Republika e Kosovës
Republika Kosova - Republic of Kosovo

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

ANNUAL REPORT 2018

Pristina, March 2019

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TABLE OF CONTENTS

1 EXECUTIVE SUMMARY 6

2 DESCRIPTION OF ENERGY REGULATORY OFFICE 9

2.1 The Regulatory Board 9
2.2 Organizational Structure and Human Resources 10
2.3 Funding of the Regulator 14
2.4 Technical Assistance Projects 14
2.5 Meetings, Workshops and Trainings 14
2.6 Procurement Activities 15

3 ENERGY REGULATORY OFFICE ACTIVITIES 16

3.1 Completion of the Regulatory Framework 16
3.2 Licensing of Energy Activities 16
3.3 Monitoring the energy enterprises 20
3.4 Renewable Energy Sources (RES) 23
3.5 Authorization for Construction of New Capacities 24
3.6 Self-Consumption Generators 30
3.7 Monitoring the construction of new generation capacities 31
3.8 Court Disputes 32
3.9 "Kosova e Re" Project 33
3.10 Electricity and Thermal Energy Annual Balance 33
3.11 Activities of the Regulator in the Area of Price Regulation 34
3.12 Promoting Electricity Generation from RES 44
3.13 TSO (KOSTT) Certification Process 45
3.14 Activities of the Regulator in the Area of Customer Protection 46

4 COOPERATION WITH OTHER PARTIES AND TRANSPARENCY 51

4.1 Reporting and cooperation with the Assembly of Kosovo 51
4.2 Cooperation with International Organizations 52
4.3 Participation of the Regulator in International Activities 55
4.4 Transparency, Public Involvement and Communication with Third Parties 62

5 FINANCIAL REPORTING FOR THE REGULATOR 65

5.1 Revenues 65
5.2 Budget 65
5.3 Budget Expenditures 66

6 ELECTRICITY SECTOR 70

6.1 Characteristics of Electricity Sector 70
6.2 Primary Energy Sources 74
6.3 Electricity Generation 75
6.4 Transmission System 80
6.5 Electricity Distribution System 90
6.6 Electricity Supply 97
6.7 Electricity Import and Export 102
6.8 Quality Standards of Electricity Supply and Services 105

7 THERMAL ENERGY SECTOR 118

7.1 Technical Characteristics of Thermal Energy Systems 118
7.2 Main Developments in Thermal Energy Sector 119
7.3 Performance of Thermal Energy Enterprises 121
7.4 Overall Generation, Supply and Losses of Thermal Energy 125
7.5 Billing, Collection and Heating Area 126

8 NATURAL GAS SECTOR 128

8.1 Perspective of the development of natural gas sector in Kosovo 128

9 CONCLUSION 131

9.1 Challenges/Recommendations of the Regulator 131

List of Abbreviations

CPA	Central Procurement Agency
EU	European Union
RES	Renewable Energy Sources
CCP	Customer Care Programme
CEER	Council of European Energy Regulators
TENGD	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
ECRB	Energy Community Regulatory Board
SEE	South-East Europe
EMS	Serbia Transmission System Operation
ENS	Energy Not Supplied
ENTSO-E	European Network of Transmission System Operators for Electricity
ERRA	Energy Regulators Regional Association
USS	Universal Service Supplier
GWG	Gas Working Group
PHLG	Permanent High Level Group
GWh	Gig watt hour
HPP	Hydropower Plant
MAR	Maximum Allowed Revenues
IAP	Ion-Adriatik-Pipeline
ITC	Inter TSO Compensation
EnC	Energy Community
KEDS	Kosovo Electricity Distribution and Services
SEEEC	South East Europe Energy Community
KEK	Kosovo Energy Corporation
KESCO	Kosovo Electricity Supply Company
KESH	Albanian Energy Corporation
KfW	German Development Bank
MC	Ministerial Council
km	Kilometre
KOSTT	Transmission, System and Market Operators
PSRC	Public Services Regulatory Commission of Kentucky
kV	Kilovolt
kW	Kilowatt
OL	Overhead line
MPA	Ministry of Public Administration
PPA	Power 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
AU	Administration Unit
DH	District Heating
SS	Substation
DSO	Distribution System Operator
TSO	Transmission System Operator
MO	Market Operator
PECI	Projects of Energy Community Interest
PRR	Periodic Regulatory Review
RAB	Regulated Asset Base
RoR	Rate of Return
SAIDI	System Average Interruption Duration Index
SAIFI	System Average Interruption Frequency Index
SCADA	Supervisory Control and Data Acquisition
ECS	Energy Community Secretariat
TAP	Trans-Adriatik-Pipeline
TPP	Thermal Power Plant
TF	Task Force
ECT	Energy Community Treaty
MV	Medium Voltage
TR	Transformer
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
CA	Cadastral Area
ERO	Energy Regulatory Office (ERO)

1 EXECUTIVE SUMMARY

The Energy Regulatory Office (hereinafter ERO), pursuant to the obligations contained in the Law No. 05/L-084 on the Energy Regulator, presents the Annual Report 2018 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 licensees data, and presents an overview of the energy market development in Kosovo. An integral part of this report is also the financial report on ERO's budget for 2018.

An important part of the Regulator's activity is the drafting of the secondary legislation that constitutes the regulatory framework in the Energy Sector, which has been supplemented by the Regulator for the most part. The drafting and revision of sub-legal acts by the Regulator was carried out in each case by extensively consulting third parties who had a direct interest in the decision-making. Several public sessions were held with the presence of stakeholders who have shown interest in the documents being processed by the Regulator, which were made public to the parties through their publication on the Regulator's website.

- The Regulator implements the authorization procedure for the development of Renewable Energy Sources (RES) projects, drafts Support Scheme to assist in their funding and development and issues licenses for their operation.

  In order to be eligible for the Support Scheme, a RES generating plant should generate electricity from one of the primary energy sources targets, should be located within Kosovo territory and be equipped with new and unused generation facilities.

  During 2018, the Regulator has received and reviewed a significant number of applications for electricity generation from Renewable Energy Sources (RES) of various technologies. In addition to the preliminary authorizations, it has also issued six (6) final authorizations.

  Currently, the Feed-in Tariff is the only Support Scheme that uses financial incentives to reach RES targets. The criteria for receiving this support exclude other means of financial incentives that will be used simultaneously for the same project.

  Current results of the Support Scheme are as follows:

  71.7 MW are in operation, of which 33.75 MW are from wind turbines, 31.3 MW from hydro power plants, and 6.6 MW are from solar panels. In different phases of the construction process are 182 MW, of which 103.5 from wind turbines, 75.5 MW from hydro power plants and 3.4 MW from solar panels. Under the "pending" process for obtaining the preliminary authorization are 295 MW, of which 235 MW are from wind turbines and 60 MW from solar panels.
- During 2018, the Regulator licensed a generation company and extended a license, licensed four electricity supply companies and extended two licenses for electricity wholesale supply (trading).
- During 2018, the Regulator monitored licensed energy enterprises and currently it is under the process of preparing the reports of this monitoring.

- During 2018, the Regulator has completed the "Second Regulatory Review" for the Regulatory Period 01 April 2018 to 31 March 2023 to determine the Maximum Allowed Revenues (MAR) for the licensees: Transmission System Operator and Market Operator (TSO/MO -KOSTT), the Distribution System Operator (DSO-KEDS) and for a one-year period for the Universal Service Supplier (USS-KESCO). During this multi-year tariff review, the Regulator also analyzed the data for the past five years (2013-2017) and the forecast for the next five years (2018-2022).
- In September 2018, the Board issued a Preliminary Decision on the certification of KOSTT as the Transmission System Operator of Electricity. Through this certification, the Regulator confirms that there is sufficient separation of control over TSO on one side and generation and/or supply on the other side and that the energy enterprise is in compliance with the unbundling provisions set out in Chapters IV and V of the Directive 2009/72/EC. These chapters are transposed into Kosovo legislation through Article 11 of the Law on Electricity.
- The Regulator has faced several court disputes related to its activity, with the biggest influence being the dispute and the decision on the interim measure of the Court of Appeals regarding the handling of unbilled energy (losses) in the four northern municipalities of the country.
- In the framework of customer protection, during 2018, the Regulator has received and reviewed complaints from customers as well as provided consultations, clarifications and guidance on the actions required to resolve their complaints.
- The Regulator during the implementation of its activities has had cooperation with local and international institutions, has also reported to the Assembly of Kosovo and informed public and media about the developments in the energy sector.
- In carrying out and performing the duties and responsibilities established by law, the Regulator has been assisted by USAID - "Repower Kosova" and the Energy Community Secretariat on a continuous basis.
- The Regulator is funded by own source revenues, in accordance with the Law on Energy Regulator and during 2018 has realized revenues in the amount of 1,217,435.60 €, while it has spent 648,074.62 € and the unspent part in the amount of 569,360.98 € have been disbursed into the Budget of Republic of Kosovo.
- During 2018, the Regulator also carried out customer protection activities through reviewing complaints submitted to the Regulator (105 complaints), and a total of 223 complaints (including complaints from previous years) were reviewed. In addition to this, the Regulator has also monitored customer complaints from energy companies as well as other issues in the field of customer protection.

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

The Law on Electricity defines customers with the right of universal service who are supplied with regulated prices determined by the Regulator through cost-reflective, reasonable, non-discriminatory tariff reviews, based on objective and transparent criteria, also taking into account customer affordability.

- Electricity generation in 2018 was 5,311 GWh, out of which 5,008 GWh are from power plants, while HPPs and other RES comprise 303 GWh. This represents a slight increase compared to the generation in 2017.
- The total demand for electricity in the system in 2018 was 5,671 GWh, which is increasing over the years, however during the last year although there was a slight increase in consumption in distribution, the overall demand has declined since the customers involved in the transmission have a lower realization which at the end results in a slight decrease in overall demand. Losses in the transmission network are at an acceptable level of 1.39% towards the energy entering the transmission system.
- Losses in the distribution network are quite high. Technical losses are 13.17%, while unauthorized consumption of energy (hereinafter referred to as commercial losses) constitutes 14.75% of the distribution demand, of which the unbilled energy in the four northern municipalities of Kosovo accounted for 5.31% (272 GWh).

The table below reflects the main data realized in 2018 compared to the balance of 2018 and the realization in 2017.

Tab. I. Comparison of the data of 2018 to the Balance and year 2017

	Unit	Production	Demand	Import	Export	Losses	
						Transmission	Distribution
Realization 2018	GWh	5,311	5,671	825	677	111	1,429
Realization/Balanc	%	95.11	100.77	119.07	104.13	101.17	109.14
Ratio 2018/2017	%	100.20	99.73	66.44	76.91	94.31	97.64

Regarding the thermal energy sector, the situation remains mainly unchanged. The Cogeneration Project at DH Termokos has yielded good results by increasing the quality of heat for the customers connected to the network, while the Cogeneration Project in DH Gjakova is in the process of being realized.

- Generation of thermal energy in 2018 in DH Termokos was 224 GWh_{Th}, whereas in DH Gjakova 8.8 GWh_{Th};
- The consumption of thermal energy in 2018 in DH Termokos was 197 GWh_{Th}, whereas in DH Gjakova 6.6 GWh_{Th};
- Thermal energy losses in 2018 in DH Termokos were 8.79% (only for primary distribution network), whereas in DH Gjakova 20%.

There is no functional infrastructure and natural gas market in Kosovo, but energy laws and energy strategy envisage the development of natural gas infrastructure by linking gas infrastructure projects to the South Eastern European region, especially with the pipeline project TAP (Trans-Adriatic Pipeline) and the Energy Community Gas Ring.

2 DESCRIPTION OF ENERGY REGULATORY OFFICE

Energy Regulatory Office (ERO) is an independent agency which is 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 establishment 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 establishment of dominant position and uncompetitive practices by energy enterprises, as well as resolving complaints and disputes in the energy sector.

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

2.1 The Regulatory Board

The Regulatory Board consists of 5 members including the chairman, who are appointed as full-time employees by the Assembly of Kosovo with a term of five (5) years. The Board of the Regulator is a decision-making body for all matters under the Regulator'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 sessions announced in advance on ERO's official website.

On 15 March 2018, the Assembly of the Republic of Kosovo has decided on the appointment of two Board Members, enabling the functioning of the Board of the Regulator regarding the decision-making. On 31 December 2018, the Board of the Regulator was comprised by the following members:

Arsim Janova, Acting-Chairman;

Besim Sejfijaj, Member;

Selman Hoti, Member; and

Izet Rushiti, Member.

The Board of the Regulator during 2018 held a total of ten (10) public meetings, in which 165 decisions were issued regarding the:

- Market monitoring and energy sector activities;
- Price Regulation
- Licensing of energy activities in Kosovo;
- Authorization of construction of new generation capacities from renewable sources;
- Customer Protection;

- Approval of rules, methodologies and other energy sector documents, and
- Other issues within its responsibilities.

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

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

2.2 Organizational Structure and Human Resources

The Regulator is organized in accordance with the Law on Energy Regulator (Chapter II of the Law) and the Regulator's Operations Manual. The Regulatory Board according to the responsibilities defined by law performs the following activities:

- adopts regulatory and operational policies of the Regulator;
- organizes and supervises the work of the Regulator;
- supervises the budget implementation and financial management of the Regulator and approves its reports and financial statements;
- organizes recruitment procedures and supervises the work of staff employed by the Regulator;
- approves the compensation levels and other employment conditions for the Regulator's employees;
- drafts and approves sub-legal acts required for the implementation of the Law on Energy Regulator.

The organizational structure of the Regulator is determined by the Regulatory Board based on the responsibilities and duties set by Law on Energy Regulator no. 05 / L-084. The basic structure is composed of the Managing Director, the Board's Assistance Officer, the Public Relations Officer, five Departments and the Administration Unit (AU), which are established in accordance with the Regulator's operational tasks.

2.2.1 Managing Director

The Managing Director coordinates the activities between the Board and professional and administrative staff; is responsible for implementing all decisions of the Regulatory Board, actively informs and advises the Board on developments in the energy sector, supports the Regulatory Board to ensure that all the Regulator's activities are carried out in accordance with the laws, regulations and policies of the Regulator and supervises the work of the Regulator's Departments. The Managing Director reports and responds directly to the Board and carries out its duties under the directions and instructions of the Board, in accordance with the Regulator's Operations Manual.

2.2.2 Departments of the Regulator

Departments are led by the heads of departments who organize, control, plan, collaborate, evaluate their staff and take responsibility for the activities and fulfil all the tasks assigned to the work of departments. The head of the department is responsible for delegating the daily work of the department staff.

The role of the staff members of departments is to carry out their duties, whenever required under legal requirements and through the heads of departments they propose to the Board. In some cases, staff members may be authorized by the Board to perform special duties.

Staff members should work in close collaboration with the head of the department and other professional staff. The staff member should also be able to attend the trainings available from the Regulator to improve their professional skills and knowledge.

Legal and Licensing Department (LLD)

Legal and Licensing Department is responsible for drafting the secondary legislation, evaluation of applications for licensing of energy enterprises, evaluation of applications for granting the 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; 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 the affordability and 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 the customers.

Thermal Energy and Natural Gas Department (TENGD)

Thermal Energy and Natural Gas Department is responsible for reviewing and implementing the 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 the Regulator by providing support and technical expertise on issues related to thermal energy and natural gas.

Administration Unit (AU)

Administration Unit supports the functioning of the Regulator, administration of finances, organizes the efficient recruitment of the Regulator's staff, coordinates trainings of the Regulator's staff, supply and maintenance of office equipment and assists in arranging the office by making it comfortable for work for all the Regulator's staff.

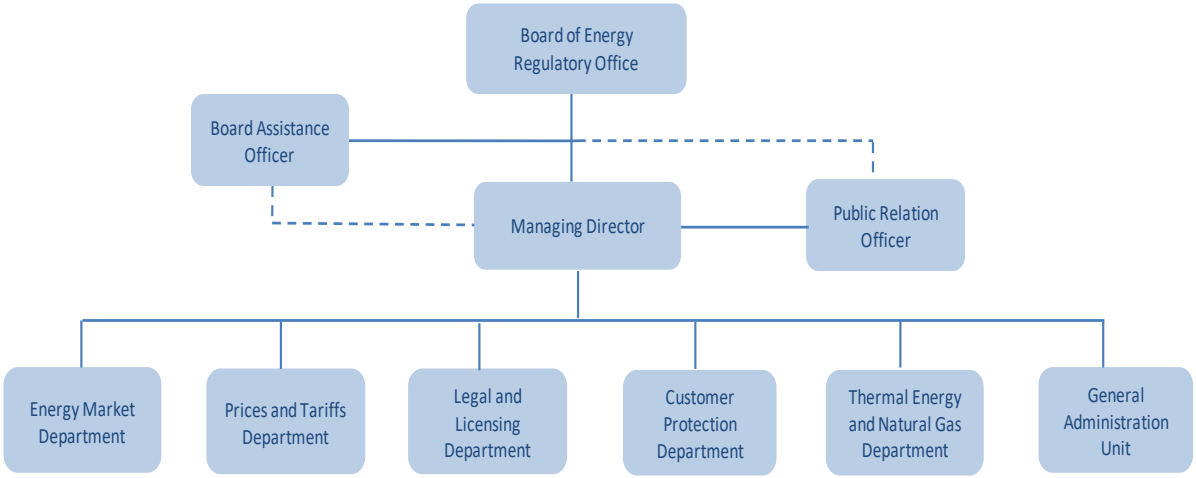


Fig. 2.1 Organizational Scheme of the Regulator

A short description of the organizational structure with the jobs in 2018 is given in the table below.

Tab. 2.1 Organizational Structure

Job Positions	Planned Positions	Employed	Vacancies
ERO Board	**5**	**4**	1
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 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			
Tariffs and Pricing Department (TPD)			
Head of Tariffs and Pricing Department	4	4	0
Expert for Regulatory Affairs and Tariffs			
Tariffs and Prices Analyst			
Tariff Structure Analyst			
Energy Market Department (EMD)			
Head of 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 Thermal Energy and Natural Gas Department	2	2	0
Thermal Energy Analyst			
Customer Protection Department (CPD)			
Head of Customer Protection Department	3	2	0
Customer Protection Officer			
Standards Performance Analyst			1
Total	**33**	**31**	**2**

The Regulator's 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.

2.3 Funding of the Regulator

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

The Regulator collects fees for:

- Initial and annual licensing tax;
- Taxes from applications for issuance and modification of licenses;
- Taxes for the issuance of Certificates of Origin;
- Reviewing of applications for authorization for construction of new generation capacities.

In accordance with the Law on Energy Regulator, all above mentioned taxes are dedicated revenues of the Regulator.

If it is evaluated that the Regulator's dedicated revenues are insufficient to cover the total expenditures required for the effective performance of the obligations, the Regulator may require a supplementary budget allocation to cover the deficit. Also, in accordance with this Law, if the collected taxes exceed the Regulator's forecast, they are disbursed to the state budget.

2.4 Technical Assistance Projects

During this year as well, the Regulator has benefited from the USAID-funded "Repower Kosova" technical assistance project. The project aims to support the Regulator and other relevant institutions dealing with energy issues. During 2018, "Repower Kosova" supported ERO in harmonizing secondary legislation, issues related to market liberalization and other issues related to the energy sector which are related to the increase of capacities and development of legal structure.

With the support of the REPOWER project from USAID, during 2018, students from the field of engineering, law and economics from the University of Pristina and the American University (AUK) have conducted internships at the Regulator.

2.5 Meetings, Workshops and Trainings

Taking into account the fact that regulation in the energy sector is a field that is developing with rapid dynamism, then these developments need to be followed continuously. The Regulator pays special attention to participation in meetings, workshops and trainings. In addition to the contribution made to these meetings and working tables, this has an impact on increasing the knowledge of the Regulator's staff, as well as gaining experience from regional and international regulation practices that are required for professional development.

Staff Training

The Regulator considers the human resources as an important factor in meeting the obligations set by law, and therefore constantly pays attention to increasing the professional capacities of its employees.

The staff of the Regulator has already gained experience and knowledge in the energy sector including electricity, thermal energy and gas, qualities gained through work and organized trainings.

Given that energy sector is developing dynamically, training and capacity building are necessary, so the Regulator has paid special attention to the training and development of its employees, encouraging them to acquire new or advanced skills through:

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

During 2018, a series of regional meetings, workshops and trainings have been held that have contributed to further increasing the knowledge of the Regulator's employees on regulating the energy sector in line with EU standards.

The staff of the Regulator has participated in trainings, workshops, professional study visits mainly organized by ECS, REPOWER-USAID, NARUC, ERRA, etc.

2.6 Procurement Activities

ERO has been facing numerous problems as a result of 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.

3 ENERGY REGULATORY OFFICE ACTIVITIES

3.1 Completion of the Regulatory Framework

An important part of the Regulator's activity is the drafting of secondary legislation which comprises the regulatory framework in the Energy Sector. This regulatory framework has been supplemented by the Regulator in a significant part and the Regulator is still carrying out the drafting process of some important documents in implementation of the Laws in Energy Sector. Drafting and revision of sub-legal acts by the Regulator was carried out in each case by extensively consulting third parties who had a direct interest in the decision-making. Several public hearings were held with the presence of stakeholders who have shown interest in the documents being drafted by the Regulator, which in any case have been made public to the parties through their publication on the Regulator's website.

During 2018, the Board of the Regulator has issued important Decisions, by approving the following documents:

a) Operation Safety Standards;
b) Transmission System Safety and Planning Standards;
c) Procedure for Connection to the Transmission Network;
d) Code of Practice for Access to Land and Premises;
e) Rule on Publication of Electricity Market Data;
f) Rule and Methodology on Preparation of Energy Balances;
g) Procedure on Electricity Trading;
h) Grid Code- Operational Code;
i) Metering Code;
j) Balancing Code;
k) Connections Code;
l) Operational Planning Code etc.

3.2 Licensing of Energy Activities

Generation of electricity and other energy activities in Kosovo can only be carried out if the enterprises are equipped with a license issued by the Energy Regulatory Office. The types of activities for which enterprises must be licensed are described in the legislation in force. Therefore, according to Article 28, paragraph 2 of the Law on Energy Regulator, Law no. 05/L-084 and Article 3, paragraph 1 of the Rule on Licensing of Energy Activities in Kosovo (Rule ERO/No.07/2017), the Regulator has licensed the following activities: generation of electricity; generation of thermal energy; co-generation of electricity and thermal energy; transmission of electricity including transmission system operation; distribution of electricity including the operation of the distribution system; distribution of thermal energy; supply of electricity and thermal energy, import or export of electricity including transit; wholesale (trading) electricity supply; as well as the operation of the electricity market.

In addition to the above-mentioned licenses, the applicable laws allow to carry out some energy activities without having to apply to the Regulator for a license, which do not have a major impact on Kosovo's power system. So activities that do not need a license are:

- electricity generation at the power location with a capacity not exceeding 5 MW;
- generation of thermal energy produced by heating plants for own consumption or with a capacity not exceeding 1 MW;
- generation of electricity for own consumption, where the generation plant or electricity customers are not connected to the transmission or distribution system.

During 2018, the companies licensed by the Regulator continued to operate under licenses in force. Even this year, the Regulator has received several applications for licensing of electricity generation, electricity supply, electricity wholesale supply (trading), licensing, etc.

3.2.1 Licensing of electricity generation

In order to carry out the activity of electricity generation with a capacity larger than 5 MW, a license issued by the Regulator is required, in accordance with Article 29 of the Law on Energy Regulator. During 2018, several enterprises applied to the Regulator for licensing of electricity generation activity in Kosovo.

Generally, licensing of electricity generation activity is increasing as a result of the construction of new generation capacities (from wind, water, solar, etc.) through the authorization procedure. The process of issuing the authorization is governed by the Regulator, which includes many other Kosovo institutions issuing Permits and other appropriate documents, which the enterprises submit to the Regulator.

Enterprises that after the construction of the generation capacity through the authorization procedure have applied for licensing of the electricity generation activity during 2018 are: "Air-Energy" LLC (Kitka), "Hidroenergji" LLC (Lepenci 3) and "Kelkos Energy" LLC (HPP Lumbardhi II). It is worth mentioning that the latter has two applications in the process of licensing for two hydro power plants (HPP Deçani and HPP Belaje), regarding which it has applied for a generation license in 2016. The following is a short description of the data for these enterprises.

"Air-Energy" LLC. (KITKA 32.4 MW) **-** Has applied for a license on 17.07.2018 and was licensed within three (3) months following the application date, therefore completing the documentation required by the Regulator for the activity of electricity generation, in wind-park KITKA, with an installed capacity of 32.4 MW. The Board of the Regulator issued a Temporary License, for a period of one (1) year (11.10.2018 until 10.10.2019), given that the enterprise did not submit the Environmental Permit, which is required in addition to other documents, for licensing of electricity generation activity in Kosovo. The licensee is instructed to submit the Environmental License within this period, in order to be issued the license with a longer term, in line with applicable legislation.

"Hidroenergji" LLC (Lepenci 3, 9.98 MW) –Applied on 20 December 2018 for generation of electricity from water, with a capacity of 9.98 MW, and is still under the evaluation process by the Regulator.

"Kelkos Energy" LLC (HPP Lumbardhi II, 6.2 MW). Applied on 21 December 2018 for generation of electricity from water, with a capacity of 6.2 MW and is under the evaluation process by the Regulator.

Both these enterprises (Hidroenergji and Kelkos) have built their hydro power plant through the authorization procedure for construction of new generation capacities, whereas their applications for licensing of electricity supply activity are under evaluation process at Energy Regulatory Office.

"KelKos Energy" LLC (HPP Deçani, 8.06 MW and HPP Belaje, 9.8 MW) –is an enterprise *"under the process of licensing the electricity generation activity"* from water, since 24.02.2016 when it applied to the Regulator for licensing of electricity generation activity in Kosovo for two hydro power plants, whereas as mentioned above, the same enterprise, during 2018, has also applied for the third hydro power plant (HPP Lumbardhi II, 6.2 MW), all units in the Municipality of Deçan.

As for the aforementioned companies, the whole project for the construction of these hydropower plants has gone through the procedure for construction of new capacities, led by the Regulator, while this enterprise still does not have electricity generation license for any of these three (3) hydro power plants, due to the non-issuance and non-submission to the Regulator of the Environmental Permit issued by the Ministry of Environment and Spatial Planning of Kosovo.

Despite this, Kelkos continued with the operation of HPP Deçan and HPP Belaje, without a license. Initially this activity was carried out as a test operation, but starting from April 1, 2016, the generators are in commercial operation. The Regulator has instructed the Enterprise to submit an Environmental Permit for these hydropower plants so that it can issue a license for operation. There is still no progress in this regard, "KelKos Energy" LLC does not yet possess a license for electricity generation.

***"Kosovo Energy Corporation"* JSC** Generation Division - TPP Kosova A is an enterprise which has applied for extension of the license for electricity generation from lignite (coal) until 04.10.2022. The license of this enterprise was extended for the period from 04.10.2018 until 04.10.2019.

The table below presents the data of the enterprises that were licensed, their license was extended and those in the process of obtaining a license for electricity generation activity.

Tab. 3.1 Enterprises that have been licensed, are in the process of licensing and those applying for extension of license for electricity generation activity

No.	Name of the Company	Description of Licensed Activity	The number of the License	Address, Headquarters of the Licensee	Validity of the License
1	"Air Energy" LLC	Electricity Generation	ZRRE/Li_62/18	St. Isa Boletini, n.n. 60000,Gjilan, Republic of Kosovo	11.10.2018 - 10.10.2019
2	Korporata Energjetike e Kosovës JSC (TPP Kosova A)	Electricity Generation	ZRRE/Li_05/17_A	St."Nëna Terezë" No 36, 10000 Pristina, Republic of Kosovo	04.10.2018-04.10.2019-Extension of License
3	"Hidroenergji" LLC (Lepenci 3)	Electricity Generation	ZRRE/Li_63/18	St. Dëshmorët e Kombit, N.N. Ferizaj, Republic of Kosovo	in process... (2018)
4	"KelKos Energy" LLC (HPP Lumbardhi II)	Electricity Generation	ZRRE/Li_64/18	St.Sali Çeku, Gogaj Building 14, Deçan, Republic of Kosovo	in process... (2018)
5	"KelKos Energy" LLC. (HPP Deçani)	Electricity Generation	ZRRE/Li_49/16	St.Sali Çeku, Gogaj Building 14, Deçan, Republic of Kosovo	in process (since 2016)
6	"KelKos Energy" LLC (HPP Belaje)	Electricity Generation	ZRRE/Li_50/16	St.Sali Çeku, Gogaj Building 14, Deçan, Republic of Kosovo	in process (since 2016)

The Regulator issues a decision for each application for a license, within sixty (60) calendar days, following the submission of the completed application.

3.2.2 Licensing of electricity supply activity

During 2018 several legal entities for electricity supply were licensed by the Regulator, which have completed the application for this activity. The entities that are licensed are: "Future Energy Trading and Exchange Dynamics" LLC, "Jaha Company" LLC, "SharrCem" LLC, and Kosovo Energy Corporation JSC. The data of these enterprises in details are shown in the table below. However, except for KESCO, other companies licensed for electricity supply activities in Kosovo have so far not yet carried out electricity supply activities.

Tab. 3.2 Enterprises that have been licensed for electricity supply during 2018

No.	Name of the Company	Description of Licensed Activity	The number of the License	Address, Headquarters of the Licensee	Validity of the License
1	"Future energy trading and exchange dynamics" LLC	Electricity Supply	ZRRE/Li_55/16	Kalabria , A1, CII, No.25, Pristina, Republic of Kosovo	13.04.2018-12.04.2023 issuance of license
2	"JAHA COMPANY" LLC	Electricity Supply	ZRRE/Li_59/17	Arbëri , St. Ismail Qemali Nr.17 Pristina, Republic of Kosovo	13.04.2018-12.04.2023 issuance of license
3	"SharrCem" LLC	Electricity Supply	ZRRE/Li_61/17	Street, "Adem Jashari" No.280, Hani i Elezit	13.04.2018-12.02.2023 issuance of license
4	"Korporata Energjetike e Kosovës" JSC	Electricity Supply	ZRRE/Li_60/17	St. Nënë Tereza, Nr.36, 10000 Pristina, Republic of Kosovo	20.12.2018-19.12.2043 issuance of license

As it can be seen from the table above, the companies "FUTURE ENERGY TRADING AND EXCHANGE DYNAMICS" LLC, "Jaha Company" LLC, and "SharrCem" LLC, were licensed for a period of five (5) years, while " Kosovo Energy Corporation "for a period of twenty-five (25) years, in accordance with Article 32 of the Law on Energy Regulator, which determines the duration of the supply license depending on the financial situation of the applicant, with a maximum duration of twenty five (25) years.

3.2.3 Licensing of electricity wholesale supply (trading) activity

During 2018, the Regulator extended two licenses for an additional period of five (5) years: "Danske Commodities Kosovo" LLC and "MCM Commodities" LLC, but did not accept any new application for licensing of electricity wholesale supply (trading). The reasons for this may be the provisions 2 and 3 of Article 32 of the Law on Electricity, according to which: "*Electricity trading may be performed by electricity enterprises on the basis of a license issued by the Regulator in accordance with the Law on Energy Regulator and in line with Market Rules. The licenses issued for the trading of electricity in other Contracting Parties to the Energy Community shall be recognized in Kosovo. Such licensed suppliers will have the right to trade electricity without the need for additional licenses. Traders and suppliers registered in another Party of the Energy Community have the right to participate in the electricity market under the principle of reciprocity and in accordance with applicable market rules, balancing rules and fiscal rules".*

"EVN TRADING" L.L.C. - is an enterprise that has been licensed by the Regulatory Board for a period of five (5) years (15.06.2015 - 15.06.2020) for electricity wholesale supply (trade) activity, but on 12.07. 2018, at the request of the licensee, the Regulatory Board has ceased the licensing activity, since the enterprise has brought to the Regulator the documents according to which it has no legal obligation.

The details of the enterprises that have been licensed for extension of the license on electricity wholesale supply (trading) activity and the enterprises whose license was terminated are shown in the table below.

Tab. 3.3 The enterprise to whom the license for electricity wholesale supply (trading) activity was extended or terminated

No.	Name of the Company	Description of Licensed Activity	The number of the License	Address, Headquarters of the Licensee	Validity of the License
1	"Danske Commodities Kosovo" LLC	Electricity Wholesale Supply (Trading)	ZRRE/Li_39/17	Q.Pejton, St.Mujo Ulqinaku No.5 Ap 4, 10000 Pristina, Republic of Kosovo	22.04.2018-21.04.2023 Extension of the License
2	MCM COMMODITIES LLC	Electricity Wholesale Supply (Trading)	ZRRE/Li_40/17	MotherTeresa, 10000 Pristina, Republic of Kosovo	02.05.2018-01.05.2023 Extension of the License
3	"EVN TRADING"LLC	Electricity Wholesale Supply (Trading)	ZRRE/Li_42/17	Mustaf Kruja No.14, 10000 Pristina, Republic of Kosovo	12.07.2018 termination of the license

Regarding the extension of the license, the duration of each license may be extended for a period of time not exceeding the relevant time period of the current license, meaning that the licensee manages to meet all the terms and conditions of the license and has filed a written request for the extension of the current license.

3.3 Monitoring the energy enterprises

One of the main competences of the Energy Regulator is the supervision/monitoring of energy enterprises, to see whether the enterprises are operating in compliance with the terms of the license, the application of rules, individual acts and decisions issued by the Regulator or other legislation in force.

The Regulator, in line with the responsibilities under the Law on Energy Regulator, in particular Chapter XII, the Law on Electricity and secondary legislation related to monitoring and supervision of activities in the energy sector, monitored the licensed enterprises for energy activities. Monitoring is carried out through reports and data from licensees, by holding meetings, and by visiting (monitoring) licensees, with or without notice.

During 2018, the Regulator monitored licensed energy companies as well as those in the process of construction through the authorization procedure for the construction of new capacities, especially the enterprises that are above 5 MW which are expected to be licensed by the Regulator, whether they are acting according to the legislation in force.

The detailed report on the monitoring of energy enterprises during 2018 will be prepared by the Regulator and will be published on the Regulator's Website.

The Regulatory Board, on 05 November 2018, has issued decisions on the establishment of Working Groups for monitoring of energy enterprises.

The following is a brief overview of the energy enterprise monitoring process during 2018.

3.3.1 Monitoring according to the Reporting Manual in the Energy Sector

According to this manual, licensed energy companies have submitted to the Regulator immediate, quarterly or annual reports, depending on the requirements outlined in this manual or other Regulator's Requirements. For some license articles of particular importance, i.e violations of license conditions that may have a serious impact on government policies, customers or the cost of compensation, the licensee should immediately notify the Regulator. In the event that such notice is not submitted on time, the Regulator has the right to impose administrative measures or fines in accordance with the Rule on Administrative Measures and Fines.

Taking into account the reports submitted during 2018, the Regulator has not imposed any administrative measures or fines on the licensees.

3.3.2 Field Monitoring of the Compliance Program of the Distribution System Operator (KEDS) for 2018

According to Article 15 of the Law on Electricity, the Regulatory Board, on 16 July 2015 (Decision V_750_2015), has approved the "Distribution System Operator Compliance Program". Therefore, since 2015, the Compliance Officer has prepared and submitted to the Regulator, the Annual Report on the KEDS Compliance Program, which is initially reviewed by KEDS Management and approved by the KEDS Executive Board. This is because, according to the Compliance Program, the Licensee must take measures to eliminate discriminatory behaviours and also the DSO Compliance Officer must prepare an Annual Report each year on the measures taken in the previous year for the implementation of the Compliance Program.

3.3.3 Field Monitoring of Kelkos Energy Enterprise

As a result of the construction of Hydro Power Plants from this enterprise (HPP Deçani, HPP Belaje and finally HPP Lumbardhi II), the Regulator's monitoring group, during 2018, was focused on monitoring the construction of generation capacity HPP Lumbardhi II. The monitoring of this hydro power plant was carried out in order to see the real situation of the construction of this hydropower plant and at the same time to instruct the investor on the procedures and the upcoming process, whether for test phase, obtaining the license for electricity generation, entry into operation etc. From the field visit on June 4, 2018 it was concluded that HPP Lumbardhi II is at the end phase of works for construction of this hydropower plant.

3.3.4 Monitoring the Capital Investments in KOSTT and KEDS during 2018

Security of electricity supply and its quality depend on the level of operating and capital expenditures. For this purpose, the Regulator during the regulatory periods allows a certain level of capital investments based on the planned projects. In order to see how these projects have been implemented, the Regulator, within its responsibilities and competences, has established a Working

Group for capital investments monitoring of KOSTT and KEDS licensees through a decision of the Regulatory Board.

The monitoring group through written communications and visits on the field focused on monitoring the procedural, technical and financial aspects. The methodology used for the realization of this monitoring was carried out through selecting the projects by chance and of different nature.

For this purpose, the working group has requested from the licensees to submit relevant project files, in order to get the results which are by nature measurable and qualitative.

Following the analysis of capital investments, projects and procurement procedures, the working group will present to the Board of the Regulator, the compliance with the overall technical and procedural requirements of the findings, and key recommendations during the monitoring.

3.3.5 Monitoring the Supply and Customer Protection

The Working Group on monitoring the complaints and other issues related to customer protection has carried out monitoring and developed the following activities:

1. Provision of data in the area of provision of services to customers by Public Supplier - KESCO and Distribution System Operator - KEDS;
2. The visit of the Regulator's Working Group in three districts: Pristina, Ferizaj and Mitrovica;
3. Providing data (samples) from the venue in the above mentioned districts;
4. Analysis of all the data provided by KESCO and KEDS; and
5. Findings derived from the data provided by KESCO and KEDS.

Following all the analysis, the Working Group of this Report shall present to the Regulatory Board the main recommendations with the aim of improving the electricity supply services, which have been identified during the monitoring, which will decide on further steps to ensure best supply of electricity to customers.

3.3.6 Market Monitoring

The Regulator is responsible for monitoring the operation of electricity markets in order to ensure their efficient operation and to identify the correct actions that may be required.

The Regulator continuously monitors the electricity market including imports and exports of electricity. The energy traded by domestic sources and imports was used to cover the demand including consumption, losses and balance of the system. Within the monitoring, the Regulator, in addition to analyzing the daily, monthly reports etc. has also carried out visits to the licensees during the direct execution of the procurement process. The purpose of these visits was for the Regulator to ensure that all energy procurement procedures are being applied under the legislation in force. It should be emphasized that the Regulator on August 20, 2018 has approved the document "Procedure for Electricity Trading", which defines the general principles of purchase and sale of electricity.

The supplier is obliged that in order to cover the needs of customers, to provide energy in the domestic competitive market or from imports, as well as system operators are obliged to provide energy to cover the losses and other auxiliary services in the competitive market based on the legislation in force.

3.3.7 Monitoring Electricity Interruptions

Based on the decision of the Regulatory Board, a Working group for monitoring of electricity outages and maintenance was established, which focuses mainly on the monitoring of the Electricity Distribution System Operator (KEDS), the Kosovo Electricity Supply Company (KESCO) and the Transmission System Operator and Market Operator (KOSTT).

For carrying out this monitoring, the following documents were taken into consideration: *Rule on General Conditions of Energy Supply; Rule on Disconnection and Reconnection of Customers in the Energy Sector; Quality of Supply and Service Standards; Grid code; Distribution Code and Distribution Metering Code, as well as various reports: Plannings for Maintenance and their Implementation, indicators (SAIDI, SAIFI, ENS etc.),* then notices on outages published on the websites, and minutes of the works carried out etc.

Regarding the monitoring activity and findings of this monitoring, the Regulator is in the process of finalizing the Report which will be published on the Regulator's website.

3.4 Renewable Energy Sources (RES)

Upon the Law on Energy Nr. 05/L-081, the policies related to RES have been set up, aiming to promote the sustainable and economical use of RES domestic potentials, in order to meet the demand for energy, increase the security of supply and environmental protection which is an integral part of the Energy Strategy of the Republic of Kosovo.

In order to implement RES policies, the respective Ministry has, according to the legislation in force, determined by a special sub-legal act the RES targets for energy, in line with the requirements of the relevant European Union Directive for RES.

The Law on Energy Regulator no. 05/L-084 stipulates that the construction of new generation capacities (RES), new systems for the transmission and distribution of natural gas, including interconnectors, as well as direct electricity lines and direct gas pipelines for the transfer of natural gas will be made in accordance with the authorization procedure under this law, which shall be undertaken by the Energy Regulatory Office, in accordance with objective, transparent and non-discriminatory criteria.

