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Republika Kosova - Republic of Kosovo

ZYRA E RREGULLATORIT PËR ENERGJI
REGULATORNI URED ZA ENERGIJU
ENERGY REGULATORY OFFICE



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List of abbreviations

CAA	Civil Aviation Authority
AERS	Serbia Regulator
RES	Renewable Energy Sources
CCP	Customer Care Programme
CEER	Council of European Energy Regulators
TENG D	Thermal Energy and Natural Gas Department
LLD	Legal and Licensing Department
CPD	Consumer Protection Department
TPD	Tariffs and Pricing Department
EMD	Energy Market Department
EBRD	European Bank for Reconstruction and Development
EC	European Commission
EMS	Serbia Transmission System Operation
ECS	Energy Community Secretariat
ECRB	Energy Community Regulatory Board
SEE	South East Europe
ENS	Energy Not Supplied
ENTSO-E	European Network of Transmission System Operators for Electricity
GWG	Gas Working Group
PHLG	Permanent High Level Group
GWh	Gig watt hour
HC	Hydropower Plant
IAP	Ion-Adriatic-Pipeline
ITC	Inter TSO Compensation
EC	Energy Community
SEEEC	South East Europe Energy Community
KEK	Kosovo Electricity Corporation
KESH	Albanian Energy Corporation
KEDS	Kosovo Electricity Distribution and Services
KESCO	Kosovo Electricity Supply Company
KfW	German Development Bank
CM	Council of Ministers
km	Kilometre
KOSTT	Transmission, System and Market Operators
PSRC	Public Services Regulatory Commission
kV	Kilovolt
kW	Kilowatt
OL	Overhead line
MAR	Maximum Allowed Revenues
MPA	Ministry of Public Administration
EPA	Energy Purchase Agreement
MESP	Ministry of Environment and Spatial Planning

MVA	Megavoltamper
MW	Megawatt
MW_{TH}	Thermal Megawatt
MWh	Megawatt hour
MED	Ministry of Economic Development
NARUC	National Association of Regulatory Utility Commissioners
DH	District Heating
SS	Substation
DSO	Distribution System Operator
TSO	Transmission System Operator
MO	Market Operator
PECI	Projects of Energy Community Interest
PG TSO KOSTT	Working Group for inclusion of KOSTT in ENTSO-E
RG CE	Regional Group of Continental Europe
RoR	Rate of Return
RAB	Regulated Asset Base
SCADA	Supervisory Control and Data Acquisition
SAIDI	System Average Interruption Duration Index
SAIFI	System Average Interruption Frequency Index
TAP	Trans-Adriatic-Pipeline
TPP	Thermal Power Plan
TF	Taskforce
TKE	Energy Community Treaty
TR	Transformer
MV	Medium Voltage
LV	Low Voltage
VAT	Value Added Tax
AI	Administrative Instruction
USAID	United States Agency for International Development
WACC	Weighted Average Cost of Capital)
WBIF	Western Balkans Investment Framework
ERO	Energy Regulatory Office

EXECUTIVE SUMMARY

Pursuant to the obligations contained in the Law No. 05/L-084 on the Energy Regulator, the Energy Regulatory Office (hereinafter ERO) presents the Annual Report 2017 for review by the Assembly of the Republic of Kosovo.

The Annual Report contains information on activities undertaken and results achieved in relation to the scope of ERO, as well as analysis regarding the energy enterprise activities, according to licensee data, and present an overview of the energy market development in Kosovo. An integral part of this report is also ERO's budget financial report for 2017.

During 2017 (in the first five months while the board was operational), ERO has taken numerous decisions, has adopted rules, methodologies and procedures concerning the energy sector. Amongst the important issues are: The rule for establishment of the Universal Service Supply income; the rule on prices, on the basis of which energy prices have been set for 2017; as well as the harmonization of a part of the secondary legislation in accordance with the new laws on energy and EU's Third Energy Package.

Three suppliers are equipped with licenses for retail supply of electricity, whereas, on the other hand, a significant number of enterprises are equipped with licenses for electricity trading and licenses for generation, transmission and distribution of electricity and thermal heat. In 2017, ERO reviewed licensing applications submitted by various legal entities.

ERO has received and reviewed a significant number of applications for generation of electricity from Renewable Energy Sources (RES) of various technologies and in 2017, in addition to the preliminary authorizations, has issued eight (8) final authorizations. ERO has also monitored the processes of developing new generating capacities from RESs, whereas one was completed in the respective year and entered into operation.

ERO has faced several judicial disputes with respect to its activity, whereby the dispute and decision on the interim measure of the Court of Appeals concerning the treatment of unbilled energy (loss) in the four northern municipalities of the country had the greatest influence.

During 2017, ERO has carried out the annual adjustments process to Maximum Allowed Revenues (MAR) and reviewed the applications of new tariffs by the licensees in the energy sector, including transmission, distribution and supply of electricity for consumers with the right to universal service and licensees in the thermal energy sector. ERO has changed the retail tariff structure in the electricity sector since 1st of April 2017. The essential change is the removal of seasonal tariffs (summer/winter) for all final consumers, as well as the removal of block tariffs for household customers.

In terms of consumer protection, ERO has received and reviewed consumers' complaints throughout the year, and has provided consultations, clarifications and guidance on the actions necessary to resolve their complaints.

In the course of exercising its activities, ERO has cooperated with local and international institutions and has reported to the Assembly of Kosovo, and has informed the media about developments in the energy sector.

During 2017, preparatory actions were undertaken for certification of the transmission system operator, selection of the last resort supplier as well as preparation of rules and other procedures for the functioning of the energy system in harmony with the requirements of the Third Energy Package.

In carrying out and performing the duties and responsibilities established by law, ERO has been assisted by USAID – “Repower Kosova” and the Energy Community Secretariat on a continuous basis.

In addition to the part of the report describing the activities of ERO, the report also contains activities of licensees in the energy sector, where electricity, thermal energy and natural gas are separately analysed.

Through the guidelines for liberalization of the electricity market, ERO has decided to open the wholesale market, starting with the generation and then gradually liberalizing the retail market by adapting it to the circumstances of the energy sector in Kosovo.

The market has marked its opening with the placing in the market of the 220kV and 110kV voltage level consumers at unregulated prices of electricity supply, who constitute about 8% of the demand for energy. The free market also includes the coverage of losses in the transmission and distribution network (including the energy for four northern municipalities), which accounts for about 28% of the energy demand.

Customers with the right to universal service are supplied at regular prices set by ERO through cost-reflective, reasonable, non-discriminatory tariff reviews, taking into account consumer protection, based on objective criteria, and transparently established.

Electricity production in 2017 was characterized by a decline compared to production in 2016. This decline in production was due to expropriation problems in the villages of Hade and Shipitulla and consequently, there was an increase in the import of electricity to cover the consumption.

The overall demand for electricity in the system and the consumption in distribution is increasing steadily over the years, however, the supply quality is concerning since in some cases it is below the required standards, which is observed by measuring indexes (SAIDI, SAIFI, ENS, etc.), as well as the quality of services.

Losses in the transmission network are at an acceptable level, while losses in the distribution network are quite high. Technical losses amount to 12.28%, while unauthorized consumption of energy (hereinafter referred to as commercial losses) constitutes 17.03% of the demand for distribution, out of which unbilled energy in the northern part of Kosovo constitutes 5.31% (265 GWh).

The table below reflects the main data realized during 2017 compared to the balance of 2017 and realization in 2016.

Tab. I. Comparison of 2017 data and balances to 2016

	Unit	Production	Demand	Import	Eksport	Losses	
						Transmission	Distribution
Realization 2017	GWh	5,300	5,686	1,242	880	118	1,464
Balance 2017	GWh	5,827	5,464	724	1,088	113	1,321
Realization 2016	GWh	5,835	5,342	534	1,121	120	1,427

The billed energy has had a steadily increase over the years, particularly collection had a more prominent increase, thus amounting to 99.09% for customers connected to the transmission and distribution network.

The situation of thermal energy sector has remained largely unchanged. The cogeneration project in DH Termokos has provided positive outcomes by increasing the heating quality for customers connected to the network, while the cogeneration project in DH Gjakova is under implementation.

1 ENERGY REGULATORY OFFICE

1.1 Description of the Energy Regulatory Office

Energy Regulatory Office (ERO) is an independent agency and separated in legal and functional terms from any other natural or legal person. ERO duties and functions are defined in the Law 05/L-084 on Energy Regulator, which includes: the efficient, transparent and non-discriminatory creation and functioning of the energy market; determining the terms and conditions as well as granting of licenses for carrying out activities in the field of energy; determining the terms and conditions and the granting of authorizations for the construction of new capacities; market monitoring and the care to improve energy supply security; setting tariffs for energy activities in a reasonable manner and based on tariff methodology; monitoring and preventing the creation of dominant position and uncompetitive practices by energy enterprises, as well as resolving complaints and disputes in the energy sector.

ERO is responsible for designing and implementing the regulatory framework for the energy sector in Kosovo, in order to achieve compliance with the obligations of SEECC Treaty and alignment with the “*acquis communautaire*” on energy, ensure non-discriminatory access to all energy network users at prices reflecting true economic costs.

1.2 Organizational Structure and Human Resources

ERO's organizational structure is defined by the Board of the Energy Regulatory Office based on responsibilities and duties provided for in the Law No. 05/L-084 on Energy Regulator and the Rule on the Organization and Functioning of the Energy Regulatory Office.

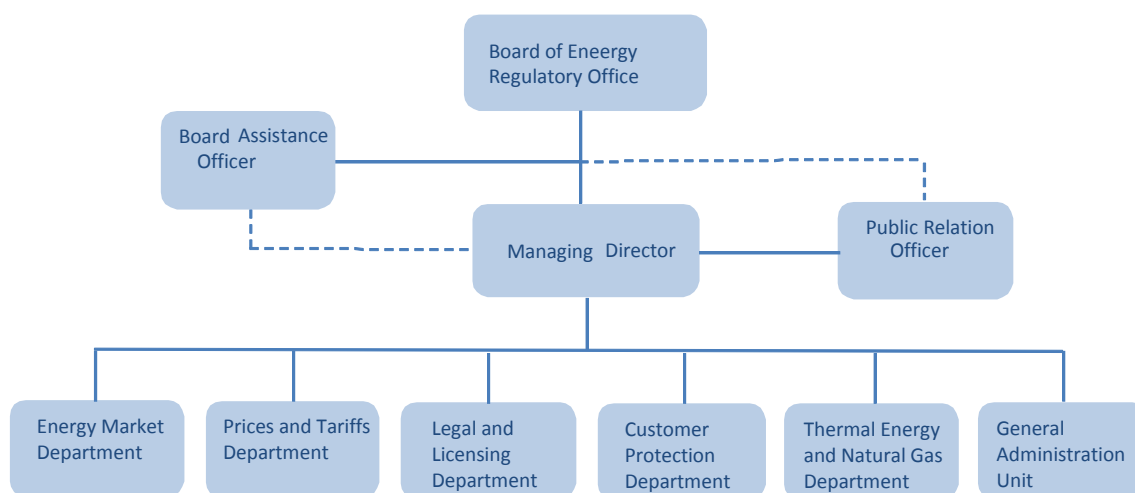


Fig. 1.1 Organizational Scheme of ERO

ERO's Board consists of the Chairman and four other members and is in charge of all matters under the jurisdiction and competence of ERO. The Board takes decisions by majority votes and has the quorum needed to take a decision if at least three Board members are present.

ERO staff is structured in organizational departments on the basis of specific operational and administrative activities.

Brief description of organizational structure with job positions in 2017 is shown in the table below.

Tab. 1.1 Organizational structure with the job positions

Job positions	Planned positions	Employees	Vacancies
ERO Board	5	2	Chairman and two Board members
Managing Director	1	1	0
Public Relations Officer	1	1	0
Board Assistance Officer	1	1	0
Administration Unit			
Head of Administration Unit	9	9	0
Chief Financial Officer			
Procurement Manager			
Administration Officer			
Data Manager Officer			
Database Development Expert			
English Language Translator			
Receptionist			
Driver/Maintenance			
Legal and Licensing Department (LLD)			
Head of Legal and Licensing Department	3	3	0
Legal Affairs and Monitoring Expert			
License Monitoring Analyst			
Pricing and Tariffs Department (PTD)			
Head of the Pricing and Tariffs Department	4	4	0
Expert for Regulatory Affairs and Tariffs			
Tariffs and Prices Analyst			
Tariffs Structure Analyst			
Energy Market Department (EMD)			
Head of the Energy Market Department	4	4	0
Power Supply and Market Structure Analyst			
Power Systems Analyst			
Market Monitoring Analyst			
Thermal Energy and Natural Gas Department (TENGD)			
Head of the Thermal Energy and Natural Gas Department	2	2	0
Thermal Energy Analyst			
Costumer Protection Department (CPD)			
Head of the Costumer Protection Department	3	2	0
Costumer Protection Analyst			1
Standards Performance Analyst			
Total	33	29	4

ERO staff is a team of experts with proven performance in the areas of responsibilities they cover.

This composition of engineering, economics, law and other experiences strengthens the confidence of an institution having clear strategies towards success in developing the energy sector in Kosovo.

1.3 ERO's Board

ERO Board consists of 5 members including the chairman, who are appointed as full-time employees by the Assembly of Kosovo with a term of 5 years. ERO Board is a decision-making body for all matters under the ERO's jurisdiction and competence. The Board takes decisions by majority vote and has the quorum needed to take a decision if at least three Board members are present, but there should be three (3) votes in favour in order to become a final decision. The Board states its stances regarding the issues it handles through decisions that are taken at open meetings announced in advance on ERO's official website. ERO has been operating with three board members since September 2016, whereas upon the expiration of another member's term in May 2017, the ERO Board does not have the quorum needed for decision-making. On 31 December 2017, the Energy Regulatory Office Board consisted of the following members:

*Arsim Janova, Acting Chairman of Board, and
Besim Sejfiqaj, Member of the Board*

For decision-making purposes, in accordance with the authority granted under the legislation in force, the ERO Board has held regular meetings until 15 May 2017, where it discussed about the functioning of the energy system in Kosovo, and adequate decisions were taken and documents needed for the sector were approved.

The ERO's Board has held a total of seven (7) public meetings until May 2017, in which were taken 43 decisions related to:

- Market monitoring and energy sector activities;
- Liberalization of the energy market;
- Price adjustment;
- Licensing of energy activities in Kosovo;
- Authorization of construction of new power generation capacities from renewable sources;
- Consumer protection;
- Approval of rules, methodologies and other energy sector documents, and
- Other issues within its responsibilities.

Most of the approved and reviewed documents were initially subject to public discussion, as foreseen by law, to include all parties involved in the decision-making processes and are published in ERO's official website.

The Board, for all activities, was supported by: Managing Director, Administration Unit and 5 departments as follows:

- Legal and Licensing Department (LLD)
- Energy Market Department (EMD)
- Tariffs and Pricing Department (TPD)
- Consumer Protection Department (CPD)
- Thermal Energy and Natural Gas Department (TENGS)

In terms of professional qualifications, the Board has targeted the employees' specialization in the relevant profiles within their responsibilities, through various training courses organized inside and outside the country.

1.4 ERO's Departments

Legal and Licensing Department (LLD)

Legal and Licensing Department is responsible for drafting secondary legislation, reviewing licensing applications by energy enterprises, reviewing applications on granting authorizations for construction of new capacities. This department also supervises and monitors licensees' activities.

Energy Market Department (EMD)

Energy Market Department is responsible for market structure, monitoring the performance of market participants, evaluation and analysis of data in the energy sector. The Department also monitors competition and behaviour of market participants in an objective, transparent and non-discriminatory manner.

Tariffs and Pricing Department (TPD)

Tariffs and Pricing Department is responsible for evaluation of tariff applications of licensed enterprises and presents them to the Board for approval; monitors the execution of operational and capital expenses through Tariff Reviews; undertakes all the measures to ensure that the tariffs are cost-reflective, reasonable, non-discriminatory, based on objective criteria and established in a transparent manner, taking into consideration customer protection.

Customer Protection Department (CPD)

Customer Protection Department is responsible for reviewing and resolving complaints and disputes between customers and energy enterprises, system operators and energy enterprises as well as between two energy enterprises. In the course of exercising its duties and responsibilities, this Department cooperates with all institutions and organizations which legitimately represent customers.

Thermal Energy and Natural Gas Department (TENGD)

Thermal Energy and Natural Gas Department is responsible for reviewing and implementing strategies, performance standards and other operational practices that are related to these sectors. This Department carries out the monitoring of licensed enterprises through collection, analysis and evaluation of relevant data and information and also contributes to the development of reporting systems of district heating enterprises, focusing in technical-technological elements and integration of incentives and targets for efficiency. It also cooperates with other departments of ERO by providing support and technical expertise on issues related to thermal energy and natural gas.

Administration Unit (AU)

Administration Unit supports the functioning of ERO, administration of finances, organizes the efficient recruitment of ERO staff, coordinates trainings of the ERO staff, supply and maintenance of

office equipment and assists in arranging the office by making it comfortable for work for all the ERO staff.

1.5 Training of ERO's staff

ERO considers its staff as one of the resource with significant importance and is constantly committed to supporting them by providing adequate knowledge, skills and expertise to carry out duties and responsibilities according to highest standards, with the aim of achieving their full potential, through:

- on-the-job trainings;
- short-term seminars inside and outside the country;
- long-term trainings and courses inside the country and abroad;

During 2017 were held a series of regional meetings, workshops and trainings, which contributed to the further improvement of ERO employees' knowledge on regulating the energy sector in line with EU standards.

ERO staff has participated in training, workshops, professional study visits mainly organized by ECS, REPOWER-USAID, NARUC, etc.

In 2017, with the support of USAID REPOWER project, students from the University of Prishtina and the American University of Kosovo (AUK) have held their internship at ERO.

1.6 Technical Assistance Projects

During this year as well ERO has benefited from the USAID-funded "Repower Kosova" technical assistance project. The project aims to support ERO and other relevant institutions dealing with energy issues. In 2017, "Repower Kosova" supported ERO in harmonizing secondary legislation, issues related to market liberalization and other issues related to the energy sector, including study visits related to capacity building for development of legal infrastructure of RES.

1.7 Procurement Activities

ERO has been facing numerous problems as a result Central Procurement Agency (CPA) failure to perform the procurement procedures. Due to the amendment of the Law on Public Procurement, the office's operation has been hampered by the lengthy procedures pursued by CPA while carrying out procurement activities. This has led the office to remain without services and supplies required for its normal functioning. Consequently, the procurement plan for 2017 was implemented only 47%.

1.8 ERO funding

ERO is funded from dedicated revenues collected from fees of licensees pursuant to Article 24 of the Law on Energy Regulator.

ERO collects fees for:

- Initial and annual fees for licensing;
- Applications for issuance and modification of licenses;
- Issuance of certificates of origin;
- Reviewing of applications for authorization to build new capacities.

2 ACTIVITIES OF THE ENERGY REGULATORY OFFICE

2.1 Completion of legal and regulatory framework

In August 2016, the Assembly of the Republic of Kosovo adopted the Law No. 05/L-081 on Energy, the Law No. 05/L-084 on the Energy Regulator and the Law No. 05/L-085 on Electricity. The aforementioned Laws have been amended and approved in order to transpose the EU's Third Energy Package.

The Law on the Energy Regulator has determined a period of nine (9) months within which ERO should issue and harmonize all sub-legal acts within its competence, including harmonization of the licenses issued. This process started in the last quarter of 2016, while its finalization and approval took place mainly in 2017.

The new and harmonized sub-legal acts are as follows:

- Rule on licensing of energy activities
- Rule on authorization procedure for construction of new generation capacities
- Rule on confidential information
- Rule on administrative measures and fines
- Rule on general conditions of electricity supply
- Rule on the resolution of complaints and disputes in energy sector
- Rule on disconnection and reconnection of customers in the energy sector
- Rule on taxes
- Rule on certification of the Electricity Transmission System Operator
- Rule for the establishment of the Universal Service Supply income
- Principles on establishment of tariffs for the use of the transmission and market system
- Principles on establishment of tariffs for the use of the distribution system
- Rule on supplier of last resort
- Rule on establishment of the maximum allowed revenues of Distribution System Operator
- Rule on establishment of the maximum allowed revenues of Transmission System and Market Operator
- Rule on assessment of capital projects in the transmission and distribution network in the electricity sector.

Following the approval of above mentioned sub-legal acts, all licenses issued by ERO have been subject to amendment and harmonization. This process was completed in May 2017, whereby ERO, within the nine (9) month deadline provided for by the Law on the Energy Regulator, has completed and approved the entire regulatory framework, which is already in compliance with the requirements of the EU's Third Energy Package.

2.2 Licensing of energy activities

Energy activities in Kosovo are performed by energy companies equipped with a license by ERO. Pursuant to the Law No. 05/L-084 on the Energy Regulator and the Rule on Licensing of Energy Activities in Kosovo, the Regulator has licensed the following activities: electricity production; thermal energy production; co-production of electricity and thermal energy; transmission of electricity, including operation of transmission system; distribution of electricity, including operation of distribution system; distribution of thermal energy; supply of electricity and thermal energy, including transit, import or export of electricity; wholesale supply (trading) of electricity supply; and operation of the electricity market.

In addition of aforementioned licenses, applicable laws allow for some energy activities without having to apply before the Regulatory for a license, as these activities do not have a stringent impact on Kosovo's energy system. Activities that do not require a permit are as follows:

- production of electricity at the energy location, with a capacity not exceeding 5 MW;
- production of thermal energy from DHs for own consumption, or with a capacity not exceeding 1 MW;
- production of electricity for own consumption, where the production facility or electricity consumers are not connected to the transmission or distribution system.

During 2017, the regulator has received also applications for licensing the electricity supply activities, wholesale supply (trading) of electricity, license extension, etc.

2.2.1 Licensing of electricity supply activity

ERO has licensed three customers' retail suppliers, however all customers in the country are supplied by KESCO as the other two licensed suppliers, HEP and GSA, were passive in terms of customer supply throughout the year.

Entities that have applied and are in the process of licensing are: "JAHA COMPANY" L.C.C., Kosovo Energy Corporation and "SharrCem" L.C.C.

The table below contains the enterprises that have applied at the Regulatory Office for licensing of the electricity supply activity.

Tab. 2.1 Enterprises that have applied and are in the process of licensing in 2017

No.	Enterprise name	Description of licensed activity	License number	Address, headquarters of the licensee	License validity
1	"Future energy trading and exchange dynamics" L.C.C.	Electricity supply	ZRRE/Li_55/16	Neighbourhood Kalabria, A1, CII, No.25, Prishtina, Republic of Kosovo	in process...
2	"Jaha company" L.C.C.	Electricity supply	ZRRE/Li_59/17	Neighbourhood Arbëri, Str. Ismail Qema i No.17, Prishtina, Republic of Kosovo	in process...
3	Kosovo Energy Corporation L.C.C.	Electricity supply	ZRRE/Li_60/17	Str. Nënë Tereza, No.36, 10000 Prishtina, Republic of Kosovo	in process...
4	"SharrCem" L.C.C.	Electricity supply	ZRRE/Li_61/17	Str. "Adem Jashari" No.280, Hani i Elezit	in process...

The company "Future energy trading and exchange dynamics" L.C.C. and "SharrCem" L.C.C. has completed all procedures required by the Regulator for licensing, while the other two enterprises are in the process of completing necessary documentation.

During 2017, the Regulator has licensed two (2) legal entities for wholesale supply (trading) of electricity; one (1) is in the process of licensing, while two (2) entities are in the process of extending their license for this activity.

Details of enterprises licensed, in process of licensing and those applying for license extension on wholesale supply (trading) of electricity are as follows:

Tab. 2.2 Enterprises licensed, in the process of licensing and those applying for extension of license for wholesale supply (trading) of electricity in 2017

No.	Enterprise name	Description of licensed activity	License number	Address, headquarters of the licensee	License validity
1	"Interenergo d.o.o-Kosova" SH.P.K.	Wholesale supply (trading) of electricity	ZRRE/Li_56/16	Sali Çeku gogaj Building, app.14, Decan, Republic of Kosovo	27.02.2017-26.02.2022
2	"MTSP KOSOVO" L.L.C	Wholesale supply (trading) of electricity	ZRRE/Li_58/17	Str. Bedri Pejani No 3, 10000 Prishtina, Republic of Kosovo	13.04.2017-12.04.2022
3	"Energy & Energy" SH.P.K.	Wholesale supply (trading) of electricity	ZRRE/Li_57/17	Str.Luan Haradinaj, B.9 E.17 No.10, 10000 Prishtinë, Republic of Kosovo	in the licensing process
4	"Danske Commodities Kosovo" SH.P.K.	Wholesale supply (tregti) e energjisë	ZRRE/Li_39/17	Q.Pejton, Str. Mujo Ulqinaku No.5 Ap 4, 10000 Prishtinë, Republic of Kosovo.	in the process for license extension
5	MCM COMMODITIES SH.P.K	Wholesale supply (trading) of electricity	ZRRE/Li_40/17	Nena Tereze, 10000 Prishtina, Republic of Kosovo	in the process for license extension

2.2.2 Licensing of electricity production activity

During 2017, ERO has reviewed the application for extending the license of KEK TPP Kosova A. Because of ERO's Board lack of quorum for decision-making, no decision was rendered on extending the license of KEK TPP Kosova A. The process of issuing a license for the company "Kelkos Energy" L.L.C. (HPP Decan and HPP Belaje) still remains unfinished due to the environmental permit to be issued by MESP.

2.2.3 Modification of licenses

In accordance with amendments made to the primary and secondary legislation, the Board of ERO during 2017 has modified/harmonized all applicable licenses.

2.3 Renewable Energy Sources (RES)

Directive 2009/28/EC sets out the support for the use of electricity generated from RES, issued by the Parliament and the European Council of 23 April 2009, applicable and enforceable to the Energy Community States.

The Decision No. D/2012/04/MC-EnC of the Council of Ministers of the South East European Energy Community (SEECC) has set the mandatory target for RES by 2020. Under this obligation, 25% of final energy consumption should be from RES.

The applicable Law No. 05/L-081 on Energy has established the RES policy, which aims to promote the economic and sustainable exploitation of the local potentials of RES, in order to meet the needs for energy, increase the security of supply and environmental protection, which is an integral part of the Energy Strategy of the Republic of Kosovo.

For the purpose of implementing RES policies, the respective Ministry, according to the legislation in force, has determined with a special sub-legal act the energy targets of RES in accordance with requirements of relevant directive of the European Union.

Law No. 05/L-84 on the Energy Regulator has established that the construction of new generation capacities (RES), new systems for transmission and distribution of natural gas, including interconnectors, and direct electricity lines and direct pipelines for transmission of natural gas shall be undertaken in line with authorization procedures as described in this law, and shall be carried out by the Regulator, in line with objective, transparent and non-discriminatory criteria.

In May 2017, the Ministry of Economic Development reviewed the Administrative Instruction No. 01/2013 on RES Targets and has issued a new sub-legal act for RES targets (MW) to be set up by 2020, and the only changes are: Photovoltaic Energy has increased from 10 MW as it was with AI No. 01/2013 to 30 MW installed capacity and Biomass from 14 MW to 20 MW.

The Administrative Instruction has determined that the mandatory RES target by 2020 is 25% of the gross final energy consumption as set out in Article 4 of the Decision No. D/2012/04/MC –EnC of the Ministerial Council of the Energy Community.

The table below presents the RES targets according to the Administrative Instruction No. 05/2017 of MED.

Tab. 2.3 Targets according to the MED Administrative Instruction

Renewable Energy Sources	Unit	Targets according to AI 05/2017
RES target	%	29.89
Solar	MW	30.00
Natural gas/Biomass	MW	20.00
Wind	MW	150.00
Existing HPP	MW	46.21
New HPP	MW	240.00
Total RES	MW	486.21
Zhuri	MW	305.00

In order to achieve the targets for generation of electricity from RES, as set forth in the above-mentioned Administrative Instruction, and in accordance with the legal mandate provided by the Energy Legislation in force, the Rule on Authorization Procedure for Construction of New Generating Capacities, Rule on Support Scheme and Methodologies for Calculation of Incentive Tariffs have been implemented.

2.4 Authorization - construction of new capacities

During this year, the ERO continued applying authorization procedures, review the applications for issuing authorization for construction of new generation capacity based on Renewable Energy Sources (RES) for companies that applied for authorization.

In the framework of fulfilling the obligations set forth in the legislation in force, ERO has issued Final Authorizations for the Construction of Generating Capacities, whereby each applicant in order to obtain the authorization was subject to regularity analysis and correctness of legal, administrative, technical, financial and environmental documentation, as well as obtaining relevant permits for water use in case of hydropower plant, land use rights, technical solutions of the connection and environmental consent, issued by relevant institutions in accordance with the activity that entities have requested for obtaining a Final Authorization for allowing construction of new generating capacity from RES.

During 2017, ERO has received 16 applications for authorization to build new RES generation capacities from different legal entities. 7 requests for conversion of the Preliminary Authorization into a Final Authorization from different sources of energy have been accepted and reviewed. The number of applications for generation of solar energy and wind energy has increased. During this year, there were requests for Modification of Final Authorization. While the requests for extension of validity time-limits of Preliminary Authorization and the Final Authorization was minor. Other applications for obtaining the Preliminary Authorization and Final Authorization were also received, but in the absence of the quorum of the Board for Decisions since 15 May 2017, they could not be reviewed.

2.4.1 Issuance of preliminary authorization

During 2017, ERO has issued preliminary authorizations for applications that have met the initial criteria and which remain to meet certain criteria required for granting the final authorization for construction of new generation capacities.

The following table shows the number of preliminary authorization issued by the Board of ERO according to various sources in 2017.

Tab. 2.4 RES preliminary authorizations

RES preliminary authorizations	No. of decisions issued
Hydro Power Plant	7
Wind Energy	1
Total	8

ERO has issued preliminary authorizations for hydropower plants to 7 legal entities, one preliminary authorization for wind turbines, while did not issue any preliminary authorization for the construction of solar/photovoltaic panels. The total installed capacity is around 44.5 MW, of which:

- 7 preliminary authorizations for hydropower plants with a total capacity of 9.5 MW
- 1 preliminary authorization for wind turbines with a capacity of 35 MW

The table 2.5 below presents enterprises which have been issued with a preliminary authorization.

Tab. 2.5 Enterprises to which was issued the Decision of Preliminary Authorization

No.	Legal entity	Facility	Location	Installed capacity	Date of issuance of the Preliminary Authorization
1	Hidro Forca L.L.C.	Hydro Power Plant	HPP Strazhë Municipality of Kacanik	1.08 MW	17 March 2017
2	Security Team Kabashi e K L.L.C.	Hydro Power Plant	HPP Erenik. Municipality of Junik	1.86 MW	17 March 2017
3	Hidrocom L.L.C.	Hydro Power Plant	HPP Kaqandollë, Municipality of Vushtria	2.6 MW	17 March 2017
4	Monten L.L.C.	Hydro Power Plant	HPP Llapi 1 Municipality of Podujeva	0.79 MW	17 March 2017
5	Monten L.L.C.	Hydro Power Plant	HPP Llapi 2 Municipality of Podujeva	0.8 MW	17 March 2017
6	Prishtina – Energy L.L.C.	Wind Turbine	Wind Park- KOZNICA, Municipality of Novoberda	35. MW	17 March 2017
7	Puna L.L.C.	Hydro Power Plant	HPP Radesha 1 Municipality of Dragash	0.715 MW	10 May 2017
8	Puna L.L.C.	Hydro Power Plant	HPP Radesha 1 Municipality of Dragast	1.7 MW	10 May 2017

Compared to 2016, where ERO issued twenty-three (23) preliminary authorizations, in 2017, due to the lack of the Board's decision-making capacities, only seven (7) decisions for preliminary authorizations with a total installed capacity of 44.54 MW have been issued. These applications must be completed within the legal limits in order for ERO to issue final authorizations to commence the construction of new generation capacity from RES.

Decisions on the Notice of Preliminary Authorization stipulate that applicants have proved their eligibility for the construction of new generating establishments nevertheless they have not yet met the other requirements relevant to the commencement of construction of new generation establishment before fulfilling all the conditions and requirements set out in the applicable legislation. Such decisions oblige the applicants that within a period of one (1) year from the issuance of preliminary authorization, they must meet other legal requirements and make a written request in order to be granted with final authorization for construction.

Preliminary Authorization issued to the company Prishtina - Energy SH.PK. (Wind Turbines) is beyond the RES targets defined by Administrative Instruction No. 05.2017 issued by the Ministry, but such authorization has been included in the Support Scheme as a "pending" application, and as long as there are no defined targets or until new targets are defined, these shall remain as pending applications for admission to the Support Scheme, and legal deadlines shall not start to run until ERO notifies in writing that the legal deadlines have started to run.

It is worth mentioning that upon issuance of a decision for preliminary authorization, such decision defines the availability of the targets as well as the admission of the applicant to the Support Scheme and the automatic guarantee of the feed-in tariff as well as the guarantee of the sale of electricity for the period determined by legislation in force.

2.4.2 Applications under review by ERO

During this year, ERO has received applications for obtaining authorization for construction of new generating capacities, as such applications are in the phase of being completed. The table 2.6 below shows the list of applications under review.

Tab. 2.6 Companies under review for obtaining a decision on preliminary authorization

No.	Legal Entity	Facility	Location	Installed capacity	Application Date
1	Alsi & Kosove L.L.C.	Solar Panels	Madanja, Kusar, Municipality of Gjakova	3 MW	19 April 2017
2	Bulding Construction L.L.C.	Solar Panels	Madanaj, Kusar, Municipality of Gjakova	3 MW	19 April 2017
3	Jaha Solar SH.P.K.	Solar Panels	Madanaj, Kusar, Municipality of Gjakova	3 MW	15 May 2017
4	Jaha Solar SH.P.K.	Solar Panels	Madanaj, Kusar, Municipality of Gjakova	3 MW	15 May 2017
5	Jaha Company SH.P.K.	Solar Panels	Buroj, Municipality of Skenderaj	3 MW	15 May 2017
6	Jaha Company SH.P.K.	Solar Panels	Buroj, Municipality of Skenderaj	3 MW	15 May 2017
7	Jaha Company SH.P.K.	Solar Panels	Buroj, Municipality of Skenderaj	3 MW	15 May 2017
8	Ev Wind Park SH.P.K.	Wind Turbines	Wind Park – Zatric, Municipality of Rahovec	32.4 MW	27 October 2017
9	Ev Wind Park SH.P.K.	Wind Turbines	Wind Park – Zatric, Municipality of Rahovec	32.4 MW	27 October 2017

ERO has evaluated applications requesting issuance of authorizations for construction of new generating capacities, complying with all the legal procedures and criteria for meeting the RES targets set out in the applicable guidelines, however, in the absence of decision making, it could not issue Preliminary Authorizations to the above-mentioned applicants.

2.4.3 Termination of preliminary authorization

ERO has also reviewed the decisions for terminating the preliminary authorization. The table below shows the companies whose preliminary authorizations were terminated according to the legal power.

Tab. 2.7 Companies the preliminary authorizations of which were terminated

No.	Legal Entity	Facility	Location	Installed capacity	Termination Date
1	Triangle General Contractors – INC Branc	Hydro Power Plant	HPP Jasiq Erenik, Municipality of Junik	5 MW	28 January 2017
2	Triangle General Contractors – INC Branc	Hydro Power Plant	HPP Mal Erenik, Municipality of Junik	7.5 MW	28 January 2017
3	Fidani Water Energy SH.P.K.	Hydro Power Plant	HPP Radoniqi, Municipality of Gjakova	0.43 MW	19 May 2017

The termination of the preliminary authorization resulted from the expiration of the validity period, whereby the applicant was obliged to submit, within the legal deadline, an application for conversion of the Preliminary Authorization into a Final Authorization.

2.4.4 Projects in the process of extending the preliminary authorization validity

During this year, ERO has received applications for extension of validity time-limits from the holders of decisions for preliminary authorization, in order for them to complete the relevant evidence mainly of the construction permit issued by the competent authorities and of the connection agreement depending on the voltage level from the system operators in Kosovo.

The table below shows the legal entities that have submitted to ERO an application for an extension of validity of the preliminary authorization.

