



**Energy and Water Regulatory Commission (EWRC)  
Bulgaria**

# **Annual Report to the European Commission**

**July 2016**

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## 1. Foreword

The present document represents a national report elaborated by the Energy and Water Regulatory Commission (EWRC, the Commission) to the Agency for Cooperation of the Energy Regulators and the European Commission in pursuance of the reporting obligations under art.37, para 1b, item d of Directive 2009/72/EC and art.41, para 1b, item d of Directive 2009/73/EC. The structure of the Report follows the one suggested by CEER.

In 2014 a procedure for amending the Energy Act was initiated and part of the proposals was adopted at the beginning of 2015. Changes were made to ensure the independence of the Regulator. The adopted amendments provide greater independence in terms of work organization and determine the necessary financial elements for effective realization of the regulatory objectives. Appointment and dismissal of the Commission's members is done as proposed by the National Assembly and in line with the Administration Act, this entails defining EWRC as a Commission and not as a state commission under the Council of Ministers. In this regard, since March 2015 the State Energy and Water Regulatory Commission has been renamed as Energy and Water Regulatory Commission (EWRC).

At the National Assembly a Committee was established to monitor the activity of the Energy and Water Regulatory Commission. EWRC members and experts regularly participate in the meetings of this Committee in relation to issues concerning Regulator's activities.

Pursuant to art.20, item 7 of EA, EWRC reports its activities on an annual basis to the National Assembly. 2015 EWRC activities report received the support of the National Assembly and was adopted unanimously by the MPs.

In 2015 EWRC certified and defined Electricity System Operator EAD (ESO EAD) as the independent transmission operator of the electricity system of the Republic of Bulgaria and approved the Ten Year Network Development Plan for the period 2015 - 2024, Rules for providing services by the independent transmission operator to a vertically integrated undertaking and ESO EAD Compliance programme.

During the year EWRC took a number of steps to develop transparent rules for the organization of a balancing market and a power exchange in order to meet the requirements of Directive 2009/72/EC. In this regard, the Electricity Market Rules (EMR) was supplemented and amended (SG, 90 of 20 Nov 2015). Balancing market encompasses all commercial participants in the chain generation, transmission, distribution and end-customers and is the main and most important step to the further organization and operation of the power exchange and an essential condition for fulfilling our country's commitments of full electricity trade liberalization. With the introduction of hourly schedules in transactions' negotiating and balancing in both free and regulated market, the main technical prerequisite for trade realization following the exchange principle is currently in place in Bulgaria.

In 2015 Independent Bulgarian Power Exchange EAD (IBEX), holding license № JI-422-11 of 31 March 2014 for "organization of a power exchange market", started its test operation with real market players.

The initiated by EWRC negotiation process between NEK EAD as a public provider and generators at long-term power and availability purchase agreements (AES Maritza East 1 EOOD and ContourGlobal Maritza East 3 AD), in order to bring the availability and energy

prices down, lead to the signing of agreements in 2015 on availability price reduction on both contracts, respectively - 14% and 15%, without increasing the period of performance.

Decisions taken by EWRC in 2015 are compatible with the European electricity market target model and it is an important step towards an integrated European energy market. This will combine prices in different markets and make more efficient the use of interconnectors. It will bring us closer to a sustainable and competitive internal energy market - a market that will gain momentum next year and the years afterwards.

In 2015 EWRC certified and designated Bulgartransgaz EAD as the independent transmission operator of the gas system in Bulgaria in pursuance of the independence requirements of Directive 2009/73/EC and Regulation (EC) 715/2009. EWRC approved the Ten Year Network Development Plan for the period 2015 - 2024, Rules for providing services by the independent transmission operator to the vertically integrated undertaking and a Compliance programme of the Independent transmission operator.

The Commission adopted Natural Gas Market Rules (NGMR), in pursuance of Art.21 para.1, item 9 of EA and to fulfil the energy market liberalization requirements of Directive 2009/73/EC in terms of gas market organization and operation rules and Regulation (EU) № 312/2014 of the European Commission of 26 March 2014 on the establishment of a Network code for balancing the gas transmission networks in terms of gas market balancing rules.

In 2015 EWRC adopted amendments to the Rules for providing access to transmission and distribution networks and access to natural gas storage facilities in order to ensure and implement the principles of non-discrimination and equality between market participants in the local natural gas market.

To diversify sources of natural gas supplies for Bulgaria and South-eastern Europe, the realization of the gas interconnection Greece - Bulgaria (IGB) appears to be of particular importance and it will directly connect the national transmission systems of the two countries. IGB Interconnector has been defined as a project of national significance in both Bulgaria and Greece and is listed as a project of common interest (PCI) by the European Commission. In this context, EWRC approved Updated Guidelines for management and allocation of capacity on the IGB Interconnector according to paragraph 6 of article 36 of Directive 2009/73/EC – Phase I: Invitation of interested parties to express their interest in reserving capacity and. A draft Notice to participate in Phase I Expression of Interest was approved (December 2015) together with its annexes.

EWRC will continue in 2016 to carry out reforms in the energy sector related to the Regulator's activities and the sectors subject to regulation. We are convinced that our regulatory actions will result in significant benefits for consumers and market participants.

**Assoc. Prof. Ivan N. Ivanov, PhD**  
**EWRC Chairman**

## **2. Main developments in the gas and electricity markets**

### **2.1. Main developments in the electricity market**

The requirements of the European Union Third Liberalization Energy Package and the Bulgarian legislation stipulate that the electricity market is to be liberalized and gradually integrated with those in other European Union (EU) member states. In line with Directive 2009/72/EC and under the Bulgarian Energy Act (EA), the electricity market in the Republic of Bulgaria has been fully liberalized since 1 July 2007 with a stepwise liberalization process and currently electricity trade in Bulgaria is realized in two market segments – freely negotiated prices and regulated prices. In 2015 the Bulgarian electricity market operated under a hybrid model, where part of low voltage customers trades were concluded at regulated prices approved by EWRC and the rest was traded in the liberalized market at prices negotiated with customers connected to middle and high voltage and part of low voltage industrial customers.

In 2015 EWRC took a number of measures to solve market problems and the first step was aimed at equitable distribution of public service obligations costs on all end customers. Thus the large difference in free and regulated market prices was balanced, as that was an obstacle to full market liberalization and, at the same time, the current deficit of the public provider NEK EAD was covered.

EWRC initiated amendments in Electricity Market Rules (EMR) related to the operation of the organized energy exchange, the rights and obligations of the power exchange operator and the market participants and the establishment of conditions for free market access of household and small non-household customers by regulating the terms and ways to develop and implement standardized load profiles. In this connection, a special Instruction has been developed on switching terms and conditions for the above mentioned customers, which is to facilitate at the utmost the free choice of a supplier and the transition to the liberalized market segment by only filling out a template application form. Although it is necessary to take some additional steps in order to achieve the ultimate goal of market opening for the smallest customers and to create conditions for the electricity power exchange functioning, still prerequisites for the electricity market liberalization process finalization are in place.

With the approved EMR amendments market, participants have been indicated in terms of their obligation to bear the costs arising from the imposed by EA duties to the publics, in order to achieve a transparent equitable costs distribution among end customers connected to the electricity system, including TSO and distribution networks operators.

A number of measures seeking disciplinary effect on market participants have also been regulated. With the advancement of the full electricity market liberalization process and the increasing free market share, financial stability and security of transactions should be ensured, in order to avoid debt in the sector.

The introduction of an efficient organized power exchange is an additional opportunity for market participants to trade on the basis of market principles in order to increase transparency and competition in the electricity market in Bulgaria. The availability of energy exchange will lead to market coupling with neighbouring electricity markets.

On 11 Dec 2015 IBEX EAD, holding license № JI-422-11 of 31 March 2014 for the activity "organization of electric power exchange", started test operation with real market players and in early 2016 it launched the actual power exchange operation. According to the preliminary plans of IBEX EAD, the power exchange will offer three types of products:

- hourly – submitting offers at every delivery interval (one hour);
- block – submitting offers for a certain number of delivery intervals and
- flexible – submitting offers for flexible products.

It is envisaged initially only hourly products to be offered and the minimum buy and sell amount that can be traded on power exchange to be 100 kWh. Power exchange operation started in the day-ahead segment, at a later stage an intraday market platform will be launched, as well as one for signing long-term deals.

In December 2015 EWRC signed an Amended Multilateral Memorandum of Understanding between the Agency for the Cooperation of Energy Regulators (ACER) and National Regulatory Authorities concerning cooperation and coordination of market monitoring under Regulation (EU) № 1227/2011 of the European Parliament and the Council on wholesale energy market integrity and transparency (REMIT).

## **2.2. Main developments in the gas market**

By the amendment of EA as of 17 July 2012 the Third Energy Liberalization Package was transposed into the national legislation, particularly Directive 2009/73/EC and Regulation (EC) 715/2009. The energy market liberalization requirements - to promote fair competition and easy access for different suppliers - are intended to allow consumers to benefit fully from the opportunities of a liberalized internal natural gas market.

In this context, EWRC took a number of important steps in 2015 to ensure the gas market opening as part of the EU market and efficient market access for all market players, including new entrants by establishing transparent, market-based mechanisms for natural gas delivery and sale.

To achieve these objectives, EWRC firstly adopted new Natural Gas Market Rules (NGMR, the Rules), which replaced the Natural Gas Trading Rules as of 2007. The NGMR provisions aim at promoting fair competition, which in turn creates prerequisites for the free negotiation of prices at market conditions and eliminating the need for these prices to be regulated by EWRC. The Rules introduce the following principles, whose application shall lead to the realization of the above-mentioned objectives, namely:

- introduction of a virtual trading point, which is necessary in order to provide the possibility of network users to transfer natural gas ownership to one another and to minimize their daily imbalances, which will increase gas market liquidity;
- envisaged responsibility of gas transmission network users to maintain the balance between natural gas inputs and off-takes in the transmission network, which is a prerequisite for minimizing residual balancing actions by the balancing entity, which will have a positive effect on the natural gas market;
- regulated natural gas switching procedure, enabling natural gas customers connected to the transmission and distribution networks to freely choose their supplier, which is a prerequisite for creating competition in the gas market.

NGMR comply with Regulation (EU) № 312/2014 establishing a Network Code on gas balancing of transmission networks and the introduction of interim measures in the absence of sufficient liquidity in short-term gas wholesale market. The rules govern the possibility of applying interim measures by the transmission system operator, which may grant a derogation from the application of Balancing Network Code in case of low liquidity of the short-term gas

market. In this regard, at the proposal of the transmission network operator, in 2015 EWRC adopted a decision approving the application of interim measures for a period of five years, i.e. no later than 15 April 2019, given the lack of liquidity in the internal natural gas market. The decision was taken by EWRC as a national regulatory authority in strict compliance with the requirements of the Regulation and in cooperation with the regulatory authorities of Greece and Romania. Such interim measures have been approved by the Greek and Romanian regulatory authorities at the proposal of their national transmission system operators.

Competition in gas markets requires transparent and non-discriminatory access to the gas transmission infrastructure for all users. The lack of an equal and transparent access to transmission capacity is an impediment to effective competition in the wholesale market.

In this regard, another important step was taken by EWRC with the adoption of amendments to the Rules for providing access to transmission and distribution networks and access to natural gas storage facilities. They ensure that there is no a requirement for the potential natural gas traders to prove the existence of a valid supply contract and / or contracted capacity in the networks of neighbouring TSOs. At the same time, these amendments ensure the application of the non-discrimination and equality principles among the gas market participants in the country, consistent with Regulation (EU) № 984/2013 of the Commission of 14 October 2013 establishing a Network Code on capacity allocating mechanisms in gas transmission systems (Regulation (EU) № 984/2013). This Regulation provides for a tender procedure about interconnection points within the EU and standard products for cross-border capacity to be offered and allocated.

In 2015 EWRC adopted a decision approving a list of relevant points in the transmission system of Bulgartransgaz EAD, in compliance with the transparency requirements in term of TSOs under Regulation (EC) № 715/2009. Thus the transmission system operator fulfils the obligation to make public the information on technical, contracted and available capacities of all relevant points, regularly and periodically and in a standardized and user-friendly way.

Achieving competition, which creates conditions for the free negotiation of gas prices under market conditions, as well as the efficient market opening, could be realized by building the necessary infrastructure and implementing the projects of common interest, which will contribute to the diversification of natural gas sources and supply routes. These projects are crucial for the development of gas infrastructure, the provision of security of supply in the region and the contribution to the national economy of Bulgaria.

In this regard, in 2015 EWRC adopted the decisions necessary for the successful implementation of priority infrastructure projects - approval of the Ten Year Network Development Plan of Bulgartransgaz EAD for the period 2015 - 2024 and approval of papers for the Market test, Phase I: Invitation to interested parties to express interest in booking capacity in the IGB project - gas interconnection Greece – Bulgaria.

Actions taken by EWRC in the performance of its regulatory powers aimed at opening, proper functioning and development of a competitive, secure and sustainable internal gas market by creating incentives for the development of efficient competition, ensuring a balance between the interests of energy companies and customers, equality and non-discrimination between different categories of energy companies and between customer types.

### **3. Electricity market**

#### **3.1. Networks regulation**

##### **3.1.1. Unbundling and TSO certification**

In relation to the restructuring of electricity generation, transmission and system operation, as well as in compliance with Directive 2009/72/EC, Bulgaria has chosen the independent transmission operator model, where the transmission operator and network assets are separated into a legal entity within the vertically integrated undertaking, which carries out the generation and supply activities.

In accordance with the selected restructuring model EWRC adopted Decision № P-205 of 18 Dec 2013 authorizing the transformation of NEK EAD by separation through acquisition of assets, used for the electricity transmission, for the acquiring company ESO EAD. ESO EAD was granted with a license for the activity "electricity transmission" and the license for the same activity granted to NEK EAD was terminated. The license of ESO EAD for the activity "electric power system management" was also terminated.

After the unbundling procedure finalization on February 4, 2014, ESO EAD became the owner and operator of the entire electricity transmission network in Bulgaria. Bulgarian Energy Holding EAD (BEH EAD) is the sole shareholder of ESO EAD. BEH EAD is owned by the Bulgarian state, which exercises its rights through the Minister of Energy.

Regarding the submitted by ESO EAD certification application pursuant to art. 81a para. 2 of EA and art. 94, para. 2 item 1 of Ordinance № 3 of 21 March 2013 on licensing the activities in the energy sector (OLAES), a certification procedure has been opened for the company to be certified as an independent transmission operator.

By Decision № C-5 of 30 July 2015 EWRC certified ESO EAD as an Independent Transmission Operator and approved the Ten Year Network Development Plan for the period 2015 - 2024, Rules for providing services by the independent transmission operator to a vertically integrated undertaking and ESO EAD Compliance programme.

##### **3.1.2. Technical operation**

###### *Provision of balancing services*

Electricity market organization and operation in the country are regulated by the Electricity Market Rules (EMR) and Auction rules on procurement and allocation of transmission capacity on the interconnections in the control area of ESO EAD and the neighbouring control areas for 2015. The electricity market in the country is organized on a market basis and is administered by ESO EAD.

ESO EAD maintains a register on its website about the active balancing energy suppliers from primary, secondary and tertiary regulation and activated cold reserve blocks. The independent transmission operator maintains the balance of the EPS according to technical and economic criteria based on balancing market bids and offers. Balancing energy suppliers are all generators who operate adjustable units. Balancing energy price is set under a mechanism regulated in EMR and a methodology, an integral part of them.

Since 1 June 2014 an hourly market has been launched for all electricity transactions, applying common balancing conditions for standard, special and combined balancing groups. It encompasses all commercial participants in the chain generation, transmission, distribution and end-customers and is the main and most important step to the further organization and

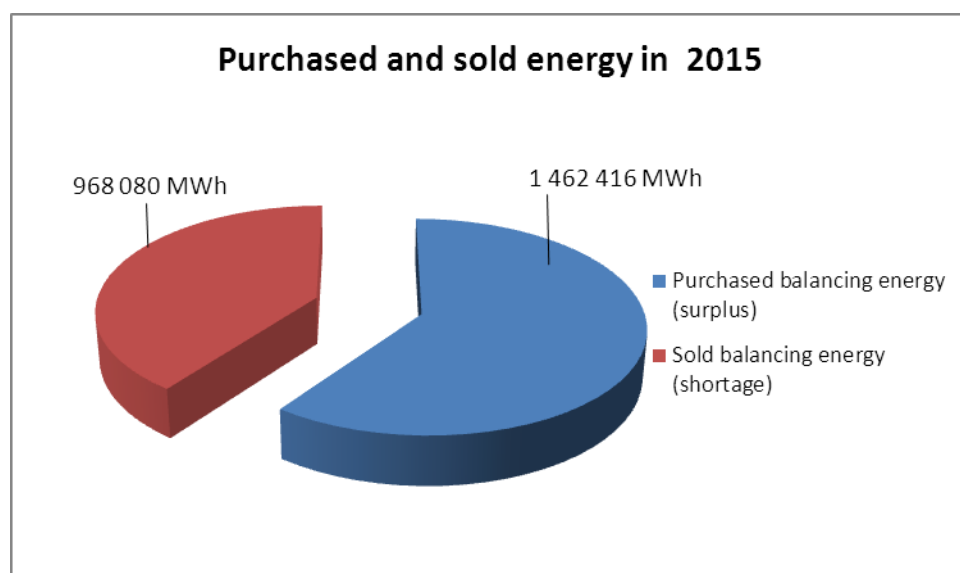


operation of the power exchange and an essential condition for fulfilling our country's commitments of full electricity trade liberalization.

EWRC's observations on the work of balancing electricity market in Bulgaria in 2015 show that the market operates stably and provides predictable environment in the relations between all market participants. As a result of actions taken by EWRC and the adoption of Decision № II-26 of 19 Dec 2014 laying down a marginal price for transactions in balancing energy market as of 01 Jan 2015, no extreme values of the balancing energy shortage price and negative surplus energy price were registered like the ones reached in the previous 2014. Given the above, in Decision № II -50 of 30 Dec 2015, the Commission kept the marginal price unchanged for transactions on the balancing energy market, namely:

- price cap for transactions on the balancing energy market for upward regulation (in case of energy shortage) at the amount of 202.00 BGN/MWh and
- price cap for transactions in the balancing energy market for downward regulation (in case of energy surplus) at the amount of 0.00 (zero) BGN/MWh.

Following the balancing market launch, the total power shortage and total power surplus increased significantly. The common power shortage in 2015 was 968 079 MWh, compared to 590 796 MWh in 2014 and represented 3.21 % of the registered schedules. The energy to cover the energy surplus in 2015 was 1 462 416 MWh, compared to 1 229 204 MWh in 2014 and represented 4.84 % of the registered schedules.



Balancing energy price is set for each settlement period as two balancing energy prices. The average 2015 energy shortage price was 184.63 BGN/MWh, compared to 199.13 BGN/MWh in 2014. The average energy surplus price was 10.83 BGN/MWh, compared to 15.46 BGN/MWh in 2014.

In the table below, concrete electricity price values traded on the balancing market are presented for 2015.

Balancing top-up energy	
Minimum price, EUR/MWh	0.00
Maximum price, EUR/MWh	449.92
Average price, EUR/MWh	94.40

Balancing spill energy	
Minimum price, EUR/MWh	0.00
Maximum price, EUR/MWh	20.86
Average price, EUR/MWh	5.54

Pursuant to Methodology on balancing energy price setting, these prices are set based on the prices provided by balancing energy suppliers, upward and downward regulation energy, activated for the EPS balancing and the realized imbalances of market participants for each settlement period.

In connection with the above, ESO EAD has developed and implemented an internal methodology for calculating the balancing market settlement results, taking into account the additional costs incurred related to system management and redispatching of generating capacities.

The necessity of setting price caps is justified by the lack of sufficient competition among market players offering balancing energy, and therefore conditions created for offering negative downward regulation prices and unrealistically high upward regulation prices, leading to distortion of the balancing market, extreme values of balancing energy and high costs for imbalances of producers and consumers.