In order to meet the legal obligations for reaching the obligatory RES target by 2020, the Ministry of Economic Development has issued the Administrative Instruction no. 01/2013 and no. 05/2017 which has set the annual and long term energy targets of energy from RES.

The Administrative Instruction has determined that the mandatory target for Renewable Energy Sources by 2020 is 25% of the final gross energy consumption, as defined in Article 4 of the Decision of the Ministerial Council of the Energy Community Nr. D/2012/04 / MC-EnC.

It is worth mentioning that Kosovo is a signatory party to the Treaty on Establishment of the Energy Community, which was signed on 25 October 2005, ratified and entered into force on 1 July 2006 and started to be implemented on 1 July 2007. Based on this, Kosovo has assumed legal obligations to fulfill all obligations related to the energy sector, which also includes the obligation to reach the RES targets by 2020.

Annex I of this Administrative Instruction 05/2017 has determined the electricity capacities from RES (MW), where the set target level for renewable energy sources, admitted to the Support Scheme is as in the following table:

Tab. 3.4 Targets for RES capacities

Capacity of Electricity from RES					
Primary Energy Source	2016	2017	2018	2019	2020
Photovoltaic	6	7	8	9	30
Wind	1	61	115	129	150
Small HPPs	40	57	181	187	240
Biomass	6	8	10	12	20

In order to reach RES targets for generation of electricity from RES, as set forth in the above-mentioned Guideline, and in accordance with the legal mandate provided by the applicable legislation on energy, during 2018, the Regulator has received and reviewed applications for obtaining the authorization, in line with the Rule on Authorization Procedure for Construction of New Generation Capacities based on RES and Rule on Support Scheme from Renewable Energy Sources

The Board of the Regulator, in order to support the promotion of renewable energy investments, has issued Decision V-810-2016 which sets the Feed-in-Tariff for generation of electricity produced by RES, where: electricity generated from water (hydro power plant <10 MW) has the price of 67.47 €/MWh, the electricity generated from wind (<35 MW) has the price of 85.0 € / MWh, the electricity generated from solid biomass for the targets up to 14 MW has the price 71.3 €/MWh and electricity generated by solar/photovoltaic panels (PV <3 MW) for the targets up to 10 MW according to the previous instruction was 136.4 € / MWh.

Also, in order to meet RES targets, the Regulator has also guaranteed the lifespan of the Energy Purchase Agreement, which is concluded between the investor and KOSTT/MO, where the electricity generated from photovoltaic panels and the energy generated from wind turbines will have a duration of 12 years, while for other sources (hydropower and solid biomass) it will have a duration of 10 years, with applicable prices (Feed-In Tariff) and accepted in the Support Scheme.

3.5 Authorization for Construction of New Capacities

The Regulator, during 2018, continued to implement the authorization procedure, review of applications for issuance of authorization for construction of new generation capacities based on Renewable Energy Sources (RES) for companies that applied for obtaining an authorization.

The Regulator, within the framework of fulfilling its obligations under the legislation in force, has issued final authorizations for construction of new generation capacities, whereby each applicant

for obtaining the authorization has been subjected to a regularity analysis and correctness of the legal, administrative, technical, financial documentation and environmental issues, as well as obtaining relevant permits for water use in hydropower cases, the right on the use of land, technical solutions of the connection and environmental consent issued by relevant institutions in accordance with the activity that entities have requested for obtaining the Final authorization for allowing the construction of new generation capacities from RES.

During 2018, the Regulator received 12 applications for authorization for construction of new generation capacities from RES, from different legal entities. 6 requests were received and reviewed for the conversion of preliminary authorization into final authorization from solar energy sources and hydro power plants. During this year there were requests for modification of the final authorization. While the requests for postponement of the preliminary authorization and final authorization have been variable.

3.5.1 Issuance of Preliminary Authorization

The Regulator, during this year, has reviewed and evaluated applications received from legal entities that have proved their suitability for the construction of new facilities but have not yet met all requirements deriving from the legislation in force, has issued preliminary authorizations to enable completion of applications and for obtaining the final authorization for construction of new generation capacities.

The table below presents the number of preliminary authorizations, issued by the Regulatory Board, from different RES technologies during 2018.

Tab. 3.5 RES Preliminary Authorizations

Preliminary Authorizations from RES	No. of issued Decisions
Hydro Power Plants	1
Wind Energy	5
Solar Energy	7
Total	13

The Regulator, with respect to hydro power plants, has issued a preliminary authorization for 1 legal entity, whereas for the construction of wind turbines was issued one authorization for a project with a capacity of 11 MW, which is within the limits allowed by Administrative Instruction, whereas 4 other wind projects with an installed capacity of 135.8 MW and projects from solar/photovoltaic panels with an installed capacity of about 21 MW were considered by decision as "pending" applications to be admitted to the Support Scheme, of which:

- 1 preliminary authorization for hydro power plants with a total capacity of 3.3 MW;
- 1 preliminary authorization for the wind turbine with a capacity of 146.8 MW;
- 7 preliminary authorizations for solar power with a capacity of 21 MW;

Regarding the applicants who have met the requirements and criteria determined for issuance of preliminary authorization, this year the Regulatory Board has issued thirteen (13) preliminary

authorizations. The companies that were issued preliminary authorizations (see table 3.6 below) are presented below.

Tab. 3.6 The companies which were issued the Decision on Preliminary Authorization

No.	Legal Entity	Facility	Location	Installed Capacity	Date of Issuance of Preliminary Authorization
1	Dino Energy LLC	Hydro Power Plant	HPP Lepenci 2, Kaçanik	3.3 MW	20.12. 2018
2	Bond -Com Energy Point LLC	Wind Turbines	Wind Park - Budakova, Suhareka	11 MW	13.06.2018
3	Bond -Com Energy Point LLC	Wind Turbines	Wind Park - Budakova, Suhareka	35 MW	13.06.2018
4	Air Energy LLC	Wind Turbines	Wind Park -Kamenica, Kamenicë	34.8 MW	13.06.2018
5	Air Energy LLC	Wind Turbines	Wind Park - Kamenica, Kamenicë	34.8 MW	13.06.2018
6	Data Systems LLC	Wind Turbines	Wind Park Mareci, Pristina	31.2 MW	20.12.2018
7	Alsi & Co - Kosovë L.L.C.	Solar	Madanaj, Kusar, Gjakova	3 MW	29.03.2018
8	Building Construction L.LC.	Solar	Madanaj, Kusar, Gjakova	3 MW	29.03.2018
9	Jaha Solar LLC	Solar	Madanaj, Kusar, Gjakova	3 MW	12.07.2018
10	Jaha Solar LLC	Solar	Madanaj, Kusar, Gjakova	3 MW	12.07. 2018
11	Jaha Company LLC	Solar	Buroj, Skenderaj	3 MW	12.07.2018
12	Jaha Company LLC	Solar	Buroj, Skenderaj	3 MW	12.07.2018
13	Jaha Company LLC	Solar	Buroj, Skenderaj	3 MW	12.07.2018

Compared to 2017, when the Regulator had issued seven (7) preliminary authorizations, during 2018, thirteen (13) decisions on preliminary authorizations, with a total installed capacity of 171 MW were issued, which within the legal deadline, following the completion of legal requirements could be authorized by the Regulator for construction of new generation capacities from RES.

The Decisions on Notification for Preliminary Authorization have determined that applicants have proven their suitability for construction of new generation facilities, but have not yet met other relevant requirements, which at the same time stipulates that it does not entitle the holders of preliminary authorization to continue the construction of new generating facilities before fulfilling all the conditions and requirements set out in the applicable legislation. Such decisions shall oblige the applicant to submit a written request within a period of one (1) year from the issuance of the Preliminary Authorization requesting that the Final Authorization be issued.

Preliminary Authorizations of solar energy and wind turbines are considered "pending" applications for admission to the Support Scheme, and legal deadlines do do not start until the Regulator through a written notice informs the commencement of the legal deadlines.

It is worth mentioning that the issuance of the Decision on Preliminary Authorization, also determines the availability of targets, admission of the applicant to the Support Scheme and 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.

3.5.2 Applications that are under review process at the Regulator

The Regulator, during this year, has received applications for obtaining the authorization for construction of new generation capacities, which are in the completion phase. Below is a list of applications that are under review process.

Tab. 3.7 Companies that are under review process for obtaining the Preliminary Authorizations

Nr.	Legal Entity	Facility	Location	Installed Capacity	Application Date
1	KPOWR L.L.C.	Solar	Sverrk, Pejë	3 MW	14.09.2018
2	EDK LLC	Solar	Sverrk, Pejë	3 MW	14.09.2018
3	EDK LLC	Solar	Sverrk, Pejë	3 MW	14.09.2018
4	JAHA EXTRA BETON LLC	Solar	Sverrk, Pejë	3 MW	14.09.2018
5	JAHA EXTRA BETON LLC	Solar	Sverrk, Pejë	3 MW	14.09.2018
6	PERLAT LLC	Solar	Sverrk, Pejë	3 MW	18.09.2018
7	EDK LLC	Solar	Sverrk, Pejë	3 MW	18.09.2018
8	N.T.SH. ELING	Solar	Llabjan, Pejë	3 MW	13.12.2018
9	N.P. District Heating JSC GJAKOVA	Biomass	Rezina, Gjakova	1.5 MW	20.04.2018

The Regulator has evaluated the applications for issuing authorizations for the construction of new generation capacities, respecting all legal procedures and criteria for meeting the RES targets set out in the applicable guidelines, and upon completion it will issue the Preliminary Authorizations to the abovementioned applicants.

3.5.3 Issuance of Final Authorization

The Regulator, during 2018, has reviewed the applications for the issuance of Final Authorization, along with the completed documentation for conversion of Decision on Notice for Preliminary Authorization into Final Authorization for construction.

The table below presents the number of Final Authorizations issued by the Regulatory Board, based on different RES technologies during 2018.

Tab. 3.8 RES Final Authorizations

Final Authorizations from RES	No. of issued Decisions
Hydro Power Plants	3
Wind Turbines	3
Total	6

For construction of new generation capacities from hydropower plants, three final authorizations were issued whereas three other final authorizations were issued for construction of wind turbines with a total installed capacity of 114.8 MW, of which:

- 3 authorizations for hydropower plants with a total capacity of 11.3 MW
- 3 authorizations for wind turbines with a capacity of 103.5 MW

The following table shows the legal entities that were issued the Final Authorization for construction of new generation capacities.

Tab. 3.9 Companies that were issued a Final Authorization for Construction

No.	Legal Entity	Facility	Location	Installed Capacity	Date of Issuance of Final Authorization
1	N.T.N. Renelual Tahiri LLC	Hydro Power Plant	HPP Dragash, Dragash	3.4 MW	29.03.2018
2	Afa Energy LLC	Hydro Power Plant	HPP Kotlina, Hani I Elezit	4.9 MW	29.03.2018
3	Hidro Forca LLC	Hydro Power Plant	HPP Soponica 2, Kaçanik	3 MW	13.06.2018
4	Sowi Kosovo L.L.C.	Wind Turbines	Selac 1, Mitrovica	34.5 MW	13.06.2018
5	Sowi Kosovo L.L.C.	Wind Turbines	Selac 2, Mitrovica	34.5 MW	13.06.2018
6	Sowi Kosovo L.L.C.	Wind Turbines	Selac 3, Mitrovica	34.5 MW	13.06.2018

The above-mentioned projects are expected to be implemented within a period of two (2) years according to the dynamic plan for implementation of projects, in accordance with the terms of the authorization.

3.5.4 Modification of the Final Authorization

During this year, the Regulator has received requests for modification of the Final Authorization for construction of new generation capacities from RES. These requests, following the completion of relevant evidence issued by the relevant institutions in the Republic of Kosovo, have been assessed and reviewed by the Regulatory Board, in accordance with the legal provisions of the Rule on Authorization Procedure.

The following table presents the legal entities that have been allowed the modification of the Final Authorization, for the installed capacities for generation of electricity from RES.

Tab .3.10 Companies whose final authorization has been modified

No.	Legal Entity	Facility	Location	Installed Capacity	Date of Issuance of Final
1	Eurokos JH LLC	Hydro Power Plant	HPP Brodi 1, Dragash	2.48 MW	15.10.2018
2	Eurokos JH LLC	Hydro Power Plant	HPP Restelica 3, Dragash	2.35 MW	15.10.2018

The Modification of the Final Authorization from the company Eurokos JH LLC, was requested for the hydro power plant HPP Brodi 1, for the installed capacity of 1.06 MW, authorized by Decision V-881-2017, dated 09 February 2017, and modified by Decision V-1054-2018, dated 15.10.2018, to the installed capacity of 2.48 MW, in Brod River, Municipality of Dragash, meeting the environmental and water requirements. Whereas, the Modification of the Final Authorization V-882-2017, dated 09 February 2017, was issued to the Eurokos JH LLC, from the initial installed capacity of 1.49 MW to the installed capacity of 2.35 MW, which was allowed by Decision V-1055-2018, dated 15.10.2018, in accordance with the Water Permit issued by MESP. These modifications are allowed in accordance with the criteria and legal requirements of the applicable legislation.

3.5.5 Entry of RES Generators into Operation

During this year, following the finalization of the projects, in line with the Authorization by the Regulatory Board, as well as following the technical admission, the generators of three (3) projects entered into commercial operation, with a total installed capacity of 38.4 MW.

The following table presents the legal entities that have entered into operation for generation of electricity from RES.

Tab. 3.11 The companies which have entered into operation

No.	Legal Entity	Facility	Location	Installed Capacity	Date of Issuance of Final Authorization
1	Air Energy LLC	Wind Turbines	Wind Park - Kitka, Kamenica	32.4 MW	11.10.2018
2	Birra Pejës LLC	Solar	Madanaj, Kusar, Gjakova	3 MW	06.11.2018
3	Frigo Food Kosovë LLC	Solar	Madanaj, Kusar, Gjakova	3 MW	06.11.2018

Fig. 3.1 Images from Wind Turbines - KITKA

Fig. 3.2 Images from solar panels installed in Madanaj, Gjakovë

The Project Wind Park - KITKA has been in commercial operation since October 11, 2018, whereas the solar projects have entered into commercial operation on 06 November 2018. Regarding these projects, the agreements for purchase of electricity for generation of electricity from RES are finalized, which have been signed for a period of twelve (12) years with KOSTT/MO.

3.6 Self-Consumption Generators

The Regulator, during this year, has also handled requests/applications of generators for obtaining the status of Own-Consumption Customer. Following the fulfilment of legal requirements, in accordance with the Rule on Authorization and the Support Scheme, they were allowed to proceed with the construction of generation capacities for own-consumption.

The following table presents the legal entities that were issued a Decision by the Regulatory Board for construction of own-consumption generators during 2018.

Tab. 3.12 Companies that were issued the Decision to construct generators for own-consumption

No.	Legal Entity	Facility	Location	Installed Capacity	Date of Issuance of Final Authorization
1	N.T. LIRIDONI	Solar	Llapnasellë, Graçanica	95 kW	24.09.2018
2	Agro Trade LLC	Solar	Llapnasellë, Graçanica	55.2 kW	24.09.2018
3	Çarshia LLC	Solar	Marigona Neighborhood, Graçanica	100 kW	24.09.2018

The above-mentioned projects are expected to be carried out within the period defined according to the dynamic plan for implementation of projects, in accordance with the technical criteria of the connection.

The Regulator has also received other requests from natural and legal persons, which are in different phases of completion and according to the procedures in force, following the completion, they will be allowed the construction of these generation capacities for own-consumption.

3.7 Monitoring the construction of new generation capacities

The Regulator, during this year, has monitored the legal entities that have obtained a Final Authorization the construction of generation capacities, which are in different phases of construction.

The Regulator monitored the works that are being carried out by the company Matkos Group LLC, for the projects HPP Vica, HPP Shterpca and HPP Sharri, authorized by Decisions V-640-2014, V-759-2016 and V-760-2016, for construction of new generation capacities from hydro power plants, with a total installed capacity of 16 MW (all three projects), in CA Shterpce, Municipality of Shterpca.

The hydro power plant HPP Vica, according to the dynamics of works carried out in the field, is expected to be finalized by the beginning of 2019, whereas the projects HPP Shtërpca and HPP Sharri are in different phases of construction.

The Regulator has monitored the works that are being carried out by HIDROENERGJI LLC, for the project HPP Lepenci 3, authorized by Decision V-755-2016, for the construction of new generating capacities from hydro power plant, with an installed capacity of 9.98 MW, CA Kaçanik, Municipality of Kaçanik. During the monitoring it was noticed that: the construction of the offtake has been completed, the pipeline extension is almost completed and the facility of the hydro power is completed, as well as the turbines have been joined together with the technical parts. According to the planning, this project is expected to begin the testing phase in the spring of 2019.

The Regulator monitored the works that are being carried out by EUROKOS JH LLC for the Project HPP Brodi 3, authorized by Decision V-870-2016, for construction of new generation capacities from hydro power plant, with an installed capacity of 4.7 MW, in CA Kukalane, Municipality of Dragash. The project HPP Brodi 3 is in the final phase of execution, and according to the dynamic of works being carried out, it is expected to enter the testing phase soon, which will start in early 2019.

The Regulator monitored the works that are being carried out by the company N.T.N. RENELUAL TAHIRI LLC, for the project HPP Orqusha, authorized by Decision V-891-2017, for construction of

new generation capacities from the hydro power plant, with an installed capacity of 4 MW, in CA Orqusha, Municipality of Dragash.

The Regulator monitored the works that are being carried out by SOLAR GREEN ENERGY LLC, for the Project authorized by Decision V-838-2016 for construction of new generation capacities from solar/photovoltaic panels, with an installed capacity of 3 MW, in CA Novosellë, Municipality of Kamenica, where according to the dynamics of works, it is expected to enter into operation in March 2019.

In addition to this, the Regulator has also monitored other projects that are being executed according to Decisions on Final Authorizations, which are in different phases of construction, according to legal deadlines set in respective decisions. Their monitoring has been carried out continuously depending on the requirements that have arisen during their implementation.

The Regulator will continue to monitor the construction of new generation capacities from Renewable Energy Sources, meanwhile respecting all the legal procedures and criteria established by the applicable legislation.

3.8 Court Disputes

The Regulator, on 12.10.2018, received from the Basic Court in Pristina, Department for Administrative Matters, the Ruling A. no. 1373/17, dated 08.10.2018, upon which it was obliged, within 30 days, to submit procedural objections and declare whether it accepts or contests the claim of the plaintiff regarding the initiation of the Administrative Conflict by the Ombudsperson of the Republic of Kosovo, for annulment of the decision of the Regulatory Board no. V_399_2012 dated 06 February 2016.

The Regulator, on 09.11.2018, at the Basic Court in Pristina, Department for Administrative Matters has filed a response to the lawsuit upon which it has fully contested the lawsuit and the claim of the plaintiff Ombudsperson of the Republic of Kosovo and has denied all the facts mentioned by the plaintiff in the lawsuit. The Regulator has also requested from the court to refuse the lawsuit filed against the Regulator for annulment of the decision V_399-2012, dated on 06.02.2012 as ungrounded and requested that the Decision of the Board remain as grounded and fair. The Regulator is awaiting the invitation from the competent court for review of the merit case, which will define all the issues raised by the lawsuit and justified by the answer to the lawsuit.

The Regulator, on 19.10.2018, received from the Basic Court in Mitrovica, the branch in Skenderaj, General Department, the Resolution C. No. 35/2018, dated on 16.10.2018, upon which it was obliged to submit a reply to the lawsuit in written form, within 15 days.

The Regulator on 01.11.2018, at the Basic Court in Mitrovica, Branch in Skenderaj, General Department, filed a written reply upon which it has fully contested the lawsuit and the petition initiated by the plaintiff. The Regulator has also requested that the claim be rejected as inadmissible as long as there is a court case in the file being adjudicated by the Basic Court in Pristina for Administrative Affairs.

The Regulator, on 19.06.2018, received from the Basic Court in Pristina, Department for Administrative Matters, the Ruling A.no. 1780/2016, upon which, after the main public hearing held

in the presence of the parties' authorized representatives, rejected the claim of the plaintiff, KEDS JSC in Pristina, requesting the annulment of the decision of the Regulator V_860_16 dated 14.10.2016, upon which the HEP-KS company was licensed for the supply of electricity, whereby the court in question, left the decision of the Board in force as grounded and fair.

3.9 "Kosova e Re" Project

Security of electricity supply is one of the main objectives of the Government's Energy Strategy. According to this Strategy, investment in new generation capacities is needed, and regarding this the Government of Kosovo has developed an open, competitive tender and has selected the investor for the construction of the generator with a capacity of 450 MW.

In order to facilitate the implementation of operation in the market, the Government has established the New Kosovo Electricity Company ('NKEC') to take over the risk of purchasing the energy. The energy purchased by NKEC should be marketed in a transparent, non-discriminatory and market-based manner, in accordance with Kosovo's laws and applicable competition rules of the Energy Community, without restricting competition in the electricity market.

In order to achieve this, the Regulator has prepared a *"draft-Consultation Paper on Development of Security of Supply (PSO)"* for imposing a public service obligation on suppliers who supply customers in Kosovo, to pay a tax for NKEC, in order to ensure safe return of investments made by the investor, under the agreement signed between the Government of Kosovo and the investor.

The document contains the criteria for measuring the security of supply, the proposed methodology for calculating and applying the tax for capacity as well as the justification for setting the PSO. This document will be published for public discussion and will be published on the Regulator's Website, and will also be sent to interested parties including ECS, for further comments.

3.10 Electricity and Thermal Energy Annual Balance

The Regulator has legal responsibility for defining the methodology, rules and procedures for preparation and approval of energy balances. Also, according to the law, the obligations of system operators regarding the preparation of these balances are also defined.

In July 2018, the Regulatory Board, through Decision V_1016_2018 issued the Rule and Methodology on Preparation of Energy Balances. This Rule sets forth the principles, procedures and methodology for the drafting of annual and multi-year balances of electricity and thermal energy.

According to Law on Energy (No. 05/L-081), the Regulator is responsible for the approval of energy balances, including annual and long-term (10-year) balances of electricity, thermal energy and natural gas. The annual balances should be approved by the Regulator separately and then summarized in general for electricity, thermal energy and natural gas, as well as published on the website.

Based on the legal requirements, in December 2018, the Regulatory Board approved:

- Electricity Annual Balance 2019;
- Thermal Energy Annual Balances 2019;

- Long-Term Electricity Balance 2019-2028; and
- Long-Term Thermal Energy Balances 2019-2028.

The annual balances were approved separately; however they were published as a joint document.

Given that Kosovo does not have an organized natural gas system, the relevant natural gas balances are not prepared.

These documents were prepared in accordance with Law no. 05/L-081 on Energy (Article 8), and the Methodology on Preparation of Energy Balances, and contain:

a) annual and long term planning for generation of electricity and thermal energy;
b) forecast of electricity import and export;
c) consumption and losses in transmission and distribution networks of electricity/thermal energy.

The purpose of these documents is to inform all interested parties about the forecast of energy demand for 2019, respectively for the period 2019-2028. The documents are published on the Regulator's website www.ero-ks.org.

3.11 Activities of the Regulator in the Area of Price Regulation

3.11.1 Second Periodic Review 2018-2022

The Energy Regulatory Office based on the Law on Energy Regulator and the Rule on Maximum Allowed Revenue (MAR), within the powers granted, is the only authority responsible for setting tariffs for regulated activities in the energy sector.

In this context, one of the main duties of the Regulator during 2018 has been the review of applications submitted by licensees, regarding the allowed revenues and tariffs in the electricity sector, including transmission, distribution, wholesale energy purchases and electricity supply for universal service customers, namely regulated tariffs. The Regulator has carried out the evaluation of allowed revenues and tariffs by analyzing the technical, economic and financial indicators presented in the applications of the licensees.

In May 2017, the Regulator initiated "Second Regulatory Review" for the regulatory period 1 April 2018 to 31 March 2023, to determine the Maximum Allowed Revenues (MAR) of the licensees: Transmission System Operator (TSO-KOSTT), Market Operator (MO-KOSTT), Distribution System Operator (DSO-KEDS) and for a one-year period for the Universal Service Supplier (USS-KESCO).

During this multi-year tariff review, the Regulator analyzed the data for the past five years (2013-2017) and the forecast for the next five years (2018-2022). Developments in the energy sector should provide customers with the best quality of supply and service, where improvements of supply have a cost regarding which the licensees need to be compensated through tariffs.

During this reporting period, the Regulator has also made adjustments to Capital Investments (Regulatory Asset Base) for KOSTT and KEDS for the first regulatory period 2013-2017.

The entire review process has gone through public consultations (public hearings, meetings and publication of documents) as follows:

- The Regulator on 15 May 2017 initiated the Second Periodic Regulatory Review, (April 2018-2022);
- The Consultation Paper on the Weighted Average Cost of Capital WACC, published on 04 July 2017;
- Consultation Paper on the Loss Reduction Target, in the Transmission and Distribution Network, published on 04 July 2017;
- Consultation Paper on the Lifespan and Categorization of Assets, published on 04 July 2017;
- Response to Comments for the Consultation Paper on the Weighted Average Cost of Capital WACC, published on 05 April 2018;
- Response to Comments for the Consultation Paper on Loss Reduction Target, published on 05 April 2018;
- Response to Comments for the Consultation Paper on the Lifespan and Categorization of Assets at DSO and TSO/MO, published on 05 April 2018;
- Consultation Paper- Efficiency Factor, published on 24 August 2018;
- Consultation Paper on Maximum Allowed Revenues, Periodic Review for TSO/MO, published on 24 August 2018;
- Consultation Paper on Maximum Allowed Revenues, Periodic Review for DSO, published on 24 August 2018;
- Consultation Paper on Maximum Allowed Revenues of the Universal Service Supplier (KESCO), published on 13 September 2018;
- Final Report on TSO/MO Maximum Allowed Revenues – Response to Comments, published on 24 September 2018;
- Final Report on DSO Maximum Allowed Revenues- Response to Comments, published on 24 September 2018;
- Final Report on Maximum Allowed Revenues of the Universal Service Supplier – Response to Comments, published on 15 October 2018.

During this process, key performance parameters and operating and capital expenditures were set for a five year period. Determining these parameters facilitates the planning of licensees over the mid-term period and based on these components, the regular annual adjustments are carried.

3.11.2 Energy Purchases in the Wholesale Market

Kosovo as a signatory of the Energy Community Treaty has obligations for implementation of the EU Third Legislation Package and has been implementing it. The Regulator, based on the Guideline on Market Liberalization and Market Design, is developing the competitive market. Market opening enables the increase of competition in the wholesale and retail market. This provides the customers with more competitive prices.

Generation Prices for Public Generators (KEK JSC) are deregulated from 1 April 2017, but this energy will be offered in the wholesale energy market, with a priority for the Universal Service Supplier. Following the determination of the required amounts for supply, in order to meet the demands of USS customers, the calculation of the costs for energy purchase in the wholesale market is also

carried out. In accordance with the Rule on USS Revenues, the Universal Service Supplier is obliged to provide electricity in a transparent, competitive and efficient manner. The Universal Service Supplier must demonstrate that the estimated electricity prices are reasonable, in line with historical prices and those designed in the wholesale market.

During the determination of USS Revenues, account is taken of the balance of electricity which should reflect only the costs of electricity supply for the customers who are entitled the supply under universal service criteria. In this regard, volumes for wholesale energy purchases for USS are: energy purchases from KEK JSC, energy purchases from generators connected to transmission/distribution level and energy purchases through import.

The energy generated by KEK will be offered in the wholesale market, which is conducted in accordance with the "Energy Trading Procedure". By following this procedure and the Market Rules, the Transmission System Operator and the Distribution System Operator make the purchase of energy to cover the losses and provide ancillary services. Contracts for these services are made in accordance with market principles.

The summary of wholesale costs, foreseen for 2018 for the USS is given in the following table:

Tab. 3.13 USS Costs

Power Purchase Costs	GWh	€/MWh	€'000
Amount Supplied by KEK	2,868	29.00	83,180
Ujmani and other Generators at TSO Level	200	32.44	6,488
Generators at DSO Level	105	36.68	3,854
Import	250	55.00	13,750
Total Supplied Amounts	3,423	32.28	107,272
Retail Margin [3.00 %]			3,218
Total Power Purchase Costs			110,490

From the data presented in the table above, it is noticed that the average price for wholesale energy purchase for USS is 32.28 € / MWh. It should be taken into account that the costs that result from the difference between the referent price and the Feed-in Tariff are covered through the fund for Renewable Energy Sources, managed by the Market Operator.

3.11.3 Electricity Tariffs for Regulated Customers

The Regulator determines the regulated tariffs for customers who are entitled the supply under universal service criteria. The criteria on which customers upon which the customers are granted this right, are set out in the Law on Electricity, according to which: *"The right to universal service is entitled to all household and non-household customers with an annual circulation of less than ten 10 million Euro, or no more than fifty (50) employees ".*

In 2018 customers who were billed with regulated tariffs are customers connected to the 35 kV, 10 kV and 0.4 kV voltage levels, while the customers connected to the 220 kV voltage level and the ones at 110 kV are supplied at unregulated prices (market prices).

It should be mentioned that the right of supply at market prices, respectively the right to choose the supplier, is entitled to all customers. So far, the Regulator has licensed a total of 7 suppliers from which customers can purchase their energy at unregulated prices, but it should be emphasized that only KESCO is active.

The process for determination of regulated tariffs for 2018 is carried out by setting Maximum Allowed Revenues. Following the determination of Maximum Allowed Revenues, USS has submitted the tariff proposal. After analyzing this proposal, the Regulator has decided that the tariffs for industrial and commercial customers should be decreased for 5%, whereas household customers' tariffs remained the same.

This reduction, applied only to industrial and commercial customers, was made with the purpose of reflecting as accurately as possible the service costs of all customers.

The reasonable costs that are used to determine regulated tariffs include: power purchase costs, pass-through costs (transmission and distribution network costs), supplier costs (retail costs) and adjusted costs.

The details of these costs are presented in the following table.

Tab. 3.14 The justifiable costs that are used to determine regulated tariffs

MAR of Universal Service Supplier	Unit	2018
Supplier Retail Costs		
Operational Expenditures	€mil	5.96
Depreciation	€mil	0.11
Adjustments for CPI 2017	€mil	0.09
Pass-Through Costs		
TSO Costs	€mil	20.29
DSO Costs	€mil	83.46
RES Fund	€mil	2.50
Working Capital (WCLCt)	€mil	1.28
Power Purchase Costs	€mil	110.49
License Tax	€mil	0.06
Adjustments 2017	€mil	-17.10
Adjustments 2016	€mil	-1.52
Adjustments for CAPEX-PRR1	€mil	0.13
Bad Debt (BDTA)	€mil	8.57
Final MAR	**€mil**	**214.32**

The structure of electricity retail tariffs for universal service customers (regulated tariffs) is designed to cover the determined revenues in the amount of 214.32 million Euro.

The table below shows the structure of retail tariffs, and following the application of these tariffs it is expected that the supplier will invoice the allowed level of Maximum Allowed Revenues. This tariff structure has been applied since 1 November 2018.

Tab. 3.15 Tariff Structure of Retail Customers

Tariff Group	Voltage Level of Supply	Customer Tariff	Unit	Time of the day	Approved 2018
1	35kV	Customer Fixed Tariff	€/customer/month		11.19
		Engaged Power	€/kW/month		5.85
		Active Energy (P), of which	€c/kWh	High Tariff	4.92
			€c/kWh	Low Tariff	3.16
		Reactive Energy (Q)	€c/kVArh		0.67
2	10kV	Customer Fixed Tariff	€/customer/month		4.62
		Engaged Power	€/kW		5.04
		Active Energy (P), of which	€c/kWh	High Tariff	5.73
			€c/kWh	Low Tariff	3.69
		Reactive Energy (Q)	€c/kVArh		0.67
3	0.4 kV Category I (reactive power customers)	Customer Fixed Tariff	€/customer/month		2.57
		Engaged Power	€/kW		2.97
		Active Energy (P), of which	€c/kWh	High Tariff	6.69
			€c/kWh	Low Tariff	4.96
		Reactive Energy (Q)	€c/kVArh		0.67
4	0.4kV Category II	Customer Fixed Tariff	€/customer/month		2.97
		Active Energy (P), of which	€c/kWh	Single Tariff	8.83
		Active Energy (P), of which	€c/kWh	High Tariff	10.71
			€c/kWh	Low Tariff	5.30
5	0.4kV 2-rate meter (household)	Customer Fixed Tariff	€/customer/month		1.74
		Active Energy (P), of which	€c/kWh	High Tariff	6.75
			€c/kWh	Low Tariff	2.89
6	0.4kV 1 rate meter (household)	Customer Fixed Tariff	€/customer/month		1.74
		Active Energy (P), of which	€c/kWh		5.32
7	0.4kV (household-unmetered)	Estimated consumption			
		Customer Fixed Tariff	€/customer/month		1.74
		Active Energy (P), of which	€c/kWh	Average Tariff	6.75
8	Public Lighting	Customer Fixed Tariff	€/customer/month		3.21
		Active Energy (P), of which	€c/kWh	Single Tariff	9.24

High Tariff (day) is applied from 07:00-22:00 during the period from 1 October until 31 March
High Tariff (day) is applied fron 08:00-23:00 during the period 1 April until 30 September
The customer is charged with reactive energy above the allowed one which corresponds with cos(Φ)<0.95

3.11.4 Input Values for PRR2

The Regulator, during PRR2 has also determined the input values for TSO/MO and DSO, which are the main parameters used to calculate the Maximum Allowed Revenues of the TSO/MO and DSO. These input values are specified as fixed values and will be applied during the relevant 5 years of price control. The Regulator carried out the process of setting these parameters through public consultations, enabling all stakeholders to provide their comments on this process.

The input values, determined by Rules on Revenues are: asset lifespan and categorization, weighted average cost of capital, allowed level of losses, loss sharing factor, efficiency factor and savings sharing factor.

The Regulator, following the public consultation has approved the "Weighted Average Cost of Capital" which will be 8.3% real. This value applies for the entire regulatory period 2018-2022 for TSO/MO and DSO, which is presented in the table below:

Tab. 3.16 Weighted Average Cost of Capital for the Second Regulatory Period

Weighted Average Cost of Capital-Real	Unit	2018	2019	2020	2021	2022
Transmission System Operator and Market Operator	%	8.30	8.30	8.30	8.30	8.30
Distribution System Operator	%	8.30	8.30	8.30	8.30	8.30

Also, during this process, through public consultation, the Regulator has set the “Loss Reduction Target” (loss reduction trajectory). The table below presents the allowed losses at TSO and DSO level for the second regulatory period.

Tab. 3.17 Allowed Losses at Transmission and Distribution for the Second Regulatory Period

Allowed Losses	Unit	2018	2019	2020	2021	2022
Allowed Losses for TSO	%	1.78	1.78	1.78	1.78	1.78
Loss Reduction Target	%	-	-	-	-	-
Allowed Losses for DSO	%	18.80	18.80	17.60	16.40	15.10
Loss Reduction Target	%	-	-	1.20	1.20	1.30

One of the key input parameters that was set in 2018, used to determine the allowed revenues during PRR2 is "Asset Lifespan and Categorization". During the determination of these parameters, the Regulator has taken into account the technical, economic lifespan, and the best regulatory practices.

Asset categories and asset lifespan for the TSO / MO assets are given in the following table:

Tab. 3.18 Lifespan of TSO Assets by categories

No.	Asset Category	Lifespan (Years)
I	Buildings, roads, sewer networks, water supply, wells, elevators	50
II	HV Network, pillars	40
III	Low voltage network, substations, transformers, etc.	30
IV	Trucks, Scisor lift and Working Machines	10
V	Control and Telecommunication, Various Equipment, Fire Protection	8
VI	Furniture, office equipment	7
VII	IT equipment, software, patents, licenses, cars, etc.	5

Asset categories and lifespan of DSO assets are given in the following table:

Tab. 3.19 Lifespan of DSO Assets by categories

Nr.	Asset Category	Lifespan (Years)
I	Administration Buildings	50
II	MV networks, substations, power transformers, and equipment	30
III	LV networks, substations, power transformers, and equipment	25
IV	Transformer Stations (TMRR and TMT) and equipment	15
V	Meters and measuring devices, trucks,scissor lift and working machinery	10
VI	Furniture, office equipment	7
VII	Working equipment, reading apparatus and equipment, cars, computers, IT equipment, software, etc.	5

[1] *TMRR and TMT are measuring transformers of electricity and voltage*

During the determination of operational costs for the 2018-2022 regulatory period, the Regulator has determined the Efficiency Factor that applies to the base year (2018) to make the forecast of these costs later in the coming years. The efficiency factor for TSO/ MO and DSO for PRR2 is presented in the following table:

Tab. 3.20 Efficiency Factor for TSO/MO and DSO for the second regulatory period

Efficiency Factor	Unit	2018	2019	2020	2021	2022
Transmission System Operator and Market Operator	%	-	1.50	1.50	1.50	1.50
Distribtuion System Operator	%	-	1.50	1.50	1.50	1.50

In order to encourage more efficient operation of the operators, the Regulator has set savings sharing factor for operational and maintenance costs, for savings that exceed the efficiency factor. These savings are shared between licensees and customers by the 50/50 factor.

3.11.5 Revenues and Tariffs for Distribution and Transmission Use of System

The Regulator, following the determination of regulatory parameters, has set the Maximum Allowed Revenues. The Maximum Allowed Revenues of the TSO/MO and DSO include operating and maintenance costs, costs for purchase of losses, depreciation and return costs resulting from planned investments, in accordance with the Development Plan and other justifiable costs for operation of the transmission and distribution system.

During the evaluation of operational and maintenance costs, in addition to historical data, the Regulator has also analyzed the performance of similar companies in the region and beyond.

With the aim of providing security of supply, liberalization and integration of electricity markets, integration of new generating capacities, reduction of losses and improvement of other technical parameters of the network, the Regulator has allowed considerable capital investments which for the TSO / MO reach the value of €50.2 million, whereas for DSO €131.44 million, for the second regulatory period 2018-2022.

The table below shows the Maximum Allowed Revenues and planned capital investments for PRR2 for KOSTT.

Tab. 3.21 Maximum Allowed Revenues for TSO for the Second Regulatory Period

KOSTT	PRR2 - (Allowed *1000 €)				
	2018	2019	2020	2021	2022
Maximum Allowed Revenues	30,477	28,747	29,970	30,951	31,536
Allowed Capital Investments	10,067	16,232	7,120	15,935	912

Maximum Allowed Revenues for KOSTT will be collected through tariffs approved by the Regulator, based on the Tariff Determination Methodology of the transmission system, system operation, and market operation.

The following table presents the applicable Tariff Structure for use of Transmission System Operator and Market Operator, Transmission Use of System and RES fund.

Tab. 3.22 TSO/MO Tariffs Structure

Tariff Group	Tariff Element	Unit	Tariff
Transmission Connected Generation	System Operator Tariff	€/MWh	0.933
	Market Operator Tariff	€/MWh	0.026
Distribution Connected Generation	System Operator Tariff	€/MWh	0.279
	Market Operator Tariff	€/MWh	0.026
Distribution Operator	System Operator Tariff	€/MWh	1.033
	Market Operator Tariff	€/MWh	0.029
Supply	TUOS Tariff 400/220 kV	€/kW/vit	7.580
	TUOS Tairff 110 kV	€/kW/vit	15.515
	System Operator Tariff	€/MWh	1.033
	Market Operator Tariff	€/MWh	0.029
	RES Fund Tariff	€/MWh	0.731

The same principles for determination of revenues and tariffs are applied for both network operators (TSO/MO and DSO). Thus, the Regulator, through a transparent process and in consultation with all stakeholders, has set the Maximum Allowed Revenues for DSO.

DSO Revenues for the Second Regulatory Period 2018-2022 are approved as described below.

Tab. 3.23 Maximum Allowed Revenues for DSO for the Second Regulatory Period

KEDS	PRR2 - (Allowed *1000 €)				
	2018	2019	2020	2021	2022
Maximum Allowed Revenues	83,462	83,178	82,951	82,279	81,380
Allowed Capital Investments	28,483	33,737	28,846	20,510	19,866

Maximum Allowed Revenues for DSO will be collected through tariffs approved by the Regulator based on the Methodology on Determination of Distribution System Tariffs.