Tab. 2.8 Companies in the process of extending the preliminary authorization validity

No.	Legal Entity	Facility	Location	Installed capacity	Extension Application Date
1	gEnCi SH.P.K.	Hydro Power Plant	HPP Prizreni 9, Municipality of Prizren	1.93 MW	02 November 2017
2	gEnCi SH.P.K.	Hydro Power Plant	HPP Prizreni 9, Municipality of Prizren	2.1 MW	02 November 2017
3	gEnCi SH.P.K.	Hydro Power Plant	HPP Prizreni 9, Municipality of Prizren	2.83 MW	02 November 2017
4	Hidroforca SH.P.K.	Hydro Power Plant	HPP soponica, Municipality of Kaçanik	3 MW	03 November 2017
5	Matkos Group SH.P.K.	Hydro Power Plant	HPP Vica, Municipality of Shtërpca	4.6 MW	06 November 2017
6	Sowi Kosovo L.L.C.	Wind Turbines	Wind Park, Selac 1, Municipality of Mitrovica	35 MW	06 November 2017
7	Sowi Kosovo L.L.C.	Wind Turbines	Wind Park, Selac 2, Municipality of Mitrovica	35 MW	06 November 2017

8	Sowi Kosovo L.L.C.	Wind Turbines	Wind Park, Selac3, Municipality of Mitrovica	35 MW	06 November 2017
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The applications for extending the validity of the Preliminary Authorization were submitted within the regular legal time limits, but due to the lack of decision-making capacities ERO has been unable to review and decide on such applications.

2.4.5 Projects pending of final authorization

During this year, ERO has received applications for conversion of the preliminary authorization into a final authorization for the construction of new RES generating capacities. Such applications have been assessed as completed with relevant evidence issued by relevant institutions in the Republic of Kosovo, in accordance with the legal provisions of the Rule on Authorization Procedure.

The following table shows the legal entities that have submitted an application for the conversion of the preliminary authorization into a final authorization for construction.

Tab. 2.9 Companies pending final authorization

No.	Legal Entity	Facility	Location	Installed capacity	Final Authorization Application Date
1	N.P.N. Renelual Tahiri SH.P.K.	Hydro Power Plant	HPP Dragash, Municipality of Dragash	3.4 MW	19 July 2017
2	Afa Energy SH.P.K.	Hydro Power Plant	HPP Katlina 1, Municipality of Kaçanik	2.4 MW	24 July 2017
3	Afa Energy SH.P.K.	Hydro Power Plant	HPP Katlina 2, Municipality of Kaçanik	2.7 MW	24 July 2017

Applications for conversion of Preliminary Authorization into Final Authorization were submitted within the regular legal time limits, but due to the lack of decision-making capacities ERO has been unable to issue the Final Authorization for constructions.

2.4.6 Issuance of final authorization

During 2017, ERO has reviewed applications for issuance of Final Authorization, together with the complete documentation for conversion of decision on the preliminary authorization into a Final Authorization for construction.

The table below shows the number of final authorizations issued by the Board of ERO according to different RES sources during 2017.

Tab. 2.10 Final authorizations of RES

Final Authorizations from RES	No. of issued decisions
Hydro Power Plants	6
Energy from Solar Panels (Photovoltaic)	1
Total	7

6 final authorizations were issued for the construction of new generating capacities from hydropower plants while one (1) final authorization was issued for construction of solar/photovoltaic panels with a total installed capacity of 11.3 MW, out of which:

- 6 authorizations for hydropower plants with a total capacity of 10.9 MW
- 1 authorization for solar panels with a capacity of 0.4 MW

The table below shows the legal entities that were issued the Final Authorization for Construction of New Generating Capacities.

Tab. 2.11 Companies that were issued a final authorization for construction

No.	Legal Entity	Facility	Location	Installed capacity	Final Authorization Issuance Date
1	2 KORRIKU SH.P.K.	Hydro Power Plant	HPP Saponica, Municipality of Kaçanik	1.3 MW	18 January 2017
2	EUROKOS JH SH.P.K.	Hydro Power Plant	HPP Brodi I, Municipality of Dragash	1.06 MW	09 February 2017
3	EUROKOS JH SH.P.K.	Hydro Power Plant	HPP Restelica 3, Municipality of Dragash	1.49 MW	09 February 2017
4	Hidro Line SH.P.K.	Hydro Power Plant	HPP Albaniku 1, Municipality of Mitrovica	1.86 MW	27 February 2017
5	Hidro Line SH.P.K.	Hydro Power Plant	HPP Albaniku 4, Municipality of Mitrovica	1.11 MW	27 February 2017
6	RENELUAL TAHIRI SH.P.K.	Hydro Power Plant	HPP Orqusha, Municipality of Dragash	4 MW	27 February 2017
7	N.T.SH. ELEING	Solar Panels	Llabjan, Municipality of Peja	0.4 MW	31 March 2017

The aforementioned projects are expected to be implemented within a period of two (2) years under the terms of the Authorization.

2.4.7 Modification of the Final Authorization

ERO during this year has received numerous requests for modification of Final Authorization for the construction of new generation capacities from RES. Such applications after being completed with relevant evidence issued by relevant institutions in the Republic of Kosovo are assessed and reviewed by the Board of ERO, in accordance to the provisions of the Rule on Authorization Procedure.

The table below shows the legal entities that were allowed to modify the final authorization for the installed capacities for generation of electricity from RESs.

Tab. 2.12 Companies the final authorization of which has been modified

No.	Legal Entity	Facility	Location	Installed capacity	Final Authorization Modification Date
1	EkoEnergji SH.P.K.	Hydro Power Plant	HPP Binca, Municipality of Viti	1 MW	27 February 2017

2	Hidroenergji SH.P.K.	Hydro Power Plant	HPP Lepenci 3, Municipality of Kaçanik	9.98 MW	10 May 2017
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Modification of the Final Authorization of the company EkoEnergji L.L.C is required for Binqa Hydro Power Plant for the installed capacity of 0.6 MW, authorized by the Decision V-737-2015 dated 15 June 2015 and modified by the Decision V-892-2017 dated 27.02.2017 of the installed capacity of 1 MW in Morava e Binqes River, municipality of Vitia, by meeting the environmental and water requirements. Whereas, the modification of the final authorization V-755-2016 dated 28 January 2016 issued to Hidroenergji L.L.C from the initial installed capacity of 8.5 MW in the installed capacity of 9.98 MW was allowed in accordance with the Water Permit issued by MESP. These modifications have been allowed in accordance with the criteria and legal requirements of the applicable legislation.

2.4.8 Entry into operation of generators from RES

During this year, after the finalization of the project authorized by the ERO Board, only one Hydropower Plant has become operational, with a total installed capacity of 2.01 MW.

The table below shows the legal entity that has started operation for generation of electricity from RES.

Tab. 2.13 The company that has become operational

No.	Legal Entity	Facility	Location	Installed capacity	Date of becoming operational
1	Matkos Group SH.P.K.	Hydro Power Plant	HPPBrezovicaja, Municipality of Shtërpca	2.01 MW	19 April 2017



Fig. 2.1 Images from the HPP Brezovica facility

The HPP Brezovica Project is in commercial operation, and since 19 April 2017, has finalized the Agreement for the Purchase of Energy for the Generation of Electricity from RES. The agreement was signed for a period of ten (10) years.

2.5 Monitoring the construction of new generating capacities

During this year, ERO has monitored the legal entities that are equipped with a Final Authorization for construction of generating capacities for generation of electricity from RES.

ERO has monitored the works that are being carried out by the Air Energy L.L.C which is authorized by Decision V-824-2016 for construction of new generating capacities for generation of electricity from wind turbines at the place called "Wind park - KITKA", for the installation of 9 wind turbines with a total installed capacity of 32.4 MW, CZ, Hogosht, Polička and Velegllava, Municipality of Kamenica.

Below you can find pictures from the field showing the installation of wind turbines and the construction of the substation, which are in different installation/construction stages.



Fig. 2.2 Images of the wind turbine base and of the 110 kV substation "Wind park - KITKA"

ERO has monitored the works that are being carried out by Matkos Group L.L.C for HPP Vica, HPP Shterpca and HPP Sharri, authorized by Decisions V-640-2014, V-759-2016 and V-760-2016, for the construction of new generating capacities from Hydro Power Plants, with total installed capacity of 16 MW for the three (3) projects, CZ Shterpca, Municipality of Shterpca.

Below you can find pictures from the field showing the hydro power plants that are in different construction stages.



Fig. 2.3 Images of the construction of HPP Vica, HPP Shterpca and HPP Sharri

ERO has monitored the works being carried out by HIDROENERGJI SH.P.K. for HPP Lepenci 1 Project, authorized by Decision V-755-2016, for the construction of new generating capacities from the Hydro Power Plant, with an installed capacity of 9.98 MW, CZ, Municipality of Kaçanik.

Below you can find pictures from the field showing the hydro power plant which is in the construction phase.



Fig. 2.4 Images of the construction of HPP Lepenci 3

ERO has monitored the works that are being carried out by EUROKOS JH L.L.C for HPP Brodi 3 Project, authorized by Decision V-870-2016, for the construction of new generating capacities from the Hydro Power Plant, with an installed capacity of 4.7 MW, CZ Kukalana, Municipality of Dragash.

Below you can find pictures from the field showing the hydro power plant which is in the construction phase.



Fig. 2.5 Images of the construction of HPP Brodi 3

ERO has monitored the works that are being carried out by N.T.N. RENELUAL TAHIRI L.L.C for the HPP Orqusha Project, authorized by Decision V-891-2017, for the construction of new generating capacities from the Hydro Power Plant, with an installed capacity of 4 MW, CZ Orqusha, and

Municipality of Dragash. Also, ERO has monitored the works that are being carried out by 2 Korriku L.L.C for the HPP Soponica Project, authorized by Decision V-880-2017, for the construction of new generating capacities from the Hydro Power Plant, with an installed capacity of 1.3 MW, CZ Doganaj, Municipality of Kaçanik.

ERO will continue to monitor the construction of new generating capacities from Renewable Energy Sources, while complying with all legal procedures and criteria established by the applicable legislation.

2.6 Court cases

Lawsuit filed by KEK

On 22 May 2017, ERO was sued by the Kosovo Energy Corporation (KEK JSC) for annulment of Decision V-909-2017 dated 13.04.2017. The lawsuit was filed with the Basic Court in Prishtina, Department for Administrative Matters, with a proposal to postpone the execution of the challenged decision until the case is ruled according to the lawsuit filed by the plaintiff. Decision V-909-2017 deals with the adjustments for capital investments of the regulatory period 2013-2016 for KEK JSC.

On 28.05.2017, ERO received from the Basic Court in Prishtina, Department for Administrative Affairs, the Decision A. No. 861/17 dated 23.05.2017 which rejected the lawsuit of the plaintiff, KEK JSC, for postponement of the execution of the decision of the respondent, namely ERO, i.e. the Decision V_909-2017 dated 13 April 2017, until the case is ruled according to the lawsuit. After KEK JSC filed a complaint with the Appellate Court of Kosovo and after ERO's response to the complaint, the Appellate Court of Kosovo rendered the Decision AA No. 269/17, which confirmed the decision of the Basic Court in Prishtina.

Lawsuit filed by KESCO

On 25.08.2017, ERO received from the Basic Court in Prishtina, Department for Administrative Matters, the Decision A. No. 1780/16, dated 09.08.2017, which obliged ERO to file a response to the lawsuit regarding the initiation of the Administrative Conflict by KESCO JSC for the abrogation of the ERO Board's Decision V_860-2016, dated 14.10.2016, for licensing HEP-KS LLC to carry out activities of electricity supply.

On 11.09.2017, ERO filed with the Basic Court in Prishtina a response to the lawsuit requesting to fully reject the lawsuit of the plaintiff, KESCO JSC, by presenting the necessary facts as well as requesting that the abovementioned decision of the ERO Board remains in force as grounded.

The lawsuit filed by the Ombudsperson

ERO was sued at the Basic Court in Prishtina, Department for Administrative Matters, by the Ombudsperson of the Republic of Kosovo for annulment of the Decision V-399-2012 dated 06.02.2012, with a proposal to postpone the execution of the challenged decision until the case is ruled according to the plaintiff's lawsuit. ERO's Decision V_399_2012 relates to the regulatory parameters which, among other things, stipulate that *"... the loss reduction curb in distribution shall start at values realised during 2011 and shall be reduced by 3% (percentage points) in the first 3 years and by 2.5% (percentage points) in 3 subsequent years ... "*.

On 18.09.2017, ERO received from the Basic Court in Prishtina, Department for Administrative Matters, the Decision A. No. 1373/17, dated 11.09.2017, which "*Approves the request of the claimant, namely the Ombudsperson of the Republic of Kosovo, and postpones the execution of the decision of the respondent, Energy Regulatory Office in Pristina, Decision V_399_2012 dated 06.02.2012, until a judgement is rendered regarding the claimants lawsuit*". Upon receipt of the aforementioned decision, on 29.09.2017, ERO filed a complaint with the Appellate Court of Kosovo, challenging the Decision of the First Instance Court in its entirety and proposing to approve ERO's Complaint as grounded and annul the Decision of the Basic Court in Prishtina.

On 30.10.2017, ERO received from the Appellate Court of Kosovo, Department for Administrative Matters, the Decision AA. No. 451/17, dated 20.10.2017, with rejects ERO's Complaint as ungrounded and confirms the Decision A. No. 1373/17, dated 11.09.2017, of the Basic Court in Prishtina, Department for Administrative Matters.

On 29.11.2017, ERO submitted a request to the Supreme Court of Kosovo for extraordinary review of the court decision, whereby challenged the Decision A. No. 1373/17, dated 11.09.2017, of the Basic Court in Prishtina, Department for Administrative Matters, and the Decision AA. No. 451/17, dated 20.10.2017, of the Appellate Court of Kosovo, with a proposal to annul the challenged decisions and return the case to the first instance court for review and retrial, or to amend the Decision of the Basic Court in Pristina and approve ERO's Complaint as grounded.

2.7 Annual balance of electricity and thermal energy

According to the Law on Energy (No. 05/L-081), ERO is responsible for balances, including annual and long-term (10 years) balances of electricity, thermal energy and natural gas. The law also defines the obligations of system operators for preparation of these balances. The annual balances should be approved by ERO separately and then summarized as a whole for electricity, thermal energy and natural gas and published on the website. Since Kosovo does not have a natural gas system, no annual natural gas balance has been prepared.

In 2017, the following balances were prepared and finalized:

- Annual Electricity Balance for 2018; and
- Annual Thermal Energy Balance (for DH Termokos and DH Gjakova) for 2018;

The Annual Energy Balance summarized for 2017 is published on ERO's website www.ero-ks.org, while the Annual Energy Balance for 2018 will be published after its approval.

The balances have so far been prepared based on the Methodology for Preparation of Energy Balance and based on the Administrative Instruction No. 07/ 2011 on Rules for Energy Balance.

During 2017, ERO has prepared the Rule on Preparation of Electricity and Thermal Energy Balances, which also contains methodologies for drafting and procedures for preparing, delivering, reviewing and approving the annual and multi-annual electricity and thermal balances. ERO is currently finalizing this Rule which is then to be approved by ERO's Board.

2.8 ERO's activities in the field of pricing regulation

Based on the Law on Energy Regulator and based on the Rules for Determination of Maximum Allowed Revenues (MAR), taking into account the powers being conferred with, ERO is the sole responsible authority for setting tariffs for regulated activities in the energy sector.

In order to fulfil this legal obligation, one of ERO's main activities during 2017 was the process of annual adjustments to MAR and the review of applications for new tariffs by licensees in the energy sector, including transmission, distribution and the public supply of electricity for tariff customers and licensees in the thermal energy sector.

ERO throughout the whole review process has given a special emphasis on public consultation. It also includes the publication of documents on the website as follows:

- KEK JSC Capital Investments Adjustments Report;
- Final Report on DSO Maximum Allowed Revenues;
- Final Report on TSO/MO Maximum Allowed Revenues;
- Notification on the execution of the Decision AA. No. 451/2017, dated 20 October 2017, of the Appellate Court of Kosovo.

2.8.1 Energy tariffs in the liberalized market

In January 2017, ERO issued the document entitled "Guideline on Liberalization of Electricity Market in Kosovo", which defines the manner, criteria and timing of electricity market liberalization in Kosovo, at electricity generation and supply level. This Guideline sets the preconditions for market liberalization, development of effective competition in the electricity market, deregulation of electricity generation prices for KEK JSC starting from March 2017, purchase of electricity losses by Transmission System Operator and Distribution System Operator in a competitive market.

Also, in the light of reforms to be undertaken during the year is the establishment of a fund for renewable energy sources (RES), where the difference between the market prices and the feed-in tariffs will be covered by the RES Fund.

In addition to the above-described reforms related to the wholesale market, ERO has created the necessary legal framework to enable opening of the retail market, namely providing the final customers with the opportunity to freely choose their supplier. The process of market liberalization at retail level is guaranteed by the following rules: Rule on Determination of Revenues for Universal Service Supplier, Rule on Supplier of Last Resort, and the Supplier Switching Rule.

Given the complexity of the market liberalization process, ERO has planned to continue with this process gradually and in cooperation with all parties responsible in the energy sector. In this regard, in accordance with the Guideline on Liberalization of Electricity Market in Kosovo, the retail market will be opened in several phases, depending on the type of customer and the voltage they are connected to. Customers connected to the 220 kV and 110 kV transmission level are subject to market conditions and prices applicable from 31 March 2017, while commercial customers

connected to 35 kV and 10 kV voltage levels are expected to be subject to electricity market conditions and prices applicable from 31 March 2018.

2.8.2 Adjustments to the electricity supply costs for KEK

During the 4-year Periodic Review (1 April 2013 until 31 March 2017), ERO has defined the maximum allowed revenues that enabled a normal operation and enabled the carrying out of capital investments necessary for this period. The total value of investments allowed in KEK JSC for a period of four (4) years was EUR 208.4 million, including investments in: TPP Kosova A, EUR 58.4 million, TPP Kosova B, EUR 44.1 million, and the Mining Division, EUR 105.9 million.

Based on the Rule on Regulated Generator Pricing, the multi-year review period ended on 31 March 2017, and from that date, ERO does not adjust the prices for KEK JSC. Based on this Rule, ERO should make adjustments to capital investments allowed and carried out by KEK. During this process, ERO adjusts KEK's revenues in case there is a difference between the capital investments allowed and carried out, compensating customers for depreciation and return on these investments. This compensation is adjusted to the interest rate designated as the entry value during the regulatory period.

The data submitted by KEK showed an unsatisfactory state of investments carried out over the four year period. From the total allowed investment value for KEK in all divisions, around EUR 101.4 million have been spent, or 48.7% of the total value, if expressed in percentage.

The following table shows the capital investments allowed and carried out in KEK JSC for the period from 1 April 2013 until 31 March 2017.

Tab. 2.14 Investments in KEK during the four-year period

INVESTMENTS IN KEK								
	Mining		TPP KOSOVA A		TPP KOSOVA B		Total	
Year	Allowed (€ mil)	Carried out (€ mil)	Allowed (€ mil)	Carried out (€ mil)	Allowed (€ mil)	Carried out (€ mil)	Allowed (€ mil)	Carried out (€ mil)
2013	14.51	8.44	23.02	30.46	9.07	1.87	46.60	40.77
2014	39.96	10.44	17.71	9.81	5.50	9.19	63.17	29.44
2015	41.45	6.19	10.21	8.87	16.50	6.04	68.16	21.10
2016	9.95	5.92	7.50	2.60	13.00	1.61	30.45	10.13
Total	105.87	30.99	58.44	51.74	44.07	18.71	208.38	101.43

After making calculations for adjustments due to investments not being carried out, it turns out that consumers should be compensated in the amount of EUR 21,534,381.

ERO has analysed several ways to adjust KEK's capital costs in order to compensate all customers who have paid these costs during the period 2013-2016 through electricity bills. ERO has estimated that the fairest way to compensate the customers is through the transmission system, where all customers would benefit regardless of the voltage and regulation level. As noted above, deregulation of retail prices for customers connected to 220kV and 110kV level and to other

customers has already commenced and therefore compensation through suppliers will be very difficult to be done.

It should be noted that KEK should return revenues for the portion of depreciation and return received for investments not carried out, adjusted to the interest rate, within a period of two (2) years.

KEK will supply KOSTT with energy for transmission system needs for free, as a form of compensation to consumers. The estimated amount of transmission system energy needs (for covering the losses) during the regulatory year 2017/2018 is foreseen to be 360 GWh. KEK must supply KOSTT with at least 302 GWh in order to compensate EUR 10.7 million in the first year (April 2017 - March 2018) from the total amount to be returned. The remaining amount of EUR 21.5 million will be returned in the second year, taking into account the energy quantity and market prices for energy purchasing in the wholesale market.

Starting from 1st of April 2017, KEK has had several options for selling electricity to local market. Sales of electricity generated by KEK were made with these market prices:

- sales of electricity for supplying the customers with universal service at the price of EUR 28.6/MWh;
- sales of electricity to customers connected to the 110 kV voltage level at the price of EUR 35.4/MWh;
- sales of electricity to KOSTT and KEDS to cover losses in their networks at the price of EUR 35.4/MWh; and;
- sales as electricity export at the price of EUR 37.8/MWh.

2.8.3 Electricity tariffs for final customers

The block tariff structure, applicable until March 2017 for household consumers, although it is based on the basic principles of covering costs and reflects the current economic situation of the country, it is, however, a bit complex and sometimes not well-understood by consumer. After energy market liberalization, it was necessary to simplify this tariff structure, so that consumers can easily estimate the cost of supply from different suppliers. This tariff structure is based on relevant rules and methodologies that reflect the principle of the real cost of service for each customer group at different voltage levels.

As of 1 April 2017, ERO has changed the retail tariff structure in the electricity sector, whereby it resulted that this structure is simple and understandable, cost-reflective, encourages efficient energy consumption and is easily administered by the supplier. The tariff structure was changed for the final customers. One of the essential changes is the elimination of seasonal tariffs, and now the tariffs will be the same regardless of consumption season (summer or winter) and will include all final customers. This proposal resulted because of the minimal changes to the supply costs between winter and summer seasons. As a result of this change, final customers will have an unchanged price in terms of the season, for every kWh spent. Changing the tariff structure for household customers has maintained the average tariff as it was in the previous year, in 2016. The other proposed change involves only household customers and concerns the abolition of block tariffs on

the basis of consumption levels. With the new tariff structure, tariffs will be eliminated according to the consumption level blocks and will be shifted to the average daily (day/night) tariffs per kWh regardless of the quantity consumed. In this way, each customer will find it easier to calculate his bill and plan the consumption as needed. The day/night tariffs have remained in force in order to promote a more efficient use of energy during the peak load. This way, there will be an incentive for customers to shift part of the consumption from peak load (day) to off-peak load (night).

2.8.4 The impact of Appellate Court's Decision on the Interim Measure in changing the tariffs

On 13 June 2017, ERO received a Report with Recommendations from the Ombudsperson of the Republic of Kosovo regarding the billing of electricity consumed in the four northern municipalities of the Republic of Kosovo.

On 12 July 2017, ERO has formally responded to recommendations under the Ombudsperson's Report, informing him in detail that the unbilled electricity in the four northern municipalities is a direct consequence of local authorities refusal in four municipalities of the country's northern part to recognize the legitimacy of the Government of the Republic of Kosovo, the legitimacy of the laws, regulations, institutions and of the obligations of public service providers, including access to their assets, which has resulted in a constant and persistent non-payment of electricity by electricity consumers residing in these municipalities.

After receiving the written responses from ERO, the Ombudsperson of the Republic of Kosovo filed a lawsuit with the Basic Court in Prishtina, Department for Administrative Affairs, against ERO, requesting annulment of Decision V_399_2012 issued by ERO's Board on 06.02.2012, and proposing to postpone the execution of this decision until a merit-based review of the lawsuit.

Basic Court in Prishtina, Department for Administrative Affairs, has issued a Decision on an interim measure to postpone the execution of the Decision No. V_399_2012 confirmed by the Appellate Court.

Based on the court decision on the interim measure, ERO, within the legal deadline, has notified in writing KOSTT, KEDS and KESCO and has provided them with instructions on how to apply this court decision by adjusting the tariffs for final customers and the tariffs for TSO/MO for the costs of supply to the four northern municipalities of Kosovo.

Tab. 2.15 Structure of tariffs for retail customers

Tariff group	Voltage level of supply	Tariff element	Unit	Time of day	Tariffs April- November	Tariffs from 1 December
1	35kV	Standing (customer) charge	€/customer/month		12.21	11.78
		Standing (demand) charge	€/kW/month		6.40	6.16
		Active energy (P), of which	€/kWh	High Tariff	5.37	5.18
			€/kWh	Low Tariff	3.45	3.33
		Reactive energy (Q)	€/kVArh		0.73	0.70
2	10kV	Standing (customer) charge	€/customer/month		5.05	4.86
		Standing (demand) charge	€/kW		5.51	5.31
		Active energy (P), of which	€/kWh	High Tariff	6.25	6.03
			€/kWh	Low Tariff	4.02	3.88
		Reactive energy (Q)	€/kVArh		0.73	0.70
3	0.4 kV Category I (reactive energy customers)	Standing (customer) charge	€/customer/month		2.86	2.71
		Standing (demand) charge	€/kW		3.23	3.13
		Active energy (P), of which	€/kWh	High Tariff	7.30	7.04
			€/kWh	Low Tariff	5.41	5.22
		Reactive energy (Q)	€/kVArh		0.73	0.70
4	0.4kV Category II	Standing (customer) charge	€/customer/month		3.24	3.13
		Active energy (P), of which	€/kWh	Single Tariff	9.63	9.29
			€/kWh	High Tariff	11.68	11.27
			€/kWh	Low Tariff	5.78	5.58
5	0.4kV (domestic) 2-rate meter	Standing (customer) charge	€/customer/month		1.80	1.74
		Active energy (P), of which	€/kWh	High Tariff	7.00	6.75
			€/kWh	Low Tariff	3.00	2.89
6	0.4kV (domestic) 1-rate meter	Standing (customer) charge	€/customer/month		1.80	1.74
		Active energy (P), of which	€/kWh		5.52	5.32
7	0.4kV (domestic) unmetered	Assessed consumption:			1.80	
		Standing (customer) charge	€/customer/month		7.00	1.74
		Active energy (P), of which	€/kWh	Average Tariff		6.75
8	Public lighting	Standing (customer) charge	€/customer/month		3.50	3.38
		Active energy (P), of which	€/kWh	Single Tariff	10.09	9.73
High Tariff (day time) applies from 07:00 to 22:00 during the period 1 October to 31 March						
High Tariff (day time) applies from 08:00 to 23:00 during the period 1 April to 30 September						
Customer will be charged with reactive energy above allowed cos (Φ)<0.95						

2.8.5 Tariffs for using the transmission system

Every relevant tariff year, ERO has reviewed the Maximum Allowed Revenues through annual adjustments, setting tariffs in accordance with the Rule on Maximum Allowed Revenues of Transmission System Operator and Market Operator.

During this process, the licensees submitted the applications with requests for maximum allowed revenues, including requests for operating expenses, repairs, maintenance and capital expenses.

ERO has evaluated such applications and has prepared the Consultative Report on Maximum Allowed Revenues of the TSO/MO, putting such report on public consultation for receiving comments from all parties involved in this process. After reviewing the comments, ERO has also prepared the Final Report on Maximum Allowed Revenues and TSO/MO tariffs in the amount of EUR 25.22 million, or EUR 2.85 million more than in 2016.

The ERO Board, after reviewing all relevant documents, in the meeting held in March and April 2017, issued the following decisions:

- V_907_2017 on Approval of Maximum Allowed Revenues for the Transmission, System and Market Operator (KOSTT);
- V_913_2017 on Approval of Tariffs for Using of the Transmission, System and Market Operator (KOSTT).

Based on the aforementioned decisions, ERO has set KOSTT tariffs to cover its maximum allowed revenues, but these tariffs have been reduced in December 2017 in order to reflect the implementation of the Appellate Court's decision to remove costs of four northern municipalities from the tariffs of regulated customers.

The following table shows the structure of TSO/MO tariffs applied from 1st of April to 30 November and from 1st of December 2017 onwards.

Tab. 2.16 Structure of TSO/MO tariffs

Tariff group	Tariff element	Unit	Tariffs April-November	Tariffs 1 December
Generation connected to transmission	System Operator Tariff	€/MWh	0.42	0.223
	Market Operator Tariff	€/MWh	0.037	0.019
Generation connected to distribution	System Operator Tariff	€/MWh	0.054	0.029
	Market Operator Tariff	€/MWh	0.037	0.019
Distribution Operator	System Operator Tariff	€/MWh	0.499	0.265
	Market Operator Tariff	€/MWh	0.044	0.023
Supply	TUOS Tariff 400/220 kV	€/kW/yea	6.081	3.224
	TUOS Tariff 110 kV	€/kW/yea	11.731	6.22
	System Operator Tariff	€/MWh	0.499	0.265
	Market Operator Tariff	€/MWh	0.044	0.023
	RES Fund Tariff	€/MWh	1.763	1.763

2.8.6 Tariffs for using the distribution system

The Maximum Allowed Revenues and tariffs for Distribution System Operator (KEDS JSC) were reviewed based on the Rule for Maximum Allowed Revenues of the DSO.

Based on this Rule, licensees have submitted the maximum revenue application that includes requests for DSO's operational, maintenance, and capital expenditures. Based on the application, KEDS's request for revenues for the relevant tariff year 2017 was in the amount of EUR 86.34 million.

After evaluating such application, ERO prepared a consultative report on the DSO (KEDS) maximum revenue, subjecting such report to public consultation. After reviewing the comments, ERO prepared the final report and set the maximum allowed revenues of KEDS in the amount of EUR 67.53 million, or EUR 19.81 million less than the KEDS request, i.e. EUR 9 million less than in 2016.

ERO's decision to reduce KEDS's maximum allowed revenues to this level has come as a result of:

- application of the efficiency factor for operational and maintenance costs of 5%;
- application of losses reduction target by ERO;
- realization of unregulated revenues by KEDS such as: new connections, leasing of assets, utilization of DSO network by operators IPKO and Kujtesa;
- application of the revenue correction factor, etc.

After reviewing all relevant documents, the ERO's Board issued the following decisions:

- V_908_2017 on approval of Maximum Allowed Revenues for KEDS;
- V_914_2017 on approval of the tariffs for using the Distribution Network.

Based on the Methodology for Setting the Tariffs for Using the Distribution Network, ERO approved the tariffs for KEDS.

The following table shows the structure of tariffs for the DSO, applied since 1st of April 2017.

Tab.2.17 Structure of tariffs for the DSO

Tariffs for customers connected to DSO		
Voltage level	Unit	Tariff
35 kV	€/kWh	1.07
10 kV	€/kWh	1.45
0.4 kV	€/kWh	2.15

The tariffs for using the distribution system, set by ERO, are charged to users of the distribution system by the DSO based on the voltage level.

2.8.7 Thermal energy tariffs

In accordance with the legal provisions, ERO determines Maximum Allowed Revenues and Thermal Energy Tariffs based on the Thermal Energy Pricing Rule.

This Rule, inter alia:

- Determines the bases and methodology for calculating the Maximum Allowed Revenues and thermal energy tariffs;
- Establishes the procedures for submitting applications and reviewing, adjusting and approving tariffs in the regulated thermal energy sector.

In order to implement this Rule, respectively the Methodology for Calculating the Maximum Allowed Revenues and Thermal Energy Tariffs, the Model for calculating maximum allowed revenues and thermal energy tariffs has been developed (prepared).

As provided for in the Rule on Determination of Thermal Energy Maximum Allowed Revenues, ERO has monitored, i.e. reconsolidated, the 2016/2017 season to verify the realization of maximum allowable revenues of 2016/2017 season by DH Termokos, as this report showed that revenues allowed by ERO almost completely match those realized by DH Termokos for the 2016/2017 season.

Due to not having ERO Board's quorum, no decision was made on the thermal energy tariffs for the 2017/2018 season, and consequently, they remained the same as those of the previous season.

The structure of thermal energy tariffs for DH Termokos and DH Gjakova is as follows.

Tab. 2.18 Thermal energy tariffs

Thermal energy tariffs					
Tariff components with measurements	Unit	DH Termokos		DH Gjakova	
Thermal capacity monthly tariff (fixed component)	[€/kW/month]	0.93		0.91	
Thermal energy supply/consumption tariff (variable component)	[€/MWh]	41.47		58.76	
Tariff components without measurements	Unit	Residential customers	Commercial and institutional customers	Residential customers	Commercial and institutional customers
Thermal capacity monthly tariff (fixed component)	[€/m ² per month]	0.11	0.15	0.09	0.12
Thermal energy supply/consumption tariff (variable component)	[€/m ² per month]	0.67	0.82	0.88	1.27

2.9 Promoting electricity generation from RES

Feed-in tariffs are a mechanism for promoting investment in the generation of electricity from renewable sources, which are applied in developing countries as well as in the developed countries (EU, USA and beyond).

Based on the Methodology for Calculating the Feed-In Tariffs, ERO has determined the level of feed-in tariffs of electricity produced by wind, water, solar and biomass sources. This methodology has taken into account investment costs, operating expenses, return on capital and other relevant data that were necessary for calculating this tariff.

The following table shows the feed-in tariffs for generation of electricity from RES, by technologies, and approved by the ERO Board.

Tab. 2.19 Feed-in tariffs for RES by technology

Feed-in tariffs applicable to RES	
RES	€/MWh
Wind	85.00
Photovoltaic	136.40
Small Hydro Power Plants	67.47
Biomass	71.30

The RES generators which have not been accepted in the Support Scheme may choose to operate as generators with regulated prices or as generators in the free market and will be subject to applicable rules covering their imbalances and having priority in dispatch and priority in connection.

The Support Scheme provides financial incentives to build sufficient capacities for generation of electricity from RES in order to reach the target set for RES according to the Administrative Instruction.

The Renewable Energy Fund (REF) is created and managed by the Market Operator (MO) in accordance with the Rule on Support Scheme. The MO buys all electricity generated (measured) from BRE based on relevant prices from the Support Scheme. This electricity is then covered by suppliers at reference prices which represent wholesale electricity purchase prices including import, while the difference between the price under the Support Scheme and the reference price is covered by all suppliers in proportion to the electricity supplied through REF.

The tariff for the electricity generated from RES is a separate transmission tariff that covers the costs of the Renewable Energy Fund for which certificates of origin are issued, which can be then updated during regular annual reviews. This tariff is the ratio of the total operating costs of the Renewable Energy Fund to estimated consumption of the electricity that will be charged by the market operator.

The costs of purchasing electricity generated from renewable sources during 2017 were EUR 6.34 million.

In the framework of the Rule on Support Scheme, ERO has also addressed electricity generated by micro-generators (self-consumption generators) that can "push" the surplus of generated electricity on the network and obtain the electricity needed.

It should be noted that 2017 marked an increase of investors' interest in electricity generated from RES. Based on the data, until 2017, about EUR 84.2 million were invested in the water generating capacities, about EUR 17 million were invested in the wind generating capacities and about EUR 1 million were invested in solar panels generating capacities. The total investment made by the end of 2017 amounted to EUR 102 million, while potentials expected to be realized based on authorizations issued by ERO are around EUR 341 million, which are expected to be invested by 2020. These capital investments are mostly financed by bank loans covering up to 70% of investment costs, while the rest is funded by the company's own capital (equity).

2.10 TSO certification process

ERO has initiated the process of certifying the Transmission System Operator (TSO) - KOSTT. Certification of TSOs is required in order to ensure that the TSO performs its functions independently from any other business in the energy sector and consequently ensure that the TSO as such offers free and non-discriminatory access to the transmission network for all stakeholders operating in the sector, thus ensuring a free functioning of electricity market in the country. Certification is a process on which ERO confirms that there is sufficient separation of control, on one hand over the TSO and over generation and/or supply on the other, and that the control of the energy companies is in compliance with relevant provisions on unbundling. To this end, on 16 June 2017, representatives of Transmission, System and Market Operator-KOSTT JSC submitted to ERO the application for Certification of KOSTT. ERO has requested that the application is supplemented with some additional information that is needed to define ownership of TSO's assets and other relevant issues for this process. As a requirement deriving from the EU directives, the certification process is being monitored and coordinated with the Energy Community Secretariat and the decision will be taken as soon as the Board is complete.

