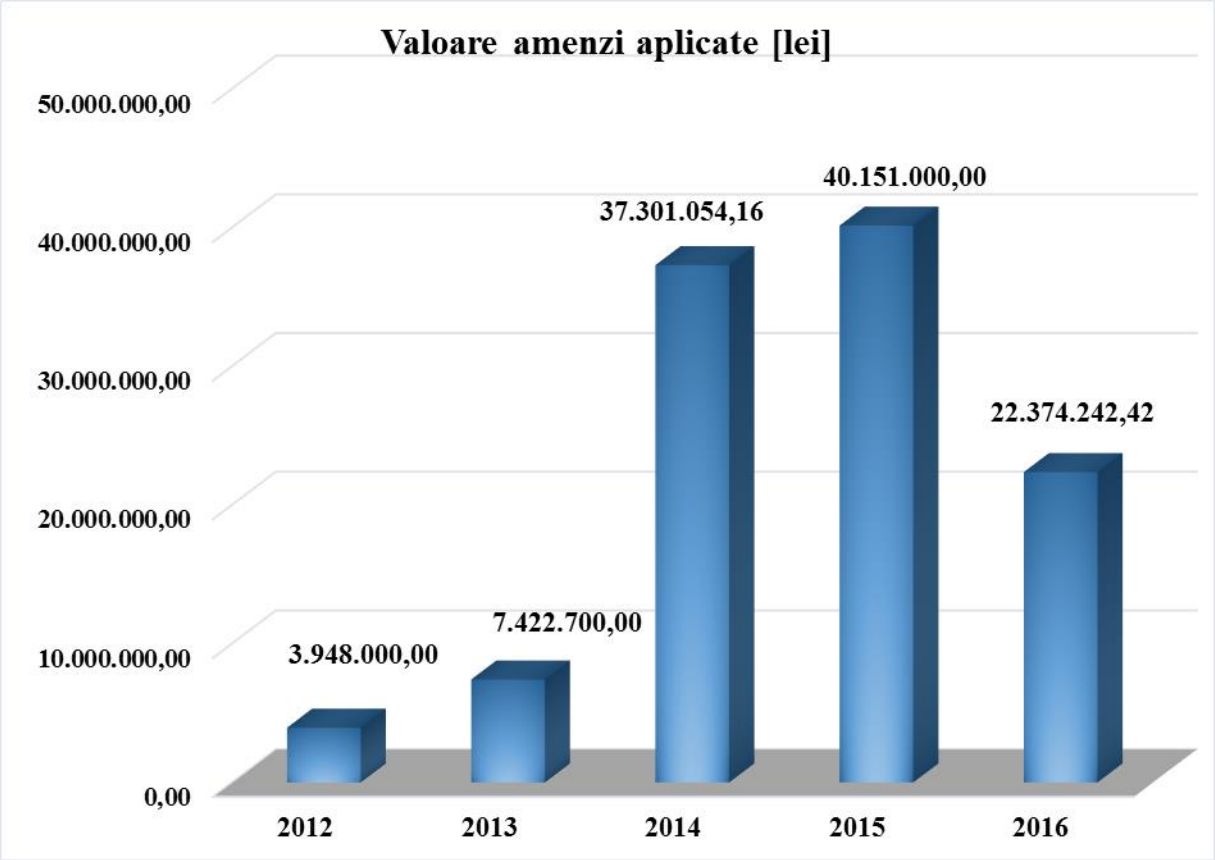
By the official reports for finding and sanctioning, fines were imposed in the total amount of **22,374,242.42 RON.**

Out of the total of 767 official reports, 10 were given to individuals and 757 to economic agents.

The table below shows the distribution of the contravention sanctions and the amount of fines applied:

The distribution of sanctions by types of economic operators		
Type of economic operator	**Total number of sanctions applied**	**Total amount of fines applied (RON)**
Electricity license holders	747	14,869,022.42
Natural gas license holders	345	6,301,000.00
Electricity permit holders	50	219,000.00
Natural gas certificate holders	143	782,000.00
Energy efficiency	38	70,220.00
Others	35	133,000.00
Total	1358	22,374,242.42

The amount of fines applied (RON)



The main acts committed by persons subject to control actions, for which sanctions were applied in 2016, consisted in noncompliance with the legal provisions regarding:

- switching the electricity supplier;
- recalculation of electricity consumption in case of fraudulent consumption;
- pre-invoicing of electricity and natural gas;
- transparent and non-discriminatory trading on centralized, markets for the sale and purchase of natural gas;
- carrying out business activities without a license, in accordance with the legislation in force;
- the obligation to acquire / pay the value of green certificates not purchased by licensed economic operators in the field of electricity;
- the obligation of energy suppliers to provide financial guarantees to pay for the electricity distribution service;
- performance indicators set by performance standards for electricity and natural gas distribution services, for electricity and natural gas supply activities and for the electricity and natural gas transmission system;
- connection to the electrical networks of interest;
- access to the natural gas distribution and transmission system;
- establishing the single points of contact by electricity suppliers;
- displaying on the licensee's websites the information / documents provided by the regulations in force and the supply standard offers;

- the design, verification, execution, reception and commissioning of natural gas installations;
- the design, verification, execution, reception and commissioning of electrical installations;
- certification of compliance of photovoltaic and / or wind power plants;
- preparing and submitting activity reports and informing consumers;
- energy efficiency of large non-households.

Simultaneously with the main contravention measures listed above, proposals were made for the implementation of complementary measures, consisting in the suspension of authorizations / attestations, for certain categories of activities, to 4 economic agents.

Dispute settlement

Pre-contractual dispute settlement

ANRE Order no. 35/2013 provides the basis for the activity of solving the pre-contractual misunderstandings in the electricity sector and mediating the pre-contractual misunderstandings in the natural gas sector. In 2016, two requests were settled in the electricity sector and two other applications were settled through mediation in the natural gas sector.

Dispute settlement of complaints against network operators

ANRE Order no. 150/2015 provides the basis for dispute settlement of complaints against network operators. In 2016, 3 requests were resolved, concerning complaints against network operators in the electricity sector.

For the **settlement of disputes arising in the performance of contracts** between electricity and natural gas wholesale and retail market participants, *ANRE Order no. 61/2013* was issued *approving the Regulation on the organization and functioning of the commission for settling disputes on the wholesale and retail markets between electricity and natural gas market participants*.

During 2016, 14 requests for dispute settlement in the natural gas sector and 6 for the electricity sector were received.

The regulatory framework developed by ANRE and implemented by orders and decisions has a major impact on economic and social conditions, given that it is binding to regulated natural and legal persons.

The possibility of contesting the individual administrative acts or regulations of the regulator is an important factor in ensuring its accountability to consumers.

Thus, orders and decisions issued by ANRE can be challenged in court by natural or legal persons who believe that by applying those regulations, some of their rights have been violated.

Current status of proceedings pending before the courts:

Total: 649 ongoing cases in 2016, of which **206** have been finalized.

Classification of disputes handled by ANRE in courts in 2016, in the electricity, natural gas and efficiency sector, depending on their subject, is presented below:

- Administrative - 197 cases;
- Contravention law - 287 cases;
- Insolvency - 81 cases;
- Labour law - 5 cases;
- Claims - 55 cases;
- Obligation to do – 10 cases;
- Criminal law - 1 case;
- Free access to public information – 3 cases;
- Actions in progress – 8 cases;
- Appeals in execution – 2 cases.

In 2016, out of the total number of cases completed, 206 respectively**, 167 (meaning 81%) of them were favorably solved for ANRE. Out of these 167, 8 regarded orders and decisions issued by ANRE.** It is worth mentioning that, in some of these cases, operators (for example, GDF - now ENGIE, OMV Petrom) have demanded that ANRE be ordered to pay damages for alleged damages caused by the issue of the contested administrative acts. All of this has been definitively rejected.

Regarding ANRE's activity of regulating the electricity, gas and energy efficiency market, it is worth mentioning that, since in the second regulatory period, tariffs and prices approved by ANRE have diminished, economic operators in the field of electricity and natural gas disputed almost all of the orders and decisions issued by ANRE. Among these operators we mention, for example, E.ON Energie, E.ON Distributie, Enel Energie, Enel Distributie, CEZ Distributie, Hidroelectrica, Electrica SA, etc.

In terms of reports finding contraventions and imposing sanctions, we mention that part of them referred to sanctioning OPCOM and the Centralized Market for Bilateral Contracts participants for the trading/accepting to trade electricity buy/sale offers which did not comply with the legislation in force (ie. OPCOM, Complexul Energetic Oltenia, Axpo Energy România SA etc.).

All contravention complaints formulated by OPCOM and electricity producers were resolved, in 2016, in favor of ANRE, by maintaining as legal and sound the reports of finding and sanctioning contraventions.

Another important example of contravention is the sanctioning of last-resort suppliers for violating the obligation to invoice separately green certificates. All contravention complaints finally settled in 2016 were in favor of ANRE.
It is also worth mentioning the contravention complaints of the licensed operators against the reports for finding and sanctioning the contraventions concluded by ANRE for breaching the

provisions of the Regulation on electricity supply to final customers. All these court files finally settled in 2016 were in favor of ANRE.

ANRE received favorable verdicts in all court files settled in 2016 regarding free access to public information, as well.

The specific activities in dispute settlement consist mainly of: preparation of the defense strategy in each case, drafting of the procedural documents (eg greetings, written notes / conclusions, ordinary and extraordinary remedies, etc.), representation in court of the interests of the institution, monitoring the circuit of procedural acts issued in court files, maintaining a database on ongoing disputes.

ANNEXES

Annex 1

Volume and age of the electricity transmission network's electrical installations

Volumul și vechimea instalațiilor electrice din rețeaua electrică de transport

Volumul instalațiilor electrice în RET	LEA [km traseu]		Stații electrice [buc]	
	2015	2016	2015	2016
750KV	3,1	3,1	1	1
400kV	4.856	4.915,2	38	38
220kV	3.875,6	3.875,6	42	42
110kV	40,4	40,4	-	-

Vechimea liniilor electrice	An PIF					
	1960-1979		1980-1999		2000-2016	
	Lungime [km traseu]	% din categorie	Lungime [km traseu]	% din categorie	Lungime [km traseu]	% din categorie
LEA 750 KV	0	0	3,11	100	0	0
LEA 400 kV	3613,67	73.5	1150,07	23.4	151,5	3.1
LEA 220 kV	3764,3	97.1	61,1	1.6	50,3	1.3
LEA 110 kV	8,9	22	29,1	72	2,42	6
TOTAL		**83,4%**		**14,1%**		**2,3%**

Vechimea transformatoarelor/autotransformatoarelor	An PIF					
	1960-1979		1980-1999		2000-2016	
	Cantitate [buc]	Putere instalată [MVA]	Cantitate [buc]	Putere instalată [MVA]	Cantitate [buc]	Putere instalată [MVA]
TRAFO 10 MVA	4	40	3	30	2	20
TRAFO 16 MVA	17	272	11	176	4	64
TRAFO 20 MVA	0	0	1	20	0	0
TRAFO 25 MVA	3	75	11	275	10	250
TRAFO 40 MVA	2	80	3	120	4	160
TRAFO 63 MVA	0	0	0	0	2	126
TRAFO 100 MVA	1	100	0	0	0	0
TRAFO 200 MVA	24	4800	14	2800	43	8600
TRAFO 250 MVA	1	250	10	2500	20	5000
TRAFO 400 MVA	2	800	2	800	18	7200
TRAFO 500 MVA	0	0	0	0	2	1000
TRAFO 1250 MVA	0	0	2	2500	0	0
TOTAL MVA		6417		9221		22420
% din total putere instalată		**16,8%**		**24,2%**		**58,9%**

Annex 2

Table 5 – Age of the electricity distribution network's electrical installations

Tabelul 5 Vechimea instalațiilor electrice din rețeaua electrică de distribuție

	An PIF	Instalatii electrice													
		Linii IT		Linii MT		Linii JT		branșamente JT		Stații electrice		Posturi de transformare		Puncte de alimentare	
		Lungime [km]	% din categorie	Lungime [km]	% din categorie	Lungime [km]	% din categorie	Lungime [km]	% din categorie	Cantitate [buc]	% din categorie	Cantitate [buc]	% din categorie	Cantitate [buc]	% din categorie
e-Distributie Muntenia	înainte de 1960	128	11.3%	147	1.3%	23	0.1%	13	0.1%	4	6.0%	60	0.7%	0	0.0%
	1960-1979	703	61.8%	6543	57.2%	7630	33.5%	3403	30.0%	39	58.2%	1273	15.6%	45	23.9%
	1980-1999	237	20.8%	2676	23.4%	9156	40.2%	4474	39.5%	15	22.4%	843	10.3%	6	3.2%
	2000-2016	69	6.1%	2067	18.1%	5974	26.2%	3443	30.4%	9	13.4%	5977	73.3%	137	72.9%
e-Distributie Muntenia	înainte de 1960	502	18.5%	2749	21.5%	2090	12.8%	1536	13.1%	7	5.6%	489	6.1%	0	0.0%
	1960-1979	1496	55.2%	8254	64.7%	8901	54.5%	6375	54.5%	77	62.1%	4707	58.5%	12	75.0%
	1980-1999	690	25.4%	1347	10.6%	2282	14.0%	1423	12.2%	38	30.6%	1792	22.3%	1	6.3%
	2000-2016	25	0.9%	413	3.2%	3061	18.7%	2372	20.3%	2	1.6%	1064	13.2%	3	18.8%
e-Distributie Dobrogea	înainte de 1960	16	0.6%	599	5.5%	654	6.1%	88	0.7%	2	0.9%	97	1.6%	0	0.0%
	1960-1979	1968	74.1%	6792	62.8%	6337	58.9%	1159	8.8%	139	65.0%	2925	48.7%	9	25.7%
	1980-1999	659	24.8%	2983	27.6%	2502	23.2%	6871	52.3%	61	28.5%	1620	27.0%	8	22.9%
	2000-2016	12	0.5%	446	4.1%	1270	11.8%	5010	38.2%	12	5.6%	1364	22.7%	18	51.4%
Distributie Energie Oltenia	înainte de 1960	181	3.4%	279	1.3%	379	1.4%	417	1.3%	0	0.0%	151	1.5%	0	0.0%
	1960-1979	3530	65.4%	15286	71.2%	13171	47.0%	14389	46.6%	159	78.3%	5423	52.7%	26	32.1%
	1980-1999	1092	20.2%	3839	17.9%	9210	32.9%	10687	34.6%	42	20.7%	2197	21.4%	34	42.0%
	2000-2016	594	11.0%	2067	9.6%	5261	18.8%	5381	17.4%	2	1.0%	2517	24.5%	21	25.9%
Delgaz Grid	înainte de 1960	42	1.6%	148	0.8%	355	1.1%	256	1.0%	0	0.0%	0	0.0%	0	0.0%
	1960-1979	1661	61.7%	11601	65.3%	16024	49.1%	11178	42.0%	53	39.6%	3598	32.7%	81	73.0%
	1980-1999	967	35.9%	4140	23.3%	11913	36.5%	9665	36.3%	74	55.2%	5309	48.3%	27	24.3%
	2000-2016	21	0.8%	1865	10.5%	4330	13.3%	5545	20.8%	7	5.2%	2085	19.0%	3	2.7%
SDEE Munteania Nord	înainte de 1960	217	10.0%	1240	7.8%	541	2.0%	530	2.0%	11	5.2%	202	2.0%	1	0.4%
	1960-1979	1625	75.2%	9901	62.4%	13646	51.5%	13377	51.5%	143	67.5%	5098	51.2%	91	39.1%
	1980-1999	305	14.1%	3877	24.4%	7829	29.6%	7760	29.9%	52	24.5%	2926	29.4%	16	6.9%
	2000-2016	13	0.6%	854	5.4%	4463	16.9%	4315	16.6%	6	2.8%	1729	17.4%	125	53.6%
SDEE Transilvania Nord	înainte de 1960	124	5.6%	478	3.1%	768	3.0%	1698	6.8%	7	5.8%	209	2.4%	2	1.8%
	1960-1979	1389	63.0%	10620	68.9%	15075	58.9%	12395	49.6%	79	65.3%	4057	47.0%	44	40.4%
	1980-1999	512	23.2%	2610	16.9%	5583	21.8%	5448	21.8%	25	20.7%	2666	30.9%	43	39.4%
	2000-2016	180	8.2%	1709	11.1%	4153	16.2%	5450	21.8%	10	8.3%	1695	19.6%	20	18.3%
SDEE Transilvania Sud	înainte de 1960	423	13.2%	4439	32.2%	3305	16.3%	3607	18.2%	10	9.4%	860	10.0%	22	9.7%
	1960-1979	2003	62.4%	5372	39.0%	9242	45.5%	9125	46.2%	67	63.2%	3322	38.4%	64	28.3%
	1980-1999	730	22.8%	2362	17.1%	3851	18.9%	4292	21.7%	19	17.9%	1947	22.5%	45	19.9%
	2000-2016	51	1.6%	1601	11.6%	3925	19.3%	2748	13.9%	10	9.4%	2512	29.1%	95	42.0%
Agregat la nivel de tara	înainte de 1960	1633	7.4%	10078	8.4%	8115	4.4%	8145	5.0%	41	3.5%	2068	2.9%	25	2.5%
	1960-1979	14375	64.9%	74370	62.3%	90026	49.2%	71401	43.4%	756	64.0%	30403	43.0%	372	37.2%
	1980-1999	5192	23.4%	23834	20.0%	52325	28.6%	50620	30.8%	326	27.6%	19300	27.3%	180	18.0%
	2000-2016	966	4.4%	11022	9.2%	32438	17.7%	34264	20.8%	58	4.9%	18943	26.8%	422	42.2%