The table below presents the Tariff Structure for Distribution Use of System for 2018.

Tab. 3.24 DSO Tariff Structure

Tariffs of customers connected to DSO		
Voltage Level	Unit	Tariff
35 kV	€c/kWh	1.33
10 kV	€c/kWh	1.64
0.4 kV	€c/kWh	2.53

3.11.6 Thermal Energy Tariffs

In line with legal provisions, the Regulator sets the Maximum Allowed Revenues and thermal energy tariffs based on Thermal Energy Pricing Rule.

This Rule, among others,:

- sets the basis and methodology for calculation of Maximum Allowed Revenues and Thermal Energy Tariffs;
- Establishes the procedures for submission of applications, review, adjustment and approval of tariffs in the regulated sector of thermal energy.

In accordance with legal provisions, the Regulator determines the Maximum Allowed Revenues and thermal energy tariffs based on the Tariff Methodology, which is shown in the following figure:

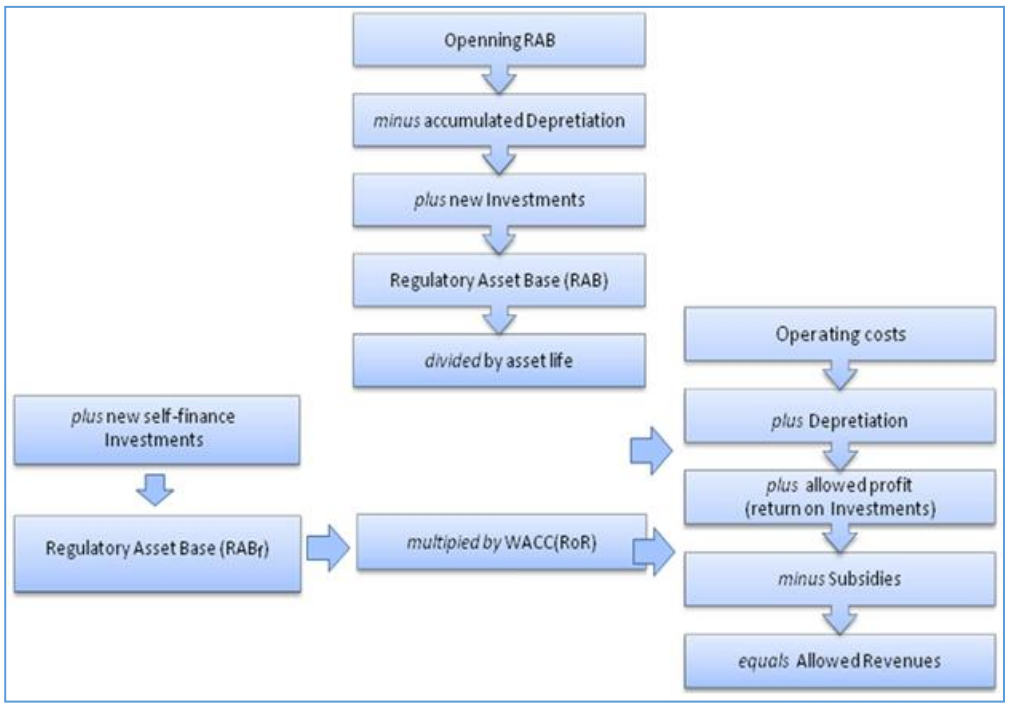


Fig. 3.3 Schematic Presentation of Tariff Methodology

According to this methodology, the Regulator sets the Maximum Allowed Revenues, which the thermal energy enterprise has to realize through the tariffs, namely the allowed reasonable costs that should be recovered and a reasonable profit rate, which is calculated according to the Allowed Rate of Return (RoR) on the Regulatory Asset Base (RAB).

On 28 June 2018, the Regulator issued a letter for notifying the commencement of tariff review for the 2018/2019 season.

The process for determination of tariffs and their approval is carried out in two steps:

1. Determination of Maximum Allowed Revenues, based on: i) the information and data provided in the tariff application; ii) information submitted during the regulatory reporting of realizations in the last season 2017/2018; and iii) the co-ordination between current and projected realizations, which is based on the difference between the planned and actual revenues of the previous heating season.
2. Calculation of tariffs based on Maximum Allowed Revenues and Tariff Structure.

For determination of Allowed Revenues of DH Termokos J.S.C for the 2018/2019 season, in line with Thermal Energy Pricing Rule, the Regulator has undertaken the following steps:

1) Evaluation and Determination of Allowed Operational Costs;
2) Evaluation and Determination of Depreciation;
3) Determination of Allowed Return on RAB (allowed profit for the company), which includes:
   a) determination of RAB –evaluation and approval of company's assets, verification and approval of planned investments and working capital; and
   b) Calculation of Allowed Rate of Return (RoR)/ WACC;
4) Evaluation and Determination of the Allowed Cost of Network Losses.

Within the tariff review, the Regulator has drafted the Regulatory Reports for determination of Maximum Allowed Revenues as well as for determination of thermal energy tariffs for 2018/2019 season.

In the session held on 15 October 2018, the Regulatory Board, following the review of Regulatory Reports and all relevant documents, issued the following decisions:

- V_1046/1_2018 - on Approval of Maximum Allowed Revenues for DH Termokos JSC, to be recovered through thermal energy (heating) tariffs for final customers, for 2018/2019 season;
- V_1046/2_2018 - on Approval of thermal energy tariffs for final customers of the District Heating (DH) Termokos JSC, for the heating season 2018/2019;
- V_1047_2018 - on Approval of thermal energy tariffs, for final customers of the District Heating (DH) Gjakova JSC, for the heating season 2018/2019.

The structure and levels of thermal energy tariffs for DH Termokos and DH Gjakova are presented below.

Tab. 3.25 Thermal energy tariffs

Thermal Energy Tariffs - Season 2018/2019					
Metered Tariff Components	Unit	DH Termokos		DH Gjakova	
Monthly Tariff for Thermal Capacity (fixed component)	[€/kW/month]	0.93		0.91	
Supply Tariff/ Cons. Of Thermal Energy (variable component)	[€/MWh]	38.77		58.76	
Unmetered tariff Component	Unit	Household Customers	Com& Ins Customers	Household Customers	Com& Ins Customers
Monthly Tariff for Thermal Capacity (fixed component)	[€/m^2 per month]	0.12	0.15	0.09	0.12
Supply Tariff / Cons. of Thermal Energy (variable component)	[€/m^2 per month]	0.66	0.82	0.88	1.27
Total tariff for unmetered customers	[€/m^2 per month]	0.78	0.97	0.97	1.39

3.12 Promoting Electricity Generation from RES

Kosovo is one of the countries that has so far relied the entire financial support mechanism on the Energy Regulatory Office. ERO has established mechanisms of the RES Support Scheme, based on the targets set by the Government of Kosovo for fulfilling the legal obligations it has received in relation to the European Commission. Therefore, Kosovo has a mandatory target to reach 25% of domestic consumption from RES by 2020. With respect to this, the Regulator has carefully handled this obligation by establishing mechanisms which are appropriate and predictable for Kosovo's economic and social circumstances. Mechanisms established by the Regulator for the support of RES have proved to be very efficient, covering a large number of targets in various technologies with investment applications, and from time to time has adapted these mechanisms to legal changes and the terms of doing business in Kosovo and the region.

It is worth emphasizing that the energy sector, including renewable energy, remains one of the most attractive investment areas in Kosovo, owing to the above-mentioned mechanisms. Due to this, the level of investments in RES in recent years has increased significantly, where only in 2018, about 30 million Euro were invested in water generation capacities, 33 million Euro from wind technology and about 7.7 million Euro from solar/photovoltaic technology. So, the total realized investments during 2018 are in amount of around 70.7 million Euro.

Feed-in Tariffs are a mechanism for promoting investments in generation of electricity from renewable sources, which are applied in developing countries as well as in developed countries (EU, USA and beyond) . Given that it is highly required to promote investment in RES, Kosovo has also adopted the Feed in Tariff as the main incentive mechanism.

The following table presents the Feed-in Tariff for electricity generation from RES, according to the technologies.

Tab. 3.26 RES Feed-in Tariffs, by technologies

Feed-in Tariff aplicable for RES	
RES	€/MWh
Wind	85.00
Photovoltaic	136.40
Small Hydro Power Plants	67.47
Biomass	71.30

The implementation of the Support Scheme of Feed-in Tariff is made possible through the RES fund, managed by the Market Operator. The financial value of the fund in 2018 was about 10 million Euro. According to the trend of investments in RES, it is expected that the RES fund will increase in the next years.

Given that RES targets according to international obligations and the Administrative Instruction of the Government of Kosovo for the Promotion of RES are limited, the Regulator has established a regulatory framework for all potential investors for investments in RES technologies, outside the scheme of Feed-in Tariff. This framework guarantees a priority in energy dispatching and market prices to all generators outside the Feed-in Tariff Scheme.

The Regulator has also developed a Support Scheme for RES generators for own-consumption. The main purpose of this scheme is to encourage customers to invest in micro-generators, by means of which they would cover some of their consumption.

3.13 TSO (KOSTT) Certification Process

The Regulator, on 28 April 2017, received from Transmission System Operator and Market Operator JSC., the request/application upon which is required the Certification as a Transmission System Operator, based on Article 12 of the Law 05/L-085 on Electricity, Article 7 of Rule on TSO Certification, and in line with ownership unbundling model, as set in Article 9 (6) of the Electricity Directive 2009/72/KE.

The Board of Energy Regulatory Office, in the session held on 24 September 2018, approved the request/application of TSO/KOSTT, and certified the Transmission System Operator, as the only operator in the territory of the Republic of Kosovo, by means of which it was proved that the criteria of ownership unbundling and independence in decision making from the activity of generation and supply of electricity have been met, in line with the laws of the Republic of Kosovo and the Energy Community.

The Regulator, on 02.10.2018, in accordance with Rule no. 14/2017 on Certification of Transmission System Operator, issued by the Regulator, has officially submitted to the Energy Community Secretariat (ECS) the Preliminary Decision on Certification of TSO-KOSTT, in order to review it and grant an Opinion.

The Energy Community Secretariat (ECS), according to the Legal Procedures, is obliged within four (4) months following the receipt of the Preliminary Decision by the Regulator, to issue an Opinion regarding the certification of TSO. The Regulator upon receipt of the Opinion by ECS, is obliged

within two (2) months to issue the Final Decision on Certification of TSO/KOSTT, in accordance with provisions of Article 39 of the Law on Energy Regulator.

3.14 Activities of the Regulator in the Area of Customer Protection

In line with Article 17 of the Law on Energy Regulator, the Regulator is responsible for resolving complaints and disputes between customers and licensees, between two licensees, as well as regarding third party access to the transmission system or distribution of electricity, thermal energy or natural gas, as well as transmission, cross-border flows of electricity and natural gas.

According to the provisions of the above-mentioned rules, all customers are entitled to file complaints regarding the services provided by the supplier or system operator, who process the complaint and issue a response within the legal deadline. After receiving the response, the customer may address the Regulator for further review.

The Regulator, during 2018, has registered 105 complaints of customers who have exercised their right against the responses issued by the Supplier and 1 dispute between two licensees (energy companies), whereas in total, during 2018, 106 complaints/disputes were registered. During 2018, the number of complaints submitted to the Regulator is about 119.81% lower than the number of complaints submitted during 2017. The Regulator, in addition to registered and resolved customer complaints, has also offered support in providing information and explanations through verbal consultations, email, and through phone to all energy customers.

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

Tab. 3.27 Customer Complaints by Categories, 2018

Customer Complaints by Categories	Number	Share [%]
Household Customers	87	82.86
Commercial Customers	16	15.24
Industrial Customers	1	0.95
Public Lighting Customers	1	0.95
Total	105	100.00

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

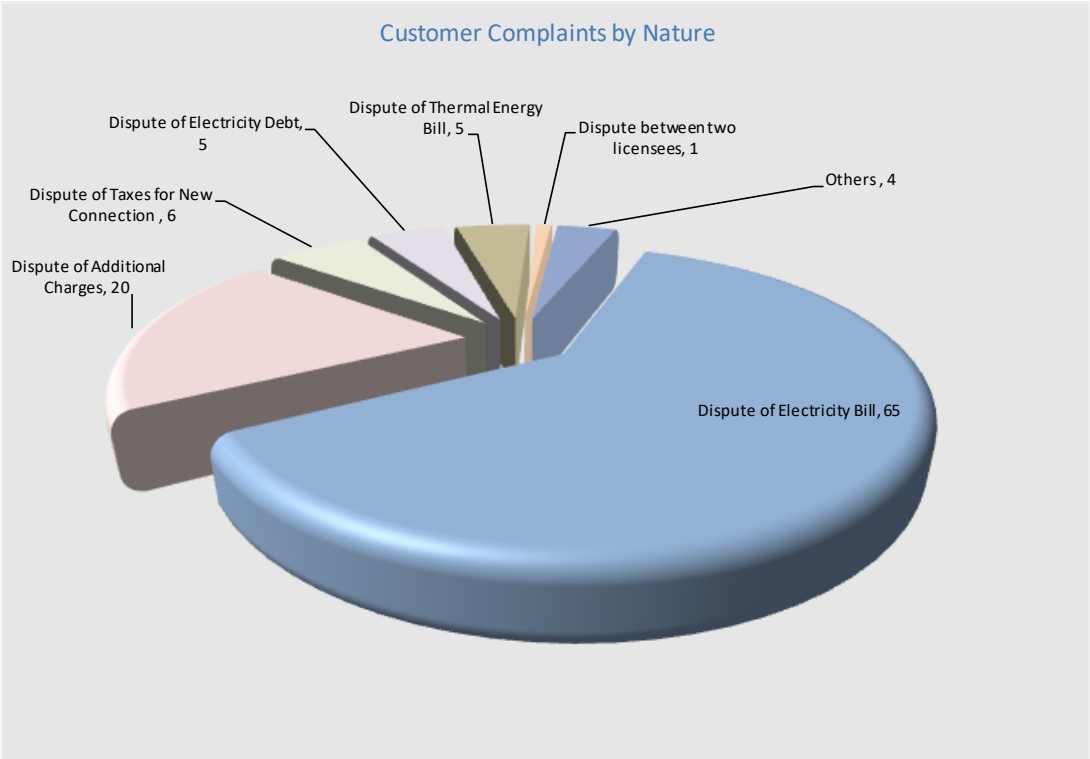


Fig. 3.4 Number of customer complaints by their nature

The following is an explanation of the nature of customer complaints filed for 2018:

- **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 consumption, as a result of the defect of any measuring system.
- **Dispute of new connections,** relates to customer complaints who were 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 code that existed before.
- **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 thermal energy bills,** relates to customer complaints regarding the billing of thermal energy, made by DH "Termokos", which are related to the heating quality and billed area.

During January - December 2018, the Regulator has solved 223 customer complaints, including complaints that have been returned for reconsideration to the supplier and Distribution System Operator. From the overall number of resolved complaints, 136 of them were decided in favor of customers or expressed in percentage 61.26%, while 86 customer complaints or 38.74% were rejected as ungrounded. All complaints reviewed by the operators, which were proceeded to the

Regulator, were once again reviewed by the Regulator in order to establish the complete resolution of the complaints according to the customers' requests and the respective customers were informed. In all reconsidered cases, the customers agreed with the provided resolutions.

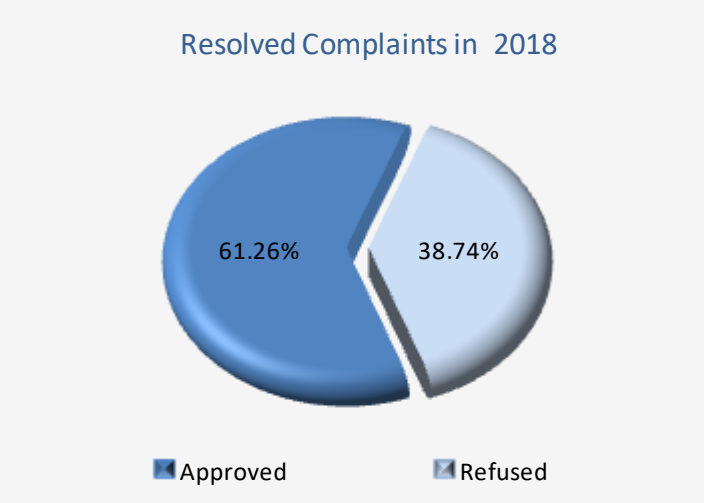


Fig. 3.5 Resolved Complaints, 2018

It should also be emphasized that the Regulator has received from the Basic Court of Pristina a complaint of the customer, with the justification of incompetence on the subject for review by the court. This complaint has been reviewed by the Regulator and the customer was instructed for further procedures, according to legal provisions of Article 61 of the Law on Electricity and the Rule on Resolution of Complaints and Disputes in Energy Sector.

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

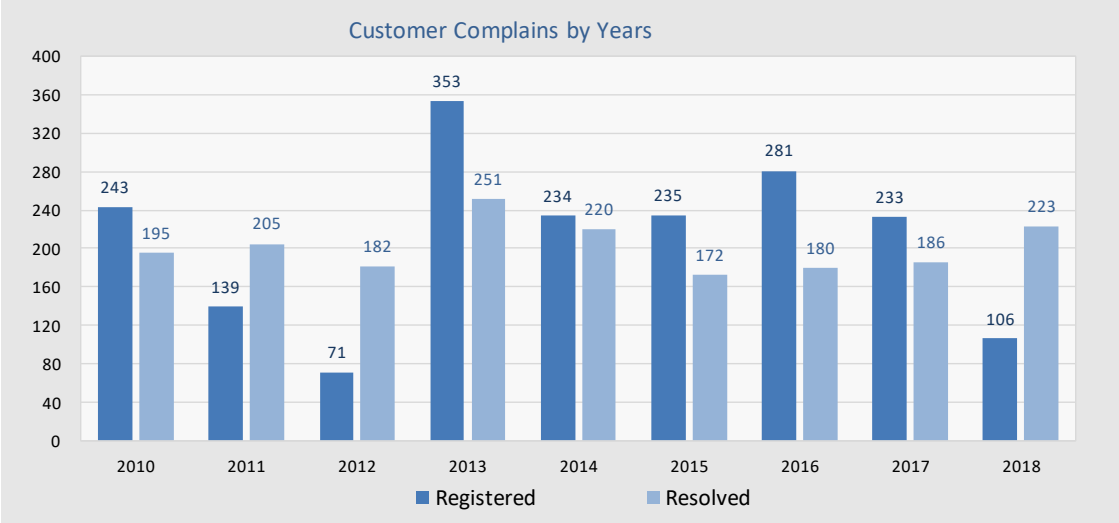


Fig. 3.6 Registered and Resolved Customer Complaints 2010-2018

3.14.1 Disputes between two licensees

The Regulator, pursuant to Article 17, paragraph 1, sub-paragraph 1.2 of the Law on Energy Regulator, as well as the legal provisions of Article 4, paragraph 1, sub-paragraph 1.2 of the Rule on

Resolution of Complaints and Disputes in Energy Sector, in addition to the competences for review of customer complaints against an energy enterprise, is also entitled the competences for resolution of disputes between two licensees.

The Transmission System Operator and Market Operator- KOSTT JSC, by the end of 2018 initiated a dispute against Kosovo Energy Corporation JSC regarding the objection of the invoice no. OST-P-03-2-2018.

The dispute filed by KOSTT JSC against KEK JSC could not be resolved by the Regulator during 2018 due to its submission by the end of 2018, therefore this dispute remains to be completed in early 2019.

3.14.2 Decisions of the Regulatory Board in the Area of Customer Protection

Based on the Rule on Resolution of Complaints and Disputes in Energy Sector, customers and licensees are entitled to file a complaint against the decision of the Department of Customer Protection (CPD) as a first instance to the Regulatory Board as a second instance.

During 2018, customers submitted 15 complaints to the Regulatory Board, against CPD decisions. Of the 15 registered complaints, the Regulatory Board reviewed all of them and rejected these complaints as ungrounded.

The supplier KESCO, during 2018, submitted 32 complaints to the Regulatory Board against CPD decisions. Of the 32 registered complaints, the Board reviewed all of them and rejected these complaints as ungrounded.

During 2018, the Regulatory Board reviewed 6 recommendations issued by the Customer Protection Department regarding complaints of commercial and industrial customers, whereby the Board approved all these recommendations.

3.14.3 Other Activities in the Area of Customer Protection

In addition to the registered complaints, the Regulator's staff during this reporting year has also carried out 1,325 meetings and 750 telephone conversations with parties including electronic communications, who have addressed the office for various contractual issues between the customer and the energy enterprise. The Regulator's staff during the communication with customers has informed and instructed them about the rules, procedures and their rights and obligations regarding electricity supply.

During 2018, the Regulator also received 13 customer complaints by mail. Despite the fact that it was necessary to address the licensees or the courts regarding these complaints, the customers insisted on addressing the Regulator in resolving them. The nature of these complaints was mainly for unauthorized use of electricity, as well as damage compensation. The regulator in all these cases responded in writing to the customers by instructing them about further procedures regarding their complaints.

The Regulator, during 2018 same as in the previous years, had close cooperation with the Department of Customer Protection within the Ministry of Trade and Industry. During this reporting year, it has received some customer complaints from this institution. These complaints were

received and reviewed by the Regulator in accordance with the legal provisions. It is worth mentioning that since 2018, at the request of the Ministry of Trade and Industry, a Regulator's Representative is a member of the Customer Protection Council.

During 2018, a number of Regulator's decisions were appealed by dissatisfied parties to the Basic Court in Pristina - Department for Administrative Matters to assess the legality of administrative decisions. During 2018, the Regulator based on the decisions of the Basic Court in Pristina has prepared 20 responses to the claim against the claimants KEK, KEDS, KESCO and customers regarding the decisions of the Regulatory Board. Also, during this reporting year the Regulator has been engaged in 51 court hearings in the Basic Court in Pristina as a respondent party. It is worth mentioning that during the previous years as well as the reporting year, the number of court proceedings that the Regulator has followed has increased significantly and is demanding high engagement.

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

4 COOPERATION WITH OTHER PARTIES AND TRANSPARENCY

4.1 Reporting and cooperation with the Assembly of Kosovo

Given that the Regulator is a body established by the Assembly of Kosovo, it annually submits the Annual Report to the Assembly and reports regularly to the Committee on Economic Development, Infrastructure, Trade, Industry and Regional Development as well as the Committee on Budget and Finances. During 2018, the Regulator has also reported on specific issues before other committees as per their requirements.

- The Regulator participated in the workshop supported by INDEP on the topic "Transparency and Reporting of Independent Agencies - Annual and Financial Reports and the Opinion of the National Audit Office";
- On 29 March 2018, the Regulator and KOSTT reported to the Committee on Economic Development regarding the situation in energy sector in the country;
- 11 April 2018, the Regulator submitted the Financial Report 2017 to the Parliamentary Committee on Budget and Finances;
- 12 April 2018, the Regulator presented to the Committee on Economic Development, Infrastructure, Trade, Industry and Regional Development the Regulatory Parameters, which determine the revenues collected from regulated customers tariffs;
- On 24 April 2018, the Regulator presented the Annual Report to the Committee on Economic Development, Infrastructure, Trade, Industry and Regional Development;
- On May 4, 2019, the Regulator submitted the Report on indicative assessment of electricity prices following the construction of TPP “Kosova e Re”, prepared at the request of the Committee for Economic Development, Infrastructure, Trade, Industry and Regional Development;
- 18 September 2018, the Regulator presented to the Committee on Economic Development, Infrastructure, Trade, Industry and Regional Development the "Consultation Papers on Determination of Maximum Allowed Revenues" as well as the "Consultation Paper on Determination of the Efficiency Factor";
- On December 15, 2018, the Regulator reported to the Parliamentary Committee on Human Rights, Gender Equality, Missing Persons and Petition for Implementation of Recommendations adopted by the Assembly at the plenary session held on 9 February 2018 regarding the billing of electricity in the four northern municipalities of the Republic of Kosovo;
- On 28 December 2018, the Regulator reported to the Committee on Economic Development, Infrastructure, Trade, Industry and Regional Development regarding the electricity outages applied by licensed operators.

4.2 Cooperation with International Organizations

Reactivation of Membership and Participation in ERRA Activities

The Regulator, following several years of interruption, continued the membership in ERRA[1] (Energy Regulators Regional Association). This interruption of the Regulator's participation in this Association had occurred because some of its members refused to recognize the Regulator as a Kosovo representative, continuing to recognize it on behalf of UNMIK, as it was originally admitted in 2005. Following few years of insistence from Regulator's side, the ERRA General Assembly, on 23 April 2018, decided to change its Operating Guide by deciding that the names of its members should be used as used by the United Nations. As a result of this admission, during 2018, the Regulator has continued to be an active participant in the ERRA organization and has reported to the working groups. The Regulator was represented by the Board and its management at the annual ERRA conference, which was held in Antalya, Turkey, under the organization of the Turkish Energy Regulatory Authority (EMRA). The conference addressed the importance of regulators' independence in a transition period in the energy sector and encouraged regulators to continue working within sustainable regulatory frameworks.

So far, ERRA has 43 members, including ERO, which has been a member since 2005. The Association was legally registered in Hungary in April 2001 and its Secretariat operates in Budapest. The main purpose of the Association is to increase the exchange of information and experiences among its members and to broaden the access to the regulatory energy experience around the world https://erranet.org/.

Fig. 4.1 Annual ERRA Energy Investment and Regulation Conference- 23 April 2018, Antalya, Turkey

[1] *Energy Regulators Regional Association (ERRA) is a volunteer organization made up of independent energy regulators mainly from Europe, Asia, Africa, the Middle East, South America and North America.*

Cooperation with NARUC

The Regulator and NARUC have continued the Partnership Activity[2] during 2018 with various projects and workshops. At the beginning of June, a workshop was held for the Vulnerable Customers, as part of the activities for implementing the Third Package of EU Directives on Energy. With the Third Package, the handling of the issue of Vulnerable Customers was not left to the Regulator directly and was not included in the previous legislative packages, therefore, from the regulatory aspect, it is a challenge for the Regulator to conceive and handle this group.

The workshop lasted for three days, and one of its parts also included representatives of other parties such as the Ministry of Economic Development, Ministry of Finance, Ministry of Labor and Social Welfare, Public Electricity Supply Company (KESCO) and the office of the World Bank. These stakeholders will have an important role in defining and finding methodologies for addressing vulnerable customers, in terms of electricity consumption in the country.

As a continuation of this project, in December 2018, two members of the Regulator's staff, visited the Pennsylvania Regulator in order to have a closer view of the practices and means used by this country in addressing vulnerable customers.

Fig. 4.2 Workshop on Vulnerable Customers - 30 May - 2 June 2018, Pristina

The Regulator was also a participant in the NARUC Project for drafting the Transmission Development Plans and the Project for Transmission Codes and Natural Gas Distribution Codes.

The Regulator nominated two permanent members of the staff to be part of the project "Ten-Year Transmission Network Development Plans of Southeast Europe" by NARUC in order to support the regulators of the Southeast Europe in reviewing, approving and monitoring transmission network development plans that have been drafted by the Transmission System Operator (TSO).

[2] *ERO and NARUC are in partnership since 2018. This partnership is financially supported by USAID and has resulted in ERO's procedural and technical changes and improvements based on the best international regulation practices. The partnership with NARUC over the years has included regulators from the Illinois Commercial Commission (ICC), the Pennsylvania Public Utility Commission (PA PUC), the New York State Public Service (NYSPSC), the Kentucky Public Service Commission (KPSC) and the one from Ohio (PUCO).*

Fig. 4.3 Second Workshop, 12 June 2018, Zagreb, Croatia

The project is made up of three workshops that covered in details all the components and sections that comprise a transmission network development plan, how net profit methodologies are applied and best practices for reviewing and monitoring a transmission network development plan. The workshops have also included cyber security issues related to transmission system planning and how regulators should review and monitor cyber security investment proposals by TSOs. In this framework, the *"Guidelines for Review, Approval and Monitoring of Ten-Year Transmission Network Development Plans "* was established.

Regarding the Gas Project, the member of the Regulator's staff, nominated as permanent member in this project, during 2018 participated in two workshops organized under the project "Market Design and Gas Transmission Codes". In addition to this, as part of Project Assistance, the Regulator hosted the NARUC's consultant in the 4-day Workshop held at the Regulator, on Drafting the Draft-Concept of Gas Codes for Kosovo and the Regulatory Guidelines for the Review and Evaluation of Gas Infrastructure Projects and network development plans.

Fig. 4.4 Gas Workshop on 21-23.05.2018 held in Lithuania

4.3 Participation of the Regulator in International Activities

Participation in international activities is considered by the Regulator as a very important part of activities that serve to strengthen the institution, increase its knowledge and its staff experience. The main activities and participation in international organizations, international conferences, workshops or multilateral and bilateral meetings are described below.

4.3.1 Participation in Energy Community

The Energy Community (EC) is an international organization founded by the Treaty establishing the Energy Community , signed in October 2005 in Athens, Greece, in force since July 2006.

The main objective of the Energy Community is to extend the rules and principles of the EU's internal market to countries of Southeast Europe, the Black Sea region and beyond on the basis of a legally binding framework.

The activities of the EC in 2018 were focused on the fulfilment of common goals: the implementation of the *"acquis communautaire"*, the development of a harmonized regulatory framework at regional level, and the liberalization and integration of electricity and natural gas markets.

The EC Contracting Parties are: Albania, Bosnia and Herzegovina, Kosovo, Macedonia, Montenegro, Serbia, Moldova, Ukraine and Georgia. The member states of the European Union are in the capacity of participants, while Norway, Turkey and Armenia have the status of the Observer.

Fig. 4.5 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 headquarters in Vienna and four advisory forums: on electricity, natural gas, social issues and oil.

The Energy Community Regulatory Board (ECRB)- is an institution established under Article 58 of the ECT, 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
- seek 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.

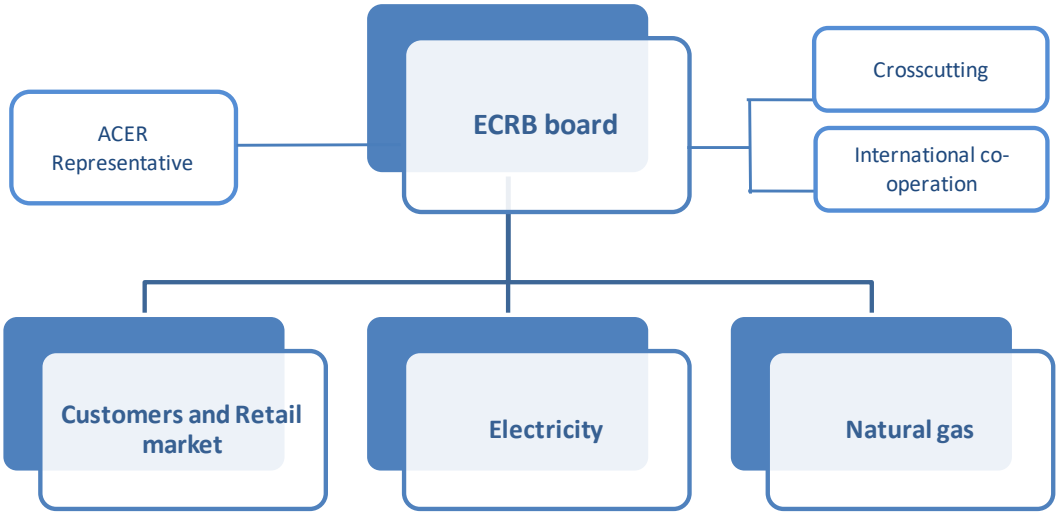


Fig. 4.6 The Structure of Energy Community Regulatory Board

4.3.2 Activities of the Regulator within ECRB

Under its obligations to the EC, the Regulator has appointed its members to the ECRB and to each working group and actively participates in the activities of the Board and the relevant working groups. The activities of the respective groups are presented below:

4.3.2.1 Electricity Working Group

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

- **TF1 – Electricity Wholesale Market Opening**

  In order to support the effective opening of electricity regional markets in Energy Community, this subgroup is focused on regulatory support activities, integration of the "day-ahead" market and “real-time” markets in South East Europe, within the Initiative WB 6 (Western Balkans 6). A number of documents were compiled within this Task Force, such as: i) The Report on Trading Activities on the day-ahead and “real-time” markets; and ii) Harmonized Regulatory Review of CAO SEE Rules;

- **TF2 – Integrated Market Balancing**

  The 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 drafting of Reports for: i) Balancing Markets Development Plans; ii) Analysis of Price Formation of Imbalances in Contracting Parties; and iii) Regulatory Coordinated Input for Cross-Border Balancing.

- **TF3 – Electricity Wholesale 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 drafting of documents such as: i) Monitoring Report on the Development of Electricity Wholesale Market in the Contracting ii) Monitoring Report on Compliance with Transparency Regulation (EU) 543/2013 and iii) Guideline on SEE Market Monitoring.

4.3.2.2 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 – Natural Gas Wholesale Market Monitoring**
  Market monitoring is a fundamental component of regulatory responsibilities; complete reporting on market performance and development prospects promotes competition, customer protection, energy efficiency, investment and safety of supply.

  Within this sub-group, the activities are mainly focused on: i)Monitoring Reports on Developments of Gas Wholesale Market in Contracting Parties; and ii) Monitoring Report of Compliance with Transparency Requirements in Contracting Parties as well as Monitoring Report on ACER Gas Markets.

- **TF2 –Implementation of Network Codes**

  Upon adoption by the Energy Community of the Network Codes under the Third Package, the implementation of these codes by the Contracting Parties is one of the primary tasks in the Energy Community Agenda. In this regard, regulatory authorities should identify and select the best model for implementing network codes.

  Following the activities of this task force, the following analytical documents were drafted for: i) Implementation of the Gas Code for the balancing of gas flows in the Contracting Parties and ii) Implementation of the Tariff Code in the Contracting Parties.

4.3.2.3 Customer and Retail Market Working Group

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 – 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: i) drafting a Monitoring Report on the functioning of retail electricity markets and natural gas in the EC; ii) drafting of an evaluation Document for existing capacities and procedures in the Contracting Parties regarding the monitoring of electricity retail market.

- **TF2 –Distribution Network Tariffs (electricity and natural gas)**

  Taking into account the legislative and technological changes that affect the distribution tariffs, this sub-group has analyzed the methodologies for distribution tariffs applied in the Contracting Parties, including the composition of allowed revenues and tariff structures. This analysis serves to identify best practices and provide the proper recommendations.

  In this regard, the Study on Tariff Methodologies for Distribution of Electricity and Gas in the Energy Community has been compiled, based on inputs from all Regulatory Authorities.

- **TF3 –Resolution of Complaints and Customer Awareness**

  Customer protection, as a fundamental responsibility of the Regulators, also includes the instruments for handling the complaints and disputes, that enable the protection of customer interests in a liberalized market. Also, it also includes the information and awareness of customers about their rights in the context of a competitive market.

  The activities within this subgroup included the Status Review regarding the resolution of complaints and disputes, and the organization of the Workshop on measures for active involvement of customers in liberalized markets.

4.3.3 Participation of the Regulator in meetings organized by international institutions

Given that the regulation in energy sector is a field that is developing dynamically then these developments need to be followed continuously. The Regulator pays special attention to participation in meetings, workshops and trainings. In addition to the contribution made to these meetings and workshops, this has an impact on increasing the knowledge of the Regulator's staff, as well as gaining experience from regional and international regulation practices that are required for professional development.

During 2018, a series of regional meetings, workshops and trainings have been held that have contributed to further enhance the knowledge of Regulator's employees on regulating the energy sector in line with EU standards.

Below are presented the meetings, working groups and trainings held during 2018:

- 30 January 2018 - 41st Meeting of the Working Group on Gas (GWG) - ECRB, EC, organized by the Energy Community Secretariat in Vienna;

- 7-8 February 2018 –Workshop related to the project "Ten-year development plan of Transmission Network of the South East Europe", Skopje, Macedonia;
- 21 February 2018 - Training "Empowering of electricity and gas customers through the development of price comparison tools", organized by the Energy Community Secretariat in Vienna, Austria;
- 22 February 2018 - 39th meeting of the Customer and Retail Working Group within ECRB, organized by the Energy Community Secretariat, Vienna, Austria;
- 26 February 2018 –The meeting "Network Code for the Gas Capacity Allocation Mechanism - Gas Action 2020" in Vienna, Austria;
- 27 February 2018 - 43rd meeting of the ECRB Electricity Group, organized by the Energy Community Secretariat, Vienna, Austria;
- 28 February 2018 –Training on the Joining of Electricity Markets in the Day-Ahead Market, Vienna, Austria;
- 12 April 2018 –Preparatory meeting - Common Energy Market Albania - Kosovo; Prizren;
- 18 April 2018 - Meeting of WB6 Group on Implementation of Cross-Border Balancing in the Western Balkans and the Steering Committee Program (XB PSC), Sofia, Bulgaria, organized by the Energy Community Secretariat;
- 19 April 2018 - the Meeting of the Group on Implementation of the Day-Ahead Market of WB6, and the Steering Committee's Program (DA PSC) in the Western Balkans, Sofia, Bulgaria, organized by the Energy Community Secretariat;
- 08 May 2018 - Workshop- Implementation of network codes in the Energy Community, organized by the Energy Community Secretariat, Vienna, Austria;
- 15 May 2018 - Training “Regulatory School –REMIT and Market Supervision“ in Vienna, Austria;
- 22 May 2018 - The 4th Meeting of Electricity Group PECI/PMI, organized by the Energy Community in cooperation with the European Commission, the Energy Community Secretariat, Vienna, Austria;
- 23 May 2018 –Energy Community Meeting of the Project Evaluation Working Group PECI, in Vienna, Austria.
- 31 May 2018 - 3rd Technical Workshop "Gas Market Design and Natural Gas Transmission Codes"; organized by the United States Agency for International Development (USAID), the National Association of the Regulatory Utility Commissioners (NARUC), the National Commission on Energy and Pricing Control in Lithuania (NCC);
- 11-12 June 2018 - Workshop related to the project “Ten-year Development Plans of the South East Europe Transmission Network", Zagreb, Croatia;
- 13-15 June 2018 –Participation in IT Cyber Security Conference in Hanover, Germany;
- 19 June 2018 –Participation in the Energy Community Regulatory School - Workshop on Gas Transmission Tariff Systems.
- 27-28 June 2018 –The 40th meeting of the Working Group for Customers and Retail Market, within the Energy Community Regulatory Board (ECRB) as well as the joint

workshop between ECRB, CEER and MEDREG, organized by the Energy Community Secretariat, Vienna, Austria ;

- 04-21 June 2018 - Exchange Visit to US, IVLP Program "Security of Energy Supply and its Impact on Economic Development"; USA;
- 2 July 2018 –Third Meeting on Day- Ahead Market Implementation at WB 6, Vienna, Austria;
- 3 July 2018 –Austria; Third meeting on the implementation of cross-border balancing in WB 6, Vienna, Austria;
- 4 July 2018 –Second Workshop on Implementing the Coordinated calculation of regional capacities, Vienna, Austria;
- 21 September 2018 –Joint ACER-ECRB Workshop on Regulation 2015/1222 (CACM), Rome, Italy;
- 24 September 2018 - the Meeting of the Group on Implementation of the Day-Ahead Market of WB6, Vienna, Austria, organized by Energy Community Secretariat;
- 26 September 2018 - Third Workshop on Implementing the Calculation of Coordinated Regional Capacities (CCC) in the Western Balkans, organized by the Energy Community Secretariat, Vienna, Austria;
- 04 October 2018 - 40th Meeting of Energy Community Regulatory Board (ECRB), held in Athens, Greece;
- 17-18 October 2018 –Training on the Market and Energy Trading, Vienna, Austria;
- 18-19 October 2018 –Technical Workshop - Effective cyber security regulation, organized by NARUC and USAID in Riga, Latvia;
- 23 October 2018 - 41st meeting of the Customers and Retail Market Working Group, within ECRB, Milan, Italy;
- 25-28 October 2018 –Training and information visit related to archiving, regulation and digitalization, Istanbul, Turkey;
- 26 November 2018 –Fourth Workshop on Calculation of Coordinated Regional Capacities in the Western Balkans, Vienna, Austria;
- 27 November 2018 –First meeting on the Joining of Multi-regional Power Markets in the Day-Ahead Market at WB 6, Vienna, Austria;
- 3 - 4 December 2018 – Workshop – Project on price comparison tools and communications with customers, held in Vienna, Austria;
- 10-12 December 2018 - Workshop related to the project "Ten-year Development Plans of the South East Europe Transmission Network", Ljubljana, Slovenia;
- 20 December 2018 –Meeting on Technical Assistance for the Implementation of Regional Electricity Markets in the Day-Ahead Market at WB 6, Vienna, Austria.