2.11 Market monitoring

In accordance with its legal powers, ERO is responsible for monitoring the operation of electricity markets in order to ensure their efficient functioning and identify the necessary corrective actions.

During 2017, ERO has monitored the electricity import and export carried out by KESCO and KOSTT in the framework of their daily activities to balance Kosovo's energy system, even by conducting visits to responsible parties. The purpose of these visits was for ERO to ensure that all energy procurement procedures under the applicable legislation are being applied.

According to legislation in force, operators are obliged to ensure the electricity for covering losses and other auxiliary services in the competitive market. Operators are able to ensure most of this electricity from domestic production, and when the demand for energy from domestic production is not met, this electricity is then ensured from imports.

During this monitoring period, KOSTT has imported to cover electricity for transmission losses and unbilled electricity in the north of the country, while KESCO has imported for consumers with universal service right, customers with unregulated prices, and to cover distribution losses, and has exported for electricity surpluses.

The monitoring carried out focuses on these areas:

- a) Total import and export, and accompanying problems;
- b) Number of traders' participants in each tender;
- c) Quantity of unrealized imports/exports.

Given that this was a new process for KOSTT (a process previously carried out by KESCO), certainly there were initial difficulties and problems. Difficulties were mainly related to traders' low interest to offer very small quantities of electricity required by KOSTT because KOSTT ensures part of its demand from local production according to priorities provided in the Guideline for Liberalization of

Electricity Market in Kosovo, which has also resulted in higher import prices compared to imports realized by KESCO for the same period, and which stabilized over the time.

While trading electricity, KOSTT and KESCO have fulfilled the criteria of electricity procurement procedure such as: the most economically advantageous tender, the sufficient number of traders participating in auctions, the timing of trading, communication with participating parties, etc.

As mentioned in the paragraphs above, initially there were difficulties in ensuring imported electricity quantities, so that part of the required electricity remained un-contracted. For this reason, the required quantity of imports to cover the KOSTT demands was 46,215 MWh of which 38,967 MWh were contracted, while 7,248 MWh was non-contracted electricity.

2.12 Monitoring the electricity outages

Based on the findings from the monitoring of electricity outages for October-November 2016, ERO has prepared a report which, together with the Regulator's accompanying letter, in accordance with the Rule on Administrative Measures and Fines, has been sent to KEDS to give them the opportunity to comment and probably object the findings of the Report.

After reviewing and evaluating the responses/comments of KEDS JSC to the Regulator's Report on the inspection of planned outages, the Regulatory Board has ascertained that KEDS JSC has not in any case or with any fact been able to object/argue the findings of the Regulatory Report, and, in its meeting held on 27 February 2017, issued "*Notice on the violations ascertained with respect to planned outages carried out during October-November 2016 by KEDS JSC*".

On 31.03.2017, in conformity with the legal provisions foreseen in the Law on Energy Regulator and the Rule on Administrative Measures and Fines, the Regulatory Board has taken a decision on the imposition of a EUR **45,000** fine on the Kosovo Energy Distribution Services (KEDS JSC) for violations made during electricity outages.

2.13 ERO activities in the area of customer protection

In the light of its legal powers, ERO is responsible for settling complaints and disputes between consumers and energy companies, system operators and energy enterprises, as well as between two energy companies.

According to provisions of abovementioned rules, all customers have the right to file complaints concerning the services provided by the supplier or system operator, who should then process the complaint and issue a response within the legal deadline. After receiving the response, the customer can address ERO for further review.

During 2017, the number of complaints filed with ERO is about 20.60% lower than the number of complaints received during 2016. In 2017, 233 complaints were registered with ERO, while 281 complaints were received in 2016. Unsolved complaints are in the process of being completed with the documentation and facts relevant to their resolution. In addition to registered and resolved customer complaints, ERO has also provided support in delivering information, explanations, verbal consultations, email and telephone to all electricity consumers.

The number of complaints received by customer categories is presented in the table below.

Tab. 2.20 Customer complaints by category, 2017

Customer complaints by category	Number	Percentage [%]
Residential customer	214	91.85
Commercial customer	18	7.73
Industrial customer	1	0.43
Total	233	100.00

From the total number of complaints received, 186 complaints, or around 79.83%, have been reviewed and resolved. Out of the total number of complaints resolved in 121 (66%) ERO has decided in favour of the customers, whereas 63 (34%) customer complaints were rejected as ungrounded. Based on legal competencies, in addition to official complaints received and registered, ERO has returned 68 customer complaints to the supplier and the distribution system operator due to deficiencies and errors in the documentation provided by parties. All these complaints have been reviewed by the supplier and the distribution system operator and the customers have been notified of improvements made.

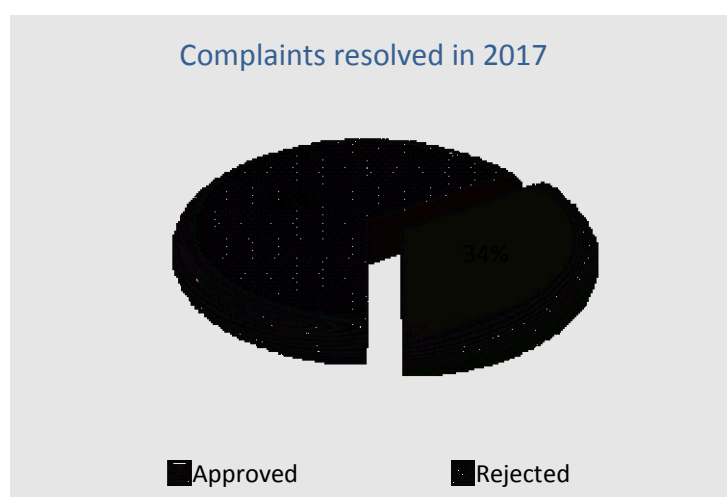


Fig. 2.6 Status of resolved complaints, 2017

It should also be noted that ERO received 2 customer complaints from the Basic Court in Prishtina under the justification that the courts lacks subject-matter jurisdiction to adjudicate the cases. These complaints were reviewed by ERO and customers were instructed on further proceedings based on provisions of Article 61 of the Law on Electricity and Rule on Resolution of Disputes and Appeals in the Energy Sector.

The figure below shows the number of customer complaints according to their nature.

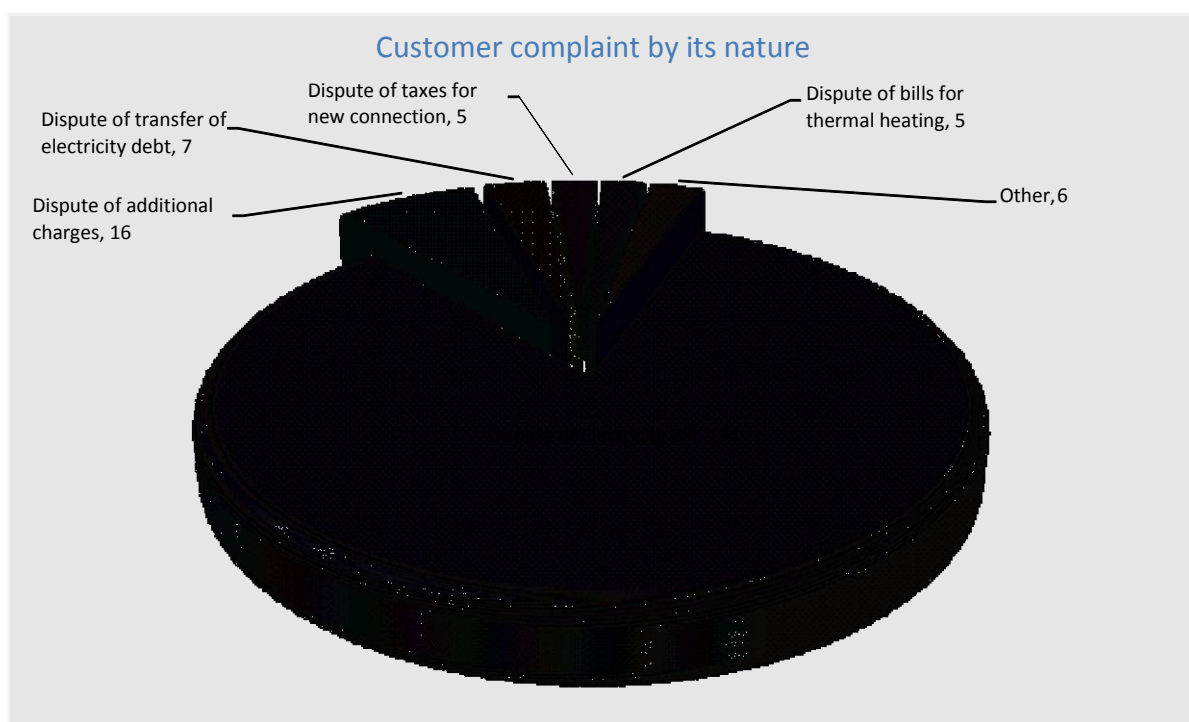


Fig. 2.7 Number of customer complaints by its nature

The following sections explain the nature of customer complaints lodged during 2017:

- **Dispute of electricity bills**, relates to customer complaints in cases of incorrect or irregular readings, which is considered as giving an inaccurate overview of the actual state of electricity consumption.
- **Dispute of additional charges**, relates to customer complaints to which the electricity company has billed additional charges to the regular billing. These complaints result from non-registration of electricity spending, as a result of the defect of any measuring system.
- **Dispute of electricity debt**, relates to customer complaints for issues caused by inaccurate definition of the electricity debt not collected by the supplier in cases of property transactions and for usurped property.
- **Dispute of new connections**, relates to customer complaints to which the energy company denied the right for a new connection by the distribution system operator. In such cases of complaints, in order to implement a new connection, customers were obliged by the company to initially pay the debts in the old amount that existed before.
- **Dispute of bills for thermal heating**, relates to customer complaints regarding thermal heating billing made by DH. "Termokos", which are related to the heating quality and billed area.

The number of customer complaints, registered and resolved by ERO, by years, is presented in the figure below.

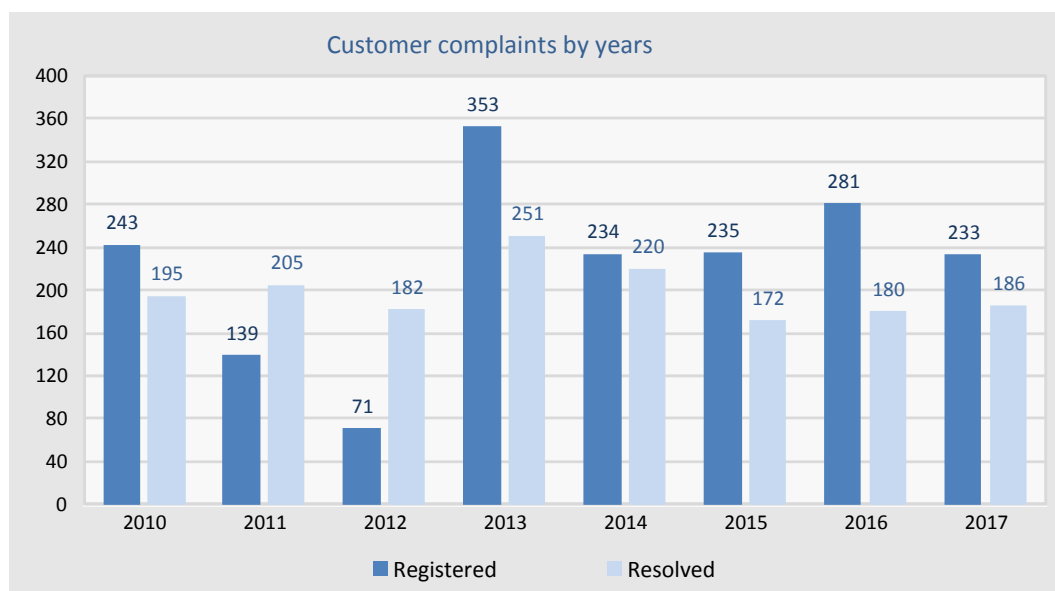


Fig. 2.8 Registered and resolved customer complaints 2010-2017

2.13.1 Decisions of the ERO Board in the area of customer protection

Based on the Regulation on Resolution of Complaints and Disputes in the Energy Sector, customers and licensees are entitled to lodge complaints against decisions of CPD, as the first instance, to the ERO Board as a second instance.

During 2017, the Board of ERO reviewed three customer complaints comprising a decision and two recommendations issued by the Customer Protection Department, whereby they were approved.

During 2017, the supplier - KESCO filed five complaints to the ERO Board against first instance decisions. The Board reviewed these complaints and rejected them as ungrounded.

2.13.2 Other activities related to customer protection

In addition to registered complaints, during 2017, ERO also held 1,115 meetings and 680 telephone conversations, as well as maintained electronic communication, with customers, who addressed the Office about various issues between customers and licensees in terms of energy supply. As part of its communication with customers, ERO informed and guided them in terms of rules and procedures, as well as their rights and obligations relating to energy supply.

During 2017, ERO received 15 customer complaints by mail, who insisted that ERO deal with their complaints even though they should have addressed the licensees or courts. These complaints were mainly related to unauthorized use of electricity and damages compensation. ERO responded in writing to all such customers instructing them about further proceedings related to their complaints.

Regarding the implementation of the Law No. 05/L-043 on Public Debt Forgiveness, during 2017 ERO received a considerable number of complaints by customers claiming that they were denied legal rights by not being involved in energy (electricity and thermal energy) debt forgiveness lists. ERO has addressed a large number of complaints about this issue and instructed customers about their rights as set out in the aforementioned law.

ERO has cooperated closely with the Customer Protection Department under the Ministry of Trade and Industry, whereby during this reporting period received several customer complaints from this institution. These complaints have been received and reviewed by ERO in accordance with legal provisions, and parties were instructed regarding the procedures to be followed due to the lack of ERO's legal competence for review.

During 2017, a number of decisions of ERO were appealed by unsatisfied parties to the Basic Court in Prishtina - Department of Administrative Matters, requesting legality assessment of administrative decisions. ERO during 2017, based on decisions of the Basic Court in Prishtina, has prepared 17 responses to claims against KEC, KEDS, KESCO and customers as claimants to the decisions of ERO Board. Also, during this reporting year, ERO was involved in 48 court sessions in the Basic Court in Prishtina as a respondent.

It is important to note that, so far, no decision of ERO i related to customer complaints in administrative procedure has been returned for review due to legality non-compliance by the administrative body; all these charges against decisions of ERO were rejected as ungrounded and the challenged decisions were upheld.

3 COOPERATION WITH OTHER PARTIES AND TRANSPARENCY

3.1 Reporting and cooperation with the Assembly of Kosovo

During 2017, as in previous years, ERO continued to report to the Assembly through relevant assembly committees for important events in the energy sector whenever requested by the Committee.

In March 2017, at the request of the Committee for Economic Development, Infrastructure, Trade and Industry, ERO has presented the Tariff Structure Proposal and the impacts that this structure will have on customers of all categories. During the meeting, the members of the Committee requested by ERO representatives to be presented with some simulations of customer invoices from different customer groups in order to get more information on the impacts that these groups may have on the changes in proposed tariff structure.

In December 2017, the Committee on Economic Development, Infrastructure, Trade, Industry and Regional Development was informed by ERO regarding the energy situation in the country, respectively regarding the delays of expropriation in mining areas and the obligation to implement decisions of the Court of Appeals regarding the energy supplied to the four northern municipalities of the country.

Also, during December, ERO reported before the Committee on Human Rights, Gender Equality, Missing Persons and Petitions regarding the energy supplied to the four northern municipalities of the country.

3.2 Cooperation with other stakeholders and partnership activities

During 2017, ERO had close cooperation and partnership with MED, other institutions of the Republic of Kosovo, the licensees, the Energy Community Secretariat and the international community operating in Kosovo on various issues of the energy sector.

3.2.1 Cooperation with the Ministry of Economic Development

ERO has actively participated in the working groups established by the MED on the preparation of the Energy Strategy 2017-2026, the National Action Plan on Energy Efficiency, as well as various administrative instructions.

Moreover, ERO has assisted MED in filling out the various questionnaires required by international institutions. Moreover, during 2017 they held several meetings on problems of the sector, the perspective of the electricity market and the forms of cooperation.

3.2.2 Cooperation with the Kosovo Competition Authority

During 2017, ERO had two meetings with the Kosovo Competition Authority discussing ways of co-operation, within the framework of their legal functions, to exchange information and address competition-related problems.

3.2.3 Participation of ERO at meetings of the National Council for Economic Development

ERO participated in several meetings of the National Council for Economic Development, organized by the Ministry of Trade and Industry, where issues raised by the Kosovo Chamber of Commerce and other chambers operating in Kosovo related to electricity tariffs, connections to electricity networks and power supply were addressed.

3.2.4 Cooperation and partnership with international institutions

During 2017, ERO has collaborated with NARUC - the National Agency of Regulatory Utilities Commissions in the "Southeast Europe Natural Gas Transmission and Distribution Grid Codes Project", with the financial support of the United States Agency for International Development (USAID)

This project is related to the regional co-operation of South-eastern Europe regulators in the field of gas co-organized by NARUC and ERRRA (Energy Regulators Regional Association) seated in Budapest.

The aim is that through this cooperation ERO will be in step with development of regulations for technical codes such as those of transmission and distribution network that reinforce the development of secondary legislation at the moment of gas infrastructure installation planned to include Kosovo according to the ALGOKAP project.

With the help of USAID and NARUC, ERO has committed and signed a Letter of Intent to create a Tool for comparing the electricity price. With this, ERO aims to enable customers to a credible source in an open market to compare the prices that will be offered by electricity suppliers who will operate in the Kosovo market.

3.3 ERO's participation in international activities

The purpose of participation in international activities is considered by ERO as one of the key elements that serves institutional strengthening, increase of knowledge and experience of its staff. The main activities and the active participation in international organizations, international conferences, roundtables or multilateral and bilateral meetings are presented below.

3.3.1 Participation in the Energy Community Regulatory Board (ECRB)

The Energy Community (EC) is an international organization established by international treaty in October 2005 in Athens, attended by the European Union countries, the South East European region and the Black Sea. EC activities during 2017 were focused towards achieving common goals:

"acquis communautaire" implementation, develop the harmonized regulatory framework at regional level and liberalize and integrate markets in the sector of electricity and natural gas.

EC Contracting Parties are: Albania, Bosnia and Herzegovina, Kosovo, Macedonia, Montenegro, Serbia, Moldova, Ukraine and Georgia. European Union member states are participants, whereas Norway, Turkey and Armenia have the observer status.



Fig. 3.1 Member states of the Energy Community of South East Europe

Energy Community Treaty (ECT) is a key strategic component of the European Union (EU) for Southeast Europe and an effective pre-accession tool, which is aimed at expanding benefits from the Regional Energy Market before the regional countries become EU members.

The main institutions of the EC are: Ministerial Council (MC), Permanent High-Level Group (PHLG), Energy Community Regulatory Board (ECRB), the EC Secretariat with the seat in Vienna and four advisory forums: on electricity, natural gas, social issues and oil.

The Energy Community Regulatory Board is an institution established under Article 58 of the ECT SEE, comprised of regulatory authorities of the contracting parties, participants and observers. ECRB plays the role of a coordinating body of the regulatory authorities for harmonization of the regulatory framework, exchange of knowledge and development of best practices on implementation of the treaty.

Based on the provisions of the EC Treaty, ECRB has the responsibility to:

- advise to the Ministerial Council and PHLG on statutory, technical and regulatory issues;
- issue recommendations to parties, in line with the provisions of the Treaty, on any cross-border disputes, etc.;
- Undertake measures against parties, if authorized by the MC;

- Facilitate cooperation and coordination among regulatory authorities;
- Give recommendations and draft reports about the functioning of energy markets; and
- Seeks fulfilment of the parties' obligations under ECT.

With the purpose of fulfilling its responsibilities, ECRB is organized in working groups that perform activities in their respective fields. ECRB is chaired by the President, annually elected by the representatives of national regulators, and the deputy who is delegated by the European Commission.

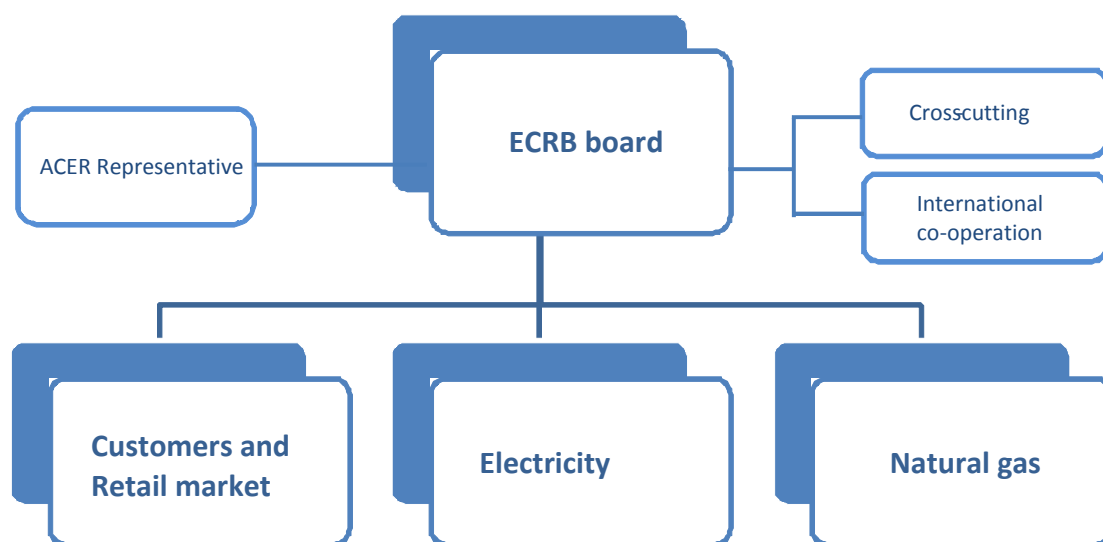


Fig. 3.2 Structure of Energy Community Regulatory Board

According to the obligations towards EC, ERO has nominated its members in ECRB and in every working group, participates actively in the Board activities and respective working groups. Working groups and respective activities are as follows:

3.3.1.1 Working Group on Electricity

During 2017, this working group held regular meetings and activities which were also attended by the representative of ERO. For more efficient work, this group has also established its subgroups (Task Forces –TF), description and activities of which are presented below:

- **TF1 - Wholesale electricity market opening** - In order to support the effective opening up of the market, this subgroup is focused on regulatory support activities for capacity allocation and integration of the "one-day-ahead" market in South East Europe. Also, a number of activities have been related to the provision of co-ordinated inputs for "one-day-ahead" integration projects in South-East Europe under the WB 6 Initiative (Western Balkans 6).
- **TF2 - Balancing the integrated market** - Implementation of balancing mechanisms based on the market and interconnection of national balancing markets into regional market will promote transparent formation of balancing pricing, will promote competition in purchasing of balancing services and will have positive impact on the stability of transmission network. This process has received an additional boost from the WB 6 Initiative.

In this respect, TF-2 subgroup activities have resulted in: finalization of the Research for existing models of imbalance calculation in EC and provision of regulatory inputs for regional balancing projects of the WB 6 Initiative.

- **TF3 - Wholesale electricity market monitoring:**

Market Monitoring is a key component of regulatory responsibilities, which is also defined in "acquis communautaire", full disclosure of market performance and development prospects enables the promotion of competition, customer protection, energy efficiency, investment and safety of supply.

In this context, the activities are focused on: implementation of the Market Monitoring Guidelines and the Monitoring Report of the Electricity Wholesale Market in the Contracting Parties.

3.3.1.2 Gas Working Group (GWG)

This working group focuses its activities on issues of regulating the natural gas sector, harmonizing the regulatory framework at regional level and other issues related to the development of natural gas infrastructure in the SEE region. For efficiency purposes and in favour of handling of specific issues, specific subgroups are created ("Task Force"-TF).

- **TF1 - Gas transmission tariffs**

Within this subgroup, activities were initially focused in preparing regulators of contracting parties to implement the Grid Code for transmission tariffs, through obtaining expertise and experience from the European Union. Existing tariff levels and structures between EU member states and EC contracting parties were also analysed in terms of compliance with the Grid Code on Gas Transmission Tariffs.

- **TF2 - Regulatory treatment of losses in the network**

In the following part of the Research on the current status of treating losses in the gas infrastructure of regional countries, prepared in 2016, activities in 2017 continued in: the methodology of assessing losses and data measuring and verification; identification of the main causes of losses in network; identification of incentive measures to reduce losses; and analysing the effects of incentive measures applied to reduce the losses.

3.3.1.3 Working Group for Customers and Retail Markets

Within the ECRB, there is a customer working group with its own sub-groups, which deals with customer-related activities, tariffs and retail prices, contractual relations between suppliers and customers, and the quality of energy supply and regulation of the voltage quality.

- **TF1 - Customer awareness**

The activities within this subgroup included customer information and awareness rising regarding their rights in the context of a fully liberalized market. Furthermore, the use of information activities and their effects in the Contracting Parties was assessed. This assessment has served to provide further recommendations and guidance on improving customer protection and preparing the most appropriate means of communicating with customers in the future.

- **TF2 - Retail Market Monitoring**

Market monitoring is a fundamental component of regulatory responsibilities; complete reporting on market performance and development prospects allows regulators to create an effective framework that balances market participants' needs and promotes competition, customer protection, energy efficiency, investment and safety of supply.

In this regard, the activities of this sub-group include: drafting a Monitoring Report on the functioning of retail electricity markets and natural gas in the EC; and providing inputs to support ACER's activities in monitoring the electricity and gas retail markets.

- **TF3 - Customer protection in a closed distribution system**

Given the fact that such closed distribution systems can serve, in addition to large industrial/commercial customers, to supply small commercial and residential customers, equal and transparent rules should be established for customer protection. In this context, the activities are focused on: comparative research of regulatory frameworks for closed systems in the EU and the EC with the aim of identifying the best-applied practices.

- **TF4 - Quality of gas supply**

According to the Directive 2009/73/EC, regulatory authorities should approve requirements regarding supply quality. Based on the electricity sector experiences, in 2017, activities focused on analysing existing standards and indicators, including similarities and changes compared to the electricity sector. This activity also involved the preparation of an analytical document.

3.3.2 Participation of ERO in meetings organized by international institutions

ERO is participating in some international institutions and actively participates in meetings held within these institutions. Most of them have a determining role in many activities in the energy sector at regional and national level.

The meetings and roundtables abroad attended by ERO representatives are listed below.

- **08 February 2017** - 40th meeting of the ECRB Electricity Group, organized by the Energy Community Secretariat, Vienna, Austria;
- **09 February 2017** - 38th meeting of the ECRB Gas Working Group, organized by the Energy Community Secretariat, Vienna, Austria;
- **20-24 February 2017** – Study visit to Zagreb "Development of Capex monitoring rule" funded by USAID Repower;
- **24 March 2017** – Meeting of legal experts of the parties to the "Energy Community Treaty", organized by the Energy Community Treaty, Vienna Austria;
- **28 March 2017** – Meeting on the topic: Gas Activities in the Energy Community 2020, organized by the Energy Community Secretariat Vienna, Austria;
- **11-12 May 2017** – Participation in the workshop "A Regional Strategy for Sustainable Hydropower in the Western Balkans", Tirana;

- **06-09 June 2017** – Study visit to Finland "The needs for development in Termokos and the best practices for DH in Finland" - organized by the European Commission consulting office in Kosovo, funded by TYEX;
- **06-07 June 2017** – Workshop on Harmonization and Standardization of Natural Gas Transmission Grid Codes for Southeast Europe Regulators organized by USAID NARUC and ERRA in Budapest, Hungary;
- **14 June 2017** - 37th meeting of the Customer and Retail Market Working Group within ECRB, organized by the Energy Community, Vienna, Austria;
- **19-20 June 2017** - Energy Security Seminar "Contribution of EU's Neighbouring South-Eastern Countries to Regional Energy Security: Challenges and Opportunities for Cooperation", organized by Ministry of Foreign Affairs and Ministry of Energy of Romania in cooperation with RACVIAC - Centre for Security Cooperation, Rakitje, Croatia;
- **13 September 2017** - Workshop on "Harmonisation of trade and supply licenses" organized by the Energy Community Secretariat, Vienna, Austria;
- **29 September - 02 October 2017** – Training "Risk Management and Internal Control System at Public Institutions", FLSA in Ohrid Macedonia;
- **10-11 October 2017** – First meeting of the PECE/PMI electricity group and the Workshop - 10-Year Network Development Plan, organized by the Energy Community Secretariat, Vienna, Austria;
- **24 October 2017** - 42nd meeting of the ECRB Electricity Group, organized by the Energy Community Secretariat, Vienna, Austria;
- **25 -26 October 2017** – Workshop "Price Comparison Tool", organized by NARUC, Sarajevo, Bosnia and Herzegovina;
- **07 November 2017** - 38th meeting of the Customer and Retail Market Working Group within ECRB, organized by the Energy Community Secretariat, Vienna, Austria;
- **09 November 2017** – Workshop on Transparency, ENTSOG and EC, organized by the Energy Secretariat, Vienna, Austria;
- **17 November 2017** – Workshop on cooperation in the Kosovo - Albania energy market, Tirana, Albania;
- **21-22 November 2017** – study visit to Zagreb at the Croatian Market Operator HROTE and Croatian Energy Regulator HERA
- **21-22 November 2017** – Study visit to AIB, and to the Flemish Regulator, Brussels, Belgium;
- **07 December 2017** – Training related to "Energy Market and Energy Trade", Vienna, Austria;
- **07-08 December 2017** - Workshop "Technical Codes of Gas Distribution and Transmission - USAID Project" held in Budapest, Hungary, organized by: United States Agency for International Development (USAID), Energy Regulators Regional Association (ERRA), US National Association of Regulatory Utility Commissioners (NARUC);

- **12 December 2017** – Participation in the workshop "A Regional Strategy for Sustainable Hydropower in the Western Balkans", Skopje, Macedonia;
- **12 December 2017** – Meeting of PECO/PMI Selection Group: Gas Group SKE, Vienna, Austria.

3.4 Transparency and public involvement in regulatory processes

Through the Communication Strategy approved by the Board of ERO, has been given a special importance and priority to the general public communication. ERO's transparency is provided by the publication of documents and information related to the level of service of participants in the energy sector.

All the rules that have been amended with the amendment of the third legislative energy package have been put into public discussion. It is worth mentioning that the entire process of amending the rules has been subject to publication of the drafts and then received comments from stakeholders starting from the Energy Community Secretariat, licensees, customers, etc. Notifications of public review processes, in addition to the web pages, are also published as announcements in daily newspapers.

The process of changing the electricity tariff structure is preceded by the publication of the documentation and involvement of all stakeholders, either through written comments, hearings and special meetings, with the Parliamentary Committee for Economic Development, Chamber of Commerce, other NGOs as well as communications with media and customers.

Another process that has been developed in full transparency and with the involvement of other parties has been the initiation of the opening of electricity market, which started with the publication of the "Guideline on Liberalization of Electricity Market" for commenting by the parties and then has been approved by the Board in an open public meeting.

ERO's website remains one the main sources of information and ensuring transparency, where all ERO activity announcements are published, including Board meetings, all Board decisions, registers of applicants for obtaining authorizations, register of licenses for energy activities, tariff review processes, primary and secondary legislation and many important pieces of information and documents for the energy sector. ERO's website also has an email, through which it receives continuous questions and comments from customers, potential investors, foreign and non-governmental organizations, media etc.

With the purpose of further enhancing public's involvement and information, following the trend of social networks use by the public of Kosovo, during 2017, ERO also created its own Facebook page whereby published all ERO activity reports.

ERO's relations to the media are very correct, the ERO staffs respond to questions and explanations that journalists raise on sector regulation matters. In order to gather more information about sector developments, but also have the best picture of customer impressions on energy services, ERO continuously monitors the means of information and continuously strives to increase transparency and give accurate information on regulatory issues.

4 FINANCIAL REPORTING FOR ERO

4.1 ERO budget

ERO is funded by its own source revenues, in accordance with the Law on the Energy Regulator, Chapter 4, namely taxes collected by licensed enterprises and operators in the energy sector.

Revenues

All of ERO's collected revenues were deposited in accordance with Article 64 of the Law on Public Financial Management and Accountability in the official bank account established by the Director General of the Treasury.

During 2017, ERO collected revenues in the amount of € 1,412,853.40. Considering that the total budget amount spent by ERO in 2017 is 592,128.02 €, the unspent revenues in the amount of €820,725.38, pursuant to Article 23 of the Law on the Energy Regulator, will be transferred to the Budget of the Republic of Kosovo.

Tab. 4.1 Revenues

Description	Amount
Own Source Revenues 2017	1,412,853.40 €
Expenditures 2017	(592,128.02) €
Revenues transferred to the Budget of the Republic of Kosovo	820,725.38 €

Budget

With the Law on the Budget of the Republic of Kosovo No. 05/L-125 for year 2017, the Assembly of Kosovo approved the ERO budget in the amount of €768,316, which is entirely allocated as a government grant, although according to the Law on the Energy Regulator, ERO is financed from its own source revenues and only in cases where such revenues are insufficient, ERO may use budget allocations in the form of government grants. According to economic categories, the budget of ERO is as follows:

Tab. 4.2 Budget at the beginning of the year

Description	Budget
Wages and salaries	476,184.00 €
Goods and Services	199,332.00 €
Utilities	22,000.00 €
Capital expenditures	70,800.00 €
Total	768,316.00 €

With the decision of the Government of the Republic of Kosovo (Decision No. 01/21) and Law no. 06/L-002, ERO's budget has been reduced by € 83,800.00, namely €25,000.00 in the economic category "wages and salaries" and € 58,800.00 in the economic category "capital expenditures". Expressed in percentage, ERO's budget has been reduced by 10.90%.

Tab. 4.3. Final budget

Description	Budget
Wages and salaries	451,184.00 €
Goods and Services	199,332.00 €
Utilities	22,000.00 €
Capital expenditures	12,000.00 €
Total	684,516.00 €

Budget Expenditures

To finance the activities carried out in 2017, ERO has spent € 592,128.02.

According to the economic classification, ERO expenditures are as follows:

Tab. 4.4 Expenditures by economic categories

Description	Amount
Wages and salaries	416,031.90 €
Goods and Services	149,256.51 €
Utilities	18,194.81 €
Capital expenditures	8,644.80 €
Total	592,128.02 €

Budget execution in proportion to the remaining budget after cuts is 86.50%. The incomplete budget execution mainly occurred due to delays in procurement procedures by the CPA.

The budget execution rate by economic categories, expressed in percentage, is displayed in table 4.5.