Annex 3

Compensations paid by the concessionaires distribution operators for not complying with the performance indicators

Compensații plătite de operatorii de distribuție concesionari în anul 2016 pentru depășirea indicatorilor de performanță

Operatorul de rețea	Nr. utilizatori pentru care durata de restabilire a alimentării cu ee s-a depășit	Nr. total de compensații plătite	Valoare totală a compensațiilor plătite [lei]
e-DistributieMuntenia	4133	35	**7000**
e-DistributieBanat	2156	20	**4000**
e-DistributieDobrogea	4328	19	**3780**
Distributie EnergieOltenia	11	11	**2200**
DelgazGrid	21288	5	**830**
SDEEMuntenia Nord	120	0	**0**
SDEETransilvania Nord	0	0	**0**
SDEETransilvania Sud	26	4	**800**
Total	**32062**	**94**	**18610**

Annex 4

Table 1 – Factors that have influenced the evolution of the transmission tariff for electricity

Tabelul 1. Factorii care au influențat evoluția tarifului pentru serviciul de transport al energiei electrice

Serviciul de transport	UM	2008	2009	2010	2011	2012	2013	sem I 2014	an tarifar 2014-2015	an tarifar 2015-2016	an tarifar 2016-2017
Venit liniarizat	lei	938,281,416	990,911,807	1,008,261,850	1,092,381,028	1,128,160,707	1,105,041,367	549,020,623	1,124,923,678	1,110,973,658	1,071,570,230
Corectie anuala (din anii anteriori)		-65,441,748	-56,095,705	-5,402,000	34,085,051	17,785,395	54,849,659	17,047,060	0	-20,787,434	-99,166,611
Venit reglementat		**872,839,668**	**934,816,103**	**1,002,859,850**	**1,126,466,079**	**1,145,946,103**	**1,159,891,026**	**566,067,684**	**1,124,923,678**	**1,090,186,225**	**972,403,618**
Energie extrasa din retele prognozata		**56,942,433**	**57,946,328**	**58,970,000**	**60,007,526**	**61,065,459**	**54,810,000**	**25,550,000**	**50,000,000**	**52,000,000**	**52,000,000**
Tarif mediu aprobat pentru serviciul de transport al energiei electrice	lei/MWh	**15.33**	**16.13**	**17.01**	**18.77**	**18.77**	**21.16**	**22.16**	**22.50**	**20.97**	**18.70**
Energie electrica introdusa in retele	MWh	58,074,296	51,353,188	54,086,472	55,010,694	53,376,893	52,449,101	27,664,627	58,171,487	56,401,379	60,277,100
Tarif mediu TG aprobat	lei/MWh	7.64	7.6	8.41	8.6	8.6	9.7	10.16	10.30	2.57	0.85
Venit realizat introducere energie	lei	447,170,426	391,154,010	463,112,173	478,848,243	465,502,455	520,987,493	284,183,866	610,724,783	144,983,585	51,235,535
Energie electrica extrasa din retele	MWh	58,857,676	52,263,191	55,241,871	56,056,203	53,928,586	51,846,199	25,453,607	52,155,773	52,676,556	54,052,600
Tarif mediu TL aprobat	lei/MWh	7.69	8.53	8.59	10.18	10.18	11.46	12.00	12.20	18.14	17.70
Venit realizat extragere energie	lei	452,468,964	454,991,683	475,050,720	577,081,943	559,336,316	606,533,743	309,021,443	644,227,270	956,426,339	956,731,020
Venit total realizat din tarif	lei	899,639,390	846,145,693	938,162,893	1,055,930,186	1,024,838,771	1,127,521,236	593,205,309	1,254,952,054	1,101,409,924	1,007,966,555
CPT realizat	MWh	995,647	992,824	1,119,314	1,080,588	1,018,268	1,031,711	491,506	1,067,252	1,005,294	1,012,602
CPT realizat	%	2.28	2.55	2.69	2.48	2.33	2.52	2.42	2.47	2.29	2.30
Valoare CPT realizat	lei	214,714,659	243,912,884	265,658,327	251,537,904	252,390,367	221,670,309	89,165,121	194,206,894	181,479,815	205,000,092
Valoare CPT recunoscut	lei	185,518,385	193,952,623	185,709,963	178,065,102	178,108,728	166,609,659	76,145,440	178,783,064	170,534,722	183,826,541

Annex 5

Table 2 - The evolution of revenues and costs related to the electricity transmission service and planned and realized investments

Tabelul 2 Evoluția veniturilor și a costurilor aferente serviciului de transport al energiei electrice precum și investiție planificate și realizate

Anul		2008	2009	2010	2011	2012	2013	sem I 2014	an tarifar 2014-2015	an tarifar 2015-2016	an tarifar 2016-2017
Costuri totale din care	lei	1,969,025,461	1,974,614,813	2,051,658,693	1,728,758,448	1,578,124,200	1,569,028,843	763,299,096	1,688,762,813	1,549,842,465	1,520,060,703
pentru serviciul de transport	lei	888,548,234	900,981,380	894,693,666	965,574,934	965,904,156	909,096,662	425,351,513	906,153,802	878,443,238	877,459,517
CPT realizat	MWh	995,647	992,824	1,119,314	1,080,588	1,018,268	1,031,711	491,506	1,067,252	1,005,294	1,012,602
CPT realizat	%	2.28	2.55	2.69	2.48	2.33	2.52	2.42	2.47	2.29	2.30
Valoare CPT realizat	lei	214,714,659	243,912,884	265,658,327	251,537,904	252,390,367	221,670,309	89,165,121	194,206,894	181,479,815	205,000,092
Valoare CPT recunoscut	lei	185,518,385	193,952,623	185,709,963	178,065,102	178,108,728	166,609,659	76,145,440	178,783,064	170,534,722	183,826,541
Venituri totale din care	lei	2,156,911,148	2,045,689,347	2,162,509,930	1,927,210,817	1,676,758,591	1,812,079,830	1,015,318,978	2,125,954,479	1,940,204,223	1,845,301,136
din serviciul de transport	lei	1,080,006,394	968,598,143	1,000,449,027	1,143,141,633	1,105,987,276	1,182,761,567	629,497,428	1,391,196,703	1,211,842,903	1,134,534,292
Rezultat total din care	lei	187,885,687	71,074,534	110,851,237	198,452,369	98,634,391	243,050,987	252,019,882	437,191,666	390,361,758	325,240,433
pentru serviciul transport	lei	191,458,160	67,616,763	105,755,362	177,566,699	140,083,120	273,664,905	204,145,915	485,042,901	333,399,665	257,074,775
Investitii in RET prognozate a fi realizate din surse proprii	lei	285,000,000	253,555,350	322,820,268	379,118,911	397,059,735	260,000,000	200,000,000	109,245,360	257,131,507	239,477,362
Valoare investitii realizate in RET din care:		457,987,165	200,170,877	502,994,678	292,866,175	280,682,152	381,530,163	97,362,542	140,115,579	137,270,078	274,205,652
surse proprii	lei	438,756,006	172,631,476	409,503,710	288,327,787	154,457,737	271,977,607	92,726,253	107,885,434	123,421,074	266,356,482
contributii din care:	lei	19,231,159	27,539,401	93,490,968	4,538,388	126,224,415	109,552,556	4,636,289	32,230,145	13,849,005	7,849,170
tarif de racordare	lei	1,343,455	27,259,370	90,612,719	4,538,388	126,178,430	47,688,430	4,636,289	32,205,099	8,694,965	7,115,928
Anul		**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	
Venit total din situațiile financiare	lei	2,998,109,139	2,541,883,285	2,679,809,912	3,273,229,540	2,860,856,444	2,560,130,925	2,874,606,265	3,032,679,650	2,752,463,319	n.a.
Cheltuieli totale din situațiile financiare	lei	2,944,594,309	2,530,626,752	2,658,073,832	3,146,227,537	2,813,812,444	2,320,379,154	2,442,800,177	2,602,857,114	2,417,873,365	n.a.
Profit brut din situațiile financiare	lei	53,514,830	11,256,533	21,736,080	127,002,003	47,044,000	239,751,771	431,806,088	429,822,536	334,589,954	n.a.
Profit net din situațiile financiare	lei	41,943,077	6,135,590	9,557,424	90,913,316	34,487,968	200,927,862	357,616,487	360,054,467	272,361,543	n.a.

Annex 6

Annual adjustments applied to linearized revenues for the electricity distribution service for 2017

RON - Nominal terms for 2016

Operator	Adjustment 2015	Adjustment 2016	Adjustment 2017*	Total adjustments
Enel Distributie Muntenia	-13,202,375	-76,335,037	-32,902,260	**-122,439,672**
Enel Dobrogea Banat	-7,805,329	-42,198,687	-19,680,394	**-69,684,410**
Enel Distributie Dobrogea	-7,282,655	-25,319,445	-16,461,542	**-49,063,642**
CEZ Distributie	-14,888,748	-49,150,910	-31,948,789	**-95,988,447**
E.ON Distributie Romania	510,523	-44,053,093	-22,593,471	**-66,136,041**
Electrica Distributie Muntenia Nord	3,844,559	-78,171,650	-22,892,013	**-97,219,104**
Electrica Distributie Transilvania Nord	-4,000,866	-58,366,306	-21,056,504	**-83,423,676**
Electrica Distributie Transilvania Sud	-1,274,949	-58,181,088	-21,417,678	**-80,873,715**

*Adjustment related to the change of the RRR (regulated rate of return) for 2017, according to ANRE Order 146/2014 and Adjustment related to cutting the tax on special constructions in 2017

Annex 7

Table 5 Distribution tariffs 2008-2016 (RON/MWh)

Tabelul 5. Tarifele de distribuție aplicate în perioada 2008-2016 [lei/MWh, termeni nominali]

Nume distribuitor	Tens.	01/01/2008	01/01/2009	01/01/2010	10/12/2010	01/01/2011	01.07.2012	01/01/2013	01/01/2014	01/01/2015	01/01/2016
Total tara	**Total**										
	IT	18.31	18.18	18.46	18.46	18.77	19.31	20.30	20.65	21.71	19.24
	MT	56.36	56.54	57.48	57.48	57.96	59.95	63.00	65.26	64.31	56.78
	JT	169.86	173.47	177.02	177.02	180.59	191.95	201.74	200.57	197.16	172.57
E- Distributie Muntenia	**Total**										
	IT	9.44	9.25	9.39	8.73	8.92	10.49	11.02	12.19	12.16	10.17
	MT	38.14	37.04	37.48	34.85	35.36	41.60	43.72	48.35	48.44	40.64
	JT	166.85	164.98	163.25	151.82	151.21	177.92	186.99	182.47	183.53	154.42
E- Distributie Banat	**Total**										
	IT	21.00	21.00	21.00	21.00	21.00	21.00	22.07	22.80	22.10	18.60
	MT	63.00	63.00	63.00	63.00	63.00	63.00	66.21	68.97	66.91	56.58
	JT	171.22	178.05	189.28	189.28	192.66	202.00	212.30	205.63	200.54	170.11
E- Distributie Dobrogea	**Total**										
	IT	21.00	21.00	21.00	21.00	21.00	21.00	22.07	22.07	22.04	19.30
	MT	63.00	63.00	63.00	63.00	63.00	63.00	66.21	66.21	66.02	57.78
	JT	167.53	170.69	175.67	175.67	186.72	202.00	212.30	211.67	211.33	184.57
Distributie Energie Oltenia	**Total**										
	IT	19.75	20.22	21.00	21.00	21.00	21.00	22.07	24.28	25.39	22.56
	MT	61.75	62.22	63.00	63.00	63.00	63.00	66.21	70.62	73.81	65.66
	JT	200.75	201.22	202.00	202.00	202.00	202.00	212.30	210.77	211.11	184.24
Delgaz Grid	**Total**										
	IT	21.00	21.00	21.00	21.00	21.00	21.00	22.07	20.85	20.64	18.71
	MT	63.00	63.00	63.00	63.00	63.00	63.00	66.21	67.10	66.32	60.15
	JT	176.34	194.50	188.17	188.17	196.15	202.00	212.30	214.50	208.84	188.26
SDEE Muntenia Nord	**Total**										
	IT	14.14	13.64	13.26	13.26	15.30	18.00	18.92	18.90	18.47	15.93
	MT	48.00	47.73	48.18	48.18	53.79	60.00	63.06	63.13	61.31	52.60
	JT	171.40	169.10	169.15	169.15	190.07	199.00	209.15	206.05	199.92	171.38
SDEE Transilvania Nord	**Total**										
	IT	19.13	18.33	19.99	19.99	20.96	21.00	22.07	20.65	21.10	19.93
	MT	61.13	60.33	61.99	61.99	62.96	63.00	66.21	67.28	68.44	64.20
	JT	149.81	144.23	149.06	149.06	151.60	164.42	172.80	178.75	180.59	167.74
SDEE Transilvania Sud	**Total**										
	IT	21.00	21.00	21.00	21.00	21.00	21.00	22.07	23.46	23.41	21.22
	MT	52.86	55.96	60.19	60.19	59.53	62.98	66.19	70.44	70.26	63.58
	JT	155.01	164.99	179.55	179.55	174.30	186.25	195.75	194.73	192.65	172.02

Table 6 – The regulated revenues for the concessionaires distribution operators 2008 – 2016

Tabelul 6. Situația veniturilor reglementate ale operatorilor de distribuție concesionari în perioada 2008-2016

[lei termeni nominali]

Nume distribuitor	2008	2009	2010	2011	2012	2013
E- Distributie Muntenia	609,017,247	616,783,958	649,235,181	621,312,127	714,838,756	793,542,260
E- Distributie Banat	424,726,822	439,929,623	464,300,663	472,895,206	483,316,442	535,077,393
E- Distributie Dobrogea	315,740,224	321,607,102	330,661,129	346,376,760	356,689,428	432,807,819
Distributie Energie Oltenia	628,543,721	634,386,501	642,877,477	644,870,097	646,915,408	772,944,811
Delgaz Grid	484,879,543	539,143,402	536,933,062	568,501,299	594,495,140	598,749,007
SDEE Muntenia Nord	503,745,093	500,502,889	504,126,669	571,156,630	597,659,190	609,716,351
SDEE Transilvania Nord	417,301,816	411,477,244	433,702,908	447,510,591	461,417,480	532,093,695
SDEE Transilvania Sud	434,862,878	466,062,134	509,951,160	503,505,387	525,378,530	614,441,154