4.4 Transparency, Public Involvement and Communication with Third Parties

All regulatory processes have been developed by the Regulator in full transparency and with the involvement of the public.

The Regulator's website and social media (Facebook) have continued to remain among the most important sources of information and transparency. All Notices on the Regulator's activities, including all Board Sessions, Board Decisions, registers of applicants for obtaining authorizations for construction of generation capacities, register of licenses for energy activities, tariff review processes, review of secondary legislation and many important information and documents for the energy sector have been continuously published. The Regulator's website also has an electronic address through which it receives questions and comments from customers, potential investors, foreign and non-governmental organizations, media, etc.

During 2018, the Regulator has published 28 press releases, 14 other notices on different regulatory processes and has held 8 public discussions. The Regulator has published on its website all Decisions of the Board and other documents that were reviewed by the Board.

The Regulator, with the Support of NARUC[3], is working on creating a tool for comparison of electricity prices. Upon this project, the Regulator aims to enable customers, in an open market, to have a reliable source to compare the prices that will be offered by electricity suppliers who will operate in the Kosovo market.

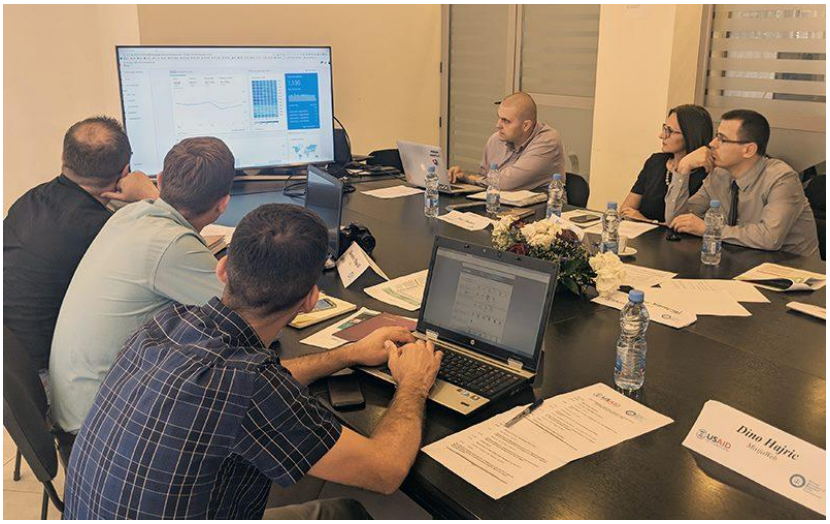


Fig. 4.7 Workshop on Establishment of Price Comparison Tool – 4, 5 June 2018, Pristina

In this aspect, USAID and NARUC have also organized the first workshop of the project "Enhancing the role of customers and public information in the countries of South East Europe", a workshop organized as a second phase of the Price Comparison Tool project and communications with customers. The workshop was held on 3 and 4 December 2018 in Vienna, Austria, and was attended by the Regulator's staff.

[3] *NARUC (National Agency of Regulatory Utilities Commissions of the United States of America (USA) - https://www.naruc.org/*

The Project on Price Comparison Tool and Communication with Customers is focused on developing price comparison tools for participating Regulators and assisting regulators on improving communication and customers' education on issues related to opening of electricity retail market. The Project on enhancing customers and informing the public will be based on the achieved progress and will further assist with best practices regarding website development and communications by providing trainings on the application of best practices.

While South-eastern European countries are moving towards more integrated and open regional electricity markets, regulators will play a major role in proper public education and must ensure that they have the means to facilitate more competitive and transparent markets. At the retail level, electricity purchase can be a complicated process, especially for customers who are not familiar with the energy sector. As proved by the opening of the retail electricity market in the US and the EU, customer education is the key to creating an atmosphere that encourages transparency and investments.

During the first phase of this project, USAID and NARUC assisted the regulators in developing their price comparison tools to facilitate the opening of the retail electricity market. The project will help to improve the work of Regulators in terms of public communication in order to make better use of these tools and ensure that regulators are able to properly educate customers and are facilitating the robust development of retail markets.

Cooperation with Media

Cooperation with media and the provision of information in the shortest possible time is one of the basic principles of the Regulator in relation to the communication with public. The Regulator's staff is highly committed to answer the questions and provide explanations to the journalists on different issues they might be interested regarding the regulation of power sector. In order to gather as much information as possible about developments in the sector, but also to have a better insight into customer feedback on energy services, the Regulator continuously follows the different means of communication and tries to increase transparency by providing information and trying to involve the public in all regulatory processes.

Public Consultations

With the purpose of discussing and receiving comments from all stakeholders, the Regulator has continued to publish for public consultation all the documents reviewed during 2018.

On 17 April 2018, the Energy Regulatory Office discussed with other parties in the energy sector (MED, KOSTT, REPOWER) and the European Bank for Reconstruction and Development (EBRD) in relation with the developments in the area of new investments from renewable energy sources and supporting these investments through the Support Scheme.

On 31 May 2018, the Regulator has published for public consultation the Draft Rule and Methodology for Preparation of Energy balances. The purpose of preparing this Rule is to determine the principles, procedures and methodologies for the preparation of Electricity Balances and Thermal Energy Balances.

On 2 June 2018, the Regulator published for Public Consultation the draft Document on Imposing the Public Service Obligation for Security of Supply. This document outlines the criteria for

measuring the security of electricity supply, the process for assessing the imposition of a public service obligation and the tax on security of supply imposed on suppliers.

On 24 August 2018, Consultation Papers on Maximum Allowed Revenues (MAR) for the Transmission System Operator and Market Operator (TSO/MO) and the Distribution System Operator (DSO) and the Consultative Paper on Determination of Efficiency Factor were sent to all parties for discussion.

On 12 September 2018, the Regulator published for public consultation the Regulatory Report on Determination of Allowed Revenues for the 2018/2019 Season of the District Heating "Termokos" JSC.

On 13 September 2018, the Regulator has published for public consultation the Consultation Paper on Maximum Allowed Revenues of the Universal Service Supplier. This Consultation Paper presented the Regulator's Proposal for Maximum Allowed Revenues (MAR) for the Universal Service Supplier (USS) for the relevant tariff year 2018. The Consultation Paper for USS MAR was part of the periodic review process for the second regulatory period for the Transmission System Operator and Market Operator TSO/MO (KOSTT) and the Distribution System Operator DSO (KEDS).

On 19 September 2018, the Regulator organized an Open Table Discussion on the Rule on Support Scheme of Renewable Energy Sources Generators. In order to consult all interested parties, the Regulator held this Open Table as part of its activities which aim the proper functioning of a sustainable power system, which provides proper supply to customers and a reliable environment for all investors.

Fig. 4.8 Table Discussion - Rule on Support Scheme of RES Generators

5 FINANCIAL REPORTING FOR THE REGULATOR

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

5.1 Revenues

All collected revenues of the Energy Regulatory Office have been deposited in accordance with Article 64 of the Law on Public Financial Management and Accountability in the official bank account established by the General Director of Treasury.

In 2018, the Energy Regulatory Office collected revenues in an amount of € 1,217,435.60. Given that the total amount of the budget spent by the Regulator in 2018 is 648,074.62 €, the unspent revenues in the amount of € 569,360.98, pursuant to Article 23 of the Law on Energy Regulator, will be transferred to the Budget of the Republic of Kosovo .

Tab. 5.1 Revenues

Description	Amount
Own-source Revenues 2018	1,217,435.60 €
Expenditures 2018	(648,074.62) €
Revenues transferred to the Budget of the Republic of Kosovo	569,360.98 €

5.2 Budget

The Assembly of Kosovo, in line with Law no. 06/L-020 on the Budget of the Republic of Kosovo for year 2018, approved the budget of the Energy Regulatory Office in the amount of € 784,328, which is entirely allocated as a government grant, although according to the Law on Energy Regulator, the Regulator is funded from own source revenues and only in cases where such revenues are insufficient, then the Regulator may use budget allocations in the form of government grants. According to the economic categories the Regulatory Budget is as follows:

Tab. 5.2 Budget at the beginning of the year

Description	Budget
Wages and Salaries	492,196.00 €
Goods and Services	199,332.00 €
Utilities	22,000.00 €
Capital Expenditures	70,800.00 €
Total	784,328.00 €

Upon the Decision of the Government of the Republic of Kosovo (Decision no: 02/70, 07/80 and 11/79), the Regulator's budget has been reduced by € 94,061.00, namely € 34,597.00 in the category of *"wages and salaries"*, € 10,175.00 in the economic category *"goods and services"*, € 5,095.00 in the category of *"utilities"* and € 44,194.00 in the economic category *"capital expenditures"*. Expressed in percentage, the Regulator's Budget has been reduced by 12%.

It is important to note that the Budget of the Regulator has been reduced by the Government of the Republic of Kosovo by the end of 2018, due to its non-allocation. The reason for not spending the budget in the category of *"wages and salaries"* is due to non-completion of the position of chairman of the Board and a staff position throughout the year 2018, whereas the *non-allocation* of the budget in the "*goods and services*" category and "*capital expenditures*" occurred due to the failure of the Central Procurement Agency (CPA) to complete the procurement procedures.

Tab. 5.3 Final Budget

Description	Budget
Wages and Salaries	457,598.75 €
Goods and Services	189,157.00 €
Utilities	16,905.22 €
Capital Expenditures	26,605.62 €
Total	690,266.59 €

5.3 Budget Expenditures

To fund the activities carried out in 2018, the Regulator spent € 648,074.62.

According to the economic classification, the Regulator's Expenditures are as follows:

Tab. 5.4 Expenditures by Economic Categories

Description	Amount
Wages and Salaries	457,596.75 €
Goods and Services	167,442.83 €
Utilities	14,637.52 €
Capital Expenditures	8,395.52 €
Total	648,072.62 €

Budget execution in proportion to the remaining budget after cuts is 93.89%.

The budget execution rate by economic categories, expressed in percentage, is presented in Table 5.5.

Tab. 5.5 Budget Execution, expressed in percentage

Description	Budget	Expenditures	Difference	Execution in %
Wages and Salaries	457,598.75 €	457,598.75 €	- €	100.00%
Goods and Services	189,157.00 €	167,442.83 €	21,714.17 €	88.52%
Utilities	16,905.22 €	14,637.52 €	2,267.70 €	86.59%
Capital Expenditures	26,605.62 €	8,395.52 €	18,210.10 €	31.56%
Total	690,266.59 €	648,074.62 €	42,191.97 €	93.89%

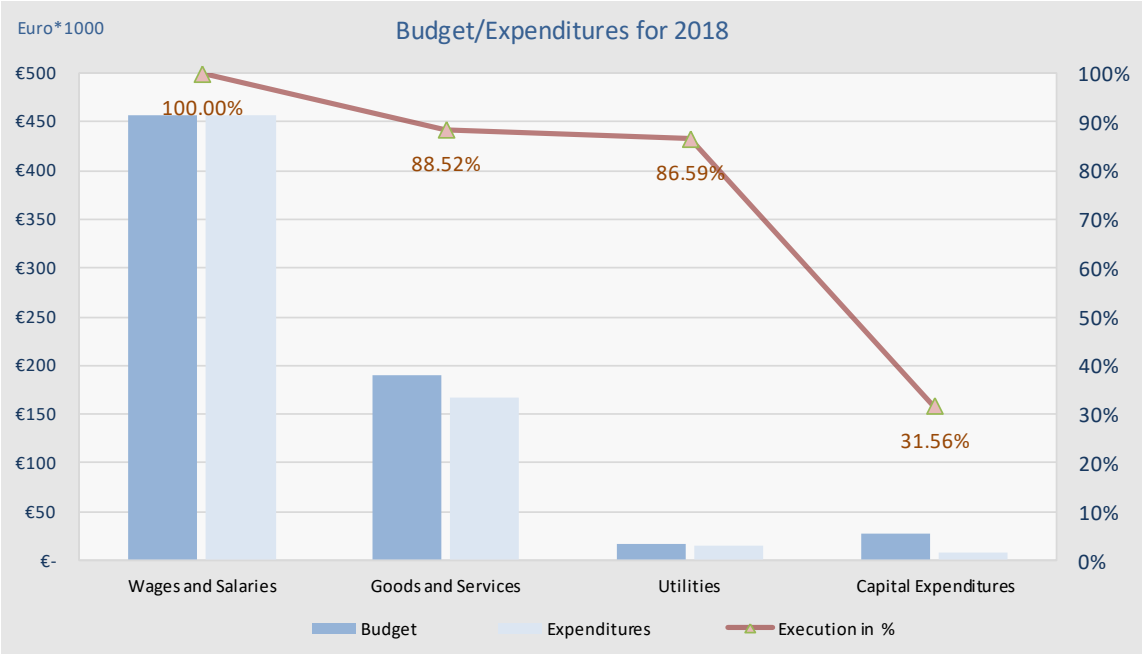


Fig. 5.1 Budget and Expenditures in 2018

The following table presents the expenditures by economic codes.

Tab. 5.6 Wages and Salaries

Wages and Salaries	Amount
Net Wages	380,692.41 €
Personnel Income Tax	33,324.58 €
Employer's Pension Contribution	21,790.88 €
Pension Contribtuion of Employees	21,790.88 €
Total	457,598.75 €

In this category, a total of € 457,598.75 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. 5.7 Goods and Services

Goods and Services	Amount
Expenditures for Official Travels Abroad	8,091.33 €
Allowances for Official Travels Abroad	19,509.31 €
Accomodation for Official Travels Abroad	7,508.28 €
Other Expenditures for Official Travels Abroad	2,605.77 €
Internet Expenditures	681.48 €
Mobile Telephony	9,373.54 €
Postal Expenditures	226.70 €
Education and Training Services	850.00 €
Different Intellectual and Advisory Services	6,149.45 €
Printing Services	83.00 €
Other Contracting Services	- €
Membership Expenditures	6,500.00 €
Furniture	- €
Computer	8,443.80 €
Hardware for IT	- €
Other Equipment	- €
Office Supplies	1,850.67 €
Beverage Supply	2,669.00 €
Accomodation	236.59 €
Generator Fuels	111.54 €
Vehicle Fuel	5,898.04 €
Vehicle Registration	420.00 €
Vehicle Insurance	1,400.87 €
Municipal Tax for Vehicle Registration	40.00 €
Security of Premises	6,745.20 €
Vehicle Maintenance and Repair	1,956.90 €
Building Maintenance	3,660.00 €
Maintenance of Information Technology	7,030.00 €
Maintenance of Furniture and Equipment	- €
Building Rent	49,140.00 €
Vehicle Rent	6,200.36 €
Advertisments and Vacancies	- €
Official Dinners	5,201.00 €
Rental Tax Payment	4,860.00 €
Total	167,442.83 €

As shown in Table 5.7, the amount of funds spent for this category of expenditures is € 167,442.83.

The budget expenditures based on the activities are as follows:

Tab. 5.8 Expenditures by activities

Expenditures by Activities	Amount
Travel Expenditures	37,714.69 €
Telecommunication Services	10,281.72 €
Expenditures for Services	13,582.45 €
Purchase of Furniture and Equipment	8,443.80 €
Purchase of Furniture and Equipment	4,756.26 €
Derivatives and Fuels	6,009.58 €
Registration and Insurance Services	8,606.07 €
Maintenance	12,646.90 €
Rent	60,200.36 €
Marketing Expenditures	- €
Representation Expenditures	5,201.00 €
Total	167,442.83 €

Tab. 5.9 Utilities

Utilities	Amount
Electricity	13,178.48 €
Water	414.53 €
Telephone Expenditures	1,044.51 €
Total	14,637.52 €

The amount of funds spent for this category of expenditures is € 14,637.52. Compared to the previous year, in 2018, € 3,557.29 were spent less.

Tab. 5.10 Capital Expenditures

Capital Expenditures	Amount
Software	2,705.92 €
Information Technology Equipment	5,689.60 €
Total	8,395.52 €

In this category of expenditures, the Regulator, for year 2018, has planned a budget of € 70,800.00 for the execution of five projects, of which only two were realized, while three other projects were not realized due to the failure of the procurement procedures by the Central Procurement Agency, despite the fact that the initiation of procedures by the Regulator was made at the beginning of 2018.

6 ELECTRICITY SECTOR

6.1 Characteristics of Electricity Sector

The electricity sector is comprised of of generation, transmission, distribution and customer supply.

Generation is mainly based on lignite power plants (TPP A and TPP B), HPP Ujmani which are 100% owned by the Government of the Republic of Kosovo whereas other HPPs and other RES are privately owned.

KOSTT is the only operator of the transmission and market and is 100% owned by the Assembly of Kosovo. It operates with two separate licenses, a license for operation of the transmission system and a license for market operation.

KEDS is the only distribution operator but is privately owned.

KESCO is a supplier that has a license for supply of Public Service Obligation, set forth by the Regulator to supply customers who are entitled the universal service.

Other suppliers –so far, there are 6 licensed suppliers who are privately owned but haven't begun to operate commercially yet.

The figure below shows the participants of the energy sector and their duties and obligations.

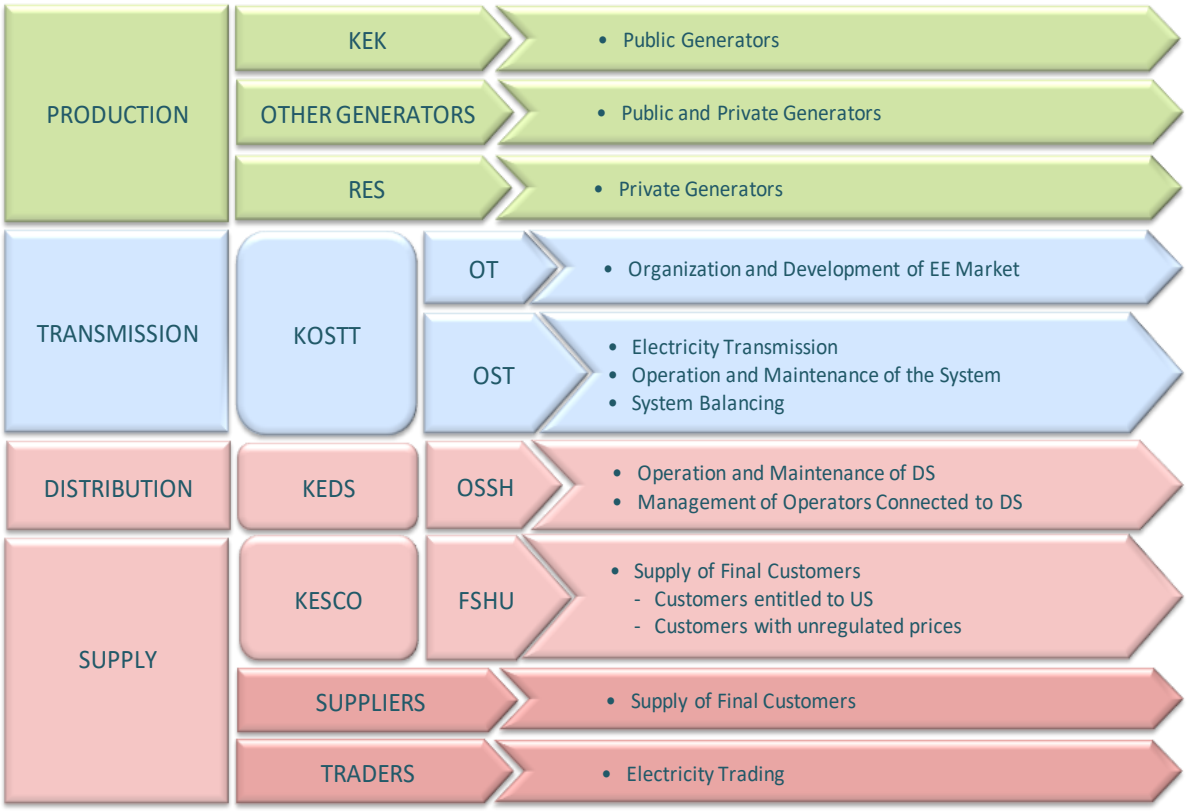


Fig. 6.1 Organization of Electricity Sector

Kosovo's power system is mainly designed to produce basic electricity, which, as mentioned above, is based on lignite as raw material, but not for maximum load coverage and balancing of the system which remains a major challenge to all participants in the sector.

Kosovo has installed generation capacities of 1,409 MW, including generation capacities from RES, however the operational capacity is considered 1,076 MW, of which lignite thermal power plants (TPP) account for about 89.23%, while the rest consists of HPP Ujmani with 2.97% and Other RES (hydro power plants, solar panels and wind power plants) with 7.80%, including the Wind Power Plant (Air Energy) with a capacity of 32.4 MW which started commercial operation in October 2018.

These capacities, in most of the period would be sufficient to cover demand as well as to export, but due to power plant aging and insufficient flexibility to accommodate demand at different times, especially at peak times , then imports, and sometimes exports, are required to balance the system. The introduction of generators from RES increases the generation capacity, but in most cases they are unpredictable and are in dispatch priority mode, therefore they do not have an impact on improving the balancing of the power system, and sometimes even increase the imbalances.

The figure below shows the generation, import, export and demand of electricity over the last ten years.

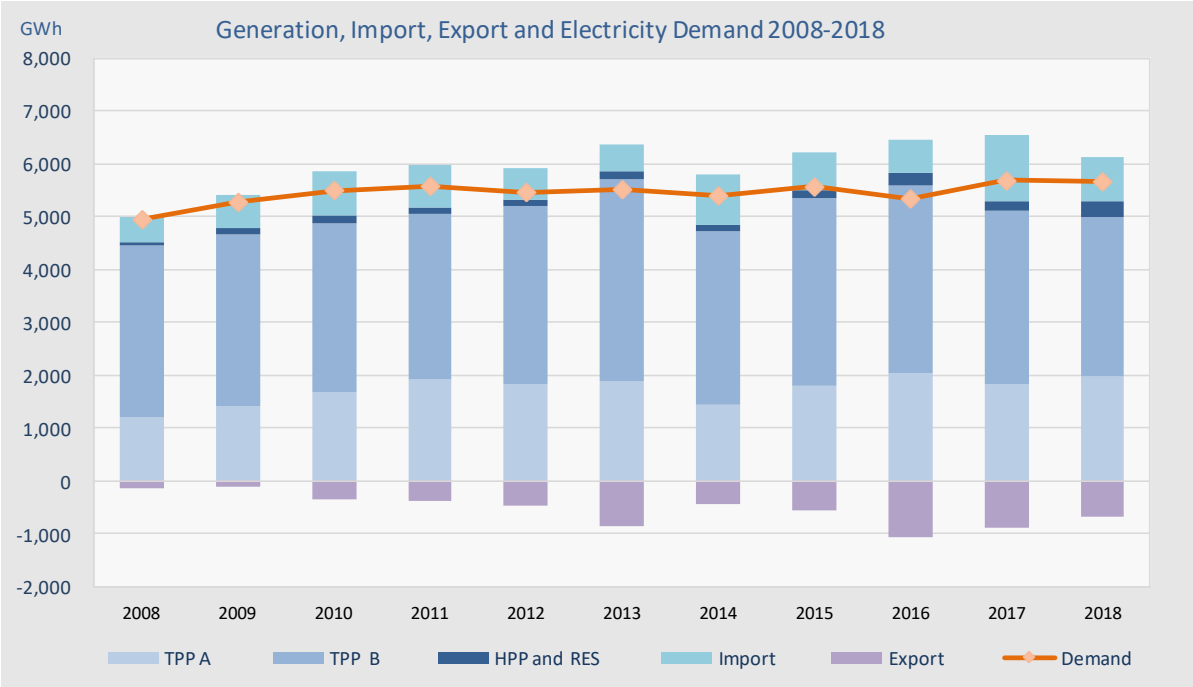


Fig. 6.2 Generation, Import and Electricity Demand 2008 - 2018

Over the last few years, as seen in the diagram above, electricity generation has been almost sufficient to cover consumption. To add to this, in two years Kosovo has been a net exporter of electricity, but has mostly been importing over the years. The maximum demand on Kosovo's power system is almost double that of the minimum demand, and these changes cannot be conveyed by the generation of domestic generators, so it is necessary to contract import or export within the same day.

6.1.1 Electricity Market

The electricity market in Kosovo includes bilateral electricity trading and trading to balance the electricity system. Based on the legislation in force, electricity generators are obliged to offer their

capacity in a transparent, non-discriminatory and market-based manner to all customers in wholesale and retail markets, including those with Public Service Obligations.

As mentioned above, due to the low flexibility of the system to meet the demand and the high demand at peak times, there is a need for imports or exports of electricity. From the overall electricity demand at the country level, 5,671 GWh (including transmission and distribution losses), most of it is covered by domestic generation, whereas the rest is covered by electricity imports.

The table below presents system balancing, which shows that during 2018, Kosovo was a net importer.

Tab. 6.1 Balancing of the power system

	Power System Balancing 2018	GWh
1	Production from Generators in Transmission	5,253
2	Production from Generators in Distribution	58
3	Import	825
4	Total Available Energy	6,136
5	Export	677
6	Net import/export	-148
7	System Deviations (receiving from the system)	-213
8	Transit	1,805
9	National Demand	5,671
10	Transmission Losses	111
11	Consumption of Customers in Transmission Network	331
12	LLOMAG Consumption	107
13	Load in Distribution Network	5,120
14	Distribution Losses	1,429
15	Net Consumption in Distribution	3,691

Starting from 1 January 2016, KOSTT participates in the ITC Mechanism for calculating compensation for transit expenditures and obligations for imports and exports. Compensation for transit expenditures and obligations for imports and exports are carried out through this mechanism where the obligations and requirements are calculated, and final settlement of the balancing for the whole region is carried out. It is worth mentioning that the transit participation in the transmission system network in earlier periods has been much higher (even over 50%), but there is a downward trend especially with the increase in domestic demand. In 2018, the share of transit in the transmission system is 31.8%.

With respect to the operation of the transmission network, it should also be emphasized the KOSTT's inability to allocate transmission capacities due to the non-recognition of KOSTT as a control block/area. Capacity allocation would generate revenues for KOSTT that could be used for maintenance and repair of transmission capacities as well as for the construction of new transmission capacities where there is a network congestion. The capacity allocation for Kosovo lines continues to be carried out by the Transmission System Operator of Serbia (EMS), who also collects financial revenues from this allocation.

The implementation of the signed electricity agreement between Kosovo and Serbia has not been implemented yet, although it has been foreseen since November 2015.

Regarding the security of supply of electricity customers, in addition to the regular operation of the transmission network, it also also required the proper functioning of enterprises performing other activities such as distribution and generation, including import and export of electricity.

Figure 6.3 shows the flow of electricity from generation, transmission up to the distribution to consumers as well as electricity flows towards regional networks and from regional networks including transit.

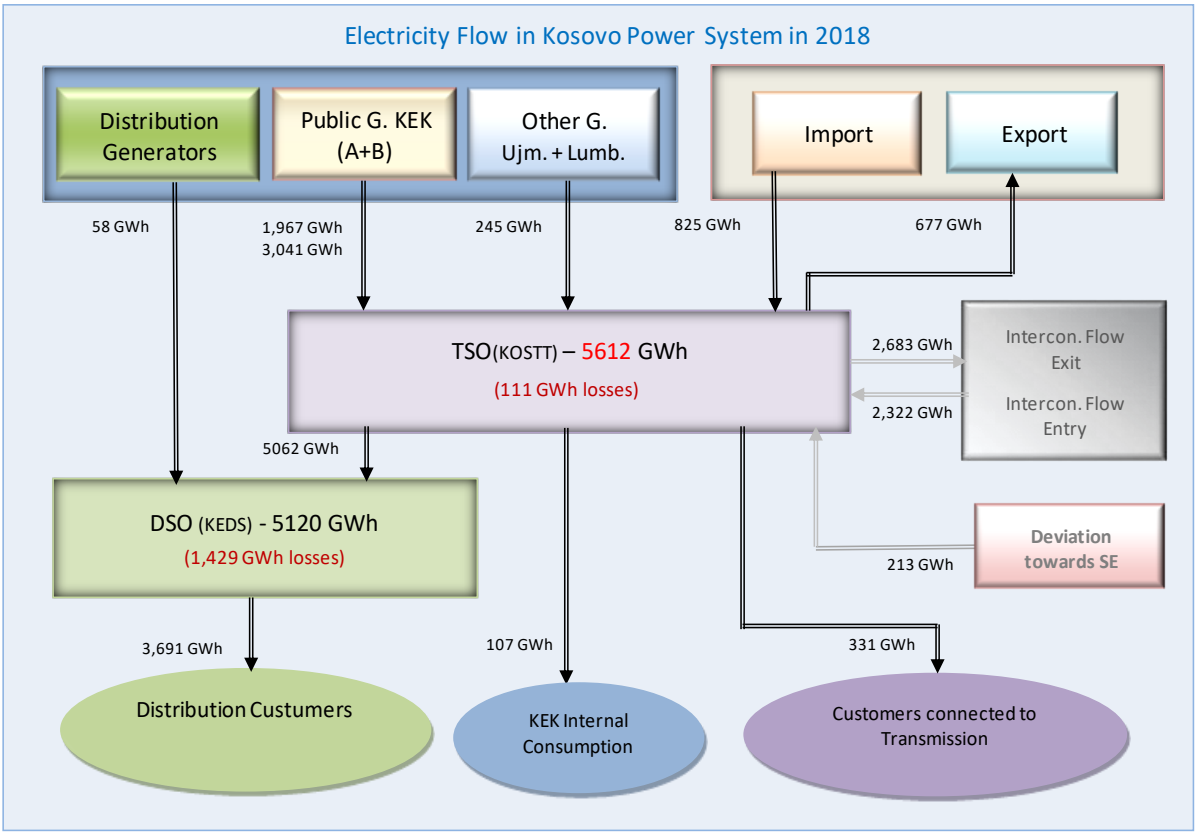


Fig. 6.3 Electricity flows in the system in 2018

6.1.2 Generation Adequacy and Security of Supply

The adequacy of generation and security of supply in Kosovo's power system are at an acceptable level and it is worth emphasizing that electricity generation along with import meet the national electricity consumption.

The adequacy of the transmission system contains sufficient reserves to enable electricity flows to meet domestic demand, including peak load coverage, and to enable transit through interconnection lines.

The overall generation capacity of generators in Kosovo is 1076 MW, while the maximum load during this year was 1,203 MW, therefore the ratio of the generation adequacy towards the maximum load is 89.4%.

The table below shows maximum and minimum monthly loads during 2018.

Tab. 6.2 Maximum and Minimum Loads in 2018

Load 2018	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	MWh/h	MWh/h	MWh/h	MWh/h	MWh/h	MWh/h	MWh/h	MWh/h	MWh/h	MWh/h	MWh/h	MWh/h
Maximal	1,046	1,078	1,071	834	715	708	699	752	809	877	1,044	1,203
Minimal	520	526	423	287	265	272	282	306	334	361	370	568

It is worth emphasizing that the maximum loads occur during the winter season due to consumption of electricity for heating.

The table below shows the maximum and minimum loads (Pmax and Pmin) of the Kosovo power system over the years, their time of occurrence, generation, and the respective import and export of electricity.

Tab. 6.3 Maximal and Minimal Power System Loads

Year	Maximal Load							Minimal Load						
	Pmax			Production	Import	Export	Deviation*	Pmin			Producti	Import	Export	Deviation*
	[MW]	Data	Ora	[MW]	[MW]	[MW]	[MW]	[MW]	Data	Ora	[MW]	[MW]	[MW]	[MW]
2015	1,129	31.12	20:00	825	308	0	-4	272	30.08	04:00	250	0	50	-72
2016	1,160	31.12	18:00	797	321	0	42	246	12.06	06:00	711	0	310	155
2017	1,161	11.01	20:00	660	415	0	86	286	3.06	06:00	733	50	440	57
2018	1,203	31.12	18:00	787	271	0	145	265	27.06	06:00	577	5	430	-113

* Deviation of the system towards the interconnection system

In order to cover the losses, during 2018, electricity continued to be purchased by the Transmission System Operator and Distribution System Operator in the competitive electricity market. Based on the document "Description of wholesale energy handling in the transitional phase", the energy required to cover the losses in the transmission and distribution network is provided proportionally by the remaining energy from KEK after the allocation of energy for the universal service. If the energy received from KEK is not sufficient to cover the losses, then the rest of the required energy is provided by import.

6.2 Primary Energy Sources

Kosovo has large lignite reserves that provide long-term electricity generation security, but the impact of gas emission and other pollutants in the environment remain a problem. Around 89.23% of the installed electricity generation capacities are comprised of the power plants that operate with lignite as the primary source of energy.

Kosovo also has RES potentials, such as: water energy, wind energy, solar energy, biomass etc.

6.2.1 Lignite Production and Consumption

Lignite production in 2018 was 7.17 mil. ton, whereas the consumption 7.48 mil. ton, these quantities being smaller compared to 2017.

Production and consumption of lignite by months, for 2018, is presented in table 6.4.

Tab. 6.4 Production and Consumption of Lignite in 2018

Lignite Generation/Production	Totali	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Lignite Production (t*1000)	7,170	648	606	727	636	451	549	421	647	558	692	632	605
Lignite Consumption (t*1000)	7,476	590	688	823	642	713	502	559	557	517	612	538	736
Lignite Consumption in the Market	117	0	0	0	0	8	7	3	14	27	26	16	16

The following figure shows the production and consumption of lignite during 2008 - 2018.

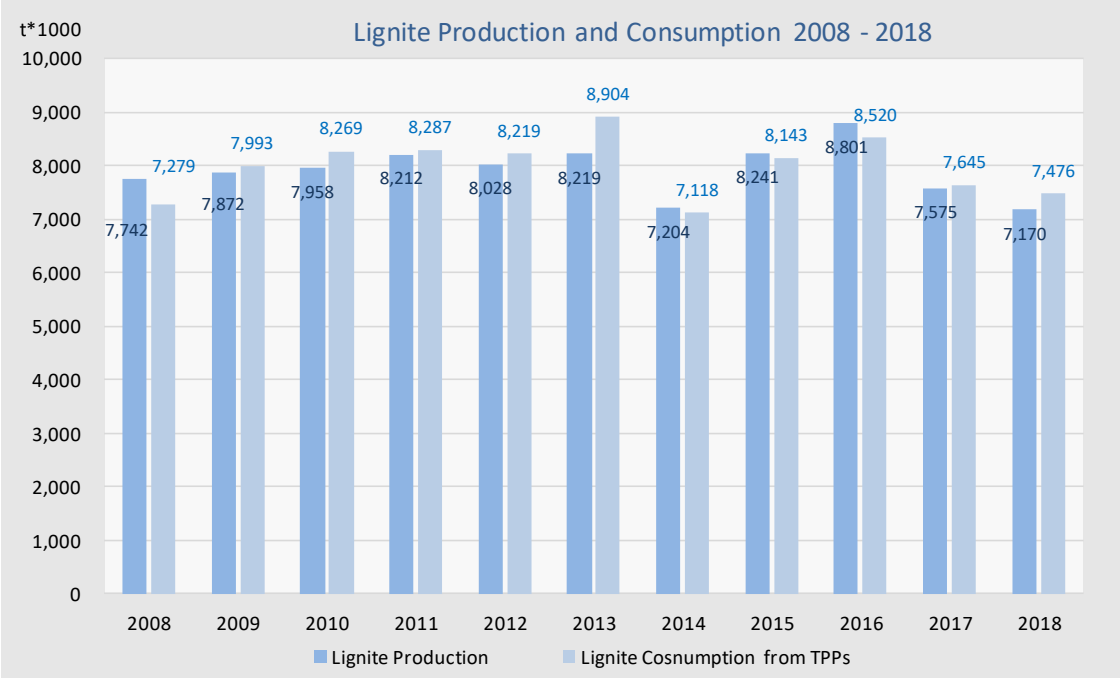


Fig. 6.4 Lignite Production and Consumption, 2008-2018

6.3 Electricity Generation

6.3.1 Electricity Generation Capacities

Electricity generation capacities in Kosovo are mainly from power plants that make up 91.43% of the installed capacity or 89.23% of the operational capacity, and the remaining part are hydro power plants and renewable energy sources (hydro power plants, wind power plants and photovoltaic panels).

The capacity of generating units is presented in the following table, by primary source, installed and operational capacity, minimal and maximal generation limit as well as the year of entry into operation.

Tab. 6.5 Generation Capacities in Kosovo Power (Electricity) System

Generating Units	Unit Capacity (MW)			Entry into operation
	Installed	Net	Min/max	
TPP Kosova A1	65	Not operational		1962
TPP Kosova A2	125	Not operational		1964
TPP Kosova A3	200	144	100-130	1970
TPP Kosova A4	200	144	100-130	1974
TPP Kosova A5	210	144	100-135	1975
TPP Kosova A	610	432		
TPP Kosova B1	339	264	180-260	1983
TPP Kosova 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 HPPs (out of the Support Scheme)	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
HPP Restelica 1&2	2.28	2.28		2016
HPP Brezovica	2.10	2.10		2017
Wind Power	1.35	1.35		2010
Air Energy-Kitka	32.40	32.40		2018
PV LedLight Technology	0.10	0.10		2015
PV ONIX SPA	0.50	0.50		2016
PV Birra Peja	3.00	3.00		2018
PV Frigo Food Kosova	3.00	3.00		2018
Total RES (in Support Scheme)	71.67	70.80		
Total	1,408.72	1,075.90		

Over the last few years there has been an increase in installed generation capacities of RESs, which continue to be put into operation as private investments.

6.3.2 Electricity Generation

The total generation of electricity in 2018 was 5,311 GWh, while in 2017 it was 5,300 GWh, which means that there is an increase of 0.2%. Whereas, compared to the electricity balance for 2018, generation was realized only about 95.1%. The generation, including own costs by units and months during 2018 is presented in Table 6.6.

Tab. 6.6 Electricity Generation in 2018

Generators MWh	Total	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
TPP A3 Gross	824,177	15,163	95,952	29,400	35,432	108,569	103,412	87,140	106,785	83,587	18,985	89,276	50,476
TPP A4 Gross	712,747	97,395	42,058	110,759	91,247	0	0	0	33,334	70,422	115,457	63,254	88,823
TPP A5 Gross	703,724	0	24,749	78,474	1	32,201	82,729	110,009	77,684	107,511	105,129	28,362	56,873
TPP A Own-Consump.	273,457	13,205	19,854	26,045	15,285	17,039	22,655	24,571	27,024	31,350	28,613	22,781	25,035
TPP A net	1,967,192	99,352	142,905	192,588	111,395	123,731	163,487	172,578	190,778	230,170	210,958	158,111	171,137
TPP B1 Gross	1,074,986	208,587	176,334	191,948	168,195	201,112	31	0	0	0	0	0	128,780
TPP B2 Gross	2,284,913	206,019	184,132	196,485	185,932	206,033	187,608	206,724	189,474	105,780	209,005	200,005	207,718
TPP B Own-Expenses	319,371	38,586	34,229	37,315	33,719	37,174	18,345	19,831	18,061	10,894	19,459	19,588	32,169
TPP B net	3,040,529	376,019	326,237	351,117	320,408	369,971	169,293	186,893	171,413	94,886	189,545	180,417	304,329
HPP+RES Transmission	245,095	7,330	11,395	33,132	37,869	32,125	22,977	23,208	15,831	12,542	14,635	16,774	17,276
RES Distribtuion	58,155	3,631	4,743	8,893	9,924	9,196	5,545	5,168	3,579	2,092	1,639	1,769	1,976
Total	**5,310,970**	**486,333**	**485,280**	**585,730**	**479,597**	**535,023**	**361,303**	**387,847**	**381,602**	**339,689**	**416,778**	**357,071**	**494,718**
Balance 2018	5,584,181	494,042	490,037	579,214	498,640	571,306	331,172	348,938	427,037	356,049	407,659	531,977	548,109
Report tot./bil	95.1%	98.4%	99.0%	101.1%	96.2%	93.6%	109.1%	111.2%	89.4%	95.4%	102.2%	67.1%	90.3%

It should be emphasized that 11.84% of the electricity from the gross production of power plants is consumed by the power plants themselves as own costs. Part of this consumption (for both generators TPP Kosova A and TPP Kosova B) is realized directly from the plants, while the rest is exported into the transmission system and then consumed by the power plants.