Tab. 4.5 Budget execution, expressed in percentage

Description	Budget	Expenditures	Change	Execution in %
Wages and salaries	451,184.00 €	416,031.90 €	35,152.10 €	92.21%
Goods and Services	199,332.00 €	149,256.51 €	50,075.49 €	74.88%
Utilities	22,000.00 €	18,194.81 €	3,805.19 €	82.70%
Capital expenditures	12,000.00 €	8,644.80 €	3,355.20 €	72.04%
Total	684,516.00 €	592,128.02 €	92,387.98 €	86.50%

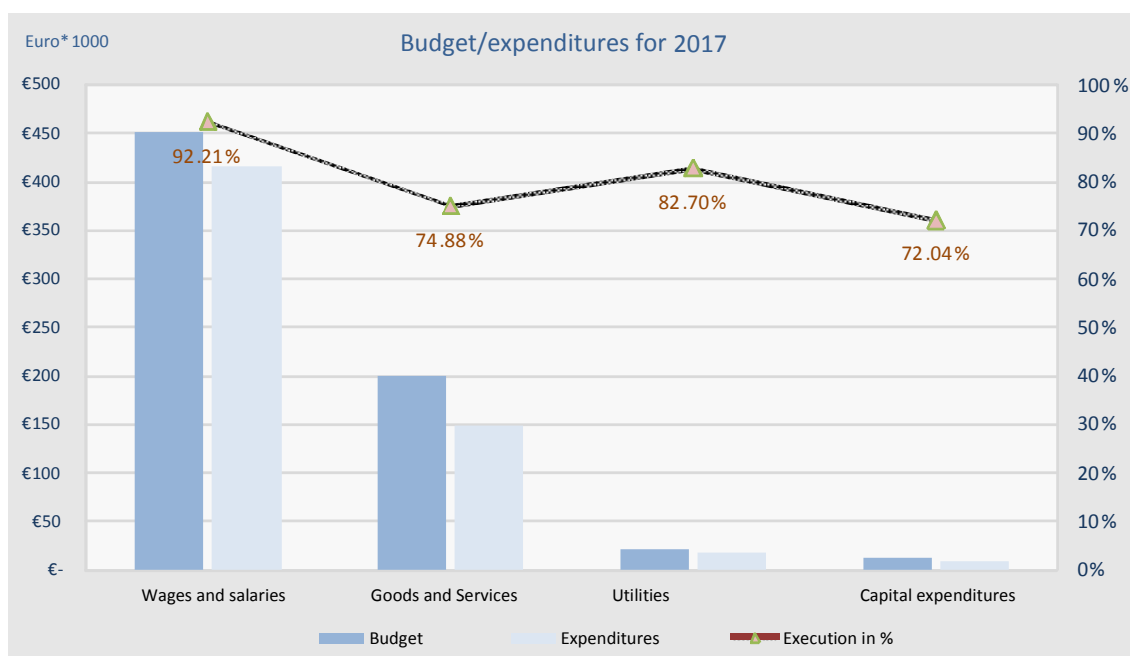


Fig. 4.1 Budget and Expenditures for 2017

The following tables display expenditures by economic codes.

Tab. 4.6 Wages and Salaries

Wages and salaries	Shuma
Net wages	346,715.00 €
Personal Income Tax	29,693.70 €
Employer's pension contribution	19,811.60 €
Pension Contribution of Employees	19,811.60 €
Total	416,031.90 €

In this category, a total of € 416,031.90 is spent and the all amount was spent on regular salaries of ERO staff. With the exception of allowances (per diems) for official trips abroad, which are paid by goods and services category, ERO does not pay other allowances.

Tab. 4.7 Goods and Services

Goods and Services	Amount
Expenditures for official travels abroad	6,470.17 €
Allowances for official travels abroad	15,600.05 €
Accommodation for official travels abroad	4,986.26 €
Other expenditures for official travels abroad	1,365.78 €
Internet Expenditures	681.48 €
Expenditures for Mobile Telephony	11,721.43 €
Postal expenditures	159.20 €
Education and training services	1,540.00 €
Different intellectual and advisory services	4,409.75 €
Printing services	702.98 €
Other contracting services	520.00 €
Membership expenditures	4,000.00 €
Furniture	2,150.00 €
Computer	- €
Hardware for IT	- €
Other equipment	- €
Office supplies	6,945.37 €
Beverage supply	3,309.89 €
Generator fuels	98.34 €
Vehicle fuel	3,221.61 €
Vehicle registration	430.00 €
Vehicle insurance	1,400.87 €
Municipal tax for vehicle registration	40.00 €
Security of premises	7,015.13 €
Vehicle maintenance and repair	1,498.30 €
Building maintenance	4,705.00 €
Maintenance of information technology	4,994.00 €
Maintenance of furnitures and equipment	907.14 €
Building rent	49,140.00 €
Advertisements and vacancies	984.00 €
Official dinners	4,141.90 €
Rental tax payment	6,117.86 €
Total	149,256.51 €

As it can be seen from Table 4.7, the funds spent for this category is € 149,256.51. The budget expenditures based on the activities are as follows:

Tab. 4.8 Expenditures by activities

Expenditures by activities	Amount
Travel expenditures	28,422.26 €
Telecommunication Services	12,562.11 €
Expenditures for services	11,172.73 €
Purchase of furniture and equipment	2,150.00 €
Other purchases - goods and services	10,255.26 €
Derivatives and fuels	3,319.95 €
Registration and insurance services	8,886.00 €
Maintenance	12,104.44 €
Rent	55,257.86 €
Marketing Expenditures	984.00 €
Representation expenditures	4,141.90 €
Total	149,256.51 €

Tab. 4.9 Utilities

Utilities	Amount
Electricity	16,644.30 €
Water	501.05 €
Telephone expenditures	1,049.46 €
Total	18,194.81 €

The amount of funds spent on the category of utilities is € 18,194.81. Compared to the previous year, approximately the same amount of budget was spent in 2017.

Tab. 4.10 Capital Expenditures

Capital expenditures	Amount
Software	8,644.80 €
Total	8,644.80 €

5 ELECTRICITY SECTOR

5.1 Characteristics of the electricity sector

Kosovo has preconditions for the production of electricity, not only to cover its own needs but also for export. Kosovo's power system is designed to produce electricity based mainly on lignite but not for maximum load coverage and system balancing. Therefore it remains a major challenge of balancing the system for all participants in the sector.

The electricity sector consists of generation, transmission, distribution and supply to customers.



Fig. 5.1 Organization of the electricity sector

Kosovo has an installed generating capacity of 1,560 MW, however, operational capacity is considered around 1,038 MW. The majority of production capacity is composed of Thermal Power Plants (TPP) with 92.5% lignite, while the rest consists of hydropower, solar panels and wind power plants. These capacities provide preconditions, not only to cover consumption but also export, however due to the ageing of power plants and insufficient flexibility to adapt to consumption at different periods, particularly during peak hours and/or at night, import or export is required for balancing the system. Additionally, other hydro-generation capacities (HCs) and RESs, besides being small and/or lacking accumulative basins, are not able to provide system balancing services.

The figure below shows the production and import of electricity over the last ten years.

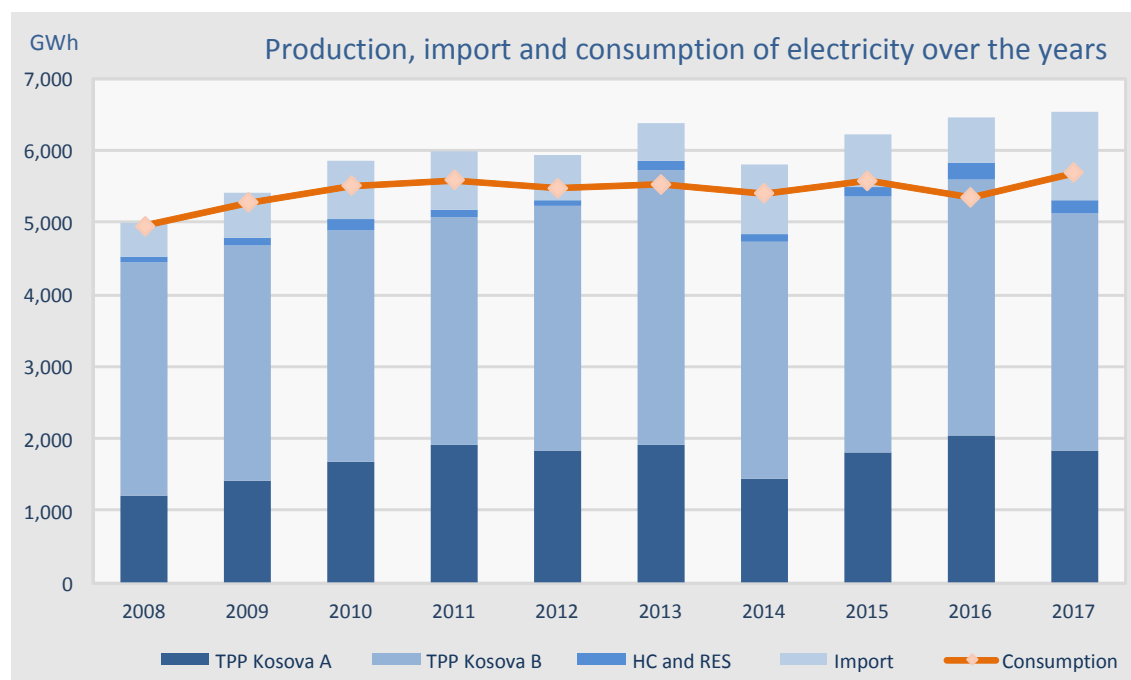


Fig. 5.2 Electricity Production, Import and Demand 2008 - 2017

For different reasons it may so happen that there will be export and import in the same period, or even within the same hour. This phenomenon may occur in different cases, e.g. when export is contracted while in the meantime a generating unit fails, or when import has been contracted but the generating unit has returned to operation earlier than predicted prediction, or in cases when there is a change of production. Sometimes this also occurs due to the huge change in demand, for example, when changing atmospheric conditions - rise or fall of temperatures.

The introduction of RES generators increases the operating capacity of generation, but in most cases, they are unpredictable and are in dispatch priority regime, therefore they have no impact on improving the energy system balancing, and sometimes even increase imbalances. With regard to investments in RES, the international energy institutions years ago have considered necessary that for each installed MW of RES's to have the same conventional generating reserve installed to cover demand in the event of a change in production or failure of the generators from RES.

5.1.1 Electricity Market

Market liberalization is the direction that all the countries of the region, including Kosovo, are following, which ultimately results in increased competition, lowering prices and improving services for customers.

The electricity market in Kosovo includes bilateral trading of electricity and trading to balance the electricity system.

Kosovo is a signatory of the Energy Community Treaty, which opens cooperation opportunities with countries of the region, but also creates obligations deriving from Treaty requirements and Energy Community requirements expressed through packages of EU energy legislation. These packages

include regulations, directives and guidelines for operation of energy systems in the Energy Community.

The energy sector reform, which in Kosovo dates back to 2004, when energy laws were developed and ERO was established, is a pre-condition for successful market liberalization. The process continued with the unbundling of vertically integrated company - KEC, and the establishment of the Transmission System and Market Operator - KOSTT in 2006. KOSTT maintains the function of the Transmission System Operator and the Market Operator and responds to the Assembly of Kosovo under the new 2016 Legislation. Further unbundling has continued with the separation of distribution and supply from KEC, and then, distribution and supply have been privatized in May 2013. Since 2015, the legal unbundling of the distribution from supply has occurred, resulting in the establishment of two companies KEDS - Distribution System Operator and KESCO - Electricity Supplier.

To support market liberalization and increased competition in the electricity sector, in January 2017, ERO approved the document "Guidelines on liberalization of the electricity market in Kosovo". This guideline defines the manner, conditions and time of market liberalization, in the activity of production and supply of electricity.

Based on the Guideline, electricity producers are obliged to provide their capacities in a transparent, non-discriminatory and market-based manner to customers in the wholesale and retail markets, including those with public service obligations.

Electricity losses during 2017 have commenced to be purchased by the Transmission System Operator and the Distribution System Operator in the competitive electricity market. Based on the document "Description of wholesale energy treatment in the transitional phase", the energy needed to cover losses in the transmission and distribution network is provided proportionally by the remaining energy from KEC after energy allocation for universal service. If energy received from KEC is insufficient to cover losses, the remaining part of required energy is provided from imports.

Since October 2016, Ferronikeli is being supplied with electricity at unregulated prices. However, in February 2017, there were barriers to supply due to some limitations in the transmission system in Bulgaria, so Ferronikeli was supplied at regulated prices, and thereafter continued with supply at unregulated prices.

In 2017 there was an increase in demand for electricity, while participation by different categories of consumption, including system losses, is presented in the figure below.

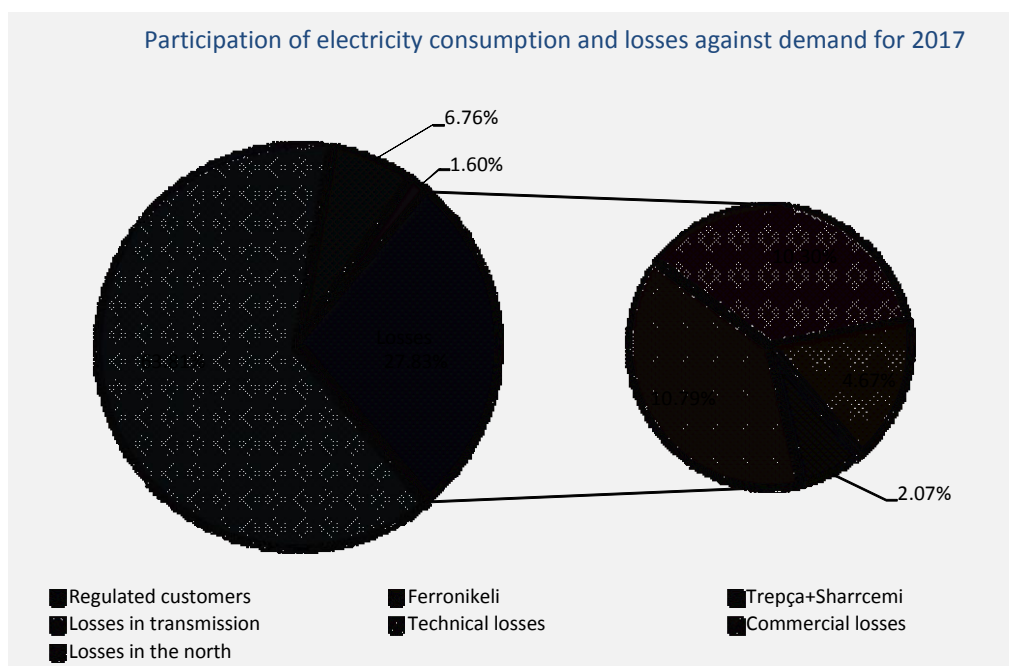


Fig. 5.3 Participation of regulated, unregulated consumption and losses against demand, 2017

From the system's total demand of 5,686 GWh for 2017, consumption with the right of universal service participates with 63.8%, consumption with unregulated prices 8.36% and overall system losses with 27.83%.

In the first three quarters of 2017, Kosovo was a net exporter of electricity, while in the fourth quarter was a net importer of electricity. The impact of the fourth quarter was large and turned Kosovo from a net exporter to a net importer, where the total net import was 362 GWh. Among other things, this situation has occurred due to the coal supply problem of thermal power plants, delays in the expropriation of mining areas, described below at the part of energy production.

Based on the Law on Electricity, if the intentions of the universal service cannot be achieved under market conditions, the Regulator may regulate the electricity prices of end-buyers that enjoy the right to supply within the universal service, provided that it is in accordance with the conditions set forth in this Law.

The safety of electricity supply, as the sector's main goal, inter alia depends on the generation capacities and the transmission and distribution capacities. Since the TPP Kosova A is considerably old, over 40 years, and TPP Kosova B also has a significant operating period, new investments are needed, both in basic energy as well as in RES. ERO has issued a significant number of authorizations for construction of new power capacities from RES.

On 20th of December 2017, the Government of the Republic of Kosovo has signed the commercial agreement with the company "Contour Global" for construction of the new thermal power plant Kosova e Re (New Kosovo). The construction of this thermal power plant is expected to ensure Kosovo's energy independence, and is considered as a replacement of TPP Kosova A, which should be decommissioned with the introduction of TPP Kosova e Re.

The installed capacity of the TPP Kosova e Re will be 500 MW, whereas it will have an output of about 450 MWh/h. The thermal power plant also has the possibility of supporting cogeneration up

to 10% of its capacity. The parameters of the Kosovo e Re thermal power plant will be in accordance with EU standards and criteria for environmental pollution limitations.

The technical condition of the energy sector has improved during the recent years. The signed agreement for construction of the TPP Kosova e Re also contributes to this, but investments in other sectors are also needed for the regular operation and safe electricity supply of the country.

5.2 Lignite production and consumption

Kosovo has large reserves of lignite which ensure long-term electricity generation; however, the problem is the impact on environment due to emission of greenhouse gas and other polluters. About 92.5% of the total installed capacities of electricity generation is comprised by power plants that operate with lignite as the primary energy source.

Lignite production in 2017 was 7.57 million tons, whereas the consumption 7.65 million tons, which quantities are smaller compared to 2016 due to inability to expand surface mining for coal exploitation. Lignite production and consumption for 2017 has been presented by months in Table 5.1.

Tab. 5.1 Lignite production and consumption in 2017

Lignite production/consumption	Total	Jan.	Feb.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.
Lignite production (t*1000)	7,575	682	623	799	623	710	619	501	655	643	672	474	572
Lignite consumption (t*1000)	7,645	859	601	860	590	678	763	530	552	664	727	368	451
Lignite consumption in the market (t*1000)	18.0	14.7	20.1	20.7	20.1	10.6	18.6	22.4	4.9	0.8	20.0	15.3	14.9

The figure below presents the lignite production and consumption during 2008 – 2017.

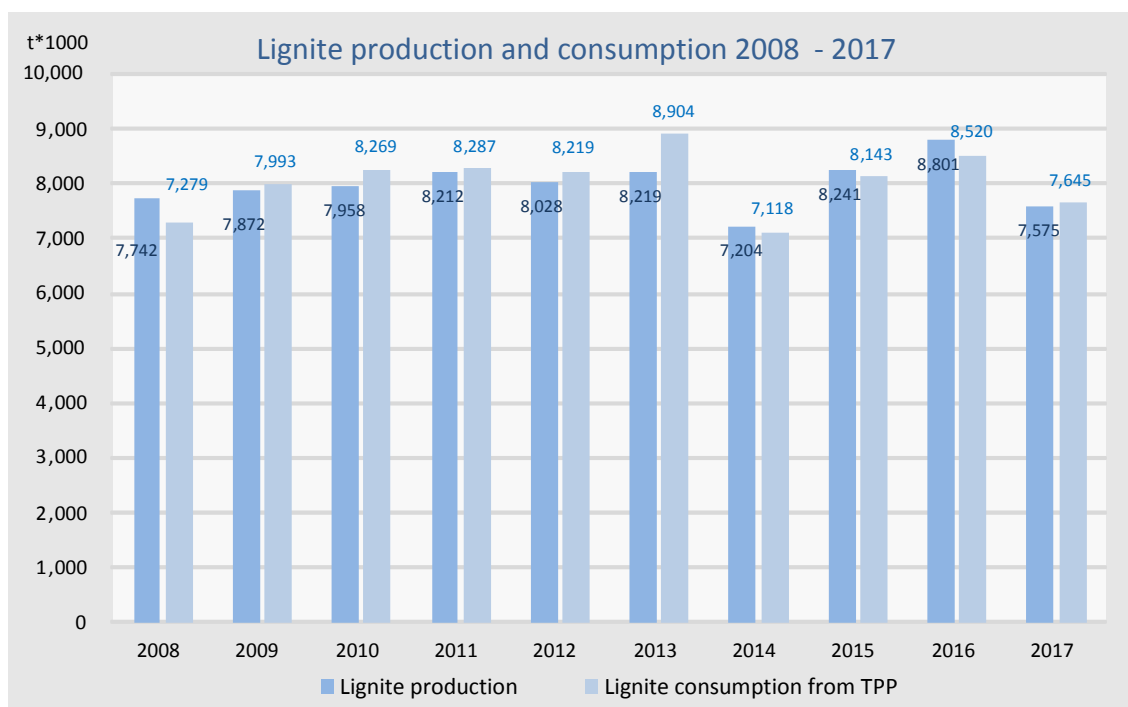


Fig. 5.4 Lignite production and consumption during 2008 – 2017

5.3 Electricity generation

5.3.1 Electricity generation capacities

Electricity generation capacities are:

- Power Plants;
- Hydro Power Plants; and
- Renewable Energy Sources (small hydro power plants, wind power plants and photovoltaic panels).

Capacity of generating units has been presented in the table below by type, material, installed capacity and operational capacity, minimum and maximum generating limits and year of commissioning.

Tab. 5.2 Generation capacities in Kosovo's electricity system

Generating unit	Unit capacity (MW)			Commissioning
	Installed	Net	Min/max	
A1	65	Not operational		1962
A2	125	Not operational		1964
A3	200	144	100-130	1970
A4	200	144	100-130	1974
A5	210	144	100-135	1975
TPP Kosova A	800	432		
B1	339	264	180-260	1983
B2	339	264	180-260	1984
TPP Kosova B	678	528		
HPP Ujmani	35.00	32.00		1983
HPP Lumbardhi	8.08	8.00		(1957) 2006
HPP Dikanci	4.02	3.34		(1957) 2013
HPP Radavci	1.00	0.90		(1934) 2010
HPP Burimi	0.95	0.85		(1948) 2011
Total HPP	49.05	45.09		
EGU Belaja	8.06	7.50		2016
EGU Deçani	9.81	9.50		2016
HPP Hydroline-Albaniku III	4.27	4.27		2016
HPP Brod II	4.80	4.80		2015
Wind Power	1.35	1.35		2010
LedLight	0.10	0.10		2015
Photovoltaic plant ONIX	0.50	0.50		2016
Restelica 1&2	2.28	2.28		2016
HPP Brezovica	2.10	2.10		2017
Total RES	33.27	32.40		
Total	1,560.32	1,037.50		

The Installed capacity of thermal power plants would be sufficient to cover electricity demand, but due to their ageing, operational capacities have significantly reduced, which in turn affects the decreased generation of electricity. Another problem is the system balance as the generation mainly takes place in inflexible thermal power plants and RES that do not contribute to balancing.

Since the installed capacity of generating units is 1 is 1,560.32 MW, the operating capacity is significantly lower with around 1,037.50 MW. As a result, operating power plants have a capacity of about 960 MW, while the rest of production capacities are from HP Ujmani, Lumbardhi and other RES with a total generation capacity of 77.5 MW.

In recent years, there is an increase in the installed generation capacity from RES, which continue to be operational as private investment within the RES.

5.3.2 Electricity generation

Total production of electricity in 2017 was 5,300 GWh, while in 2016 was 5,835 GWh, which means that there is a decrease of 9.01 % compared to 2016. Also, in comparison with the electricity balance for 2017, the generation has been realized with only around 90.96 %, mainly due to problems with new mining. Table 5.3 shows the generation including own consumption for 2017 by units and months.

Tab. 5.3 Electricity generation in 2017

Producers MWh	Total	January	February	March	April	May	June	July	August	September	October	November	December
TPP A3 gross	458,139	0	66,295	0	0	52,483	86,443	107,834	72,966	4,152	67,966	0	0
TPP A4 gross	824,241	78,033	66,152	103,730	96,498	47,713	104,957	107,559	45,560	81,302	0	29,563	63,172
TPP A5 gross	801,622	106,129	36,606	111,781	105,504	101,313	1,127	0	89,735	102,775	71,307	75,346	0
TPP A own cons	257,121	25,602	21,658	25,448	24,406	25,986	22,189	23,757	25,104	22,366	18,204	14,049	8,351
TPP A threshold	1,826,881	158,561	147,395	190,063	177,596	175,522	170,339	191,637	183,157	165,863	121,068	90,860	54,821
TPP B1 gross	1,857,690	194,596	132,152	191,261	141,834	181,991	186,332	187,346	64,634	91,907	203,352	141,522	140,765
TPP B2 gross	1,784,271	206,930	181,709	203,049	114,048	188,001	190,903	41,169	138,012	181,835	183,757	63,467	91,391
TPP B Own cons	347,786	37,967	30,677	36,736	25,428	34,548	35,147	22,478	19,517	25,346	35,534	20,150	24,257
TPP B threshold	3,294,175	363,558	283,184	357,574	230,453	335,444	342,087	206,037	183,129	248,395	351,574	184,840	207,898
Ujman+Lumb.	136,308	10,286	10,100	20,745	18,631	22,404	14,508	8,662	5,161	4,356	4,707	6,172	10,575
Distributive HPP	42,951	1,602	3,217	4,984	6,153	8,395	5,314	1,949	1,196	1,004	1,362	2,243	5,532
Total	5,300,315	534,006	443,896	573,366	432,833	541,765	532,249	408,286	372,643	419,618	478,712	284,115	278,826
Balance 2017	5,827,106	533,123	478,692	545,553	459,634	562,254	538,251	394,583	330,032	465,808	551,789	416,854	550,533
Tot./balance ratio	90.96%	100.17%	92.73%	105.10%	94.17%	96.36%	98.88%	103.47%	112.91%	90.08%	86.76%	68.16%	50.65%

It should be noted that 10.56% of energy from gross generation from thermal power plants has been consumed by thermal power plants as own consumption. A part of these own consumptions (for both generators TPP Kosova A and TPP Kosova B) is performed directly from internal plants, whereas the other part has entered into the transmission system and returned to thermal power plants.

The figure below presents the share of generators in total electricity generation in 2017.

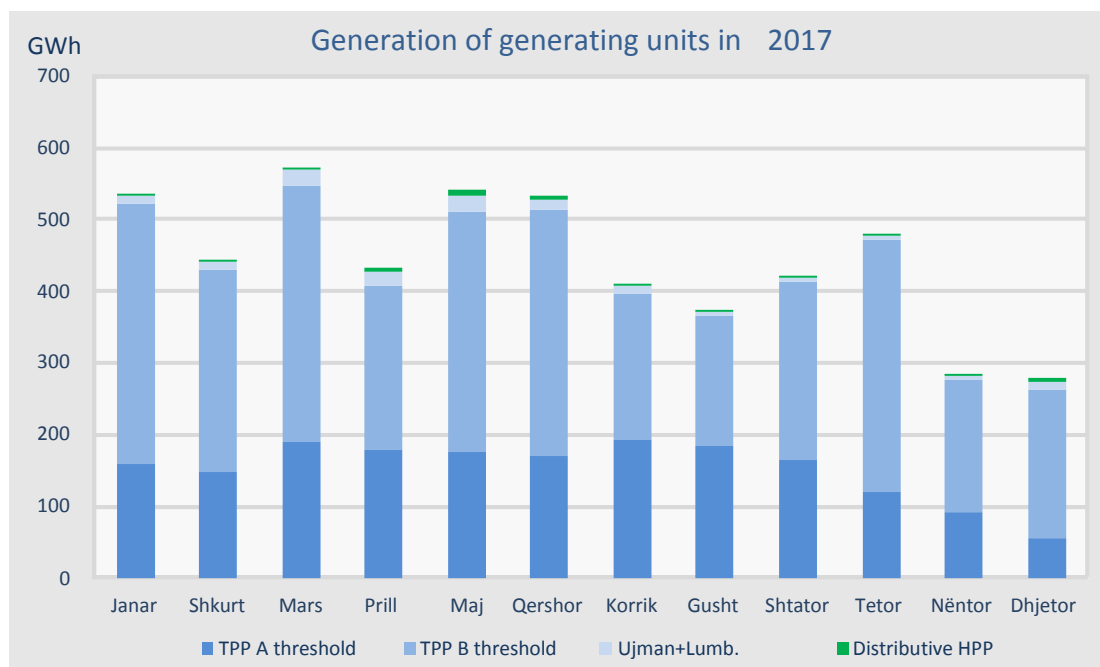


Fig. 5.5 Generation of generating units in 2017

By October 2017, total generation exceeded the consumption for the same period, thus the electricity export was much higher than import. However, this situation has changed since November due to outstanding problems with expropriation of villages of Hade and Shipitulle. In this period, the coal reserves of KEK were scarce, with no opportunity of using new spaces until a solution for compensation of properties is found.

This situation created with regard to expropriation has damaged KEK financially considering that requests for compensation reached higher values than the price calculated a few years ago. All this resulted in halving the operation of KEK generators in November and December and increased imports to cover non-generated electricity. In addition, KEK has been financially damaged by the reduction of generation that resulted in reduced revenues compared to the prediction according to the energy balance.

Increase of import due to reduced KEK generation, as well as high import prices during this period, which has affected even the supplier (including the distribution network operator for covering losses in distribution) due to the change of energy price to be charged by KEK to the supplier and the imported energy price.

Furthermore, this situation has affected the transmission system operator because KOSTT has to import, at very high prices, the energy required to cover transmission losses, instead of obtaining this electricity from KEK as a return of debt determined by ERO.

RES generation in 2017 reached 42,951 MWh and is lower for 20.5% than in 2016.

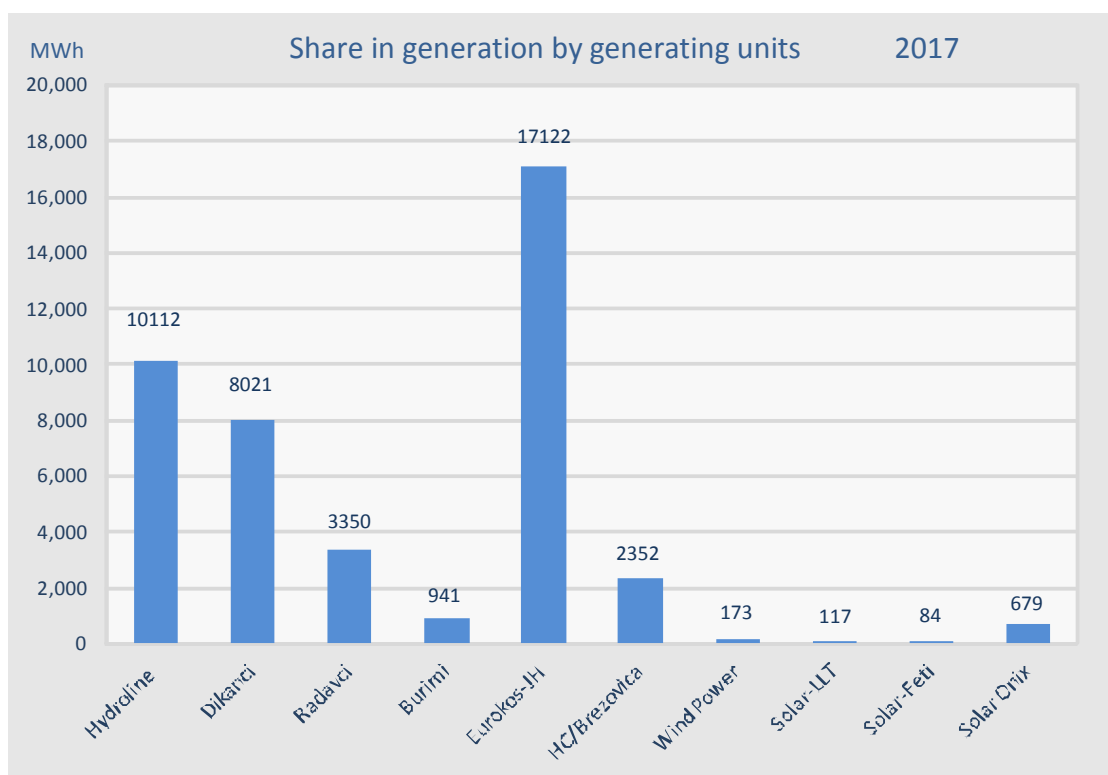


Fig. 5.6 RES generation in 2017

Operation of generating units

The operation of generating units during 2017 and until the last two months of the year has been at a satisfactory level, approximated to the forecasts in the energy balance for the operating hours, as well as, for energy provided in the system. The number of drop outs of generating units in thermal power plants has been higher compared to the previous year, and these interruptions can be divided into planned interruptions, unplanned interruptions and failures.

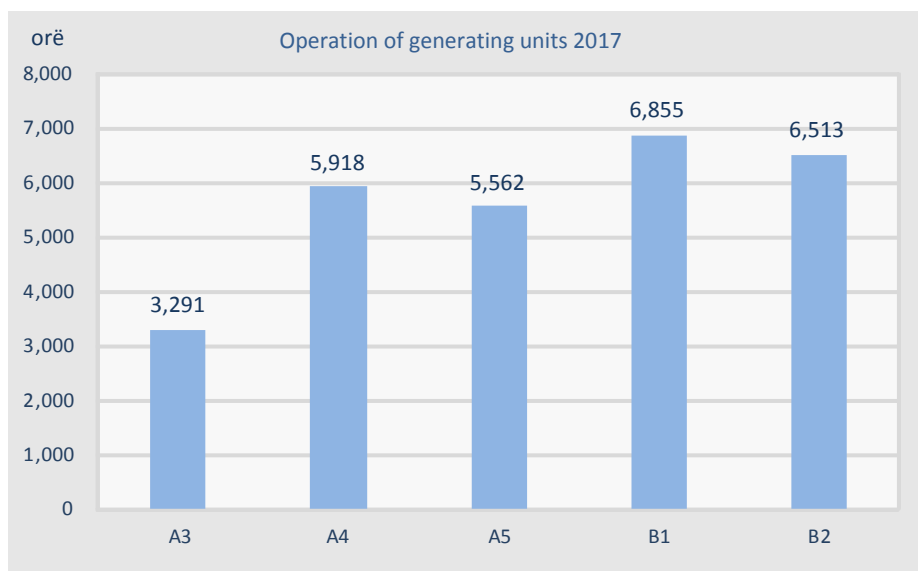
Find below all types of interruptions and availability of thermal power plants for 2017.

Tab. 5.4 Interruptions of generating units 2017

2017	TPP Kosova A			TPP Kosova B	
	A3	A4	A5	B1	B2
Planned interruptions	3	3	4	3	4
Unplanned interruptions	6	4	1	8	5
Failures	1	4	1	7	6
Total interruptions	10	11	6	18	15

Operating time of the generating units of TPP Kosova A and TPP Kosova B has been presented in graphical form in the figure below and were lower, especially A3 unit which operated only for 37.57% of the time.

Fig. 5.7 Operation of generating units in 2017



The figure below presents the trend of generation of generating units for the period 2008 – 2017.

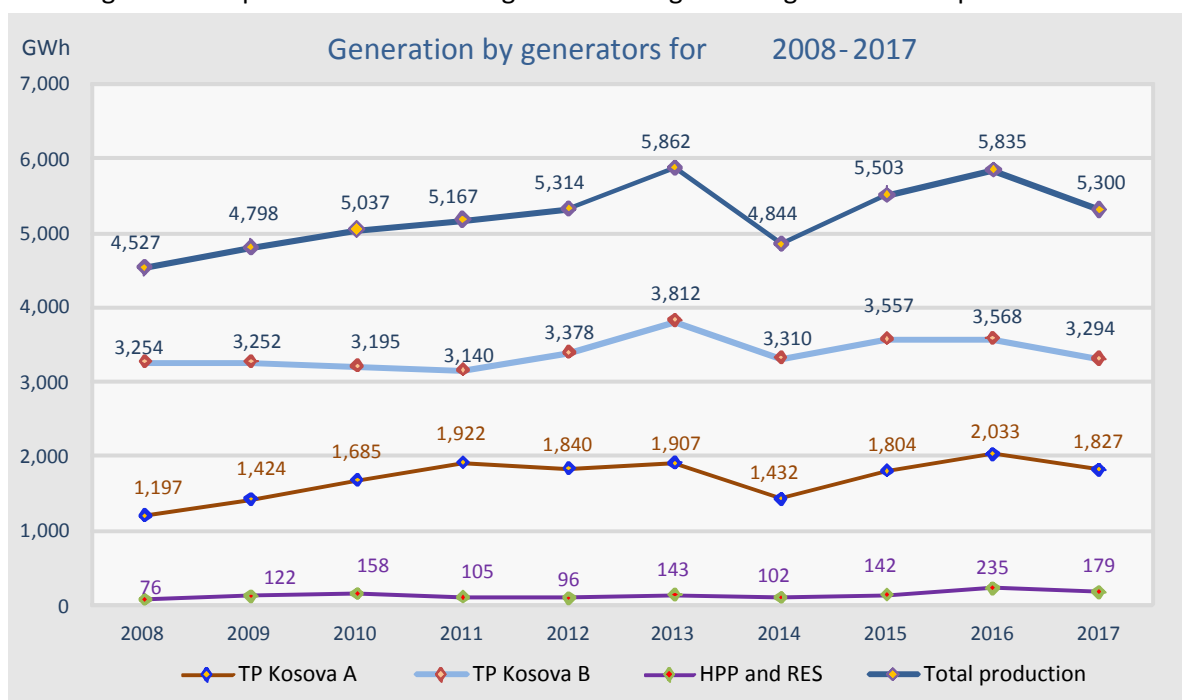


Fig. 5.8 Generation of electricity for 2008 – 2017

5.4 Transmission system

Kosovo transmission system is operated by KOSTT, who is responsible for the safety and reliability of energy system operation, which has sufficient capacities to cope with energy flows in the system. KOSTT coordinates between system operation and these energy flows through the electricity transmission network, which is connected to regional and European energy system through lines of these countries:

- Albania, Macedonia, Montenegro and Serbia – line 400 kV;
- Albania and Serbia – line 220 kV; and
- Serbia – with two lines 110 kV.