Nume distribuitor	2014	2015	2016
E- Distributie Muntenia	832,171,358	844,161,281	716,539,293
E- Distributie Banat	545,593,605	536,268,885	458,634,246
E- Distributie Dobrogea	447,619,922	450,837,586	397,391,042
Distributie Energie Oltenia	722,712,264	738,457,451	653,344,994
Delgaz Grid	651,090,514	640,702,615	583,046,666
SDEE Muntenia Nord	672,031,680	644,457,850	545,963,095
SDEE Transilvania Nord	564,356,552	576,193,910	541,207,460
SDEE Transilvania Sud	627,619,224	627,601,007	567,232,826

Table 7 – Total revenues / costs for the electricity distribution service 2008 – 2016

Tabelul 7. Situația veniturilor/costurilor totale realizate pentru serviciul de distribuție a energie electrice în perioada 2008-2016

[lei, termeni nominali]

Nume distribuitor		2008	2009	2010	2011	2012	2013	2014	2015	2016
E- Distributie Muntenia	Venituri Totale	689,467,437	688,312,173	700,205,845	667,759,321	786,844,511	848,328,675	841,659,618	884,770,554	762,470,893
	Costuri totale	558,135,413	591,243,344	603,676,058	712,224,997	689,250,590	702,385,068	718,472,054	676,720,370	667,371,508
	Rezultat	131,332,024	97,068,829	96,529,787	(44,465,675)	97,593,920	145,943,608	123,187,564	208,050,183	95,099,384
E- Distributie Banat	Venituri Totale	471,043,509	484,451,552	521,772,065	543,218,453	555,275,602	579,566,158	559,169,035	563,116,728	483,475,021
	Costuri totale	360,347,655	363,208,626	365,358,542	386,083,865	411,924,385	418,897,852	411,717,330	396,866,046	399,591,213
	Rezultat	110,695,854	121,242,926	156,413,524	157,134,588	143,351,216	160,668,306	147,451,705	166,250,682	83,883,808
E- Distributie Dobrogea	Venituri Totale	356,441,812	365,843,532	383,697,764	417,294,406	437,599,250	467,184,662	458,806,294	472,065,240	415,041,608
	Costuri totale	300,830,893	297,641,617	307,848,727	349,267,815	364,293,707	365,323,627	367,024,584	348,617,766	350,486,933
	Rezultat	55,610,919	68,201,915	75,849,037	68,026,591	73,305,543	101,861,036	91,781,710	123,447,474	64,554,675
Distributie Energie Oltenia	Venituri Totale	752,407,141	733,014,451	736,339,952	752,318,645	757,242,157	753,673,653	777,507,665	825,630,996	739,968,054
	Costuri totale	548,082,554	565,022,122	603,390,479	632,542,828	732,367,413	739,208,492	685,481,060	642,033,459	652,110,230
	Rezultat	204,324,587	167,992,329	132,949,473	119,775,816	24,874,743	14,465,160	92,026,605	183,597,537	87,857,824
Delgaz Grid	Venituri Totale	535,922,137	603,384,383	595,674,422	604,552,825	634,420,725	667,014,371	677,911,562	678,444,772	633,552,417
	Costuri totale	527,071,427	505,541,052	472,210,447	549,763,907	561,780,703	570,882,588	594,758,127	580,974,253	536,540,509
	Rezultat	8,850,711	97,843,330	123,463,975	54,788,917	72,640,022	96,131,783	83,153,435	97,470,519	97,011,908
SDEE Muntenia Nord	Venituri Totale	573,757,128	568,390,106	561,941,455	648,613,812	676,622,481	718,663,003	717,254,127	723,539,092	639,877,325
	Costuri totale	487,170,262	527,344,052	564,044,152	586,282,681	575,504,810	575,639,599	595,993,079	574,284,614	548,573,846
	Rezultat	86,586,866	41,046,054	(2,102,697)	62,331,131	101,117,671	143,023,405	121,261,048	149,254,478	91,303,479
SDEE Transilvania Nord	Venituri Totale	472,695,954	456,604,269	484,765,289	507,277,380	529,881,170	574,857,704	595,748,478	634,744,212	614,692,330
	Costuri totale	450,312,994	451,593,433	492,040,062	493,777,436	499,309,674	452,023,129	500,385,823	489,918,672	480,305,298
	Rezultat	22,382,960	5,010,836	(7,274,773)	13,499,944	30,571,496	122,834,574	95,362,655	144,825,540	134,387,032
SDEE Transilvania Sud	Venituri Totale	487,887,964	506,580,846	563,810,887	571,543,404	601,387,677	642,311,539	659,136,404	687,392,353	634,328,155
	Costuri totale	499,553,381	494,781,430	553,726,387	561,605,750	550,032,307	536,810,565	560,712,185	544,933,462	530,832,257
	Rezultat	(11,665,418)	11,799,417	10,084,500	9,937,654	51,355,370	105,500,974	98,424,219	142,458,891	103,495,898

Table 8 – Recognized costs for own technological consumption in the linearized revenues of concessionaires distribution operators for every year between 2014 – 2016

Tabelul 8. Situația costurilor recunoscute cu CPT în veniturile liniarizate ale operatorilor de distribuție a energiei electrice concesionari aferente fiecărui an al perioadei 2014-2016

(lei termeni nominali ai fiecarui an)

		E-Distribuție MUNTENIA	E-Distribuție BANAT	E-Distribuție DOBROGEA	Distribuție Energie Oltenia	Delgaz Grid	SDEE Muntenia Nord	SDEE Transilvania Nord	SDEE Transilvania Sud
2014	**Venit liniarizat 2014**	832,171,358	545,593,605	447,619,922	722,712,264	651,090,514	672,031,680	564,356,552	627,619,224
	COST cpt RECUNOSCUT	213,620,592	106,479,317	97,740,935	216,387,500	155,645,925	177,754,258	124,534,544	156,533,706
	% COST cpt RECUNOSCUT în Venit liniarizat	**25.67%**	**19.52%**	**21.84%**	**29.94%**	**23.91%**	**26.45%**	**22.07%**	**24.94%**
2015	**Venit liniarizat 2015**	832,802,135	536,127,023	448,309,471	740,164,908	656,246,701	659,513,803	588,144,874	643,280,847
	COST cpt RECUNOSCUT	213,797,520	108,504,166	95,017,656	194,271,711	143,564,666	173,659,498	125,057,826	156,281,462
	% COST cpt RECUNOSCUT în Venit liniarizat	**25.67%**	**20.24%**	**21.19%**	**26.25%**	**21.88%**	**26.33%**	**21.26%**	**24.29%**
2016	**Venit liniarizat 2016**	810,173,394	513,693,856	437,077,493	735,210,248	645,411,389	626,953,381	594,109,251	639,134,731
	COST cpt RECUNOSCUT	202,772,220	98,920,618	89,078,035	179,626,876	132,999,734	156,501,625	115,547,775	143,831,964
	% COST cpt RECUNOSCUT în Venit liniarizat	**25.03%**	**19.26%**	**20.38%**	**24.43%**	**20.61%**	**24.96%**	**19.45%**	**22.50%**

Tabelul nr. 9 Cantitățile de energie electrică distribuită în perioada 2008-2016 [MWh]

Nume distribuitor	Tens.	2008	2009	2010	2011	2012	2013	2014	2015	2016
Total tara	**Total**	**42,440,179**	**39,399,291**	**40,851,492**	**42,317,713**	**41,583,650**	**41,004,021**	**41,073,898**	**42,603,956**	**43,277,933**
	IT	10,290,915	7,827,544	8,424,403	8,864,917	8,245,155	7,441,406	7,191,664	7,232,190	7,303,196
	MT	13,466,938	12,363,663	12,928,759	13,540,668	13,297,744	13,438,200	13,831,930	14,596,703	14,862,430
	JT	18,682,326	19,208,084	19,498,330	19,912,128	20,040,751	20,124,416	20,050,304	20,775,063	21,112,307
E- Distributie Muntenia	**Total**	**5,913,207**	**5,997,096**	**6,247,840**	**6,396,853**	**6,191,811**	**6,521,654**	**6,564,445**	**7,036,123**	**7,053,057**
	IT	240,869	250,511	260,376	263,471	234,858	227,111	237,693	251,736	257,328
	MT	2,197,328	2,245,710	2,370,933	2,469,774	2,314,427	2,491,981	2,563,859	2,815,601	2,831,709
	JT	3,475,010	3,500,875	3,616,531	3,663,608	3,642,526	3,802,562	3,762,893	3,968,785	3,964,021
E- Distributie Banat	**Total**	**3,956,322**	**3,854,331**	**4,077,731**	**4,241,083**	**3,832,402**	**3,978,862**	**3,969,392**	**4,143,040**	**4,227,400**
	IT	612,792	590,337	724,412	767,561	601,406	453,997	444,522	515,587	540,635
	MT	1,299,607	1,198,755	1,272,031	1,335,956	1,283,253	1,417,040	1,478,577	1,526,980	1,563,336
	JT	2,043,923	2,065,238	2,081,288	2,137,566	1,947,742	2,107,825	2,046,293	2,100,473	2,123,430
E- Distributie Dobrogea	**Total**	**3,465,577**	**3,345,577**	**3,479,535**	**3,635,587**	**3,644,128**	**3,495,927**	**3,527,040**	**3,578,969**	**3,615,569**
	IT	1,014,446	920,099	995,466	1,060,272	1,046,136	905,841	967,444	906,709	922,140
	MT	903,191	821,120	840,360	867,322	854,542	860,903	870,678	939,489	950,611
	JT	1,547,940	1,604,358	1,643,709	1,707,992	1,743,450	1,729,182	1,688,918	1,732,771	1,742,818
Distributie Energie Oltenia	**Total**	**8,281,349**	**7,072,580**	**6,994,450**	**7,335,072**	**6,977,758**	**6,452,703**	**6,315,723**	**6,418,724**	**6,381,036**
	IT	3,447,083	2,496,831	2,421,833	2,647,064	2,182,219	1,946,080	1,778,479	1,738,686	1,653,927
	MT	2,502,890	2,125,046	2,105,604	2,144,279	2,194,730	2,018,543	1,956,055	1,998,874	1,961,311
	JT	2,331,376	2,450,704	2,467,013	2,543,729	2,600,808	2,488,079	2,581,188	2,681,165	2,765,798
Delgaz Grid	**Total**	**4,296,166**	**4,051,815**	**4,350,954**	**4,423,498**	**4,592,726**	**4,413,577**	**4,390,501**	**4,350,475**	**4,479,407**
	IT	910,502	647,973	735,969	804,075	871,960	755,227	672,270	575,719	599,029
	MT	931,472	896,864	1,014,633	1,091,675	1,101,779	1,043,577	1,114,385	1,144,621	1,206,410
	JT	2,454,192	2,506,978	2,600,351	2,527,747	2,618,987	2,614,774	2,603,847	2,630,135	2,673,969
SDEE Muntenia Nord	**Total**	**7,194,719**	**6,211,722**	**6,363,140**	**6,544,653**	**6,421,103**	**6,245,826**	**6,245,247**	**6,513,419**	**6,572,009**
	IT	2,843,338	1,879,375	2,106,067	2,097,785	1,914,901	1,813,137	1,745,975	1,818,688	1,821,733
	MT	1,991,846	1,841,245	1,793,435	1,887,954	1,912,725	1,884,175	1,965,660	2,065,585	2,088,448
	JT	2,359,535	2,491,101	2,463,638	2,558,914	2,593,477	2,548,514	2,533,612	2,629,146	2,661,827
SDEE Transilvania Nord	**Total**	**4,469,979**	**4,254,551**	**4,391,480**	**4,561,960**	**4,580,343**	**4,598,517**	**4,695,851**	**4,929,212**	**5,131,107**
	IT	593,201	458,829	514,622	533,642	504,376	496,149	522,617	547,039	551,286
	MT	1,608,561	1,458,202	1,501,664	1,580,309	1,568,321	1,607,526	1,687,968	1,792,722	1,907,544
	JT	2,268,217	2,337,520	2,375,194	2,448,009	2,507,645	2,494,843	2,485,267	2,589,451	2,672,278
SDEE Transilvania Sud	**Total**	**4,862,860**	**4,611,620**	**4,946,363**	**5,179,008**	**5,343,380**	**5,296,954**	**5,365,698**	**5,633,995**	**5,818,347**
	IT	628,683	583,588	665,659	691,047	889,299	843,863	822,663	878,026	957,119
	MT	2,032,043	1,776,721	2,030,098	2,163,399	2,067,966	2,114,454	2,194,749	2,312,831	2,353,062
	JT	2,202,134	2,251,311	2,250,606	2,324,562	2,386,115	2,338,637	2,348,286	2,443,138	2,508,166

Table 9 – Quantities of distributed electricity between 2008 – 2016 (MWh)

Table 10 – The evolution of own technological consumption in the electricity distribution networks between 2007 – 2016

Tabelul 10. Evoluția CPT în rețelele electrice de distribuție a energiei electrice în perioada 2007-2016

								% din energia electrică intrată în contur			
Nume distribuitor	Tens.	2007	2008	2009	2010	2011	2012	**2013**	**2014**	**2015**	**2016**
Enel Distributie Muntenia	**Total**	**16.05**	**15.25**	**16.16**	**16.73**	**16.47**	**13.03**	**13.78**	**14.61**	**13.21**	**12.95**
	IT	1.29	0.76	0.70	0.70	0.72	0.71	0.63	0.58	0.68	0.68
	MT	5.48	4.00	4.52	4.39	4.35	3.68	3.78	3.85	3.59	3.54
	JT	19.29	19.70	20.41	21.20	21.13	16.42	17.64	18.52	16.96	16.79
Enel Distributie Banat	**Total**	**12.38**	**11.04**	**11.39**	**10.98**	**9.68**	**9.87**	**9.78**	**9.59**	**9.64**	**10.14**
	IT	0.65	0.60	0.60	0.69	0.69	0.64	0.68	0.81	0.73	0.88
	MT	3.38	3.69	3.77	3.82	3.71	3.65	3.61	3.69	3.67	3.95
	JT	20.06	17.77	16.98	17.17	14.78	15.21	14.71	14.36	14.56	14.44
Enel Distributie Dobrogea	**Total**	**13.46**	**12.34**	**12.56**	**11.56**	**10.97**	**9.93**	**9.57**	**10.54**	**10.04**	**10.43**
	IT	0.76	0.68	0.79	1.01	1.16	1.35	1.94	2.16	1.63	1.86
	MT	2.99	4.05	4.39	3.90	4.02	4.15	3.95	5.17	6.13	5.55
	JT	23.39	19.67	18.62	18.18	16.00	15.52	14.06	14.06	12.71	13.90
CEZ Distributie	**Total**	**9.96**	**10.19**	**11.69**	**12.43**	**12.31**	**12.40**	**13.32**	**11.37**	**10.62**	**10.20**
	IT	1.64	1.71	1.62	1.46	1.20	1.45	1.68	1.23	1.11	1.18
	MT	5.54	4.82	4.79	4.89	5.02	5.21	5.34	4.10	3.74	4.00
	JT	25.92	23.69	24.55	27.36	26.32	23.74	24.64	23.44	20.75	19.14
E.ON Moldova Distributie	**Total**	**15.23**	**16.47**	**16.72**	**15.20**	**16.19**	**15.95**	**15.65**	**14.93**	**13.45**	**12.85**
	IT	1.21	1.25	1.01	0.87	1.06	0.96	1.02	1.01	0.86	1.02
	MT	3.20	3.27	2.54	2.66	2.85	2.85	2.97	2.68	2.68	2.74
	JT	21.55	21.79	21.81	20.49	22.37	21.77	20.45	19.65	17.39	16.26
FDEE Electrica Distributie Muntenia Nord	**Total**	**9.66**	**10.16**	**10.92**	**11.84**	**11.46**	**11.92**	**12.18**	**12.38**	**11.40**	**11.42**
	IT	0.69	0.74	0.97	1.02	0.98	1.01	1.06	1.02	0.87	0.82
	MT	7.55	6.96	6.71	7.36	7.01	7.17	6.87	6.61	6.59	6.37
	JT	15.51	15.78	14.16	15.73	14.85	15.29	16.16	17.02	15.17	15.51
FDEE Electrica Distributie Transilvania Nord	**Total**	**12.16**	**12.32**	**12.04**	**13.08**	**11.91**	**11.68**	**11.59**	**11.34**	**11.08**	**10.75**
	IT	1.01	1.26	1.25	1.60	1.17	1.36	1.19	0.98	1.13	1.21
	MT	4.85	3.77	4.74	4.62	4.59	4.58	4.49	4.69	4.56	4.64
	JT	15.07	15.45	12.45	14.17	12.93	12.08	12.29	12.22	11.69	10.98
FDEE Electrica Distributie Transilvania Sud	**Total**	**11.26**	**11.46**	**12.29**	**12.64**	**12.20**	**12.15**	**12.21**	**11.80**	**11.18**	**10.75**
	IT	1.25	1.19	1.22	1.15	1.24	1.14	1.10	1.04	0.97	1.03
	MT	4.23	4.14	4.32	4.13	4.06	4.22	4.21	4.23	4.06	3.67
	JT	17.67	17.19	16.89	19.38	18.13	17.57	18.42	17.51	16.96	16.62