The figure below presents the participation of generators in the overall electricity generation in 2018.

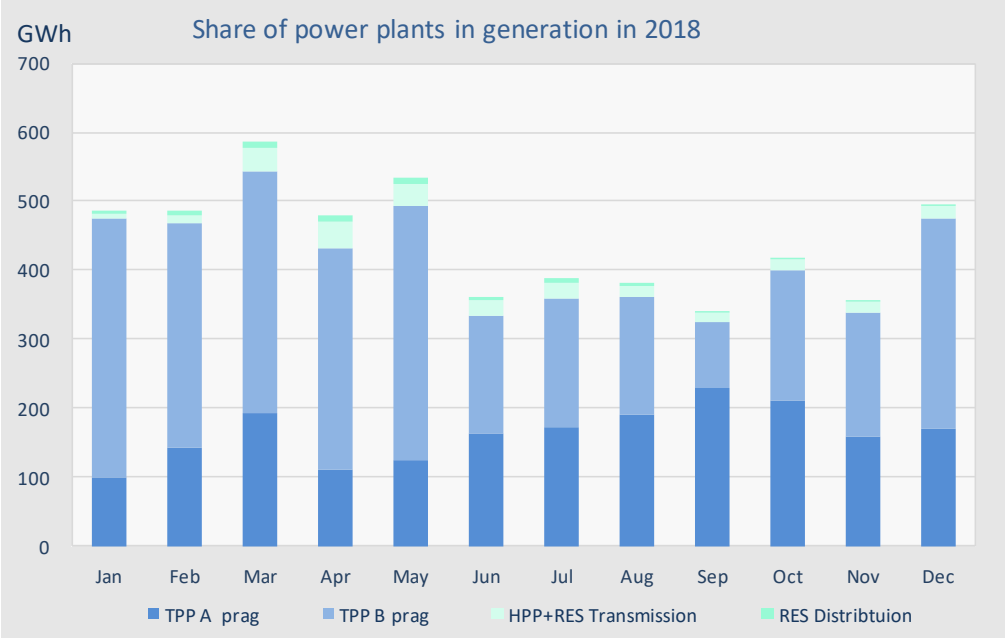


Fig. 6.5 Production of generating units in 2018

The generation of RES connected to the transmission network in 2018 was 245.1 GWh and is higher for 79.81% compared to 2017, which is impacted by the generation of the wind generator - Kitka with a capacity of 32.4 MW. Also, the generation of RES connected to the distribution network, 58.2

GWh, in 2018 was higher by 35.40% compared to 2017, due to the connection of two photovoltaic generators with a capacity of 3 MW each.

The following tables present electricity generation from RES connected to the transmission network, respectively to the distribution network.

Tab. 6.7 Generation from RES connected to the transmission network in 2018

RES in Transmission	Installed Capacity	Production	Share in production*
	MW	MWh	%
HPP Ujmani	35.00	98,199	40.07
HPP Kaskada Lumbardh	25.95	117,160	47.80
Air Energy/Kitka	32.40	29,736	12.13
Total RES	93.35	245,095	100%

*Share of generating units towards RES Generation in Transmission

Tab. 6.8 Generation from RES connected to the distribution network in 2018

RES in Distribution	Installed Capacity	Production	*Share of Production
	MW	MWh	%
Hydroline	4.27	11,697	20.11
Dikanci	4.02	10,453	17.97
Radavci	1.00	4,182	7.19
Burimi	0.95	1,790	3.08
Eurokos-JH	4.80	22,817	39.23
HPP/Brezovica	2.10	5,168	8.89
Wind Power	1.35	17	0.03
Solar-LLT	0.10	123	0.21
Solar-Feti	0.10	93	0.16
Solar Onix	0.50	661	1.14
Solar Birra Peja	3.00	578	0.99
Solar Frigo Food	3.00	576	0.99
Total RES	25.19	58,155	100%

* Share of generating units towards RES Generation in Distribution

Operation of Generating Units

The operation of generating units of TPP Kosova A and TPP Kosova B, during 2018 has been close to the forecasts in the energy balance, both for operating hours as well as for the energy provided in the system. The number of interruptions from the operation of lignite generation units has been lower compared to last year.

The table below shows all types of interruptions and availability of power plants for 2018, where it is noticed that the generating units TPP Kosova A3 and TPP Kosova A4 have not had any interruption in the system.

Tab. 6.9 Interruptions of Generating Units 2018

2018	TC Kosova A			TC Kosova B	
	A3	A4	A5	B1	B2
Planned Interruptions	6	2	3	1	0
Unplanned Interruptions	4	4	3	2	7
Failures	0	0	2	3	6
Total Interruption	10	6	8	6	13

The operation hours of the generating units of TPP Kosova A and TPP Kosova B in graphical form are shown in the figure below and were lower than planned, especially for Unit B1 which worked only 44.41% of the year, whereas Unit B2 worked around 93.8% of the year. The number of operating hours of Unit B2 is higher even in the first years of operation of this unit.

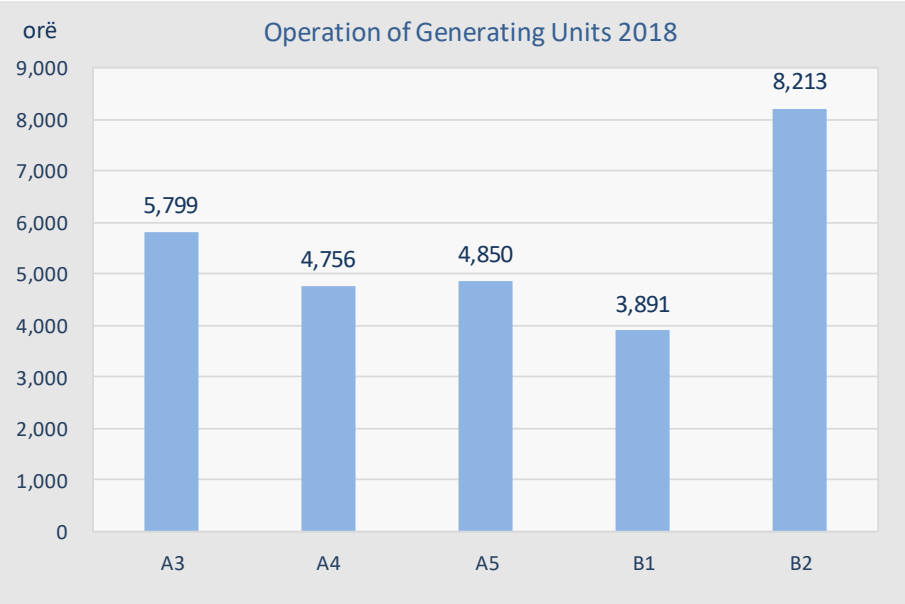


Fig. 6.6 Operation of Generation Units in 2018

The figure below presents the production of generating units for the period 2008 - 2018.

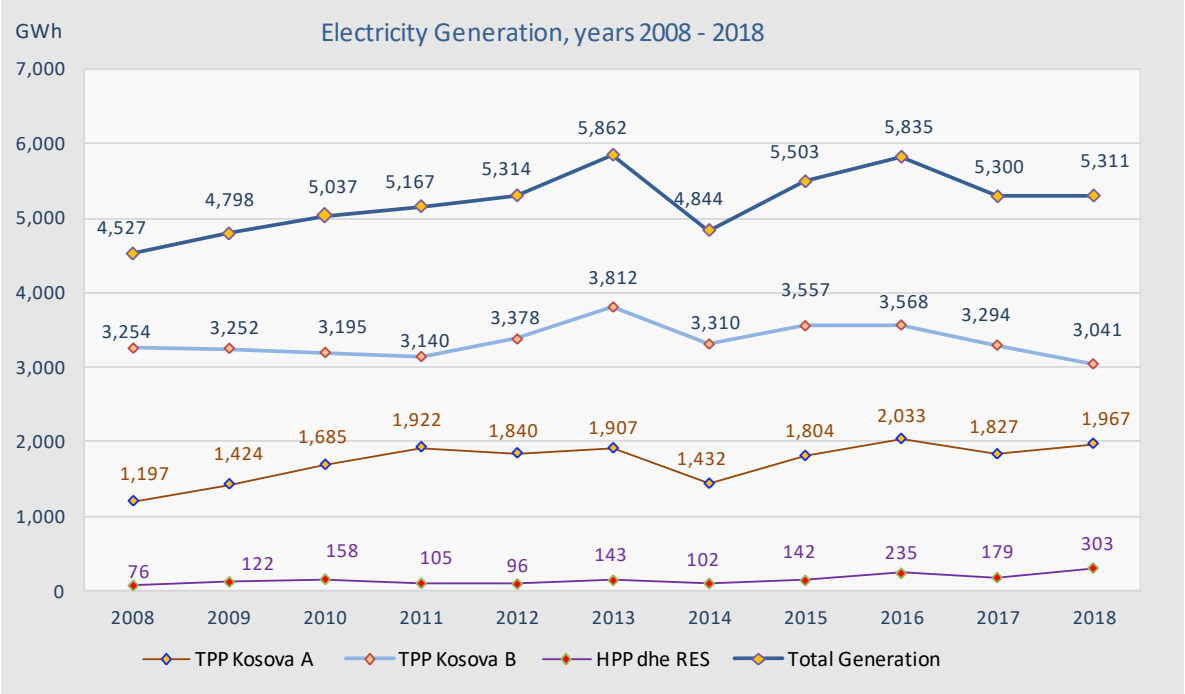


Fig. 6.7 Electricity generation, 2008 - 2018

6.4 Transmission System

The transmission system in Kosovo is operated by KOSTT, which is responsible for the safety and reliability of the operation of power system. The transmission network has sufficient capacity to cope with the power flows in the system.

The electricity transmission network of Kosovo is well connected to the regional system and Europe through interconnection lines with:

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

The interconnection line 400 kV SS Kosova B- SS Kashar (Tirana) was finalized in 2016 including the successful testing phase, however it hasn't commenced the regular operation yet due to political causes.

The signed Agreement on Secondary Regulation Frequency/Load between KOSTT and TSO of Albania also remains unmodified since KOSTT has not yet started operating as a regulatory block/area within ENTSO-E

Transmission network of power system in Kosovo meets the domestic demand of the transmission as well as the N-1 criteria, except for the line Prizren 2- Rahovec, which remains radically supplied.

The following tables show the transformation capacities and transmission network lines according to the voltage level:

Tab. 6.10 Transmission System Substations

Tranformation (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	6	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	12	22	790
110/35	KOSTT	7	19	641
110/10	KOSTT	2	8	252
35/110 (Deçan)	Kelkos	-	1	40
Total		38	84	6,399

Tab. 6.11 Transmission Network Lines

Voltage (kV)	Owner	Length (km)
400	KOSTT	279.5
220	KOSTT	240.8
110	KOSTT	856.7
Total		1,377.0

The following scheme presents basic information on the number of substations (SS), transformers (TR) and transformer power (VA), line length, and the power plants connected at the relevant voltage level.

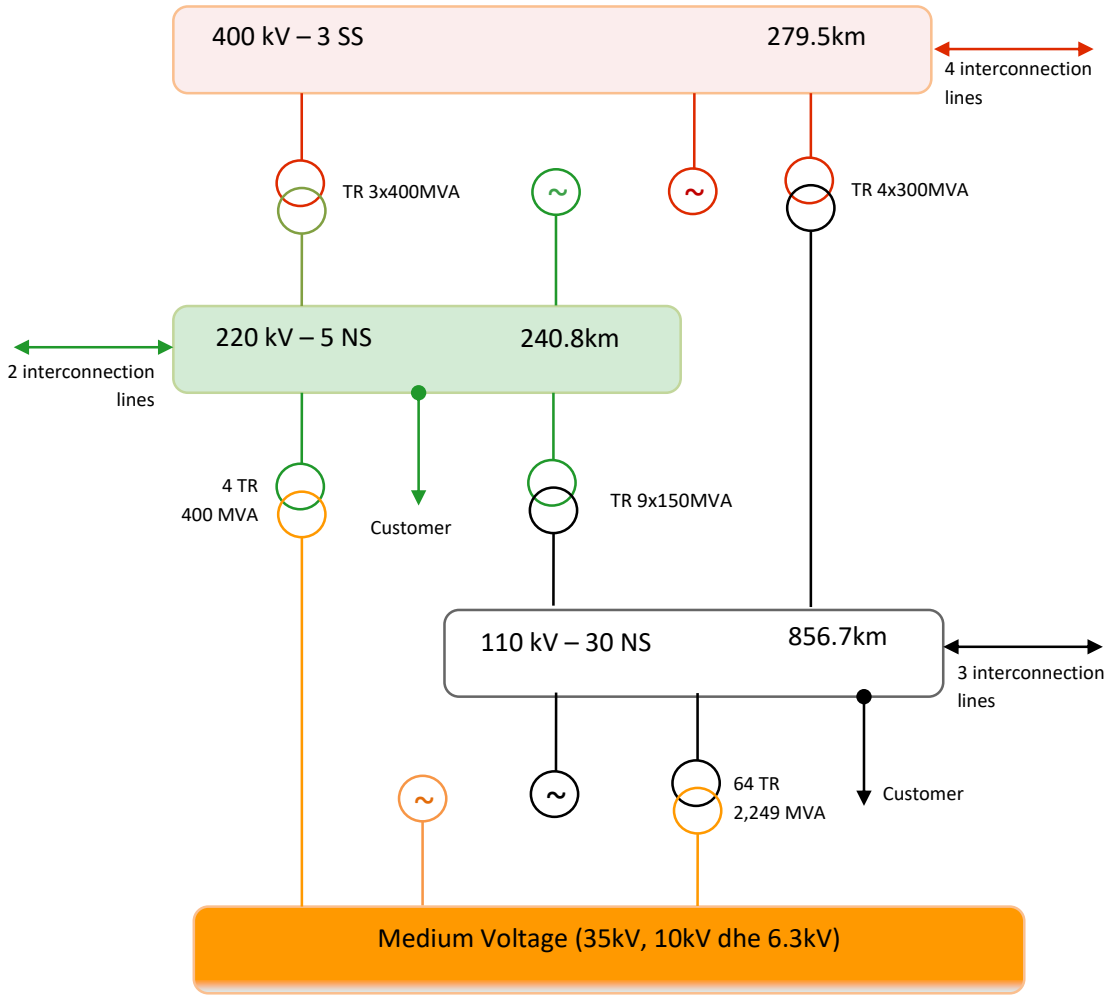


Fig. 6.8 The Basic Data of Transmission Network

6.4.1 Electricity Flows in the Transmission Network

There are considerable energy flows across the transmission network to cover customer demand from domestic generation and imports, but also for potential exports of electricity surpluses, as well as for energy transiting from other countries. Electricity transit through the Kosovo network in 2018 was about 32% compared to consumption, and this energy charges the network by adding losses, network amortization, and the need for maintenance of the transmission network. Compensation for charging the network from the transit is carried out through the ITC Mechanism.

The figure below shows the energy flows through all interconnection lines in both directions (entry, exit).

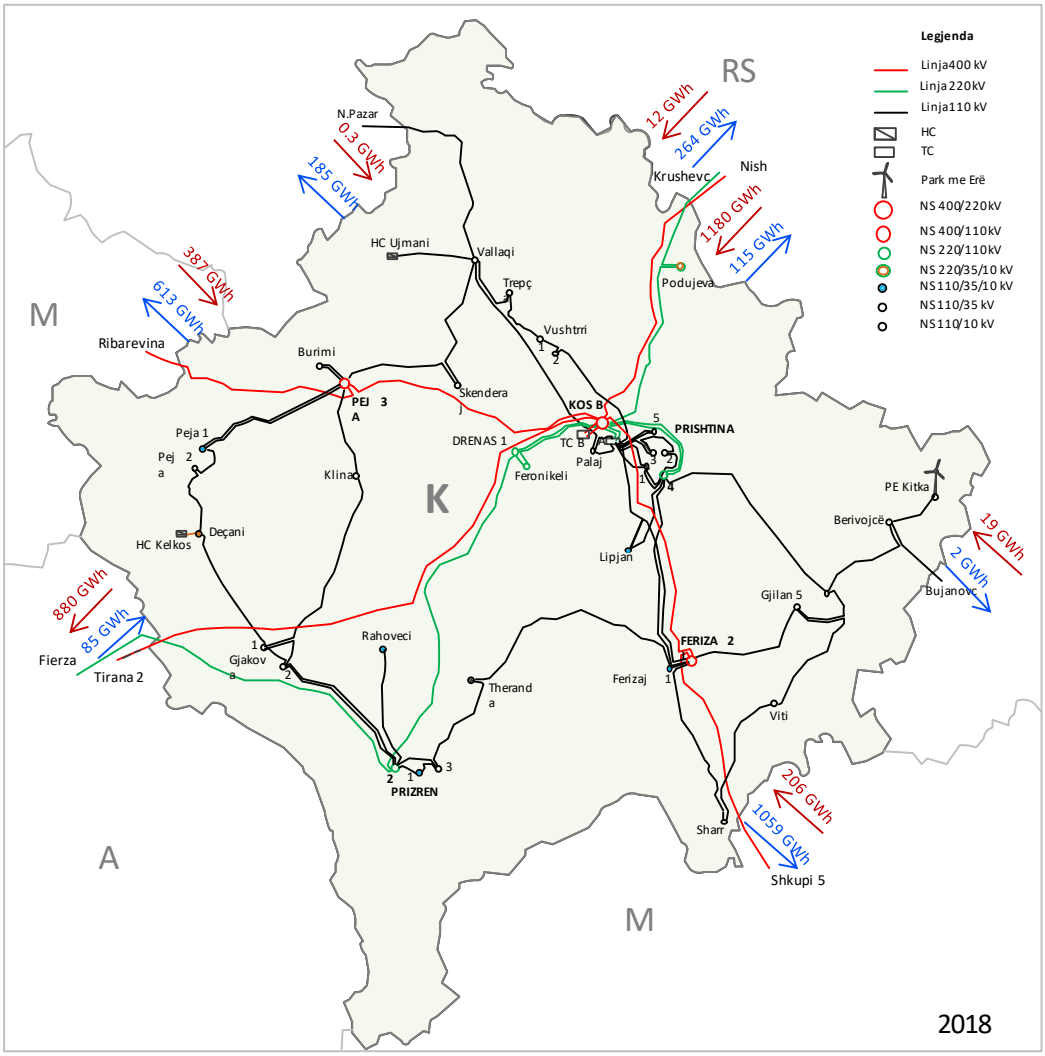


Fig. 6.9 Energy Flows through Interconnection Lines

6.4.2 Investments in the Transmission System

For a sustainable level of electricity supply, reduction of losses and improvement of the security and quality of services, investment in certain parts of the network is required, as well as adequate maintenance of existing capacities.

Investments in the transmission system can be categorized as:

- Projects *started in previous years and completed in 2018 and have valid warranty period;* and
- Projects started in 2016/2017 that should be completed in 2019.

Projects completed in 2018 which have one-year valid warranty period

- SS 110/35/10kV Theranda- Rehabilitation of the substation is completed (99 %);
- Installation of the metering groups in the new border between KOSTT and KEK/DSO- The project is completed in a total of 97%. The final point of the MG is also completed, according to the contract. The works at SS Vallaq and SS Ujman remain uncompleted (due to political situation)

Management of the projects, which were started in 2016/2017 and are ongoing, but should be completed in 2019:

***Due to delays in obtaining the construction permits, there are delays in implementation of projects based on the contract. The continuity of works is until Q3 2019.*

- In Q3 2016, there were contracts signed regarding the projects which are funded by EBRD/KOSTT and which should be completed in Q4 2018 and Q3 2019. These projects are on the phase of design, production and delivery of the equipment. The construction and installations works are expected to commence following the establishment of required work conditions and after the construction permit is obtained. .

LOT 1 –Substations GIS, ongoing

- 110/10(20) kV – SS Pristina 6 and 110 kV HIS in SS Pristina 4 (Design 80 %, delivery of equipment 85 % construction and installation works 35 %);
- 110/10(20) kV – SS Mitrovica 2 (Design 90 %, delivery of equipment 85 %, construction and installation works 45 %);
- 220/10(20) kV – SS Drenasi 2 (Design 80 %, delivery of equipment 80 %, construction and installation works 65 %);

LOT 2 – Power Transformers: 40 MVA:

- 2x40 MVA SS Pristina 6, 2x40 MVA in SS Mitrovica 2 and 2x40 MVA in SS Drenasi 2, (are under the phase of design and production of transformers 90 %, installation 60 %);

*** The project is related to LOT 1 and LOT 3.*

LOT 3 – Transmission Lines : design works are mainly completed, other works are ongoing,

- double air line 220 kV Drenasi 2 (95 %);
- double cable line 110 kV SS Mitrovica2 (80 %);
- double cable line 110 kV SS Pristina 6 – SS Pristina 4 (60 %);
- single air line 110 kV SS Rahoveci – SS Theranda (0 %);
- double air line and cable line 110 kV, SS Fushe Kosova, (15 %).

6.4.3 Maximum Load and Electricity Demand in Power System

In order to analyze the functioning of the power system, the value of maximum load (peak) is also important, and this usually takes as a sample five (5) maximum loads realized in different hours and different days of the year. The following table shows the maximum load (peak) values for 2018.

Tab. 6.12 Values of Maximum Load (peak) in 2018

Maximal Load Pmax (MW)	Date	Hour
1,203	31.12.2018	18:00
1,152	27.12.2018	18:00
1,146	20.12.2018	18:00
1,078	28.02.2018	19:00
1,070	01.03.2018	19:00

The maximum load in the Kosovo power system was recorded at 31 December 2018 at 10:00 am in the amount of 1,203 MW, which is higher than the maximum load in 2017 (1,161 MW).

The demand varies in daily and seasonal periods, and due to this change, balancing the system is hampered. To see this impact, especially in the case of Kosovo power system, it is important to analyze the daily consumption chart for each hour of the day for the entire annual period.

The following chart shows the demand and generation, which shows that the generation is higher than the demand during night hours, whereas during the day, especially at evening hours, demand has a significant increase and is higher than generation. So, within the same day, in the daylight hours (high tariff) generation does not cover the demand and electricity needs to be imported, while at night (low tariff) there is surplus of energy that should be exported.

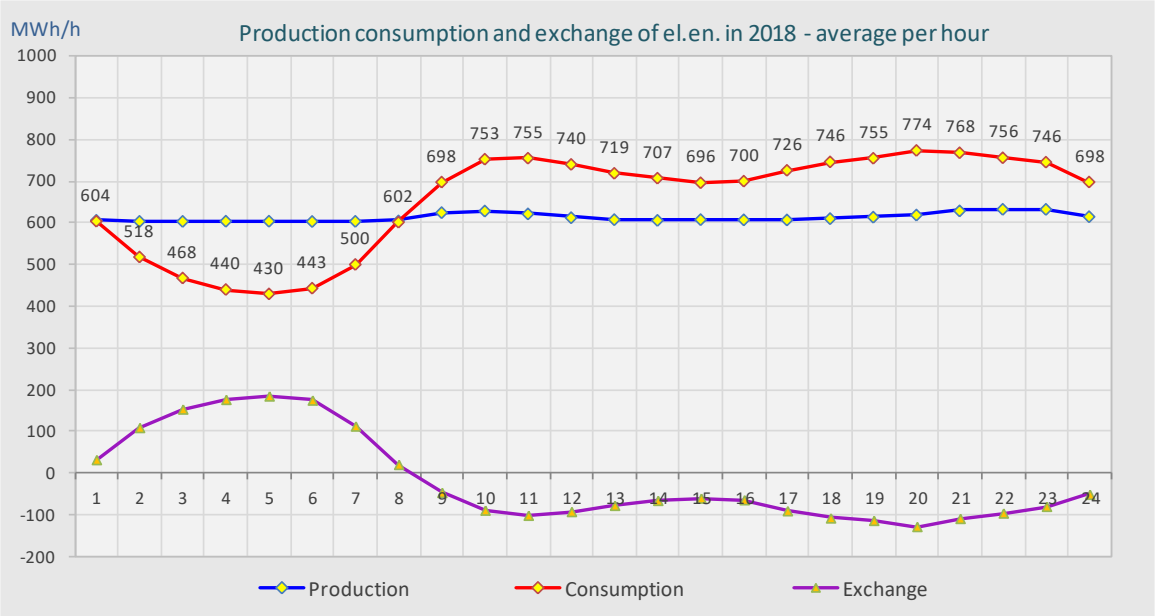


Fig. 6.10 The daily chart as an annual average for 24 hours for 2018

The difference between the average of maximum and minimum daily consumption, during the months of 2018 is shown in the chart below.

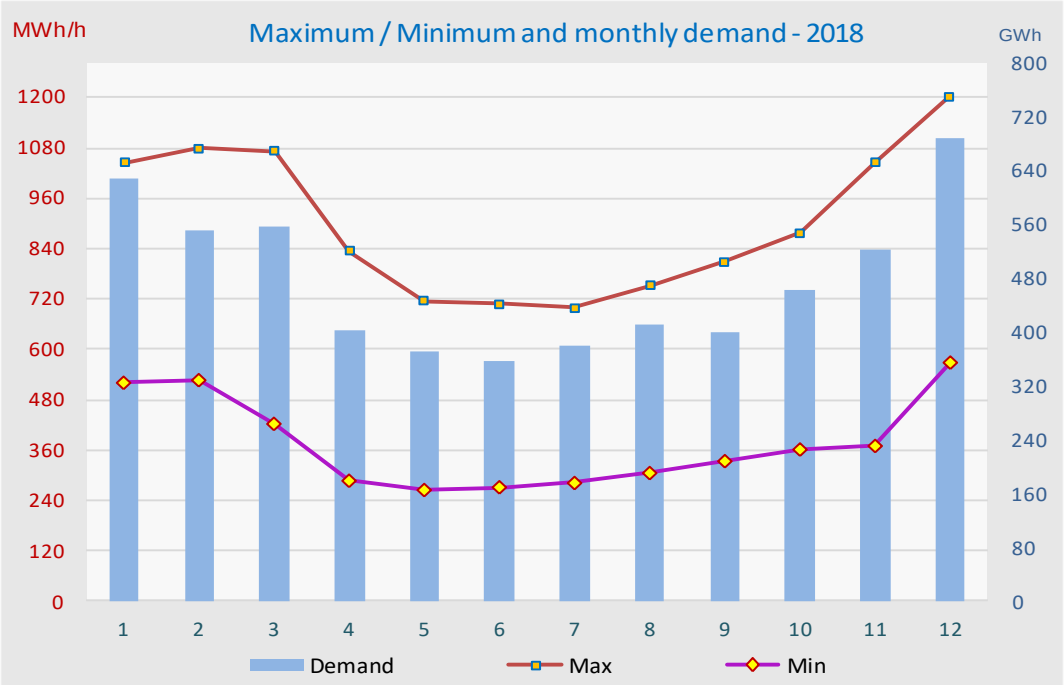


Fig. 6.11 Monthly average of the demand and maximum/minimum daily loads in 2018

Load shedding due to lack of electricity

Despite the efforts to eliminate supply outages due to power shortages, there are still some outages in electricity supplies in specific cases. The Regulator has repeatedly opposed these outages and has taken steps towards ending them, except in cases where the plants are at risk.

The table below shows the monthly electricity outages for 2018, while the figure below presents the outages by years.

Tab. 6.13 Load Shedding

2018	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Reductions MWh	3,354	260	8,407	0	0	0	0	0	0	0	4,187	0	16,209

The load shedding vary from year to year with a tendency to reduce, and in 2018 these outages were at a level of 16,209 MWh.

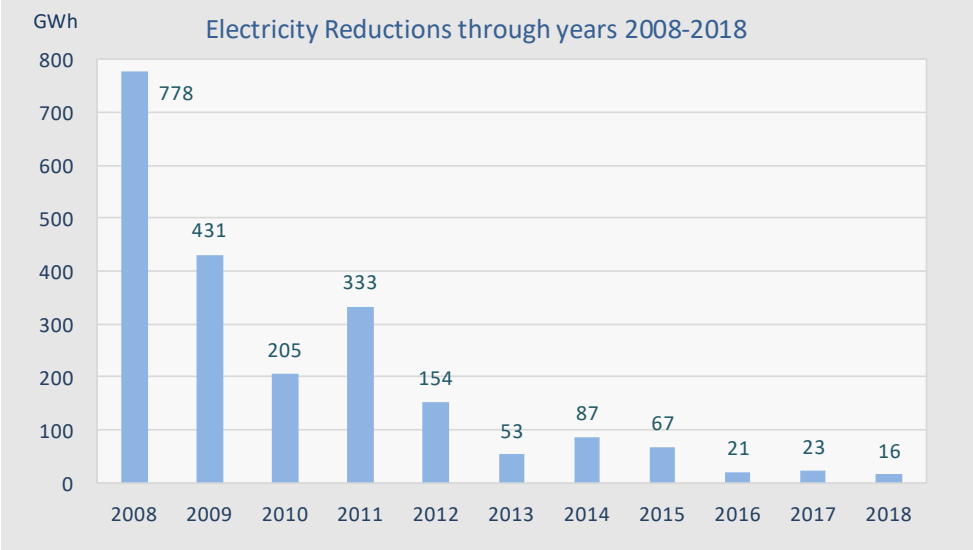


Fig. 6.12 Load shedding through years 2008 - 2018

6.4.4 Electricity Demand and Transmission System Losses

The total electricity demand in 2018 was 5,671 GWh and represents a decrease of 0.27% compared to 2017, which was 5,686 GWh. Compared to the forecast of Electricity Balance for 2018, the electricity demand is 0.77% higher.

Table 6.14 shows the total demand and transmission losses realized in 2018 and compared to Electricity Balance 2018.

Tab. 6.14 Overall demand and losses in the transmission system in 2018

2018	Gross Demand-Realization	Gross Demand-Balance	Ratio Realization/ Balance	Transmission Losses Realization		Transmission Losses Balance	
	MWh	MWh	%	MWh	%	MWh	%
January	623,006	603,354	103.26	12,764	2.05	13,280	2.20
February	548,343	544,718	100.67	11,247	2.05	11,565	2.12
March	553,077	528,763	104.60	13,242	2.39	14,085	2.66
April	405,845	448,586	90.47	9,854	2.43	10,348	2.31
May	372,263	416,968	89.28	8,141	2.19	11,625	2.79
June	352,647	388,743	90.71	5,598	1.59	7,276	1.87
July	375,794	400,723	93.78	6,419	1.71	7,671	1.91
August	401,700	421,118	95.39	6,884	1.71	8,986	2.13
September	389,171	394,031	98.77	5,688	1.46	7,551	1.92
October	455,388	433,249	105.11	8,123	1.78	8,904	2.06
November	515,717	471,931	109.28	10,131	1.96	10,978	2.33
December	677,598	574,826	117.88	13,192	1.95	11,400	1.98
Total	5,670,550	5,627,011	100.77	111,282	1.96	123,669	2.20

The electricity demand has been steadily rising until 2011, whereas starting from 2011 the demand is stabilized, with small fluctuations from year to year, which can be seen in the figure below. In

2018, the general demand compared to 2017 is approximately the same, due to the decrease in consumption of Ferronikel and the increase of demand in distribution.

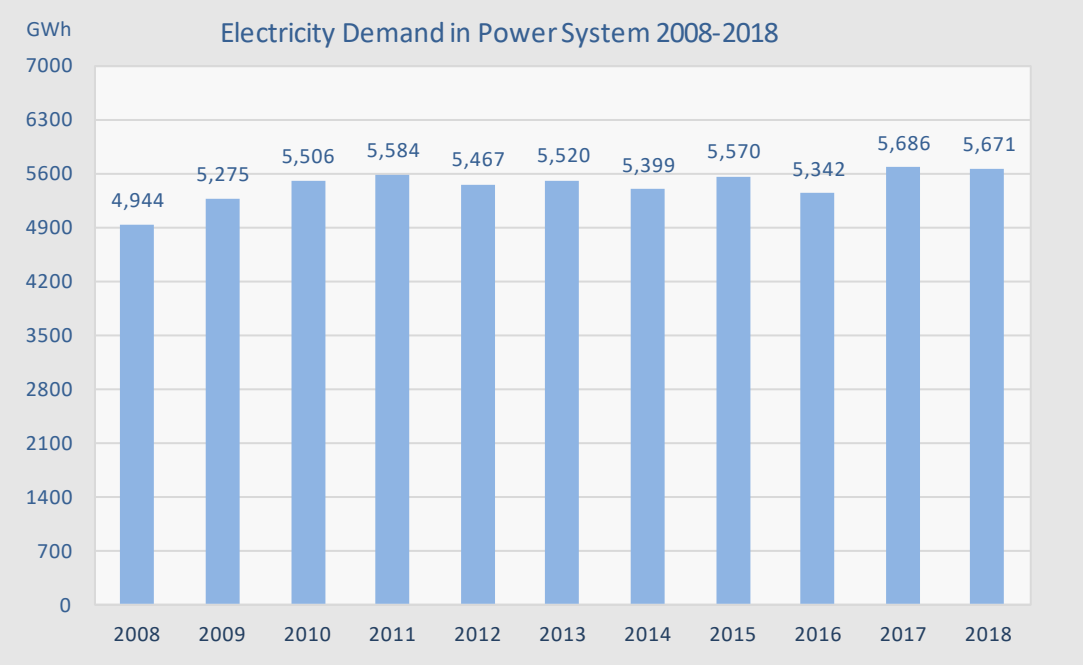


Fig. 6.13 Overall demand in the power system 2008-2018

The total electricity demand is divided into the consumption of customers connected to the transmission network, consumption in the distribution system (including losses), own-consumption for generation plant needs, and transmission losses, as shown in the table below divided by categories for 2018.

Tab. 6.15 The demand by categories and energy losses

Energy Demand 2018	Total MWh
Gross Consumption in Distribtuion*	5,120,442
Unregulated Customers	331,326
KEK's Internal Consumption	107,500
Transmission Losses	111,282
Overall Demand	**5,670,550**
Own-comsumption of KEK from Transmission	124,688

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

The value of electricity for own expenses in 2018, received from the transmission network is 98 GWh for generators of TPP Kosova A and 27 GWh for TPP Kosova B, or a total of 125 GWh.

Electricity demand varies according to the consumption period but also according to customer categories, and this is shown in the following table, including the losses in the transmission and distribution network (technical and commercial losses).

Tab. 6.16 Share of different categories in the overall demand 2018

2018/GWh	Total	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Household Consumption	2,374	241.8	213.7	227.1	188.5	169.1	166.4	177.3	184.2	161.0	184.8	196.9	262.9
Commercial Consumption	944	86.4	80.1	84.2	69.6	69.2	69.8	76.4	83.3	71.7	73.5	80.0	100.1
Industrial Consumption	704	73.2	56.6	49.0	43.5	39.3	40.2	42.5	57.4	72.0	76.6	74.2	79.8
Commercial Losses	755	114.8	106.0	96.1	41.6	38.1	27.6	26.6	21.0	33.2	55.3	83.7	111.4
Technical Losses	674	83.4	71.5	73.3	44.7	39.9	35.6	39.6	41.1	37.4	47.0	61.3	99.5
Transmission Losses	111	12.8	11.2	13.2	9.9	8.1	5.6	6.4	6.9	5.7	8.1	10.1	13.2
KEK Int. Con.	107	10.7	9.3	10.1	8.1	8.6	7.5	7.0	7.9	8.2	10.0	9.6	10.7
Total	**5,671**	**623.0**	**548.3**	**553.1**	**405.8**	**372.3**	**352.6**	**375.8**	**401.7**	**389.2**	**455.4**	**515.7**	**677.6**

Table 6.16 shows the change of demand by months. In some categories this change is quite high, such as household consumption and commercial losses that are higher in the winter season, which is mainly due to the consumption of electricity for heating.

Losses in the transmission system in recent years are at an acceptable level due to investments made by KOSTT, and include losses incurred by transit.

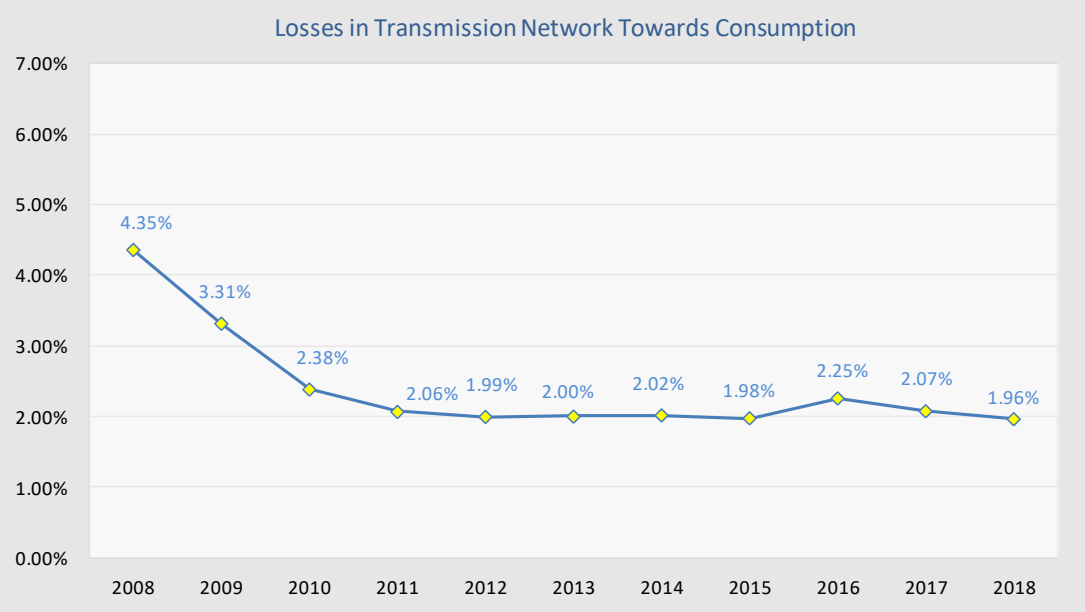


Fig. 6.14 Share of losses in transmission network 2008-2018

Losses in the Kosovo transmission network are approximately the same as the losses in transmission networks in the region and Europe. Figure 6.14 shows the share of losses in the transmission network towards the overall demand of the Kosovo power system. The figure shows the share of losses calculated towards the domestic demand. The level of transmission losses is affected by all the energy entered into the transmission system. Therefore, in order to calculate the share of losses towards the transmission network load, other sources, such as transit, as well as energy for generators own costs, should be included in addition to domestic demand. The share of transmission losses calculated in this form is 1.39%.

6.5 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 the 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 are presented in the tables below.

Tab. 6.17 Substations and transformers by voltage level in DSO

Transformation (kV/kV)	Owner	No. of SS	No. of TR	Installed Capacity (MVA)
35/10	KEDS	44	95	668
35/10kV	Privat	10	14	63
35/6kV	Privat	5	8	43
35/0.4kV	Privat	16	22	20
10(20)/0.4	KEDS	2,617	2,709	1,349
10(20)/0.4	Privat	2,222	2,232	1,054
10/0.4	Privat	1,247	1,253	606
10/0.4	KEDS	2,865	2,865	868
6(3)/0.4	KEDS	77	78	22
6/0.4	Private	1	1	1
Total		9,104	9,277	4,693

Tab. 6.18 DSO Lines

Voltage (kV)	Owner	Overhead lines (km)	Cable Network (km)	Total (km)
35 kV	KEDS	482	32	514.1
10(20) kV	KEDS	1,491	507	1,998.0
10 kV	KEDS	4,165	904	5,070.0
6 kV	KEDS	42	8	50.0
3 kV	KEDS	4	1	5.0
0.4 kV	KEDS	17,555	2,534	20,088.2
Total		23,739	3,986	27,725.3

The scheme below presents basic information on the number of substations (SS), transformers (TR) and transformer power (VA), line length, and the plants connected at the relevant voltage level.