The up-dated state of the power market in 2015 was as follows: 27 standard balancing groups' coordinators, 13 special balancing groups' coordinators and 13 combined balancing groups' coordinators.

#### *Security and reliability standards, quality of services and supplies*

Regarding the security of supply and guaranteeing the compliance with the requirements of services quality and electricity supplies, EWRC monitors and yearly carries out a review of the fulfilment of the adopted in 2010 „Methodology for reporting the fulfilment of the target indicators and electricity quality indicators control and service quality of network operators, public providers and end suppliers“(the Methodology). To guarantee the consumers interests it is envisaged for EWRC to adjust the revenue requirements of energy company every price period of the regulatory period depending on the energy quality indicators fulfilment and on service quality during the previous year. As a quality indicator in these relations, the response time or the time for taking the necessary corrective measures by the energy utilities is taken into consideration, the same being divided into: general indicators for quality of commercial services and guaranteed indicators. The guaranteed indicators have been laid down as commitments in the General Conditions of the electricity sales contracts and the General Conditions of the contracts for electricity transmission to consumers over the electricity distribution networks of the end supplier.

#### *Monitoring time taken to connection and repair*

The Energy Act regulates the duties of the transmission and distribution companies to connect all generation and user entities to the relevant network. Under art.116, para.7 of EA the terms and conditions for connection, suspension of connection or supply and the property boundaries between electrical facilities, are defined by a EWRC Ordinance.

In connection with the implementation of legal requirements concerning the technical arrangements, connection methods and terms of customers and generators to distribution networks, the following regulations and administrative provisions governing connection to these networks have been adopted with EWRC decisions: Ordinance № 6 of 24 Feb 2014 on connection of electricity generators and customers to the transmission or distribution networks (Ordinance № 6), OLAES, Guidelines on connection pricing for distribution network consumers and General conditions of electricity supply and distribution contracts, including Rules on work with energy services' users. In order to provide information to consumers, the aforementioned administrative regulations are publicly known and the same have been placed at a prominent place in the customer service centres and published on the websites of the supply and distribution companies.

The terms and conditions of signing preliminary and final connection contracts of transmission or distribution networks customers are regulated in Ordinance № 6. The time period for the network operators' obligation to conclude a contract is 30 days. In the connection contracts between network operators and customers the terms and stages of construction and commissioning of the connection facilities of all connection units are included, depending on the technical requirements, connection method and points of the existing electric network, including the need for expansion and / or increasing the transmission capacity of the existing network.

In pursuance of OLAES contracts under general conditions made between users of energy services and energy enterprises providing services of public interest, include an advance notification to customers for periods of interruption during repair works, operational switches concerning the commissioning of new facilities and other such actions that shall be subject to planning.

In pursuance of its supervisory powers EWRC currently monitors the compliance of the licensed activity performance with the energy companies' license terms for providing services of public interest, including contractual breaches, defaults on connection of generators and customers to the networks and the time, which transmission / distribution network operators use to make connections, repair and power outages in carrying out network expansion and reconstruction related to objects' connection, to the point of connection. In this regard, in 2015 planned inspections of electricity distribution companies were carried out and pursuant to Art. 80 of EA finding records were drawn up with the following mandatory instructions and implementation limits:

1. CEZ Distribution Bulgaria AD – to draw up and submit to the Commission a detailed schedule of files processing on purchasing and contracting, according to Art. 21, para. 5 and par. 7 of Ordinance № 6, to analyse the frequent power outages and provide the Commission with scheduled corrective measures in areas where concentrations of frequent outages appear. CEZ Distribution Bulgaria AD provided evidence and data on the mandatory instructions performed within the indicated time limits;

2. ENERGO-PRO Grid AD:

- to carry out an analysis in order to establish the reasons for non-compliance with the statutory deadlines for issuing opinions on connection conditions, draft connection contracts elaboration of electricity generators and customers, as well as the timely notification of customers when such have already been drafted, subject to the provisions of Art.12 para.2, Art. 16, art. 80, art. 82 and Art. 83 of Ordinance № 6. In this regard the company is to develop and adopt new internal procedures / instructions / rules;

- to analyse the reasons hindering the acquisition finalization of energy objects built on the grounds of Art. 21, para. 5 of Ordinance № 6 and according to the results, to take measures

such as to review / supplement the clauses in the connection contracts in order to make timely control over the construction - installation works, corresponding to the projects and technical specifications of the constructed connection facilities under the requirements of Art. 21, para. 6 of Ordinance № 6. ENERGO-PRO Grid AD provided evidence and data on the mandatory instructions performed within the indicated time limits.

In 2015 four inspections on connections were completed concerning renewable energy sources generators (RES) to the distribution and transmission networks of the following companies: NEK EAD, CEZ Distribution Bulgaria AD, EVN Bulgaria Electricity Distribution EAD and ENERGO-PRO Grid AD.

Reports were prepared and decisions adopted by the Commission as a result of the inspections performed. As discrepancies in the documents and information during the checks were identified, as well as on the grounds of the reports' findings, EWRC sent according to competency a copy of the documentation to the Ministry of Energy, Ministry of Regional Development and Public Works and the Prosecutor's Office of the Republic of Bulgaria.

About 4% of all complaints received in EWRC in 2015 referred to the generators and consumers facilities connection to the power grids. Those were mainly complaints against the DSOs concerning rejection or delay of connection to the distribution network, incorrectly set price or connection conditions.

Within its statutory powers and by conducting ongoing and follow-up control and in pursuance of Art.37, paragraph 1 b m of Directive 2009/72/EC, EWRC monitors the time taken by transmission and distribution system operators to make connections and relevant repairs.

#### *Monitoring safeguard measures*

In the event of a sudden crisis in the energy market and where the physical safety and security of persons, equipment, facilities or EPS integrity is threatened, a Member State may temporarily take the necessary protective measures. Such measures must cause the least possible disturbance in the internal market operation and must not be wider in scope than is strictly necessary to remedy the sudden difficulties which have arisen.

Under the Energy Act, ESO EAD carries out unified operational planning, coordination and management of the electricity system. The main tasks to be performed by ESO EAD and associated with the centralized operational management of EPS, include operational management of EPS, power and energy regimes and electrical loads forecasting, generation capacities planning and EPS operational mode.

Participation in voltage control is the responsibility of all power generators connected to the transmission network, in line with the requirements of ESO EAD and the technical capabilities of their generation units. Participation in the preventing EPS control is the responsibility of all grid users, in accordance with the EPS security plan requirements and the EPS recovery plan, electricity supply continuity, ENTSO-E requirements compliance and the electricity system management rules, with minimum loss of active energy in transmission and transformation.

The work of the managing and regulating systems in power plants and the automation system in substations are under constant control. Systematic tests are periodically organized and conducted in order to check the readiness of power plants to provide additional services and the implementation of the security recovery plans.

All planning or coordination activities of ESO EAD in 2015 were based on load and power consumption forecasts and for the relative purposes: investment planning forecast period

more than five years, monthly annual planning, daily month planning, daily week planning, hourly day planning or internal day re-planning.

Maintaining electricity transmission voltage levels within the allowed limits, ensures reliable and safe EPS operation, the technical and economic characteristics of electrical equipment, sustainable operation of synchronous generators and is a condition for reducing losses in electricity transmission and transformation. Voltage control is done centrally by a “Voltage Schedule” that is monthly developed, set and monitored by ESO EAD.

Assessment of expected maximum EPS load, transmission network bottlenecks under normal and repair schemes and options for voltage regulation in the limits of available technical means, is carried out by planning a winter maximum regime. It is prepared by the National Dispatching Centre (NDC) based on a perspective model, including the projected balance of generation capacities and of control days’ load readings. Based on this scheme measures are proposed to increase the transmission capacity of the electricity network and to avoid bottlenecks.

In pursuance of art.81 d of EA and art.22 of Directive 2009/72/EC the transmission network operator has developed a Ten Year Network Development Plan of the Republic of Bulgaria for the period 2015-2024, after a public consultation with stakeholders. The Plan complies with the upcoming changes in generation, supply, consumption and exchanges with other countries. Investment plans for regional networks and networks within the European Union have been also taken into account. In the Ten Year Development Plan ESO EAD has foreseen electricity transmission infrastructure investments. The Plan contains all the investments decided to be met and certain new investments to be made over the next three years, as well as a timetable for investment projects implementation.

In 2015 EWRC considered the investment demand on cross-border allocation of costs related to the PCI 3.7.4 "Internal line between Maritsa East 1 and Burgas" made by ESO EAD, pursuant to Art. 12, paragraph 3 of Regulation (EU) № 347/2013 of the European Parliament and of the Council of 17 April 2013 on guidelines for trans-European energy infrastructure. In connection with that investment request EWRC issued Decision № II-1 of 24 April 2015 laying that the cross-border distribution of investment costs for the PCI 3.7.4 3.7.4. "Internal line between Maritsa East 1 and Burgas" shall be 100% at the expense of the Bulgarian side, where ESO EAD shall provide 50% of investment costs. Based on EWRC decision ESO EAD attracted grant co-financing by the financial mechanism "Connecting Europe Facility" to construct a power line between substation "Maritza East" and substation "Burgas" with a length of 133 km and capacity of 1500 MW. The grant is 50% of the project costs and amounts to € 29 106 650. The project is part of the Ten Year Network Development Plan of the Republic of Bulgaria and the electricity transmission system development plan in Europe of ENTSO-E.

Computational models, collecting and processes information daily, both within the National Dispatching Centre (NDC) and within ENTSO-E according to the procedure for the daily forecast of day ahead electricity system limitations (DACF - Day Ahead Congestion Forecast), are used to assess the security and operational planning mode of the transmission network. Up-to-date load flows allocation model results from the procedure, reflecting the neighbouring and the Bulgarian electricity system status, which contains: topology, load and generation. Based on this model, daily security checks of the electricity system operation and the “n-1” criteria compliance are made.

The parallel work of Bulgaria with neighbouring countries, members of ENTSO-E in 2015 was realized through interconnectors and was based on the principles of mutual benefit, solidarity and mutual assistance in emergency situations - to ensure safe, quality and efficient supply to electricity consumers. The existing Bulgarian electricity system interconnections

ensure the necessary technical conditions for the exchange of significant amounts of electricity in normal and emergency modes.

In 2015 by Protocol Decision №237 of 18 Nov 2015 EWRC agreed 2016 Auction rules for the allocation and procurement of transmission capacity on the interconnections in the control area of Electricity System Operator EAD and the control areas of the neighbouring operators.

Regulation № 714/2009 provides for the system operators to apply market approaches in the management of congestion on the interconnectors, to publish the available transmission capacities and to allocate them on a yearly, monthly, weekly and daily basis in a transparent and non-discriminatory manner. Through the established regional cooperation and the operational arrangements for the coordinated allocation of cross-border capacity, as well as the coordinated mutual support in emergencies, the safe and secure operation of both the internal and international electricity markets is guaranteed.

### **3.1.3. Connection and access network tariffs**

In accordance with the adopted regulation method, the Commission uses different approaches in assessing the economic efficiency of the price components and of the transmission and distribution networks tariff regulation.

Transmission and distribution network tariffs to end consumers are approved by EWRC upon the companies' proposal in time and form specified under Ordinance № 1 of 18 March 2013 on electricity prices regulation. Different consumers' groups and tariff structures are specified according to companies' proposals and are grouped according to the voltage level and daylight zones. Network services are paid based on electricity consumption. Transmission services and access are paid by consumers connected to the electricity transmission and distribution networks, distribution companies, traders with export transactions and traders with transactions on behalf of a network services user.

In 2015, by Decision № II-27 of 31 July 2015 and Decision № II-35 of 1 Nov 2015, EWRC approved and accordingly adjusted the regulated electricity and network services prices after analysis and evaluation of the data reported by the electricity undertakings in the current pricing period, including analysis and evaluation of the reported general financial status, analysis of recorded technical and economic indicators, as well as analysis and assessment of the quality indicators and subsequently based on information and documents evidencing the potential significant deviation between the allowed by the Regulator estimated cost and those actually incurred by energy companies.

#### **Transmission and access to the electricity transmission network**

Regulating the network tariff for transmission through the transmission network, where the EWRC uses the method "rate of return" regulation, all price components are assessed annually for the new tariff to be approved. Due to the fact that in the country there is only one regulated HV electricity transmission company, there is no comparable basis on which costs evaluation to be done. Regarding the last, EWRC uses the annually collected information as an assessment criterion of the annual costs level and in addition, takes into consideration the specific circumstances concerning the legal security and technical security of supply requirements.

Approved prices and pricing elements in 2015 for the activity of transmission and access to the grid are shown in the following table:

Pricing decisions		2014		2015	
		30.06.2013	01.10.2014	01.08.2015	01.11.2015
<b>Transmission price</b>	BGN/MWh	6.62	6.62	7.39	7.36
Annual revenue requirements	thou BGN	223 093	223 093	305 020	304 057
Regulated asset base	thou BGN	804 222	804 222	814 509	814 509
Rate of return on capital	%	2.67 %	2.67 %	2.67%	2.67%
Estimated power amounts for the regulated period	MWh	40 309 120	40 309 120	41 297 200	41 297 200
<b>Access price</b>	BGN/MWh	1.36	1.36	1.17	1.17
Annual revenue requirements	thou BGN	54 970	54 970	48 503	48 503
Regulated asset base	thou BGN	32 841	32 841	36 726	36 726
Rate of return on capital	%	6.83 %	6.83 %	3.33%	3.33%
Estimated power amounts for the regulated period	MWh	40 309 120	40 309 120	41 297 200	41 297 200

**Table 1: Approved prices and pricing elements in 2015 for the activity transmission and access in transmission network; Source: EWRC**

### **Access price for renewable energy sources (RES) generators – solar and wind**

Under the Additional provisions of EA "access" shall mean the right to use the transmission and/or distribution networks for electricity transmission at a payable price, and user of these networks may be a natural or legal person supplying electricity to or withdrawing it from the network. Therefore, network users are both electricity consumers and generators and as such they owe an access price. The transmission and distribution network access price reflects costs that are caused in relation to network management and activities in the overall electricity system management and administration, including costs associated with dispatching, substations, commercial metering devices and their reading, as well as all other administrative expenses and general purpose costs for the relevant network.

Electricity generators are obliged to conclude access contracts with the electricity transmission and/or distribution network operator, where the parties' rights and obligations have been regulated with regard to dispatching, the provision of cold reserve and ancillary services. These contracts constitute a pre-condition for the execution of electricity sale contracts. As far as the contract covers the dispatching obligations and on the other hand, dispatching costs are covered by the access price, the latter is one of the access contract terms and conditions.

The transmission access price for producers generating power from wind and sun is justified by the need of additional reserve capacities in order to balance the intermittent electricity from solar and wind farms. In this regard and in view of the need to maintain the power system balance and to offset the impact of these types of renewable energy, the transmission operator has justified the additional cost of purchasing secondary regulation reserve to be able to pay to the thermal power plants for their full participation in primary and secondary regulation, voltage regulation and "switching on/off cycles". ESO EAD has justified the necessary reserve of 170 MW with an increased secondary regulation range of photovoltaic power plants (PvPP) and wind power plants (WPP), where PvPP increase of the secondary regulation range is 9.5 MW for every 100 MW of installed capacity and for WPP – 7.8 MW for every 100 MW of installed capacity.

The transmission operator has argued its claim with the fact that the power generation and consumption nature is an undivided, complex process that depends on many factors - the economic situation in the country, meteorological conditions, the level of industrial development, household consumption, accident regime of the facilities. To achieve EPS balance, ESO EAD balances at any point of time the casual random variations of the electric load, including due to accidents, generating capacities and interconnection exchanges. In addition, the PvPP and WPP generated energy, unlike the electricity generated from hydropower plants (HPP) and biomass power plants, is intermittent, as it is highly dependent on variable meteorological conditions and adds to the cost of ancillary services availability, to the costs for the full-bodied participation in power plants regulation, to the turn on/off costs and reserve costs. These variations are able offset each other, but are very often cumulative, leading to even greater deviations and require additional balancing costs.

Based on the data and justification presented by the transmission operator, the Commission admitted the additional cost of purchasing additional secondary regulation reserve to be reasonable and by Decision № II - 27 of 31.07.2015 it adopted a transmission network access price of 7.14 BGN/MWh for ESO EAD, which is payable by PvPP and WPP electricity generators connected to the transmission and distribution networks. Prices are payable to ESO EAD by all electricity generators using renewable sources (solar and wind) and selling their energy at feed-in-tariffs, regardless of the connection point. Generators connected to the distribution networks pay the prices to DSOs who transfer the sums to ESO EAD.

### **Transmission and access to the electricity distribution networks**

Regulating the network tariffs for the electricity distribution companies, the Commission applies incentive-based (revenue cap) regulation. The Commission approves the revenue requirements of the energy utility for the first year of the regulatory period and analyses and adjusts them for each subsequent year of the regulatory period. The envisaged adjustments of the revenue requirements are related to the inflation rate, the efficiency ratio and target quality indicators performance, the difference between forecast and actual expenses for the purchase of energy, as well as expenses incurred by the change in the consumption structure. In addition, indicators are applied to the methods, reflecting the quality of activity performance (electricity quality, service quality), in accordance with which the allowed revenue requirements of the energy utility are adjusted in view of the target indicators performance. The difference in the performance of the forecast investments and actual investments is also taken into account. The revenue requirements are reduced in accordance with the difference between the reported non-performance of the target indicators for quality and allowed deviation.

### **Technological costs**

Calculations of the technological costs of electricity transmission and distribution companies are carried out according to Article 10, para. 5 and 6 of Ordinance № 1 of 18 March 2013 on electricity prices regulation, following a methodology approved by EWRC. In approving the prices of transmission and access to the transmission and/or distribution networks, the Commission assesses the cost of purchasing electricity for technological costs, cold reserve and ancillary services. By applying a common approach in approving the prices of the companies, EWRC has complied with both the findings of the current analysis of the results achieved and the regulation method objective - creating conditions for companies to reduce costs for the activity, while at the same time to ensure the necessary investments to improve the quality of services. Eligible technology costs are determined by a Commission's Decision under a methodology or guidelines adopted by it.



In determining the revenue requirements of electricity distribution companies, the amount of technological costs is allowed in accordance with EWRC's Instructions on pricing of electricity transmission through the distribution networks and the technological costs levels in 2015 were adjusted as a result of the analyses and assessment.

The Commission has kept DSOs technological costs target values unchanged according to the reports submitted by individual companies and they are as follows:

- CEZ Distribution Bulgaria AD – 8 %;
- EVN Bulgaria Electricity distribution EAD – 8 %;
- Energo-pro Bulgaria Networks AD – 9 %;
- ERP Zlatni Pjasatsi AD – 5%.

### **3.1.4. Cross-border issues**

*Cross-border infrastructure access, including capacity allocation and congestion management procedures*

Auction rules were developed in line with Regulation (EC) № 714/2009 on conditions for access to the network for cross-regional cooperation between operators, by introducing common rules and procedures for the allocation of available transmission capacity (capacity) in both directions on the interconnections of power system of Bulgaria and neighbouring power systems. The purpose of these rules is to ensure optimal networks management, promoting energy exchanges development and coordinated allocation of cross-border capacity through non-discriminatory market-based solutions.

ESO EAD pursuant to art.109, para.1 item 3 of EA is obliged to provide the joint operation of the electric power system and the electric power systems of other countries in accordance with international treaties. Regulation (EC) № 714/2009 imposes an obligation on national regulatory authorities to ensure compliance with the Regulation and the guidelines adopted in accordance with Art.18 thereof, for the establishment of regional cooperation between transmission system operators (Art. 12 and Art. 13 of the Regulation). ESO EAD, in its role as an electricity system operator of the Republic of Bulgaria, and the neighbouring electricity system operators have signed Memorandums of cooperation regarding the operational management and the available transmission capacity allocation on the interconnections. Bulgaria has five neighbouring control areas (Greece, Romania, Serbia, FYROM and Turkey), for which annual, month and daily transmission capacity allocation auctions are carried out.