Interconnection line 400 kV SS Kosova B - SS Kashar (Tirana) was finalized in 2016 included issuing successfully for testing, but for political reasons has not yet been made entirely operational. The Agreement signed for secondary regulating frequency/power between KOSTT and OST in Albania also remains unimplemented since KOSTT has not yet begun to operate as a regulated area/block within ENTSO-E.

Transmission network of Kosovo energy system is well-connected to the regional system and meets the domestic transmission needs and criterion N-1, except line Prizren 2 – Rahovec, which remains with radial supply.

The transformation capacities and transmission network lines by voltage level are shown in the following tables:

Tab. 5.5 Substations in transmission network

Transformation (kV/kV)	Owner	No. of SS	No. of TR	Power (MVA)
400/220	KOSTT	1	3	1,200
400/110	KOSTT	2	4	1,200
220/110	KOSTT	3	9	1,350
220/35	Feronikel	1	2	320
220/35/10(20) (Besiana)	KOSTT	1	1	40
220/10(20) (Besiana)	KOSTT	-	1	40
110/35/10(20)	KOSTT	7	7	278
110/35/6.3	Trepça	1	2	126
110/6.3	Trepça	-	2	63
110/35	Ujmani	1	1	20
110/6.3	Sharri	1	2	40
110/10(20)	KOSTT	11	22	790
110/35	KOSTT	6	19	641
110/10	KOSTT	3	8	252
35/110 (Deçan)	Kelkos	-	1	40
Total		38	84	6,399

Tab. 5.6 Lines in transmission network

Voltage (kV)	Owner	Length (km)
400	KOSTT	279.5
220	KOSTT	231.8
110	KOSTT	841.8
Gjithsej		1,353.1

5.4.1 Electricity flows in transmission systems

The transmission network has considerable electricity flows to cover customer demand from domestic generation and import but also for possible exports of electricity surpluses, and also for electricity transited towards other countries. Electricity transit through Kosovo network is very high, about 26% compared to the consumption, and burdens the network by causing losses, depreciation of network, as well as the need for maintenance of transmission network.

The figure below shows the energy flows throughout all interconnectivity lines in both directions (entries, exits).



As far as the transmission network operation is concerned, we have to take stock of KOSTT inability of allocate transmission capacities as KOSTT as not been recognized as a regulatory zone/block. The allocation of capacities would generate revenues for KOSTT, which could be used to repair and maintain transmission capacities, as well as building new transmission capacities in cases of network overloads. Serbia Transmission System Operator (EMS) still allocates capacities for Kosovo lines, as well as collects financial revenues from such allocation.

The energy agreement signed between Kosovo and Serbia is not yet implemented, although originally scheduled to be implemented by November 2015, but it was conditioned with the licensing and operationalization of an electricity supplier in the north of Kosovo. This has not been implemented, and therefore the KOSTT- ENTSO-E connection agreement has not yet been implemented.

Other factors in addition to regular functioning of the transmission network, such as generation, consumption, energy import and export, also have an impact on the security of customers energy supply.

The flow of energy from generation, transmission to the customer, as well as, the electricity flows towards the regional networks including transit, is shown in figure 5.10

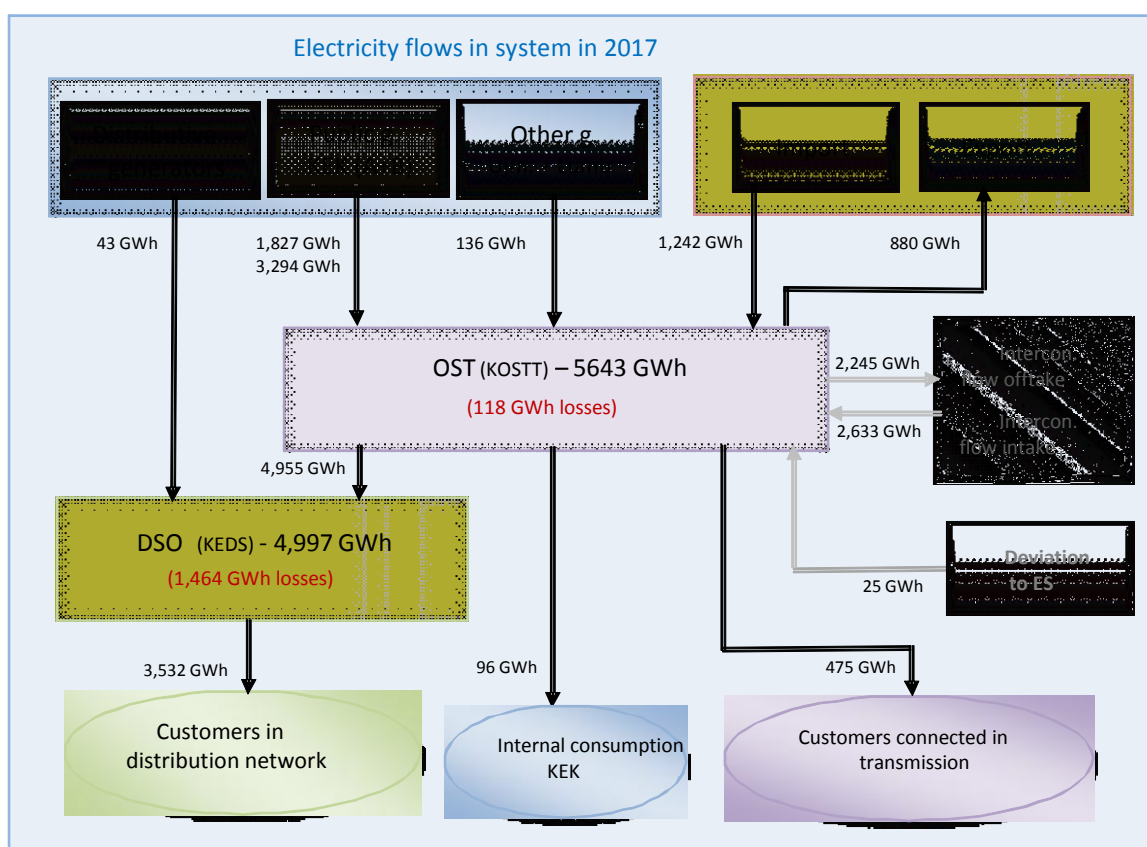


Fig. 5.10 Electricity network in system in 2017

5.4.2 Investments in transmission system

For sustainable level of electricity supply, reduction of losses and improvement of secure and quality of services, investments are needed in certain parts of network, as well as adequate maintenance of existing capacities.

Investments in transmission system can be categorized as:

- Projects started in previous years and completed in 2017 that still have valid warranty period; and
- Projects commenced in 2016/2017 and ongoing.

Projects commenced in earlier years and ended in 2017 and have valid warranty period

- Project Package "Improvement of Transmission Network, Phase IV & V":

LOT1- Substations – completed project

- Rehabilitation of switches in SS 220/110 kV Prishtina 4;
- Installation of metering groups in interconnection lines;
- Transformer fields 400/110 kV in SS Peja 3 (*project completed in 2016*);
- SS 110/35/10 kV Peja 1 – plants GIS (*5 fields 110 kV, have been completed in 2016 - 79%). GIS has been energized (2 fields 110 kV of GIS, in SS Peja 1, have been completed in 2017 - 21%).*

LOT 3 – Transmission lines – completed project

- Rehabilitation of line 110 kV, SS Peja 2 – SS Deçan;

LOT 4 – Rehabilitation of 19 substations – completed project;

- Change of HV (High Voltage) and MV (Medium Voltage) equipment in SS Viti;
- Change of HV and MV equipment in SS Lipjan;
- Supply and installation of power transformer TR 3 – 40 MVA, in SS Lipjan;
- Change of power switches in SS 220/110 kV Prishtina 4;
- Change of own AC/DC consumption at substations 110 kV;
- Change of control system in SS Kosova B, SS Besiana and SS Prishtina 5;

- Inclusion of all changes in existing substations, as well as incorporation of new substations in SCADA/EMS in Dispatch Centre and Emergency Dispatch Centre – *project completed*;
- Installation of metering groups at the new border between KOSTT and KEK/DSO – *project completed at a level of 95% in total*. Works in SS Vallaq and SS Ujman (due to political situation) are not completed and SS Theranda due to the lack of conditions for work;
- Installation of TR 2 in SS 110/10(20) - Skenderaj and installation of TR in SS Burim – *completed project*;
- Revitalization of 110kV Substation, side 35kV (Gjilani 1 and Ferizaji 1) – *project completed*;
- Other projects from DP: Supply of 400kV switches, Renovation of Facility of 200m² at "Kurriz", Supply of 48V DC batteries for telecommunication transmission equipment network, etc.

Projects commenced in 2016/2017 and ongoing

During Q3 of 2016, contracts have been signed for projects funded by EBRD/KOSTT and should be completed in Q4 2018 and Q3 2019. These projects are at the phase of designing, producing and delivering equipment. Construction and installation works are expected to commence when there are conditions for work, upon obtaining work permits.

LOT 1 – Sub-stations with GIS that are ongoing,

- 110/10(20) kV – SS Prishtina 6 and 110 kV HIS in SS Prishtina 4 (*design 80 %, delivery of equipment is 80 %*);
- 110/10(20) kV – SS Mitrovica 2 (*design 80 %, delivery of equipment is 80 %*);
- 220/10(20) kV – SS Drenasi 2 (*design 80 %, delivery of equipment is 80 %*);

- In SS 110/35/10 kV Theranda – Rehabilitation of substation, construction works and installing works have commenced (*design 90 %, delivery of equipment is 80 % and construction works 60%*)

LOT 2 – Power transformers: 40MVA

- 2x40 MVA SS Prishtina 6, 2x40 MVA in SS Mitrovica 2, and 2x40 MVA in SS Drenasi 2, are at the transformer design and production phase 65% ;

LOT 3 – Transmission lines: design works have been completed for 70%, production and delivery of cables 100%,

- single line 110 kV SS Rahovec – SS Theranda,
- double line and cable 110 kV SS Fushe Kosova,
- double line 220 kV Drenas 2,
- double line 110 kV SS Mitrovica 2, and
- double line and cable 110 kV SS Prishtina 6 – SS Prishtina 4.

Works are at the line designing phase 70%, production and delivery of cables has been partly completed 100%.

The table below presents KOSTT capital investments allowed and realized for the first period of multi-year periodical tariff review 2013 -2017.

Tab. 5.7 Investments in KOSTT in the last 5 years

INVESTMENTS IN KOSTT FOR MULTIYEAR PERIOD		
Transmission, System and Market Operator		
Year	Allowed (€ mil)	Realized (€ mil)
2013	33.65	21.29
2014	31.18	12.46
2015	26.90	36.91
2016	15.45	24.62
2017	13.06	27.48
Total	120.25	122.76

5.4.3 Maximum load and energy demand in the energy system

The maximum load (namely peak load) value is of particular importance for analysing the functioning of the energy system, whereby usually five (5) maximum loads in different hours and different days of the year as used for this purpose. The table below shows the max load values (peak) for 2017.

Tab. 5.8 Maximum loads (peak) values in 2017

Maximum load P _{max} (MW)	Date	Time
1,161	11.01.2017	20.0
1,151	09.01.2017	19.0
1,139	12.01.2017	19.0
1,122	31.12.2017	18.0
1,100	22.01.2017	19.0

The maximum load in Kosovo's energy system was recorded on 11th of January 2017, at 20:00h, reaching to 1,161 MW, which is higher than the maximum load in 2016 (1,160 MW).

Demand change by days and seasons, and the system balance becomes difficult because of such changes. In order to see this impact, particularly in the case of Kosovo's energy system, it is important to analyse the daily consumption diagram per hour for the entire year.

The diagram below shows demand and generation, whereby one can notice that production is higher than demand during night-time, whereas during the day-time, in particular in the evening, there is a significant increase of demand that is higher than production; i.e. within the same day, during the day-time (high-tariff), production does not cover the demand and electricity should be imported, whereas during the night-time (low tariff) there is electricity surplus that needs to be exported.

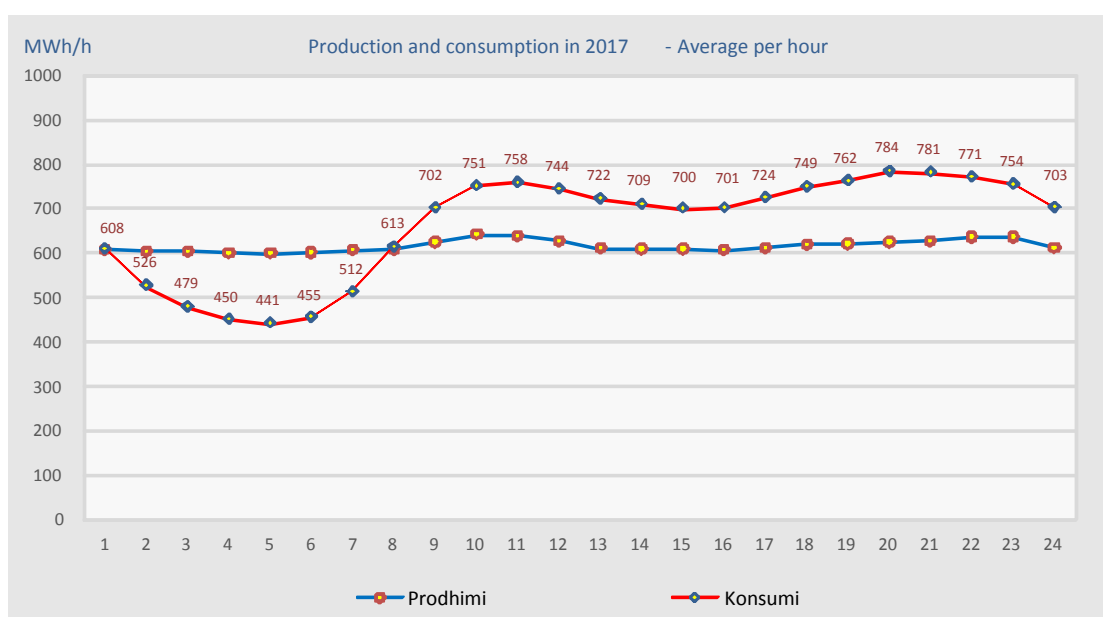


Fig. 5.11 Daily diagram of annual average for 24 h for 2017

The energy system balancing in our country is rather complex and difficult. This is particularly affected by two main factors, such as: inflexibility of generating units and great difference for electricity between day-time and night-time. The difference in the demand for electricity during different periods of the same day poses serious obstacles for following the demand diagram and keeping the system deviation within permitted limits.

Find below the average difference between daily consumption maximums and minimums during 2017.

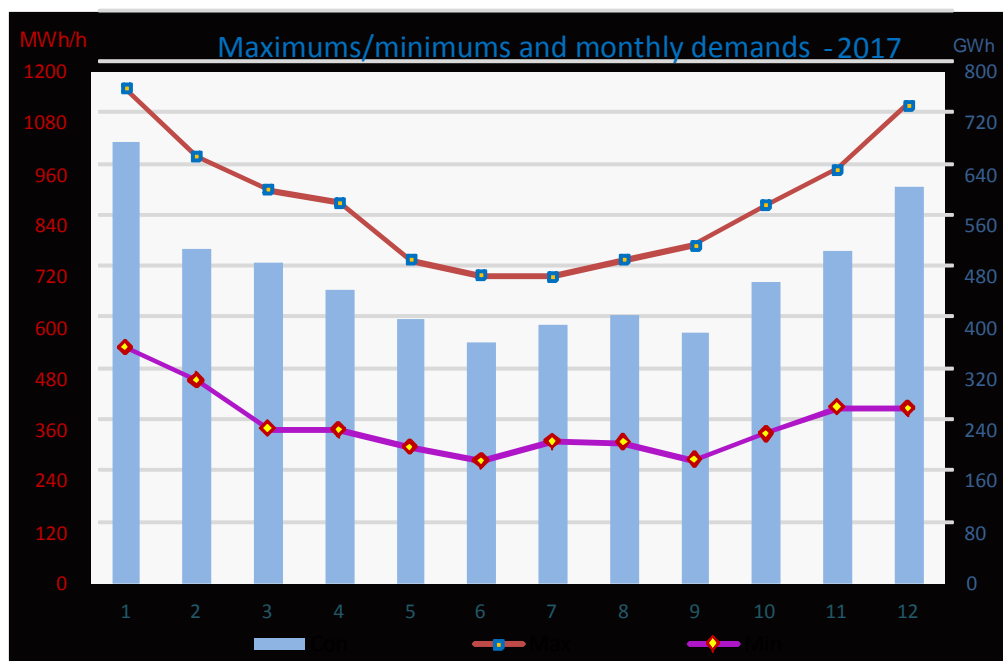


Fig. 5.12 Monthly average of the demand and maximum/minimum daily loads 2017

Load shedding due to lack of electricity

Despite all efforts to eliminate the supply load shedding due to the lack of electricity, there is still a need for load shedding of the electricity supply.

The table below presents monthly power outages for 2017, whereas in the figure below power outages by years.

Tab. 5.9 Power outages

2017	January	February	March	April	May	June	July	August	September	October	November	December	Total
Reductions MWh	6,420	9,770	1,895	2,059	1,780	0	0	0	0	0	0	678	22,602

Load shedding varies from year to year, with a trend of decline, and in 2017 the load shedding has been at the level of 22,602 MWh.

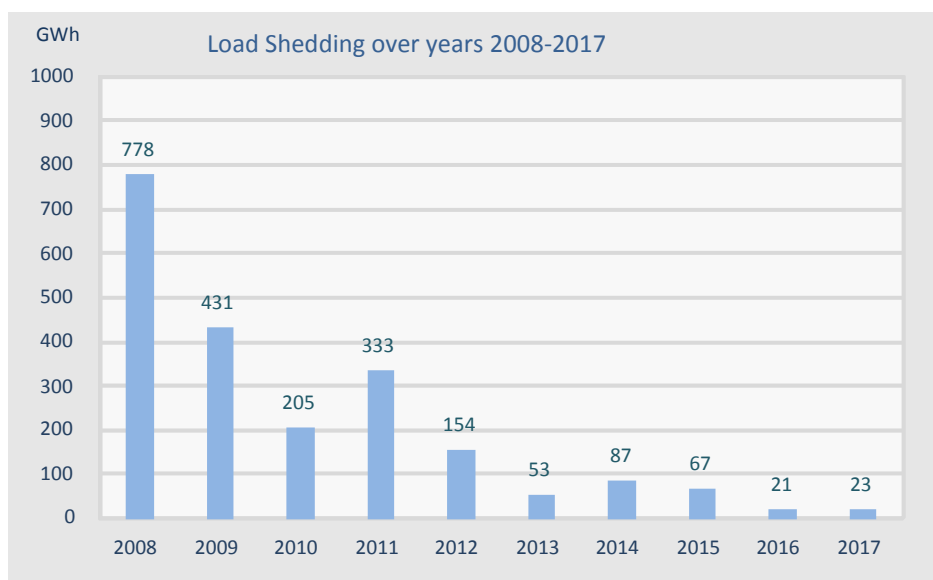


Fig. 5.13 Consumption over the years during 2008 - 2017

5.4.4 Demand and electricity losses in the transmission network

The total demand of electricity in 2017 was 5,686 GWh and represents an increase of 6.43% compared to 2016, when it was 5,342 GWh. Compared with the forecast of the electricity balance in 2017 is for 4.06% higher.

Table 5.10 presents the total demand and losses in transmission during 2017, and a comparison with power balance for 2017.

Tab. 5.10 Total demand and losses in transmission network in 2017

2017	Gross demand Realization	Gross demand Balance	Realis./Balance Ratio	Losses in transmission realisation		Losses in Transmission Balance	
	MWh	MWh	%	MWh	%	MWh	%
January	677,620	554,662	122.17	16,907	2.50	10,952	1.97
February	513,651	494,757	103.82	11,658	2.27	9,805	1.98
March	494,867	491,651	100.65	8,952	1.81	10,515	2.14
April	452,389	451,654	100.16	7,339	1.62	9,059	2.01
May	408,950	423,294	96.61	7,896	1.93	10,302	2.43
June	370,667	383,540	96.64	6,474	1.75	9,917	2.59
July	396,341	397,675	99.66	8,512	2.15	7,562	1.90
August	407,448	387,286	105.21	9,443	2.32	7,038	1.82
September	380,227	402,987	94.35	8,142	2.14	8,752	2.17
October	461,739	438,407	105.32	9,088	1.97	10,688	2.44
November	505,502	469,555	107.66	11,107	2.20	8,051	1.71
December	616,382	568,048	108.51	12,427	2.02	10,262	1.81
Total	5,685,783	5,463,515	104.07	117,945	2.07	112,904	2.07

The electricity demand had a continuous increase until 2011, whereas from 2011 there is stabilization in the demand, with fluctuations from year to year, as can be seen in the figure below. In 2017 there has been an increase in total demand compared to 2016, which was significantly impacted by the increase of the Ferronikel's consumption as a result of optimum operation of the enterprise during the year.

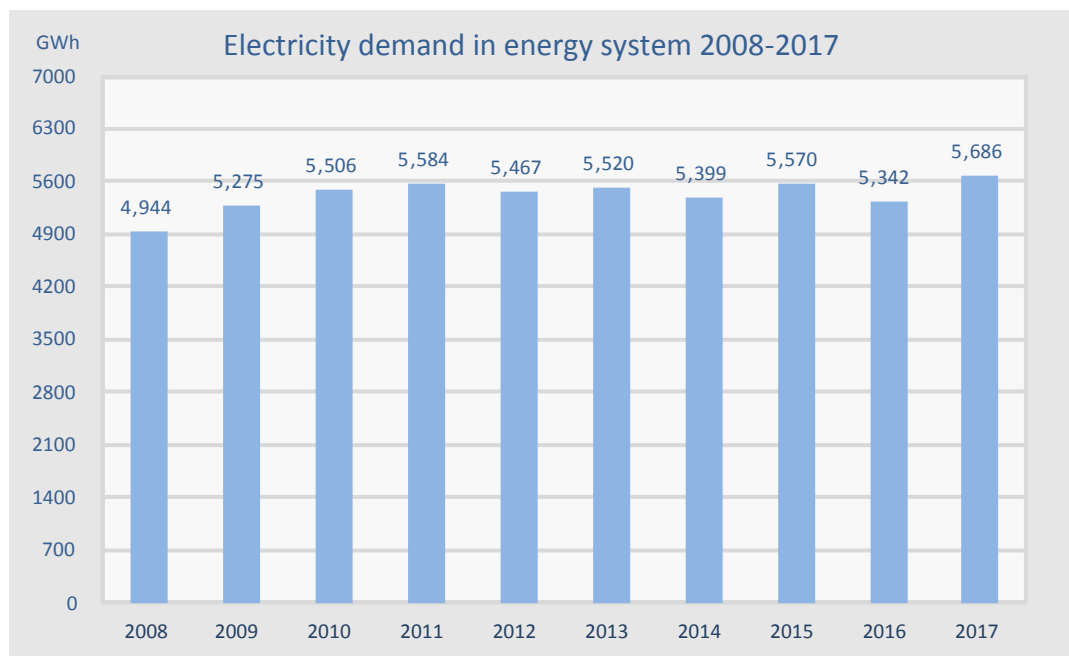


Fig. 5.14 Total demand in energy system 2008-2017

Total electricity demand is divided into the consumption of customers connected to the transmission network, consumption of distribution system (including losses), own consumption for the needs of production plants, as well as losses in transmission. This has been presented in the table below divided by categories for 2017.

Tab. 5.11 Demand by categories and electricity losses

Electricity demand 2017		Total
		MWh
Gross consumption in distribution*		4,996,637
Ferronikeli		384,398
Trepça + Sharrçemi		90,844
KEK internal consumption		95,959
Losses in transmission		117,945
Total demand		5,685,783
KEK own consumption from transmission		134,909

(*) Electricity received in distribution from transmission + distribution production

The amounts of electricity taken from transmission network for own consumption in 2017 is 107 GWh for generators of TPP Kosova A and 28 GWh for TPP Kosova B, or 135 GWh in total.

The electricity demand differs based consumption periods, but also based on customers' categories. This has been presented in a graphical form in the figure below, including losses in transmission and distribution network (technical and commercial losses).

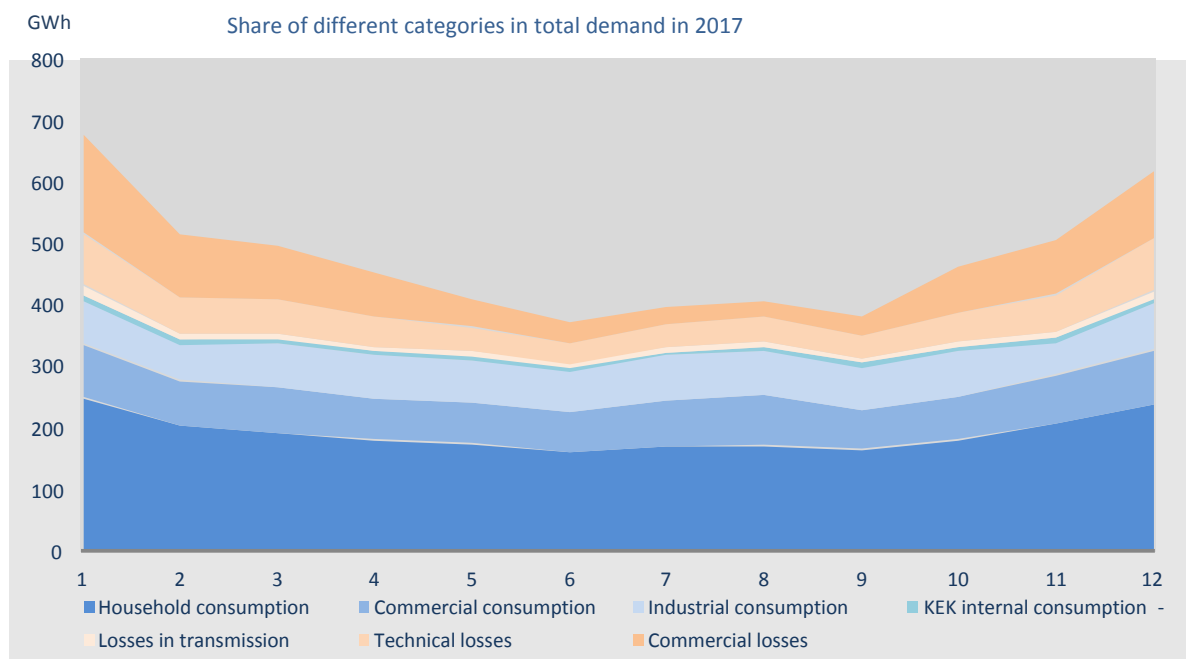


Fig. 5.15 Share of different categories in total demand 2017

The Figure 5.15 presents the change of demand by months. In some categories, the change is quite significant, e.g. household consumption and commercial losses that are higher during the winter mainly due to use of electricity for heating.

In recent years, losses in transmission system are at an acceptable level thanks to investments from Kosovo and include losses caused by transit as well.

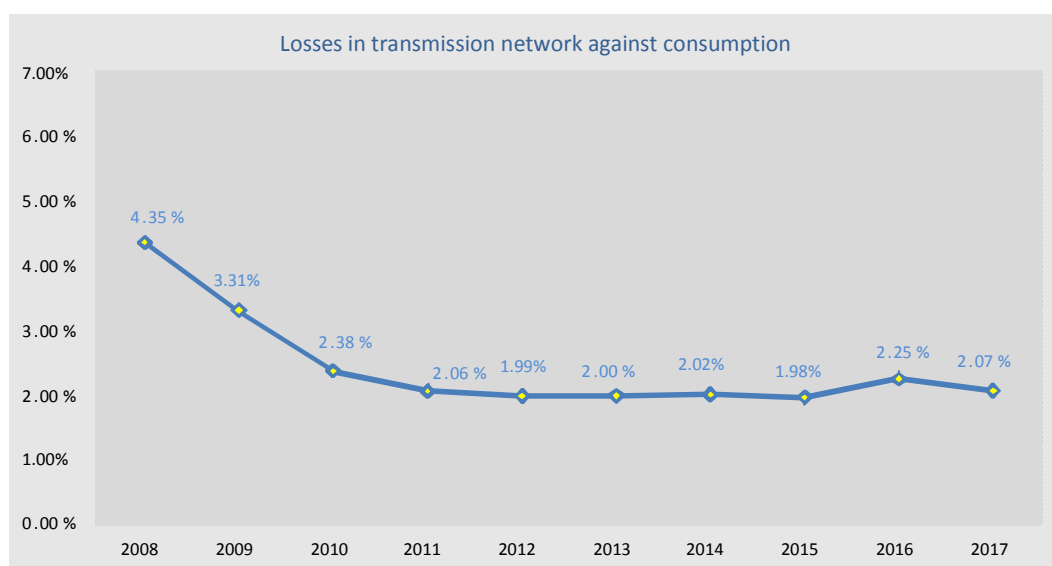


Fig. 5.16 Losses in percentage in the transmission network 2008-2017

Losses in Kosovo transmission network are nearly in the same level as losses in the regional and European transmission networks. Figure 5.16 presents transmission network losses in percentage compared to the overall demand of Kosovo energy system. The percentage of losses in the figure has been calculated against domestic demand, whereas the whole electricity entered in the transmission system has an impact on the level of losses in transmission. In addition to the domestic demand, other flows as transit and electricity for generators consumptions, etc., need to be included for calculating the percentage of losses against transmission network load. The percentage of losses in transmission calculated in this form is 1.45%.

Cost of electricity losses

Electricity losses in the system consist of losses in transmission, losses in distribution (technical and commercial) and unbilled electricity in four municipalities in the north of the country. These losses incur large costs of energy system and have been presented in the following table for the period 2013-2017.

Tab. 5.12 Demand by categories and electricity losses

Description	Unit	2013	2014	2015	2016	2017
Technical losses	GWh	769	709	722	627	614
Commercial losses	GWh	717	590	519	548	585
Losses in north	GWh	218	227	247	252	265
Losses in transmission	GWh	110	109	110	120	118
Price	€/MWh	30.21	27.30	28.20	34.11	35.43
Technical losses	mil€	23,231	19,353	20,371	21,390	21,739
Commercial losses	mil€	21,659	16,096	14,645	18,709	20,743
Losses in north	mil€	6,590	6,206	6,953	8,595	9,399
Losses in transmission	mil€	3,333	2,971	3,102	4,109	4,179
Value	mil€	54,814	44,627	45,071	52,803	56,060

ERO does not accept that customers pay for losses exceeding the loss reduction target set through input values within multi-annual tariff review. The difference between allowed level of losses and losses incurred is not included in tariffs, but is covered by the relevant operator.

It is worth mentioning that from unbilled electricity in the amount 265 GWh in four municipalities in the north of the country presented in the table above, ERO has received 237 GWh in tariffs, whereas the other part has not been billed based on the decision for preliminary injunction imposed by the Court of Appeals effective from 1 December 2017.

5.5 Electricity distribution system

Distribution network consists of voltage lines of 35 kV, 10(20) kV, 6 kV and 0.4 kV, as well as relevant substations of level 35/x kV, 10(20)/0.4 kV and 6/0.4 kV.

Basic data of substations and lines, including capacity, transformation and length of lines of distribution system have been presented in the tables below.

Tab. 5.13 Substations and transformers by level of voltage in DSO

Transformation (kV/kV)	Owner	No. of SS	No. of TR	Installed Capacity (MVA)
35/10	KEDS	44	94	660
35/10kV	Private	8	12	62
35/6kV	Private	5	8	43
35/0.4kV	Private	16	22	20
10(20)/0.4	KEDS	2,458	2,550	1,296
10(20)/0.4	Private	2,017	2,027	946
10/0.4	Private	1,247	1,253	606
10/0.4	KEDS	2,865	2,865	868
6(3)/0.4	KEDS	65	65	9
Total		8,725	8,896	4,509

Tab. 5.14 Lines in DSO

Voltage (kV)	Owner	Air network (km)	Cable network (km)	Total (km)
35 kV	KEDS	481	20	501
10(20) kV	KEDS	1,416	393	1,809
10 kV	KEDS	4,165	904	5,070
6 kV	KEDS	42	8	50
3 kV	KEDS	4	1	4
0.4 kV	KEDS	16,867	2,345	19,211
Total		22,975	3,671	26,646

5.5.1 Investments in the distribution system

During 2017, significant investments have taken place in the distribution network, in medium and low level voltages. KEDS, as a distribution operator, invested around EUR 23.4 million in the distribution network, which have been summarised in the main projects, as follows:

- Construction in DSO's Dispatch Centre;
- Strengthening of network, change of 10kV and 0.4kV lines, pillars and transformers 10/0.4kV selected in 7 districts of Kosovo;
- Supply of cubical equipment of medium voltage 35kV and 10 (20) kV in SS 110kV and 35kV;
- Elimination of bottlenecks in distribution lines – Overloaded lines 35kV and 10kV;
- Distribution transformers 10 (20) /0.4kV;
- Improvement of metering points for household consumption and electricity calculation;
- Investments in heavy machinery for operation, vehicle tracking system, purchase of licenses, purchase of health and security equipment and work equipment, etc.;
- Investments in maintenance network, etc.;

DSO has made significant investments in the network based on the 5-year investment plan approved by ERO.

Main investment objectives are:

- Ensuring sustainable and qualitative electricity supply by supporting the increase of load.
- Reduction of technical and commercial losses.
- Rehabilitation and modernization of electricity network.

In 2017, investments have mainly take place in medium voltage lines, including the transfer from 10kV level to 20kV level, summarized as:

➤ **Investments in building capacities in medium-voltage (MV) transformer stations**

The abovementioned investments strengthened the exit supply, built capacities, eliminated failures due to old age, etc.

➤ **Investments commenced in 2016 and energized during 2017**

- Construction of overhead power line 10kV Letanci and Llausha in Podujeve – pending demolition of several pillars and technical acceptance
- Construction of OPL Drenica-Komoran has been completed. Several problems with regards to the medium voltage pillars are pending. The construction of new overhead power line includes 1/3 of exit Drenica, which is supplied from TS Magura, and is supplied by the distributive plant in Komoran.
- Construction of new OPL in exit Bablak, with 63 transformers stations of MV/LV
- Construction of overhead power line 10kV Gllobar and Shtrubullove is being completed and eliminates a part of the old network.
- Construction of cable power line Klina 1 and Klina 2 which supplies the distribution plant in Kline, thus eliminating the air network of medium voltage crossing the Municipality of Klina.

➤ **Investments in OPL of medium voltage 10kV**

- Project Bellobradi-Bresana – investment of new line and rehabilitation of network.
- Double aerial line in the exit of Gjinovci and rehabilitation of failures
- Project of rehabilitation of Lubinja node in Zhupe.
- Project for construction of the line with underground and aerial cable in the exit of Lumi Madh.
- Project of exit Orllani near Lake of Batllava.
- Project of lines of Klllokot, Terpeza and Stacionari for reducing technical losses and failures, as well as improving the voltage.
- Project Shala with double line is in process.

➤ **Investments in OPL of medium voltage 20kV**

- In 2017, the DSO launched two pilot projects for converting exits 10kV into 20kV. Selected exits were Drenica in the district of Ferizaj and Breznica in the district of Prishtina.

➤ **Investments in strengthening the network – earlier projects**

It should be stated that several projects for strengthening the network, which have started in previous years, have been transferred to 2017, whereby works commenced in the respective years, but energization was done this year:

- 58 projects commenced in 2015 and were completed in 2017
- 33 projects commenced in 2016 and were completed in 2017.

➤ **Investment in strengthening the network**

Investments in the improvement of network are: placing new TS, change of existing TS with new ones, expanding and rehabilitating the network 10(20)kV, rehabilitation of low voltage network, installation of MMO and connection of household customers in meters placed outside houses.

➤ **Investments in the network maintenance;**

- Investments in 31.73km new overhead power lines and 7.36 km underground power lines
- Investments in 49 new TR that added value to assets with 13.2MVA
- Investment in 1km cable of network 35kV in voltage network 10(20)kV, as well as the existing air network of 19km and cable network of 20km has been changed
- In the low voltage network it has been invested in 163.83km existing air network and 4.24km existing cable network

➤ **Investment in overloaded transformers of MV/LV level**

In 2017, 138 TR of MV/LV level with low installed capacity have been replaced with new TR with higher installed capacity.

