

# APR 13

ANNUAL REPORT



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## YEAR OF GREATEST SUCCESS

More than a billion BAM of generated income, generation of 7,473 GWh of electricity, 37.04 million profit, and investments of more than 138 million BAM in the company facilities, all make 2013 the most successful year in the history of PE EPBiH.

2013 is a year of records and a year of investments in the mines of the PE EPBiH Concern.

The high level of operational readiness and availability of generation capacities was possible due to the expertise and accountability of our employees expressed through management, adequate planning and maintenance, which resulted in record generation of electricity and strengthening of our position as a leader in the generation of electricity in BiH and status in the regional power sector. 7,473 GWh generation enabled us to reliably and properly supply all our customers, to achieve record income in total of 1008.2 million BAM and increase market sales by as much as 42.8 percent compared to 2012.

Confirmation of our success is the continued growth of profit during 2013. In two and a half years, we went from the loss of minus 16 million BAM to profit higher than 37 million BAM.

In line with the strategic commitment that implies a reduction of investments in existing facilities and intensifying of investments in new projects through capital investments, we continued with preparatory activities for the construction of replacement thermal capacities and capacities using renewable energy sources.

During 2013 we created the necessary prerequisites for the final phase of preparations for the construction of Unit 7, HPP Vranduk and Wind farm Podveležje, the priority interests in the development investment cycle of Elektroprivreda BiH. German Development Bank (KfW) approved a loan of 65 million Euros for construction of Wind farm Podveležje and the European Bank for Reconstruction and Development (EBRD) approved 35 million Euros loan for construction of HPP Vranduk (26 million) and

expansion of capacity of HPP Una Kostela (9 million). EBRD's loan is the first corporate loan approved to Elektroprivreda BiH without mediation of state and state guarantees. The decision of EBRD to negotiate and sign a contract with Elektroprivreda BiH confirmed our business reliability and competence, strengthened the credibility and reputation of our company in the financial markets and represents an incentive to other financial institutions for direct participation in the implementation of our development plans.

In frame of preparations for the start of construction of Unit 7 - 450 MW at TPP Tuzla, the most valuable investment in post-war BiH, in the third phase of selection of the project partner for joint investment in the construction project, we sent the tender documents "Best and Final Offer", to Consortium of China Gezhouba and Hitachi Ltd. Japan, the candidates who met the criteria of the second phase of International public invitation, and initiated the process of expropriation of property and the friendly environment program implemented with the Municipality of Tuzla worth 3.6 million BAM.

In addition to the above, other activities were also conducted in connection with the preparations for the start of construction of priority facilities, and we continued the activities of implementation of projects on Unit 8 at TPP Kakanj, hydropower plants Janjići, Kovanići, Kruševo and Zeleni vir, Ustikolina, Čaplje, Unac and small hydro power plants on the Neretvica river and other projects of the development investment cycle of PE EPBiH.

68 million BAM invested and launching of the procurements worth 70 million make 2013 a year of our investments in the mines - members of the PE EPBiH Concern. During the current mandate of the PE EPBiH Management, and ending with 2013, PE EPBiH invested more than 120 million of own funds in seven mines, which contributed to improvement of humanization of work, modernization, creating preconditions for increasing productivity, successful business and removal of losses.

In the past year we continued with activities related to the Treaty establishing the Energy Community of South East Europe and the preparations for the opening of the electricity market in order to increase our competitive ability.

2013 is the year of the biggest success so far in the history of PE EPBiH due to the consistent implementation of business policy, which involves long-term, sustainable development, responsible investments, competitiveness and economic growth, responsibility in fulfilling the tasks of development and investment cycle, social responsibility through actions that have positive effects on our community, its well-being and improving the quality of life and the realization of the obligations of the parent Company of the PE EPBiH Concern.

General Manager  
Ph.D. Elvedin Grabovica





## MISSION, VISION, GOALS

### MISSION

Our mission is generation and supply of electricity, thermal energy and coal according to the defined quality standards, and providing services that will satisfy customer requirements.

Our intention is to restructure the company under European legislation and to apply the best corporate practices, implement constant professional development of employees with the development of skills of teamwork and process optimization.

Our goals are efficient response to customer requirements and transparency in business, as well as education of customers on efficient energy use and the development of the image that will strengthen our market position and customer confidence.

### VISION

PE Elektroprivreda BiH will be an entity that is constantly developing new methods to improve business performance to attain a leading position in the electricity market in the region and to meet current and future demand of electricity and heat according to customer defined quality standards.