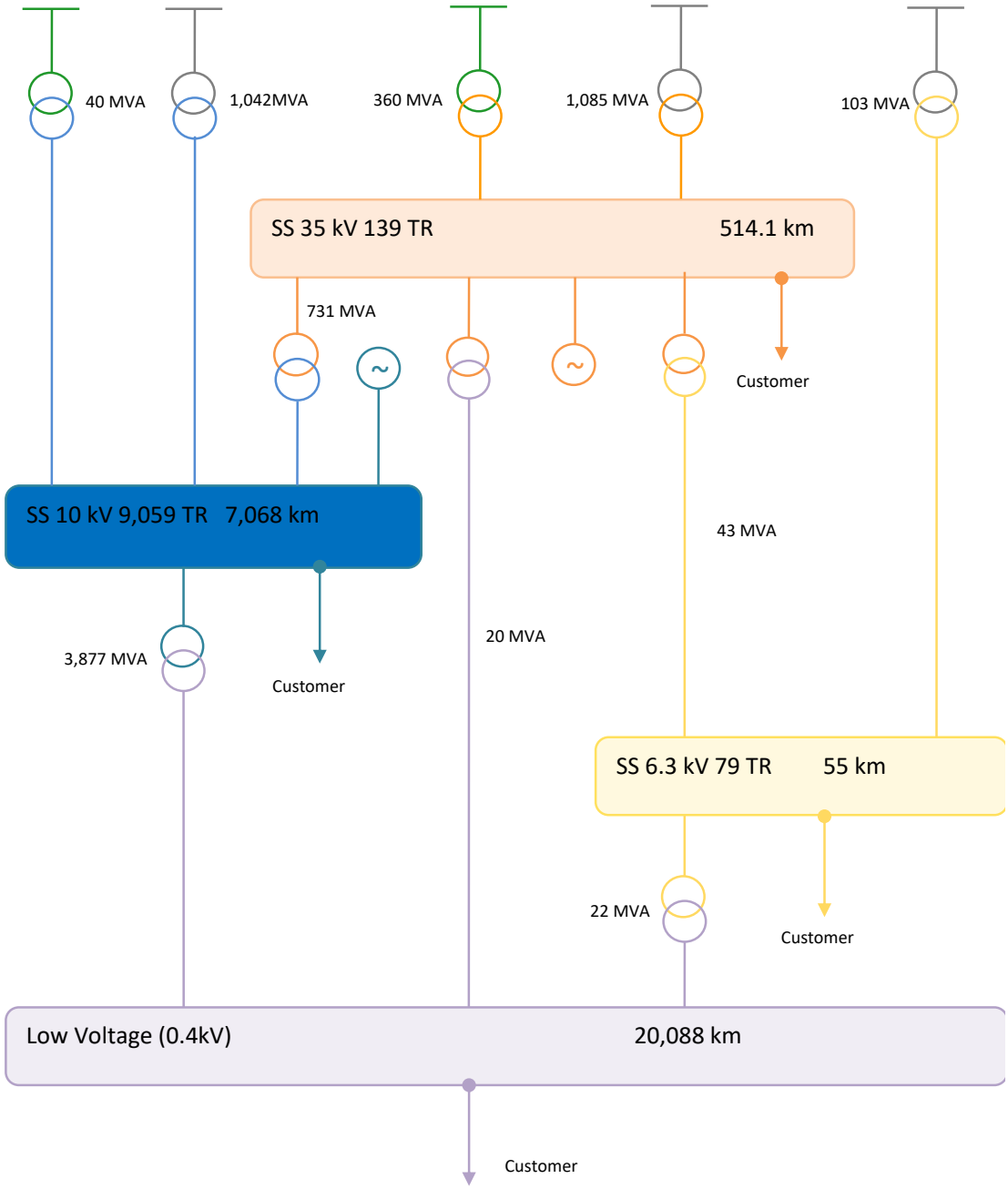


Fig. 6.15 Basic data of the distribution system

6.5.1 Investments in the Distribution System

The Distribution System Operator in accordance with the 5-year Investment Plan, approved by the Regulator, has consistently allocated a considerable budget for investments across the network including not only investments in the medium and low voltage network, but also in digitalisation and modernizing the network such as SCADA, smart meters, PLCs, etc. The year 2018 has been a continuation of several projects from 2017 and 2016, whereas several new projects at 10kV and 20kV levels were started, with particular emphasis on the investments of network reinforcement at the low voltage level and the elimination of the 35kV network .

The investment objectives continue to remain in line with the the five-year investment objectives, as follows:

1. Reduce of Technical and Commercial Losses;
2. Sustainable provision of quality electricity supply, also supporting the increase of the load;
3. Rehabilitation and modernization of the electric grid.

The following is a summary of investments realized during 2018 in new capacities, maintenance, rehabilitation and various other issues to enable safer supply of customers:

- **Investments 2016-2017 completed in 2018, in MV Network**
  - Construction of the overhead power line 10 kV, Letanci and Llausha in Podujeva, the number of the customers increased to 3, 985;
  - Construction of the overhead power line Drenica-Komoran;
  - Construction of the new overhead power line in the feeder Bablak, which now supplies 64 transformers;
  - Construction of the overhead power line 10 kV Gllobar and Shtrubullovë, which is beneficial to 3,400 customers;
  - Construction of the cable overhead power lines 10 kV Klina 1 and city Klina, (Dresniku), which is beneficial to 5, 741 customers;
  - Rehabilitation of the overhead power line Bellobradi-Bresana, is an ongoing project, where some parts of the project were realized with underground lines 10 kV, which is beneficial to 3, 318 customers;
  - Division of double air OHL – feeder Gjinovci, which is beneficial to 2,133 customers;
  - The Project of Lubinjë in Zhupë- rehabilitation, which is beneficial to 1,424 customers;
  - Investments in the feeder Lumi i Madh and the power plants which serve as an alternative supply for the feeder Llazareva and Prugovci, which is beneficial to 3, 188 customers;
  - Orllani feeder with villages around Batllava Lake - rehabilitation, which is beneficial to 506 customers;
  - Kllokoti Feeder – rehabilitation, which is beneficial to 2,866 customers;
  - The project Shala and a part of the feeder Betonjerka- rehabilitation and insertion of the new line. In total the investments includes 17 km of the new or existing line and some plants for isolation of breakdowns. 2, 593 customers are expected to benefit from this project;
  - The feeder 10 kV Juniku- insertion of the underground line and rehabilitation of the existing line. This feeder has been quite problematic in Kosovo, with huge technical losses, with a drop in voltage and frequent outages. The number of customers who are affected is 2,729;
  - Klinavci Project - rehabilitation including the interruption of the branch passing by SS 110/10 kV Klina. The investment also includes the rehabilitation of the existing network which is beneficial to 1,294 customers;

- The Uglar Project, initiated in 2017, foresees continuous rehabilitation of the Uglari feeder and is under construction.

➢ **Investments in OHL of the medium voltage 10 kV, in 2018**

- Division into two parts of the 10 kV OHL Hogoshti, which is supplied by SS Berivojca as a long feeder, where 1,968 customers benefit from it;
- 10kV Feeder Muqiverci, which is supplied by Berivojca, is invested in double OPL, which is beneficial to 2,411 customers;
- Investments in OHL 10 kV Mitrovica-Shupkovc was required due to the construction of the SS of KOSTT. The reason was the supply of SS Shupkovci through underground lines of 10kV level from Mitrovica II SS 110/10 (20) kV and elimination of the substation 35 kV;
- Feeder 10kV Zahaqi-Kastrati - rehabilitation and connection to other connections, where 1,913 customers benefit;
- Feeder Fushë Kosova 2 - Apollonia - Rehabilitation, where Apollonia feeder is unloaded, which has a large increase in demand for new capacities, where 971 customers benefited;
- Feeder Plementin- Fidanishte- network reinforcement and configuration change that discharges the Plemetini feeder, Lumi i Madh Feeder and Palaj Feeder as well, and it will also provide opportunities for new capacities in the city, which will be beneficial to around 2,476 customers.

➢ **Investments in Medium Voltage OHL- Projects of 2017 and 2018**

In 2017, DSO started with two pilot projects for converting the feeders 10kV to 20kV and continued with another feeder in 2018. The selected feeders were Drenica feeder in Ferizaj district and Breznica feeder in Pristina district. The selected feeder in 2018 was Runiku in Skenderaj where 1,772 customers benefited. It is worth mentioning that the connection in Skenderaj will be carried out with a 10 / 20kV upstream transformer.

➢ **Investments in Network Reinforcement –Earlier Projects finished in 2018**

It should be mentioned that in 2018 there were some reinforcement projects carried forward from other years, which started the work in respective years, but their energizing was carried out this year and they haven't been fully completed. There are two projects from 2014, which haven't been finished yet:

- There are 28 projects that started in 2015 and ended in 2018. Regarding 12 of these projects, only their technical admission is expected to be carried out.
- There is a total of 3 projects that started in 2016 and ended in 2018.
- There are 10 projects that started in 2017 and ended in 2018. Only one of them is expected to complete technical admission.
- There are 28 projects that started in 2018 and ended in 2018. All these projects have been completed, and only their technical admission is expected to take place.

It should be emphasized that these projects are related to all Districts of Kosovo.

Investments related to network improvement include: *Placement of new TR; Replacement of existing TR with new TR; Rehabilitation of low voltage grid; Expansion and rehabilitation of the secondary voltage grid; Placement of MMOs (columns or landmarks); Connecting household customers to outside-the-house meters.*

- **Material used in 2018 by the Department of Investments**

In order to complete the investments mentioned above, a certain number of materials were used, including but not limited to the following materials:

Tab. 6.19 Consumed materials

Type of Expenditure	Amount	Unit
Pillars	7,303	pc
Cables	1,056,346	m
Meter Boxes	7,799	pc
Panels	171	pc
Transformers	147	pc
Terminal Cables	2,585	pc
Stands	36	pc
Chambers	163	pc

- **Investments in Metering Point**

DSO has invested in the installation of new meters by switching the mechanical meters with digital meters, which will also enable reading from afar. During 2018, the following meters were invested:

- 5,363 meters with direct metering with GSM GPRS communication ;
- 17,727 meters with direct metering with PLC;
- meters with semi-indirect and indirect metering, of which 160 are new meters and 454 changed meters;
- 13,899 mechanical meters which were replaced with digital meters; and
- 25,734 meters dedicated for new connections;

- **Investments in SCADA**

The DSO is continuously implementing the SCADA project, which, as presented in the 5-year investment plan, will be built in three phases. The first phase of the project has already been completed, whereas the second phase is expected to be completed by the end of 2019.

6.5.2 Consumption and Distribution Losses

The DSO is organized in seven districts: Pristina, Mitrovica, Peja, Gjakova, Prizren, Ferizaj and Gjilan. Data on consumption, technical and commercial losses as well as other data are calculated by districts and months of the year.

The highest consumption was realized in Pristina district with 32% of the total consumption in distribution, while the lowest consumption is in the district of Gjilan with 14.33% of the total consumption.

Energy flows in Distribution, by districts, including electricity losses, are presented in Table 6.20.

Tab. 6.20 Consumption and Distribution losses by districts in 2018

Districts	Load in Districts	Billed Energy	Technical Losses		Commercial Losses		Total Losses	
	MWh	MWh	MWh	%	MWh	%	MWh	%
Prishtina	1,639,311	1,237,230	209,298	12.77	192,782	11.76	402,081	24.53
Mitrovica	737,650	309,498	73,553	9.97	354,599	48.07	428,152	58.04
Peja	554,508	401,273	80,049	14.44	73,186	13.20	153,235	27.63
Gjakova	453,002	340,729	74,739	16.50	37,533	8.29	112,272	24.78
Prizreni	648,812	507,038	90,766	13.99	51,008	7.86	141,774	21.85
Ferizaji	659,048	528,510	95,164	14.44	35,374	5.37	130,538	19.81
Gjilani	428,112	366,747	50,609	11.82	10,757	2.51	61,366	14.33
Total	5,120,442	3,691,024	674,178	13.17	755,239	14.75	1,429,417	27.92

Table 6.21 presents the demand (load), billed energy as well as technical and commercial losses by months.

Tab. 6.21 Consumption and Distribution Losses in 2018

Months	Load	Billed Energy	Technical Losses		Commercial Losses		Total Losses	
	MWh	MWh	MWh	%	MWh	%	MWh	%
January	557,073	358,892	83,431	14.98	114,751	20.60	198,182	35.58
February	499,690	322,273	71,465	14.30	105,952	21.20	177,417	35.51
March	512,637	343,203	73,321	14.30	96,113	18.75	169,434	33.05
April	372,910	286,604	44,708	11.99	41,599	11.16	86,307	23.14
May	345,531	267,577	39,880	11.54	38,074	11.02	77,954	22.56
June	327,782	264,641	35,574	10.85	27,568	8.41	63,141	19.26
July	350,318	284,124	39,617	11.31	26,577	7.59	66,195	18.90
August	361,285	299,227	41,076	11.37	20,982	5.81	62,058	17.18
September	332,878	262,252	37,411	11.24	33,214	9.98	70,625	21.22
October	392,417	290,117	46,954	11.97	55,346	14.10	102,300	26.07
November	455,971	311,045	61,266	13.44	83,660	18.35	144,926	31.78
December	611,949	401,070	99,475	16.26	111,404	18.20	210,879	34.46
Total-Realized	5,120,442	3,691,024	674,178	13.17	755,239	14.75	1,429,417	27.92
Totali Balance	4,733,059	3,423,354	484,192	10.23	668,320	14.12	1,309,705	27.67

The technical losses, according to the data sent by the DSO, amount to 13.17%. The old age of the network has a high impact on these losses, as well as the length of the lines, the quality and type of conductors and transformers, the loading of the equipment as well as their maintenance.

Commercial losses are quite high, accounting for 9.44% of total demand in distribution, however the unbilled energy in the northern part of Kosovo must be added as well, which represents 5.31% (272 GWh) of the total demand in distribution. Therefore, non-technical losses are 14.75%.

The total losses in the distribution system are metered and represent the difference between the energy entering the distribution system and the billed energy. Since technical and commercial losses cannot be measured separately, the allocation of these losses is carried out by calculating the technical losses through the respective software, taking into account the old age of the plants, the network configuration and the parameters set by standards. Commercial losses are further calculated as the difference between total and technical losses.

Electricity demand in distribution in 2018 was realized in an amount of 5,120 GWh, whereas in 2017 it was 4,997 GWh, which represents an increase of approximately 2.5%.

Consumption in the distribution system is constantly increasing, as is the overall demand, and this increase is shown in Figure 6.16, which presents the data from 2008 to 2018.

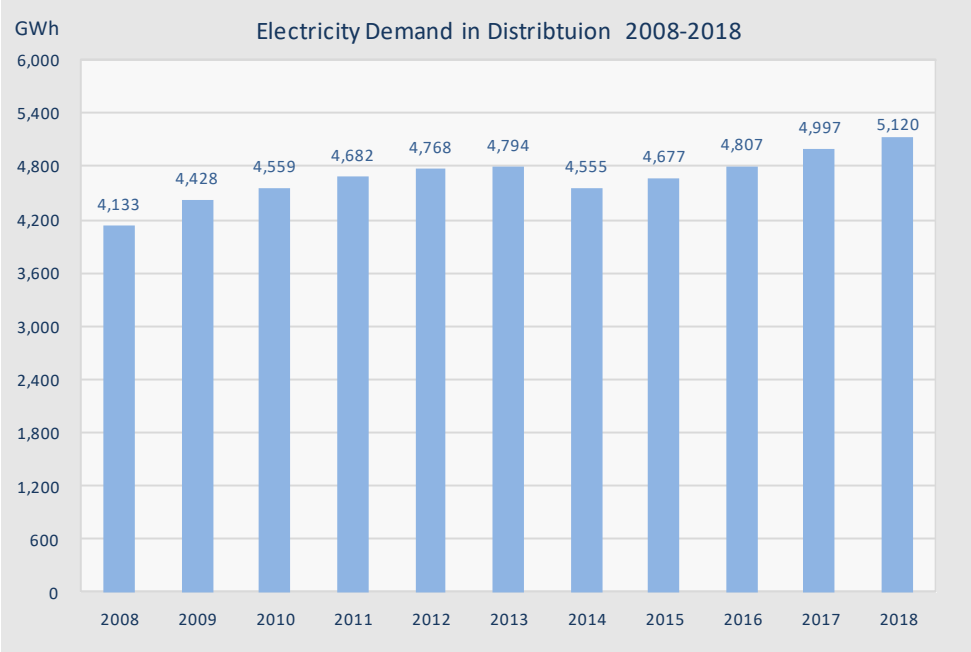


Fig. 6.16 Electricity Demand in Distribution System 2008-2018

Despite investments realized so far in the distribution network, electricity losses remain high and represent a concerning problem for the electricity sector. Losses also have a negative impact on customer supply and financial sustainability of supply and distribution operators as well as the entire energy sector.

The reduction of commercial losses also has a positive impact on the reduction of consumption, thus reducing the network load and technical losses.

During 2018, the Regulator has set new targets for allowed distribution losses, based on the level of losses of 2017 as the starting point, keeping the same level of losses (in percentage) for 2018 and 2019, and then setting the rate of loss reduction of 1.2 percentage points for the next two years and 1.3 percentage points for 2022. The losses that the Regulator approves to the Distribution System Operator are based on these targets.

The cost of electricity losses up to the level determined by the Regulator is covered by the customers tariff. The Distribution System Operator makes continuous efforts to reduce distribution losses, however despite the reduction of losses over the years, the DSO has failed to meet the

targets set by the Regulator, which means that the cost of the part which exceeds these targets is borne by the DSO itself.

Below is a chart showing the technical, commercial and total losses from 2008 to 2018, showing the trend of loss reduction as well as fluctuations in the level of technical and commercial losses.

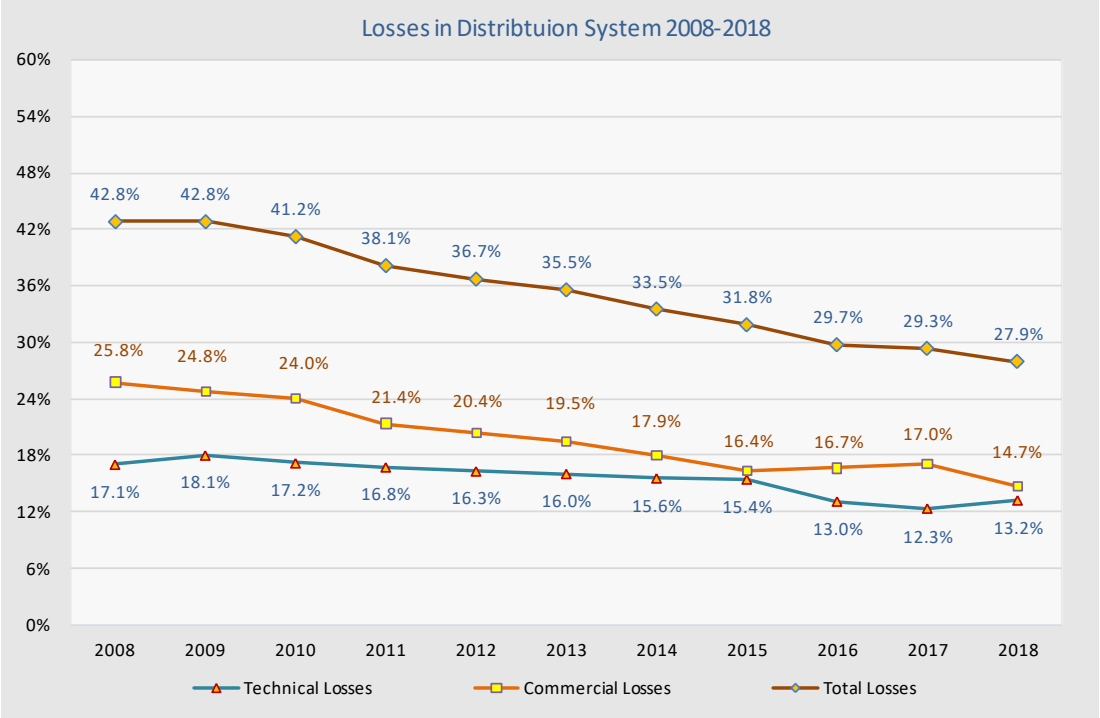


Fig. 6.17 Technical and Commercial Losses in Distribution for the period 2008-2018

In general, electricity losses at DSO have decreased from 29.3% in 2017 to 27.9% towards distribution demand.

6.6 Electricity Supply

Electricity supply involves the sale of electricity to final customers and includes the supply of customers who are entitled the universal service and unregulated customers.

Electricity supply during 2018 was carried out by the universal service supplier who supplied customers with regulated prices as well as customers with unregulated prices for which a separate account was held.

The share of household customers in the total billed consumption in distribution remains dominant with about 59.01%, followed by commercial consumption with 22.89%, industrial consumption 17.51%, and finally by consumption in public lighting with 0.59 %. While gross consumption was roughly the same as last year, the consumption of household customers increased by 3.6%, the consumption of commercial customers also had an increase of about 6.5%, whereas there was a decrease of 15.2% in the industrial consumption compared to the last year.

The figure below presents the share of consumption categories compared to overall consumption (presented with or without losses in distribution).

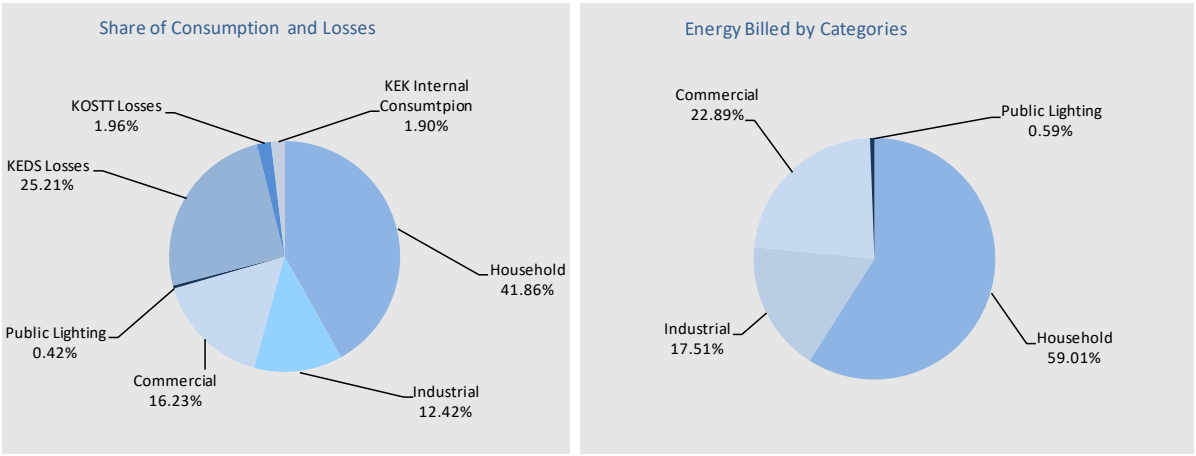


Fig. 6.18 Share of Consumption Categories- with and without losses in 2018

6.6.1 Billing and Collection

The billed energy in the distribution system in 2018 was 3,691 MWh and represents about 72.1% of the distribution system load, which compared to 2017 is higher by 1.4 percentage points.

Table 6.22 presents the billing and collection in distribution as well as the ratio between them by months for 2018, where it is seen that in several months this ratio is higher than the 100% value, which means that during these months, the electricity from previous months was collected as well as the old debt.

Tab. 6.22 Billing and Collection by months in distribution for 2018

Distribtuion 2018	Load	Realization	Billing	Collection	Coll/Bill
	MWh	MWh	€	€	%
January	557,073	358,892	24,672,983	22,402,269	90.80%
February	499,690	322,273	22,251,077	21,087,088	94.77%
March	512,637	343,203	23,958,590	22,868,761	95.45%
April	372,910	286,604	20,628,428	22,168,813	107.47%
May	345,531	267,577	19,593,128	20,382,177	104.03%
June	327,782	264,641	19,400,672	23,824,991	122.80%
July	350,318	284,124	20,872,994	19,979,557	95.72%
August	361,285	299,227	22,029,485	21,734,665	98.66%
September	332,878	262,252	19,591,008	20,480,296	104.54%
October	392,417	290,117	21,192,159	20,325,972	95.91%
November	455,971	311,045	21,963,875	20,952,462	95.40%
December	611,949	401,070	27,442,384	24,362,470	88.78%
Total	5,120,442	3,691,024	263,596,782	260,569,522	98.85%

The billed and collected electricity in distribution as well as the ratio between billing and collection from 2008 to 2018 is shown in the figure below.

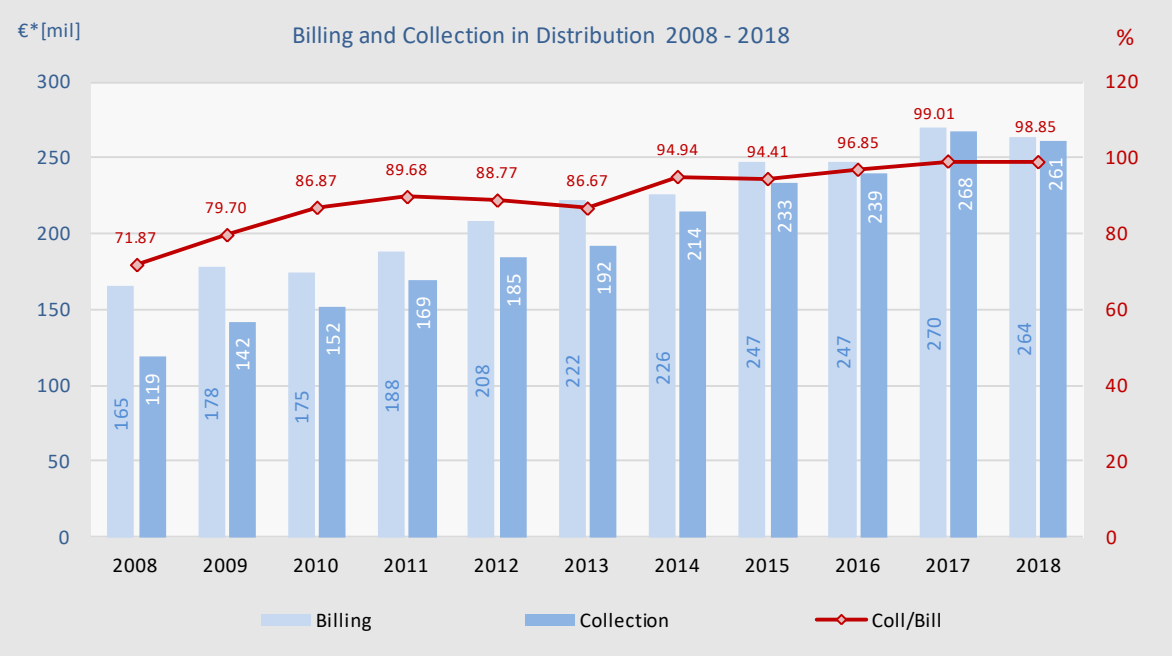


Fig. 6.19. Billing and Collection in Distribution through the years 2008-2018

The level of collection towards distribution billing for 2018 was 98.85%, whereas when the customers connected to the transmission system whose collection is 100% are also calculated, then the overall collection is 98.94%. The consumption categorized by voltage level and electricity customers groups for 2018 is given in the following table.

Tab. 6.23 Electricity billed by customer categories 2018

Categories (MWh)	Total	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
220 kV	234,106	34,779	21,088	8,374	6,308	2,681	2,894	2,992	16,644	33,722	35,832	32,920	35,872
110 kV	97,220	7,704	7,061	8,773	8,703	7,337	8,848	9,070	9,033	8,682	9,050	7,090	5,870
35 kV	45,074	3,259	3,126	3,763	3,422	3,776	3,645	3,803	3,988	3,684	3,982	4,291	4,335
10 kV	327,948	27,445	25,363	28,119	25,047	25,507	24,822	26,644	27,757	25,880	27,766	29,871	33,726
Household	2,373,612	241,801	213,673	227,096	188,539	169,090	166,369	177,320	184,188	160,981	184,835	196,851	262,870
0.4 kV I	364,821	33,249	30,284	32,513	27,120	27,813	27,181	30,670	31,939	27,792	28,732	30,501	37,027
0.4 kV II	555,789	50,627	47,747	49,550	40,835	39,891	41,056	44,166	49,815	42,151	42,557	47,076	60,317
Public Lighting	23,780	2,510	2,081	2,162	1,640	1,498	1,568	1,520	1,541	1,764	2,245	2,455	2,795
Total Billed	4,022,351	401,375	350,422	360,351	301,614	277,594	276,384	296,185	324,903	304,656	334,999	351,055	442,811
Consumption KEK	107,500	10,686	9,257	10,052	8,069	8,573	7,524	6,996	7,854	8,202	9,966	9,605	10,715
Losses KEDS	1,429,417	198,182	177,417	169,434	86,307	77,954	63,141	66,195	62,058	70,625	102,300	144,926	210,879
Losses KOSTT	111,282	12,764	11,247	13,242	9,854	8,141	5,598	6,419	6,884	5,688	8,123	10,131	13,192
Total	**5,670,550**	**623,006**	**548,343**	**553,077**	**405,845**	**372,263**	**352,647**	**375,794**	**401,700**	**389,171**	**455,388**	**515,717**	**677,598**

Electricity billed in the transmission and distribution system in 2018 was 4,022 GWh, which expressed in monetary value (including VAT) is 286.3 mil €, whereas the collection is 283.2 mil €.

The table below presents billing, collection, and the ratio between them presented in percentage of about 99%.

Tab. 6.24 Billing and Collection in 2018

2018	Load	Realization	Billing	Collection	Coll/Bill
	MWh	MWh	€	€	%
Regulated Customers	5,120,442	3,691,024	263,596,782	260,569,522	98.85%
Unregulated Customers	331,326	331,326	22,049,357	22,049,357	100.00%
Total	5,451,768	4,022,351	285,646,140	282,618,879	98.94%

Average Price of Electricity

The average selling price of electricity is different depending on the customer category, the voltage level to which customers are connected and the use of electricity at different tariffs by the time the energy is used. The average price varies for household and non-household customers. Figure 6.20 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 use electricity at certain times. For households the average energy price is 5.65€ cents/kWh and compared to 2017 there is a price decrease of 6.4 percentage points, while for non-household customers the average energy price is 7.94 € cents / kWh.

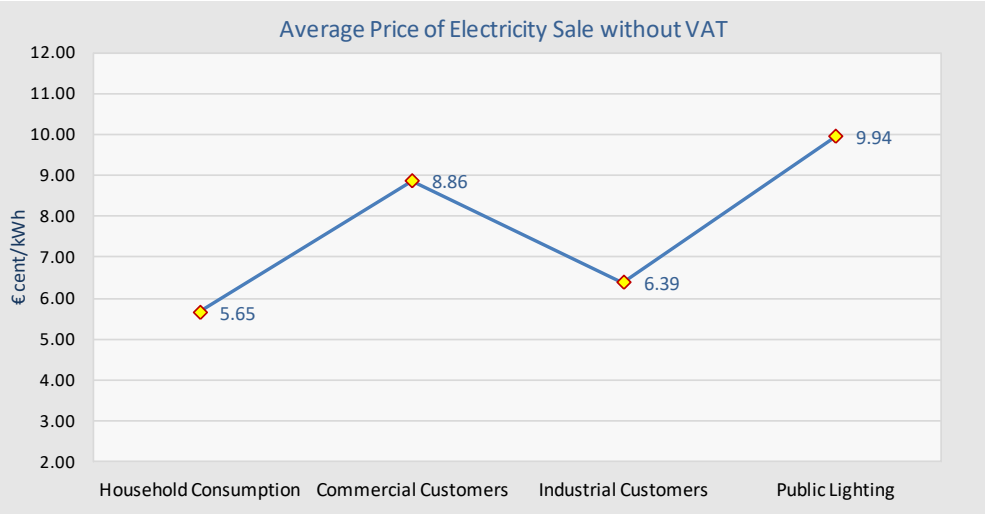


Fig. 6.20 Average Price of Electricity Sale 2018 (without VAT)

The figure below shows the average electricity prices for household and non-household customers for the last ten years, prices that do not include VAT.

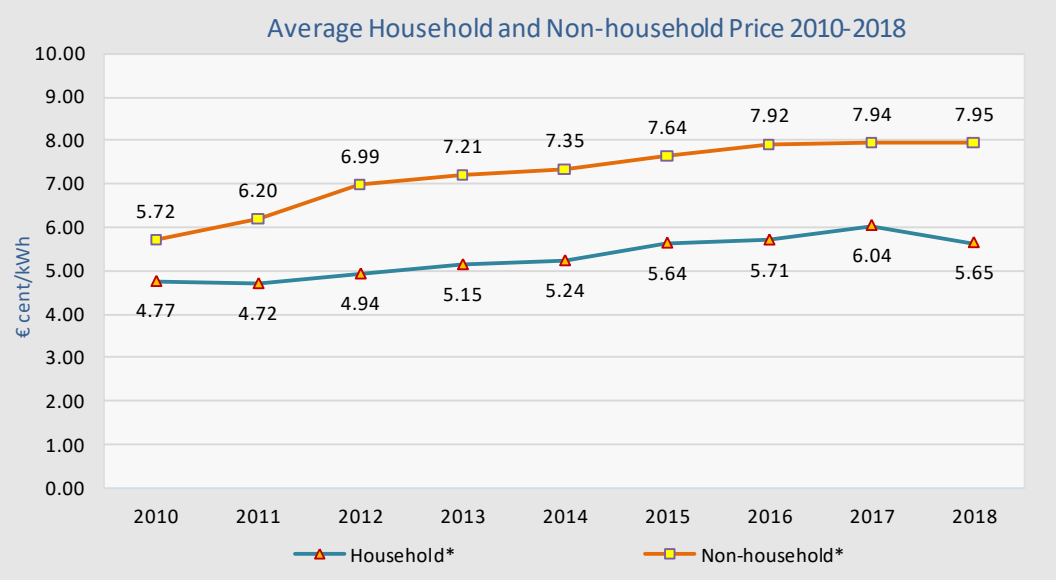
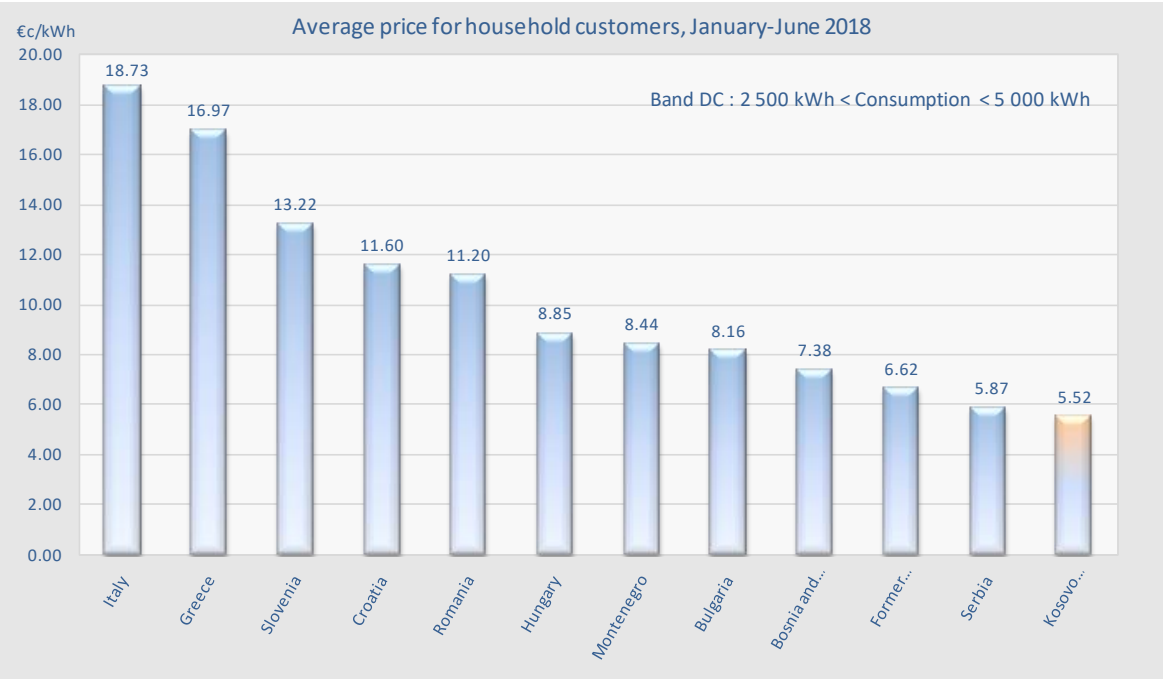


Fig. 6.21 Average Price of Electricity Sale through years (without VAT)

The average price without VAT for household customers is shown in the following figure for the first six months of 2018 for some countries, issued by Eurostat, as the data for the last six month of the year is missing. Eurostat data are categorized by consumption, and the figure shows the consumption value of 2500-5000 kWh, which most closely corresponds to the average consumption of a Kosovan family.



** Source of data- EUROSTAT*

Fig. 6.22 Average Prices for Household Customers for the first six months (without VAT)

6.7 Electricity Import and Export

The electricity demand in Kosovo's power system is covered by domestic generation and imports realized through cross-border lines.

The country's total electricity demand was covered by import at the level of 14.55%, which represents a decrease of about 7.3 percentage points from the previous year being about 21.85%.

Within the interconnection borders of the Republic of Kosovo, 2,683,390 MWh entered, while 2,322,325 MWh were delivered, of them 361,063 MWh for internal consumption, while the rest has been transit.

The table below shows the electricity flows in interconnection lines with neighbouring countries.

Tab. 6.25 Electricity Flows in interconnection lines for 2018

Interconnection flow MWh	400 kV		220 kV		110 kV		Total	
	Received	Delivered	Received	Delivered	Received	Delivered	Received	Delivered
Albania			880,416	84,691			880,416	84,691
Macedonia	205,692	1,058,990					205,692	1,058,990
Montenegro	386,615	613,086					386,615	613,086
Serbia	1,179,805	115,304	11,680	263,685	19,181	186,570	1,210,666	565,559
Total	1,772,112	1,787,380	892,096	348,376	19,181	186,570	2,683,389	2,322,326
Balance	15,268		-543,720		167,389		-361,063	

The import realized for 2018 was 825,182 MWh, with which the energy deficiencies were met, especially at peak times in the winter season when the demand was unaffordable for the domestic generation.

This amount includes the electricity imported for regulated and unregulated customers, the losses in the transmission network and losses in the distribution network, which is provided through commercial contracts and through the exchange of energy for energy between KEK and KESH.

The total electricity import for 2018 was 825,182 MWh, which is about 31 percentage points lower than in 2017, which was 1,242,225 MWh.

Electricity imported with commercial contracts during 2018 was 813,134 MWh in the amount of € 53,940,752, with an average price of € 66.34/MWh.

The data on imports and exports of electricity are presented in the table below.

Tab. 6.26 Electricity Import and Export in 2018

Import/Export MWh	Import with contracts	Import as exchange	Total import	Export with contracts	Export as exchange	Total export	Net Imp/Exp
January	119,926	0	119,926	25,397	0	25,397	-94,529
February	63,368	0	63,368	36,671	1,533	38,204	-25,164
March	55,850	4,766	60,616	44,324	832	45,156	-15,460
April	17,113	5,632	22,745	118,120	0	118,120	95,375
May	4,972	0	4,972	175,925	1,910	177,835	172,863
June	20,846	0	20,846	50,198	0	50,198	29,352
July	30,080	0	30,080	47,725	0	47,725	17,645
August	61,983	0	61,983	33,570	13,098	46,668	-15,315
September	77,219	0	77,219	31,149	6,660	37,809	-39,410
October	69,341	0	69,341	46,447	2,880	49,327	-20,014
November	139,037	0	139,037	18,381	0	18,381	-120,656
December	153,399	1,650	155,049	20,934	1,061	21,995	-133,054
Total	813,134	12,048	825,182	648,841	27,974	676,815	-148,367

Given the consumption curve during the daylight hours, and the inefficiency of the generating units to convey the consumption, it is seen that in many cases there is energy inefficiency and surpluses, sometimes within the same day. So, in several hours of the same day there are energy imports, while at other times there are energy surpluses that should be exported.

Electricity surpluses occur mainly in the night hours (at the time of low tariff). In these periods, surpluses appear in the region as well, resulting in higher bids, and this implies that export prices are significantly lower than import prices.

Electricity exported with commercial contracts during 2018 was 648,841 MWh with an average price of 35.88 €/MWh. In addition to contracted export, there was an amount of energy exchanged (energy for energy) between KEK and KESH. The amount of energy exported as an exchange is 27,974 MWh. The total export of electricity for 2018 was 676,815 MWh, which is about 23 percentage points lower than in 2017, which was 879,910 MWh.