➤ **Investments in metering point**

During 2017, investments have been made in around 60,000 meters, of which:

- 5,274 meters with direct measurement with GSM GPRS communication,
- 3,852 meters with direct measurement with PLC
- 522 meters with semi-indirect and indirect measurement
- 20,797 manual meters replaced with digital ones, and
- 26,900 meters dedicated to new connections

➤ **Investments in SCADA**

- DSO commenced implementation of SCADA system, which will take place in three phases. The first phase of project commenced in the previous year and is expected to be completed during 2018.

New investments resulted in increased quality of consumption voltage, network performance, and discharge of overloaded lines, loss reduction, and increased security of supply for customers. In settlements (cities and towns) there are attempts to replace air network with cable one. Also, based on investments, distributing facilities have been constructed in several parts of system, which enable the reduction of the number of radial lines.

Low voltage capital investments have strengthened the low voltage network, whereby consumer safety has increased, technical and commercial losses have been reduced, and access to meter reading has been facilitated.

The following table presents the allowed and realized capital investments of KEDS for the first period of multi-annual tariff review period 2013 -2017.

Tab. 5.15 Investments in DSO in the last 5 years

INVESTIMET NË KEDS PËR PERIUDHËN SHUMËVJEÇARE		
Operatori I Sistemit të Shpërndarjes		
Viti	Të lejuara (€ mil)	Të realizuara (€ mil)
2013	21.65	16.57
2014	21.23	17.64
2015	21.39	20.64
2016	21.56	23.65
2017	21.42	23.39
Gjithsej	107.25	101.89

5.5.2 Consumption and distribution losses

DSO is organized into seven districts: Pristine, Mitrovica, Peja, Gjakova, Prizren, Ferizaj and Gjilan shown in the following figure. Consumption data, technical and commercial losses and other data are calculated according to the months but in some cases also by districts.



Fig. 5.17 Layout of districts of Kosovo distribution system

Electricity consumption in distribution in 2017 is carried out in the amount of 4.997 GWh, while in 2016 was 4.807 GWh, which represents an approximate increase by 3,95%.

The highest consumption was carried out in Pristina district with 31.6% of the total consumption in distribution, while the lowest consumption in Gjiljan district with 8.3% of total consumption.

Consumption in the distribution system has continued to increase, as well as the overall demand, and this growth is presented in Figure 5.18 where data from 2008 to 2017 have been presented.

Despite investments carried out so far in the distribution network, the electricity losses continue to remain high and represent concerning problems to the electricity sector. Losses also have a negative impact on the supply of customers and financial sustainability for supply and distribution system operators, as well as the entire energy sector.

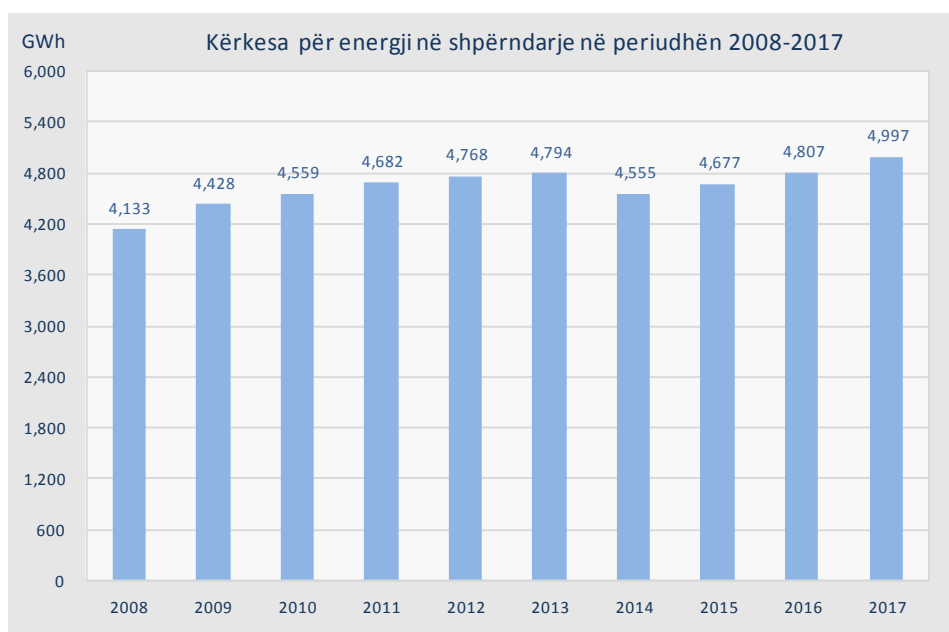


Fig. 5.186 Demand for electricity in the distribution system 2008-2017

Table 5.16 presents demands (charges), billed energy as well as technical and commercial losses in distribution.

Tab. 5.16 Consumption and losses in distribution for 2017

Muajt	Ngarkesa	Energjia e faturuar	Humbjet teknike		Humbjet komerciale		Humbjet gjithsej	
	M W h	M W h	M W h	%	M W h	%	M W h	%
Jana r	609,683	365,942	82,497	13.53	161,244	26.45	243,741	39.98
Shkurt	460,175	301,617	58,512	12.72	100,045	21.74	158,557	34.46
Mars	434,080	294,440	53,687	12.37	85,953	19.80	139,640	32.17
Prill	393,256	274,433	47,532	12.09	71,291	18.13	118,823	30.22
Maj	351,467	268,131	38,793	11.04	44,543	12.67	83,336	23.71
Qershor	318,235	253,303	33,457	10.51	31,474	9.89	64,932	20.40
Korrik	338,162	273,958	36,201	10.71	28,003	8.28	64,204	18.99
Gusht	348,849	283,692	38,958	11.17	26,199	7.51	65,157	18.68
Shtator	322,605	256,515	35,479	11.00	30,611	9.49	66,090	20.49
Tetor	400,784	280,788	45,629	11.38	74,367	18.56	119,996	29.94
Nëntor	465,518	318,398	58,622	12.59	88,498	19.01	147,120	31.60
Dhjetor	553,824	361,099	84,202	15.20	108,522	19.60	192,725	34.80
Gjithsej realizuar	4,996,637	3,532,316	613,570	12.28	850,751	17.03	1,464,321	29.31
Gjithsej sipas bilancit	4,564,440	3,243,702	503,131	11.02	514,229	11.27	1,320,738	22.29

The technical losses according to the data sent by the DSO amount to 12.28%, with the impact on the high level of these losses being the age of the network, the length of the lines, the quality and type of conductors and transformers, the loading of the equipment as well as their maintenance. Significant investments are needed to reduce technical losses.

Commercial losses are high, accounting for 11.72% of the total demand on distribution, adding to this the unbilled energy in the northern part of Kosovo, which represents 5.31% (265 GWh) of total demand for distribution with total non-technical losses by 17.03%.

Electricity flows in distribution by districts, including electricity losses, is presented in Table 5.17.

Tab. 5.17 Consumption and distribution losses by districts for 2017

Distriktet	Ngarkesa në distrikte	Energjia e faturuar	Humbjet teknike		Humbjet komerciale		Humbjet gjithsej	
	MWh	MWh	MWh	%	MWh	%	MWh	%
Prishtina	1,580,153	1,180,312	188,138	11.91	211,702	13.40	399,841	25.30
Mitrovica	730,697	293,925	67,818	9.28	368,954	50.49	436,772	59.77
Peja	546,030	385,251	73,325	13.43	87,455	16.02	160,780	29.45
Gjakova	450,835	327,951	71,485	15.86	51,399	11.40	122,884	27.26
Prizreni	645,749	489,705	82,312	12.75	73,731	11.42	156,044	24.16
Ferizaji	628,441	498,934	84,111	13.38	45,395	7.22	129,506	20.61
Gjilani	414,732	356,238	46,380	11.18	12,114	2.92	58,495	14.10
Gjithsej	4,996,637	3,532,316	613,570	12.28	850,751	17.03	1,464,321	29.31

Reduction of commercial losses also has a positive impact in reducing consumption, also including the network load and technical losses.

At the beginning of 2012 ERO has determined the allowed distribution losses limits based on the level of losses in 2011 as a starting point but also the trend of reduction in previous years, determining the degree of reduction of losses of 3% points for three years and 2.5% points for three other years. The losses that ERO recognized to the distribution operator in tariffs are based on these targets.

The cost of energy loss is covered by customer tariffs that are regular payers of electricity which represents an extra charge to these customers but it is unavoidable in order to ensure the regular functioning of the system. The operator of distribution system made continuous efforts to reduce distribution losses, especially the commercial ones, having in mind that the implementation of their reduction requires less investment. Despite the reduction in losses over the years, the DSO has failed to meet the targets set by the ERO, which means that the cost of not meeting these targets is borne by DSO itself.

Below is presented the chart with the data for technical, commercial and total losses from the 2008 to 2017.

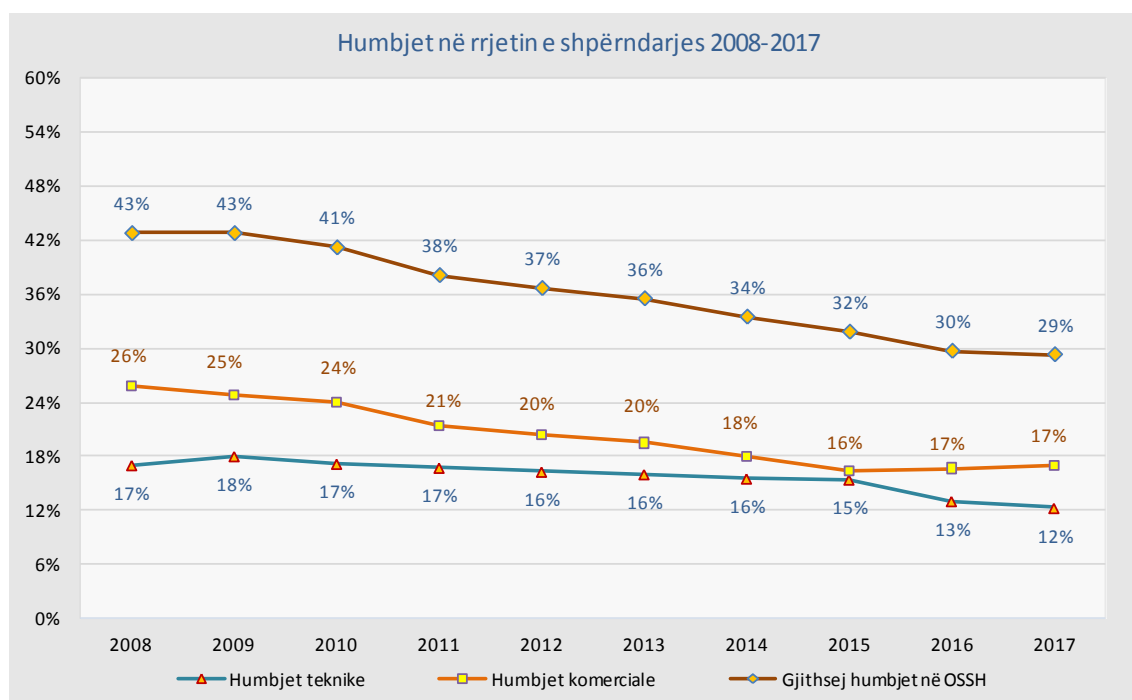


Fig. 5.19 Technical and commercial losses in distribution network for the period 2008-2017

5.6 Electricity Supply

Electricity supply during 2017 is provided by the supplier bearing the universal service obligation, who has supplied consumers at regulated process and consumers with deregulated prices, for which a special account has been kept.

Participation of household consumption in the overall billed distribution consumption is still dominant - about 57.17%. Participation in percentage of the consumption categories compared with total consumption (shown with loss and without loss distribution) is presented in the figures below.

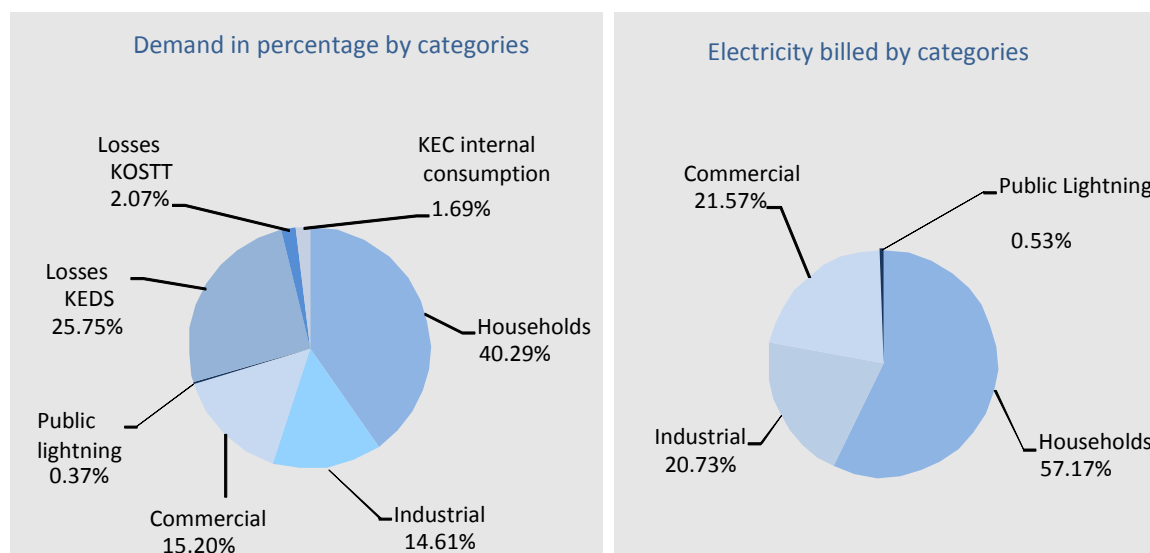


Fig. 5.20 Participation of consumption categories with and without losses in 2017

5.6.1 Billing and collection

During recent years, billed energy has been steadily increasing; especially collection has had a significant increase. The level of collection against billing in distribution for 2017 was 99.01%, while the total when also calculating the customers connected in the transmission network to which the collection is 100%, the total collection reaches 99%.

Consumption categorized according to the level of voltage and customer groups that consume electricity for 2017 is given in Table 5.18.

Tab. 5.18 Billed electricity by tariff categories 2017

Kategoritë e konsumit (MWh)	Gjithsej 2017	Janar	Shkurt	Mars	Prill	Maj	Qershor	Korrik	Gusht	Shtator	Tetor	Nëntor	Dhjetor
220 kV	384,398	34,847	29,882	35,308	34,562	32,648	32,034	34,948	32,893	32,832	34,733	14,446	35,266
110 kV	90,844	5,389	4,291	8,292	9,249	9,178	7,268	8,821	8,867	8,676	8,520	6,145	6,147
35 kV	43,587	2,553	2,541	4,010	3,487	3,572	3,537	4,171	4,121	3,607	3,844	4,101	4,045
10 kV	312,102	27,286	23,049	25,875	24,482	24,168	23,670	26,068	27,084	24,412	26,589	28,768	30,652
Familjar	2,290,962	249,590	203,066	191,419	180,730	174,303	161,135	168,891	171,436	164,765	180,445	206,379	238,803
0.4 kV I	348,392	32,317	26,820	29,283	26,494	26,731	26,779	29,871	32,352	25,469	27,835	31,173	33,268
0.4 kV II	516,022	52,118	44,319	41,816	37,699	37,959	36,897	43,606	47,159	36,641	40,065	45,850	51,893
Ndriqimi publik	21,251	2,079	1,823	2,037	1,540	1,399	1,286	1,352	1,540	1,620	2,011	2,127	2,438
Gjithsej faturuar	4,007,557	406,177	335,790	338,039	318,245	309,957	292,605	317,727	325,452	298,023	324,040	338,990	402,512
Konsumi KEK	95,959	10,795	7,646	8,235	7,983	7,760	6,656	5,898	7,396	7,972	8,614	8,286	8,719
Humbjet KEDS	1,464,321	243,741	158,557	139,640	118,823	83,336	64,932	64,204	65,157	66,090	119,996	147,120	192,725
Humbjet KOSTT	117,945	16,907	11,658	8,952	7,339	7,896	6,474	8,512	9,443	8,142	9,088	11,107	12,427
Gjithsej	5,685,783	677,620	513,651	494,867	452,389	408,950	370,667	396,341	407,448	380,227	461,739	505,502	616,382

Billed energy in 2017 is 4,008 GWh, that expressed in monetary value (including VAT) is € 296.1 million, while collection is € 293.4 million. The table below presents the billing, collection, and the ratio between them presented in percentage that is over 99%.

Tab. 5.19 Billing and collection in 2017

2017	Load	Realization	Billing	Collection	Coll./Bill.
	MWh	MWh	€	€	%
Distribution	4,996,637	3,532,316	270,224,014	267,539,783	99.01%
Ferronikeli	384,398	384,398	4,863,406	4,863,406	100.00%
Trepça+Sharrceci	90,844	90,844	21,014,345	21,014,345	100.00%
Total	5,471,879	4,007,557	296,101,765	293,417,534	99.09%

Table 5.20 shows billing and collection as well as the ratio in distribution by months for 2017. Also, the table shows that in a few months the ratio collection/billing is higher than 100% value, which means that during these months the billed electricity is collected for previous months and older debt.

Tab. 5.20 Billing and collection by months in distribution for 2017

Distribution 2017	Load	Realization	Billing	Collection	Coll./Bill.
	MWh	MWh	€	€	%
January	609,683	365,942	30,938,760	25,468,357	82.32%
February	460,175	301,617	25,444,818	26,703,349	104.95%
March	434,080	294,440	25,066,058	24,940,018	99.50%
April	393,256	274,433	20,170,830	22,536,438	111.73%
May	351,467	268,131	19,992,524	20,589,122	102.98%
June	318,235	253,303	18,983,179	18,811,508	99.10%
July	338,162	273,958	20,717,573	24,073,131	116.20%
August	348,849	283,692	21,578,202	22,063,534	102.25%
September	322,605	256,515	19,086,575	19,451,313	101.91%
October	400,784	280,788	21,009,275	19,298,530	91.86%
November	465,518	318,398	22,687,672	19,916,955	87.79%
December	553,824	361,099	24,548,548	23,687,528	96.49%
Total	4,996,637	3,532,316	270,224,014	267,539,783	99.01%

The electricity level billed and collected from 2008 to 2017 is shown in the following figure where a steady increase from year to year is marked.

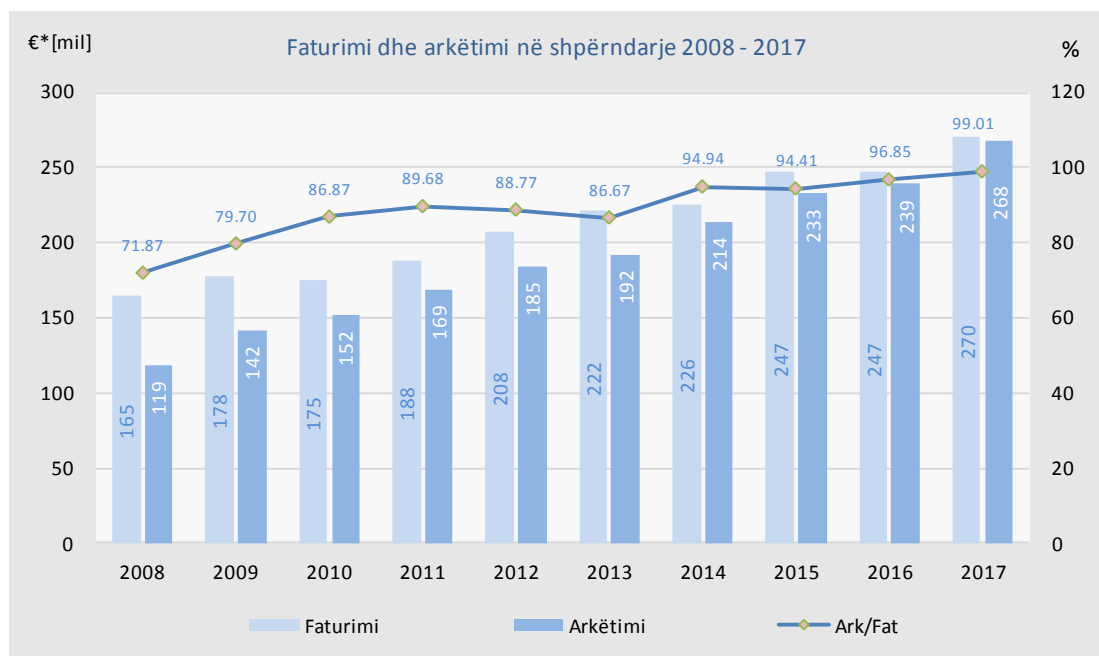


Fig. 5.21. Billing and collection in distribution over the years 2008-2017

The average price of electricity

The average selling price of electricity varies depending on the consumer category, the voltage level at which the customers are connected, consumption of electricity at different tariff rates according to the time when energy is consumed. The average price varies for household and non-household customers, and Figure 5.22 shows the average selling price for these categories (excluding VAT). The average sales price also varies according to districts depending on the concentration of

commercial/industrial activities that consume electricity at certain times. For households' category, the average energy price is 6.04 € cents/kWh, while for non-household consumers the average energy price is 7.94 € cents / kWh.

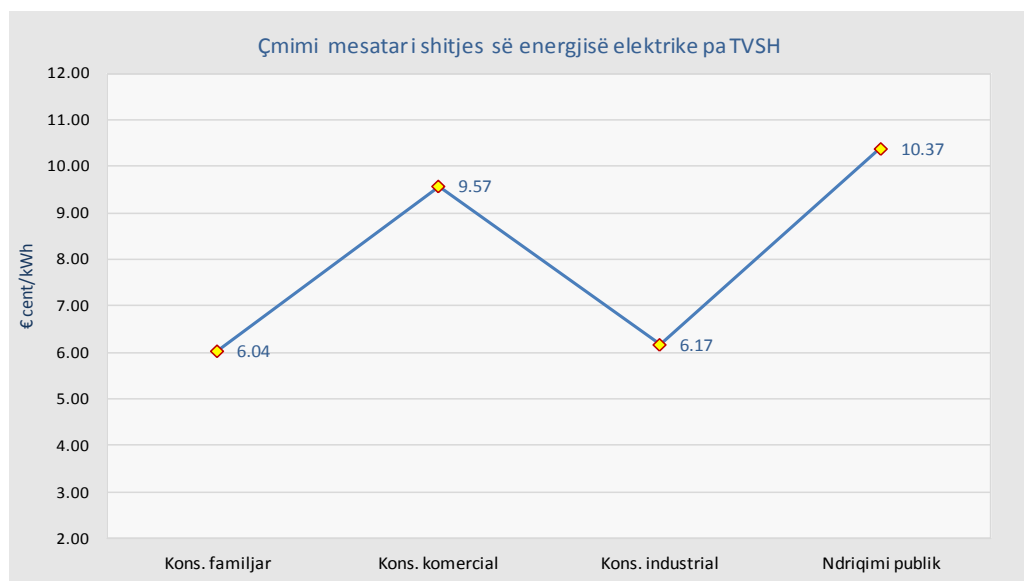
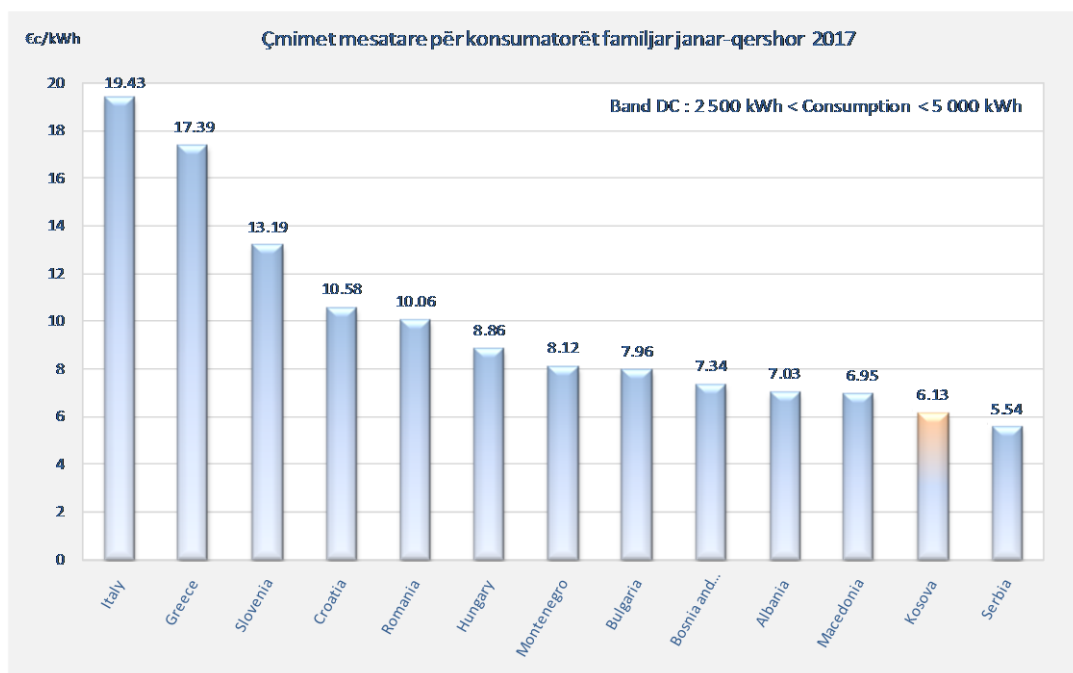


Fig. 5.22 The average selling price of electricity 2017 (excluding VAT)

The figure below shows the average price excluding VAT for household customers for the first six months of 2017 for some countries, issued by Eurostat, since there is still lack of data for the second half. Eurostat data are categorized by consumption, and the figure shows the consumption value of 2500-5000 kWh, which is closest to the average consumption of a Kosovo's households.



*Source of data from EUROSTAT

Fig. 5.23 Average prices for household customers for the first half of 2017 (excluding VAT)

5.7 Import and export of electricity

Given the configuration of generating units for consumption tracking and balancing the electricity system, in addition to domestic production, import of electricity is also required, while in some cases surpluses appear, that need to be exported.

5.7.1 Import of electricity

To cover the local electricity needs, KESCO and KOSTT have imported significant amounts of electricity from the regional market through commercial contracts concluded with electricity traders, and an amount is received in the form of exchange of electricity with Albanian Energy Corporation (AEC).

As of April 2017, in compliance with regulatory requirements, KESCO has started to allocate quantities of imports to cover the need of consumers with the universal service right from the imports quantities designated to cover losses in distribution network, whereas for the unregulated consumers (Feronikeli) was started in October 2016.

Based on the obligations under the legislation, KOSTT shall itself provide electricity in order to cover transmission losses through contracts from domestic production and imports. By the end of August 2017, KESCO has also made imports to cover transmission losses, while as of September KOSTT itself has started to realize own imports to cover transmission losses.

To cover the electricity system needs KOSTT and KESCO have imported energy in the amount of 1,242,255 MWh. This amount includes imported electricity for regulated and unregulated customers, losses in the transmission network, losses in the distribution network and losses caused by unbilled electricity in the four northern municipalities of the country.

Electricity imported by KOSTT to cover transmission network and unbilled energy losses in the four municipalities in the north of the country starting from September 2017 was 39,692 MWh in the amount of € 2,687,381 and with average price € 67.71 / MWh. Additionally, KOSTT has purchased the amount of energy of 9,442 MWh with an average price of 64.12 € / MWh from KESCO under the same conditions as other electricity importers, but this amount is declared as import by KESCO and as such it is considered as import of KESCO.

Tab. 5.21 Import of electricity by KOSTT

KOSTT's imports from September 2017			
Month	Amount (MWh)	Price (€/MWh)	Value (€)
September	725	61.64	44,690
October	6,098	60.42	368,458
November	23,734	77.68	1,843,745
December	9,135	47.13	430,488
Total	39,692	67.71	2,687,381

Electricity imported through commercial contracts by KESCO during 2017 was 1,112,734 MWh in the amount of 65,968,953 €, with an average price of 58.76 € / MWh, while the electricity imported in 2016 was 556,884 MWh with an average price of 45.80 € / MWh.

Data on total imports by KESCO and exchanges are presented in the table below.

Tab. 5.22 Electricity import by KESCO through contract and exchange 2017

Import realized by KESCO-2017				Exchange	Total
Month	Amount MWh	Price €/MWh	Value (€)	Quantity MWh	Quantity MWh
January	153,918	79.51	12,237,488	-	153,918
February	92,720	70.73	6,558,058	-	92,720
March	43,206	39.02	1,685,894	-	43,206
April	97,289	42.84	4,167,981	-	97,289
May	51,579	40.66	2,097,270	-	51,579
June	38,724	39.73	1,538,343	-	38,724
July	59,256	55.62	3,296,013	-	59,256
August	72,808	62.99	4,586,505	-	72,808
September	42,909	56.00	2,402,737	-	42,909
October	54,970	52.16	2,867,315	-	54,970
November	181,062	67.99	12,309,728	6,225	187,287
December	234,293	52.16	12,221,621	73,574	307,867
Total	1,122,734	58.76	65,968,953	79,799	1,202,533

Based on the applicable legislation and the "Guidelines on Electricity Market Liberalization", since April 2017, system operators are obliged to buy energy to cover losses and other auxiliary services in the competitive market, so KESCO has commenced allocating import to consumers with the right of universal service and import to cover losses in the DSO. Out of a total of 1,122,734 MWh imported by KESCO, 416,677 MWh were import for consumers with universal service rights, 315,260 MWh for coverage losses in the distribution network, 381,355 MWh for customers at unregulated prices and 9,442 MWh for trading with KOSTT.

Tab. 5.23 KESCO's import for universal service customers, coverage of losses in the distribution network, and trading with KOSTT

Importi nga KESCO për konsumatorët e shërbimit universal				Importi nga KESCO për mbulimin e humbjeve në shpërndarje			Importi nga KESCO për tregëtim me KOSTT		
Muaji	Sasia MWh	Çmimi €/MWh	Vlera €	Sasia MWh	Çmimi €/MWh	Vlera €	Sasia MWh	Çmimi €/MWh	Vlera €
Janar	117,174	92.15	10,798,088	-	-	-	-	-	-
Shkurt	92,720	70.73	6,558,058	-	-	-	-	-	-
Mars	5,313	48.54	257,914	-	-	-	-	-	-
Prill	33,335	46.10	1,536,551	27,234	46.10	1,255,487	-	-	-
Maj	11,979	47.34	567,096	3,256	47.34	154,142	-	-	-
Qershor	1,381	69.42	95,846	1,343	69.42	93,249	-	-	-
Korrik	3,011	63.61	191,521	19,789	63.61	1,258,724	-	-	-
Gusht	9,266	68.04	630,450	27,734	68.04	1,886,994	-	-	-
Shtator	2,398	56.88	136,406	4,511	56.88	256,601	-	-	-
Tetor	1,096	67.72	74,213	16,564	67.72	1,121,779	60	76.12	4,567
Nëntor	63,631	68.50	4,358,977	95,736	68.50	6,558,297	6,011	66.01	396,809
Dhjetor	75,373	49.93	3,763,688	119,093	49.93	5,946,809	3,371	60.53	204,047
Gjithsej	416,677	69.52	28,968,808	315,260	58.78	18,532,083	9,442	64.12	605,422

In addition to the import of electricity through contracts, a quantity of electricity was also imported through exchange (electricity with electricity) at a total of 79,799 MWh. The entire exchange in 2017 was realized between KEK and the Albanian Energy Corporation (AEC), compared to 2016 (75,405 MWh) this amount is higher by 6%.

During 2017, electricity in the amount of 381,355 MWh with a total value of 17,862,639 € with an average price of 46.84 € / MWh was imported for Ferronikel as a consumer with unregulated prices, except in February where due to some limitations in the transmission system it was supplied at regulated prices from Bulgaria.

Tab. 5.24 Tab. 5.24 Electricity imports for 2017 for customers at unregulated prices

Electricity imports for unregulated costumers (Feronikeli) 2017			
Month	Quantity (MWh)	Price (€/MWh)	Value (€)
January	36,744	39.17	1,439,400
February	-	-	-
March	37,893	37.68	1,427,979
April	36,720	37.47	1,375,942
May	36,344	37.86	1,376,033
June	36,000	37.48	1,349,248
June	36,456	50.63	1,845,767
August	35,808	57.78	2,069,061
September	36,000	55.83	2,009,730
October	37,250	44.75	1,666,756
November	15,684	63.48	995,646
December	36,456	63.28	2,307,078
Total	381,355	46.84	17,862,639

The total amount of imports with contracts in 2017 was 1,162,426 MWh, with an average price of 59.06 € / MWh, compared to 2016 this amount was 109% higher (556,884 MWh), as well as the average import price was for 29% higher than in the previous year.

Tab. 5.25 Import of electricity by 2017 according by categories

2017 Import			
Import for categories	Quantity MWh	Price €/MWh	Amount (€)
Consumers with universal service	416,677	69.52	28,968,808
Loss in distribution network	315,260	58.78	18,532,083
Customers with unregulated prices	381,355	46.84	17,862,639
KESCO for KOSTT	9,442	64.12	605,422
Total KESCO	1,122,734	58.76	65,968,953
KOSTT	39,692	67.71	2,687,381
Total import by contract	1,162,426	59.06	68,656,334
Exchange KEK from KESH	79,799	-	-
Total import	1,242,225	-	68,656,334

The following figure shows the import with contracts and price, as well as the exchange with KESH realized during 2017, for regulated customers.

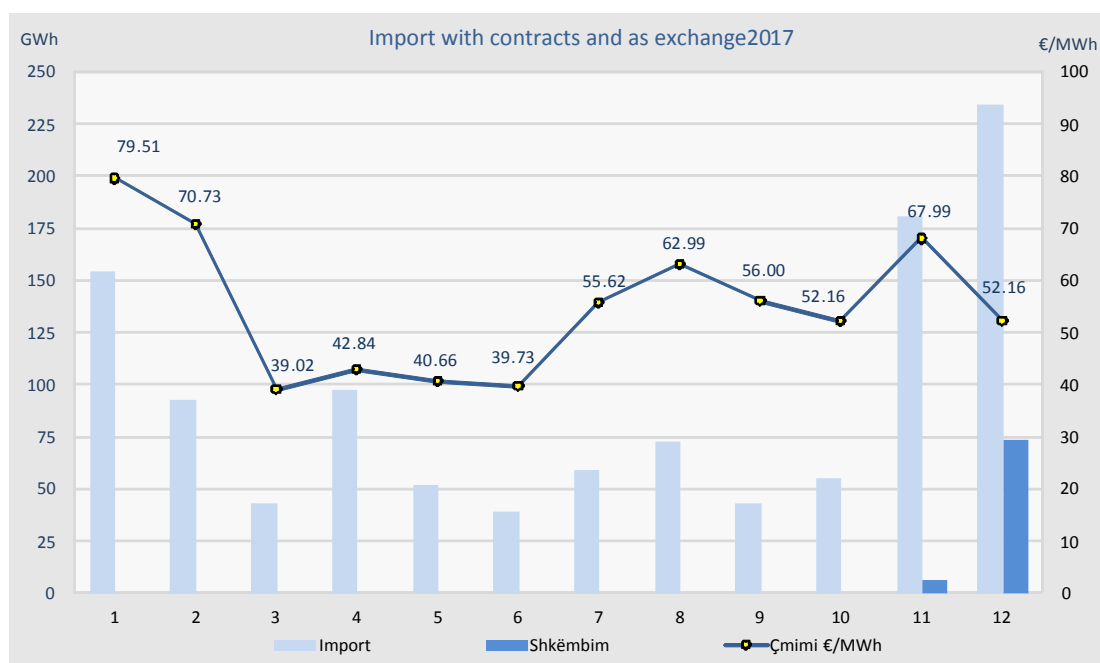


Fig. 5.24 Import of electricity by contract and in exchange for 2017

5.7.2 Export of electricity

Given the consumption curve during the hours in the day, and the inefficiency of the generating units to track consumption, it can be seen that in many cases there is a lack of energy surplus, and this occurs even on the same day. So in few hours on the same day there are energy imports, while at other hours electricity surpluses appear that need to be exported

Electricity surpluses appear mostly during the night hours (at the time of low tariff). In these periods, surpluses appear also at regional systems, consequently, supply for energy increase at night, and this affects the export prices to be significantly lower than import prices.