The provision and allocation of the available transmission capacity on the interconnections is coordinated and carried out through the application of auction rules developed jointly by the Bulgarian electricity system operator ESO EAD and the neighbouring electricity system operators. The Auction Rules regulate in detail the registration and participation requirements, different types of auctions, organization and tender procedures, settlement of the auction results and granting transmission capacity rights (TCR) together with rules for their use, the TCR secondary market TCR transfer, settlement and payment requirements and deadlines, transmission capacities reducing principles, etc. EWRC, in its capacity as a national regulatory authority and in line with art.19 of Regulation (EC) № 714/2009, annually agrees Auction Rules for allocation of transmission capacity on the interconnections between the control area of Electricity System Operator EAD and neighbouring control areas.

Cross-border transmission capacity calculation is done following a procedure approved by ENTSO-E. ESO EAD collects the interconnections schedules (so-called “external

schedules”) of market participants and based on it the operator prepares an hourly schedule for cross-border exchanges for the Bulgarian control area and coordinates them with the neighbouring control areas system operators.

In 2015 by Protocol Decision №237 of 18 Nov 2015 EWRC agreed 2016 Auction rules for the allocation and procurement of transmission capacity on the interconnections in the control area of Electricity System Operator EAD and the control areas of the neighboring operators.

In December 2015 EWRC adopted new Auction Rules on the introduction an interconnection coordination scheduling process of annual and monthly capacity and organizing and conducting daily auctions for the allocation of unused capacity between Bulgaria and Turkey. Changes were made in connection with the signing of a memorandum between ESO EAD and the Turkish system operator TEIAS for 2016 and in pursuance of the requirement of Regulation (EC) № 714/2009 to provide market participants with maximum capacity on the interconnections and transmission networks affecting cross-border flows.

In connection with the load and frequency management and to ensure the necessary reserves under active power, ESO EAD prepares and submits to ENTSO-E’s North Coordination Centre in Brauweiler (Amprion GmbH) coordinated with other control areas and blocks hourly schedules, electricity exchanges (import and/or export), controls the execution of the technical conditions under signed commercial, non-commercial, bilateral and multilateral agreements for electricity sale and exchange.

National Dispatching Centre (NDC) reports, controls and coordinates the physical hourly, daily and monthly electricity exchanges on all interconnections (state border) with the respective system operators. It calculates the unscheduled electricity exchanges of the Bulgarian EPS in parallel operation to the synchronous area of Continental Europe and calculates and verifies the compensation schedules (programs) for their compensation.

According to metering data and calculated border exchanges in 2015, Bulgarian EPS received 4 232 600 MWh electricity from neighbouring EPS and exported 14 697 489 MWh. Coordinated electricity exports with Bulgarian origin by market participants (Bulgarian time) according to interconnection schedules data and declared amounts for 2015, was 10 562 401 MWh, representing an increase of 10.04% compared to 2014, when trade exports with Bulgarian origin were 9 501 994 MWh.

### **Utilizing revenues for the interconnections**

In pursuance of the provisions of art.16, para 6 of Regulation (EC) № 714/2009, any revenues resulting from the allocation of interconnections shall be used for the following purposes:

- a) guaranteeing the actual availability of the allocated capacity; and/or
- b) maintaining or increasing interconnection capacities through network investments, in particular in new interconnectors.

In cases, where revenues cannot be efficiently used for the purposes set out in the above mentioned items, they may be used, subject to approval by the regulatory authorities of the Member States concerned, up to a maximum amount to be decided by those regulatory authorities, as income to be taken into account by the regulatory authorities when approving the methodology for calculating network tariffs and/or fixing network tariffs.

*Monitoring of national development plans and investment plans related to the 10-year network development plan of ESO EAD*

The maximum scenario of the operator predicts that in the present year the trend of increasing electricity consumption in 2014 will continue at a more moderate pace. As of 2024 gross consumption is expected to reach 43 040 GWh. The estimated absolute maximum electrical load in Bulgaria for 2024 is to be 7960 MW, and the maximum load for an average working day is 7440 MW.

A minimum scenario was developed in the plan that relies on a weaker growth rate of electricity consumption as to the maximum scenario, due to timely implementation of energy efficiency measures. In this scenario, in 2024 gross electricity consumption shall reach 40 860 GWh.

The plan defines the development of transmission network at 400 kV, 220 kV and 110 kV of EPS in Bulgaria up to 2024 and aims to create the necessary technical conditions for secure and quality electricity supply to all transmission network nodes, sustainable work and development of generation capacities in the country and electricity market vitality. In this plan ESO EAD assumes the concept for 220 kV transmission network not to be further developed, as opposed to 400 kV and 110 kV networks, with the exception of the second power supply area construction in the town of Rousse. The 110 kV network development is justified with the transmission security improvement for renewable energy, connection of conventional power plants, improving the security of supply in individual regions when scheduled and emergency repairs in the 400 kV and 220 kV networks occur, as well as improving electricity exchange with distribution networks. The plan forecasts the generation capacity development in Bulgaria up to 2024. It foresees Rousse TPP unit 4 to serve as a cold reserve supplier, due to the plant's integrated permit for the heating and condensing part, allowing operation of the unit. Varna TPP is not intended to work after the derogation period, although it provides the most competitive cold reserve price and contributes to the voltage regulation in Northeast Bulgaria, without requiring additional investments in the transmission network.

Generation capacities development forecast of Bulgaria does not include hydroelectric complexes along the river Danube, which are conventional, but fall into the group of renewables too. Their consideration requires redesigning, in accordance with nature conservation and economic criteria. These new projects must be comprehensive, which means to include a hydro power project, navigation project, bridges and roads, including rail. They should be jointly developed and adopted by Romania too.

The Kozloduy NPP 7th reactor construction project is expected to come into operation after 2025 according to the most optimistic forecast, due to long coordination procedures that lie ahead. This is confirmed by the European Commission forecast as of 2050, where additional nuclear capacity in Bulgaria is foreseen only after 2035. The option of 7th reactor at Kozloduy NPP site will be taken into account in the next update of the electricity network development plan. In the period 2015-2016 a reconstruction of Kozloduy NPP generators 9 and 10 is scheduled, which shall result in maximum active power of each unit 1100 MW. In the period 2015-2024 the total of 2212 MW new capacity is planned, of which 1489 MW renewables. With the accelerated penetration of renewables and the lack of industrial load in the country, the need to curtail forcibly the NPP operational capacity during certain periods of the year will increase. Construction of new units 9 and 10 in Maritsa Iztok 2 is not envisaged in the Plan, due to EWRC's denial to grant a license.

It is necessary to increase the regulatory capacities of Chaira PSHP with the completion of Yadenitsa dam and the rehabilitation of Chaira PSHP, Belmeken PSHP, Sestrimo HPP and Momina klisura HPP for the ESP real-time management, interconnection schedules execution and maintaining security, in accordance with the requirements of ENTSO-E (in the conditions of reduced conventional power plants generation and increased renewable sources generation).

### *Cooperation*

In 2015 EWRC realized cooperation with the regulatory authorities of the neighbouring countries regarding issues connected with the cross-border exchange in the region. The main direction was the negotiation of agreements with the regulatory authorities of the neighbouring countries, which ensure the security of electricity and electricity supply.

The cross-border transmission capacity on the interconnection in the form of commercial transfer rights is allocated and agreed bilaterally by the Auction Operators of the neighboring systems based on the electricity system managing rules and the current Auction rules approved by the regulator and in compliance with the rules of the European Network of Transmission System Operators – Electricity (ENTSO-E). ESO EAD is a full member of ENTSO-E and works in a regime of parallel work with the European EPS. Parallel work is carried out in compliance with “Operation Handbook” of ENTSO-E and is based on mutual benefit principles, solidarity and mutual support in case of emergencies to ensure the safe, qualitative and effective electricity supply of consumers.

These Common Auction Rules with a procedure for allocating intraday transmission capacity between the Bulgarian and Romanian, respectively the Bulgarian and Greek TSOs, increase the electricity market flexibility, including balancing market flexibility between Bulgaria, Romania and Greece. Procedures contained in the new Common Auction Rules agreed between the Bulgarian and Romanian, respectively the Bulgarian and Greek electricity system operators meet the requirements set out in Regulation (EC) № 714/2009.

In 2015 activities carried out in relation to ACER and CEER in the electricity market area include:

- Collecting, analyzing and delivering data for the ACER and CEER Market Monitoring Report on markets development for 2014;
- Participation in electronic procedure and approving the ACER Opinion on Regional lists of proposed projects of common interest in electricity and natural gas for 2015;
- Filling ACER database with electricity exchange values and characteristics in 2015, the Agency’s annual report under Electricity Regional Initiative (ERI) on the basis of ESO EAD data;
- Updating information for regular six-month and annual ACER reports on ERI progress;
- Questionnaire filling out on electricity transmission losses;
- Questionnaire filling out on the implementation of the Third Energy Package.

### *International projects*

In October 2014, the project “Implementation of the European electricity market in Bulgaria - II phase” was launched, realized under the Programme BG04 “Energy efficiency and renewable energy”. The program is financed by the Financial Mechanism of the European Economic Area (EEA FM) 2009 - 2014 based on the signed Memorandum of Understanding between the Republic of Bulgaria and the Kingdom of Norway, Iceland and Liechtenstein. Programme operator is the Ministry of Energy of Bulgaria. Project promoter is the Energy and Water Regulatory Commission and Partner is the Norwegian Directorate of Water Resources and Energy (NVE) to the Ministry of Petroleum and Energy, Norway. The initial key objectives foreseen to be achieved as a result of the project were: introduction of an organized day-ahead market for physical deliveries in Bulgaria; taking concrete steps towards electricity market integration with neighbouring market areas and coupled markets and development of

effective electricity market monitoring tools. The deadline scheduled for the activities implementation is February 2017.

In the period January - April 2015 the first two main tasks were completed: "Evaluation of the status of the EU internal (integrated) electricity market development" elaborated by the consultant E-Bridge Consulting based on ToR and questionnaires developed jointly with NVE and the project team of EWRC, ESO and IBEX EAD respectively. "Evaluation of the status of the Bulgarian electricity market" was elaborated by experts of EWRC and ESO EAD project team.

In the period May - August 2015 activities began on the next main task related to the development of market monitoring structure and activities at EWRC. EWRC project team performed a review of the wholesale market monitoring requirements under Directive 2009/72/EC, Regulation (EC) 713/2009 of the European Parliament and of the Council of 13 July 2009 establishing the Agency for cooperation of energy regulators and Regulation (EC) 714/2009, including the new obligations under REMIT and the Network codes.

### **3.1.5. Compliance**

The regulatory authority obligation under art.37, § 1, d of Directive 2009/72/EC on the application and control of the execution of legally binding decisions of the European Commission or ACER, is transposed in EA, art. 21, para. 1, item 31.

Under art.21, para.1, item 27 of EA the Commission monitors the implementation of the independent transmission operator's obligations. In case of non-implementation of the obligation the independent transmission operator pursuant to art. 21, para.3 of EA within its regulatory powers, the Commission shall:

1. impose sanctions for a discriminatory behaviour of the operators to the benefit of the vertically integrated undertaking;
2. monitor the communication between the operator and the vertically integrated undertaking, to guarantee that the operator implements its duties;
3. act as an authority for the dispute resolving between the vertically integrated undertaking and the operator;
4. request information and documentation concerning trade and financial relations, including loans between the vertically integrated undertaking and the operator;
5. approve trade and financial agreements between the vertically integrated undertaking and the operator in cases when they influence the conditions of market development;
6. require justification of the vertically integrated undertaking regarding the presented by the compliance responsible decision concerning network development plan or certain investments of the operator, including the compliance of the non-discrimination behaviour requirement to the benefit of the vertically integrated undertaking;
7. perform inspections at the entities of the vertically integrated undertaking and the operator;
8. approve ten-year transmission network development plan, monitors and controls its execution at the terms and conditions of the Ordinance pursuant to art. 60;
9. assign all or certain tasks of the independent transmission operator to the independent system operator, at the proposal of the network owner, in case the operator violates habitually its duties regarding the independence requirements, pursuant to chapter eight (a), section II,

including habitual discriminatory behaviour to the benefit of the vertically integrated undertaking.

Under Art.21, para.4 pt. 4 of EA concerning the implementation of EWRC's powers to regulate the activity of the Independent System Operator, the Commission approves the 10-year transmission network development plan and monitors its implementation under the terms and conditions of OLAES. According to Art.114, para.1 et seq. of OLAES, the Commission shall carry out continuous monitoring and evaluation of the Plan's implementation by the operator. When the independent transmission operator fails to make an investment under the 10-year transmission network development plan that is to be executed in the following three years, EWRC shall require a written explanation by the operator about the reasons, supported with data and documents. The Commission's decision shall oblige the operator to make the investments, in case they are still needed, as well as to provide reimbursement for these investments through the network services prices, unless the failure is due to imperative reasons that are beyond the operator's control.

ACER provides an integrated framework within which national regulatory authorities (NRAs) cooperate in order to perform their tasks at EU level. This framework is designed, among others, to support the development of EU-wide rules (network codes) and their consistent implementation across the European Union, and other activities where NRAs are expected to coordinate their actions.

## **3.2. Promoting competition**

### **3.2.1. Wholesale market**

#### *Wholesale market description*

The establishment of a competitive electricity market and its phased implementation requires network operators to carry out a number of additional activities despite electricity system management activities and networks maintenance and development. In a market environment trade relations are characterized by great diversity, the need for hourly negotiating of electricity purchases and sales, balancing the participants and regulate the rules for the balancing energy market operation.

For electricity generators market liberalization and the operators' legal unbundling sometimes rise new and divergent in terms of economic interest relationships. Network users, providing ancillary services, including cold reserve, ensure the TSO's obligations fulfillment regarding ESP management. ESO EAD contracts with balancing energy suppliers' access, ancillary services provision and balancing energy market participation and maintains a register on its website of the active balancing energy suppliers from primary, secondary, tertiary regulation and activated cold reserve units.

Each month until 10th ESO EAD defines the required availability for ancillary services of thermal power plants for the next month and the payment is in accordance with the ancillary services costs approved by EWRC for the regulatory period.

Cold reserve availability is negotiated through auctions. Ancillary services availability costs and cold reserve are recovered through access price and the cost of electricity supplied by balancing energy suppliers for upward and downward regulation, are transferred in energy shortage and excess prices in the balancing market.

ESO EAD maintains the generation - consumption balance, ESP security and quality of supply using balancing energy provided by dispatchable generation and consumption units.

The electricity market structure has not changed and includes: electricity market through bilateral contracts, power exchange, balancing energy market, cold reserve and ancillary services market and interconnection capacity provision market.

#### *Balancing mechanism, cold reserve and regulation power*

In 2015 Bulgaria followed the bilateral contracts design for cold reserve and ancillary services market with notifications in the day before delivery and balancing of all electricity transactions. Balancing of all market participants is carried out under unified negotiation and reserve providing principles.

- Reserve types:

- primary regulation reserve

- secondary regulation reserve

- tertiary regulation reserve

- cold reserve

ESO EAD pays no thirdly regulation reserve

- Negotiation period:

- Primary and secondary regulation reserves (ancillary services reserve) are negotiated at annual basis, but ESO EAD monthly sets the range for each balancing energy supplier.

- Cold reserve is bought in auctions, usually for a month or a longer period.

- Negotiation and reserve supply

Until the 10th day of the month prior to the delivery month, ESO EAD determines the availability for participation in primary and secondary regulation of thermal power plants for the next month.

Generators are obliged to allocate the set by ESO EAD availability for units in planned operation in day D and inform ESO EAD in day D-1. Generators have no rights to sell electricity in the market over the availability set for ESO EAD.

#### *Power exchange*

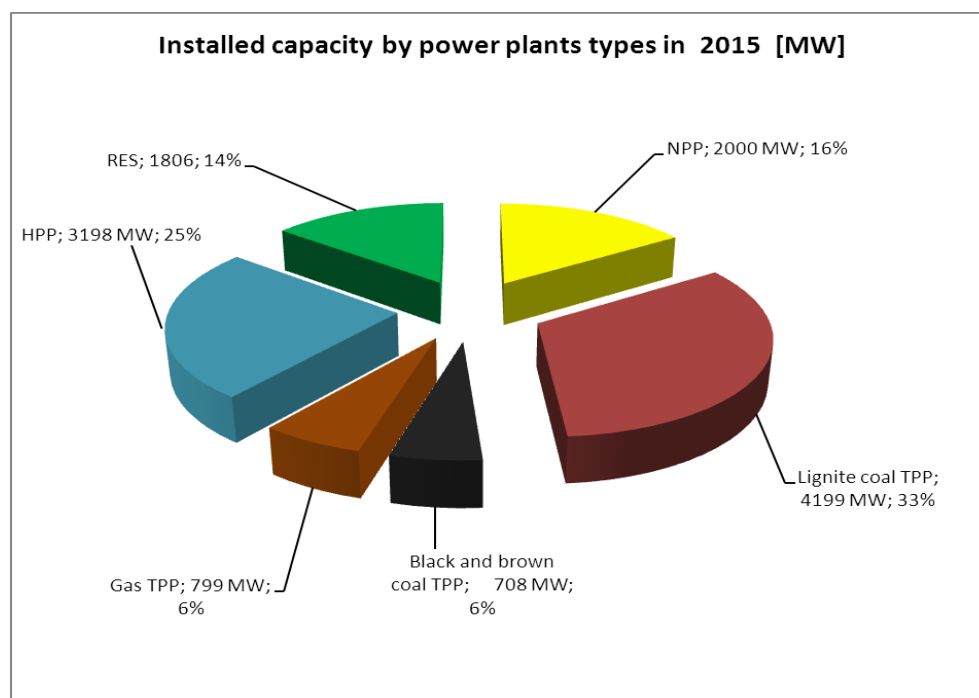
Under art.4, paragraph 1 of Regulation (EC) 2015/1222 of the Commission of 24 July 2015 establishing a guideline on capacity allocation and congestion management, each Member State electrically connected to a bidding zone in another Member State shall ensure that one or more nominated electricity market operators (NEMOs) are designated by four months after the entry into force of this Regulation to perform the single day-ahead and/or intraday coupling. For that purpose, domestic and non-domestic market operators may be invited to apply to be designated as a NEMO. Under § 3 of the above provision, unless otherwise provided by Member States, regulatory authorities shall be the designating authority, responsible for NEMO designation, monitoring of compliance with the designation criteria and, in the case of national legal monopolies, the approval of NEMO fees or the methodology to calculate NEMO fees.

## Wholesale market parameters

Bulgaria has a diverse energy mix, including nuclear, thermal power plants and plants using renewables (hydro, wind, solar power plants and biomass).

Total installed capacity of all electricity generation types, including RES in the country in 2015 was 12 710 MW. Available generation capacity (without RES generators) to the annual maximum amounts at 10 363 MW, RES generators being excluded from the available generation capacity as their generation is intermittent and difficult to forecast and dispatch. Absolute maximum load was realized on 8 Jan at 7 p.m. (7100 MW) and the absolute minimum load was realized on 10 May at 5 a.m. (2 759 MW).

Installed capacity by types of plants and generalized types of plants is shown in Figure 1.