Table 11 – Own technological consumption in electricity networks in European countries

Country	Electric power	
	Consumption per capita	Transmission and distribution losses
	kWh	% of output
	2014	2014
Austria	8,361	5
Belgium	7,694	5
Bulgaria	4,709	9
Croatia	3,714	13
Czech Republic	6,259	5
Denmark	5,859	6
Estonia	6,732	7
Finland	15,250	4
France	6,944	6
Germany	7,035	4
Greece	5,063	8
Hungary	3,966	12
Italy	5,002	7

Latvia	3,507	9
Lithuania	3,821	22
Luxembourg	13,915	6
Netherlands	6,713	5
Norway	23,000	6
Poland	3,972	6
Portugal	4,663	10
Romania	2,584	11
Slovenia	6,728	5
Spain	5,356	10
Sweden	13,480	5
United Kingdom	5,130	8

Source: http://wdi.worldbank.org/table/5.11

Electric power consumption (kWh per capita)

Electric power consumption measures the production of power plants and combined heat and power plants less transmission, distribution, and transformation losses and own use by heat and power plants

Electric power transmission and distribution losses (% of output)

Electric power transmission and distribution losses include losses in transmission between sources

of supply and points of distribution and in the distribution to consumers, including pilferage.

Table 12 - Own technological consumption in electricity distribution networks in ERRA countries

Tabelul 12. Nivelul CPT în RED din țările ERRA

Țara	An 2015	An 2016
Albania	28.00%	n.a.
Federația Bosniei și Herțegovinei	11.09%	10.32%
Republica Serbia	11.89%	11.42%
Croația	8.10%	7.60%
Georgia		7.71%
Letonia	4.60%	4.60%
Lituania	6.60%	6.30%
Macedonia	14.80%	14.70%
Pakistan	18.00%	18.00%
România	11.37%	11.03%
Rusia		7.60%
Turcia		13.80%
Ucraina	9.90%	n.a.
Ungaria	8.40%	n.a.

Table 13 – Total revenues and expenses according to the concessionaires distribution operators' annual financial statements, on 31st of December 2008 – 2016 (1)

Tabelul 13. Veniturile şi cheltuielile totale conform Situaţiilor financiare anuale la 31 decembrie 2008-2016 ale operatorilor de distribuţie a energiei electrice concesionari (1)

[lei]

Operator de distribuţie	An	Venituri Totale	Cheltuieli Totale	Profit brut	% rata profit brut	Profit net
		1	2	3=1-2	4=3/1	5
E- Distribuţie Muntenia	2008	1,790,157,877	1,507,925,381	282,232,496	15.77%	220,640,054
	2009	1,029,771,779	689,115,079	340,656,700	33.08%	280,052,234
	2010	996,607,617	847,293,861	149,313,756	14.98%	105,084,129
	2011	983,350,161	906,225,615	77,124,546	7.84%	50,470,639
	2012	1,119,001,197	883,423,820	235,577,377	21.05%	206,283,901
	2013	1,153,222,805	833,911,507	319,311,298	27.69%	267,209,925
	2014	1,073,075,554	793,133,182	279,942,372	26.09%	240,796,750
	2015	1,055,834,844	775,173,334	280,661,510	26.58%	237,942,576
	2016	954,924,769	773,949,669	180,975,100	18.95%	151,696,282
E- Distribuţie Banat	2008	559,022,029	419,056,491	139,965,538	25.04%	114,877,795
	2009	590,337,760	409,338,609	180,999,151	30.66%	150,650,944
	2010	619,060,397	435,777,888	183,282,509	29.61%	148,434,430
	2011	642,582,054	386,653,380	255,928,674	39.83%	220,456,680
	2012	659,888,093	457,342,859	202,545,234	30.69%	167,228,325
	2013	688,487,078	456,660,471	231,826,607	33.67%	190,661,260
	2014	649,705,588	443,136,679	206,568,909	31.79%	172,244,917
	2015	646,917,204	454,995,689	191,921,515	29.67%	157,894,088
	2016	563,599,098	450,449,739	113,149,359	20.08%	93,562,918
E- Distribuţie Dobrogea	2008	420,413,540	340,838,854	79,574,686	18.93%	63,648,668
	2009	434,659,062	323,319,114	111,339,948	25.62%	92,084,825
	2010	462,292,285	340,774,618	121,517,667	26.29%	99,646,464
	2011	493,953,661	363,157,606	130,796,055	26.48%	108,851,221
	2012	517,858,317	406,960,447	110,897,870	21.41%	94,474,591
	2013	557,117,363	396,001,419	161,115,944	28.92%	133,529,410
	2014	533,414,259	424,004,629	109,409,630	20.51%	87,737,448
	2015	545,959,798	405,151,449	140,808,349	25.79%	114,801,225
	2016	483,145,545	395,840,779	87,304,766	18.07%	73,483,749
Distributie Energie Oltenia	2008	930,926,937	642,260,363	288,666,574	31.01%	241,067,528
	2009	896,914,905	652,762,000	244,152,905	27.22%	204,173,548
	2010	851,519,386	629,215,526	222,303,860	26.11%	187,194,191
	2011	858,918,805	695,103,624	163,815,181	19.07%	130,458,811
	2012	881,796,850	775,183,277	106,613,573	12.09%	85,956,471
	2013	852,849,313	835,229,878	17,619,435	2.07%	660,927
	2014	870,077,163	805,004,551	65,072,612	7.48%	43,848,579
	2015	922,474,814	786,472,571	136,002,243	14.74%	26,880,576
	2016	824,402,308	800,080,116	24,322,192	2.95%	8,373,992

Table 13 – Total revenues and expenses according to the concessionaires distribution operators' annual financial statements, on 31st of December 2008 –2016 (2)

Tabelul 13. Veniturile şi cheltuielile totale conform Situaţiilor financiare anuale la 31 decembrie 2008-2016 ale operatorilor de distribuţie a energiei electrice concesionari (2)

[lei]

Operator de distribuţie	An	Venituri Totale	Cheltuieli Totale	Profit brut	% rata profit brut	Profit net
		1	2	3=1-2	4=3/1	5
Delgaz Grid (pentru anii 2015 şi 2016 include distribuţia de gaz natural)	2008	602,129,981	564,221,857	37,908,124	6.30%	27,166,254
	2009	649,421,247	577,186,673	72,234,574	11.12%	53,571,940
	2010	662,602,383	472,215,262	190,387,121	28.73%	165,430,265
	2011	822,950,451	557,837,894	265,112,557	32.21%	230,492,490
	2012	778,031,451	694,120,178	83,911,273	10.79%	73,019,676
	2013	798,648,054	723,133,189	75,514,865	9.46%	67,817,520
	2014	803,934,403	705,296,947	98,637,456	12.27%	83,032,132
	2015	1,686,320,985	1,367,779,440	318,541,545	18.89%	260,302,039
	2016	1,619,510,065	1,330,533,980	288,976,085	17.84%	226,511,602
SDEE Muntenia Nord	2008	628,683,510	534,103,282	94,580,228	15.04%	76,350,669
	2009	659,140,589	623,741,779	35,398,810	5.37%	24,652,384
	2010	633,875,661	601,540,826	32,334,835	5.10%	26,676,673
	2011	712,794,771	634,035,546	78,759,225	11.05%	67,414,812
	2012	752,276,162	645,926,963	106,349,199	14.14%	87,148,792
	2013	792,757,976	647,472,141	145,285,835	18.33%	126,509,974
	2014	805,433,616	636,827,537	168,606,079	20.93%	140,265,042
	2015	798,559,728	611,923,436	186,636,292	23.37%	153,159,628
	2016	717,903,297	597,387,698	120,515,599	16.79%	103,686,814
SDEE Transilvania Nord	2008	524,641,655	493,373,889	31,267,766	5.96%	24,219,738
	2009	537,947,004	516,733,507	21,213,497	3.94%	13,959,626
	2010	545,315,028	531,080,331	14,234,697	2.61%	8,523,584
	2011	570,117,548	531,355,136	38,762,412	6.80%	29,100,621
	2012	609,106,764	542,749,849	66,356,915	10.89%	53,079,013
	2013	656,273,099	569,127,467	87,145,632	13.28%	63,705,345
	2014	674,768,422	554,404,498	120,363,924	17.84%	95,331,140
	2015	720,223,823	534,161,261	186,062,562	25.83%	158,820,652
	2016	701,678,909	547,256,428	154,422,481	22.01%	119,416,229
SDEE Transilvania Sud	2008	559,975,706	528,781,694	31,194,012	5.57%	27,043,686
	2009	577,233,404	545,772,677	31,460,727	5.45%	23,178,213
	2010	630,712,648	610,990,362	19,722,286	3.13%	11,925,991
	2011	638,791,544	613,978,752	24,812,792	3.88%	19,569,602
	2012	674,387,883	616,511,539	57,876,344	8.58%	45,804,940
	2013	716,159,389	628,295,540	87,863,849	12.27%	69,383,181
	2014	739,327,988	615,928,621	123,399,367	16.69%	100,119,160
	2015	775,288,320	596,485,744	178,802,576	23.06%	152,568,993
	2016	723,192,663	587,476,704	135,715,959	18.77%	116,423,100

Annex 8

Investment projects included in the Electricity Transmission Network Development Plan for the period 2016-2025

SECTIUNEA I - Esalonarea lucrarilor si cheltuielilor de investitii - perioada 2016 - 2025														
Nr. Crt.	Denumire proiect	Crit. ANRE	Valoare estimata	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
A	RETEHNOLOGIZAREA RET EXISTENTE												
1	Marirea gradului de siguranță a instalațiilor aferente stației București Sud 400/220/110/10 kV *– înlocuire echipament 10 kV (Lot I+II)*	N											
2	Retehnologizarea stației 400 / 220 / 110 / 20 kV Bradu	N											
3	Retehnologizare Stația 220 / 110 kV Turnu Severin Est	N											
4	Retehnologizarea stației 220;110 / 20 kV Câmpia Turzii	N											
5	Modernizare stația electrică 110 kV și 20 kV Suceava	N											
6	Retehnologizarea Stației 400/110/20 kV Domnești	N											
7	Inlocuiri AT și Trafo în stații electrice *(etapa 2), din care:*	N											
	faza 1 (6 AT 200 MVA; 5 Trafo 16 si 25 MVA)												
	faza 2 (8 AT 200 MVA; 4 Trafo 16 MVA)												
8	Inlocuiri AT și Trafo în stații electrice *(etapa 3)*												
9	Retehnologizarea stației 220 / 110 / 20 kV Ungheni	N											
10	Modernizare statia electrica 220/110/20 kV Arefu	N											
11	Modernizare statia electrica 220/110 kV Raureni	N											
12	Modernizare statia 400/110 kV Cluj Est	N											
13	Modernizare statia 220 / 110 kV Dumbrava	N											
14	Retehnologizare stația 400 / 110 / 20 kV Smârdan	N											
15	Retehnologizare stație 220 / 110 kV Craiova Nord	N											
16	Retehnologizare stația 110 kV Timișoara	N											
17	Retehnologizare stația 110 kV Arad	N											
18	Retehnologizare stația 110 kV Sacalaz	N											
19	Retehnologizare stația 220 / 110 / MT kV Baru Mare	N											
20	Retehnologizare stația 220 / 110 kV Iaz	N											
21	Retehnologizare stația 220 / 110 kV Hășdat	N											
22	Retehnologizare stația 220 kV Oțelarie Hunedoara	N											
23	Retehnologizare stația 220 / 110 kV Filești	N											
24	Modernizare statia 400 (220) / 110 / 20 kV Munteni	N											
25	Retehnologizare stația Alba Iulia 220 /110 kV / MT	N											
26	Retehnologizare statia 400/110 kV Darste	N											
27	Retehnologizare stația Medgidia Sud 110 kV	N											
28	Modernizare statia 220/110 kV Tihau - Echipament primar	N											
29	Modernizarea statiilor 110 kV Bacau Sud si Roman Nord aferente axului 400 kV Moldova	N											
30	Retehnologizarea stației 400 kV Isaccea *(etapa I - inlocuire 2 BC, celule af. si celula LEA 400 kV Stupina*	N											
31	Retehnologizarea stației 400 kV Isaccea *(etapa II - retehnologizare statie 400 kV)*	N											
32	Retehnologizarea statiei electrice de transformare 400/110 kV Pelicanu	N											
33	Modernizarea instalațiilor de 110 și 400 (220) kV din stația Focșani Vest	N											
34	Modernizare celule 110 kV si medie tensiune in statia electrica Stalpu	N											
35	Centru de cercetare si dezvoltare a tehnologiilor LST si interventie rapida in SEN - etapa I	N											
36	Montare fibra optica pe LEA 220 kV Fundeni - Brazi Vest - *lotul 1*	N											
37	Conectarea statiilor Turnu Magurele , Mostistea, Stalpu, Teleajen la reteaua de fibră optică a CNTEE Transelectrica - SA - *lotul 2*	N											
38	Modernizare CTSI Craiova prin utilizarea protocolului de comunicație IEC 60870-5-104	N											
39	Modernizare sistem de comandă-control-protecție al stației de 220 / 110 / 20 kV Sărdănești	N											
40	Modernizare sistem de comandă-control-protecție-metering 220 kV, 110 kV în stația 220/110/20 kV si retehnologizarea medie tensiune și servicii interne c.c. și c.a. în stația 220/110/20 kV Ghizdaru	N											
41	Modernizarea sistemului de control protecție și a stației 20 kV din stația 220/110/20 kV Vetis	N											
42	Modernizare sistem comanda-control-protectie si integrare in CTSI a statiei Draganesti-Olt	N											
43	Modernizare sistem comanda-control-protectie si integrare in CTSI a statiei Gradiste	N											
44	Modernizare/inlocuire sistem comanda control protectie in 7 statii	N											
45	Modernizare/inlocuire sistem comanda control protectie in 15 statii	N											