As seen from the data presented above, in 2018 Kosovo was a net importer of electricity in the amount of 148,367 MWh, presented by months in the figure below.

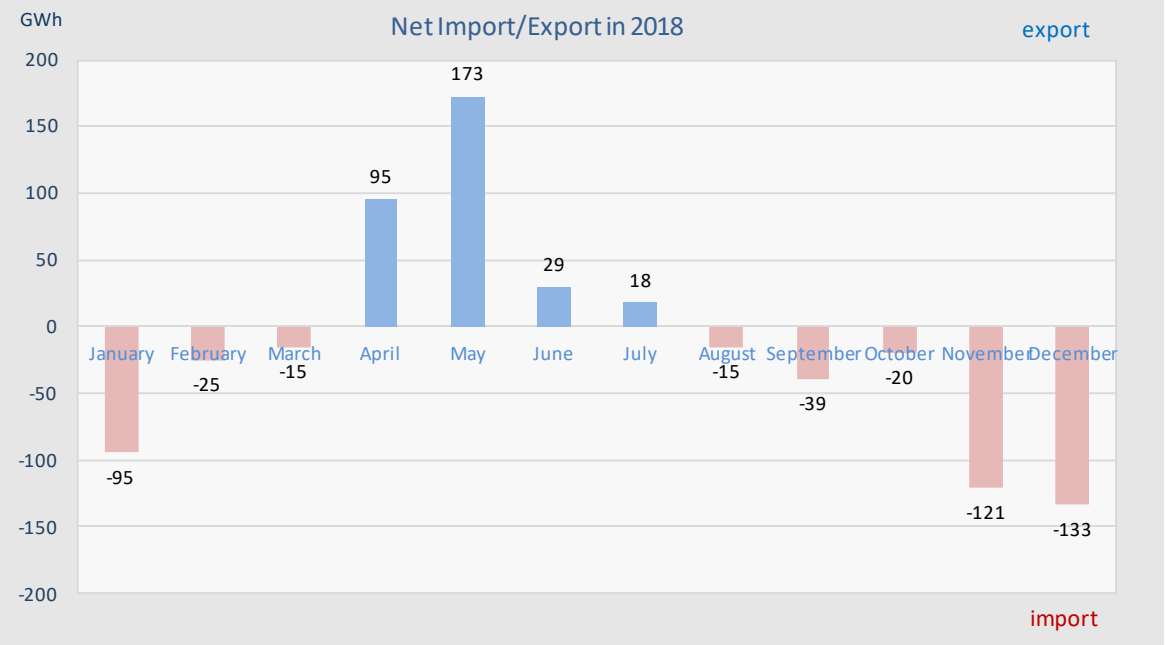


Fig. 6.23 Electricity Import and Export in 2018

There has been an increase and decrease of electricity price of import and export through the years 2000 – 2018. The figure below shows the import and export prices from 2000 to 2018.

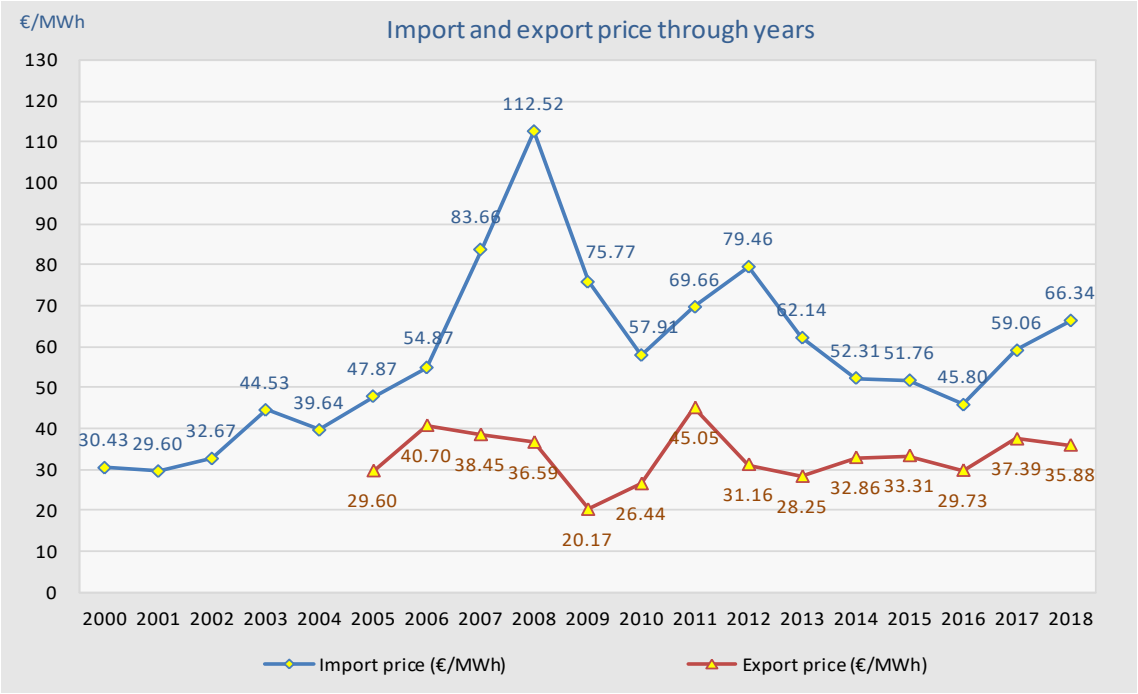


Fig. 6.24 Average Price of Import and Export through Years

6.8 Quality Standards of Electricity Supply and Services

Quality standards of electricity supply and services are an important element in the regulation of energy sector. These standards are defined so that the quality of supply and service of electricity to customers is continuously improved by the energy enterprise. For this purpose, the Regulator, in addition to the indicators that it has approved for measuring and determining the quality of services, in line with the legal provisions of the Law on Electricity has also developed the Rule on Electricity Service Quality Standards which will be approved during 2019. The purpose of the Rule on Electricity Service Quality Standards is to define guaranteed standards and improve the quality of service, uninterrupted supply and voltage quality.

The quality standards of electricity supply and services are defined and monitored according to the following areas:

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

6.8.1 Continuity of Supply

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

During 2018, the continuity of electricity supply was monitored by the Regulator for both system operators: the Transmission System Operator (TSO) and the 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.

6.8.1.1 Measuring Indexes Reported by TSO

The metering indexes reported by KOSTT for the quality standards of electricity supply and service for 2018 are presented below.

- SAIDI - for planned interruptions in the transmission system was 1.86 hours;
- SAIDI - for the unplanned interruptions in the transmission system was 0.43 hours;
- SAIFI - for the planned interruptions in the transmission system was 0.69;
- SAIFI - for the unplanned interruptions in the transmission system was 1.20;
- ENS - for planned interruptions in the transmission system was 2.192 GWh; and
- ENS - for unplanned interruptions in the transmission system was 0.378 GWh.

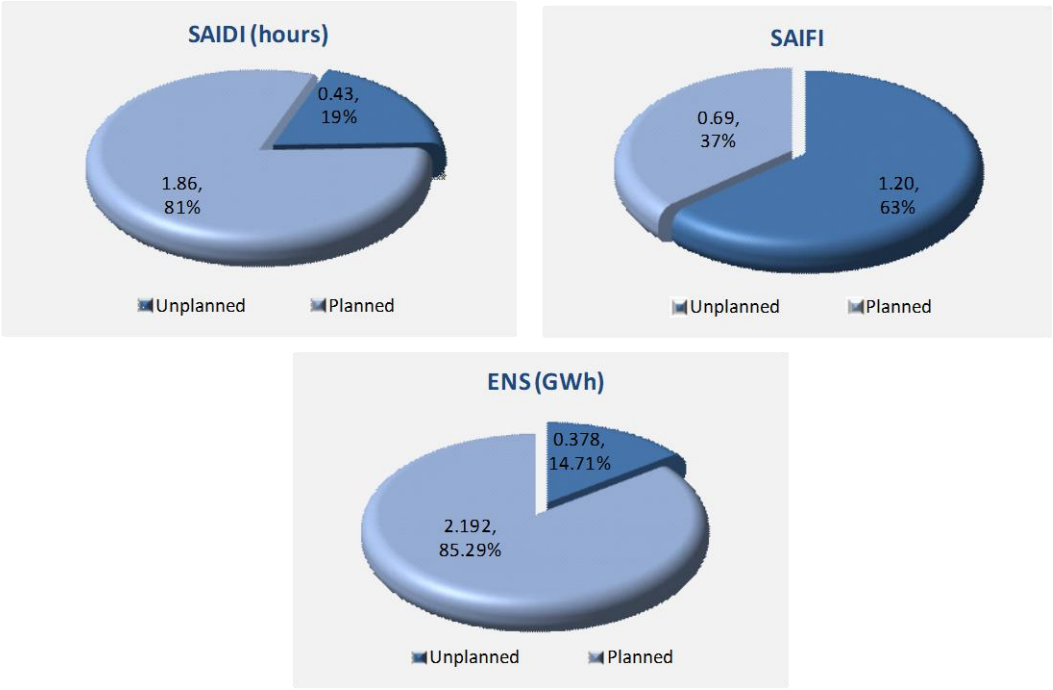


Fig. 6.25 Measuring Indicators SAIDI, SAIFI and ENS for KOSTT for 2018

The following figure shows the measuring indexes reported by KOSTT for quality standards of electricity supply and service during 2012 - 2018.

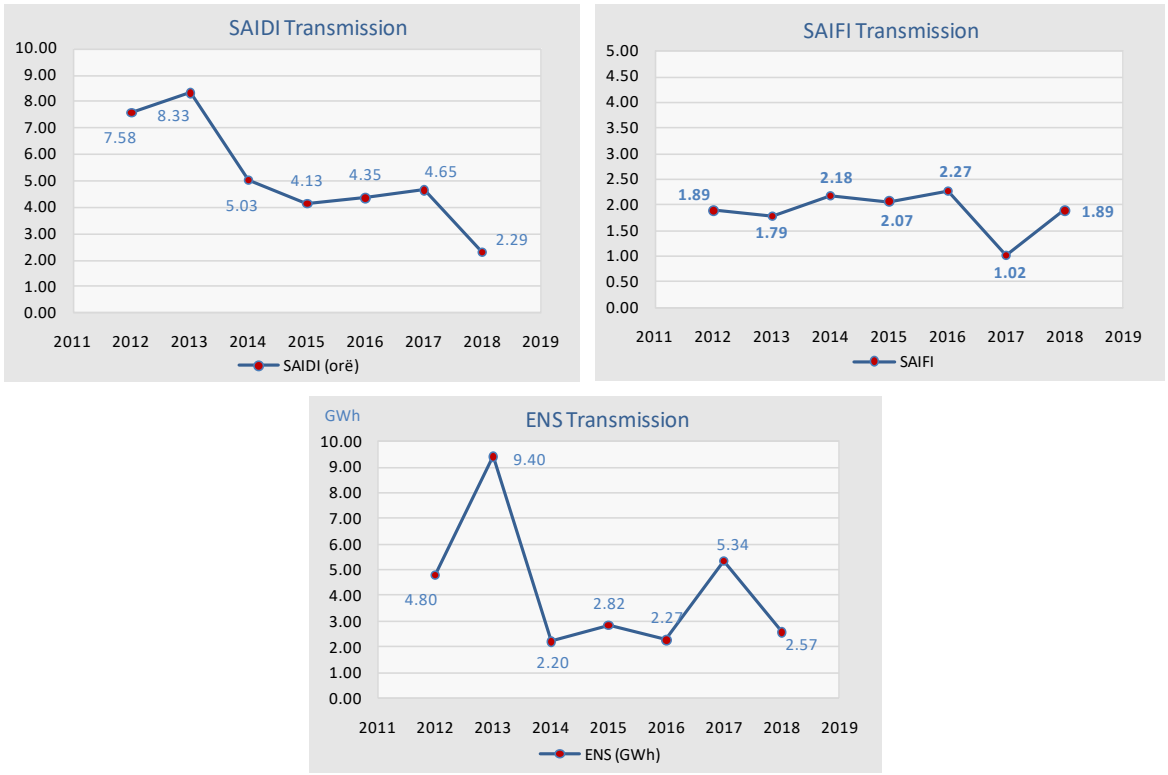


Fig. 6.26 Indicators SAIDI, SAIFI and ENS for KOSTT for the period 2011-2018

According to data reported by KOSTT for the SAIDI measuring index, it is estimated that this index has an improvement of 103.18% in 2018 compared to 2017, mainly due to the works carried out in the transmission network. It should be emphasized that in 2018, compared to 2017, the SAIDI index has a significant decrease of 130.65% of the planned outages, while there is an increase of 16.22% of unplanned outages.

Regarding the SAIFI measuring index, from the reported data it is concluded that in total this index has an increase of 85.29% over 2018 compared to 2017, respectively there is an increase of this index at the planned outages of 160.87%, as well as an increase of 23.21% of unplanned outages.

As for the energy not-supplied - ENS, during 2018 there is an improvement of this index by -107.63% compared to 2017, namely in the planned outages, by -121.12%, as well as unplanned outages have a decrease of -29.37%.

6.8.1.2 Measuring Indexes reported by DSO

The Measuring Indexes reported by the DSO on quality standards of electricity supply and service for 2018 are presented below.

- SAIDI - for planned interruptions in the distribution system was 44.93 hours;
- SAIDI - for unplanned interruptions in the distribution system was 65.23 hours;
- SAIFI - for planned interruptions in the distribution system was 13.04;
- SAIFI - for unplanned interruptions in the distribution system was 54.11;
- ENS - for planned interruptions in the distribution system was 17.73 GWh; dhe
- ENS - for unplanned interruptions in the distribution system was 32.06 GWh.

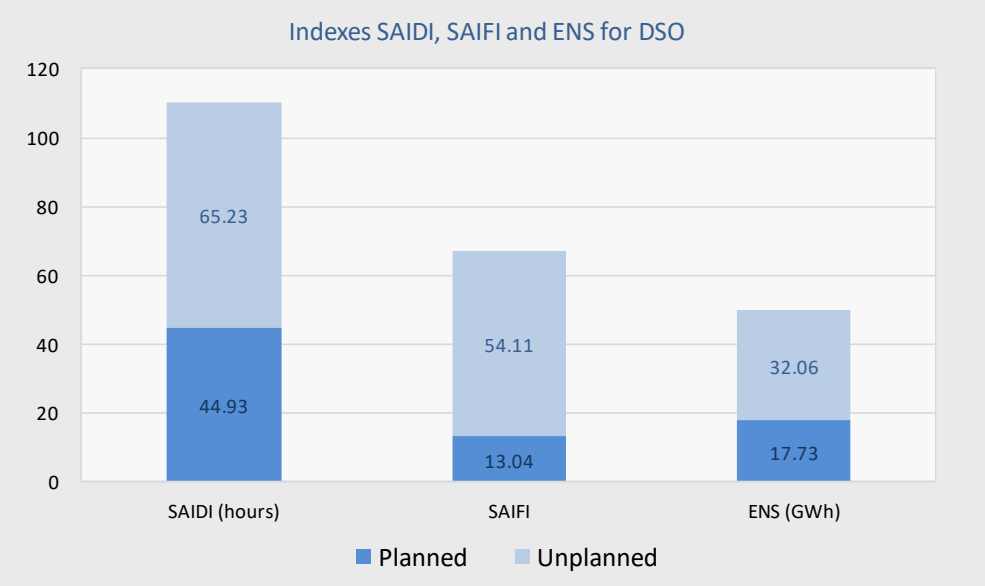


Fig. 6.27 Measuring Indexes SAIDI, SAIFI and ENS for DSO for 2018

The following figures show the metering indexes reported by the DSO for the quality standards of electricity supply and service during the years 2011 - 2018.

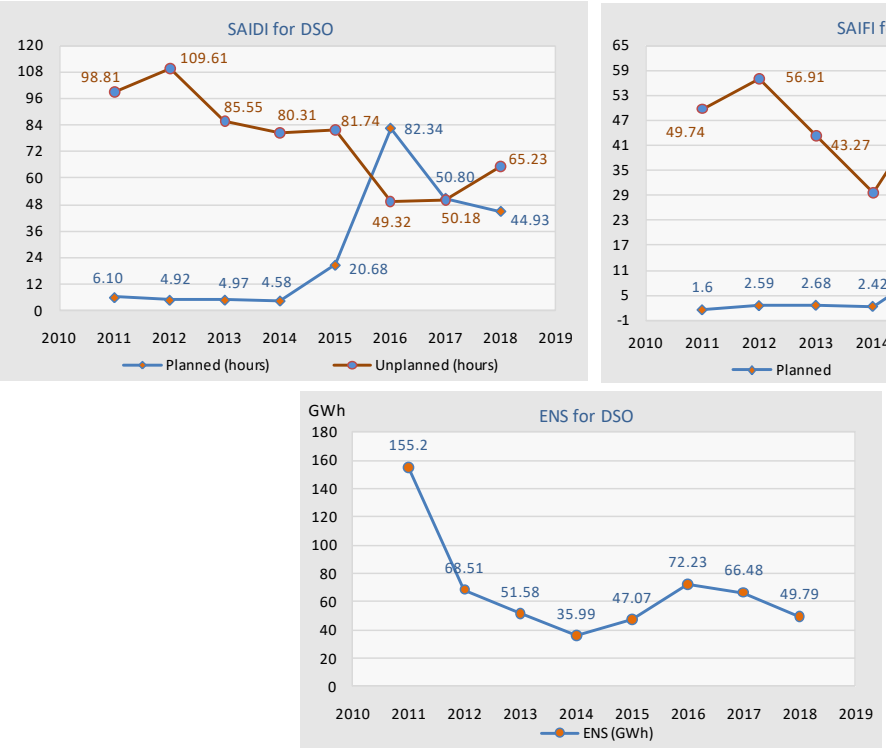


Fig. 6.28 Indicators SAIDI, SAIFI and ENS for the period 2011-2018

The data above shows that the measuring indexes SAIDI, SAIFI in 2018 generally did not improve compared to 2017, and there is an increase of these indicators compared to the previous year, whereas regarding the ENS measuring index there is an improvement of this indicator in comparison to 2017.

According to the data reported for the SAIDI measuring index, during 2018, there is an increase of this index compared to 2017, which means that in 2018 there is an increase of interruptions by 9.09% compared to 2017. It should be emphasized that following more detailed analysis of the index - SAIDI, it is noticed that in 2018 there is a reduction of -13.06 for planned outages compared to 2017, while there is an increase of 29.29% of unplanned outages in 2018 compared to 2017.

Following the analysis of the SAIFI measuring index, it is noticed that in 2018 there is an increase of this index compared to 2017, which means that in 2018 there is an increase in the frequency of electricity interruptions for customers - SAIFI for 11,80% compared to 2017. During the more detailed analysis of the SAIFI index, it is noticed that in 2018 there was a decrease in the frequency of planned customer interruptions (SAIFI) of 157.75% compared to 2017, as well as an increase in the frequency of unplanned interruptions for customers , of 104.57% compared to 2017.

In 2018, the energy not supplied (ENS) in general has improved compared to 2017, which according to the data, it is noticed that in 2018 there is a 33.52% decrease compared to 2017. In 2018 there is a decrease of unbilled energy for unplanned interruptions, for 86.13% compared to 2017, as well as decrease of unsupplied energy for unplanned interruptions for 4.43% compared to 2017.

6.8.2 Quality of Voltage

The voltage quality is related to the technical aspect of the power system and is compared to the nominal voltage, which during this period was mainly monitored through registry of customer complaints regarding voltage quality.

During 2018, the number of complaints submitted by customers to the DSO regarding the voltage quality was 792 complaints, out of which 595 or 75.13% were resolved, 37 or 4.67% are under the review process, while 160 complaints or 20.20% remain unresolved.

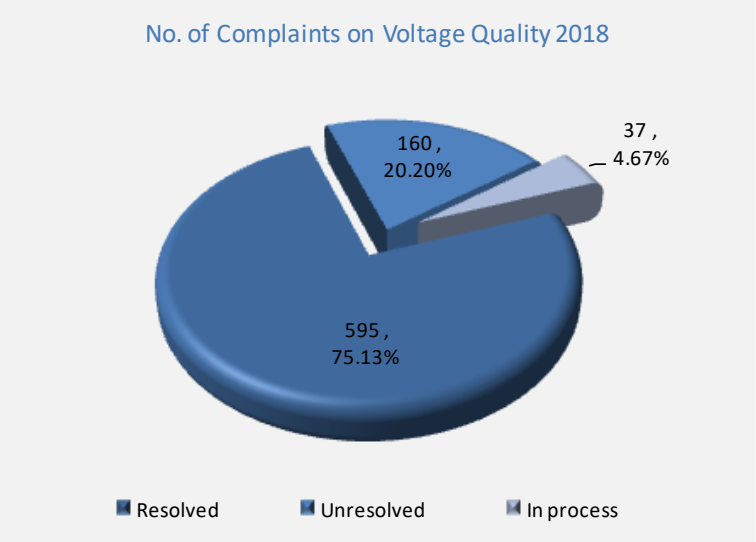


Fig. 6.29 Customer complaints on voltage quality in 2018

Below is a figure showing the data of the status of resolved customer complaints on voltage level at DSO, for 2018.

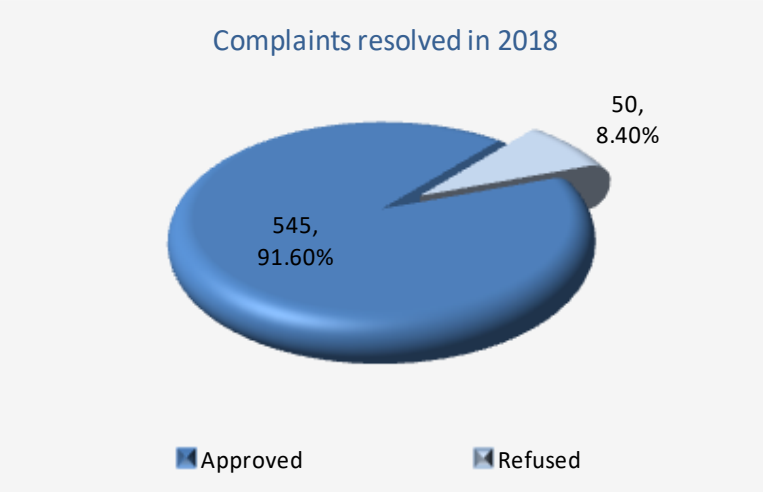


Fig. 6.30 The status of resolved customer complaints in 2018

Therefore, the figure above shows that DSO, from 595 customer complaints, has approved 545 or 91.60% in favour of customers, whereas 50 complaints or 8.40% were refused.

The figure below shows customer complaints for voltage quality by years, where it is seen that until 2017 there has been a continuous increase of customer complaints regarding voltage quality, while

in 2018 there has been a decrease in customer complaints on quality voltage. Compared to 2017, there is a decrease of 48.36%.

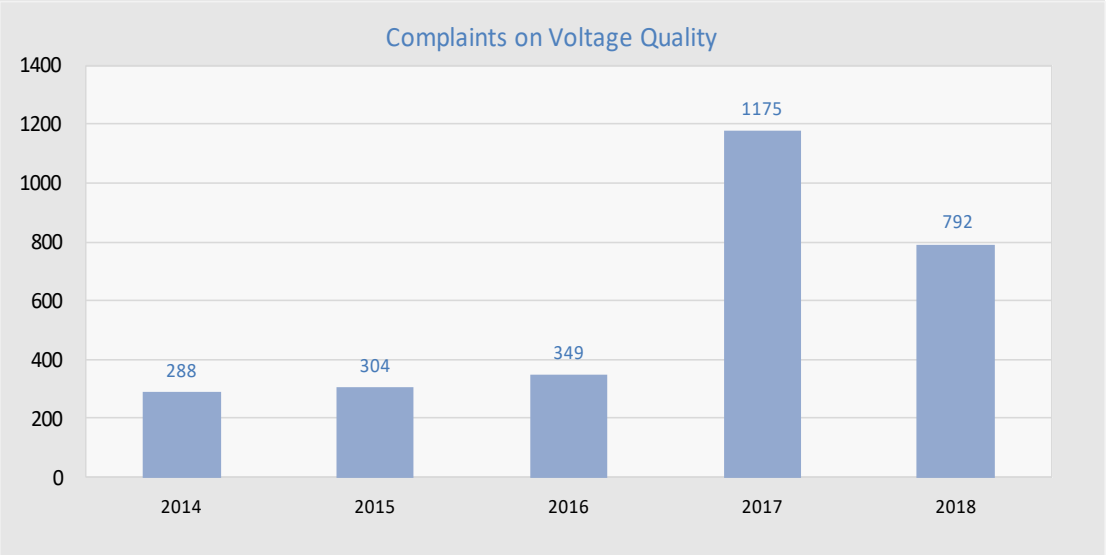


Fig. 6.31 Complaints on voltage quality, by years

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

6.8.3 Commercial Quality

Commercial quality determines the efficiency and accuracy of customer complaints and requests. The regulation of commercial quality takes into account the mutual relationship between customers and suppliers.

For the purpose of analyzing commercial quality, the data obtained from the licensee are presented in three categories that directly affect customer issues. These categories are:

- New Connections;
- Electro-Energetic Consents; and
- Customer Complaints

6.8.3.1 New Connections

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

During the period January-December 2018, KESCO registered a total of 26,242 regular requests for new connection for tariff groups 4, 5, 6, 7 and 8. 25,587 or 97.50% requests for new connections were approved, while the remaining part is in the registration process. It should be noted that the demand for new connections carried forward from the previous year was 1,545.

From the data of KESCO, it can be seen that from the total number of requests for new connections, the highest demand was from household customers (tariff groups 5, 6 and 7) 21,251 or 80.98%, followed by requests for new connections of the commercial tariff group 0,4 kV Category II - tariff

group 4 which was 3,587 or 13.67%, whereas the demand for tariff group 8 - Public lighting was 153 or 0.58%. It should also be noted that from the total number of requests for new connections, 1,251 requests or 4.77% were of undefined categories, because the applicants when applying for new connection, did not specify the customer category in their request, therefore they are registered in this category.

Of the total number of applicants' registration as customers in the "CCP" billing program, household customers amount for 21,327 or 83.35%, followed by tariff group 4 (0.4 kV category II - commercial) with 4,116 registrations or 16.09%, as well as the tariff group 8 (public lighting) with 144 registrations or 0.56%.

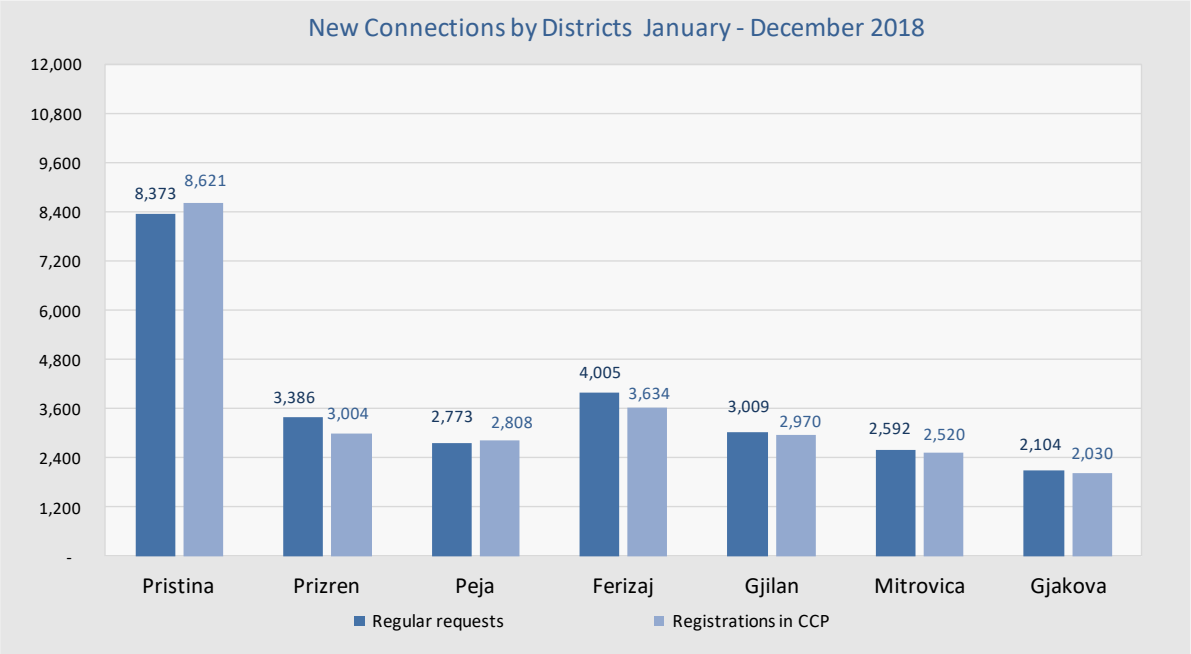


Fig. 6.32 New connections by districts for 2018

From the chart above, it is noticed that during 2018, from the total number of requests for new connections, most requests were registered in the Pristina district with 8,373 or 31.91% of requests, followed by Ferizaj district with 4,005 or 15.26%, whereas the lowest number of requests for new connections were registered in the district of Gjakova, respectively 2,104 or 8.02%. It should also be emphasized that in relation to the registration of requests in the Customer Care Package, from the overall number, the highest number of registrations were in the Pristina district with 8,621 or 33.69%, followed by Ferizaj district with 3,634 or 14.20%, whereas the lowest number of registrations was recorded in the district of Gjakova with 2,030 or 7.93%.

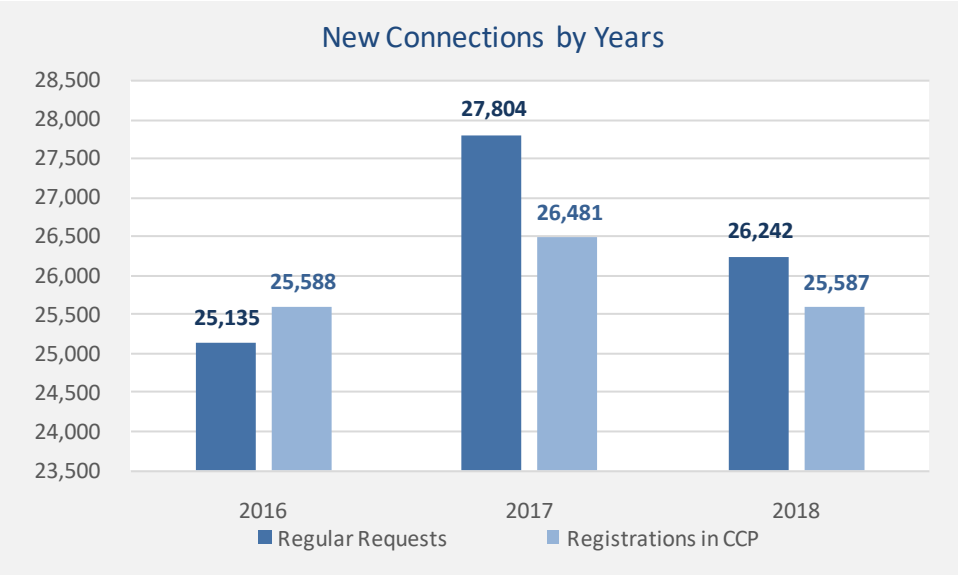


Fig. 6.33 New connections by years

The chart above shows that during 2018 there were 5.62% less requests for new connections than in 2017, and 3.38% less customer registrations than in 2017.

6.8.3.2 Electro-energetic Consents (EEC)

From the presented data, it can be seen that during 2018, 1,417 requests for Electro-energetic Consents were submitted in KEDS, whereas there were 35 requests transferred from 2017.

Tab. 6.27 Electro-energetic Consents for 2018

Districts	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Pristina	26	9	18	23	33	28	33	32	31	39	46	41	359
Mitrovica	8	3	6	12	5	10	13	8	7	19	14	10	115
Peja	1	9	8	18	18	16	10	14	16	19	10	13	152
Gjakova	10	5	10	7	9	13	13	19	4	9	10	6	115
Prizreni	12	10	14	16	13	11	14	17	8	15	15	15	160
Ferizaj	18	11	23	39	23	28	17	40	34	42	35	30	340
Gjilani	8	8	9	11	11	24	12	7	8	14	10	19	141
Total	**83**	**55**	**88**	**126**	**112**	**130**	**112**	**137**	**108**	**157**	**140**	**134**	**1,382**

From the table above, it is noticed that from the total number of requests for Electro-energetic Consents for 2018, most requests were registered in Pristina district, namely 359 or 25.98%, followed by Ferizaj district with 340 or 24.60%, whereas the lowest number of request was in the districts of Mitrovica and Gjakova, each with 115 or 8.32%.

Tab. 6.28 Electro-energetic Consents by Districts, 2018

Districts	Request for EEC 2018	Reviewed	In process	Transferred to other departments
Pristina	359	291	16	19
Mitrovica	115	85	1	11
Peja	152	129	5	8
Gjakova	115	78	1	6
Prizreni	160	120	4	8
Ferizaj	340	285	12	18
Gjilani	141	118	6	8
Total	**1,382**	**1,106**	**45**	**78**

The table above shows that from 1,382 applicants' requests for Electro-energetic Consents for 2018 and transferred from 2017, 1,106 requests were reviewed and approved, whereas according to KEDS data, 78 other requests were also reviewed, but according to the Department of Electro-energetic Consents, within KEDS, it was concluded that these requests should not be issued the Electro-energetic Consent but that these requests are delegated to other departments, the remaining 45 requests are under review.

Below is presented a chart of the requests for Electro-energetic Consents for the period 2014 – 2018. The chart clearly shows that each year there is an increase in demand of customers for Electro-energetic Consents.

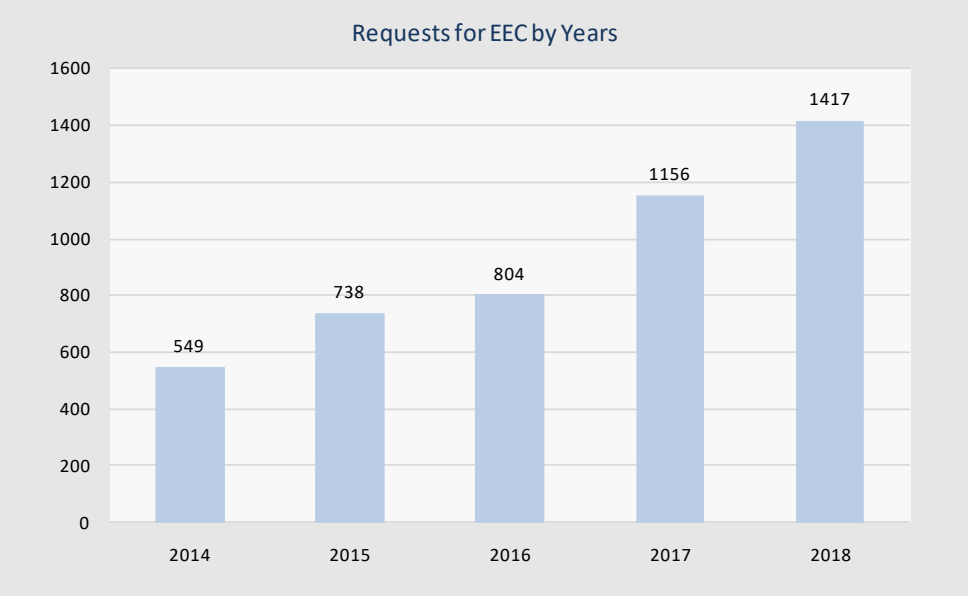


Fig. 6.34 Request for Electro-energetic Consents for the period 2014 – 2018

6.8.3.3 Customer Complaints to the Supplier- KESCO

According to KESCO's reported data, during 2018, the total number of customer complaints registered at KESCO's Customer Department is 8,040 and transferred from the last year were 985 complaints, while resolved/completed were 8,158.

Below is a graph of customer complaints registered and resolved for 2018 by districts.

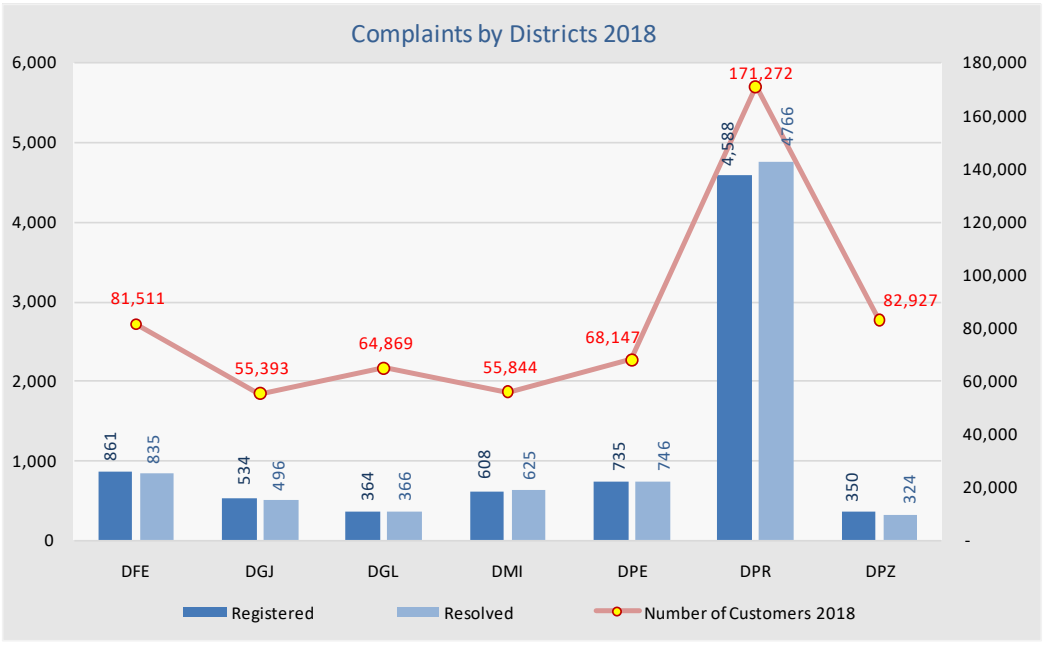


Fig. 6.35 Complaints and the number of customers by districts, 2018

The above figure shows that the highest share of customer complaints registered in KESCO during 2018 is in the Pristina district with 57.06%, followed by Ferizaj with 10.71%, while the lowest share is in Prizren district of 4.35 %. It should be noticed that the largest number of complaints in Pristina district is mainly due to the fact that Pristina District has the largest number of customers in Kosovo. Also from the figure above it is seen that the highest share of customer complaints resolved by the Customer Department in KESCO compared to the total number of complaints resolved at the country level is in Pristina district with 58.42%, followed by the Ferizaj district with 10.24%, whereas the lowest in Prizren district with 3.97%.

Below is the report of customer complaints filed with KESCO with the number of invoices/customers by month.

Tab. 6.29 The Report of Complaints and number of customers by month for 2018

Month	Complaints	Number of Bills/Customers	Ratio Complaint/Customer
January	729	563,257	0.13%
February	645	565,385	0.11%
March	747	566,701	0.13%
April	574	568,081	0.10%
May	593	570,193	0.10%
June	522	572,448	0.09%
July	558	575,137	0.10%
August	715	577,092	0.12%
September	572	579,040	0.10%
October	796	581,706	0.14%
November	729	577,188	0.13%
December	860	579,963	0.15%
Total	**8,040**	**6,876,191**	**0.12%**

From the data reported by KESCO, the number of complaints registered during 2018 is 8,040, representing 1.39% of the total number of customers, or 0.12% of the total number of annual bills.

The data shows that the highest share of resolved complaints in relation to the complaints filed for the period January-December 2018 was in the Pristina district (ratio of resolved complaints/ registered complaints) of 103.88%, followed by the district of Mitrovica with 102.80%, while the lowest share was in the Prizren district with 92.57%. It is worth mentioning that in some districts there is a share higher than 100%, due to the fact that in addition to the registered complaints of that period, the districts have managed to review some complaints transferred from the previous year.

The figure below shows the number of complaints registered and resolved according to the nature of complaints for 2018.