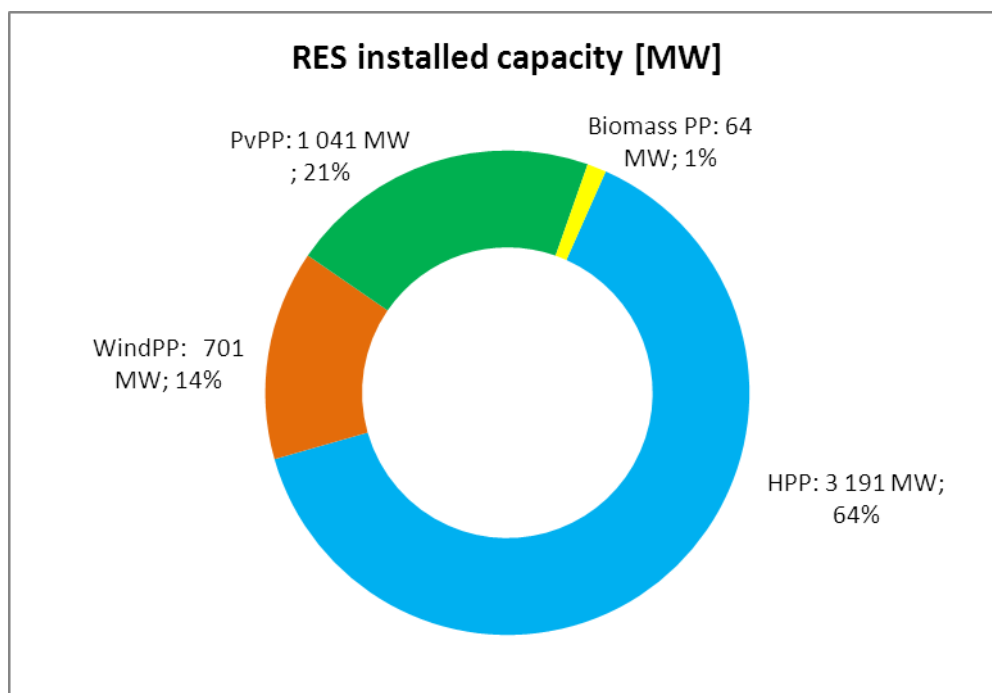
*Fig.1 Installed capacity by types of power plants in % according to ESO EAD data*

As it could be seen from the information presented, the largest share in the overall structure of the installed capacity in the country was that of the conventional thermal power plants - 44.89 % and the share of energy generated from renewable sources (hydro, wind, solar power plants and biomass) in the total production in the country reached 39.37 %.

Total installed capacity of wind energy in 2015 amounted to 701 MW, with an annual production of about 1 468 304 MWh. In 2015 the installed capacity of photovoltaic (PV) plants was about 1 041 MW and production of 1 391 429 MWh. In 2015 the installed capacity of power plants fuelled with biomass was about 64 MW and production of 206 291 MWh.

RES installed capacity structure is presented in Figure 2 below:





*Fig.2 RES installed capacity by types of power plants in % according to ESO EAD data*

Annual gross generation in the country during the reporting period (2015) amounted to 47 399 203 MWh and annual consumption and own needs of power plants being 4 872 286 MWh.

Gross domestic electricity consumption in 2015 amounted to 38 TWh, with no significant change compared to 2014. Electricity generation from renewable sources covered 19 % of gross domestic consumption of electricity in 2015.

The significant growth in 2015 of power plants generating electricity from renewable energy sources caused significant changes in the generation-consumption EPS balance, for to secure this balance numerous curtailments and base load capacities turning on/off had to be done, which in turn influenced the respective plants efficiency and deteriorated the main facilities' technical characteristics.

According to the latest European Commission recommendations on the energy sector, renewables in recent years have been strongly supported by feed-in-tariffs. This fact has made possible the enormous growth of renewable energy in the energy mix, which is in line with environmental targets for 2020. However, this kind of support leads to deviations from price and market mechanisms and hence to distortions of competition in the sector.

In the submitted 10-year EPS development plan of the Republic of Bulgaria it is stated that in the period 2015-2024, a total of 2 212 MW new capacity is planned to be constructed, of which 1 489 MW RES. With the rapid penetration of renewables and lack of industrial load in the country, the need to curtail forcibly the NPP operational capacity in certain periods of the year, will increase. It is necessary to increase the Chaira regulation capabilities through the completion of Yadenitsa dam and the rehabilitation of Chaira PSHPP, Belmeken PSHPP, Sestrimo HPP and Momina klisura HPP, in order to manage the system, to execute real-time interconnection schedules and maintain security in compliance with the requirements of ENTSO-E (in the circumstances of reduced conventional power plants generation and increased RES generation). Yadenitsa acquired the status of a project of common interest in the energy infrastructure of the European Union.

Wholesale electricity market in Bulgaria in 2015 continued to be characterized by the presence of legal and contractual obligations of the Public Provider NEK EAD to buy electricity from generators at preferential terms, namely the long-term obligation to purchase electricity (between 12 and 20 years) at prices significantly higher than electricity prices market levels. Such obligations are long-term PPAs between NEK EAD and AES 3C Maritza East 1 Ltd. and Contour Global Maritsa Iztok 3 AD, and the imposed legal obligations of the Public Provider to purchase obligatory electricity from renewable sources and high efficient cogeneration. The existence of such contractual obligations for NEK EAD to buy energy at non-market prices, leads to the impossibility of that energy realization and is in contradiction with the competitive market conditions' requirements.

Notwithstanding the difficult market situation in 2015, commercial electricity export in 2015 was 14 697 489MWh, which is 54.7 % more than that in 2014. Coordinated and declared commercial electricity export from Bulgaria carried out by market participants in 2015 was 10 562 401 MWh, which represents an increase of 11% compared to 2014, when those exports were 9 501 994 MWh.

Electricity generation, consumption and export development is presented in the table below:

<i>Index</i>	<i>Year</i>			
	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>2015</i>
<i>Gross output fed into transmission grid from PP, MWh</i>	45 230 601	41 072 730	44 559 309	47 399 203
<i>Consumption and own needs from PP, MWh</i>	4 693 527	4 306 159	4 718 268	4 872 286
<i>Net generation fed into transmission grid, MWh</i>	40 537 074	36 766 571	39 841 041	41 203 399
<i>Physical import</i>	2 352 570	3 350 387	4 319 338	4 232 600
<i>Total generation fed into transmission grid, MWh</i>	42 889 644	40 116 958	44 160 379	45 436 161
<i>Losses in transmission grid, MWh</i>	915 823	884 604	953 325	935 256
<i>Withdrawn energy from transmission grid, MWh</i>	41 973 821	39 232 354	43 207 054	22 892 187
<i>PSPP consumption, MWh</i>	1 103 094	1 057 064	813 789	748 281
<i>Physical export, MWh</i>	10 660 167	9 530 934	13 774 537	14 697 489
<i>Consumption from transmission grid, MWh</i>	30 210 560	28 644 357	28 618 728	6 910 846

**Table 2. Source: ESO EAD**

*PP – power plant*

*Physical import – actually imported power from neighbouring countries into Bulgaria*

*Physical export – actually exported power from Bulgaria into neighbouring countries*

Number of customers connected to the transmission network that have switched electricity supplier as of 1 Jan 2016 was 165.

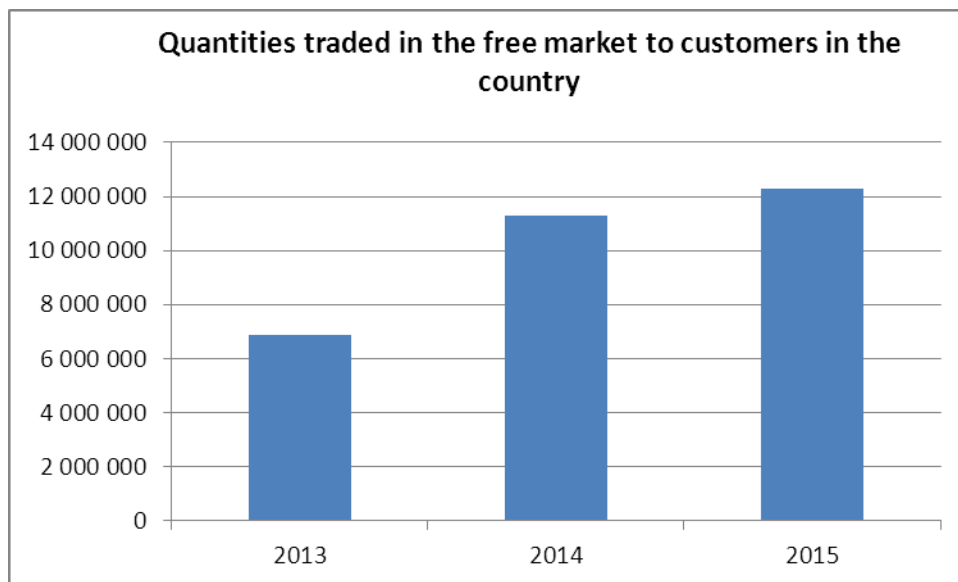
As of December 2015, 27 standard balancing groups, 13 special and 13 combined balancing groups have been registered. End consumers that have changed their supplier were 13 400.

In 2015 the Regulator has licensed 18 new companies for the activity “electricity trading”, bringing the total number of licensed traders to 144.

The sales of generators at hourly schedules in 2015 were: Kozloduy NPP - 13 162 358,424 MWh; TPP Maritsa Iztok 2 EAD – 8 153 740,444 MWh; TPP Bobov Dol EAD – 1 903 090,077; Contour Global Maritsa Iztok 3 AD - 4 696 027,717 MWh; AES 3C

Maritza East 1 EAD - 3 329 446,850 MWh and TPP Maritsa 3 AD - 13 351,416MWh. Largest sales to end customers in the standard balancing groups have been registered by the following coordinators: CEZ Trade Bulgaria EAD -9.62% of total sales, EVN Trading South East Europe EAD - 7.14% of total sales and Energy Financial Group AD -6.89% of total sales.

In 2015 quantities traded in the free market to consumers in the country were 12 289 376.75 MWh compared to 11 291 383 MWh in 2014. Export quantities were 10 562 401 MWh. The total quantity marketed by generators at freely negotiated prices was 24 808 706.23 MWh.



*Fig.3 Quantities traded in the free market to customers in the country*

In view of the above, it could be noted that electricity market in the Republic of Bulgaria is national and well integrated with the neighbouring countries. At this stage of domestic and regional electricity market development, the transmission network in the country does not have major problems with congestion in the electricity system, including the cross-border transfer capacities.

Electricity trade with neighbouring countries is in accordance with the European rules and bilateral agreements and Auction rules for cross-border exchanges and electricity trading. The latter refers also to coordination of interconnection transfer capacities between the Bulgarian transmission network operator and the neighbouring transmission system operators.

Cross-border transmission capacity on the interconnections is allocated by the Auction Operator in the form of CTR. The Auction Operator calculates and allocates the transfer capacities in line with the norms and rules of (ENTSO-E).

### **3.2.1.1. Monitoring the level of prices, the level of transparency, the level and effectiveness of market opening and competition**

#### *Market monitoring*

EWRC powers regarding regulation of activities in the electricity sector is regulated mainly in art.21 of EA. Most important of them, which concern market monitoring, include the power to:

- monitor the implementation of all measures adopted to fulfill the public service obligations, including protection of energy services users and protection of the environment, and their possible effect on national and international competition;

- monitor and control the compliance of transparency obligations of the energy companies in terms of pricing, accounting and work with energy services users;
- monitor the level and effectiveness of market opening and competition at wholesale and retail markets and monitor energy market coupling with other countries - members of the European Union;
- perform control on the transit process of market at regulated prices to organized market at freely negotiated prices, in accordance with EMR;
- monitor the announcement and fair allocation of the available networks capacity among all users.

EWRC powers related to the monitoring process are defined and listed in Chapter Eleven - Electricity Market Monitoring of EMR and include: objectives of Market Monitoring; Information provided to the Commission by the trading participants; Information provided to the Commission by the electricity system operator; Analysis and assessment of the electricity market efficiency; Market Monitoring results.

### *Market transparency*

In conjunction to Art.9, para.2 of Regulation (EC) 1227/2011, EWRC implemented a national register of market participants in a given by ACER format. The register shall give each market participant a unique identifier and shall contain sufficient information to identify the market participant, including relevant details relating to VAT identification number, registered office and person responsible for its operational and trading decisions.

Registration of market participants by EWRC is done via the application Centralised European Register of Energy Market Participants (CEREMP), created by ACER (<http://www.dker.bg/newsbg.php?n=2655>). The information necessary for registration is determined by ACER Decision № 01/2012. Market participants' registration in CEREMP done by EWRC was opened in March 2015. As of end 2015 the national registry has successfully registered 51 market participants in CEREMP system and all have received ACER code. In early October 2015 the reporting obligation in accordance with art.6, paragraph 1 of the Commission Implementing Regulation № 1348/2014 implementing art. 8, paragraphs 2 and 6 of REMIT started, according to which market participants shall report details of wholesale energy products executed at organised market places including matched and unmatched orders to the Agency through the organised market place concerned, or through trade matching or trade reporting systems.

### *Market surveillance*

Much of the information required by ACER is centrally available in the transmission network operator and the power exchange. The transmission network operator should be able to provide all the basic data relating to market monitoring.

In order to implement their license obligations, IBEX and ESO EAD together with EWRC in 2015 actively participated in preparing the implementation of various market monitoring and surveillance obligations. IBEX and ESO EAD are obliged to report to EWRC, at least cases of suspicious market participants' behaviour, market problems, incidents or disputes.

## **3.2.2. Retail markets**

Electricity market in the country operates by a model where part of electricity sales are concluded at regulated prices approved by EWRC and the rest is traded in the liberalized

market at freely negotiated prices between market participants. According to EA, participants in transactions in the liberalized electricity market are generators, traders, suppliers of last resort, a power exchange operator and end customers.

EWRC keeps on its website a list of all licensed electricity traders and their addresses for correspondence.

Since 1 July 2007 Bulgarian electricity market is fully liberalized, this means that every user has the legal right to choose a supplier and free and equal access to the electricity transmission network to the consumption point. The established market model is based on regulated third party access to the network, where transactions are carried out through direct bilateral contracts between generators or traders users; missing quantities are bought and surpluses under bilateral contracts are sold in the balancing market. In the transitional period of gradual liberalization and in parallel with the free market segment, where prices are freely negotiated between parties to a transaction subject to balancing, still a segment of electricity transactions at regulated by EWRC prices exists.

Retail market segment in 2015 enlarged with the inclusion of electricity supplies to end customers connected to the electricity distribution networks at low voltage via introducing standardized load profiles, under the last amendment of EMR in November.

In 2015 a part of the customers were supplied at regulated prices and at this stage the number of customers connected to the low voltage distribution network that have changed their electricity supplier, significantly increased in 2015 and are most dynamic. The expansion of the electricity market at freely negotiated prices to small business customers is in accordance with the requirements of EA and Directive 2009/72/EC.

In line with EA, end suppliers supply electricity to household and non-household end customers connected to low voltage distribution network in the licensed relevant territory, when these customers have no supplies by another supplier.

In pursuance of the EA and the Ordinance on electricity prices regulation and by a decision of the Regulator, the following prices have been approved:

- access and/or transmission through the electricity transmission and distribution networks;
- prices of end suppliers selling to household consumers and small businesses connected to electricity distribution LV network.

Regulated by SEWRC prices of access and transmission for the electricity distribution companies under the Ordinance on electricity prices regulation, shall be set based on allowed by the Regulator revenue requirements for maintenance and operation of the relevant distribution network.

End prices paid by regulated market consumers include apart from the energy price the following network prices:

- price of access to the electricity transmission system;
- transmission price through the electricity transmission network;
- price of access to the electricity distribution network;
- price of transmission to the electricity distribution network, split into voltage levels – respectively MV and LV.

The implementation of long-term contracts between NEK EAD and AES Maritza East 1 EOOD and Contour Global Maritsa Iztok 3 EAD continued in 2015 as well.

To ensure customers supplies in the regulated market, EWRC sets electricity generation availability for generators by which the Public Provider shall purchase electricity, as well as

the electricity amounts, based on which the Public Provider shall conclude transactions with end suppliers. Electricity amounts purchased from generators at regulated prices, within a regulator-defined availability for each generator, are determined based on the principles of equality and transparency.

Regulated electricity price in the country is formed as a price mix of the different primary energy sources (nuclear, coal, RES and high efficient cogeneration). Electricity generated from renewables and high efficient cogeneration is purchased by the Public Provider under long-term contracts and feed-in-tariffs significantly higher than market levels. Costs related to legal and contractual obligations for the purchase of electric power are classified as “obligations to the public” and art. 35 of the Energy Act regulates the rights of energy companies to be compensated for costs incurred resulting from their obligation to purchase electricity at feed-in-tariffs from renewable sources, high-efficient combined heat and power plants and long-term contracts.

In view of the above, in March 2014, the Commission adopted a decision on the basis of Art.21, para. 1, item 6 of EA, requiring NEK EAD and the parties to the long-term PPAs - Contour Global Maritsa Iztok 3 AD and AES 3C Maritza East 1 Ltd., to begin negotiations amending the PPAs concluded on 13 June 2001, with the following minimum parameters: reducing the total energy cost from TPP AES - 3C Maritza East 1 by 30%, envisaging the energy from one of the units to be sold in the free market, respectively reduce the total energy cost from TPP Contour Global Maritsa East 3 by 20%, envisaging the energy from two of the units to be sold in the free market.

By Decision № P-223 of 22 June 2015 EWRC approved an agreement amending the power purchase agreement concluded on 13 June 2001 between NEK EAD and AES – 3C Maritsa East 1 EOOD. By a subsequent Decision № P-228 of 27 Aug 2015, the Commission approved an agreement amending the power purchase agreement concluded on 13 June 2001 between NEK EAD and ContourGlobal Maritsa Iztok 3 AD. The said agreements provide for a decrease of 14%, respectively 15% of the paid by NEK EAD availability price to the thermal power plants and it is expected these changes to lead to a reduction of stranded costs that are part of the public service obligations cost formation.

#### *Standardized load profiles (SLP)*

With the amendment of EMR in 2015 the terms and ways to develop and implement standardized load profiles have been regulated, thus creating conditions for access of household and small non-household customers to the free market. In this connection, a special Instruction has been developed on switching terms and conditions for the above mentioned customers, which is to facilitate at the utmost the free choice of a supplier and the transition to the liberalized market segment by only filling out a template application form. In 2015 EWRC asked the distribution companies to present developed load profiles.

Information on SLP provided by companies can be summarized as follows:

	<b>CEZ Distribution Bulgaria AD</b>	<b>EVN Bulgaria EAD</b>	<b>Energo-pro Grids EAD</b>
<b>1</b>	Household consumers	Household consumer, general profile	Household consumers
<b>2</b>	Non-household consumers	Non-household consumers, using electricity for heating	Non-household consumers
<b>3</b>	Street lighting	Non-household consumers with district heating, gas heating or alternative heating	-
<b>4</b>	-	Business general	-

5	-	Business with intense day consumption (08.00-18.00 h)	-
6		Business with intense evening consumption (18.00-22.00 h)	
7		Business with intense night consumption (18.00-08.00 h)	
8		Business with main activity oil product sales	
9		Street lighting, nonstop during all dark hours	

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

Regarding EWRC's power to contribute for the compliance of data exchange processes concerning the most important market processes on a regional level, guaranteeing also the necessary information confidentiality level, EWRC monitors whether limiting contractual practices and provisions for exemption exist, which may set an obstacle for non-households to conclude contracts simultaneously with more than one supplier or to limit their choice of suppliers. Key principles underlying EWRC activities in fulfilling the regulatory powers of the Commission are prevention and avoidance of limitation or violation of competition in the energy market, as well as balancing the interests of energy companies and consumers.

In exercising its powers, the Commission analyses the performance of controlled energy companies, in order to create an environment preventing monopoly abuse and limiting/violating energy market competition in Bulgaria. To that end, EWRC has the right to inform the Competition Protection Commission, which in turn reviews the information and on a case by case basis may start a procedure under the Competition Protection Act.

OLAES provides for another important power and obligation of EWRC related to the issuing of a license and/or a permit or consent. If in the course of administrative proceeding, a need of permit by CPC is identified, the energy regulator suspends the proceedings, informs the applicant and notifies CPC on starting a procedure under the Competition Protection Act. Only after the entry into force of the CPC decision, EWRC renews the proceedings on issuing the respective administrative document.

In addition, in exercising its powers for giving consent of licensees' transformation, permitting transactions, and management of unfinished construction site or property, or permission for pledge/mortgage on a property which is involved in licensing operations, EWRC has the right to require CPC opinion on the specific case before making a decision or issue a permit.

Under the Energy Act, electricity transmission or distribution energy enterprises, which provide a service of public interest and have dominance on the market within the meaning of the Competition Protection Act, comply with the provisions of this act, unless it thwarts actually or legally the performance of their obligations.