B	ALTE INVESTIŢII LA NIVEL DE SUCURSALE ŞI EXECUTIV (planificate anual)	N											
C	SIGURANŢA ALIMENTĂRII CONSUMULUI												
1	Montare trafo T3 - 250 MVA (400 / 110 kV) în staţia 400 / 110 kV Sibiu Sud	E											
2	AT2 Iernut - 400 MVA, 400/220 kV Montare AT2 400 MVA, 400/231/22 kV precum şi a celulelor aferente în staţia Iernut şi modernizarea sistemului de comandă control al staţiei 400/220/110/6 kV Iernut	E											
3	Marirea capacitatii de transport LEA 220 kV d.c. Bucuresti Sud - Fundeni	N											
4	Inlocuirea trafo T3 si T4 110/10kV, 25 MVA cu transformatoare 110 / (20)10 kV, 40 MVA in statia electrica Fundeni	E											
D	INTEGRAREA PRODUCTIEI DIN CENTRALE NOI - DOBROGEA SI MOLDOVA												
1.1	Racordarea LEA 400 kV Isaccea - Varna si LEA 400 kV Isaccea - Dobrudja în staţia 400 kV Medgidia Sud. Etapa I - Extinderea staţiei 400 kV Medgidia Sud	E											
1.2	Racordarea LEA 400 kV Isaccea-Varna si LEA 400 kV Isaccea - Dobrudja în staţia 400 kV Medgidia Sud. Etapa II - LEA 400 kV d.c. Racorduri la staţia Medgidia Sud	E											
2	LEA 400 kV d.c. (1ce) Gutinas - Smardan	E											
3	Extinderea staţiei 400 kV Cernavodă, et. I + II (inlocuire 2 bobine de compensare; racordare linii noi)	E											
	etapa I: inlocuire 2 bobine de compensare												
	etapa II: racordare linii noi												
4	LEA 400 kV d.c. Cernavoda - Stalpu si racord in statia Gura Ialomitei (linie nouă)	E											
5	Extinderea staţiei 400 kV Gura Ialomiţei cu două celule: LEA 400 kV Cernavodă 3 şi LEA 400 kV Stâlpu	E											
6	Statia 400 kV Stalpu (staţie nouă)	E											
7	Trecere la 400 kV LEA Brazi Vest - Teleajen - Stalpu, inclusiv: Achiziţie AT 400 MVA, 400/220/20 kV şi lucrări de extindere staţiile 400 kV şi 220 kV aferente, în staţia 400/220/110 kV Brazi Vest	E											
8	LEA 400 kV d.c. (1ce) Constanta Nord - Medgidia Sud	E											
9	Marirea capacitatii de transport LEA 220 kV Stejaru - Gheorgheni - Fantanele	N											
10	Marirea capacitatii de transport LEA 220 kV Dumbrava - Stejaru	N											
11	LEA 400 kV d.c. (1c.e.) Stalpu - Brasov (linie nouă)	N											
12	Marirea capacitatii de transport tronson LEA 400 kV Bucuresti Sud - Pelicanu (8km)	N											
13	Marirea capacitatii de transport LEA 400 kV Cernavoda Pelicanu (53 km)	N											
E	INTEGRAREA PRODUCTIEI DIN CENTRALE - ALTE ZONE												
1	Staţia Ostrovu Mare 220 kV (staţie nouă)	N											
2	LEA 220 kV Ostrovu Mare - RET (linie nouă)	N											
3	Reconductorare LEA 220 kV (9,6km) Isalnita - Craiova circ.1	N											
F	CREŞTEREA CAPACITĂŢII DE INTERCONEXIUNE ŞI INTEGRAREA PRODUCŢIEI DIN SRE												
1	Trecerea la tensiunea de 400 kV a axului Portile de Fier - Resita - Timisoara - Sacalaz - Arad. *Etapa I:* Extindere statie 400 kV Portile de Fier; LEA 400 kV Porle de Fier - Resita; statia 400 kV Resita	E											
2	Trecerea la tensiunea de 400 kV a axului Portile de Fier - Resita - Timisoara - Sacalaz - Arad. Etapele II si III: LEA 400 kV d.c. Resita - Timisoara - Sacalaz - Arad + statia 400 kVTimisoara + statia 400 kV Sacalaz + extindere statii existente	E											
3	LEA 400 kV de interconexiune Reşiţa (România) - Pancevo (Serbia) (linie nouă)	E											
4	LEA 400 kV s.c. Gădălin - Suceava (LEA nouă)	E											
5	LEA 400 kV s.c. Suceava - Balti (LEA nouă - pentru portiunea de pe teritoriul Romaniei)	E											
G	Platformă integrată de conducere operativă a SEN + inlocuire componente sistem EMS SCADA AREVA	N											
H	Platforma pentru managementul datelor de telecontorizare aferente pieţei angro de energie electrică	N											
J	MANAGEMENT SISTEME INFORMATICE ŞI TELECOMUNICAŢII	N											
K	ALTE CHELTUIELI DE INVESTITII												
	TOTAL Sectiune I:												

Annex 9

Analysis of the implementation of the Electricity Transmission Network Development Plan for the period 2014-2023

The term of commissioning, the stage of the project, respectively the stage of realization of the investment projects included in the ETN Development Plan 2014-2023

1. 10 projects were finalized according to the term of commissioning foreseen in the 2014-2023 Development Plan

No. in the D.P. 2014-2023	Name of the project	Year of foreseen term of commissioning D. P 2014-2023	Stage
A	**Refurbishment of existing Electricity Transmission Networks**		
2	Refurbishment of Lacu Sărat station 400/220/110/20 kV	2014	Finished on time
3	Refurbishment of Mintia station 220/110 kV	2014	Finished on time
4	Refurbishment of Braşov station 400/110/MT kV	2014	Finished on time
5	Refurbishment of Barboşi station220/110 kV	2014	Finished on time
6	Refurbishment of Tulcea West station 400/110/MT kV	2014	Finished on time
12	Autotransformer and transformers replacements in power stations	2013	Finished on time
35	Organization of remote control system of Electricity Transmission Network installations	2014	Finished on time

43	Modernization of the control-protection system of the 220/110 kV Tihău station	2015	Finished on time
C	**Security of supply**		
1	Transformer Installation 1 250 MVA, 400/110 kV Oradea South	2013	Finished on time
E	**Integration of production from power plants – other areas**		
1	Cetate Station 220 kV (new station)	2013	Finished on time

2. 5 projects were postponed in relation to the foreseen commissioning date in the Development Plan 2014-2023, respectively 2015

No. in the D.P. 2014-2023	No. in the D.P. 2016-2025	Name of the project	Year of foreseen term of commissioning D. P 2014-2023	Year of foreseen term of commissioning D. P 2016-2025	Length of extension [years]	Stage of foreseen date of commissioning compared with the DP 2014-2023	Current stage	Justification presented by the TSO by address no. 19983 / 17.06.2016, registered at ANRE with no. 46108 / 23.06.2016
A	**A**	**Refurbishment of existing Electricity Transmission Networks**						
1	1	Increase of the safety degree of the installations of Bucharest Sud station 400/220 / 110kV - Replacement of equipment 10 kV (Lot I + II)	2015	2016	1	Finished late	The project was finished in March 2016	The tender procedure for the contracting of works was extended by 3 months as a result of the contestation lodged by one of the tenderers

39	38	Modernization of CTSI Craiova by using the IEC 60870-5-104 communication protocol	2015	2018	3	Deferred term	In the design phase The design theme was endorsed by CTES	Update task book in line with new upgrades and refurbishments in stations. There will be a pilot project for 4 stations
42	41	Modernization of the protection control system of the 20 kV station from the Vetiş station 220/110/20 kV	2015	2016	1	Delayed	In the execution phase, commissioning estimated for June 2016	Delay in execution of 6 months from the fault of the performer. Penalties were applied.
C	**C**	**Security of supply**						
2	1	T3 Sibiu Sud – 250 MVA, 400/110 kV	2015	2018	3	Deferred term	In the design phase	The procurement procedure for design services and the feasibility study lasted 2 years
F	**F**	**Increasing interconnection capacity and integration of RES production**						
3	3	OHL 400 kV d.c. Reșița (RO)- Pancevo (Serbia)	2015	2017	2	Deferred term	The execution of the works is in progress	Late issuing of the Government Decision on land expropriation and the Government Decision on the removal from the forestry circuit.

3. 14 projects were postponed in relation to the foreseen commissioning date in the Development Plan 2014-2023, respectively 2016

No. in the D.P. 2014-2023	No. in the D.P. 2016-2025	Name of the project	Year of foreseen term of commissioning D. P 2014-2023	Year of foreseen term of commissioning D. P 2016-2025	Length of extension [years]	Stage of foreseen date of commissioning compared with the DP 2014-2023	Current stage	Comments	Justification presented by the TSO by address no. 19983 / 17.06.2016, registered at ANRE with no. 46108 / 23.06.2016
A	**A**	**Refurbishment of existing Electricity Transmission Networks**							
10	5	Modernization of the 110 kV and 20 kV Suceava power station	2016	2017	1	Delayed	The execution of the works is in the contracting phase	-	The tender procedure for the works contract had a longer duration than estimated (6 months more)
16	10	Modernization of the 220/110/20 kV Arefu station	2016	2019	3	Deferred term	The procurement procedure is under way	Combined with A15 position in DP 2014	It was decided to integrate the modernization of the control-comand-protection system (SCCP) into the plant's refurbishment project for the unitary approach of the primary and secondary circuits. The feasibility study and the task book were updated in 2015 in accordance with the current internal technical norm. The bidding procedure for the works is underway.
17	11	Modernization of the 220/110 kV Râureni station	2016	2018	2				
18	12	Modernization of the 400/110 kV Cluj Est	2016	2017	1	Delayed	The execution of the works is in progress	Combined with A44 position in	It was decided to integrate the modernization of the control-comand-protection system into the plant's

No. in the D.P. 2014-2023	No. in the D.P. 2016-2025	Name of the project	Year of foreseen term of commissioning D. P 2014-2023	Year of foreseen term of commissioning D. P 2016-2025	Length of extension [years]	Stage of foreseen date of commissioning compared with the DP 2014-2023	Current stage	Comments	Justification presented by the TSO by address no. 19983 / 17.06.2016, registered at ANRE with no. 46108 / 23.06.2016
		station						DP 2014	refurbishment project for the unitary approach of the primary and secondary circuits. The feasibility study and the task book were updated in accordance with the current internal technical norm. The bidding procedure for the works is underway.
19	13	Modernization of the 220/110 kV Dumbrava station	2016	2019	3	Deferred term	The execution of the works is in the contracting phase	-	The work has been transferred from the maintenance to the investment chapter with the restoration of the feasibility study and the task book for the unitary approach of the primary + secondary circuits. Under signing execution contract.
28	22	Refurbishment 220 kV Oțelărie Hunedoara station	2016	2018	2	Deferred term	In the design phase.	-	Extended due to the fact that the simultaneous withdrawal of certain installations of the Electricity Transmission at certain times would jeopardize the safe operation of the National Energy System.
37	36	Optic fiber	2016	2017	1	Deferred term	The execution of	-	The auction for work was resumed.

No. in the D.P. 2014-2023	No. in the D.P. 2016-2025	Name of the project	Year of foreseen term of commissioning D. P 2014-2023	Year of foreseen term of commissioning D. P 2016-2025	Length of extension [years]	Stage of foreseen date of commissioning compared with the DP 2014-2023	Current stage	Comments	Justification presented by the TSO by address no. 19983 / 17.06.2016, registered at ANRE with no. 46108 / 23.06.2016
		assembling on the OHL 220 kV Fundeni-Brazi Vest – lot 1					the works is in progress		
40	39	Modernization of the control-comand system of the 220/110/20 kV Sărdănești station	2016	2018	2	Delayed	The execution of the works is in progress	-	The need to re-do the task book in order to include the new internal technical norms. The procurement procedure for the works execution contract lasted 10 months.
41	40	Modernization of the control-command-protection-metering system 220 kV, 110 kV in Ghizdaru 220/110/20 kV station and medium	2016	2018	2	Deferred term	Resume auction for updating design		It was decided to integrate the modernization of the control-command-protection-metering system into the refurbishment project of the station. The tender for the elaboration of the enhanced feasibility study is under way.

No. in the D.P. 2014-2023	No. in the D.P. 2016-2025	Name of the project	Year of foreseen term of commissioning D. P 2014-2023	Year of foreseen term of commissioning D. P 2016-2025	Length of extension [years]	Stage of foreseen date of commissioning compared with the DP 2014-2023	Current stage	Comments	Justification presented by the TSO by address no. 19983 / 17.06.2016, registered at ANRE with no. 46108 / 23.06.2016
		voltage upgrading and AC and DC services in the 220/110/20 kV Ghizdaru station							
D	**D**	**Integration production from new power plants – Dobrogea and Moldova**							
1	1.1	Wiring the overhead line 400 kV Isaccea-Varna and OHL 400 kV Isaccea-Dobrudja in the 400 kV Medgidia Sud station – Phase I	2016	2017	1	Delayed	The execution of the works is in progress	-	The tender for the purchase of works resumed following the submission of non-compliant offers.

No. in the D.P. 2014-2023	No. in the D.P. 2016-2025	Name of the project	Year of foreseen term of commissioning D. P 2014-2023	Year of foreseen term of commissioning D. P 2016-2025	Length of extension [years]	Stage of foreseen date of commissioning compared with the DP 2014-2023	Current stage	Comments	Justification presented by the TSO by address no. 19983 / 17.06.2016, registered at ANRE with no. 46108 / 23.06.2016
2	1.2	Wiring the overhead line 400 kV Isaccea-Varna and OHL 400 kV Isaccea-Dobrudja in the 400 kV Medgidia Sud station – Phase II	2016	2018	2	Deferred term	The procurement procedure will be initiated after the Government Decision on expropriation has been obtained.	-	Long duration of obtaining the Government Decision on the expropriation of land. The documentation for issuance has been submitted since 2014, but no Government Decision has yet been issued.
E	**E**	**Integration of production from power plants – other areas**							
2	1	Ostrovu Mare Station 220 kV (new station)	2016	2019	3	Deferred term	Ongoing project update	-	Since applying the procedure of direct purchase of the land necessary for the construction of the line did not succeed in acquiring all the necessary lots, it was decided to apply Law no. 255/2010. In order to submit the documentation for the issuance of the Government Decision on expropriation, the Feasibility Study should be updated. Currently, the procurement of design services is
3	2	Overhead line 220 kV Ostrovu Mare (new line)	2016	2019	3	Deferred term	Ongoing project update	-	

No. in the D.P. 2014-2023	No. in the D.P. 2016-2025	Name of the project	Year of foreseen term of commissioning D. P 2014-2023	Year of foreseen term of commissioning D. P 2016-2025	Length of extension [years]	Stage of foreseen date of commissioning compared with the DP 2014-2023	Current stage	Comments	Justification presented by the TSO by address no. 19983 / 17.06.2016, registered at ANRE with no. 46108 / 23.06.2016
									under way.
J1	**H**	**Modernization of telecontrol system of the wholesale electricity market**	2016	2018	2	Deferred term	Purchase of redesign services is under way	-	The Transelectrica Directorate's decision to revise the electricity measurement strategy led to the updating of the feasibility study and the modification of the task book.