Electricity exported with commercial contracts during 2017 was 876,229 MWh in the amount of 32,757,947 €, with an average price of 37.39 € / MWh, while the electricity exported in 2016 was 1,064,184 MWh with average price of 29.73 € / MWh. The amount of exported electricity is 18% lower than in 2016, while the average price was 26% higher compared to 2016.

Tab. 5.25 Electricity export with contracts and as exchange 2016

Exports of Electricity with Contracts-2017				Exchange	Total
Month	Amount MWh	Price €/MWh	Value (€)	Amount MWh	SAmount MWh
January	12,030	51.66	621,528	1,900	13,930
February	14,730	34.80	512,531	133	14,863
March	114,692	33.10	3,796,327	936	115,628
April	77,095	34.67	2,672,578	72	77,167
May	188,476	38.51	7,258,324	0	188,476
June	194,160	39.89	7,744,555	0	194,160
July	68,215	37.18	2,536,131	479	68,694
August	35,596	36.35	1,293,918	161	35,757
September	90,634	35.92	3,255,252	0	90,634
October	80,601	38.05	3,066,803	0	80,601
November	0		0	0	0
December	0		0	0	0
Total	876,229	37.39	32,757,947	3,681	879,910

Export with contracts was carried out with different traders, while export as exchange, in 2017, was carried out only by KEK with AEC.

The figure below shows the export with contracts and as exchanges.



Fig. 5.24 Export of electricity with contracts and as exchange for 2017

Given the amount of imported and exported electricity in 2017, it is noted that Kosovo has been a net exporter of electricity, with an amount of 362,315 MWh, shown by months in the following figure.



Fig. 5.25 Import and export of electricity in 2017

The electricity import and export price during 2000 - 2017 has marked ups and downs. Below is the picture showing the import and export prices from 2000 to 2017.

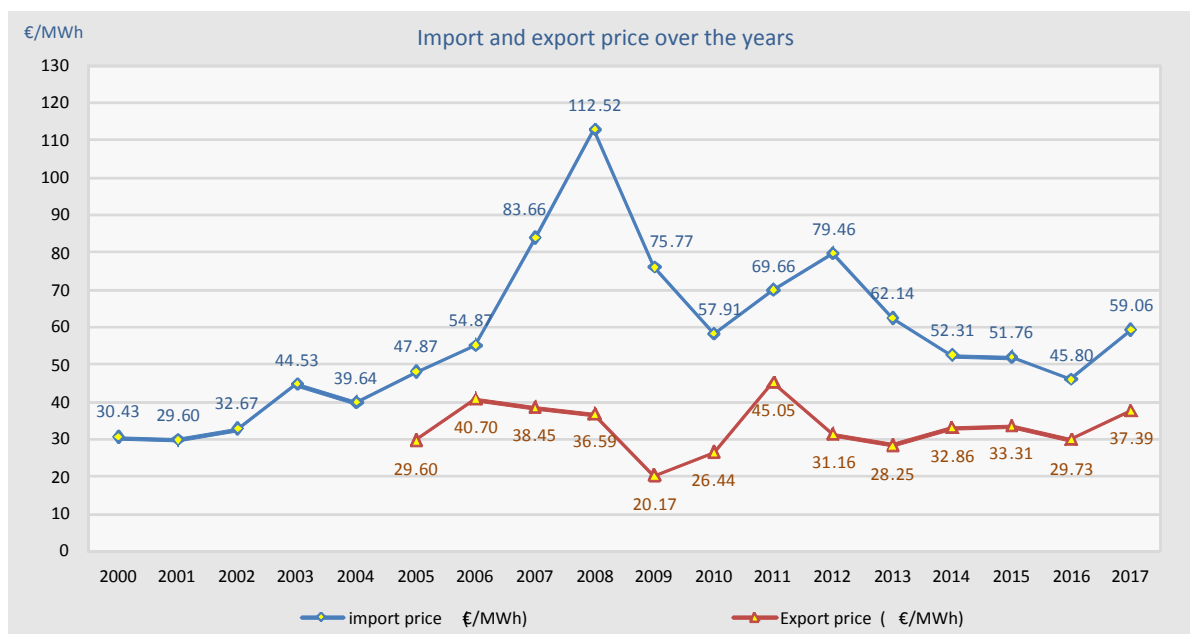


Fig. 5.26 The average import and export price over the years

5.8 Quality Standards of electricity supply and services

Standards of quality of electricity supply and service are an important element of the regulation of the electricity sector. These standards are defined so that the quality of supply and service of electricity to customers continuously improves by the electricity enterprise.

Standards of quality of electricity supply and service are defined and monitored according to the following areas:

- Continuity of supply;
- Voltage quality; and
- Commercial Quality.

5.8.1 Continuity of supply

Continuity of supply is related to the availability of electricity, respectively displays the number and duration of outages per customer within a year.

Continuity of electricity supply in 2016 is monitored by ERO for both system operators: Transmission System and Market Operator (TSMO) and Distribution System Operator (DSO).

Continuity of supply is measured by indexes:

- SAIDI - System average interruption duration index;
- SAIFI - System average interruption frequency index; and

- ENS - Energy Not-Supplied.

5.8.1.1 Measuring indexes reported by OST

Measuring indexes reported by KOSTT for the standards of quality of electricity supply and service for 2017 are shown below.

- SAIDI - for planned interruptions in the transmission system has been 4.29 hours;
- SAIDI - for unplanned interruptions in the transmission system has been 0.37 hours;
- SAIFI - for planned interruptions in the transmission system has been 0.56;
- SAIFI - for unplanned interruptions in the transmission system has been 0.56;
- ENS - for planned interruptions in the transmission system has been 4.847 GWh; and
- ENS - for unplanned interruptions in transmission system has been 0.489 GWh.

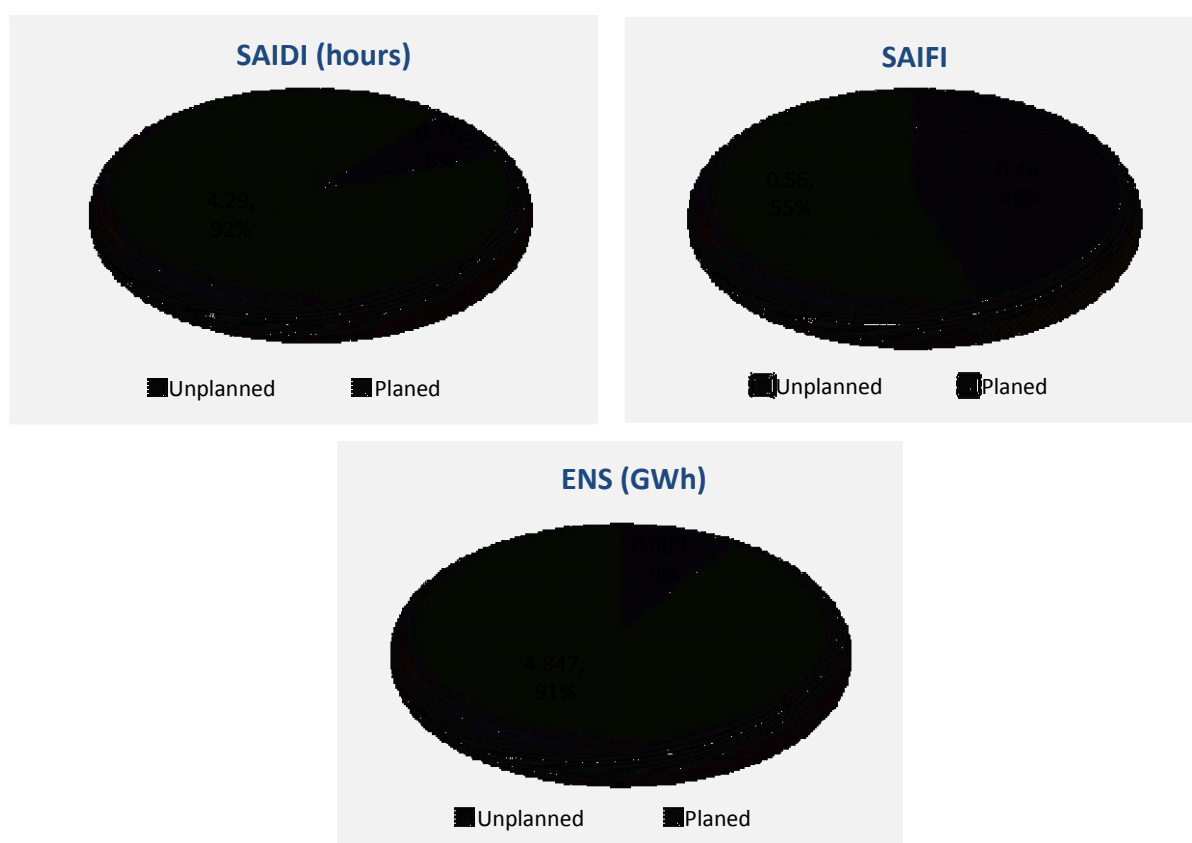


Fig. 5.27 Measurable indicators SAIDI, SAIFI and ENS by KOSTT for 2017

The figure below shows the measuring indexes, reported by KOSTT for the standards of quality of electricity supply and service during 2012-2017.

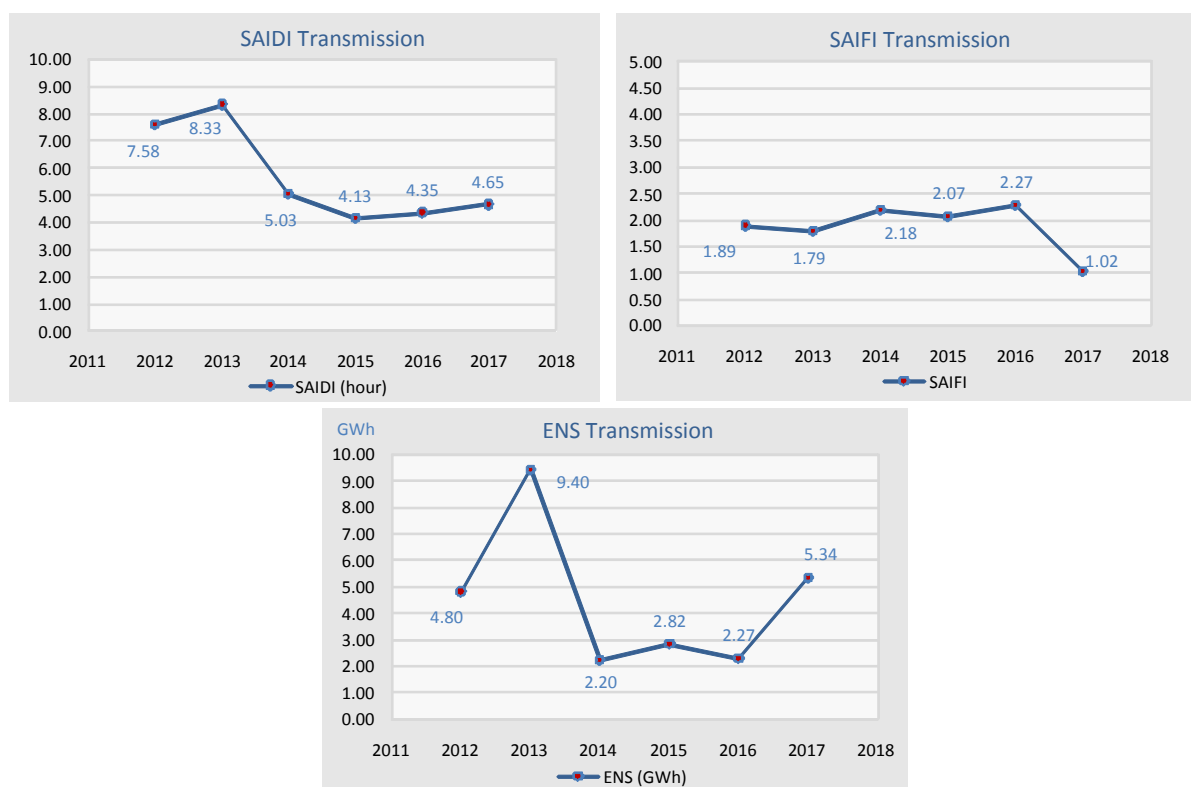


Fig. 5.28 SAIDI, SAIFI and ENS by KOSTT indicators for the period 2011-2017

According to data reported by KOSTT for the SAIDI measuring index, it is estimated that in total this index has increased by 6.86% over 2017 compared to 2016, mainly due to the works carried in the transmission network. It should be noted that in the 2016 SAIDI index, compared to 2016, we have increased the planned outages by 26.65%, while there is discounts of unplanned outages of -164.82%, which confirms the stability in the operation of the transmission network.

For the SAIFI measuring index, from the reported data it is estimated that in total this index has a decrease of -122.55% over 2017 compared to 2016, respectively there is a decrease of this index of planned outages of -119.64% and unplanned outages of -126.09%.

While regarding energy not supply - ENS, in 2017, we have an increase of this index by 82.30% from 2016, where in the planned outages have increased by 172.76%, while discounts on unplanned outages of -135.17%. The growth of this index is mainly due to the works carried out in the transmission network.

5.8.1.2 Measuring indexes reported by the DSO

Measuring indices reported by the DSO on standards of quality of electricity supply and service for 2016 are presented below.

- SAIDI - for planned interruptions in the distribution system has been 50.80 hours;
- SAIDI - for unplanned interruptions in the distribution system has been 50.18 hours;
- SAIFI - for planned interruptions in the distribution system has been 33.61;
- SAIFI - for unplanned interruptions in the distribution system has been 26.45;
- ENS - for planned interruptions in the distribution system has been 33.00 GWh; and

- ENS - for planned interruptions in the distribution system has been 33.48 GWh.

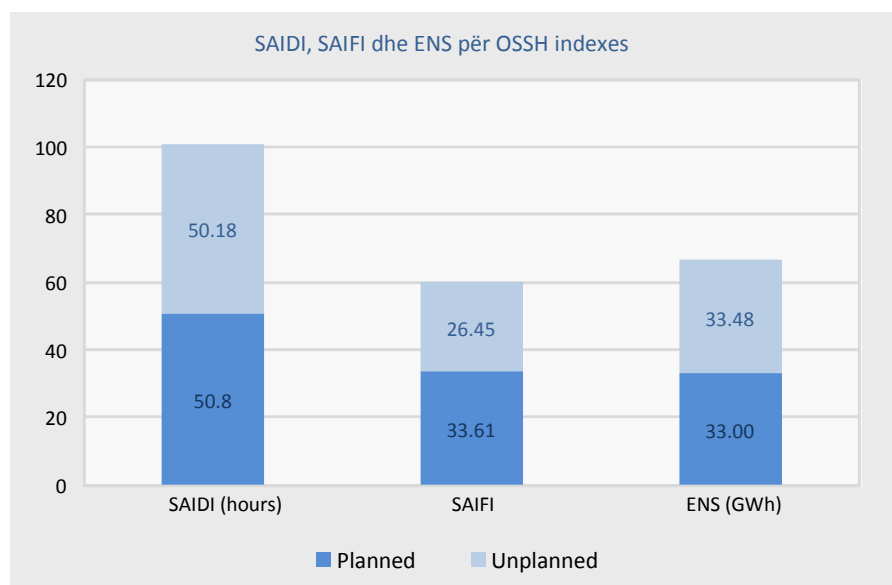


Fig. 5.29 SAIDI, SAIFI and ENS by KOSTT indicators for the period 2011-2017

In the following figures we have shown measuring indices reported by the DSO on standards of quality of electricity supply and service during 2011 – 2017.

Hours not planned

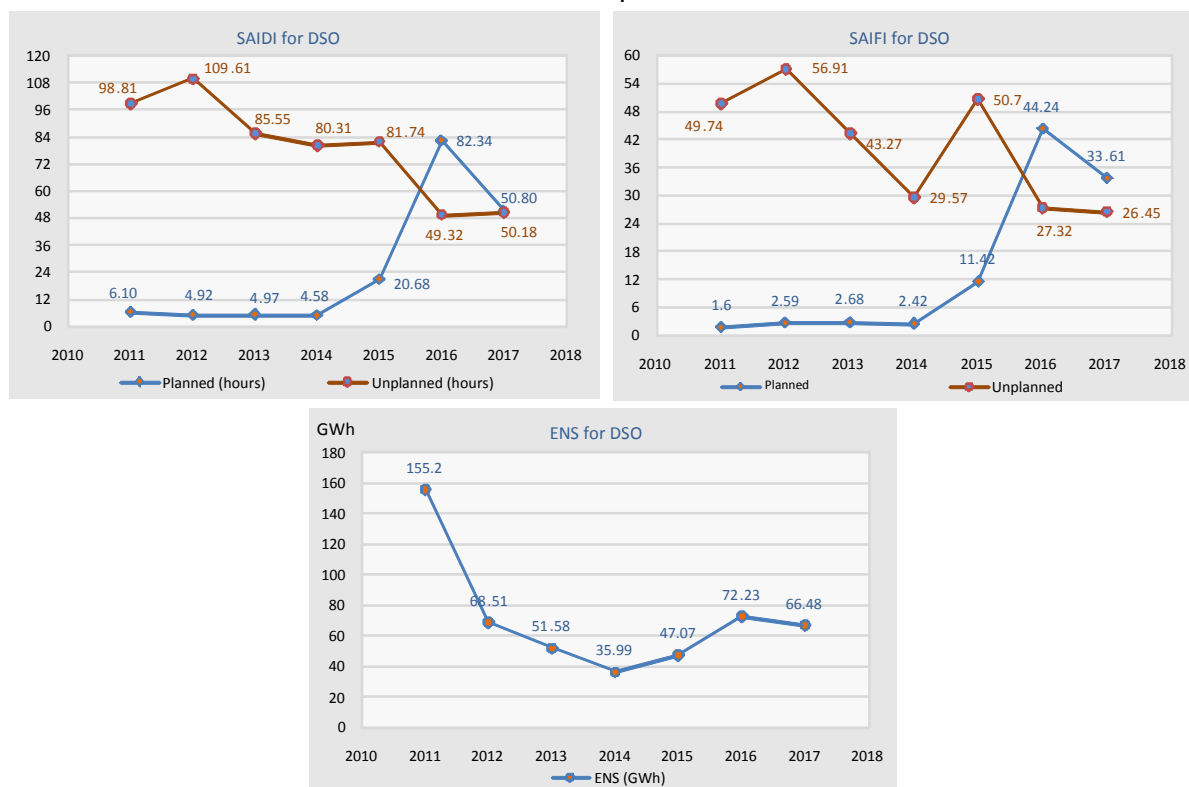


Fig. 5.30 Indicators SAIDI, SAIFI and ENS from the DSO for the period 2011-2017

From the above data is noted that measuring indexes SAIDI, SAIFI and ENS in 2017 are generally not improved compared to 2016, and that because during 2016 the DSO has carried out the largest number of planned outages in order to maintain the electricity network.

According to the data reported for SAIDI measuring index in 2017, it is noted that there is no improvement of this index compared to 2016, which according to the data shows that overall in 2017 there is a -30.38% decrease of outages compared to 2016. It should be noted that during the most detailed analysis of the index - SAIDI, is observed that in 2017 there was a -62.09% planned outages decrease compared to 2016, while there was an increase of 1.74% for unplanned outages in 2017 compared to 2016.

An analysis of the SAIFI measuring index shows that during 2017, there is improvement compared with 2016, which according to the data is noted that in 2017 we have decrease of the frequency of electricity outages per customer - SAIFI for -19.15% compared to 2016. During the most detailed analysis of the index - SAIFI, is observed that in 2016 there was a decrease of -31.60% in the frequency of planned electricity outages per customer - SAIFI compared to 2016, as well as a -3.3% decrease of unplanned outages frequency per customer compared to 2016.

During 2017, the energy not supplied (ENS) in general has improved compared to 2016, according to the data we can see that in 2017 there is a decrease of -8.65% compared to 2016. In 2017 there is a decrease of -40.27% for energy not supplied for planned outages compared to 2016, while there is an increase of 29.07% for energy not supplied in unplanned outages compared to 2016.

5.8.2 Quality of voltage

The voltage quality is related to the technical aspects of the electricity system and compares to the nominal voltage, which during this period was mainly monitored through registration of customer complaints regarding the quality of voltage.

During 2017 the number of complaints filed by customers regarding the voltage quality in the DSO has been 1,175 complaints, out of which 1,051 or 89% were solved, 21 or 2% are in the screening process, whereas 103 complaints or 9% have remained unsolved.

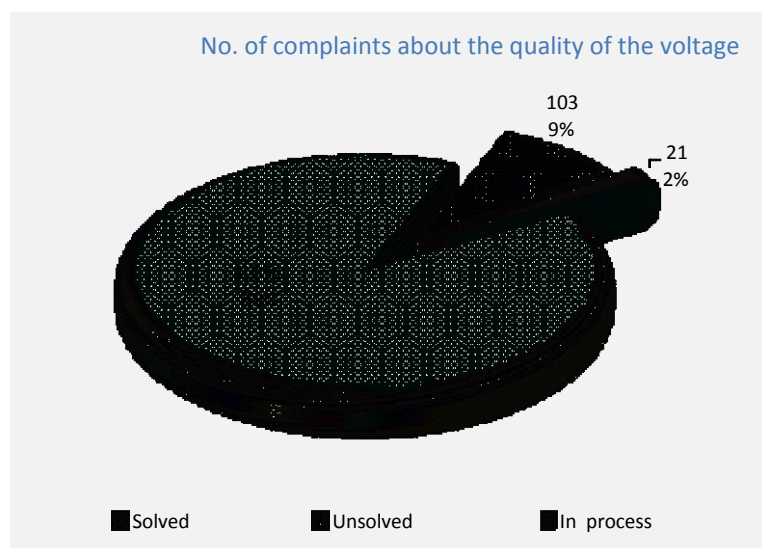


Fig. 5.31 Customer complaints about voltage quality during 2017

Below, in the figure are shown customer complaints about voltage quality over the years, which show that there is a continued increase in customer complaints about voltage quality.

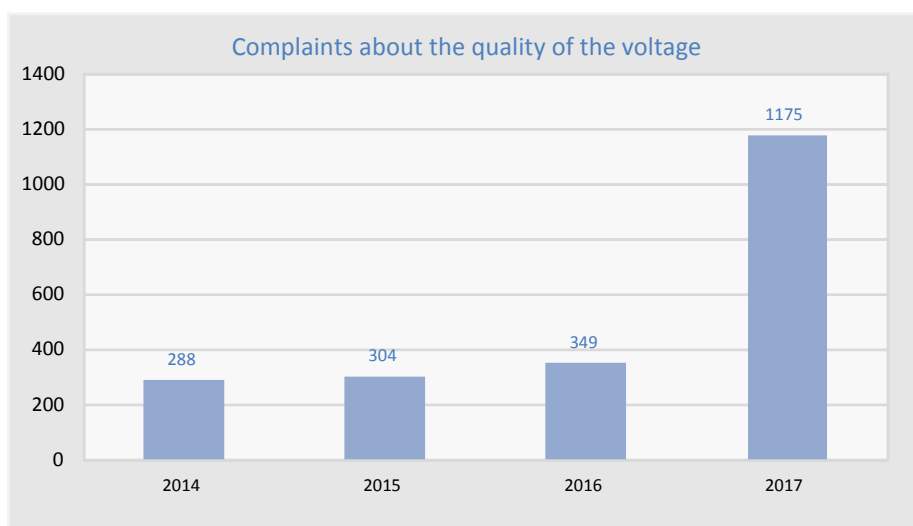


Fig. 5.32 Complaints about voltage quality by years

The voltage quality standards are defined in the Rule on General Conditions of Energy Supply, in the Distribution Code and Metering Code of Distribution.

5.8.3 Commercial quality

Commercial quality determines the efficiency and accuracy of resolving customers' complaints and requests. Commercial quality regulation takes into account the mutual relationship between the customers and supplier.

In order to analyse the commercial quality, the data obtained by the licensees have been presented in two categories which directly affect the customers' issues. These categories are as follows:

- New connections, and
- Customers' complaints

5.8.3.1 New connection

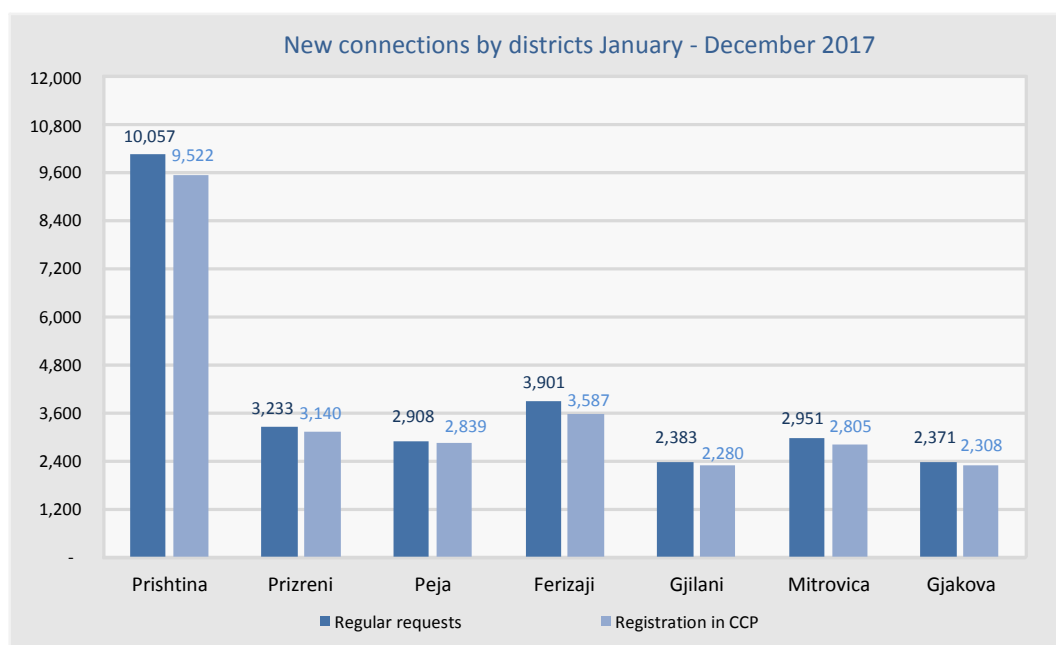
In commercial quality standards, among other things, are also incorporated new connections, through which is recorded how quickly the energy enterprise takes measures for execution of new connections.

During 2017, KESCO had in total 27.804 regular requests for registration of tariff groups 4, 5, 6, 7 and 8, requests for new connections transferred from the previous year were 855, whereas during 2017 are approved 26.481 requests for new connection.

From the KESCO data can be seen that from the total number of requests for registration of new connections, the largest number of requests was from the households (tariff group 5, 6 and 7) 22,500 or 80.92%, requests for registration of new connections of the commercial tariff group 0.4 kV Category II - tariff group 4, with 3,550 or 12.77%, whereas the requests for tariff group 8 - public lighting were 219 or 0.79%. From the total number of requests for new connections, 1,535 requests

or 5.90% have been classified into undefined categories, because consumers in their applications have not specified the category of consumer.

It is also noted that out of the total number of the customer registration into the billing program "CCP", household customers are 22,285 or 84.15%, followed by tariff group 4 (0.4 kV Category II - commercial) with 3,956 registrations or 14.94%, and the tariff group 8 (public lighting) with 8 registrations or 0.52%. It should be noted that the highest number of registrations compared with the requests for new connections is because there are registration of customers that were transferred from last year and some of them are registered this year.



The diagram above shows that for 2017, out of the total number of requests for new connections, the majority of requests have been registered in Prishtina District with 10,057 or 36.17%, followed by district of Ferizaj with 3,901 or 14.03%, whereas the lowest number of requests for new connections has been registered in the Gjakova district with 2,371 or 8.53%. Also, it should be stated that from the total number of registrations of customers new connections in the billing program, the majority of registrations have taken place in the district of Prishtina with 9,522 or 35.96%, followed by the district of Ferizaj with 3,587 or 13.55%, whereas the lowest number of registrations has been recorded in the district of Gjilan with 2,280 or 8.61%.

It should be stated that during 2017 there have been 9.49% requests for new connections more than in 2016 and 5.04% more registrations of customers than in 2016.

5.8.3.2 Electro-energetic consents

From the data presented is shown that during 2016, 804 requests were submitted to KESCO for electro-energetic Consents, whereas the requests transferred from 2015 have been 26, as shown in the following table.

Tab. 5.26 Electricity consents for 2017

Districts	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Prishtina	13	11	17	18	25	36	42	40	27	28	23	35	315
Mitrovica	3	1	10	7	11	7	6	9	7	8	7	4	80
Peja	12	10	9	7	15	10	14	7	15	13	19	9	140
Gjakova	7	11	18	19	1	15	18	7	5	12	3	3	119
Prizreni	9	6	8	8	15	12	12	12	11	8	11	7	119
Ferizaj	12	15	14	14	13	37	20	23	20	31	28	23	250
Gjilani	3	7	7	6	13	11	17	11	16	14	14	14	133
Total	59	61	83	79	93	128	129	109	101	114	105	95	1,156

According to the table above is noticed that from the total number of requests for electro-energetic Consents in 2017, the highest number of requests registered was in Pristine district, i.e. 315 or expressed in percentage 27.25%, followed by Ferizaj district 250 or 21.63%, whereas the lowest number was in Mitrovica district 80 or 6.92%.

Tab. 5.27 Electricity consents by districts for 2017

Districts	Request for EC 2017	Reviewed	In process	Submitted to other departments
Prishtina	315	282	9	24
Mitrovica	80	73	1	6
Peja	140	130	2	8
Gjakova	119	102	0	17
Prizreni	119	108	1	10
Ferizaj	250	228	11	11
Gjilani	133	117	6	10
Total	1,156	1,040	30	86

The table above shows that out of 1,156 requests of applicants for Electricity Consent (EC), 1,040 have been reviewed, whereas based on KEDS data, 86 other requests have been reviewed, but according to the Department of Electricity Consents within KEDS these requests do not qualify as requests for an Electricity Consent, but rather as requests for other services and have been forwarded to the relevant departments, whereas 30 requests of applicants are in process of review.

The chart below shows an increase in the number of customers' requests for electricity consents.

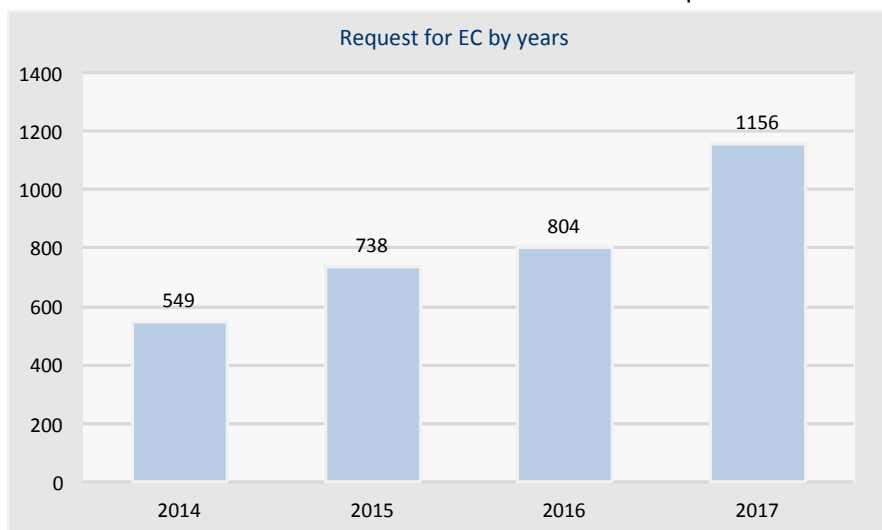


Fig. 5.34 Requests for Electricity Consents for the period 2014 – 2017

5.8.3.3 Customer complaints to the supplier - KESCO

Based on the data of KESCO supplier, the total numbers of registered customer complaints during 2017 amounts to 11,350 and 1008 have been transferred from the previous year, whereas 11,359 complaints have been resolved/completed.

Find below the chart of customer complaints registered and resolved for 2017, by districts.

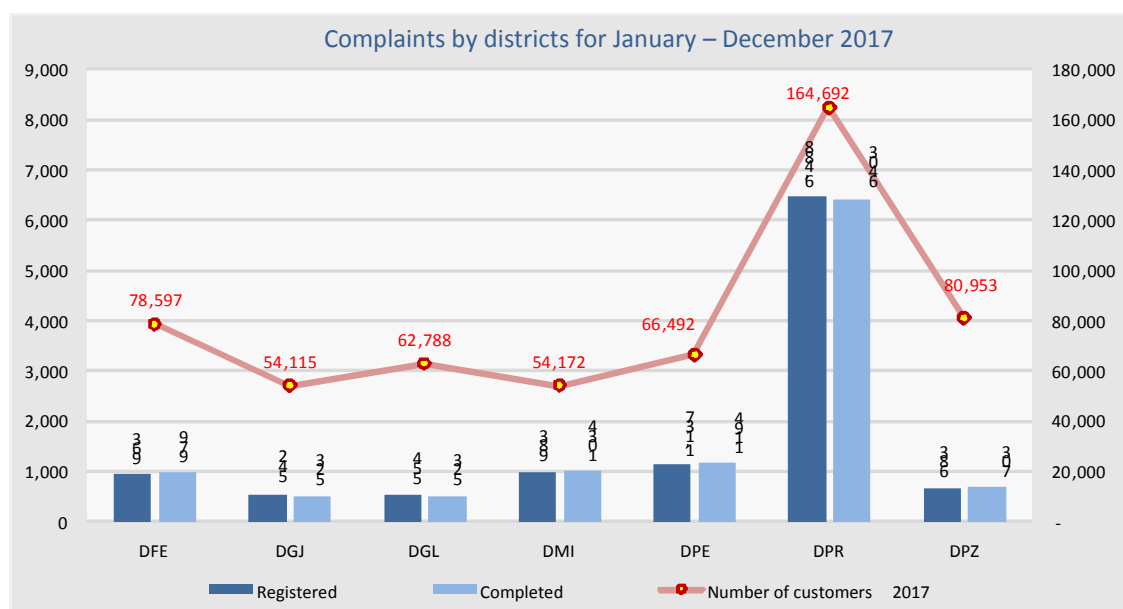
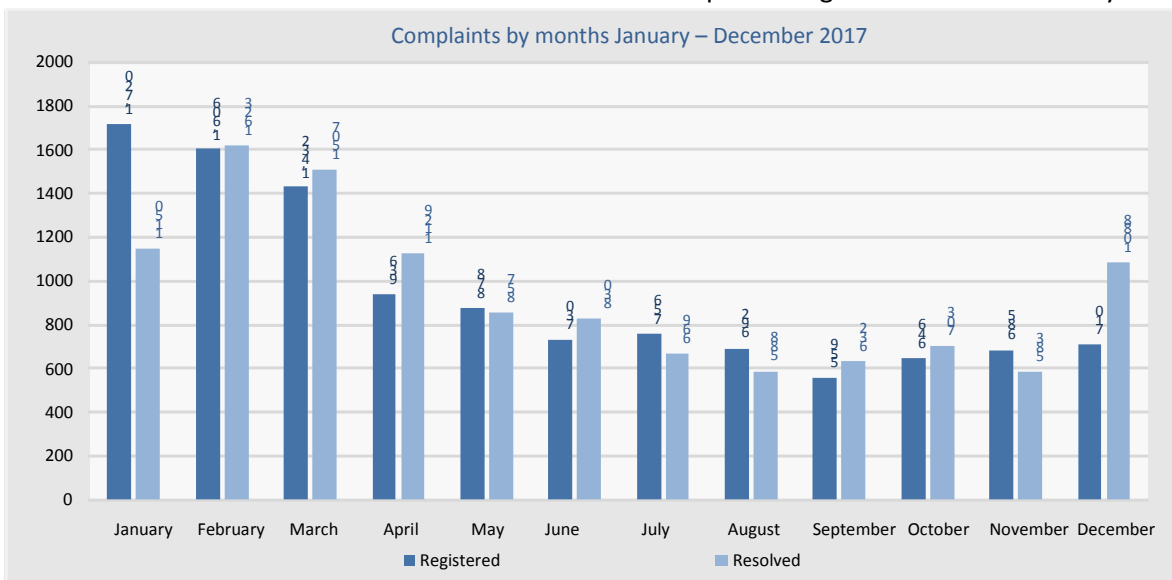


Fig. 5.35 Complaints and number of customers by districts, 2017

The figure above shows that the highest percentage of customer complaints registered with KESCO during January – December 2017 is in the district of Prishtina with 57.16%, followed by the district of Peja with 10.02%, whereas the lowest percentage is in the district of Gjakova with 4.78%. It should be stated that the highest number of complaints in the district of Prishtina mainly result from the fact that the district of Prishtina has the highest number of customers in Kosovo.