EWRC continuously monitors the market in view of guaranteeing equal treatment among all market participants, as well as among the participants belonging to one and the same group and contributing to the effective competition and correct market functioning. In this regard, EWRC applying its controlling functions performs scheduled inspections of energy companies, as well as unscheduled inspections on submitted complaints and signals.

Concerning its controlling powers, EWRC is in close cooperation with the Consumers Protection Commission, and with a range of other non-governmental organizations for consumer protection likewise.



### **3.3. Security of supply (if and in so far as NRA is competent authority)**

#### *Implementation of safeguard measures under Article 42 of Directive 2009/72/EC*

According to art.4 para.2 item 4 and 5 of EA, the Minister of Energy determines by an order mandatory indicators of the electricity supply reliability level, including measures for their implementation, and defines the necessary new generation capacities and promulgates an inventory listing these capacities in State Gazette.

Given the established regional cooperation and operational arrangements for the coordinated allocation of cross-border capacity with neighbouring system operators, as well as the agreed mutual support at emergencies, the safe and reliable operation has been ensured both in the internal and external electricity markets.

#### **3.3.1. Monitoring balance of supply and demand**

In pursuance of EA, ESO EAD elaborates short-term and long-term forecasts and electricity system development plans aiming the provision of electricity balance in the country. Based on forecasts and plans, ESO EAD provides to the Minister of Energy an electricity balance draft paper and a list of the needs for the country resources, including the needed new generating capacities and interconnection lines.

At this stage of domestic and regional electricity market development, the electricity transmission network of the country does not face significant problems related to security of supply and congestions in the electricity system, including cross-border transfer capacities. As a result of the considerable increase of RES electricity capacities in the country in 2015, mainly solar and wind power, some difficulties occurred regarding their balancing.

## **4. Natural gas market**

### **4.1. Network regulation**

In exercising its regulatory powers EWRC is guided by the following principles: ensuring a balance between the interests of energy companies and customers; ensuring equality between different categories of energy companies and among various customers' types; creating incentives for the development of a competitive energy market and where conditions exist.

#### **4.1.1. Unbundling**

In pursuance of the amendments of EA, effective as of 17 July 2012, Bulgaria has chosen the Independent Transmission Operator's model, where the transmission operator together with the network assets are separated into an individual legal entity within the vertically integrated undertaking, being the most effective solution for ensuring non-discriminatory access to the gas networks and guaranteeing transparency and efficiency of the TSO's activities.



Bulgarian Energy Holding EAD (BEH EAD) owns 100% of the capital of the gas companies' group including Bulgargaz EAD and Bulgartransgaz EAD. Bulgartransgaz EAD is an independent entity within the vertically integrated undertaking. It owns the assets used for the activity "natural gas transmission" including the gas transmission network; the company has its own identity, separate headquarters, staff and uses separate equipment and legal, accounting and information services. Bulgartransgaz EAD has all the human, technical, physical and financial resources necessary for natural gas transmission activity performance. The company has the right to take decisions independently of the vertically integrated undertaking, with respect to the assets necessary to operate, maintain or develop the transmission network, as well as powers to propose binding for the general assembly decisions on raising funds in the capital market through borrowing increased capital. The activities of the transmission network operator Bulgartransgaz EAD are unbundled legally, functionally and financially from the other activities of the vertically integrated undertaking.

Given the fact that the unbundling requirements of Directive 2009/73/ EC, Regulation (EC) № 715/2009 and Chapter Eight, "a" of EA have been met, EWRC by Decision № C-4 of 22 June 2015 certified Bulgartransgaz EAD as an independent transmission operator (ITO) of the transmission system in Bulgaria and by Decision № C-6 of 5 Nov 2015 EWRC designated the same as Bulgarian ITO. The last decision was notified to the European Commission and the notification was published in the Official Journal of the European Union, issue C 428 of 19 December 2015.

#### **4.1.2. Technical functioning**

Bulgartransgaz EAD is a combined operator performing the activities of natural gas transmission and storage. The company holds licenses № JI-214-06 and № JI-214-09 of 29.11.2006 for the activity "natural gas transmission" and license № L-214-10 of 29.11.2006 for the activity "natural gas storage". Bulgartransgaz EAD is the operator of the:

- national gas transmission network on the territory of Bulgaria transporting gas to the natural gas distribution networks and business customers;
- transit gas transmission network for gas transportation through Bulgaria to the neighbouring countries of Romania, Turkey, Greece and FYROM;
- underground gas storage facility Chiren (UGS Chiren) for the storage of natural gas primarily intended to cover seasonal fluctuation in demand and to ensure natural gas security of supply.

The transmission network operator ensures the unified management and reliable operation of the gas transmission network; the transmission via gas transmission network and its metering; the maintenance of gas transmission network facilities and equipment in accordance with the technical and safety requirements; the transmission network development in accordance with long-term forecasts and gas supply development plans and beyond them, where economically justified and ancillary networks maintenance and development. In order to ensure reliable, safe and efficient operation of its natural gas transmission networks and associated facilities and reliable transmission, Bulgartransgaz EAD performs its activities in accordance with the regulations, technical norms, applicable standards in this area and safety work rules, respecting European rules on environmental protection and transmission system development plans. Bulgartransgaz EAD by its Central Dispatching Division provides unified management, reliable operation and transmission of natural gas transmission system and its metering in compliance with the quality requirements.

To ensure the security and reliability of gas networks operation the independent transmission operator performs preventive activities in the gas transmission networks and related facilities.

The transmission system operator shall prepare a schedule of planned repairs and reconstruction of gas networks facilities, which contains data on the type of repairs, their expected duration, as well as alleged restrictions on natural gas transmission. The transmission system operator develops emergency situations procedures as well.

TSO provides preventive actions in time of accidents and emergency situations. To this end, it develops and implements an emergency plan for carrying out rescue and emergency recovering works in case of disasters, accidents and catastrophes, which is consistent with the Emergency Situations Action Plan approved by Order of the Minister of Energy – the competent authority under Regulation (EU) № 994/2010. In the event of crisis situations when the of transmission networks modes are disrupted, the operator acts according to the said Plan, developing and coordinating the regime schemes of the network operation, reporting and analyzing all entry-exit boundary conditions (bids, pressure, volumes, etc.), the gas transmission networks status (effective configurations), weather forecast, neighboring transmission systems status and inertness degree. It also manages the technological process, maintaining readiness for emergency notification and emergency situations in Central Dispatching Division, operating regions, compressor stations and the underground gas storage facility.

In pursuance of Art.81d of EA and art.22 of Directive 2009/73 /EC the transmission network operator has developed the Ten-year network development plan for the period 2015-2024, following consultations with stakeholders. The Plan is consistent with the upcoming changes in production, consumption and exchanges with other countries. Investment plans for regional networks and networks within the European Union have been taken into account. In the Plan Bulgartransgaz EAD has foreseen investments in gas transmission infrastructure. The Plan contains all the investments that have been decided to be performed and the new investments to be made over the next three years, as well as a timetable for the investment projects implementation.

Bulgartransgaz EAD performs the transmission system and gas market balancing in accordance with Regulation (EU) № 312/2014, via the NGMR and the approved by EWRC's decision interim measures: an alternative to a balancing platform (according to art.48 of the Regulation); a temporary imbalance charge (pursuant to art.48 of the Regulation) and a tolerance (according to art.50 of the Regulation).

EWRC exercises control over the activities of the independent transmission operator and the distribution system operators in terms of compliance with the adopted by the Commission:

- Ordinance № 4 of 5 Nov 2013 on natural gas transmission and distribution networks connection;
- Natural Gas Transmission Networks Management and Technical Rules that regulate: the availability and operation of an information system, including all network elements, which shall be used to manage sites/facilities, to collect and archive data, to analyse the status, to test modes, etc.; the natural gas quality and determining its quality parameters; technical conditions for the safe and reliable operation of the gas transmission operator networks; technical conditions for the natural gas amounts metering; technical rules on the operational management – centralized operational management, coordination and control of the gas transmission network operational

regime; operational networks technical rules in the event of gas transmission limitation or interruption; technical rules on gas transmission networks connection;

- Rules on Natural Gas Distribution Networks Management that regulate: relationship between the gas distribution system operator and the gas transmission system operators, network users, customers connected to the grid; other natural gas undertakings; stages of planning, construction and development of the gas distribution network, its work organization, operation and service, its operational management, connection of consumers and providing additional services; information access provision requirements about the gas distribution network and informational coordinating procedures between the gas distribution network operator and network users; description of services provided by the gas distribution network operator; gas distribution network customer connection procedures and switching of a supplier; gas distribution network operational regimes management; regulation and metering facilities realization, maintenance and decommissioning; natural gas metering; services commercial quality; gas distribution networks and customers gas installations safety; natural gas quality; energy efficiency enhancement activities.

The Commission requires from all licensees information and performs an ongoing review on the number of interruptions, duration of interruptions, number of complaints, complaints response time and time to correct errors in measurement and others.

#### **4.1.3. Network and LNG tariff for connection and access**

The adopted by EWRC Methodology on pricing natural gas access and transmission in gas transmission networks, owned by Bulgartransgaz EAD contains the terms and conditions on access and transmission pricing of natural gas through the national and transit transmission networks, owned by the company. The Methodology shall be applied for access and transmission pricing of natural gas through any of the transmission networks or transmission system. The Methodology ensures the pricing model on entry points/areas and exit points/areas separately, complying with the transparency pricing principles; price application in non-discriminatory manner to users of the respective networks; taking into account the need for integrity of the networks and their improvement; the reflection of actual costs required for the provision of natural gas transmission services and to include economically justified return on existing assets and new investments. The Methodology introduces price formation under “revenue cap” regulation.

The independent transmission operator applies "entry-exit" tariff model in terms of pricing of gas transmission network access and transmission. The costs allocation mechanism (respectively the approved annual revenue requirements) at entry points / areas and exit points / areas ensures non-discriminatory pricing that reflects costs and facilitates efficient gas trade and efficient use of gas transmission networks, while preventing cross subsidies between network users.

EWRC regulates the price formation of access and storage of natural gas storage facilities in compliance with EA, Ordinance № 2 of 2013 on natural gas prices regulation (ONGPR, Prom SG No.33 of 2013) and Guidelines on pricing access and storage of natural gas storage facilities, applying "rate of return on capital" regulation. Gas access and storage prices, which the operators of gas storage facilities, respectively a combined operator, offer for one and the same service to different customers under equivalent terms and conditions, ensure compliance with the principle of non-discrimination to all network users and at the same time the special characteristics of the national market are taken into account.

In case non-household customers provide access and use of their own gas facilities to the gas distribution network operator, this could be done, according to EA, after signing a contract and at a price defined through methodology approved by the Commission.

Prices of the activities “natural gas distribution” and “natural gas supply by an end supplier” have been regulated under the “price cap” method, under art. 3 of Ordinance № 2 on natural gas price regulation. In relation to the adopted pricing method EWRC annually collects data on the licensed companies’ activities reports in terms of investment, network constructed, number of users and consumption and they are compared to the data in the approved business plans.

EWRC sets a target rate of return on equity for "natural gas distribution" and "natural gas supply by end supplier" and approves cost-formed tariff structures at the reasoned proposal of companies to divide customers into groups and subgroups according to similar characteristics of consumption and /or other status, for which the respective prices can be approved. Current tariff structures and prices paid by end customers of gas distribution companies are grouped according to the type of consumption (household and non-household), variable/invariable consumption and actual consumption.

EA and Ordinance № 4 of 5 Nov 2013 on natural gas transmission and distribution networks connection govern the obligation of the transmission network operator to connect to its network at a specific point distribution companies, mining enterprises and gas storage enterprises, as well as the requirement of distribution companies to connect customers on equal terms, respecting the networks reliability and safety technical requirements.

Under EA and ONGPR the Commission regulates connection prices of customers to the distribution networks, which are formed by customers groups according to the requested maximum capacity and pressure and the relevant eligible costs of the consumer group. Transmission and distribution network connection prices of extraction pipeline networks, gas storage facilities, liquefied natural gas facilities, production units of gas from renewable sources, distribution networks and non-household customers outside the above groups are individual and include the actual construction cost of connection facilities of the undertaking network.

#### **4.1.4. Cross-border issues**

Under EA art.170, para.1, item 9 the transmission system operator has the duty to provide sufficient cross-border capacity aiming the European gas transmission infrastructure integration, satisfying all economically feasible and technically realistic capacity requests, keeping in mind the observance of gas supply security requirements.

Pursuant to art.27, para.1 of Regulation (EU) 984/2013 TSOs apply the Regulation by offering capacity by one or a limited number of joint web-based booking platforms at interconnection points. In order to implement the requirements, in 2015 Bulgartransgaz EAD has started a public procurement procedure with subject “Commissioning and using of interconnection points capacity booking platform”.

In art.11, para.2 of the Rules on providing access to transmission and/or distribution networks and access to natural gas storage facilities, mechanisms have been provided as well for the available capacity allocation in each entry and exit point and for the network as a whole, as follows: proportional allocation, auction procedure and open inquiry (in case of a new gas infrastructure).

In 2015 no physical congestion was observed, either on national, or on cross-border level, since the transmission system project capacity is 8 billion m<sup>3</sup> and the actual annual consumption does not exceed 40% of the maximum projected consumption.

Pursuant to art.21, para.1 item 28 of EA, EWRC establishes cooperation on cross-border issues with regulatory authorities of other countries – EU Member states and with ACER and concludes cooperation agreements with NRAs.

In 2015 EWRC has carried out cooperation and consultation with the national regulatory authorities of Romania (ANRE) and Greece (RAE) in connection with the need to apply interim measures under Art.46 et seq. of Regulation (EU) 312/2014, proposed by the Bulgarian TSO Bulgartransgaz EAD and by the Romanian and Greek transmission system operators - S.N.T.G.N TRANSGAZ S.A. Medias and DESFA S.A., respectively.

Together with the Greek regulator RAE EWRC has approved the Updated guidelines for management and allocation of capacity on the IGB INTERCONNECTOR according to paragraph 6 of art. 36 of Directive 2009/73 / EC of the European Parliament and of the Council on common rules for the internal natural gas market - Phase I: Invitation to interested parties to express interest in reserving capacity and a draft Expression of Interest Phase Notice (December 2015) and its applications.

#### **4.1.5. Compliance**

The power of the Regulator under art.41, §1 d of the Directive is transposed in art.21, para. 1, item 31 of EA, namely to comply with and implement any relevant legally binding decisions of ACER and EC.

Regarding Bulgartransgaz EAD in its role as a certified independent transmission operator, EWRC's powers to regulate its activities are stipulated in art. 21, para. 3 of EA. EWRC monitors also the obligation' performance of the ITO compliance officer to supervise the compliance programme implementation and to submit quarterly reports and an annual report in order to indicate the measures taken. It is evident from the reports by the compliance officer received in EWRC in 2015 that there were no irregularities in the compliance programme implementation. In pursuance of Art.81d of EA, EWRC monitors and assesses the implementation of the Ten-year network development plan developed by the transmission network operator following consultations with stakeholders. The Commission shall examine whether the Plan covers all investment needs identified during the consultation process, and whether it is consistent with the TYNDPs in the European Union. When the ITO fails to execute an investment, which, under the TYNDP is to be executed in the following three years, EWRC has the power to require the operator to make the investments, in case they are still needed and to provide their reimbursement through the network services prices, unless the failure is due to compelling reasons beyond the network operator's control.

#### **4.2. Promoting competition**

Key gas market participants in the country are:

- Bulgartransgaz EAD – a combined gas operator, in charge of gas transmission and gas storage activities;
- Bulgargaz EAD – the gas public provider in Bulgaria, providing gas supplies at regulated by EWRC prices;
- Gas traders – concluding gas supply trades with the public provider, end suppliers, customers, other gas traders, extraction companies gas storage undertakings and with the combined operator;
- Gas distribution companies - combine the activities “natural gas distribution” and “natural gas supply by end supplier” by supplying natural gas to customers connected

to the respective distribution networks in the licensed territories. In this regard, Art.44, para.4 of EA is applied for these companies and according to it, entities with a natural gas distribution license shall not acquire licenses for other activities subject to licensing under the EA, except a license for natural gas supply by an end supplier, if connected to the gas distribution network customers in the same territory are less than 100 000. In Bulgaria there are no companies with more than 100 000 connected customers. At the end of 2015 the companies that carry out activities “natural gas distribution” and “natural gas supply by end supplier” were 25 and they exercise their activity on 35 licensed territories;

- Non-household customers connected to the gas transmission network;
- Non-household customers connected to gas distribution networks;
- Household customers connected to gas distribution networks.

Natural gas market in the country has been examined - imports and domestic gas production, main gas market players and natural gas consumption has been described. Information is presented on the transited natural gas amounts in the period 2000-2015, the transited natural gas amounts through the transit pipeline, as well as extracted and injected natural gas quantities in UGS Chiren in 2015.

#### **4.2.1 Wholesale markets**

Under the current “Energy Strategy of Bulgaria” and in accordance with Directive 2009/73/ EC and Regulation (EC) 715/2009, in 2015 gas sector in Bulgaria developed towards market liberalization.

In accordance with the main objectives of Directive 2009/73/EC of achieving a fully operational internal market with non-discriminatory access to the network and fair natural gas pricing, Bulgargaz EAD and Bulgartransgaz EAD have been transformed through unbundling into independent business entities. Thus the legal, functional and accounting separation of natural gas transmission and natural gas public supply has been realized.

Natural gas delivery and supply in the Republic of Bulgaria is carried out in a transmission network owned by Bulgartransgaz EAD and distribution networks owned by the respective distribution companies. In the transit gas pipeline owned by Bulgartransgaz EAD natural gas transmission is carried out to the territories of Greece, FYROM and Turkey.

“Natural gas public provision” and “natural gas supply by end supplier” under EA are activities of public interest and as such are carried out by licensed companies.

“Natural gas public provision” is performed by Bulgargaz EAD according to the issued by EWRC license for the activity “Natural gas public provision”. Natural gas for the needs of the Bulgarian market is provided mainly from Russia under a contract between the public provider and OOO Gazprom Export.

The local production share for the needs of the domestic market is negligible. In 2015 Bulgargaz EAD signed a contract to purchase natural gas from the local production company Petroceltic Ltd.

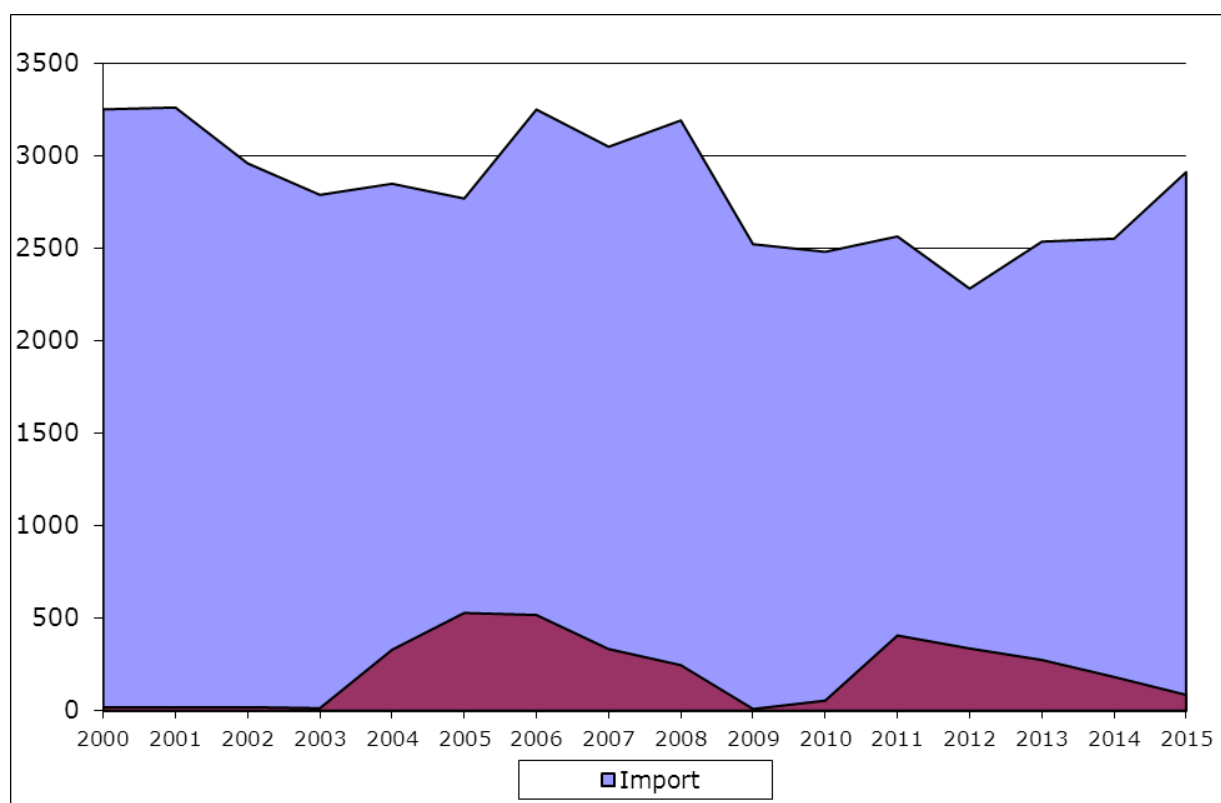
In 2015 natural gas supply to the Bulgarian market was realized by OOO Gazprom Export, Overgas Inc. AD (imports) and Petroceltic Ltd. and Oil and Gas Exploration and Production AD (local extraction).