4. 23 projects were postponed in relation to the foreseen commissioning date in the Development Plan 2014-2023, respectively 2017-2022

No. in the D.P. 2014 - 2023	No. in the D.P. 2016 - 2025	Name of the project	Year of foreseen term of commissioning D. P 2014-2023	Year of foreseen term of commissioning D. P 2016-2025	Length of extension [years]	Stage of foreseen date of commissioning compared with the DP 2014-2023	Current stage	Comments	Justification presented by the TSO by address no. 19983 / 17.06.2016, registered at ANRE with no. 46108 / 23.06.2016
A	**A**	**Refurbishment of existing Electricity Transmission Networks**							
7	2	Refurbishment of Bradu 400/220/110/20 kV station	2017	2018	1	Delayed	The execution of the works is in progress	-	The contestation lodged by one of the tenderers in the tender procedure led to a 7-month delay in signing the execution contract.
11	6	Refurbishment of Domnești 400/110/20 kV station	2018	2019	1	Deferred term	The procurement procedure is under way	-	Although 3 auctions were held to update the feasibility study, there were no offers and therefore this was updated by own means. The tender for the execution of the works was canceled as a result of non-conforming technical offers. The auction procedure will resume.
13	7	AT and T replacements in power stations (stage 2), out of which: Phase 1 (6 AT 200 MVA; 5 T 16 and 25 MVA)	2020	2021	1	Deferred term	8 AT and 4 T are in the design phase. 6 AT and 5 T are in the	-	AT / T to be put into operation during 2016-2021 are phased in 2 steps. Delay due to the fact that the simultaneous withdrawal of certain Electricity Transmission Networks facilities during certain times would jeopardize

No. in the D.P. 2014 - 2023	No. in the D.P. 2016 - 2025	Name of the project	Year of foreseen term of commissioning D. P 2014-2023	Year of foreseen term of commissioning D. P 2016-2025	Length of extension [years]	Stage of foreseen date of commissioning compared with the DP 2014-2023	Current stage	Comments	Justification presented by the TSO by address no. 19983 / 17.06.2016, registered at ANRE with no. 46108 / 23.06.2016
		Phase 2 (8 AT 200 MVA; 4 T 16 MVA)					execution phase.		the safe operation of National Energy System
20	14	Refurbishment of Smârdan 400/110/20 kV station	2020	2022	2	Deferred term	Endorsement of the task book for the purchase of works is under way	-	According to the feasibility study approved in January 2016, the duration of the works is 6 years instead of 4 years, as estimated.
23	16	Refurbishment of Timişoara 110 kV station	2018	2019	1	Deferred term	Feasibility study endorsed. The next step is the preparation of the task book	-	Delay due to the fact that the simultaneous withdrawal of certain Electricity Transmission Networks facilities during certain times would jeopardize the safe operation of National Energy System
24	17	Refurbishment of Arad 110 kV station	2020	2021	1	Deferred term	-	-	Delay due to the fact that the simultaneous withdrawal of certain Electricity Transmission Networks facilities during certain times would jeopardize the safe operation of

No. in the D.P. 2014 - 2023	No. in the D.P. 2016 - 2025	Name of the project	Year of foreseen term of commissioning D. P 2014-2023	Year of foreseen term of commissioning D. P 2016-2025	Length of extension [years]	Stage of foreseen date of commissioning compared with the DP 2014-2023	Current stage	Comments	Justification presented by the TSO by address no. 19983 / 17.06.2016, registered at ANRE with no. 46108 / 23.06.2016
									National Energy System
25	19	Refurbishment of Baru Mare 220/110/MT kV station	2019	2020	1	Deferred term	Feasibility study endorsed. The next step is the preparation of the task book	-	Delay due to the fact that the simultaneous withdrawal of certain Electricity Transmission Networks facilities during certain times would jeopardize the safe operation of National Energy System
27	21	Refurbishment of Hășdat 220/110 kV station	2017	2019	2	Deferred term	Feasibility study endorsed. The next step is the preparation of the task book	-	Delay due to the fact that the simultaneous withdrawal of certain Electricity Transmission Networks facilities during certain times would jeopardize the safe operation of National Energy System
30	23	Refurbishment of Fileşti 220/110 kV	2018	2019	1	Deferred term	Feasibility Study undergoing CTES	-	Re-designing in progress; Correlation with refurbishment works at Barboşi, Smârdan, Tulcea West stations.

No. in the D.P. 2014 - 2023	No. in the D.P. 2016 - 2025	Name of the project	Year of foreseen term of commissioning D. P 2014-2023	Year of foreseen term of commissioning D. P 2016-2025	Length of extension [years]	Stage of foreseen date of commissioning compared with the DP 2014-2023	Current stage	Comments	Justification presented by the TSO by address no. 19983 / 17.06.2016, registered at ANRE with no. 46108 / 23.06.2016
		station					approval		
46	30	Refurbishment Isaccea 400 kV station (phase 1)	2017	2019	2	Deferred term	The procurement procedure is under way	-	Correlation with works at Tulcea West station.Delay due to the fact that the simultaneous withdrawal of certain Electricity Transmission Networks facilities during certain times would jeopardize the safe operation of National Energy System
47	31	Refurbishment Isaccea 400 kV station (phase 2)	2020	2022	2	Deferred term	It is conditional upon the completion of phase I	-	conditional upon the completion of phase I
C		**Security of supply**							
4	2	AT2 Iernut - 400 MVA, 400/220 kV Installation AT2 400 MVA, 400/231/22 kV as well as the	2017	2019	2	Deferred term	In the design phase	-	Decision to merge the AT2 installation project with the SCCP modernization work at the Iernut station in December 2014. The project is in the Feasibility

No. in the D.P. 2014 - 2023	No. in the D.P. 2016 - 2025	Name of the project	Year of foreseen term of commissioning D. P 2014-2023	Year of foreseen term of commissioning D. P 2016-2025	Length of extension [years]	Stage of foreseen date of commissioning compared with the DP 2014-2023	Current stage	Comments	Justification presented by the TSO by address no. 19983 / 17.06.2016, registered at ANRE with no. 46108 / 23.06.2016
		corresponding cells in the Iernut station and modernization of control system of 400/220/110/6 kV Iernut							Study approval phase.
5	3	Increase tranmission capacity of OHL 220 kV d.c. București Sud-Fundeni	2018	2020	2	Deferred term	-	-	Improbability of granting withdrawals. Other technical solutions are being sought for the work.
D	**D**	**Integration production from new power plants – Dobrogea and Moldova**							
6	4	OHL 400 kV d.c. Cernavodă-Gura Ialomiței-Stâlpu and connection to the 400 kV Gura Ialomiței station (new line)	2019	2020	1	Deferred term	The procurement procedure will be initiated after the Government Decision on expropriation	-	Long duration of obtaining the Government Decision on the expropriation of land. The documentation for issuance has been submitted since 2014, but no Government Decision has yet been issued.

No. in the D.P. 2014 - 2023	No. in the D.P. 2016 - 2025	Name of the project	Year of foreseen term of commissioning D. P 2014-2023	Year of foreseen term of commissioning D. P 2016-2025	Length of extension [years]	Stage of foreseen date of commissioning compared with the DP 2014-2023	Current stage	Comments	Justification presented by the TSO by address no. 19983 / 17.06.2016, registered at ANRE with no. 46108 / 23.06.2016
							has been obtained.		
7	5	Expansion of the 400 kV station of Gura Ialomița with two OHL 400 kV Cernavoda 3 and overhead lines 400 kV Stâlpu	2018	2019	1	Deferred term	The procurement procedure will be initiated after the Government Decision on expropriation has been obtained.	-	The environmental permit was obtained three years after the application was submitted. The Government Decision on the expropriation of land is expected.
8	6	400 kV Stâlpu station	2019	2020	1	Deferred term	Updating the design is underway	-	The environmental permit was obtained three years after the application was submitted. The Government Decision on the expropriation of land is expected.
10	7	Transition to 400 kV Brazi Vest-Teleajen-Stâlpu OHL,	2018	2020	2	Deferred term	Design is underway	Combined with	The tender for designing resumed following the objections submitted by the bidders.

No. in the D.P. 2014 - 2023	No. in the D.P. 2016 - 2025	Name of the project	Year of foreseen term of commissioning D. P 2014-2023	Year of foreseen term of commissioning D. P 2016-2025	Length of extension [years]	Stage of foreseen date of commissioning compared with the DP 2014-2023	Current stage	Comments	Justification presented by the TSO by address no. 19983 / 17.06.2016, registered at ANRE with no. 46108 / 23.06.2016
		including acquisition of AT 400 MVA, 400/220/20 kV and extension works in the 400 kV and 220 kV substations, at 400/220/110 kV Brazi West						A29+C3+D9 positions of DP 2014-2023	
11	8	OHL 400 kV d.c.Constanța N-Medgidia S	2020	2022	2	Deferred term	In the design phase	-	Delay due to change of construction solution. Initially, the project envisaged the construction of a new 400/110 kV Bărăganu (CEE connection) and its connection to an entry-exit system at the 400 kV Medgidia Sud-Constanţa Nord OHL. Later, the investor of Bărăganu station gave up the project. In 2015, the design theme for the 400 kV OHL Constanta Nord-Medgidia Sud was approved.
14	11	OHL 400 kV d.c. Stâlpu-Braşov	2023	2025	2	Deferred term	-	-	Conditioned upon completion of OHL 400 kV d.c. Cernavodă-Stâlpu.
F	**F**	**Increasing interconnection capacity and integration of RES production**							

No. in the D.P. 2014 - 2023	No. in the D.P. 2016 - 2025	Name of the project	Year of foreseen term of commissioning D. P 2014-2023	Year of foreseen term of commissioning D. P 2016-2025	Length of extension [years]	Stage of foreseen date of commissioning compared with the DP 2014-2023	Current stage	Comments	Justification presented by the TSO by address no. 19983 / 17.06.2016, registered at ANRE with no. 46108 / 23.06.2016
1	1	Transition to the 400 kV voltage of the Portile de Fier-Reşiţa-Timişoara-Săcălaz-Arad Stage I: OHL 400 kV Portile de Fier-Resita + 400 kV Resita Station + Extension of Existing Stations	2017	2018	1	Delayed	Works are underway	-	Delay in issueing the Government Decision on the expropriation of land.
4	5	OHL 400 kV s.c. Suceava-Bălți	2022	2023	1	Deferred term	Design underway	-	Redesigning to modify the OHL route as a result of the process of obtaining approvals and agreements according to the urbanism certificate. The project is conditioned by the conclusion of a Memorandum of Understanding with the Republic of Moldova.
5	4	OHL 400 kV Gădălin-Suceava	2021	2023	2	Deferred term	Design underway	-	Redesigning to modify the OHL route as a result of the process of obtaining approvals and agreements according to

No. in the D.P. 2014 - 2023	No. in the D.P. 2016 - 2025	Name of the project	Year of foreseen term of commissioning D. P 2014-2023	Year of foreseen term of commissioning D. P 2016-2025	Length of extension [years]	Stage of foreseen date of commissioning compared with the DP 2014-2023	Current stage	Comments	Justification presented by the TSO by address no. 19983 / 17.06.2016, registered at ANRE with no. 46108 / 23.06.2016
									the urbanism certificate.
G	**G**	Integrated operational platform for SEN + replacement of EMS SCADA AREVA system components	2018	2020	2	Deferred term	The replacement for SCADA components is in progress	-	In order to contract consultancy services grant financing through USTDA is being analyzed. The project to replace some components of the EMS SCADA AREVA system is being negotiated with AREVA. The procedure resumed after the previous one was canceled.

5. Compared to DP 2014-2023, the following **7 projects** of DP 2016-2025 **have been combined/replaced**:

No. in the D.P. 2014-2023	Name of the project	Consolidation	New position in DP 2016-2025	Justification presented by the TSO by address no. 19983 / 17.06.2016, registered at ANRE with no. 46108 / 23.06.2016
A15	Modernization of command and	Combined with **A16** and **A17** of DP 2014-	**A10**-Modernization	It was decided to integrate the SCCP

No. in the D.P. 2014-2023	Name of the project	Consolidation	New position in DP 2016-2025	Justification presented by the TSO by address no. 19983 / 17.06.2016, registered at ANRE with no. 46108 / 23.06.2016
	control systems (in 220/110 kV Arefu, Râureni and Hăşdat stations)	2023	220/110/20 kV Arefu station **A11**-Modernization 220/110 kV Râureni station	modernization into the plant refurbishment project for the unitary approach of the primary and secondary circuits. The Feasibility Study and Task Book were updated in 2015 according to the Internal Technical Norm in force. The bidding procedure for the works is ongoing.
A29	Refurbishment of the 110 kV Teleajen station	Combined with position **C3, D9**, **D10** of DP 2014-2023	**D7**- Transition to OHL 400 kV Brazi Vest-Teleajen-Stâlpu, including the acquisition of AT 400 MVA, 400/220/20 kV and extension of the 400 kV and 220 kV substations at 400/220/110 kV Brazi West	The tender for designing resumed following the objections submitted by the bidders.
C3	Station expansion and connection AT4 Brazi Vest - 400 MVA, 400/220 kV	Combined with position A29+D9+D10 of DP 2014-2023		
D9	400 kV Teleajen station (new station)	Combined with position A29+C3+D10 of DP 2014-2023		
A32	Refurbishment of 220/110 kV /MT Grădiște station	Replaced by current position A43 of DP 2016-2025	**A43**- modernization of SCCP and integration into the CTSI of Gradiste station	Replaced by current position A43 of DP 2016-2025
A44	Modernization of the control-protection system of 400/110 kV Cluj Est station	Combined with position A18 of DP 2014-2023	**A12**-Modernization 400/110 kV Cluj Est station	It was decided to integrate the SCCP modernization into the plant refurbishment project for the unitary approach of the primary and secondary

No. in the D.P. 2014-2023	Name of the project	Consolidation	New position in DP 2016-2025	Justification presented by the TSO by address no. 19983 / 17.06.2016, registered at ANRE with no. 46108 / 23.06.2016
				circuits. The Feasibility Study and Task Book were updated according to the Internal Technical Norm in force by own means.
A45	Modernization SCCP 220 kV, 110 kV, internal services and 20 kV cells at Munteni station	Combined with position A31 of DP 2014-2023	**A24**-Modernization 400 (220)/110/20 kV Munteni station	Cancelled bid for SCCP. The project was reorganized by integrating the SCCP upgrade into the major maintenance project for the unitary approach of primary and secondary circuits.

Annex 10

Analysis of the stage of achieving the annual investment plans of TSO

No.	Name of the project	Value of investment (thousand RON)	Value estimated commissioning (thousand RON)	Value actual commissioning (thousand RON)	Estimated year of commissioning according to Annex 6.1 M	Stage of the project	Benefits	Reasons for commissioning delay	Measures to speed up the implementation
1.	Increase of the safety degree of the installations related to Bucharest Sud 400/220/110/10 kV - Replacement of equipment 10 kV (Lot I + lot II)	37,967	20,650	18,658	Sem. I 2016	Investment mostly realized. There is the need to relocate / move a 10 kV cable from the old 10 kV Bucharest Sud Station, in the new 20 kV station	Increase security of supply	One year delay due to ENEL, which signed late the relocation agreement.	N/A
2.	Organization and operation of the Tele-command System of the Electricity Transmission Network	13,961		8,645	Sem. II 2014	Finished	Increase security of supply		

3.	Refurbishment of 220/110 kV Barboşi station	36,082	24,077	24,077	Sem. II 2014	Finished	Increase security of supply		
4.	Refurbishment of 400/110/20 kV Tulcea Vest station	116,359	95,214	97,846	Sem. II 2015	Finished	Increase security of supply, decrease OPEX		
5.	Refurbishment of 220;110/20 kV Câmpia Turzii station	90,358	45,000		Sem. I 2017	Running contract in progress. The 220 kV station, the 110 kV station, the AT 220/110 kV, were energized. In the course of energizing the 20 kV station.	Increase the safe operation of the National Energy System in Transilvania area and reduce the own technological consumption	Apele Romane regional administration - Târgu Mureş subsidiary, through its issued certificate, requested during the execution of the contract the construction and commissioning of 3 additional tanks for oil and water collection, in line with the recent environmental legislative changes. The realization of these works led to a delay of about 2-3 months	

								to the commissioning date.	
6.	Replace AT and T in electrical stations (Stage II)	98,200	45,000 for year 3	21,044	2016-2020	Stage 2 execution contracts, lots I and II in progress	Replace AT and T in electrical stations (Stage II)		To the extent that the supplier will succeed in speeding up the delivery times, partial overtaking receipts will be done.
7.	Refurbishment 220 kV Oţelărie Hunedoara station	16,736	6,000		Sem. I 2017	The procedure for the procurement of the works contract is underway.	Increase security of supply, reduce maintenance costs.	Need to correlate programs due to the execution of several investments in the same area, poor design quality.	Accelerate completion of the auction, signing the execution contract.
8.	Optic fiber assembling on the OHL 220 kV Fundeni-Brazi Vest – lot 1	3,256	3,250		Sem. I 2017	Running contract in progress.	Conducting fiber optic connection between Fundeni - Brazi Vest stations. Closure of fiber optic ring between Brazi Vest - Domneşti – Bucuresti Sud	Difficulties related to the OHL decommissioning have led to delays in execution.	Commissioning date – July 2017

							and Fundeni stations.		
9.	Connection of Turnu Magurele, Mostiştea, Stâlpu, Teleajen stations to CNTEE Transelectrica SA fiber optic network - Lot 2	6,242	3,750		Sem. I 2017	Signed execution contract	The communication links between Stâlpu, Teleajen, Turnu Magurele and Mostiştea stations are provided. It will ensure a better selectivity of the teleprotection installations on the OHL 220 kV Turnu Magurele - Ghizdaru.	The procurement procedure has been slow due to changing procurement legislation.	Compliance with execution schedule
10.	Modernization of CTSI Craiova by using the IEC 60870-5-104 communication protocol	4,480	4,480		Sem. I 2016	Updated Technical Project. The procedure procurement contract works under preparation	Ensuring the functionality and overall management of the equipment and process installations at ST Craiova stations.	The initial acquisition was difficult, and eventually stalled. The technical project update services were purchased. The acquisition was resumed twice due to the lack of bidders and poor design quality	Accelerating the purchase.