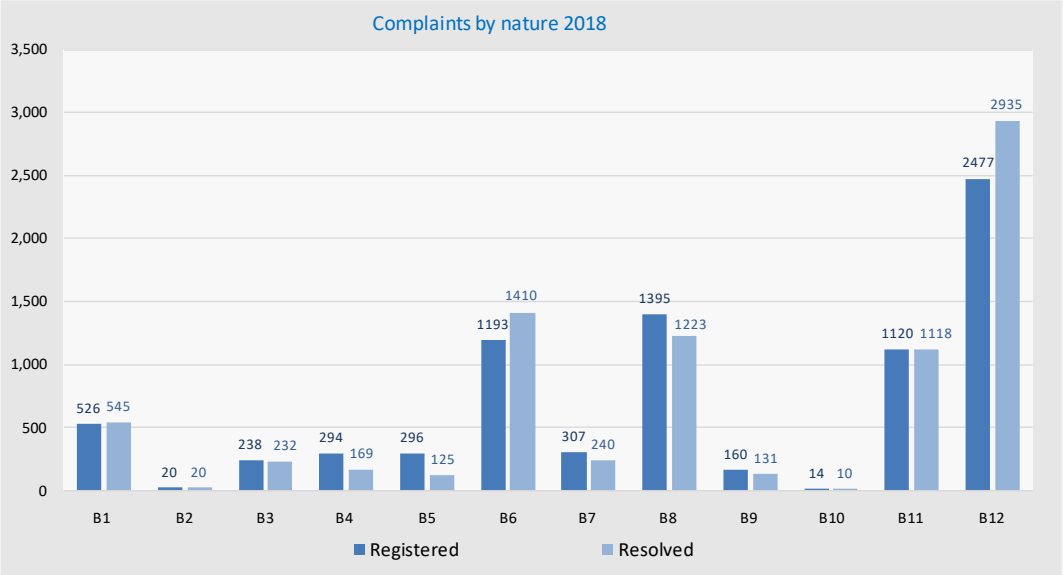


Fig. 6.36 Customer complaints by nature in 2018

Below are presented the descriptions of the nature of complaints:

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

From the data reported by KESCO for 2018, it is noticed that from the total number of customer complaints, the highest number of complaints were related to the inaccurate meter, namely 1,395 or 17.35%, followed by complaints about incorrect reading, with 1,193 or 14.84%, whereas the lowest number of complaints were related to the Charging with VAT with only 14 complaints or 0.17%. It is worth mentioning that in these comparisons the nature of other complaints is not taken into account, as in that category the different nature of the complaints is included and they are collected in the other category.

According to KESCO's data, in 2018, the complaints of the registered customers that were related to reading errors at the metering points (incorrect reading and irregular reading) were 1,500 or 18.66% of the total number of the filed customer complaints, in 2017 the number of complaints related to reading errors at the metering point were 3,955, in 2016 there were 4,504, and 5,312 in 2015. From this, it is clearly seen that the number of customer complaints related to reading errors at the metering point is decreasing and this owning to the new way of reading at the metering point by hand-held unit (Hand Held Unit) which has significantly improved the reading of metering points and reduced the probability of errors while reading the metering point because reading and billing is carried out at the same time.

Below is presented the figure with the data of complaints resolved by KESCO for 2018, or more precisely the status of resolved complaints.

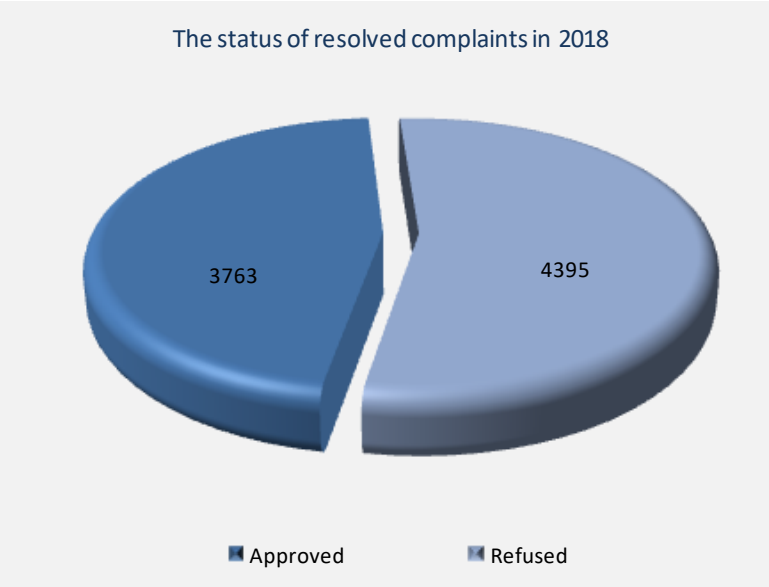


Fig. 6.37 The status of resolved customer complaints in 2018

Thus, from the figure above it is noticed that KESCO, out of 8,158 customer complaints, 3,763 complaints have been approved in favour of customers or 46.13%, while 4,395 rejected or expressed in percentage 53.87%.

The total number of customer complaints registered in 2018 was 8,040, 11,350 in 2017, 11,180 in 2016, 12,926 in 2015, and 17,655 in 2014, as shown in the figure below.

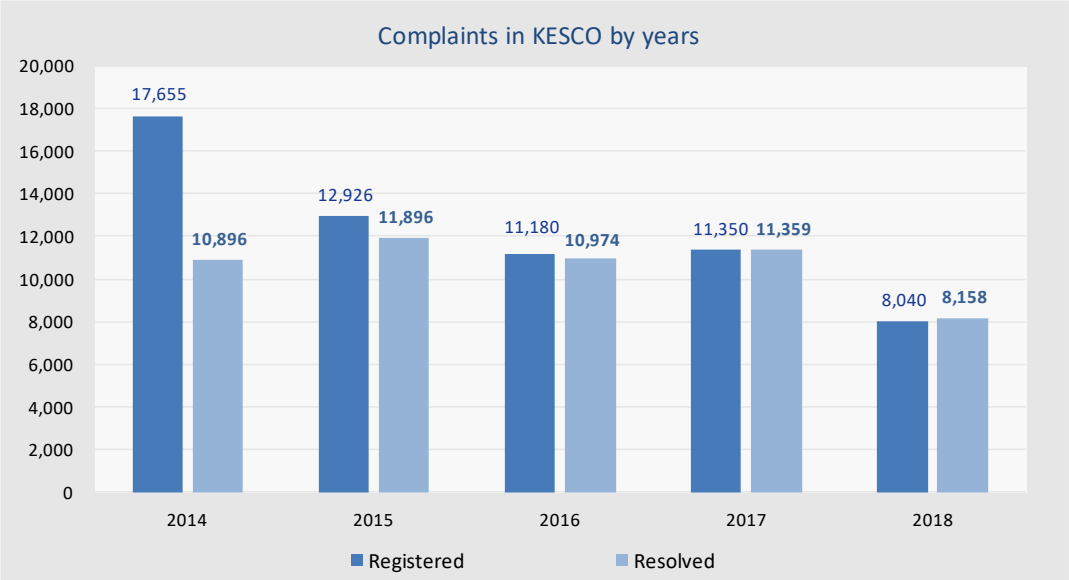


Fig. 6.38 Customer Complaints in KESCO, by years

7 THERMAL ENERGY SECTOR

The Kosovo thermal energy sector consists of 4 thermal (district heating) systems with an installed generation capacity estimated to be around 332 MW_{TH}. The district heating Termomit, Mitrovica and Zveçan, due to known circumstances, do not meet the licensing/regulation and monitoring requirements of the Regulator, thus preventing the provision of the relevant updated data; therefore detailed data for DH Termokos and DH Gjakova are provided below.

This sector has a very limited local scale, which meets 3 - 5% of the total heating demand in Kosovo.

7.1 Technical Characteristics of Thermal Energy Systems

7.1.1 Thermal Energy Production Plants

The thermal power plants of DH Termokos are comprised of the main heating plant with a total installed capacity of 120 MW_{TH}, and supporting heat plant at the University Clinical Center with a capacity of 14 MW_{TH}. Upon the connection of the thermal energy extraction station in units B1 and B2 of TPP Kosova B, to this capacity is also added the installed capacity of the 140 MW_{TH} cogeneration. It should be mentioned that the heating boilers at DH Termokos are not decommissioned but they will serve as a reserve capacity to be activated in the event of any eventual breakdown in TPP Kosova B units.

The District Heating- Gjakova is equipped with two heating boilers with total installed capacity of 38.6 MW_{TH} - one with a capacity of 20 MW_{TH} and the other 18.6 MW_{TH}.

7.1.2 Thermal Energy Distribution Systems

Kosovo thermal power distribution systems is made of a primary distribution network which is extended up to the substation supply point, and from a secondary network which is extended from the substation to the end-users.

The primary distribution network of DH Termokos has a track length of about 39 km. An integral part of the distribution network is also the pumping station and heat exchangers located in the Sunny Hill and 425 active substations, which are the dividing point between the primary and secondary grids. In addition to the existing distribution network, in 2014 the thermal energy transportation network TPP Kosova B - DH Termokos was built in the length of about 10.5 km.

The primary distribution network of DH Gjakova is extended in a length of about 13.5 km. An integral part of this network are also about 180 active substations, which are dividing points between the primary and secondary networks.

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

Tab. 7.1 Technical data of the district heating systems

Company (City)	Installed Capacity [MW]	Operational Capacity [MW]	Thermal Energy Network	
			Length of the Network (track)	No. of substations
TERMOKOS (Pristina)	2 x 58 = 116	2 x 49.3 = 98.6	Distribution	
	2 x 7 = 14	2 x 6.3 = 12.6	39.0	437
	1 x 4 = 4	3.6	Transmission	(active-425)
	[Kogjenerimi] 2 x 70 = 140	2 x 68.7 = 137.4	10.5	
Sub-total	274.0	252.2	49.5	437
DH GJAKOVA (Gjakova)	1 x 20 = 20	1 x 14.8 = 14.8	Distribtuion	302
	1 x 18.6 = 18.60	1x13.02 = 13.02	13.5	(active-180)
Sub-total	38.6	27.8	13.5	302
Total	312.6	280.0	63.0	739

7.2 Main Developments in Thermal Energy Sector

7.2.1 Developments in DH Termokos

The qualitative and sustainable supply of thermal energy in recent years has increased the interest for greater expansion of Pristina city customers in the DH Termokos system. For this purpose, during 2018 a number of development projects have been updated, mainly in the distribution network, which are at different stages of development.

At the end of July 2018, the execution of works for the replacement of the pipelines of the main highway in the segment: *Main Substation of the Sunny Hill (Technical Faculty) up to the Eastern Area in the Sunny Hill - Gyp DN400 mm, 1.5 km of tracks*. While in September 2018, works were started in the segment: *Termokos - Iber Lepenc - DN 600 mm pipe, 1 km long*. Most of the works were completed in October 2018, apart from the 250m part of the Termokos - Ibër-Lepenc segment, expected to be completed in April 2019 (after the end of this heating season). Rehabilitation of these two distribution network segments (replacing old pipes with pre-insulated pipes) will reduce thermal energy losses as well as further improve the heat quality for DH Termokos customers.

Fig. 7.1 Images from the works on network rehabilitation

This project worth about 1.5 mil. €, was funded by German Government through the German Development Bank (KfW).

At the end of 2018, the preparatory phase of the European Commission project for network expansion and rehabilitation as well as the modernization of component equipment was completed, with the appointment of Operators for execution and supervision of construction and installation works. It is planned that in April 2019, the execution of construction and installation works will be started on behalf of this project.

Main Components of the Project

- Rehabilitation of Existing Network –replacement of pipes with pre-insulated pipes in about 5.7 km of track;
- Network Expansion –new network/pipeline, about 3.6 km, mainly in the neighbourhoods Kalabria, Mati 1 and Hospital District;
- Rehabilitation of 100 existing thermal substations - complete replacement of equipment - in the regions: Dardania, Ulpiana, Center and Sunny Hill;
- Installation of 57 new substations (where the network expands);
- Installation of 100 regulatory (controlling) valves of differential pressure.

This project, estimated at about € 8.8m, is funded mainly by the European Commission's donation amounting to € 8.3m, whereas the Municipality of Pristina is expected to participate with a significantly smaller value (€ 250,000), as well as a very small amount (about € 250,000) self-financing from DH Termokos.

This project aims to reduce the losses of thermal energy and improve the quality of heating in some problematic areas, as well as network expansion aims to increase the number of customers respectively to increase the heating area.

In March 2018, a financial agreement was signed between the German Government and the Government of Kosovo on the financial support under the Energy Sector Program VIII and IX - a project for rehabilitation and expansion of DH Termokos network. This project led by the German Development Bank (kFW) is in the preparatory phase and contains 2 main components:

- Rehabilitation and expansion of DH Termokos distribution network;

- Modernization of existing substations and construction of new substations as well as the construction of reservoirs for heat storage.

This project, which is in its initial preparatory phase, is expected to be worth approximately € 14 million, funds pledged as donations from Germany, Luxemburg, Sweden, funds that will be allocated and managed through KfW, and a small amount from the Municipality of Pristina.

Within the MCC Program of the United States ("Millenium Challenge Corporation") is included a component of installation of thermal energy meters for DH Termokos customers, with the aim of switching to consumption-based billing, on behalf of which the efficient use of thermal energy is achieved. This sub-project, worth $ 10.9m, as a donation from MCC-US, contains:

- Installation of individual thermal energy meters namely heat allocators;
- Installation of thermostatic valves and circulating pumps;
- Development of the software for billing and reading of thermal energy consumption;
- . Assistance on improving billing services based on metered consumption.

During 2018, the preparatory works for the development of this sub-project have been completed and it is planned that the tendering procedures for the selection of the implementing company will begin in January 2019 in order to continue with the implementation of the project.

7.2.2 Developments in DH Gjakova - Fuel Change and Cogeneration Project

Regarding DH Gjakova, it should first be mentioned that, despite the financial difficulties for the provision of sufficient quantities of fuel – heavy fuel oil, owing to subsidies from the Kosovo budget, DH Gjakova has managed to start generation and supply of customers with thermal energy, on November 25, 2018.

In relation to the project for the new biomass Heating of DH Gjakova, it is worth mentioning that during 2018, the tendering procedures for the execution and supervision of construction and installation works were completed. This project is worth approximately € 12.5 million and is supported financially by the European Commission - Kosovo Office through IPA-2015 funds.

Following the final modifications, the main components of the project for the construction of a new biomass heating plant are:

- 2 heat-only production units: with a capacity of 2 x 5.5 MW_{TH} (total 11 MWth);
- The third unit foresees co-generation of thermal energy and electricity with a capacity of 4 MW_{TH} and 1.10 MW_{EL};
- Installation of the respective equipment of the new heating plant and connecting it to the distribution network of thermal energy namely electricity.

7.3 Performance of Thermal Energy Enterprises

During 2017/2018 season, DH Termokos has continued with the positive trend of sustainable generation and supply of thermal energy, offering 24 hour uninterrupted supply, mainly due to the realization of the cogeneration project as well as rehabilitation projects.

Regarding DH Gjakova, it should be mentioned that, owing to subsidies from the Government of Kosovo, in 2017/2018 it has managed to start generation and supply of thermal energy. However, due to financial constraints, DH Gjakova has been forced to cut the heating season to around 3.5 months (the second half of November 2017 - February 2018). Also, it has provided reduced supply and has significantly reduced the heating area, respectively the number of supplied customers, focusing on more regular payers as well as in the network parts where there are less heat losses.

7.3.1 Generation, Supply and Losses at DH Termokos

- **Thermal Energy Generation**

Termokos has based the generation of thermal energy on the Co-generation plants in TPP Kosova B; in fact during 2017/2018 season, the entire generation of thermal energy was from Cogeneration plants in TPP Kosova B, so it was not necessary to activate the heavy fuel oil boilers in Termokos Heating.

The amount of thermal energy extracted from cogeneration in the 2017/2018 season was **223,738 MWh_{TH}**. While the amount of thermal energy received at the heat exchange station in DH Termokos was **219,954 MWh_{TH}**.

The summarized data on the generation of thermal energy from cogeneration are presented in the following table:

Tab. 7.2 Generation of Thermal Energy from Cogeneration

Thermal Energy from Co-generation– DH Termokos, Season 2017/2018			
Month	Unit	Extracted Thermal Energy (metered at TPP Kosova B)/Gross Production	Received Thermal Energy (metered at DH Termokos)/Net Production
October 2017	MWh_{TH}	13,920	13,606
November 2017	MWh_{TH}	33,939	33,122
December 2017	MWh_{TH}	41,827	41,229
January 2018	MWh_{TH}	44,637	43,971
February 2018	MWh_{TH}	38,042	37,460
March 2018	MWh_{TH}	38,953	38,438
April 2018	MWh_{TH}	12,420	12,128
Total	MWh_{TH}	223,738	219,954

- **Thermal Energy Supply**

DH Termokos, in the 2017/2018 season, has marked an improvement in the quantity and quality of thermal energy supply, which is mainly due to continuous improvement of the thermal energy generation and improvement of network maintenance and repairs.

. The supply of customers with thermal energy (district heating) in this season is estimated to be **199,862 MWh_{TH}**, which represents an increase of **3,400 MWH_{TH}** or 1.73% compared to the previous season 2016/2017 (**196,462 MWh_{TH}**). This accomplished supply is quite satisfactory and has met the planning and objectives for a sufficient and quality supply.

- System Losses

The thermal energy system of DH Termokos has its own specifics regarding the losses in the system due to the integration of thermal energy from the cogeneration. So, network losses include two components: losses in the transmission network TPP Kosova B - DH Termokos and losses in the primary distribution network.

Losses in the thermal energy transmission network TPP Kosova B-DH Termokos, in a length of 10.5 km, were set by the measurements that were performed at the thermal extraction station in TPP Kosova B and at the thermal power station in DH Termokos . From the measurements that were performed in the period October 2017 - April 2018, it results that the quantitative losses in this period are **3,784 MWh_{TH}** namely **1.7%**. The following table gives details of losses in the thermal energy transmission network.

Tab. 7.3 Thermal energy and transmission network losses TPP Kosova B- DH Termokos- 2017/2018 season

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Total
Extracted Thermal Energy - metered at TPP Kosova B [MWh]	13,920	33,939	41,827	44,637	38,042	38,953	12,420	223,738
Received Thermal Energy - metered at DH Termokos [MWh]	13,606	33,122	41,229	43,971	37,460	38,438	12,128	219,954
Amount of Energy Losses [MWh]	314	817	598	666	582	515	292	3,784
Losses in [%]	2.26%	2.41%	1.43%	1.28%	1.46%	1.30%	1.30%	1.69%

Losses in the primary heat distribution network are normally determined by the thermal energy measurements at the entry of the distribution network and the supply of thermal energy to the customers substations. However, due to the lack of complete measurement of the thermal energy supply (in substations), certain approximations have been made for the calculation of supply, using in particular parameters such as: specific demand for heating capacity (W/m2) and complete load hours i.e specific consumption (kWh/m^2). The estimated consumption value is **199,862 MWh_{Th}**. By subtracting this consumption value from the amount of thermal energy introduced into the distribution network (**219,134 MWh_{Th}**) it results that the quantitative losses in the distribution network for the 2017/2018 season are **19,272 MWh_{Th}** or **8.8%.**

The following table summarizes the data on production, supply and overall losses in the system:

Tab. 7.4 Energy Performance in DH Termokos – season 2017/2018

DH Termokos - Heating Season 2017/2018		
Description	Unit	Amount
Gross Production in Power Plants	[MWh_{th}]	0
Gross Production in Cogeneration Plants	[MWh_{th}]	223,738
Loss Quantity in Transmission Network (TPP Kosova B- DH Termokos)	[MWh_{th}]	3,784
Share of Losses in Transmission Network	[%]	1.69
Own-consumption	[MWh_{th}]	820
Net Production of Thermal Energy	[MWh_{th}]	219,134
Loss Quantity in Distribution System	[MWh_{th}]	19,272
Share of Losses in Distribtution System	[%]	8.79
Supply of Customers with Thermal Energy	[MWh_{th}]	199,862

7.3.2 Generation, Supply and Losses at DH Gjakova

- **Generation of Thermal Energy**

DH Gjakova, has based the generation of thermal energy on heavy fuel oil boilers. As mentioned above, in the 2017/2018 season the generation of thermal energy has been quite reduced - gross production was **8,811 MWh_{TH}**, while the thermal energy net generation was **8,286 MWh_{TH}**. For this generation, during this season 1,114 tons of heavy fuel oil were spent. It should be emphasized that, according to the data reported by the enterprise, a low thermal efficiency of the heating plant of about 70% was achieved.

- **Thermal Energy Supply**

DH Gjakova, during the 2017/2018 season has offered a reduced supply, due to the reduction of the heating season of around 50% and the reduction of the heating area. The supply of thermal energy customers in this season was **6,629 MWh_{TH}**, which does not even closely meet the heating demand of all customers connected to the DH Gjakova system.

- **System Losses**

With respect to losses in thermal energy generation, it should first be mentioned that because some of the measurements are missing, namely, they are considered as unreliable due to the aging of the equipment, the determination of the losses includes some pre-assessed parameters such as efficiency boilers and the amount of own-consumption. The efficiency of boilers for the generation of thermal energy is estimated to be quite low, around 70%, causing a significant loss during the process of transforming the fuel energy into thermal energy, which is estimated to be **3,777 MWh_{TH}**.

Losses in the primary distribution network are calculated as the difference between the amount of thermal energy introduced into the distribution network and consumption/supply. Due to the lack of measurement of the amount of thermal energy supplied (in substations), some approximations have been made for the calculation of supply, using in the first instance parameters such as: specific demand for heating capacity (W/m2) and full load hours, namely specific consumption (kWh/m2).

So, the estimated value of consumption is **6,629 MWh_{Th}**. By subtracting this consumption value from the amount of thermal energy introduced into the distribution network **(8,286 MWh_{Th})** it results that the quantitative losses in the distribution network for the 2015/2016 season are **1,657 MWh_{Th}** or around 20%.

The following table summarizes the data on generation, supply and system losses.

Tab. 7.5 Energy Performance in DH Gjakova – season 2017/2018

DH Gjakova - Heating Season 2017-2018		
Description	Unit	Amount
Amount of fuel- Heavy fuel oil	[ton]	1,114
Calorific Value	[MWh_{th}/ton]	11.3
Energy entered from fuel- heavy fuel oil	[MWh_{th}]	12,588
Boilers Efficiency	[%]	70.00
Thermal Energy Gross Production	[MWh_{th}]	8,811
Own-Consumption	[MWh_{th}]	525
Thermal Energy Net Production/Energy entering the distribution syster	[MWh_{th}]	8,286
Loss Quantity in Distribution System	[MWh_{th}]	1,657
Share of Losses	%	20.00
Supply of customers with thermal energy	[MWh_{th}]	6,629

7.4 Overall Generation, Supply and Losses of Thermal Energy

The following table presents the summarized data on generation, supply and losses for the entire thermal energy sector.

Tab. 7.6 Energy Performance of Thermal Energy Sector– season 2017/2018

Thermal Energy Sector - Season 2017/2018				
Description	Unit	DH Termokos	DH Gjakova	Total
Thermal Energy Gross Production	[MWh_{th}]	223,738	8,811	232,549
Loss Quantity in Transmission Network	[MWh_{th}]	3,784	0	3,784
Share of Losses in Transmission Network	[%]	1.69	0.00	1.69
Own-Consumption	[MWh_{th}]	820	525	1,345
Thermal Energy Net Production	[MWh_{th}]	219,134	8,286	227,420
Loss Quantity in Distribution Network	[MWh_{th}]	19,272	1,657	20,929
Share of Losses in Distribution Network	[%]	8.79	20.00	9.20
Supply of Customers with Thermal Energy	[MWh_{th}]	196,862	6,629	203,491

7.5 Billing, Collection and Heating Area

7.5.1 Billing and Collection

With respect to billing, it should be mentioned that in the 2017/2018 season, the billing of thermal energy customers was mainly based on the heating area (per square meter). Although, customer billing has increased compared to the last season (from 97 to 105 customers), the number of customers billed according to metered thermal energy consumption is limited to 105, mostly commercial and institutional customers.

DH Termokos, in the 2017/2018 season, has recorded an increase of billing compared to the last season 2016/2017, which is mainly due to the continuous improvement of supply. Actually, the billing in the 2017/2018 season was **€ 6,041,660**, which represents an increase of € 71,342 compared to the 2016/2017 season (€ 5,970,336). However, this season has not yet reached the planned level of billing due mainly to: i) billing deductions due to days without heat and due to low quality of supply (in some neighbourhoods in Pristina); and ii) decrease on the heat area following the verification in the field.

As a result of increased billing, collection has increased compared to the previous season. In 2017/2018 season the amount collected was **€4,811,320,** whereas the amount received in the 2016/2017 season was €3,950,382, which represents an increase of €860,938 or 21.79%. Also referring to the share of collection, this season shows an increase in the percentage of collection compared to the previous season. In 2017/18 season, the share of collection was 79.64%, while in 2016/17 the share of collection was 62.24% , which represents an increase of 17.4%.

With respect to DH Gjakova, as mentioned above, during the 2017/2018 season, it has provided a reduced supply due to the halving of the heating season and the reduction of the heating area. Consequently, the billing in this season was quite small - € 329,431, while the collection amounted to € 296,688, which represents a very high level of collection of 90%.

Details about billing and collection are shown in the table and graph below.

Tab. 7.7 Billing and Collection –2017/2018 season

Heating Season 2017/2018	Heating Area [m^2]	Share	Billing [€]	Collection[€]	Collection Rate [%]
DH "Termokos" Pristina					
Household	728,530	57.33%	2,833,565	1,775,250	62.65%
Commercial and Institutional	542,250	42.67%	3,208,095	3,036,070	94.64%
Total	1,270,780	100.00%	6,041,660	4,811,320	79.64%
DH "Gjakova" Gjakova					
Household	32,474	44.96%	119,071	105,359	88.48%
Commercial and Institutional	39,750	55.04%	210,360	191,329	90.95%
Total	72,224	100.00%	329,431	296,688	90.06%

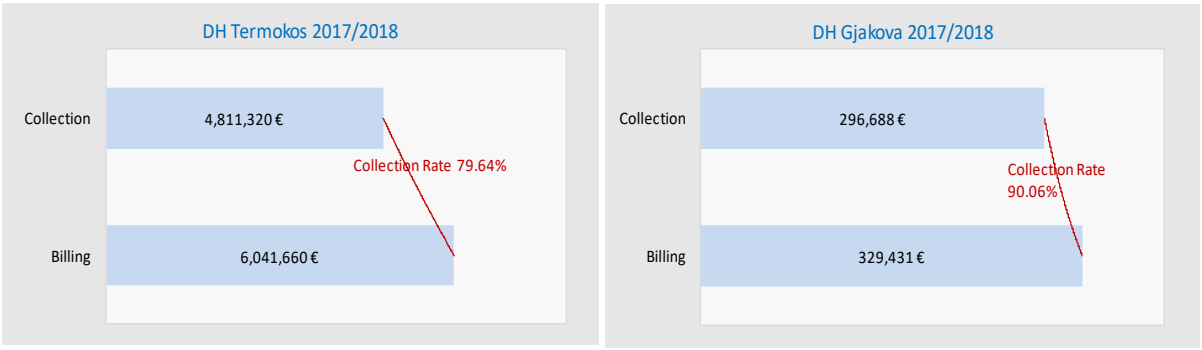


Fig. 7.2 Billing and collection for DH Termokos and DH Gjakova –2017/2018 season

7.5.2 Heating Area

DH Termokos, in the 2017/2018 season has had a total heating area of customers of **1,270,780 m^2**, which represents an increase of 35,398 m2 or about 3% compared to the heating area in the 2016/2017 season **(1,235,382 m^2).**

While DH Gjakova, for the reasons mentioned above, in 2017/2018 season has significantly reduced the heating surface to only **72,224 m^2**.

The following graphs show the heating area of DH Termokos and DH Gjakova, divided by customer groups.

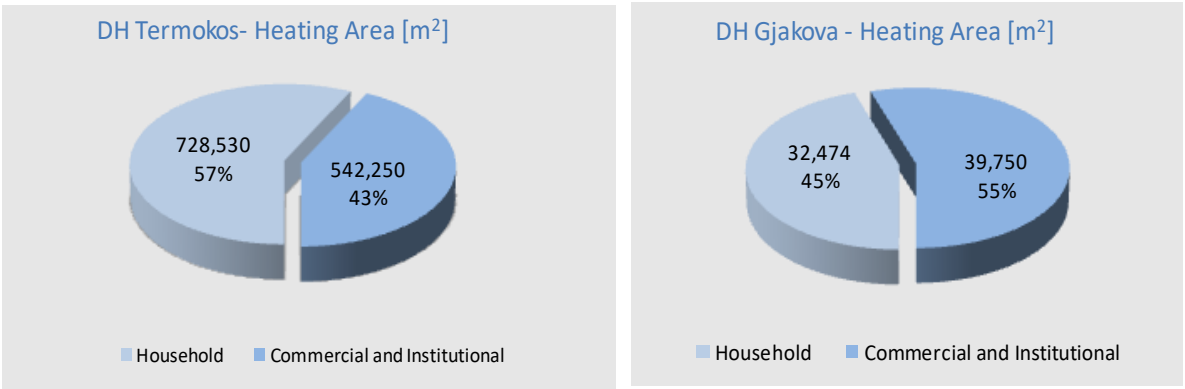


Fig. 7.3 Heating area by customer groups, 2017/2018 season

8 NATURAL GAS SECTOR

8.1 Perspective of the development of natural gas sector in Kosovo

Despite the fact that there is no functional infrastructure and natural gas market in Kosovo, the Kosovo Assembly, in order to open the prospect of developing the natural gas sector and meeting the obligations that Kosovo has towards the Energy Community Treaty, in June 2016 , within the package of energy laws, has adopted the Law on Natural Gas, No. 05 / L-082.

This law has transposed the third package of relevant European legislation on natural gas, mainly:

- Directive Nr. 2009/73 / EC on the Common Rules on the Internal Market for Natural Gas; and
- Regulation no. 715/2009/EC on the Criteria of Access to Natural Gas Transmission Networks.

The Law on Natural Gas lays the groundwork for the legal and regulatory framework for the transmission, distribution, storage and supply of 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 gas networks and market.

Kosovo's Energy Strategy 2017-2026 (adopted by the Kosovo Assembly on 26 January 2018) in Objective 4 included the development of natural gas infrastructure through connection to gas infrastructure projects in the South East Europe region, in particular with the TAP pipeline project ("Trans-Adriatic Pipeline") and with the Energy Community Gas Ring. In this regard, it should be emphasized that the gasification project, respectively the development of gas infrastructure is listed as *a priority in infrastructure - energy field projects , approved by the National Investment Council and the Government of Kosovo.*

It is estimated that the TAP pipeline project will have a positive impact on the development of gas infrastructure in the Energy Community respectively in the South East Europe region, providing opportunities for linking the planned regional projects such as the Ionian-Adriatic Pipeline (IAP) and ALKOGAP, projects that fulfill the so-called 'Energy Community Gas Ring'.

TAP is currently in the construction phase (started in early 2016). It is planned to start the first gas flows through TAP in 2019, whereas the full TAP pipeline operation in 2020. The initial capacity of TAP is planned to be 10 billion cubic meters (bcm) per year, with an increase of up to 20 bcm per year. TAP will allow interconnectivity connections (interconnections) along the pipeline to supply gas to other regional projects. So, with state agreements with “host” countries (Greece, Albania and Italy), the connection sites and quantities, respectively gas capacities are pre-determined.

8.1.1 Project: Albania – Kosovo Pipeline (ALKOGAP – “Albania-Kosovo Gas Pipeline”)

During 2018, a Pre-Feasibility Study was carried out for the ALKOGAP project, funded by the WBIF platform through the European Bank for Development (EBRD), as the financial institution for this project. This study had as its main objective the initial feasibility assessment for the construction of the ALKOGAP pipeline - as a natural gas supply line from the Caspian region through the regional pipelines TAP/IAP, which in the first phase will connect Albania with Kosovo and potentially in the

future will continue towards other countries in the Western Balkans region. This study included several key components such as:

- Research and preliminary design of the pipeline route in Albania and Kosovo;
- Determination of technical parameters of the pipeline and related equipment and installations, hydraulic analysis and configuration and optimization of the system;
- Estimation of the demand for natural gas in Kosovo - estimated household consumption, services, industry, for the district heating sector, including cogeneration and electricity generation;
- Economic and financial analysis including evaluation of investment cost, other operating costs and cost-benefit analysis;
- Review and evaluation of the legal, regulatory and institutional framework, as well as elaboration of aspects of the organization of natural gas market in Kosovo; and
- Preliminary environmental and social impact assessment, including the identification of sensitive areas and environmental and social barriers that may impact on the implementation of the project, namely the pipeline route;

The pre-feasibility study has given recommendations for other phases in terms of project implementation, highlighting the preparation of the Master Gas Plan for Kosovo[4] and the Feasibility Study, which would provide a complete and detailed assessment of the feasibility and sustainability of the ALKOGAP pipeline. The progress in the development and implementation of the project is considered important and a prerequisite for the creation and development of natural gas markets in Kosovo and Albania.

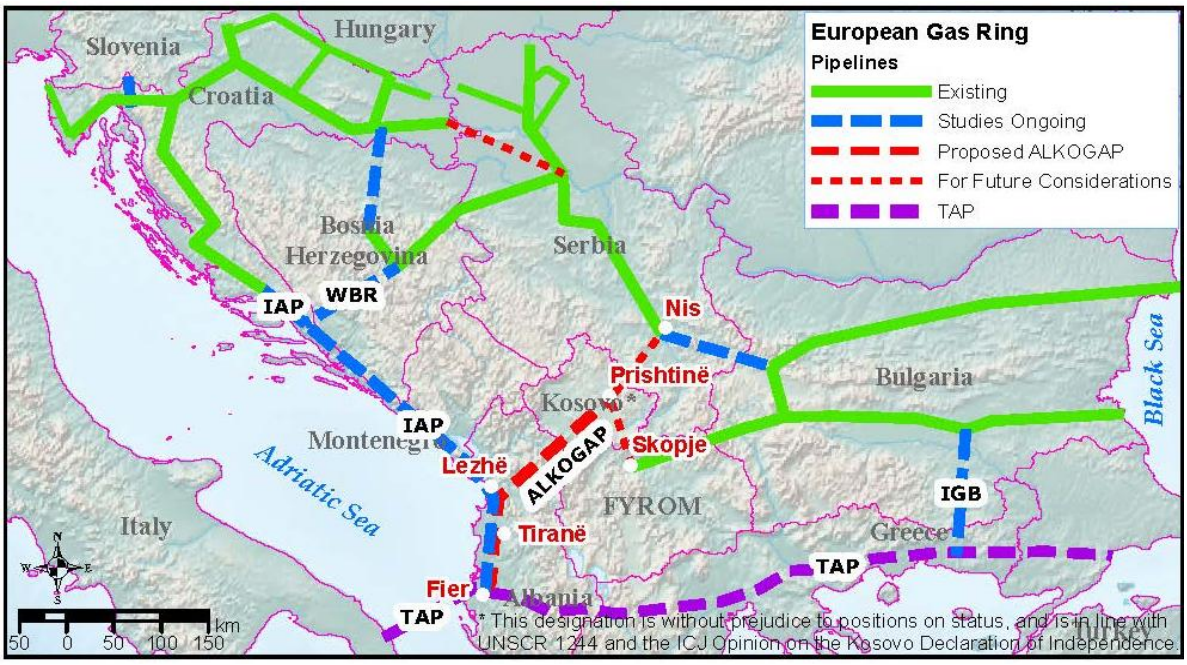


Fig. 8.1 Regional Gas Infrastructure Projects and options for Kosovo's connection (including ALKOGAP)

[4] *The Master Gas Plan is only recommended for Kosovo as Albania has prepared the Master Gas Plan in 2017.*

8.1.2 ALKOGAP Project Details

- According to the options of connection with the IAP regional project, the ALKOGAP pipeline route will have a length of 212 km - the section of Albania from Milot to the border 113 km, and the Kosovo section from border to Pristina 99 km.
- The pipe diameter is DN 24" (600mm), operating pressure 85 bar and capacity 1bcm (billion cubic meters) per year;
- Follow-up installations in both sections: Blocking Valve Stations (BVS); Pipe Examination Stations (PTS); Custody Transfer and Metering Stations (CTMS); Pressure Reduction and Measurement Stations (PRMS); and telemetric monitoring system.
- Total investment value: € 211 million - Albania section € 150 million and Kosovo section € 61 million.

It should be emphasized that the Regulator has been involved in the 'Project Interest Group' that has followed the compilation of the study and contributed by providing relevant comments and inputs.

During 2018, the Regulator continued to participate in the Southeast Europe's Natural Gas Transmission and Distribution Grid Codes Project - Southeast Europe Project on Gas Transmission and Distribution Codes. This project is implemented by NARUC, USA - the National Agency of Regulatory Utilities Commissions, with the financial support of the United States Agency for International Development (USAID).

Within the project implementation with the assistance of NARUC consultants, the following documents were prepared:

- Framework for the drafting of the Gas Network Code - which gives the basic principles, structure and content of the Code, as well as the main descriptions of the main components that must be contained in the Network Code; and
- Regulatory Guide to the Review and Evaluation of Gas Infrastructure Projects and Network Development Plans

The Regulator has continued regular participation in the Working Group of the Energy Community Regulatory Board (ECRB) and the Gas Forum as well as in other regional events organized within the Energy Community.

9 CONCLUSION

9.1 Challenges/Recommendations of the Regulator

ERO, as an independent agency was established by the Assembly of the Republic of Kosovo through the Law on Energy Regulator no. 05/L-084, which defines its duties and functions. The legal provisions of the above-mentioned law, emphasize that the activity of ERO is funded by own source revenues, in accordance with the Law on Energy Regulator, Chapter 4, respectively from the taxes collected by enterprises and licensed operators in the energy sector. It should also be mentioned that Articles 21 and 22 of the Law on Energy Regulator clearly state ERO's right to use dedicated revenues. Therefore, the above provisions prove beyond doubt that ERO has the authority and the right to determine its own budget according to specific needs.

The Republic of Kosovo is a Contracting Party to the Energy Community, and as a contracting party it is committed to adopt, but also to apply the Energy Community rules. This includes the Third Energy Package, which envisages strict decision making and financial independence of the energy regulator.

Chapter IX of the Internal Market Directive (Directive 2009/72/EC of the European Parliament and of the Council), namely Article 35.5, requires, inter alia, that Member States ensure that the regulatory authority has a separate allocation from the budget and autonomy in implementation of its budget, ie. provide sufficient financial resources for operating and personnel expenses to fulfill legal duties and obligations.

The Law on Energy Regulator No. 05/L-084 is in full compliance with the 3rd package of EU Energy Legislation; the transposition of these provisions was an obligation from the Energy Community Treaty.

It is worth emphasizing that the European Commission has consistently reacted to the Progress Reports for Kosovo, clearly pointing out the necessity for ERO's budget independence: "*ERO's independence continues to be undermined by government intervention and interventions in the ERO budget process* ".

ERO considers its staff as one of the resources of particular importance and is constantly engaged in supporting them in order to provide the required knowledge, skills and expertise to fulfill their duties and responsibilities at the highest standards. So far, ERO staff is now trained at the highest level possible to fulfill all its duties and competencies. ERO is of the opinion that salaries of staff members should be compatible with the level of salaries of the regulated industry in order to avoid "brain drain" towards the industry and enable ERO to attract and retain human resources qualified and sufficient to carry out its responsibilities. Therefore the involvement of ERO in the Public Sector Salaries Law strongly risks the departure of qualified ERO staff who can find better-paid and more secure positions outside ERO.

ERO has consistently reacted during the drafting process of the Law on Salaries and addressed letters to the Ministry of Public Administration, Parliamentary Committee on Public Administration, expressing its concerns and disagreements. Despite the clear arguments, the Regulator's objections were not considered. It is worth pointing out that the Energy Community Secretariat on 19 July 2018 has also reacted on the involvement of the Energy Regulator in the Law on the Organization

and Functioning of the State Administration and the Independent Agencies and the Law on Salaries in the Public Sector, clearly pointing out that these laws will seriously undermine the independence of the Regulator. The Energy Community Secretariat therefore considers that the inclusion of the Energy Regulator in these laws is a step backwards and is in contradiction with Kosovo's commitments under the Energy Community Treaty, as well as with the Energy Community Policy Guidelines, PG 02 / 2015, on the Independence of National Regulatory Authorities.

ERO requires from the legislative bodies to be treated as an independent constitutional agency that responds to the Assembly of the Republic of Kosovo, and has autonomy in determining its budget, including staff salaries.

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