In 2015 the public provider Bulgargaz EAD, natural gas traders of domestic production and one trader who imports and sells natural gas to distribution companies and end customers participated in the natural gas market.

Trends in the natural gas market in Bulgaria are presented in tables and graphs below:

#### Natural gas imports and local production for the period 2000 – 2015 in million m<sup>3</sup>

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Import	3250	3260	2958	2788	2848	2768	3249	3048	3190	2521	2480	2563	2281	2535	2551	2911
Local extraction	18	18	19	13	329	528	517	333	246	9	54	406	336	274	182	85
Total	3268	3278	2977	2801	3177	3296	3766	3381	3436	2530	2534	2969	2617	2809	2733	2996

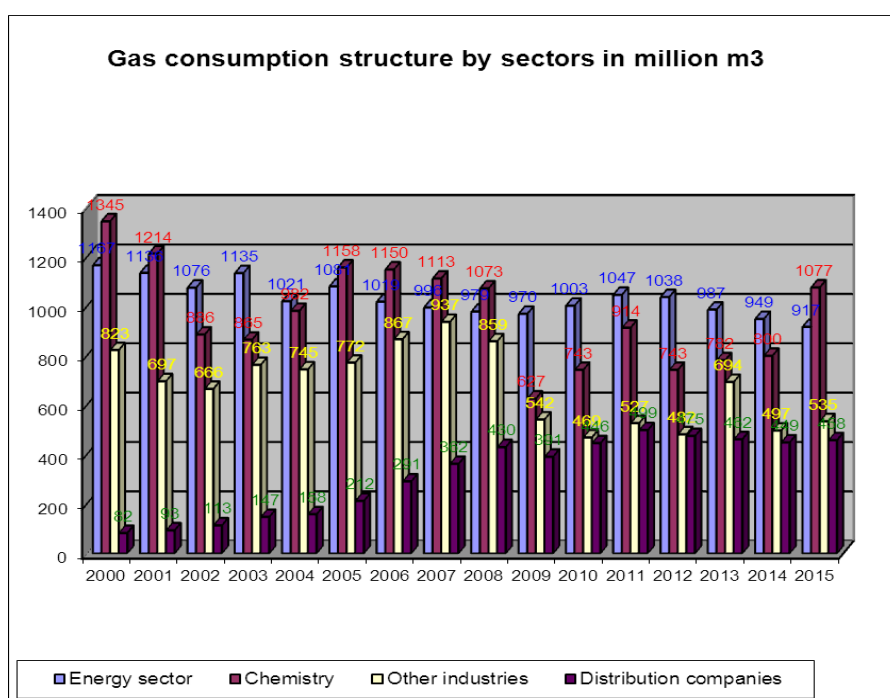


Quantities of realized natural gas in 2015 were 2 987 million m<sup>3</sup> and the consumption structure by sectors was the following:

- Energy sector – 917 million m<sup>3</sup> or 31 %
- Chemical industry – 1 077 million m<sup>3</sup> or 36 %
- Other industries – 535 million m<sup>3</sup> or 18 %
- Distribution companies – 458 million m<sup>3</sup> or 15 %

### Natural gas consumption structure by sectors in million m<sup>3</sup>

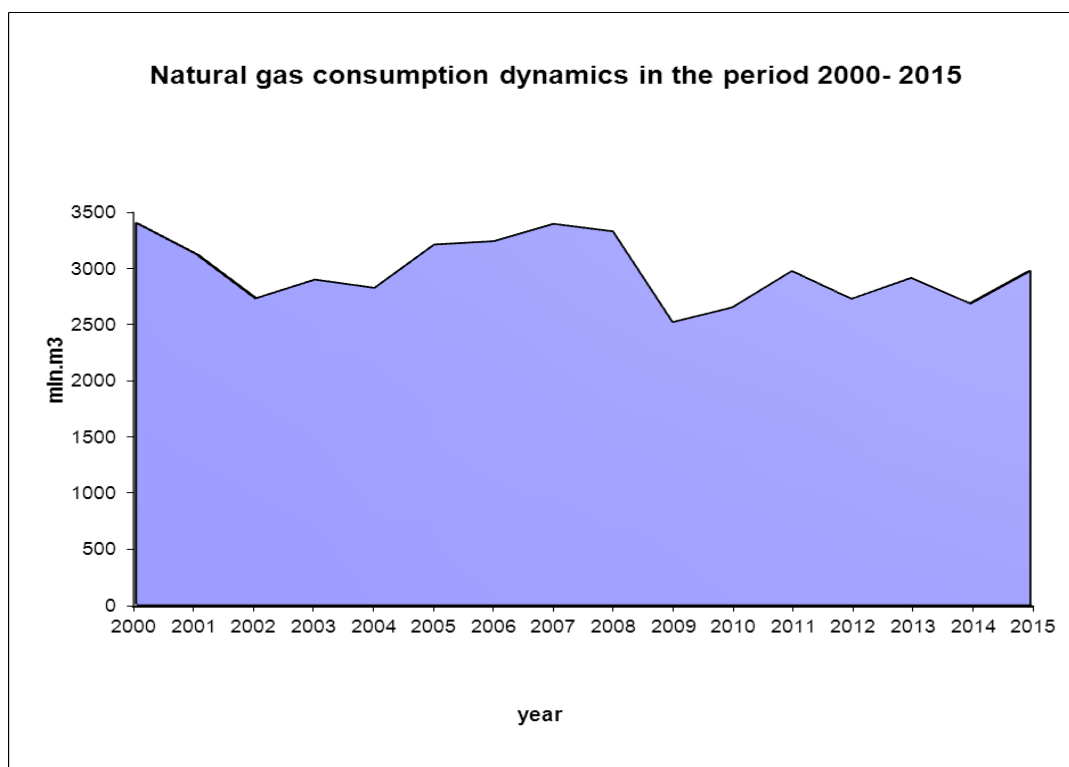
Year/ consumer	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Energy	1 167	1 136	1 076	1 135	1 021	1 081	1 019	996	979	970	1 003	1 047	1 038	987	949	917
Chemical industry	1 345	1 214	886	865	982	1 158	1 150	1 113	1 073	627	743	914	743	782	800	1077
Other industries	823	697	666	763	745	772	867	937	859	542	469	527	482	694	497	535
Distribution companies	82	93	113	147	158	212	291	362	430	391	446	499	475	462	449	458
Total	3 417	3 140	2 741	2 910	2 906	3 223	3 327	3 408	3 341	2 530	2 661	2 987	2 738	2 925	2 695	2987



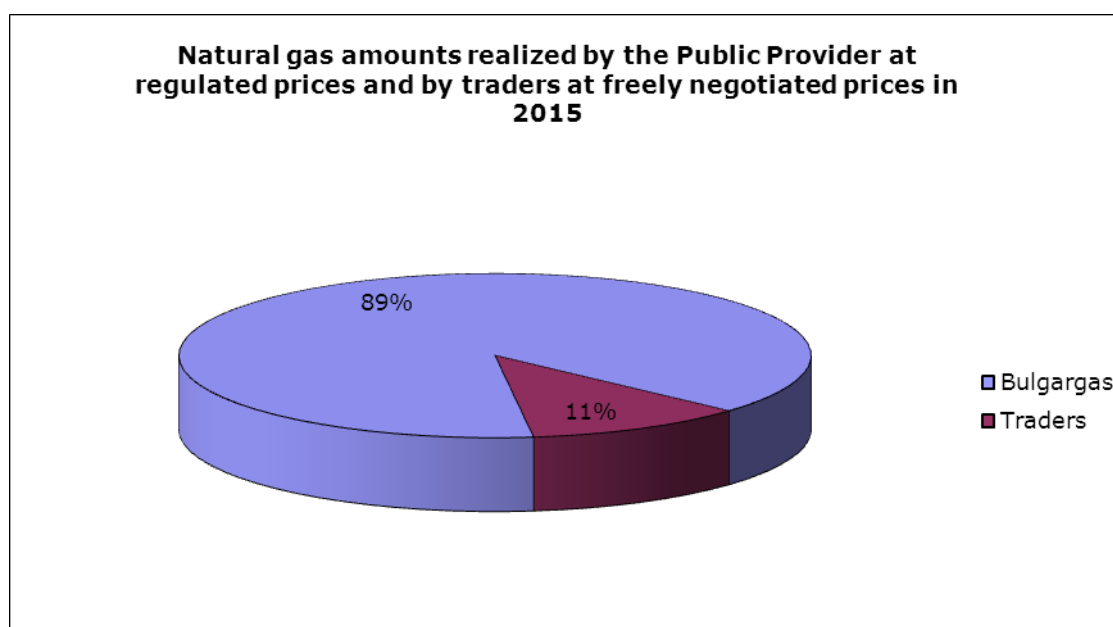
### Natural gas consumption dynamics in Bulgaria in the period 2000 – 2015 in million m<sup>3</sup>

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Consumption	3417	3140	2741	2910	2836	3223	3253	3408	3341	2530	2661	2987	2738	2925	2695	2987





Bulgargaz EAD sells natural gas at regulated by EWRC prices and the public provider share in the natural gas sale for 2015 was 89%. The remaining 11% were realized by traders at freely negotiated prices. The following chart presents the ratio of the natural gas quantity sold by the Public Provider (to customers and gas distribution companies connected to the gas transmission network) at regulated prices and by traders also to end customers and gas distribution companies, but at freely negotiated prices.



Under Art.180, para.1 of EA, every customer connected to the transmission or distribution network shall have the right to choose natural gas supplier. In 2015 three business users and the five gas distribution companies of the Overgas Inc. AD group took the benefit of that right. In the reported year no households have benefited that right.

### **Natural gas transmission in the national transmission network**

In 2015 the main users of the “natural gas transmission” service in gas transmission and distribution networks in the country were the public provider Bulgargaz EAD and Overgas Inc. AD. Natural gas supply to consumers in the Republic of Bulgaria is carried out mainly via the national gas transmission network, a complex facility consisting of 1835 km gas pipelines and high pressure gas branches, three compressor stations with total installed capacity 58 MW, gas regulation stations, metering stations, electrochemical protection systems, communication system, information system and other auxiliary facilities. The natural gas transmission network has sufficient capacity to meet current natural gas demand. Currently, about 40% of the system’s maximum technical capacity has been used. Natural gas transported in the national transmission network is provided by imports from Russia (approximately 97.4%) and local production (approximately 2.6%). There is an increase of 10.5% of transported natural gas quantities in 2015, compared to the quantities realized in 2014.

### **Natural gas transit transmission**

Bulgartransgaz EAD performs natural gas transit through the territory of the Republic of Bulgaria to neighbouring countries - Turkey, Greece and FYROM. Quantitative and qualitative analysis of natural gas inflows in the transit direction is performed in gas metering stations Negru Voda 2 and 3. The transmission of natural gas by transmission directions is realized respectively at Malkochlar GMS for Turkey, Strimonohori GMS for Greece and Zhidilovo GMS for FYROM.

The natural gas transit contract in the above directions was concluded in 1998 with OOO Gazprom Export and in Annex № 11 of 2006 the duration was extended until 2030.

There is a reduction of total transit volumes in 2015 (13.51 billion m<sup>3</sup>) compared to 2014 (14.82 billion m<sup>3</sup>) or 8.8% less. As it comes to the different directions of transited natural gas shares, a decrease in the transited gas in direction Turkey is observed, an increase in direction Greece and in direction FYROM quantities remain the same as previous year. Gas quantities transited were as follows: Turkey 11.39 bm<sup>3</sup> or 11.98% less compared to 2014 (12.94 bm<sup>3</sup>); Greece 1.98 bm<sup>3</sup> or 13.14% more than in 2014 (1.75 bm<sup>3</sup>); FYROM 0.14 bm<sup>3</sup> or no change compared to 2014 (0.14 bm<sup>3</sup>).

### **Natural gas storage**

Natural gas storage activity is performed in the only one in the country underground gas storage facility Chiren (Chiren UGS), owned by Bulgartransgaz EAD. Technological process associated with the natural gas storage activity is a seasonal (cyclical) one and represents injecting gas from/to the underground gas storage. In 2015, 288 million m<sup>3</sup> of natural gas were injected into the storage facility and 279 million m<sup>3</sup> were withdrawn. The main user of the storage service is the public provider

## **4.2.2. Retail market**

Natural gas delivery and supply in the Republic of Bulgaria is carried out in a transmission network owned by Bulgartransgaz EAD and distribution networks owned by the respective distribution companies. When regulating the prices for natural gas distribution and supply EWRC takes into account the characteristics of the market, including the fact that the needed natural gas distribution infrastructure in the country is still in process of construction and consumers connected to the natural gas distribution network are few. Household consumption is very low - 2.28 % of the total consumption in the country. In 2015 the main part of the natural gas realization was for industrial purposes - 97.72%.

EWRC applies a regulatory mechanism, which ensures incentives for the natural gas distribution enterprises to continue the development of the networks and the connection of new consumers aiming the increase of consumption. One of the incentives enhancing market competition is that EWRC approves marginal prices for the gas sale and the gas distribution companies have the right to sell to consumers at prices lower than the approved.

The Law does not require the issuance of a license for natural gas trade, thus giving a full freedom for traders and natural gas trade market is 100 % liberalized.

According to Art.176, para.1 of EA, extraction companies or natural gas traders on one hand and the gas public provider, the end suppliers, gas storage facilities operators, liquefied natural gas operators, natural gas traders or customers – on the other, conclude deals with natural gas at freely negotiated prices.

Under the provisions of EA and the Rules for providing access to transmission and/or distribution networks, all customers have the right to choose their natural gas supplier, which right is guaranteed in the licenses terms and conditions for the activity “natural gas supply by end supplier”.

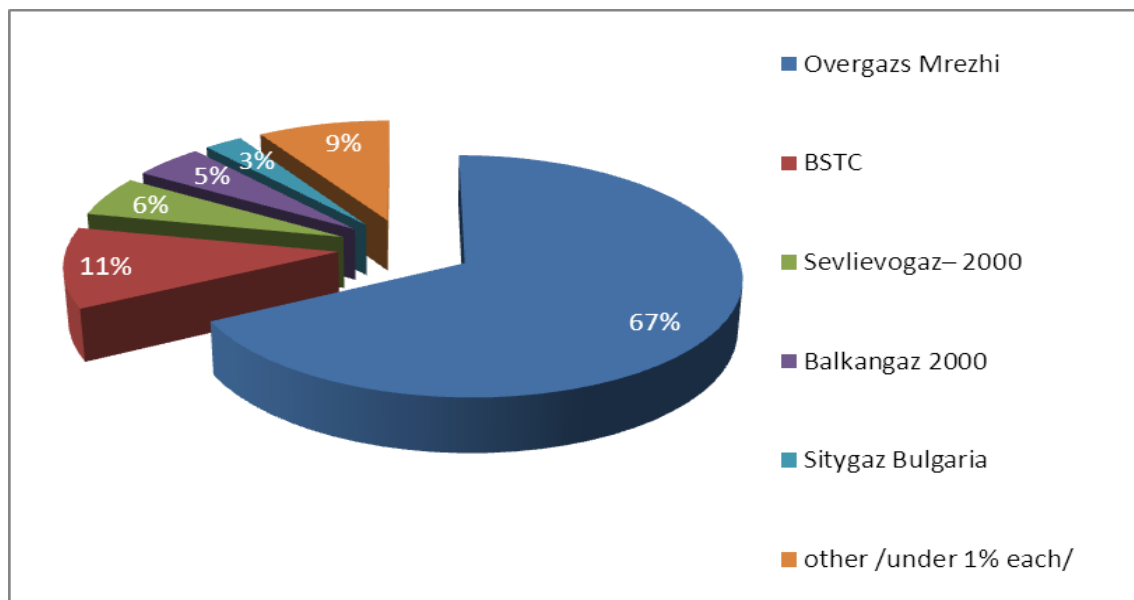
Monitoring the natural gas market stimulates retail competition. EWRC permanently monitors the market with the view to ensure non-discrimination between all market participants, as well as between participants of one and the same category and to promote efficient competition and proper market operation. Regarding the latter, when exercising its controlling powers, EWRC carries out scheduled inspections of the energy companies, as well as surprise inspections in case of filed complaints and signals.

The Commission monitors and inspects the gas distribution companies regarding the compliance of the set in their approved business plans parameters connected with their duties under the licenses for the activities of natural gas distribution and supply by end supplier. Gas distribution companies’ activity results for 2015 are given below:

Parameter	Constructed network for 2015	Investment 2015	Number of consumers (accumulative) as of 31 Dec 2015		Natural gas consumed, thousand norm m <sup>3</sup> 2015	
			Non-households	Households	Non-households	Households
Gas distribution companies	m	Thousand BGN				
<b>Total</b>	<b>110 256</b>	<b>17 943</b>	<b>6 263</b>	<b>75 357</b>	<b>397 515</b>	<b>67 730</b>

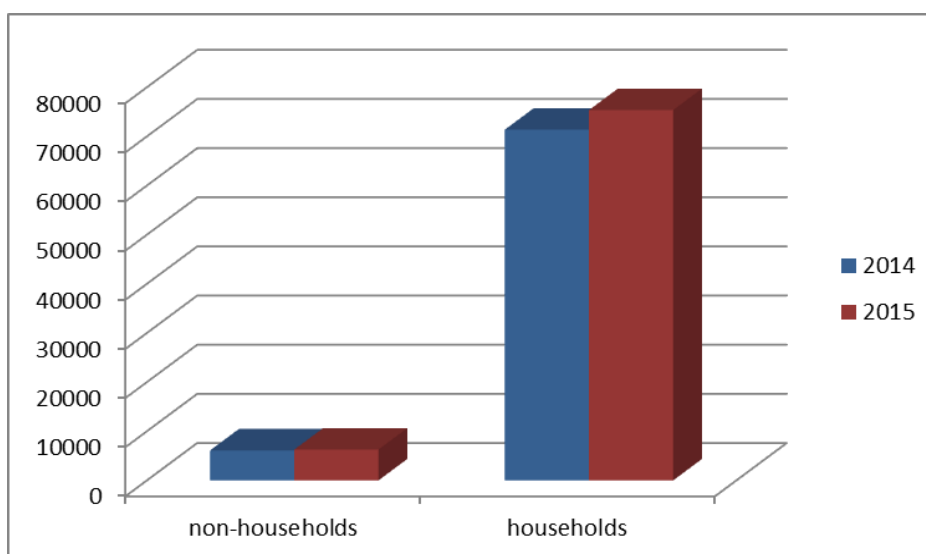
According to data of distribution companies, total number of natural gas customers in 2015 was 81 620, 75 357 (92%) of them - household customers and 6 263 (8%) non-household customers.