11.	Modernization of the protection control system of the 20 kV station from the Vetiş station 220/110/20 kV	9,393	7,000	6,521	Sem. II 2015	Commissioning done in sem. II 2016	Increase safe operation of 220/110/20 kV Vetiș station		
12.	Mordenization control-protection system of 220/110 kV Tihău station	5,907	4,000	3,566	Sem. I 2015	Commissioning date achieved	Increase safe operation of 220/110 kV Tihău station		
13.	Replacement of T3 and T4 110/10 kV, 25 MVA with transformers 110 / (20) 10 kV, 40 MVA at the Fundeni power station	9,240	5,961	3,784 (15.2) 5,847 (address)	Sem. I 2016	Commissioning date – June 2016	Increase security of supply, reduce OPEX		
14.	Expansion of the 400 kV Cernavoda station (replacement of compensation coils and connect new OHL) (Stage 1 and Stage 2)	34,786	10,562	10,492	Sem. II 2015	- Stage I - Commissioning date: September 2015; - Stage II - Updated technical and economic indicators and general outlook	Integration of production from new power plants and interconnection with Bulgaria	- Correlated with the evolution of the project "OHL 400 kV dc Cernavoda - Stalpu and connection to the Gura Ialomita station" and the construction of groups 3 and 4 of Cernavoda NPP.	Urgent request for issuance of Government Decisions for expropriation by the Ministry of Economy (Documentation submitted from 2015) for the project "OHL 400 kV dc Cernavodă - Stâlpu and

									connection at Gura Ialomiţei Station" for the completion of the second stage.
15.	Switching to the 400 kV voltage of the Portile de Fier-Reşiţa-Timişoara-Săcălaz-Arad axis. Stage I: Expansion of the 400 kV Porţile de Fier station; OHL 400 kV Porţile de Fier - (Anina) - Resita; 400/220/110 kV Resita Station	282,170	212,040	12,963	2015; 2018	1. Expansion of the 400 kV Porţile de Fier station – commissioning achieved in 2016; 2. OHL 400 kV Porţile de Fier - Anina - Reşiţa – execution works in progress; 3. 400/220/110 kV Reşiţa Station- execution works in progress	Increasing interconnection capacity and integration of RES production	Financial issues for the constructor (insolvency) and issue of Government Decision for expropriation of land for the station in December 2016.	Urgent decision to continue the project under the conditions of the insolvency law.
16.	Interconnection OHL 400 kV Reşiţa (România) - Pancevo (Serbia)	127,087	90,000		Sem. I 2016	Running contract in progress. In the process of concluding an additional act of extending the execution term	The interconnection of the Romanian and Serbian national energy systems will increase the revenues from the transmission service, reduce the energy losses in the NES,	Issuing late the Government Decision on land expropriation and the Government Decision on the removal from the forestry circuit.	Steps have been taken to the Ministry of Economy and the Ministry of Energy on the urgency to amend Law 123/2012, and GD 17/2016.

							increase the safety of the functioning of the energy systems.		
17.	Rehabilitation of telecontrol system of the wholesale electricity market - the investment component	22,122	22,050		Sem. I 2017	- in the works procurement procedure (evaluation of tenders)	- increasing safety in the functioning of the telecontrol system of the wholesale electricity market	- Amending the electricity measurement code	- Urgent signing of the contract
18.	Implementation of an electronic archiving and document management system within CNTEE Transelectrica - SA	11,825	6,025		Sem. II 2016	Application delivered, not operational. **Payments made** Requirements analysis: - Cost 610,696.06 RON in December 2011; **Design**: - Cost 961,060.30 RON in December 2011; Phase 1 application prototype: - Cost	Improving document management, business efficiency, easy access to information, securing information	The lack of necessary infrastructure	Adaptation of the project according to the current requirements of the Company: analysis of functional requirements, determination of the degree to which the application responds to current requirements (it was designed in 2011), update of theTask

						1,392,402.38 RON in December 2011; Phase 2 Application: - Cost 2,285,862.62 RON in August 2012.			Book, contracting of operational services, contracting of support infrastructure.
19.	Expansion of MIS Transelectrica system with a inventory solution for fixed assets and inventory objects based on the use of bar codes	1,940	1,940		Sem. II 2016	Analysis finished	An easier inventory process	High costs versus benefits	Proposal to move the expenses incurred by the study of solution to operational expenses
20.	MIS Extension - Advanced Reporting and Budget Planning	3,900	3,893		Sem. II 2015	The following stages were completed: Delivery of licenses and equipment, definition phase, analysis and design phase, development phase, partial transition phase. Payments made Hardware: - Cost 43,750 RON in	Advanced Analytics for Managerial Reporting, Obtaining data from a single system with data traceability Building the BVC / PAI company budget based on streams and roles, respectively collecting budget execution.		Finish the implementation by own means

						December 2012; Software licenses: - Cost 574,000 RON in December 2012; Hardware: - Cost 90.400 RON in January 2013; Defining: - Cost of 64,378.43 RON in January 2014; Analysis and design: - Cost of 751,589.06 RON in March 2014; Development: - Cost 1,514,916 RON in June 2014.			
21.	MIS extension with new features (DM integration, multicash extension, advanced collections)	2,042	1,771		Sem. I 2017	Study Commitment Note, Study Technical and Economical Offer, Study Solution, Project Technical and economical offer, Reception Protocols: Advanced	Automation of customer notification process, electronic customer relationship management, automation of		Implementation of DM project (Document Management)

						Collections – commissioning date, Multicash – commissioning date, DM Integration - Analysis Phase; Payments made *Advanced Collections:* - Oracle license: cost 57,900 RON in December 2012; - Analysis: cost 27,850 RON in June 2013; - Design: cost of 42,525 RON in March; - Development: cost of 89,125 RON in June 2013; - Transition: cost of 95,076.13 RON in August 2013. *Multicash:* - Analysis and design: cost 45,200 RON in July 2013; - Development: costs 209,700	payments based on ERP data, reducing the degree of doubling of payments made		

						RON in July 2013; - Transition: cost 213,000 RON in August 2013. *DM Integration* - Analysis: cost of 44,700 RON in June 2013.			
22.	Integrated security system in (electrical) stations, Stage IV	57,666	43,335		Sem.I. 2016	Under construction perimeter fencing in Gutinaş, Fundeni, Bucresti Sud: - Bucuresti Sud - obtaining permission from the building designer to build a false wall for SIS dispatcher location - Gutinas – works on the new fence (300m) - Fundeni - no construction permit	Legislative obligations - Law 333/2003 and GD 1010/2004	- delay in obtaining the permit for building the fence (1 year); - re-do the risk analyses to the physical security of the objectives	
23.	Rehabilitation of messaging system and related	2,445	2,445		Sem. II 2015	Feasibility study and technical project completed,	Upgrading the communication system, increase	- lack of technical resources in drafting the Task Book	Public consultation: publication of the draft Task

	applications					elaboration of the task book. Cost of 4,000,000 RON estimated in the feasibility study.	security, increase the speed and power processing	- project complexity - major differences between IBM and Microsoft products, differences that make it difficult to identify the common denominator. - Changing the legislation in the field of public procurement and the emergence of an opportunity for the possibility of public consultation in relation to the Task Book.	Book on SEAP, elaboration of a public consultation questionnaire, analysis of responses received, bilateral meetings with respondents, modification of the Task Book in order to meet both the needs of the Company and the market realities.
24.	Solution to combat cyber terrorism	2,340	2,340		Sem. II 2015	Revision of specifications for the elaboration of the feasability study and the task book for the implementation of the IT system to combat cyber terrorism	Increasing the security level for IT systems; Ensuring resource protection; Promoting prevention and response to cyber-attacks.	In 2015, a Task Book was drawn up and approved in the CTES for the elaboration of the feasibility study + task book for the implementation of the	Revision of specifications for the elaboration of the feasibility study and the task book for the implementation of the IT system

								Cybercrime Combat Information System and a necessity report for the purchase of this consultancy service was elaborated. Later, a collaboration with CERT-RO was chosen based on a Protocol agreed in 2016 and then with Cyberint. Audit attempts by these bodies have not materialized, and therefore the acquisition of consulting services on the "market" was sought.	to combat cyber terrorism and its approval. An integrated approach to procurement technical documentation is required for all systems. In the next period of time, Transelectrica will focus on the integrated approach for the technical documents necessary and on planning the investment.
25.	Improve server performance and data storage network (Private	8,050	8,050		Sem. I 2017	Preparation of the feasibility study documentation	Ensuring the continuity of IT activity as well	The feasibility study on improving server performance and	Finish the project by own means

	Cloud)					according to the new requirements established by the beneficiaries.	as increasing the physical and cyber security of the system	data storage network deliverable was not delivered at the date established by the Contract C276/21.12.2015, despite the Contract Addendum which extended the deadline by 3 months. Unilateral termination of the contract.	
26.	Redundant IT infrastructure	8,300	8,300		Sem. II 2016	Project cancelled. The scope of the project was included in the investment objective "mprove server performance and data storage network (Private Cloud)"	Optimizing the use of IT resources; Increasing the efficiency of IT & C resource allocation; Increasing the IT security level of the Company; Increasing the response speed and implementing the functional requirements defined at the level of the	The project was removed from the 2015 Investment Plan.	The project was replaced by the "Improve server performance and data storage network (Private Cloud)" objective.

							internal beneficiaries.		
27.	Recovery center and business continuity in case of disaster	4,300	4,300		Sem. II 2016	Cancelled	Operation of the recovery and continuity of Transelectrica's communications and IT activities in case of disaster	The existance of a centre that already covers the needs of this project.	
28	Other investment projects	75,662		36,386	Every year				
29	Other costs of investments	69,289		43,811	Every year				

Annex 11

The main external causes that led to the delay of investment projects

No.	Main cause	Investment projects affected	TSO justification
1.	Legal issues:		Late issue of Government Decision on land expropriation and Government Decision on the removal from the forestry circuit.
1.1	Lack of harmonization between Law 255/2010 on expropriation for public utility reasons, Law 50/1991 on the authorization of construction works and Law 350/2001 on the issue and validity of urbanism certificates, building permits and authorizations.	(49) Interconnection OHL 400 kV Reşiţa (România) - Pancevo (Serbia)	The Government Decision on the removal from the forestry circuit was done without taking into account the private properties that will be crossed.
1.2	Lack of cadastral documents and property acts of natural persons.		Impossibility of issuing a Government Decision on the removal from the forestry circuit wihout the consent of the owners.
1.3	Lack of harmonization between Law 46/2008 on the Forest Code and Law 255/2010 on expropriation for public utility reasons.	(48) Switching to the 400 kV voltage of the Portile de Fier-Reşiţa-Timişoara-Săcălaz-Arad axis. Stage I: Expansion of the 400 kV Porţile de Fier station; OHL 400 kV Porţile de Fier - (Anina) - Resita; 400/220/110 kV Resita Station	
1.4	The need to amend the Law 123/2012 on Electricity and Natural Gas in order to facilitate access to forest areas that are the private property of individuals.		
2.	Late issuance of the minister orders for the approval of the technico-economic indicators, the GD on land expropriation and GD of removal from the forest fund.	(49) Interconnection OHL 400 kV Reşiţa (România) - Pancevo (Serbia)	Issuance of minister orders and GD took 2 years
		(48) Switching to the 400 kV voltage of the Portile de Fier-Reşiţa-Timişoara-Săcălaz-Arad axis.	Issuance of minister orders and GD took 2.5 years

		Stage I: Expansion of the 400 kV Porţile de Fier station; OHL 400 kV Porţile de Fier - (Anina) - Resita; 400/220/110 kV Resita Station	
3.	The procurement procedure has been slow due to changes in the procurement legislation and lack of clear instructions.	(23) Connection of Turnu Magurele, Mostiştea, Stâlpu, Teleajen stations to CNTEE Transelectrica SA fiber optic network - Lot 2 (24) Modernization of CTSI Craiova by using the IEC 60870-5-104 communication protocol	
4.	Poor quality of design services.	(20) Refurbishment 220 kV Oţelărie Hunedoara station (24) Modernization of CTSI Craiova by using the IEC 60870-5-104 communication protocol	Long duration of the design phase Long duration of the design phase
5.	Insolvency of contract winners	(48) Switching to the 400 kV voltage of the Portile de Fier-Reşiţa-Timişoara-Săcălaz-Arad axis. Stage I: Expansion of the 400 kV Porţile de Fier station; OHL 400 kV Porţile de Fier - (Anina) - Resita; 400/220/110 kV Resita Station	Impossibility of contract termination
6.	Lack of specific legal framework to speed up the implementation of EU PCI projects in the field of energy, national interst and public utility projects.		

The main internal causes that led to the delay of investment projects

No.	Main cause	Investment projects affected	TSO justification
1.	Lack of correlation between the withdrawal from exploitation programs and the investment projects	(20) Refurbishment 220 kV Oţelărie Hunedoara station (22) Optic fiber assembling on the overhead line 220 kV Fundeni-Brazi Vest – lot 1	The need to correlate the withdrawls programs due to several investment works in the same area.. The difficulties encountered in withdrawing the OHL from exploitation lead to delays.
2.	Poor management of execution contracts	(50) Rehabilitation of telecontrol system of the wholesale electricity market - the investment component (57.1) MIS Extension - Advanced Reporting and Budget Planning (115) Improve server performance and data	The contract was not signed. Contract expiration The consultant did not deliver the documents within the agreed period of time. Unilateral termination of the contract.

		storage network (Private Cloud)	
3.	Superficial rationale for some investment projects;	(51) Implementation of an electronic archiving and document management system within CNTEE "Transelectrica" - SA	Lack of necessary infrastructure
4.	Delays in drafting or poor drafting of the task books for the procurement procedure.	(109) Rehabilitation of messaging system and related applications (112) Solution to combat cyber terrorism	- lack of technical resources in drafting the Task Book - project complexity - major differences between IBM and Microsoft products, differences that make it difficult to identify the common denominator. Revision of the specification for elaborating the feasability study and the task book for implementation/
5.	Insufficient and inefficient monitoring of investment projects	(24) Modernization of CTSI Craiova by using the IEC 60870-5-104 communication protocol (57.2) MIS extension with new features (DM integration, multicash extension, advanced collections)	The initial acquisition was difficult, and eventually stalled. The technical project update services were purchased. The acquisition was resumed twice due to the lack of bidders and poor design quality DM project was not implemented.