The highest percentage of customers' complaints resolved by KESCO compared to the total number of complaints resolved at the country level is in the district of Prishtina with 56.37%, followed by the district of Peja with 10.51%, whereas the lowest percentage is in the district of Gjakova and Gjilan with 4.60%.

Find below the table with the number of customers' complaints registered and resolved by KESCO



Based on data, the highest percentage of customer complaints resolved compared to registered complaints for 2017 was recorded in the district of Mitrovica (resolved/registered complaints ratio) and the district of Gjilan with 94.40%. It should be stated that in some districts there is a higher percentage than 100% because in addition to registered complaints of that period, the districts managed to review and resolve even some complaints transferred from the previous year.

The figure below presents the number of registered and completed complaints by the nature of complaints for the period January – December 2017.

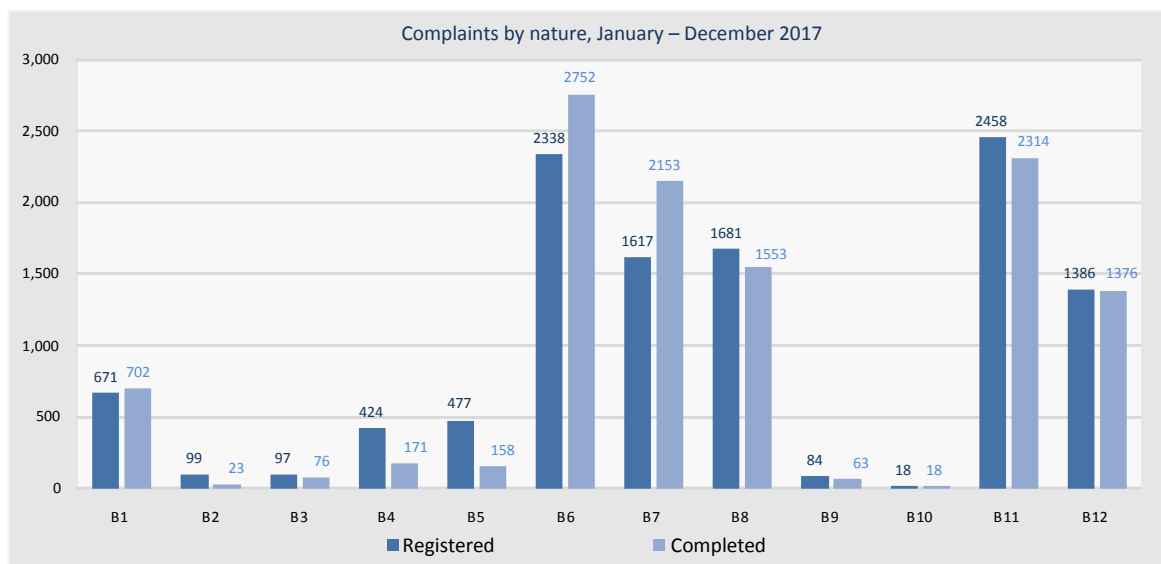


Fig. 5.37 Customers' complaints by nature for the period January - December 2017

Find below descriptions of complaints' nature:

B1	-	Unregistered payment
B2	-	Error in initial balance
B3	-	Invoice is not taken
B4	-	Over the limit
B5	-	Change of the lump sum
B6	-	Incorrect reading
B7	-	Irregular reading
B8	-	Inaccurate meter
B9	-	Request for debt settlement
B10	-	Charged with VAT
B11	-	Loss recovery
B12	-	Others

According to KESCO data, in 2016, the registered customers' complaints which have been associated with errors in reading the meter (incorrect and irregular reading) were 3,955 or in percentage 34.85% of total customers' complaints submitted, while in 2016 the number of complaints that have been associated with errors in reading the meter was 4,504, and 5,312 in 2015. This clearly shows that the number of customers' complaints regarding errors in reading the meter is in constant fall due to the reading of metering point by way of Hand Held Unit, which has significantly improved the read of meters and decreased the possibility for errors when reading the meter.

Find below the figure with data on complaints resolved by KESCO for the period January – December 2017, or more precisely the status of resolved complaints.

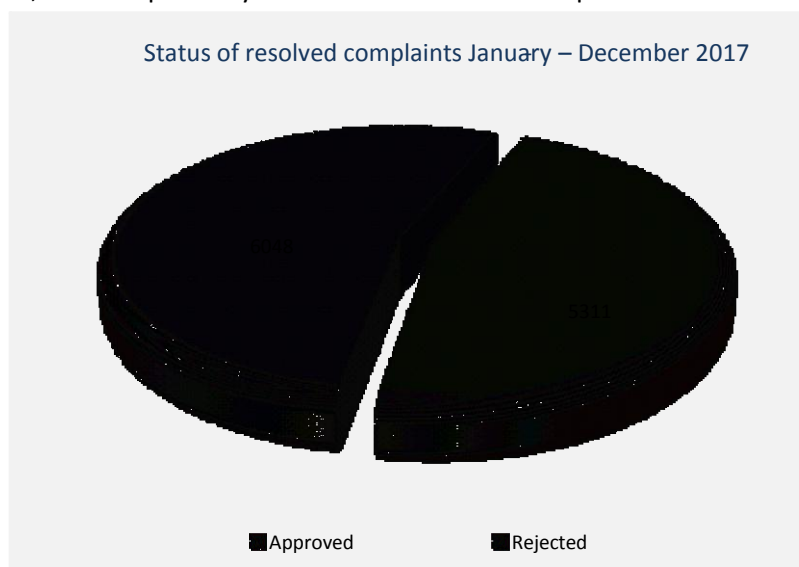


Fig. 5.38 Status of customers' complaints resolved for the period January - December 2017

The figure above shows that KESCO, from 11,359 resolved customers' complaints, approved 6,048, or 53.24%, complaints in favour of customers, whereas rejected 5,311 complaints or 46.76%.

Find below the customers' complaints submitted to KESCO/customers number ratio by months.

Tab. 5.28 Complaints/number of customers' ratio by months for 2016

Month	Complaints	Customers number	Complaints/customer ratio
January	1,720	537,765	0.32%
February	1,606	539,767	0.30%
March	1,432	541,481	0.26%
April	936	542,809	0.17%
May	878	545,019	0.16%
June	730	547,028	0.13%
July	756	549,139	0.14%
August	692	551,456	0.13%
September	559	553,637	0.10%
October	646	556,035	0.12%
November	685	558,818	0.12%
December	710	561,809	0.13%
Total	11,350	6,584,763	0.17%

Based on the data reported by the KESCO supplier, the number of requests registered during 2017 is 11,350, which represents 2.02% of total customers, namely 0.17% compared to the total number of annual receipts.

Total number of customers' complaints registered in 2017 was 11,350, in 2016 was 11,180, in 2015 was 12,926, whereas in 2014 was 17,655, as presented in the figure below.

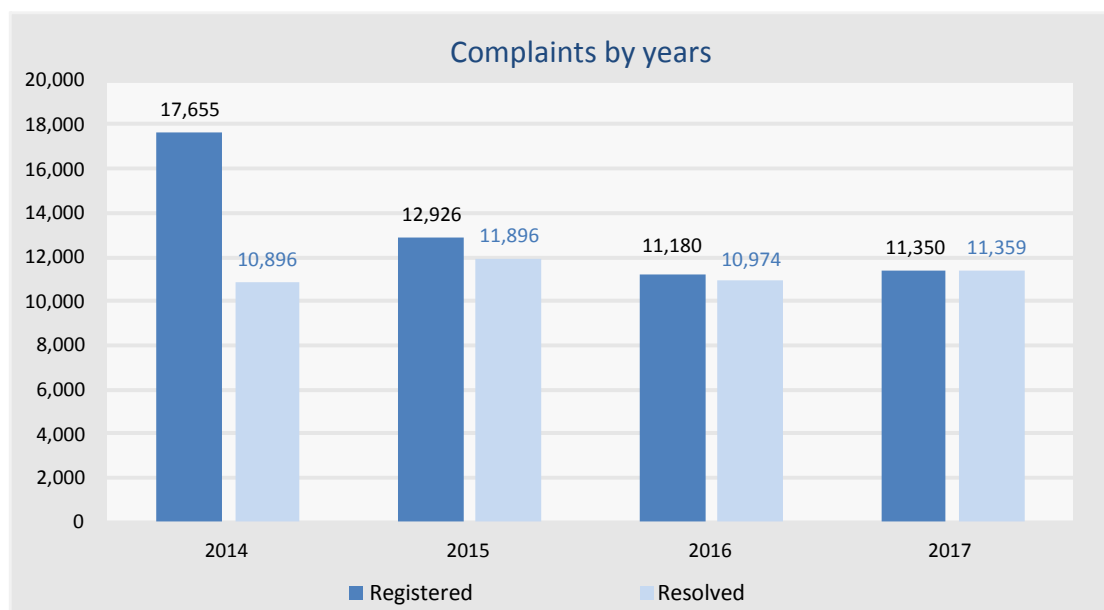


Fig. 5.39 Customers' complaints in KESCO, by years

6 THERMAL ENERGY SECTOR

Thermal energy sector in Kosovo consists of four systems: DH Termokos – Prishtina, DH Gjakova – Gjakove, DH Termomit – Mitrovica, and DH in Zvecan. This sector has a fairly limited extent locally, fulfilling 3 - 5% of total heating demand in Kosovo.

6.1 Main developments in the thermal energy sector

6.1.1 Developments in DH Termokos

The qualitative and stable supply of thermal energy over the recent years has increased interest for a wider inclusion of potential customers from the city of Prishtina into the DH Termokos system. In this regard, during 2017, the preparatory phase of the project for expansion, rehabilitation of network and modernization of constituent equipment was carried out, including the tendering phase for execution and supervision of construction and installing works.

Main project components:

- Rehabilitation of existing network – replacement of 3.4 km pipelines;
- Expansion of network – new network/pipeline 3.6 km;
- Installation of 153 thermal substations – for 103 existing substations, the complete replacement of existing equipment with new equipment and 50 new substations (where the network is expanded);
- Installation of 100 controlling valves of differential pressure.

This project, estimated to be € 8.8 mil., will be funded mainly by a donation of the European Commission in the amount of € 8.3 mil., whereas the Municipality of Prishtina is expected to participate with a significantly smaller amount (€ 250,000), and a small amount (around € 250,000) as self-funding by DH Termokos.

Also, the project supported by KfW for rehabilitation and expansion of existing network, and also the rehabilitation – modernization of substations, is at the preparatory phase. This project is foreseen to amount to € 10 mil. (by phases: € 5 mil. + € 5 mil.), which are funds committed as a donation from Germany, Luxembourg and Sweden, to be allocated and managed through KfW.

During 2017, within the support from German Government through KfW, the Master Plan for development of DH Termokos network/system has been prepared, whereby thoroughly elaborating the development of DH Termokos network – network expansion and expansion of customer base/increase of heating surface, additional production capacities (in particular cogeneration).

The US MCM Programme (“Millennium Challenge Corporation”), signed in September 2017, foresees the component of installing thermal energy meters for customers of DH Termokos, aiming to transfer into the billing based on the consumption measurement, thus allowing for efficient thermal energy use.

It is worth mentioning that in April 2017, the project for reconstruction and modernization of 50 substations of distribution thermal energy network has been successfully completed. This project, which is mainly funded by the German Government through KfW, enabled significant improvement of thermal energy supply quality in several parts with poorer quality, and also affected the reduction of thermal energy losses.

6.1.2 Developments in DH Gjakova – Change of fuel and cogeneration project

Regarding DH Gjakova, initially it must be emphasized that despite the financial difficulties in supplying of sufficient quantities of fuel - heavy oil, thanks to subsidies from Kosovo budget, DH Gjakova managed, in early November 2017, to start generation and supply customers with thermal energy.

With regards to the project for the new district heating with biomass of the DH Gjakova, it is worth mentioning that the development of project continued during 2017; specifically it has been preceded with the tendering phase for executing and supervising construction and installing works. This project in the amount of € 12.5 million is financially supported by the European Commission – Office in Kosovo through IPA-2015 funds.

The main project components for the construction of new district heating with biomass are:

- 2 units generating only thermal energy: with capacity 7 MW_{TH} and 2 MW_{TH};
- The third unit is foreseen to be a cogeneration of thermal energy and electricity, with a capacity of 8 MW_{TH} and 1.57 MW_{EL};
- Installations of relevant equipment of new district heating and connection to the distribution network of thermal energy, namely electricity.

6.2 Technical characteristics of thermal energy systems

Thermal energy sector in Kosovo consists of 4 district heating systems, with an installed capacity considered to be around 332 MW_{TH}. District Heating of Termom and Zveçan, due to notorious circumstances, have not responded to requirements for licensing/regulation and monitoring of ERO, thus making impossible to ensure relevant updated data; to this end, find below detailed data on DH Termokos and DH Gjakova.

6.2.1 Generation plants

Thermal energy generation plants of DH Termokos consist of main district heating with a total installed capacity of 120 MW_{TH}, and auxiliary district heating in the University Clinical Centre with a capacity of 14 MW_{TH}. Upon the connection of the thermal energy extraction station in B1 and B2 units of TPP Kosova B, the installed capacity of cogeneration of 140 MW_{TH} was added to this capacity. It should be mentioned that boilers with heating fuel in DH Termokos have not been decommissioned, but they will serve as reserve capacities to be activated in cases of possible failure in TPP Kosova B units.

District heating of the city of Gjakova consists of two boilers with heavy oil, with a total installed capacity of 38.6 MW_{TH} – one with generating capacity of 20 MW_{TH} and the other with capacity of 18.6 MW_{TH}.

6.2.2 Thermal energy distribution systems

Thermal energy distribution systems in Kosovo consist of primary distribution network which extends until the point of supply in substations, and secondary network, which extends from supply point in substations, to the final users.

Primary distribution network of DH Termokos has a length of around 38.5 km. An integral part of the distribution network is also the pump and heat exchangers station located at Bregu i Diellit and 385 active substations which are dividing points between the primary and secondary network.

In addition to the existing distribution network, the network for transporting thermal energy between TPP Kosova B – DH Termokos has been constructed in 2014, in a length of around 10.5 km.

Primary distribution network of DH Gjakova has a length of around 13.5 km. This network consists of around 175 active substations, which are dividing points between the primary and secondary network.

A summary of the technical characteristics of district heating systems of DH Termokos and DH Gjakova is shown in the following table.

Tab. 6.1 Technical data of district heating systems

Company (city)	Installed capacity [MW]	Operational capacity [MW]	Distribution network	
			Length of netw. [km]	No. of substations
TERMOKOS (Prishtina)	2 x 58 = 116	2 x 58 = 116	36.5	347 (324 active)
	2 x 7 = 14	2 x 7 = 14		
	2 x 0,81 = 1.62	1 x 4 = 4		
	1 x 4 = 4			
	2 x 70 = 140 [Cogeneration]	2 x 70 = 140		
Sub-total	275.6	274.0	36.5	347
DH GJAKOVA (Gjakove)	1 x 20 = 20	1 x 20 = 20	13.5	300 (251 active)
	1 x 18.6 = 18.60			
Sub-total	38.6	20.0	13.5	300
Total	314.2	294.0	50.0	647

6.3 Performance of district heating companies

In 2016/2017 season, DH Termokos continued with the production and stable supply of thermal energy, providing 24h uninterrupted electricity supply, which mainly results from the implementation of cogeneration project, and rehabilitating projects as well.

Regarding DH Gjakova, it should be mentioned that thanks to subsidies from the Kosovo Government and financial assistance from Gjakova Municipality, it has managed in 2016/2017 season to launch the generation and supply of thermal energy. However, due to financial limitations DH Gjakova, has been forced to cut the heating season for about 3 months (December 2016 – February 2017). In addition, it has provided with daily supply cuts, what has significantly reduced

the heating space, i.e. the number of customers, focusing on customers who regularly paid bills and in the network areas where there was less thermal energy loss.

6.3.1 Production, supply and losses in DH Termokos

- Thermal energy production

DH Termokos bases the production of thermal energy on cogeneration plants in TPP Kosova B; in fact, in 2016/2017 season, the entire thermal energy production was from cogeneration plants in TPP Kosovo B, so the activation of boilers with heating oil in DH Termokos was unnecessary.

The amount of thermal energy extracted from cogeneration in 2016/2017 season was 225,438 MWh_{TH}. The amount of thermal energy received in the heat exchange station in DH Termokos was 221,058 MWh_{TH}. It should be noted that this represents an increase of around 13.5% compared to the production of the previous season.

Summarised data of thermal energy production from cogeneration is presented in the following table:

Tab. 6.2 Production of thermal energy from cogeneration

Thermal energy from cogeneration – DH Termokos, 2016/2017 season			
Month	Unit	Extracted the. en. (measured in TPP Kosova B)/Gross Production	Received the. en. (measured in DH Termokos)/Net production
October 2016	MWh _{TH}	13,499	12,801
November 2016	MWh _{TH}	33,966	33,392
December 2016	MWh _{TH}	45,031	44,500
January 2017	MWh _{TH}	50,119	49,211
February 2017	MWh _{TH}	35,351	34,903
March 2017	MWh _{TH}	30,239	29,600
April 2017	MWh _{TH}	17,233	16,651
Total	MWh_{TH}	225,438	221,058

- Thermal energy supply

DH Termokos, in 2016/2017 season has marked a significant improvement in quantity and quality of the thermal energy supply, which is mainly due to continuous improvements in the thermal energy production, as well as the maintenance and repairs of the network.

Customers' supply with thermal energy (central heating), in this season was considered to be 196,462 MWh_{TH}, which represents an increase of 31,493 MWh_{TH} or around 19% compared to the previous 2015/2016 (164,969 MWh_{TH}) season. Such supply is quite satisfactory and fulfilled the plans and objectives for a sufficient and qualitative supply.

- System losses

Upon the integration of thermal energy from cogeneration, DH Termokos district heating system has its own specifics as regard to the system losses. Therefore, system losses include two components: losses in transmission network from TPP Kosova B- DH Termokos and losses in primary distribution network.

Losses in the transportation network of thermal energy TPP Kosova B- DH Termokos in a length of 10.5 km are determined from the measurements carried out in the heat exchange station (thermal energy production station) in TPP Kosova B and in heat exchange station in DH Termokos. Based on the measurements carried out for the period October 2016 – April 2017, the quantitative losses in this period amount to 4,380 MWh_{Th} namely 1.94%. Details on losses in the thermal energy transmission network are given in the following table.

Tab. 6.3 Losses of thermal energy in transmission network TPP Kosova B – DH Termokos

Electricity and losses 2016/2017	October	November	December	January	February	March	April	Total
Extracted Thermal Energy - measured in TPP Kosova B [MWh]	13,499	33,966	45,031	50,119	35,351	30,239	17,233	225,438
Received Thermal Energy – measured in DH Termokos [MWh]	12,801	33,392	44,500	49,211	34,903	29,600	16,651	221,058
Losses in energy quantity [MWh]	698	574	531	908	448	639	582	4,380
Losses in [%]	5.17%	1.69%	1.18%	1.28%	1.46%	1.30%	1.30%	1.94%

Losses in primary network of thermal energy distribution are normally determined by the metering of thermal energy at the entrance of distribution network and from thermal energy supply in customers substations. But, due to the lack of total measurement of supplied thermal energy quantity (in substations), several approximations for the calculation of supply were done, first using parameters such as, specific demand for heating capacity (W/m²) and full load hours, namely specific consumption (kWh/m²). The estimated consumption value is 196,462 MWh_{Th}. By subtracting this consumption value from thermal energy brought into the distribution network (220,108 MWh_{Th}) it results that quantitative losses in distribution network for 2016/2017 season are 23,646 MWh_{Th}, which in percentage are 10.74%.

Table below present summarised data on total production, supply and losses in system:

Tab. 6.4 Energy performance in DH Termokos – 2016/2017 season

DH Termokos - Heating season 2016-2017		
Description	Unit	Value
Gross production in heating plants	[MWh _{th}]	0.00
Gross generation in cogeneration plants	[MWh _{th}]	225,438.00
Quantitative loss in transport network (TPP Kosova B - DH Termokos)	[MWh _{th}]	4,380.00
Losses in percentage in transport network	[%]	1.94
Own consumption	[MWh _{th}]	950.00
Thermal energy net production	[MWh _{th}]	220,108.00
Quantitative losses in distribution network	[MWh _{th}]	23,646.00
Losses in percentage in distribution network	[%]	10.74
Customer supply with thermal energy	[MWh _{th}]	196,462.00

6.3.2 Production, supply and losses in DH Gjakova

- Thermal energy production

DH Gjakova bases thermal energy production on heating boilers with heavy oil. As stated above, during 2015/2016 season thermal energy production was quite reduced – gross production has been 6,699 MWh_{TH}, while net production of thermal energy was 6,249 MWh_{TH}. For the production of this season 847 t of fuel oil have been spent. It should be noted that, according to the company reported data, there has been a low thermal and heating efficiency of around 70%.

- Heat supply

During 2016/2017 season, DH Gjakova offered a reduced supply, as a consequence of season dimidiation and reduction of heating surface. The customer's supply with thermal energy for this season was 4,687 MWh_{TH}, an amount that does not nearly cover the customer demand for heating who are connected in the DH system of Gjakova.

- System losses

With regard to the losses in thermal energy production, it must be initially noted that, because several measurements are lacking i.e. are considered as not very reliable due to the age of equipment, the determination of losses also includes several pre-assessed parameters, e.g. efficiency of boilers and the value of own consumption. The boilers efficiency for thermal energy production has been assessed to be very low around 70%, which causes significant losses during the process of transforming fuel energy into thermal energy, which is assessed to be 2,872 MWh_{TH}.

Losses in primary distribution network are calculated as differences between the amount of thermal energy brought into distribution and supply/consumption network. In absence of metering the amount of supplied thermal energy (in substations), for the calculation of the supply some approximations were made by using primarily the parameters such as: specific demand for heating capacity (W/m²) and hours of full load namely specific energy consumption (kWh/m²). Thus, the estimated value of consumption is 4,678 MWh_{TH}. By subtracting this value of consumption from the amount of thermal energy brought into the distribution network (6,249 MWh_{TH}) it turns out that the quantitative losses in the distribution network for 2016/2017 season are 1,571 MWh_{TH}, which in percentage are 25%.

Table below presents aggregate data on total production, supply and losses.

Tab. 6.5 Energy performance of DH Gjakova

DH Gjakova – Heating season 2016-2017		
Description	Unit	Value
Fuel quantity – heavy oil	[ton]	847.00
Calorific value	[MWh _{th} /ton]	11.30
Energy entered from fuel – heavy oil	[MWh _{th}]	9,571.10
Boilers efficiency	[%]	70.00
Thermal energy gross production	[MWh _{th}]	6,699.77
Own consumption	[MWh _{th}]	450.00
Thermal energy net production/Energy entered in distribution network:	[MWh _{th}]	6,249.77
Quantitative losses in distribution network	%	1,562.00
Losses in percentage	[MWh _{th}]	25.00
Customer supply with thermal energy	[MWh _{th}]	4,687.00

6.4 Overall production, supply and losses of thermal energy

The following table presents the summarized data on production, supply and losses in the system for the entire sector of thermal energy.

Tab. 6.6 Energy performance of thermal energy sector – 2016/2017 season

Thermal Energy Sector - 2016/2017 season				
Description	Unit	DH Termokos	DH Gjakova	Total
Thermal energy gross production	[MWh _{th}]	225,438	6,700	232,138
Losses in transport network	[MWh _{th}]	4,380	0	4,380
Losses in percentage in transport network	[%]	1.94	0.00	1.94
Own consumption	[MWh _{th}]	950	450	1,400
Thermal energy net production	[MWh _{th}]	220,108	6,250	226,358
Quantitative losses in distribution network	[MWh _{th}]	23,646	1,562	25,208
Losses in percentage in distribution network	[%]	10.74	25.00	11.14
Customers supply with thermal energy	[MWh _{th}]	196,462	4,687	201,149

6.5 Billing, collection and heating surface

6.5.1 Billing and collection

With regard to the billing, initially should be noted that during the 2016/2017 season as well the billing of thermal energy customers was mainly based on heating surface (per square meter). Although billing based on consumption marked an increase compared to the previous season (from 51 to 97 customers), the number of customers billed based on metered thermal energy consumption is limited to around 97 customers, mainly commercial and institutional ones.

In the 2016/2017 season, DH Termokos has marked an increase in billing compared to the previous 2015/2016 season, which is mainly as consequence of continuous improvement of supply. Actually, the billing for 2016/2017 season was € 5,970,336, which is an increase of € 501,392 compared to the 2015/2016 season (5,468,944 €). However, even in this season the planned level of billing has not been achieved mainly because of: i) Deductions in billing due to the days without heating and due to the poor supply quality (in several neighbourhoods of Prishtina); and ii) reductions in heating surfaces after field verification.

As a result of increased billing, the collection as monetary amount marked an increase compared to the previous season – in 2016/2017 season the collected amount was € 3,950,382, while the collected amount in 2015/2016 season was € 3,771,663, which represents an increase of € 178,719 or 4.52%. Conversely, if we refer to the collection percentage, in this season is noticed a small decrease in the percentage of collection compared to the previous season – in 2016/17 season the percentage of collection was 62.24%, while during the 2015/16 season the percentage of collection was 63.86%, which represents a decrease of 1.62%. However, as noted from the table and diagram below, upon the commencement of cogeneration, the collection has constantly increased.

With regard to the DH Gjakova, as stated above, during the 2016/2017 season, a reduced supply was offered due to the dimidiation of heating season and reduction of heating surface. Subsequently, billing in this season was quite small – € 242,069, whereas collection amounted to € 190,993, which represents a very high collection rate of 79%.

Details regarding billing and collection are shown in the following table and graph.

Tab. 6.7 Billing and collection –2016/2017 season

Heating season 2016/2017	Heating surface [m ²]	Participation in percentage	Billing Including VAT [€]	Collection including TVSH [€]	Level of collection [%]
DH "Termokos" Prishtina					
Household	681,197	57.54%	2,963,185	1,379,704	46.56%
Commercial and institutional	502,752	42.46%	3,384,745	2,570,678	75.95%
Total	1,183,949		6,347,930	3,950,382	62.23%
DH "Gjakova" Gjakove					
Household	27,215	37.83%	77,106	61,325	79.53%
Commercial and institutional	44,718	62.17%	164,963	129,668	78.60%
Total	71,933		242,069	190,993	78.90%

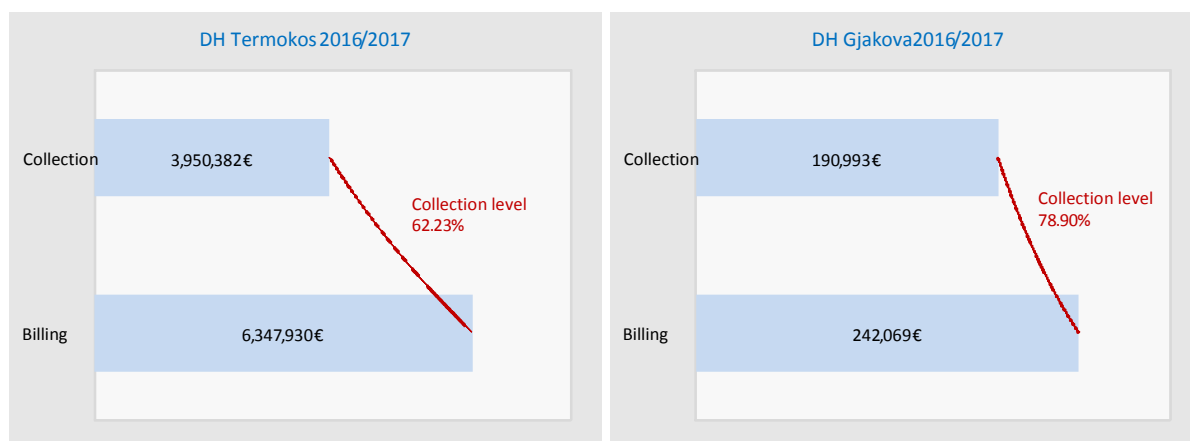


Fig. 6.1 Billing and collection of DH Termokos and DH Gjakova – season 2016/2017

6.5.2 Heating surface

DH Termokos, in 2016/2017 season, had a total customer heating surface of 1,235,382 m², which represents an increase of 59,767 m² or around 5% compared to the heating surface in 2015/2016 season (1,175,615 m²).

While DH Gjakova, due to the above mentioned reasons, in 2016/2017 season significantly reduced the heating surface in just 71,933 m².

Graphs presented below show the heating surface for DH Termokos and Gjakova, divided by the customers groups.



Fig. 6.2 Heating surface by groups of customers in 2016/2017 season

7 NATURAL GAS SECTOR

7.1 Development perspective of natural gas sector in Kosovo

Despite the fact that currently in Kosovo there is no functional infrastructure and natural gas market, the Assembly of Kosovo, in order to create the perspective for development of natural gas sector and fulfil obligations that Kosovo has as a full member in Energy Community Treaty, in June 2016 has adopted the Law No. 05/L-082 on Natural Gas within the energy laws package.

Law on natural gas lays the foundations of legal and regulatory framework for the transmission, distribution, storage and supply with natural gas and the operation of gas transmission and distribution systems. Consequently, this law determines the organization and functioning of the natural gas sector and access to networks and gas market.

Kosovo Energy Strategy 2017-2026 (adopted by the Assembly of Kosovo on 26 January 2018) included in Objective 4 the Natural Gas Development Infrastructure through the connection with gas infrastructure projects in the region of Southeast Europe, especially with the TAP pipeline project ("Trans-Adriatic-Pipeline") and gas ring of Energy Community. In this regard, it should be emphasized that a gasification project, namely the development of gas infrastructure is ranked in the *priority infrastructure projects – area of energy, approved by the National Council for Investment and the Government of Kosovo*.

The TAP pipeline project is considered to have a positive impact on the development of gas infrastructure in the Energy Community, namely Southeast Europe region, by providing opportunities to connect the planned regional projects as Ionian – Adriatic Pipeline and ALKOGAP, where both these projects supplement the so-called 'Gas Ring of Energy Community'.

TAP is currently in the construction phase (it started in the beginning of 2016), and in 2019 is planned to start with the first gas flows through TAP, while in 2020 is expected the full operation of TAP pipeline. TAP's initial capacity is planned to be 10 billion cubic meters (bcm) per year, with the possibility of increasing up to 20 bcm per year. TAP will allow interconnections along pipeline to supply with gas other regional projects. Thus, state agreements with "host countries" (Greece, Albania and Italy) have pre-defined connection sites and quantities, namely gas capacities.

7.1.1 Project: Albania – Kosovo Pipeline (ALKOGAP – "Albania-Kosovo Gas Pipeline")

The connection of Kosovo through Albania with TAP projects namely IAP is regarded as a favourable option. In this way Kosovo jointly with Albania have applied with a joint project for natural gas to be included in the list of projects of Energy Community interest (PECI). Gas supply is expected to be done by the TAP pipeline directly or through IAP pipeline. The project proposal has been jointly developed, including specific data and information for both countries. As following figure shows, this project represents a deviation from the original concept".

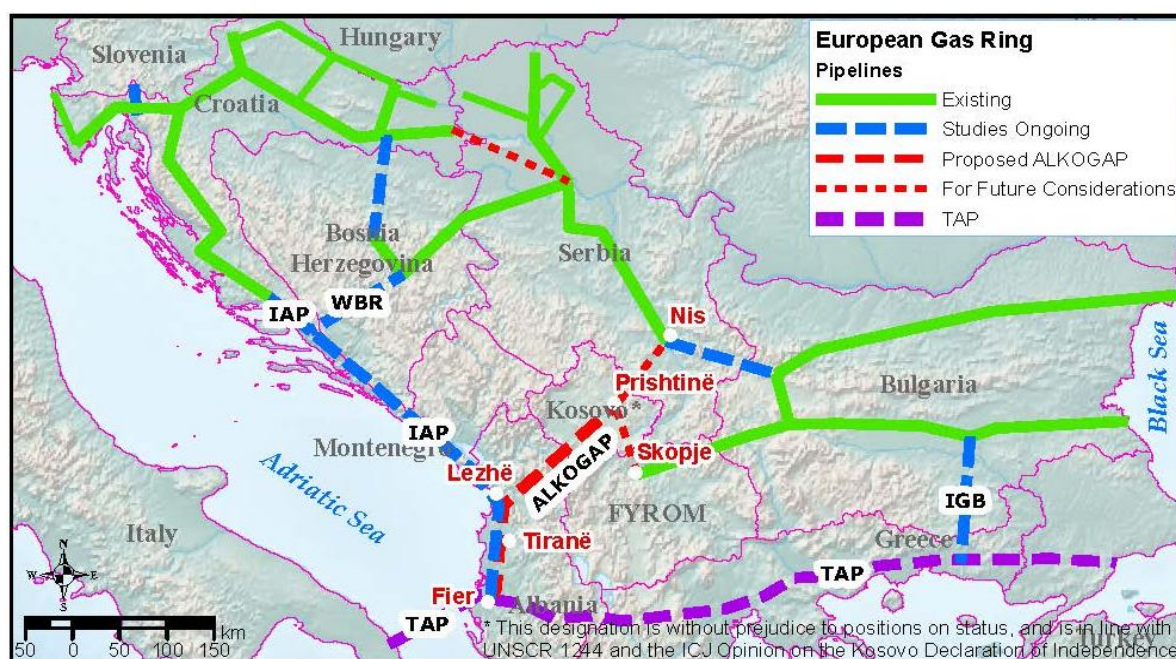


Fig. 7.1 Regional Gas Infrastructure Projects and options for Kosovo's connection (including ALKOGAP)

7.1.2 ALKOGAP project details

This project, with total length of 260 km, aims to create a new route to supply natural gas from the Middle East and the Caspian Region, through the TAP pipeline, towards the northern zone of Albania, Kosovo and beyond to other countries in the region.

The pipeline route will be assessed in two scenarios:

1. Lezha - Prishtina: This scenario pre-assumes that IAP pipeline project advances in the implementation phase and is supplied through this pipeline;
2. Fier - Lezha - Prishtina: This scenario will be considered in case there will be no progress in the implementation of IAP; this case foresees the direct supply of gas through TAP pipeline.

The project would create preconditions for the establishment and further development of the natural gas markets of Albania and Kosovo in the anticipated annual level of 2 bcm (1- 1.3 bcm for Albania and Kosovo 0.5-0.7 bcm). The project cost is estimated to be around € 200 million.

Current status of ALKOGAP project

After the evaluation of the Working Group of Energy Community on "PECI", according to the evaluation criteria, the project is eligible for the "PECI" list, which is approved by the Ministerial Council of the Energy Community in 2016.

Albania and Kosovo have also jointly applied to WBIF – "Western Balkans Investment Framework" for financial support for ALKOGAP project, and WBIF steering committee decided to allocate 300 thousand Euros from the WBIF's platforms to prepare the prefeasibility study. The leading financial institution is the European Bank for Reconstruction and Development (EBRD). During the second half of 2017, Terms of Reference have been drafted to prepare the prefeasibility study, which is expected to commence in the first half of 2018.

It should be mentioned that ERO, in cooperation with MED, provided relevant inputs with regards to the drafting of the project proposal for ALKOGAP project, as well as the work of the Working Group of Energy Community for "PECI". ERO also actively participates in the work of the Energy Community, more specifically in Gas Working Group of Regulatory Board of the Energy Community and Gas Forum.

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