The breakdown of natural gas consumers by companies’ share in servicing them is shown in the graph below:



Overgaz Mrezhi AD serves most of the customers - 54 969, which is 67% of all natural gas consumers in the country, followed by Black Sea Technology Company AD - 11% and Sevlievogaz - 2000 AD - 6%.

The number of customers (household and non-household) of gas distribution companies in 2015 rose from 77 475 in 2014 to 81 620, which is more than 5% increase per year. The number of household customers increased by almost 6% and of non-household - almost 3%.



The relatively low rate of increase in the number of non-household customers during the year was mainly due to the almost fulfilled connection potential of non-household customers in the gas distribution network, which in late 2014 was over 80%. The increase potential of non-household customers is low, since non-gasified objects are mainly small and their transition to natural gas is estimated as inefficient, due to the very high initial investment. For the same reason, although with much higher potential, the household gasification development is slow and rapid increase in the potential fulfilment of the network cannot be expected.

#### **4.2.3. Recommendation on supply prices, investigations and measures to promote effective competition**

In the past 2015 the Bulgarian regulatory authority did not give any recommendations concerning the prices of the supplied natural gas. However, EWRC published information on the approved actual marginal prices, statistics and analyses.

The provision of Article 30, para.2 of EA stipulates that the prices of electricity, natural gas and services provided by energy companies are not subject to regulation by the Commission when the later finds out the existence of competition, which creates pre-conditions for the free negotiation of prices under market conditions for each energy sector activity. In this respect, as far as natural gas sector is concerned, pre-conditions for the existence of competition in the market are provided by the legislature through the provision of art.180, para.1 of EA: “Every customer connected to the gas transmission and/or gas distribution network may choose a natural gas supplier, regardless of the European Union member state in which the supplier is registered, provided the supplier complies with the rules under art.173, para.1 and the security of supply requirements”.

In line with art.181 of EA, natural gas contracts are concluded at regulated by the Commission prices for services of public interest regarding transmission, distribution and supply and at freely negotiated prices among the parties – prices outside the public interest services.

To achieve the existence of competition, which is a prerequisite for free negotiation of electricity and natural gas prices at market conditions, an effective market opening is needed, an establishment of a single EU natural gas market, which is in the interest of citizens and industry. This can be achieved through implementation of interconnection projects, which will enable natural gas supply from other sources and will increase competition and the possibilities to choose a supplier. The interconnection projects are a priority for Bulgaria and have significant influence regarding security of supply in the region.

#### **4.3. Security of supply**

Pursuant to art. 4, para. 2, item 4a of EA, the Ministry of energy is the competent authority concerning security of supply in the meaning of Regulation (EC) 994/2010. In line with art.72 a of EA, the Minister of energy, after consultations with natural gas companies and organizations representing household and non-household customers’ interests and with EWRC, implements at national level:

1. Preventive action plan containing the measures needed for the removal or limitation of the identified risks impact in compliance with the risk assessment.
2. Emergency action plan containing the measures needed for the removal or mitigation of natural gas supply interruption impact.

EWRC participates with its representatives in an interdepartmental working group established by the Minister of Energy, which updates these documents and the risk assessment in accordance with Art.5, paragraph 4, Art.9, paragraph 4 and article 10, paragraph 2 of Regulation (EC) № 994/2010 of the European Parliament and of the Council of 20 October 2010 concerning the measures to safeguard security of gas supply.

#### **4.3.1. Monitoring balance of supply and demand**

Natural gas supplies for the Bulgarian gas market in 2015 were carried out by: Gazprom Export OOO, Overgas Inc. AD and Petroceltic EOOD.

Since the beginning of 2013 Bulgargaz EAD has been purchasing natural gas on the basis of a new contract with Gazprom Export OOO. In 2015 Overgas Inc. AD, the second trader in the natural gas market continued to import and at the same time sells gas to distribution companies and end users. The local production share for domestic needs was provided by Petroceltic EOOD.

At this stage, natural gas supplies are made by one supplier (Russian Federation) in one route – through the territories of Ukraine, Moldova and Romania.

#### **4.3.2. Measures to cover peak demand or shortfalls of suppliers**

In the approved by EWRC Ten-Year Network Development Plan (TYNDP) of Bulgartransgaz EAD for the period 2015-2024 a scenario was presented regarding the capacity demand and resources to meet natural gas demand in Bulgaria for the period 2015-2024 and the following was considered: natural gas projected demand for a period of one year and day demand peak levels; sources to meet demand in the country accompanied by a forecast for 2015-2019; a demand forecast for cross-border transmission capacity in the infrastructure of Bulgartransgaz EAD.

Measures to safeguard security of natural gas supplies were described, including risk assessment and N-1 formula under Regulation (EC) № 994/2010, which describes the ability of the gas infrastructure technical capacity to satisfy total natural gas demand in the calculated area in case of disruption of the largest single gas infrastructure on a day with exceptionally high demand occurring with a probability of once in 20 years. In case of such disruption, the capacity of the remaining infrastructure should be able to deliver the necessary gas amounts in order to satisfy gas demand in the area. Two key scenarios have been developed to meet the requirements on infrastructure standard at N-1 formula, namely: a base scenario (existing and forthcoming to be put into operation since 01.01.2016) and a target scenario (construction and commissioning of projects of common interest, as well as new domestic extraction fields). Calculations with the base scenario illustrate that in case of disruption of the largest single gas infrastructure (from Russia through Ukraine), the capacity of the existing infrastructure is not able to deliver the necessary gas amounts to satisfy total gas demand in the territory of Bulgaria for a day of exceptionally high gas demand.

At the same time, the analysis shows that with the implementation of the PCI projects Bulgaria will fulfil the infrastructure standard by 2017. In order to achieve the infrastructure standard approved in the TYNDP of Bulgartransgaz EAD for the period 2015- 2024, several major projects have been envisaged - namely modernization of the national gas infrastructure, modernization of compressor stations by integrating low-emission gas turbine engines (turbo compressors) and projects for the construction of gas interconnections. Investments foreseen for the period 2015- 2024 shall facilitate to reach the following key objectives:

- Increasing and ensuring technical security, safety and reliability of the gas infrastructure and to comply with environmental protection requirements in order to meet the expected growing gas demand in the country and in the region, through: investments in reconstruction, rehabilitation and transmission networks' repairs, including investments in existing compressor stations, investments in existing linear infrastructure, investments in existing gas regulation and measuring stations and UGS

Chiren; investments in new facilities construction in addition to the existing infrastructure needed to increase the efficiency of operations; investment in ancillary infrastructure, including fibre network.

- Providing an opportunity for competitive market development and diversification of natural gas supply sources and routes, resulting in greater energy independence; enable local traders to access the gas at various prices and the possibility of creating a regional gas exchange, including spot market by building the facilities necessary to connect to the existing transmission infrastructure with future trans-European gas corridors South Stream and with Southern Gas Corridor projects - Trans-Anatolian pipeline (TANAP), Trans-Adriatic Pipeline (TAP), as well as other pan-European projects intended to provide diversification of natural gas supply sources and gas transportation routes to Europe; connection of the gas production network of extraction enterprises in the country; development and implementation of electronic systems to manage the activities;
- Ensuring the security of gas supplies to the country through: investments in interconnections to provide connectivity with other transmission networks; investments in the expansion of the underground gas storage, of the extraction and injection facilities and to increase opportunities for the storage of larger gas amounts;
- Natural gas access to new municipalities and new end users, which will contribute to improve the environment, the quality of life, energy efficiency and the realization of savings from cheaper fuel through: expansion of the existing gas network to new regions of the country; construction of new gas metering and gas regulating stations providing the opportunity for new end users or distribution networks to join the gas transmission network.

Other measures to cover peak demand or shortage of suppliers are:

- Network configuration, real gas flows, including possibilities of physical flows in both directions - there are possibilities for reverse physical flow of natural gas from Greece and Turkey (2.4 million m<sup>3</sup>/day in the event of complete Russian gas supplies interruption). Reverse flow from Greece was realized at the end of January 2009 gas crisis, based on signed agreement;
- Natural gas storage - the amounts stored in UGS Chiren are intended mainly for compensating the uneven consumption as well as for guaranteeing security of supplies in the event of deficit. Gas quantities stored as of 31.12.2015 was 238 million m<sup>3</sup>. In 2015 the injected quantities were 288 million m<sup>3</sup> and withdrawn – 279 million m<sup>3</sup>;
- Projects crucial to the process of liberalization, diversification of natural gas supply sources and routes and gas network development in the region, with a view to ensuring continuity and security of natural gas supply, are:

#### ➤ **Gas Interconnection Greece - Bulgaria**

Gas Interconnection Greece - Bulgaria (IGB) has been designed with the aim to transport natural gas between Greece and Bulgaria through connection of the national gas transmission network of Bulgartransgaz EAD in the vicinity of the town of Stara Zagora with the gas transmission network of DESFA S.A. near Komotini, Greece. The interconnection's length on the route Komotini-Dimitrovgrad-Stara Zagora is 182 km, 151 km on Bulgarian territory and 31 km in Greece. The designed initial capacity of the interconnector shall be 3 billion m<sup>3</sup> /y and the max up to 5.5 billion m<sup>3</sup>/y at a next stage (with the construction of a compressed station), IGB gas pipeline shall have pipeline diameter 32" (~813mm). The construction of sections to the area of the towns of Kardzhali and Dimitrovgrad on the territory of Bulgaria is envisaged. In Greece in relation to the development of the Southern Gas

Corridor, possibility to connect IGB with TAP and the gas transmission infrastructure of DESFA S.A. is foreseen too.

Natural gas interconnection Bulgaria-Greece is being realized by a mixed investment company ICGB AD with the participation of Bulgarian Energy Holding EAD (50 %) and the Greek investment company IGI Poseidon (50%). Co-financing has been provided by the “European Energy Programme for Recovery” in the form of grants for the project realization. A mandate has been signed with the European Bank for Reconstruction and Development to start negotiations of financing the construction phase. Interconnection Greece - Bulgaria is a project included in the list of Projects of common interest, published by the European Commission in November 2015 under Regulation (EU) № 347/2013. The Interconnector is expected to be completed in 2018.

By Decision № Y-2 of 27.11.2015 EWRC approved Updated Guidelines for the management and allocation of interconnection capacity of the gas interconnection Bulgaria - Greece (IGB) according to art.36 of Directive 2009/73/EC - Phase I - Invitation to stakeholders to express interest in reserving capacity. Draft Notice of participation in Phase I expression of interest (December 2015) with its annexes were approved by the Commission with Decision № Y-3 of 10 Dec 2015.

#### ➤ **Gas Interconnection Bulgaria - Romania**

The reverse interconnection aims to connect the national transmission networks of Bulgaria and Romania. It has total length of 25 km, 15.4 km of which in the territory of the country, 7.5 km in the territory of Romania and 2.5 km underwater Danube river. The envisaged maximum capacity is 1.5 billion m<sup>3</sup> (direction from Bulgaria to Romania) per year and the minimum – 0.5 billion m<sup>3</sup> (direction from Romania to Bulgaria) with pipeline diameter Dn 500 mm and operational pressure Pn 54 bar. The project is divided into three parts: area under the Danube river, terrestrial part on Bulgarian territory and terrestrial part on Romanian territory. Ground part of the pipeline located on Bulgarian territory is already built. There is an optical cable into the river. It is envisaged for the pipeline to be put into operation in 2016, after completion of construction works related to the construction of the base section under the Danube river.

With the project finalization natural gas delivery from Romania will be possible, as well as natural gas transmission to Romania using the planned new entry points with Turkey and Greece and the significant free capacity of the transmission network. The project is being realized jointly by Bulgartransgaz EAD and S.N.T.G.N. Transgaz S.A. under a Memorandum of understanding of 1 June 2009. Under Decision C (2010) 5962 of 06 Sep 2010 of the European Commission the two companies been awarded a grant under the European Energy Recovery Programme (EERP) at the amount of 8 929 000 Euros.

#### ➤ **Gas Interconnection Bulgaria - Serbia**

Interconnection reverse pipeline is designed to be a reverse one and to connect the national gas transmission networks of Bulgaria and Serbia. According to preliminary technical information the route Sofia - Dimitrovgrad - Nish is about 150 km, of which 61.6 km on Bulgarian territory, and the connection point of the pipeline to the gas transmission network of Bulgartransgaz EAD is in Novi Iskar area. Projected annual minimum capacity is about 1.8 billion m<sup>3</sup> and the maximum is 3.2 billion m<sup>3</sup>. The expected construction commissioning term is the end of 2018.

The project is implemented by the Ministry of energy, as a beneficiary under a procedure of direct grant under the Operational Programme “Development of the Competitiveness of the Bulgarian Economy 2007 - 2013” for activities included in the first



phase of the project. A procedure for obtaining funds for the second phase of the project has been launched and construction will be implemented and financed by the Operational Programme “Innovation and Competitiveness 2014-2020”. Realization of the project shall enable the gas transmission to Serbia using the planned new entry points with Turkey and Greece and the significant free capacity of the transmission network. Concurrently, in crisis situations the interconnector can be used for gas supplies from Serbia.

The Interconnection is one of the Bulgarian gas projects included in the list of Projects of common interest, published by the European Commission in November 2015 under Regulation (EU) № 347/2013.

#### ➤ **Gas Interconnection Bulgaria - Turkey**

The system interconnection development project for connection of the gas transmission networks of Bulgartransgaz EAD and Botash C.A. – Turkey will provide an opportunity for diversification of natural gas supply sources and routes. ITB is a new overland pipeline with a length of about 200 km (approximately 75 km of which on Bulgarian territory), with a capacity of 3 billion m<sup>3</sup>. The estimated timeline for the construction and commissioning of ITB is 2020.

The project, as part of the priority Southern Gas Corridor is a key one in term of security and diversification of natural gas supply sources and routes to/through Bulgaria and the region. Its implementation is directly linked to the achievement of the necessary conditions for creating a competitive gas market, an increase of the systems flexibility and market integration. ITB can provide access to all current and future entry points and sources of Turkey - Azerbaijan and other natural gas and LNG spot deliveries from existing terminals in Turkey.

The Interconnection is envisaged to be constructed as a further development of the existing system connection between Bulgartransgaz EAD and Botash C.A. – Turkey by creating a possibility for reversibility conditions applicable depending on market interest. The currently reviewed Interconnection Bulgaria - Turkey working route in the territory of Bulgaria is Lozenets compressed station to Malkochlar GMS, with capacity 3 billion m<sup>3</sup>/y, with the Bulgarian and Turkish gas transmission operators as investors - Bulgartransgaz EAD and Botash C.A. respectively. The route is the result of the gas interconnection feasibility investigation and assessment prepared by an ad hoc Working Group established with Order PД 16-141 / 10.02.2011 of the Minister of Economy and Energy.

The Interconnection Bulgaria - Turkey has been ranked in the list of Projects of common Interest of the European Commission under Regulation (EU) № 347/2013. Grant financing has been received under the EC “Connecting Europe Facility” (CEF-Energy) for the implementation of the feasibility study in 2015 at the amount of € 190 000.

With the project development of the interconnections with Romania, Greece, Turkey and Serbia it is expected the number of entry points through which natural gas enters the transmission network to increase significantly in the coming years. These projects will enable the natural gas supply from various sources, which in turn will contribute to the enhancing of competition and will have a positive effect on natural gas customers. The new gas connections will significantly increase the input capacity from Greece and Turkey to Bulgaria and will also provide natural gas access and supply from the LNG terminals in these countries.

**Eastring Project** is a subproject of the Easting cluster project – a project for the construction of a transport corridor through the territory of Slovakia, Hungary, Romania and Bulgaria, providing possibilities for two-way natural gas supplies from alternative sources. Easting is designed to start from IP Veľké Kapušany in Slovakia (the existing IP situated between Ukrainian and Slovak gas transmission networks) and with an IP at an external EU

border in the territory of Bulgaria and the project consists of both construction of new gas infrastructure and optimization of the existing one in the countries along the corridor route. Eastring concept, as developed so far and included in the ENTSO-G TYNDP 2015 - 2024, is envisaged to be developed jointly and in coordination between the TSOs of Slovakia, Hungary, Romania and Bulgaria and thus it is presented as a cluster project, as follows: Eastring - Bulgaria, Eastring - Romania, Eastring - Hungary, Eastring – Slovakia.

Different route options have been considered. It is envisaged Eastring be implemented in 2 phases - the first to be commissioned in 2019, providing a capacity of 570 GWh/d and the second phase - in 2023, with capacity reaching up to 1140 GWh/d. Bulgartransgaz EAD is responsible for the implementation of the Bulgarian section of the project. Regarding the territory of Bulgaria for the first stage of the project it is planned to build a new gas pipeline with a length of about 257 km between a new entry/exit point at the Bulgarian-Romanian border and a new entry/exit point at an external EU border in Bulgaria, as well as the construction of new compressor capacities of 88-90 MW. The second stage of the project envisages additional construction of new compressor capacities. There is a foreseen possibility for Eastring to connect with the Bulgartransgaz EAD networks with input/output capacity of 200 GWh/d.

**The regional gas hub** is connected with the development of gas infrastructure in Bulgaria. In this regard, Bulgartransgaz EAD developed a concept based on the idea that significant natural gas amounts from various sources to enter the country in a certain real physical point near the Varna city for further transportation, while in this same location a market place (hub) to be organized for gas trade - where all market participants could carry out gas transactions at market principles. The idea of a gas centre construction was supported by the strategic geographic location of Bulgaria, the well-developed existing gas transmission and storage infrastructure, as well as by the interconnection projects with Romania, Turkey, Greece and Serbia.

The establishment of a gas hub aims to build the necessary transmission infrastructure that is needed to connect the natural gas markets of the Member States in the region - Bulgaria, Greece, Romania, Hungary, Croatia and Slovenia and through them the Member States of Central and Western Europe, as well as the countries of the Energy Community, thereby contributing to the achievement of the main priorities of the European energy policy. Natural gas quantities from various sources could enter the hub - Russian natural gas through a new sea pipeline and through the currently used route; natural gas extracted in the Black Sea shelf - Bulgarian (Khan Asparuh, Silistar and Teres blocks) and Romanian; natural gas sources of the Southern Gas Corridor (Caspian region, Middle East and Eastern Mediterranean) and LNG terminals in Greece and Turkey.

## **5. CONSUMER PROTECTION AND DISPUTE SETTLEMENT IN THE ELECTRICITY AND GAS SECTORS**

### **5.1. Consumer protection**

#### **5.1.1. Electricity**

Pursuant to the requirements of Art.37 (1) (n) of Directive 2009/72/EC to ensure quick access and provision of data on customer consumption, commercial metering devices, including the devices ruling the tariffs, are located in a way that the consumer has the

opportunity to observe the figures displayed in the commercial metering devices. In cases where it is needed to guarantee the life and health of citizens, property, power quality, continuity of supply and security and reliability of the energy system, commercial metering devices are put in a place with difficult access, the electricity distribution company shall be obliged to provide at its own account the possibility of visual inspection within three (3) days following a written request. The same obligation has been imposed on licensed companies in the natural gas sector under approved by EWRC general conditions. In addition, energy companies have established in every major city of their licensed territory customer service centres and have their own internet sites for each user to have an access to them.

Under EA amendments (as of 15.05.2015) Section VI defines (Measures to protect end consumers), in pursuance of the requirement of Art.37 (1) (n) of Directive 2009/72/EC, the energy companies' obligations to provide information to their customers regarding:

- actually consumed quantities and service provided value in accordance with the contracted readings periodicity with no obligation of additional payment for this service;
- conditions on the provision of electronic billing information and electronic invoices;
- electricity or natural gas supplier provides another electricity or natural gas supplier with the consumption data of a household consumer when such action has been provided for in an express agreement between the consumer and the electricity or natural gas supplier.

These provisions ensure customer access to energy consumption data, their providing in an easily understandable format and use. Customers have their consumption data and may, by an agreement and without additional costs, provide these data to any licensed supply company, thus transposing the requirements of Annex I, letter h of Directive 2009/72/ EC.