Annex 12

The impact on the national energy system (NES) of the deffered term of commissioning for investment projects.

No.	Impact	Impact assessment
1.	NSE safety	No short term impact
2.	Integration of production from power plants (including renewable and high-efficiency cogeneration)	The delay in the commissioning of investment projects does not pose a significant risk at the level of integrating high efficiency cogeneration plants into the NES. The delay in the commissioning of investment projects does not pose a significant risk at the level of integrating clasic resources power plants into the NES. The delay in commissioning of investment projects does pose a significant risk at the level of integrating the PV and wind power plants from Dobrogea area into the NES. There is no significat risk in terms of integrating into NES other E-RES power plants, except PV and wind power plants in Dobrogea, like biomass, geothermal, micro-hydro power plants since these are not concentrated in areas characterized by excessively high production in relation to local consumption. Currently, the admissible limit of integration of the Wind Power Station in the Dobrogea Area has been reached in terms of capacity evacuation of the Electricity Transmission Network (ETN). Depending on the moment when the Wind Power Stations with a valid connection contract will be put into operation, in the absence of the implementation of projects for the development of the ETN, power reductions will have to be made for the existing Wind Power Stations in Dobrogea. Also, the commissioning of groups 3 and 4 of Cernavoda NPP is conditioned by network reinforcements, foreseen in the 10-year ETN development plan elaborated by Transelectrica and approved by ANRE
3.	Increase interconnection capacity	The delays registered so far in the commissioning of the projects approved by ANRE for the regulatory period in progress do not induce,

		at this moment, a significant risk of non-fulfillment of Romania's targets regarding the cross-border interconnection capacity. However, bearing in mind that the fulfillment of these commitments is possible only to the extent that certain investment projects in the transmission grid will be implemented, not removing the causes that led to delays in the implementation of the projects concerned may induce a risk of non-fulfillment. Romania's targets for cross-border interconnection capacity, at European level are: - 10% of the installed capacity in the power plants on the territory of Romania - 2020 horizon - 15% of the installed capacity in the power plants on the territory of Romania - horizon 2025
4.	Level of technological losses in ETN	The delays registered so far in the commissioning of the projects approved by ANRE for the regulatory period in progress do not induce, at this moment, a significant risk of increasing the technological losses in ETN. The level of technological losses in the ETN is substantially influenced by a number of TSO exogenous factors over which Transelectrica can not intervene to eliminate or mitigate the effects (production structure and consumption structure, cross-border flows, Corona losses). Without a clear quantification, it can be argued that the exogenous factors mentioned above have a stronger impact on the level of technological losses in the transport network compared to the refurbishment works of the network installations

Measures to reduce the impact on NES

No.	Measure	Purpose
1.	Requests to the competent authorities to implement legislative changes necessary to harmonize the relevant legislation	- harmonization between Law 255/2010 on expropriation for public utility reasons, Law 50/1991 on the authorization of construction works and Law 350/2001 on the issue and validity of urbanism certificates, building permits and authorizations. - harmonization between Law 46/2008 on the Forest Code and Law 255/2010 on expropriation for public utility reasons. - amend Law 123/2012 on Electricity and Natural Gas in order to facilitate access to forest areas that are the private property of individuals.
2.	Requests to the competent authorities to elaborate a specific legal framework to speed up the implementation of EU PCI projects in the field of energy, national interst and public utility projects.	- proposal for a special electricity law similar to Law 185/2016 for the natural gas sector (BRUA), for securing OHL routes and facilitating obtaining the necessary permits for construction - the establishment of the one-stop shop, according to REGULATION (EU) No 347/2013 on guidelines for trans-European energy infrastructure.
3.	Steps for speeding up the process of issuing normative acts	- for the approval of technico- economic indicators; - to start the process of expropriation of land; - for the removal of land from the forest fund.
4.	Standard execution contract	Defining a standard contract with a series of pre-defined clauses, agreed by the National Agency for Public Procurement (ANAP)

5.	Standard technical requirements for different categories of works	standard set of technical requirements per category of works to be automatically downloaded in the awarding documentation
6.	Conditions laid down in the specifications relating to the economic and financial situation and the technical and / or professional capacity of the tenderer	- eliminating the participation in auction sessions of designers who do not have design experience in similar projects; - eliminating the participation in tender sessions of contractors with an economic and financial situation that may lead to their insolvency.
7.	Stricter monitoring of the implementation of investment projects	Setting a weekly reporting system along with direct monitoring of investment projects al the level of the company's board of directors

Annex 13

Table 6 - Investments foreseen and realized by the concessionaires distribution operators between 2008-2016

Tabelul 6. Investiții prognozate și realizate de operatorii de distribuție concesionari în perioada 2008-2016 [lei termeni nominali] (1)										
Nume distribuitor		**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Total tara	**Investiții totale prognozate**	**1,334,438,798**	**1,468,306,728**	**1,632,221,304**	**1,679,781,570**	**1,799,931,345**	**-**	**1,408,949,349**	**1,520,966,829**	**1,627,853,657**
	surse proprii	1,073,253,383	1,171,067,849	1,285,712,330	1,283,258,968	1,338,639,576	-	1,013,986,094	1,240,066,761	1,373,496,165
	contribuții financiare	261,185,414	297,238,879	346,508,974	396,522,603	461,291,769	-	394,963,255	280,900,068	254,357,492
	Investiții realizate	**1,301,488,109**	**1,341,073,435**	**2,005,998,254**	**2,053,809,632**	**1,607,289,210**	**1,448,984,580**	**1,397,746,691**	**1,519,998,535**	**1,703,752,952**
	surse proprii	909,947,208	841,267,156	1,453,504,112	1,520,759,336	1,208,249,122	960,779,960	969,468,159	1,134,972,130	1,244,372,278
	contribuții financiare	391,540,901	499,806,279	552,494,141	533,050,296	399,040,089	488,204,620	428,278,532	385,026,405	459,380,674
	Investiții recunoscute	**956,807,602**	**887,139,429**	**1,465,065,412**	**1,543,715,928**	**1,267,711,033**	**934,358,751**	**869,246,544**	**1,028,373,126**	**-**
E- Distributie Muntenia	**Investiții totale prognozate**	**314,766,000**	**524,541,096**	**627,187,595**	**583,788,612**	**635,128,662**	**-**	**272,835,603**	**249,134,678**	**252,645,069**
	surse proprii	164,430,000	338,725,800	396,309,186	308,348,362	302,354,070	-	180,184,461	161,596,866	169,724,310
	contribuții financiare	150,336,000	185,815,296	230,878,409	275,440,250	332,774,592		92,651,142	87,537,812	82,920,759
	Investiții realizate	**161,534,802**	**253,701,485**	**720,522,200**	**714,827,425**	**367,834,854**	**222,066,874**	**248,672,218**	**215,984,939**	**297,342,638**
	surse proprii	28,942,272	121,218,019	453,171,266	540,298,818	269,193,811	143,053,837	166,995,964	137,994,102	162,344,913
	contribuții financiare	132,592,530	132,483,466	267,350,934	174,528,607	98,641,044	79,013,037	81,676,254	77,990,838	134,997,725
	Investiții recunoscute	**28,942,272**	**121,218,019**	**453,171,266**	**540,298,818**	**269,193,811**	**129,536,101**	**142,803,647**	**124,301,881**	**-**
E- Distributie Banat	**Investiții totale prognozate**	**169,022,560**	**164,047,385**	**145,412,208**	**156,846,245**	**176,450,054**	**-**	**113,435,592**	**130,580,580**	**140,900,695**
	surse proprii	153,884,560	148,455,245	128,993,685	139,813,668	158,555,629	-	72,313,365	92,984,767	105,190,682
	contribuții financiare	15,138,000	15,592,140	16,418,523	17,032,576	17,894,425		41,122,227	37,595,813	35,710,013
	Investiții realizate	**218,308,767**	**142,403,236**	**234,213,659**	**200,679,231**	**164,700,337**	**132,370,477**	**99,516,340**	**108,443,955**	**149,350,356**
	surse proprii	168,688,282	91,620,273	192,188,039	155,460,354	119,168,335	85,139,714	66,793,275	77,794,436	97,964,559
	contribuții financiare	49,620,485	50,782,963	42,025,620	45,218,878	45,532,002	47,230,763	32,723,065	30,649,519	51,385,797
	Investiții recunoscute	**168,588,626**	**91,123,119**	**188,039,133**	**154,911,152**	**118,009,178**	**79,706,780**	**61,040,992**	**66,768,358**	**-**
E- Distributie Dobrogea	**Investiții totale prognozate**	**135,578,016**	**139,948,597**	**129,761,818**	**134,331,817**	**143,222,038**	**-**	**120,711,413**	**127,395,353**	**141,618,268**
	surse proprii	121,379,616	124,958,636	113,977,390	117,557,666	125,599,115	-	65,539,109	76,609,455	93,357,620
	contribuții financiare	14,198,400	14,989,961	15,784,429	16,774,151	17,622,923		55,172,304	50,785,898	48,260,648
	Investiții realizate	**172,002,269**	**159,372,998**	**228,472,140**	**232,744,096**	**160,218,714**	**151,463,117**	**108,474,749**	**94,063,754**	**128,790,631**
	surse proprii	124,712,365	117,545,971	191,513,930	161,882,062	108,447,889	80,082,495	61,816,565	64,446,784	81,452,408
	contribuții financiare	47,289,904	41,827,028	36,958,209	70,862,035	51,770,825	71,380,622	46,658,184	29,616,970	47,338,223
	Investiții recunoscute	**124,481,396**	**115,352,085**	**153,204,577**	**125,798,980**	**103,334,269**	**75,095,064**	**54,788,830**	**57,340,329**	**-**
Distributie Energie Oltenia	**Investiții totale prognozate**	**186,365,767**	**137,630,175**	**224,996,940**	**255,264,618**	**267,736,081**	**-**	**204,317,556**	**194,276,507**	**194,445,974**
	surse proprii	165,352,553	115,931,292	203,280,329	233,769,976	245,079,852	-	155,055,396	161,843,711	162,879,085
	contribuții financiare	21,013,214	21,698,882	21,716,611	21,494,641	22,656,230		49,262,160	32,432,796	31,566,889
	Investiții realizate	**137,523,578**	**165,222,043**	**226,689,045**	**253,577,945**	**291,887,009**	**250,441,280**	**211,733,113**	**201,777,980**	**200,800,862**
	surse proprii	137,523,578	124,584,812	198,965,990	225,711,255	251,920,530	197,943,851	155,055,639	161,853,684	166,211,011
	contribuții financiare	-	40,637,231	27,723,055	27,866,689	39,966,479	52,497,429	56,677,473	39,924,296	34,589,851
	Investiții recunoscute	**137,523,578**	**124,441,198**	**198,965,990**	**224,142,631**	**251,920,530**	**197,943,851**	**138,904,003**	**156,485,357**	**-**

Tabelul 6. Investiții prognozate și realizate de operatorii de distribuție concesionari în perioada 2008-2016 [lei termeni nominali] (2)										
Nume distribuitor		**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Delgaz Grid	**Investiții totale prognozate**	**139,245,249**	**133,472,853**	**120,449,456**	**125,066,647**	**136,748,773**	**-**	**173,382,141**	**183,513,064**	**162,913,979**
	surse proprii	139,245,249	133,472,853	120,449,456	125,066,647	136,748,773	-	173,382,141	183,513,064	162,913,979
	contribuții financiare	-	-	-	-	-		-	-	-
	Investiții realizate	**190,596,960**	**165,194,068**	**147,344,378**	**149,513,625**	**157,988,427**	**151,690,209**	**196,355,397**	**208,162,093**	**210,545,229**
	surse proprii	137,776,110	98,739,267	99,121,874	104,225,992	96,640,976	111,662,551	155,691,001	169,632,197	174,108,399
	contribuții financiare	52,820,850	66,454,801	48,222,505	45,287,634	61,347,451	40,027,658	40,664,395	38,529,896	36,436,831
	Investiții recunoscute	**148,417,718**	**111,600,668**	**114,120,645**	**122,710,059**	**119,844,033**	**110,532,740**	**141,870,708**	**162,217,590**	**-**
SDEE Muntenia Nord	**Investiții totale prognozate**	**150,889,353**	**133,382,306**	**127,629,845**	**133,978,362**	**136,244,298**	**-**	**185,098,622**	**245,720,845**	**270,936,460**
	surse proprii	121,657,353	102,735,686	94,226,642	97,563,889	96,753,154	-	117,221,622	180,350,659	215,037,277
	contribuții financiare	29,232,000	30,646,620	33,403,203	36,414,473	39,491,144		67,877,000	65,370,186	55,899,183
	Investiții realizate	**181,671,265**	**151,024,826**	**135,872,457**	**139,937,095**	**144,639,614**	**167,848,347**	**194,552,449**	**195,724,577**	**193,516,471**
	surse proprii	120,450,605	98,385,537	95,677,560	88,101,260	98,725,516	100,557,914	120,511,911	144,903,430	159,969,235
	contribuții financiare	61,220,660	52,639,289	40,194,896	51,835,835	45,914,098	67,290,433	74,040,538	50,821,147	33,547,236
	Investiții recunoscute	**132,868,147**	**111,104,712**	**103,574,190**	**102,847,981**	**117,270,571**	**100,557,914**	**110,204,443**	**132,769,343**	**-**
SDEE Transilvania Nord	**Investiții totale prognozate**	**138,636,936**	**123,488,673**	**116,314,481**	**147,431,630**	**154,662,128**	**-**	**196,730,000**	**193,689,440**	**234,084,383**
	surse proprii	112,536,936	96,605,673	88,006,682	118,065,120	123,809,672	-	129,780,000	193,689,440	234,084,383
	contribuții financiare	26,100,000	26,883,000	28,307,799	29,366,511	30,852,456		66,950,000	-	-
	Investiții realizate	**142,870,287**	**117,562,560**	**111,547,081**	**162,830,101**	**112,055,332**	**184,272,173**	**126,217,557**	**255,701,529**	**292,825,204**
	surse proprii	94,875,022	77,276,199	78,933,824	101,306,777	112,055,332	123,661,955	120,387,761	194,431,718	236,683,375
	contribuții financiare	47,995,265	40,286,361	32,613,258	61,523,324	-	60,610,218	5,829,796	61,269,811	56,141,829
	Investiții recunoscute	**106,511,994**	**91,228,139**	**93,338,404**	**114,693,667**	**127,105,150**	**123,645,003**	**119,980,515**	**181,379,802**	**-**
SDEE Transilvania Sud	**Investiții totale prognozate**	**99,934,916**	**111,795,644**	**140,468,960**	**143,073,640**	**149,739,311**	**-**	**142,438,421**	**196,656,362**	**230,308,829**
	surse proprii	94,767,116	110,182,664	140,468,960	143,073,640	149,739,311	-	120,510,000	189,478,800	230,308,829
	contribuții financiare	5,167,800	1,612,980	-	-	-		21,928,422	7,177,562	-
	Investiții realizate	**96,980,181**	**186,592,218**	**201,337,294**	**199,700,114**	**207,964,922**	**188,832,104**	**212,224,868**	**240,139,708**	**230,581,561**
	surse proprii	96,978,974	111,897,078	143,931,630	143,772,819	152,096,733	118,677,643	122,216,042	183,915,779	165,638,378
	contribuții financiare	1,207	74,695,140	57,405,664	55,927,295	55,868,189	70,154,460	90,008,826	56,223,928	64,943,183
	Investiții recunoscute	**109,473,870**	**121,071,489**	**160,651,208**	**158,312,640**	**161,033,491**	**117,341,298**	**99,653,406**	**147,110,466**	**-**