### **5.1.2. Natural gas**

In exercising its regulatory powers, the Commission shall be guided by defined in the Energy Act (EA) general principles, including ensuring a balance between the interests of energy companies and customers, equality between different categories of energy companies and between consumer types and to establish end customers protection measures (Art. 23 items 4, 5 and 12 of EA). To protect energy companies customers' rights EWRC closely cooperates with the Consumer Protection Commission, the Ombudsman of the Republic of Bulgaria, as well as a number of consumer protection NGOs.

As a specialized state body EWRC regulates the activities in the energy sector, approves the General conditions of contracts provided for in EA and the Rules on work with energy services consumers developed by energy companies that provide services of public interest. This type of contracts has a regulated by EA mandatory content, which ensures consumers' rights. Licensees providing services of public interest are obliged to guarantee consumers' rights protection and equality between customer groups in the contracts General conditions and in the Rules on work with energy services consumers.

By the amendments of EA, promulgated SG, 54 of 17.07.2012, measures have been introduced to protect consumers of energy services, designed to provide greater protection of their rights. Due to significant changes to the existing legislation, EWRC opened on its own initiative a procedure of amending the General conditions of natural gas sale contracts and the General conditions of contracts on natural gas transmission in distribution networks together with the Rules on work with energy services consumers as part of the General conditions. To this end, the Commission has asked the distribution networks operators to

make an amendment proposal of the Rules and the General conditions of contracts and it has set an appropriate deadline about it.

In 2015, with the EA amendments, promulgated SG, 17 of 6 March 2015 and SG, 35 of 15 May 2015, new provisions have been supplemented concerning measures to protect energy services consumers, aimed at ensuring effective and adequate protection of their rights. In this regard, § 42 para.1 of the Transitional and Final Provisions of the Act amending the EA (prom SG, 17 of 2015, effective as of 6 March 2015) provides for end suppliers of natural gas and distribution system operators to submit a proposal to the Commission of amending the terms and conditions of the contracts in accordance with the EA amendments.

EWRC is in a process of approving: General conditions of contracts for natural gas supply by end supplier under art.183a of EA; Terms and conditions of contracts for natural gas transmission in distribution networks under art.183b of EA; Rules for working with users of energy services.

EA requires energy companies providing services of public interest to determine in the general conditions for supply and use of networks and in the Rules for working with users of energy services, special procedures on provision of information to vulnerable customers related to their consumption and energy discontinuing. According to companies reporting registered vulnerable customers in 2015 were 4.

EWRC monitors the energy companies' obligations to provide information on: ways of payment, prices for disconnection and restoration of supply, service prices for maintenance and other service prices connected to the licensed activity; the supplier shifting procedure and information on lack of obligations of the consumers about additional payments when making the shift; real consumed quantities and costs incurred without obligation of additional payments owed for this service; elaboration of final equalizing bill at each supplier shift.

## **5.2. Dispute settlement**

Disputes settlement term and conditions are regulated by EA and Ordinance №3 on licensing the activities in the energy sector. EWRC handles complaints of:

1. networks and facilities users against transmission and distribution network operators, extraction companies, natural gas storage facilities operators and LNG operators related to the way these entities perform their duties under EA and users against W&S operators related to regulatory issues under the Water Supply and Sewerage Services Regulation Act;
2. customers against electricity and natural gas suppliers, including end suppliers regarding their duties performance under EA;
3. licensees against other licensees regarding their duties performance under EA, as well as W&S operators against W&S operators related to regulatory issues under the Water Supply and Sewerage Services Regulation Act.

Within two months of lodging a complaint under item 1, 2 and 3, the Commission may assist an amicable dispute settlement. The term may be extended by another two months if the nature of the dispute requires collecting additional data and information by the Commission. The procedure is voluntary and confidential. Under the amicable disputes settlement EWRC does not make a ruling/decision and the procedure ends with an agreement. It involves the

dispute parties and a conciliator - a member of the EWRC working group that has been designated to handle the complaint. The conciliator uses all reasonable means and efforts to resolve the dispute by proposing to the parties a resolution and if consent is achieved - to draft a written agreement.

In case no amicable settlement is achieved or the parties reject amicable settlement, the Commission shall decide on the complaint within two months after receiving it. This period may be extended by another two months if the nature of the dispute requires the Commission to collect additional data and information. Upon complainant consent the extended period may be extended again by another two months. When EWRC finds a complaint being justified, it issues a decision with binding guidelines on the implementation of the law. Commission decisions are subject to appeal before the Administrative Court - Sofia City under the Administrative Code.

Under the legislation EWRC has the power to fulfil the obligations set out in Directive 2009/72/C and Directive 2009/73/EC, namely to act as a dispute settlement body in respect of any complaint against transmission or distribution operator in relation to that operator's obligations and to issue a decision within two months of the complaint receipt. The decisions of the regulatory authority shall have binding effect unless and until overruled on appeal.

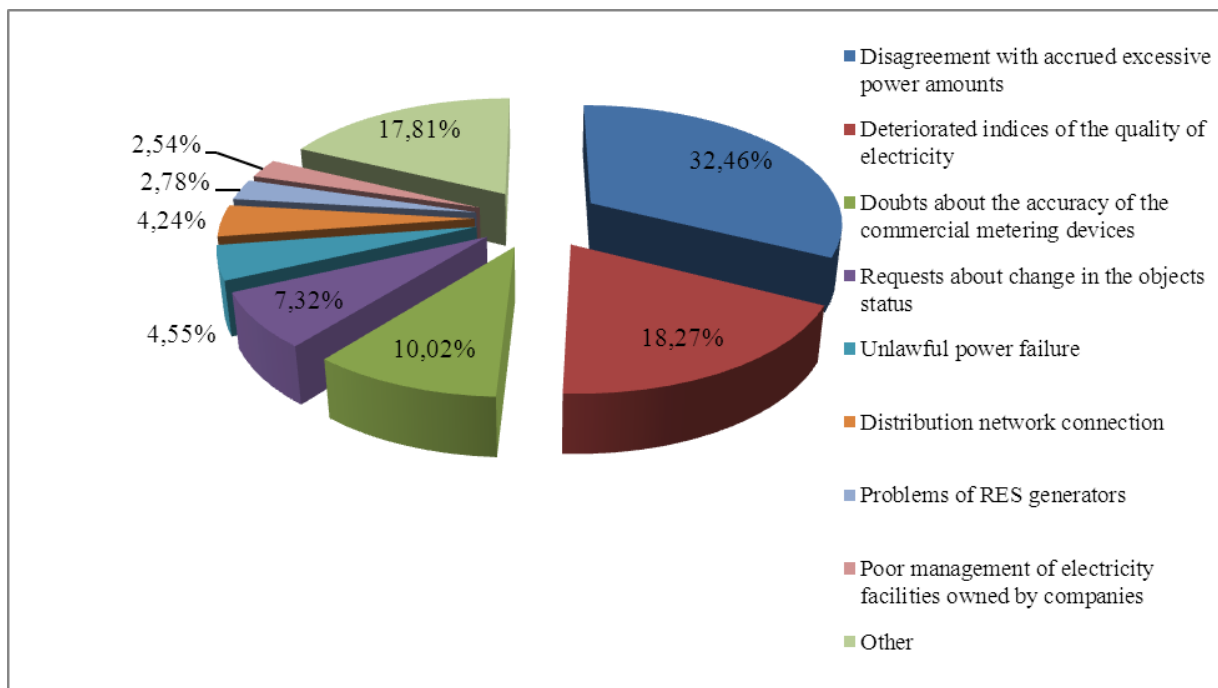
#### **5.2.1 Electricity sector**

In 2015 the complaints filed in EWRC under the provisions of art.22 of EA, were 1 297.

Users usually complain about:

- disagreement with accrued excessive power amounts – 421;
- deteriorated indices of the quality of electricity – 237;
- doubts about the accuracy of the commercial metering devices -130;
- requests about change in the objects status – 95;
- unlawful power failure – 59;
- distribution network connection – 55;
- problems of RES generators -36;
- poor management of electricity facilities owned by companies – 33;
- other - purchase of energy facilities under § 4 of EA, access contracts for the use of a foreign facility, failure to provide data from the readings – 231.

Complaints breakdown according to their subject is presented in the following chart:

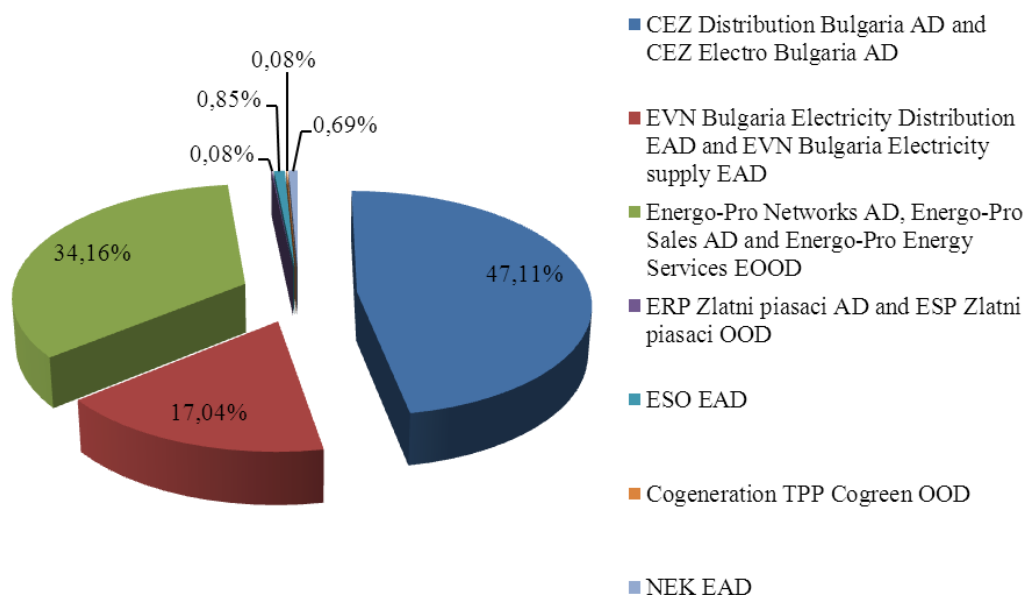


Complaints against energy companies are as follows:

- CEZ Distribution Bulgaria AD and CEZ Electro Bulgaria AD – 611;
- Energo-Pro Networks AD, Energo-Pro Sales AD and Energo-Pro Energy Services EOOD – 443;
- EVN Bulgaria Electricity Distribution EAD and EVN Bulgaria Electricity supply EAD – 221
- ESO EAD – 11;
- NEK EAD – 9;
- ERP Zlatni piasaci AD and ESP Zlatni piasaci OOD – 1;
- Cogeneration TPP Cogreen OOD – 1.

Their percentage allocation is presented in the diagram below:

### Breakdown of complaints against different energy companies filed at EWRC



#### 5.2.2 Natural gas sector

In 2015, 28 reports, inquiries and complaints were submitted at EWRC, of which 17 complaints (16 complaints under art. 22 of EA and 1 complaint of a licensee about carrying out activities under EA without having a license. In relation to the received signals and inquiries checks of documentation have been performed and answers have been prepared which were sent to the addressees.

The Commission issued decisions on three of the complaints. As a result of an inspection on a complaint by a network user against a gas distribution network operator for its denial to provide access to the gas distribution network in connection with switching, EWRC accepted that the complaint is well founded and gave instructions to the operator to execute the change of a supplier under the statutory procedure and to provide access to its gas distribution network in connection with the switching. The binding instructions have been implemented by the company in due time. Two of the complaints the Commission has assumed as groundless and terminated the files.

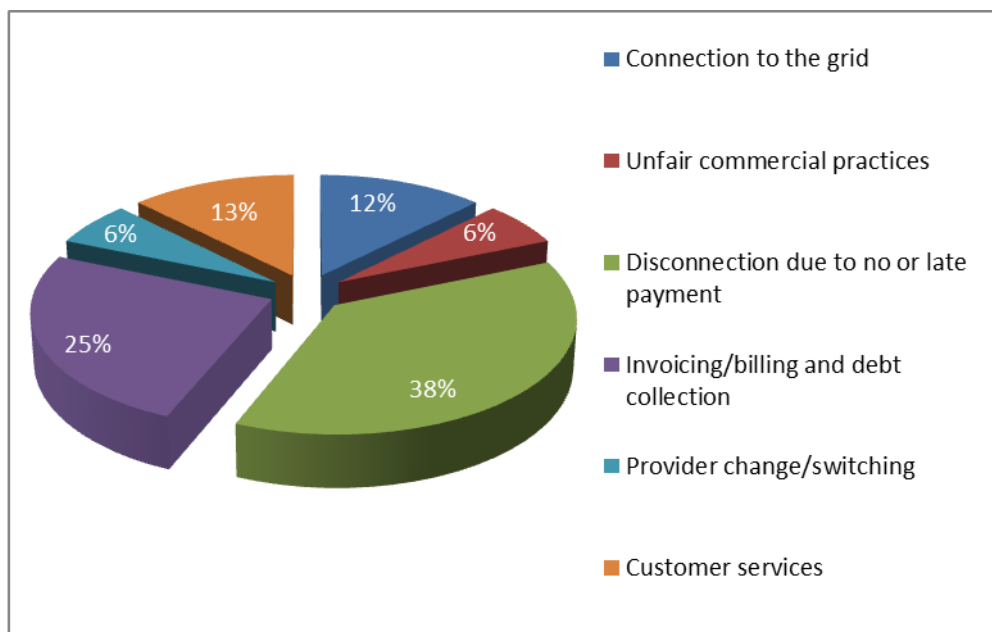
As a result of a complaint investigation concerning performance of activities under EA without holding a license, the Commission officials found violations of EA and an act for the establishment of an administrative violation has been drafted, based on which a penal provision to impose pecuniary sanction has been issued by EWRC Chairman.

One complaint was forwarded to the Competition Protection Commission and the rest were sent to the gas distribution companies – for solving by competence.

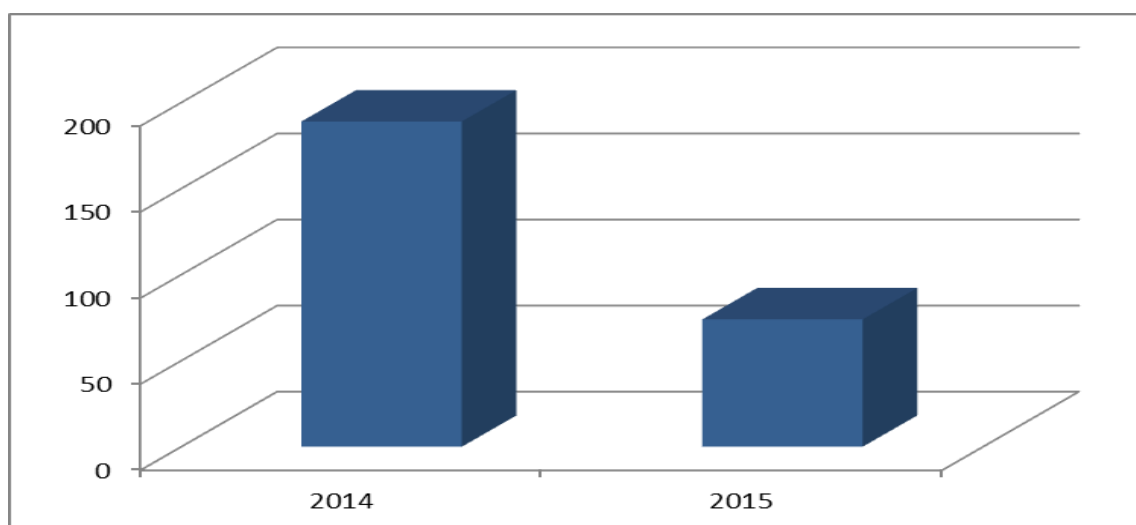
Classification of filed in EWRC complaints from customers (under Art. 22 of the Energy Act) in 2015, is done in accordance with CEER annual gas indicators, as follows:

1. gas distribution network connection – 2

2. incorrect metering of gas consumed – 0
3. quality of supply – 0
4. unfair commercial practices – 1
5. contracts, sales – 0
6. gas supply activation – 0
7. disconnection due to no or late payment – 6
8. billing – 4
9. price/tariff – 0
10. redress – 0
11. supplier switching – 1
12. customer services – 2



In gas distribution companies a total of 74 complaints from users have been received in 2015. In comparison to the complaints in 2014, when their number was 189, in 2015 they were by more than 60 % less in number.



In 2015 the number of consumer complaints received by the gas distribution companies was under 0.1 % of all household consumers. Consumer complaints have been filed from 11



out of 35 licensed territories in Bulgaria. The household customers' number in these 11 territories represents 80 % of all gas household customers in the country. The greatest number of complaints (30) was filed in Overgas Mrezhi AD for the licensed territory of Sofia and Bozhuriste municipalities, i.e. 0.14 % of the household customers have filed a complaint. This represents 41% of all complaints in the sector. The total number of household customers in that licensed territory is 29% of all natural gas household consumers in the country.

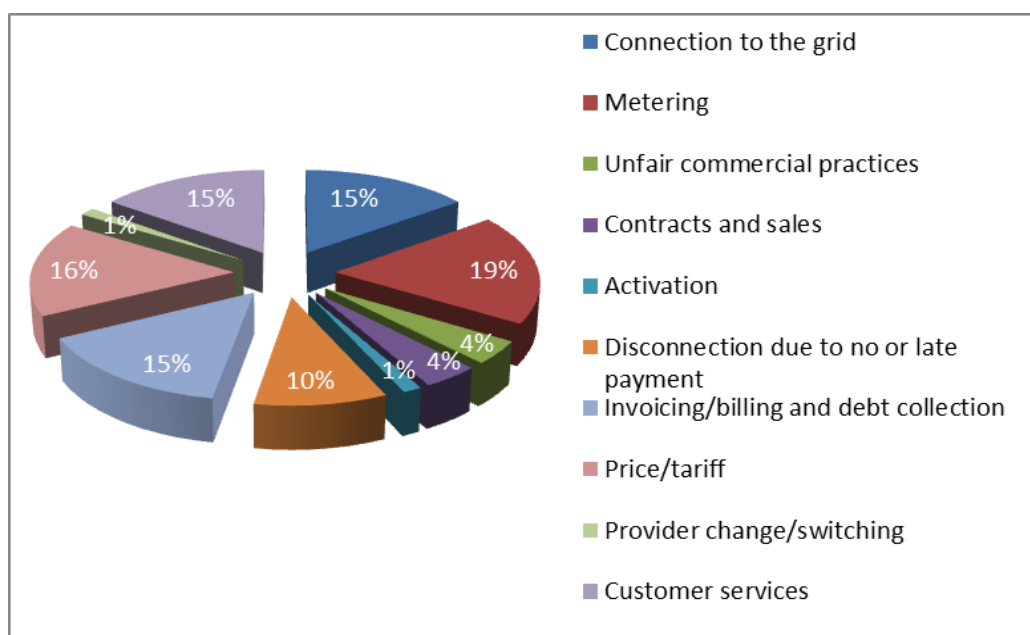
Classification of submitted at gas distribution companies complaints by customers according to CEER national gas indicators, is as follows:

1. gas distribution network connection – 11
2. incorrect metering of gas consumed – 14
3. quality of supply – 0
4. unfair commercial practices – 3
5. contracts, sales – 3
6. gas supply activation – 1
7. disconnection due to no or late payment – 7
8. billing – 11
9. price/tariff – 12
10. redress – 0
11. supplier switching – 1
12. customer services – 11

Gas distribution companies examined the complaints received and accepted 67 of them to be reasonable and they were resolved and 7 of the complaints were unfounded.

In 2015, the number of disconnected due to no payment household customers was 1948. The number of customers whose gas supply was activated in the same year after payment of consumed natural gas amounts was 1800.

Classification of complaints received in gas distribution companies, according to the subject of the complaint:



As seen from the chart above, complaints are mainly related to: connection to the distribution networks, inaccurate metering, disconnection due to non-payment, billing, price and customer services.

In the Natural gas sector no amicable dispute settlement procedure was applied in 2015.