PE Elektroprivreda BiH will invest in the modernization and development and realize capital investments, paying special attention to investment in generation of electricity from renewable sources, increasing the flexibility of the energy portfolio and energy efficiency.

In performance of its activities PE Elektroprivreda BiH will operate in accordance with European Union standards on environmental protection and develop a high awareness of preservation of environment.

### GOALS

The strategic goals of PE Elektroprivreda BiH are:

- Construction of new replacement thermal capacities and new generating capacities using renewable
- energy sources, as well as distribution capacities,
- Reorganization in accordance with the requirements of the EU directives and the new Law on
- Electricity,
- Restructuring and modernization of the mines.

In terms of investment in the generation segment, company's goals are long-term increase in generation and sale of electricity in the BiH and regional markets. This goal will be realized by increasing generation capacity, modernization of existing capacities and intensive construction of new generation facilities.

The construction of new generating capacities will allow an increase in sales and marketing of electricity in the domestic and regional markets, as well as the closure of old and inefficient units in thermal power plants.

MISSION  
VISION  
GOALS



## ORGANIZATION OF THE COMPANY

Public Enterprise Elektroprivreda of Bosnia and Herzegovina d.d. – Sarajevo (Public Enterprise Electric Utility of Bosnia and Herzegovina) (hereinafter PE EPBiH) performs its core business of generation, distribution and supply of electricity, as well as other activities in Bosnia and Herzegovina, more precisely in the territory of FBiH. Activity of trade of electricity means trade on the wholesale market within BiH, as well as the export and import of electricity.

PE EPBiH is a company that has 100% ownership over seven coal mines and four companies in other industries with different ownership shares.

Along with companies in which it has majority ownership, in accordance with the law, PE EPBiH is in a Concern in which PE EPBiH is the parent company and other companies are its affiliates. Affiliate companies employ about 10,000 employees.

### *Affiliate companies - mines (100%)*

Mines “Kreka” d.o.o. - Tuzla  
Brown Coal Mine “Đurđevik” d.o.o. - Đurđevik  
Brown Coal Mine “Kakanj” d.o.o. - Kakanj  
Brown Coal Mine “Breza” d.o.o. - Breza  
Brown Coal Mine “Zenica” d.o.o. - Zenica  
Mine “Gračanica” d.o.o. - Gračanica  
Brown Coal Mine “Abid Lolić” d.o.o. – Bila

### *Other companies*

Eldis tehnika d.o.o. - Sarajevo (100%)  
Hotel ELBIH d.d. - Makarska (100%)  
Iskraemeco d.o.o. Sarajevo (57.5%)  
ETI d.o.o. Sarajevo (49%)

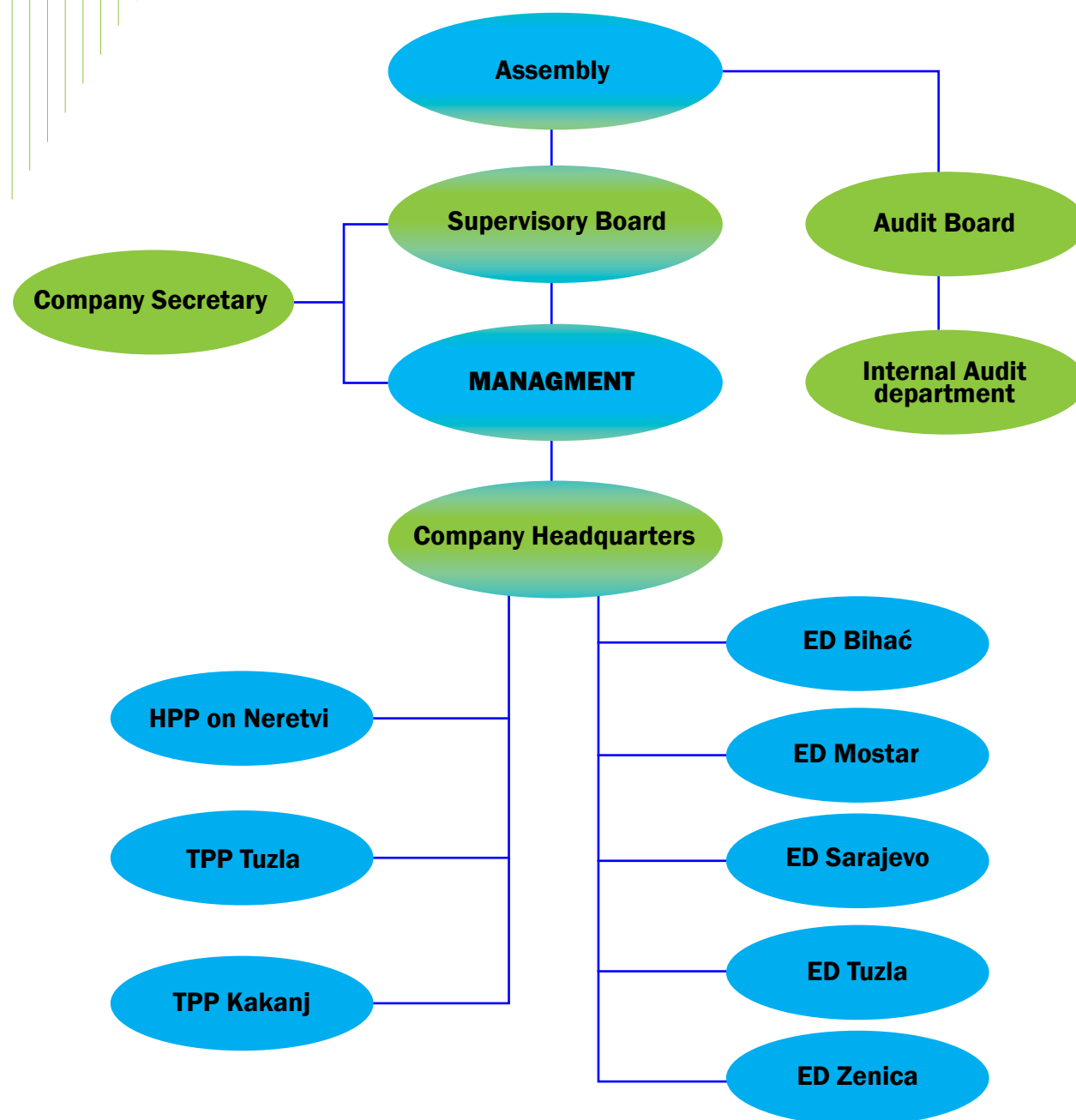
The Company is organized on a functional, procedural-operational and territorial principle and it consists of eight subsidiaries:

- Hydro-power plants on the river Neretva, Jablanica,
- Thermal power plant “Kakanj” Kakanj,
- Thermal Power Plant “Tuzla”, Tuzla,
- Subsidiary “Elektro distribucija” Bihać,
- Subsidiary “Elektro distribucija” Mostar,
- Subsidiary “Elektro distribucija” Sarajevo,
- Subsidiary “Elektro distribucija” Tuzla,
- Subsidiary “Elektro distribucija” Zenica,

### *Bodies of the Company are:*

- Assembly,
- Supervisory Board,
- Management, as well as management bodies, and
- Audit Board.

## EPBiH ORGANIZATION DIAGRAM



Responsibilities of the managing bodies of the Company are defined in the Law on Companies and the Law on Public Companies and the Company Statute details the competences of the above bodies.

The Assembly is convened as determined by the law, other regulations and the Statute, and when it is deemed to be in the best interest of the Company and its shareholders, and at least once a year.

The Supervisory Board consists of seven members, who are appointed and dismissed by the General Assembly of the Company. The Supervisory Board supervises Company's business, supervises the work of the Management of the Company and has other competences determined by the law and the Company Statute. The Supervisory Board meetings are generally held once a month.

#### Members of the Supervisory Board:

- MA Enver Agić, President
- MA Jakub Dinarević, Member
- Ph. D. Bahrudin Šarić, member
- Selvedin Subašić, Member
- Davorin Korać, Member
- Fejsal Hrustanović, Member

Management organizes and manages the business, represents the company and is responsible for the legality of the business. The work of the Management is managed by the General Manager.

#### Management consists of:

- General Manager
- Executive Manager for Generation
- Executive Manager for Distribution
- Executive Manager for Supply and Sales
- Executive Manager for Economic Affairs
- Executive Manager for Legal and Personnel Affairs
- Executive Manager for Capital Investments

#### Members of the Management:

- Ph.D. Elvedin Grabovica, General Manager
- Senad Sarajlić, Executive Manager for Generation
- Admir Anđelić, Executive Manager for Distribution
- M.A. Mirsad Šabanović, Executive Manager for Supply and Sales
- Edin Mujagić, Executive Manager for Economic Affairs
- Mensura Zuka, Executive Manager for Legal and Human Resources
- M.A. Amil Kamenica, Executive Manager for Capital Investments

The Audit Board consists of three members elected by the Assembly of the Company in accordance with the law and the Statute.

#### Members of the Audit Board:

- Sadija Sinanović, President
- Ph.D. Mirsad Kikanović, Member
- Suljo Kasapović, Member

The Company has the Secretary of the Company whose competences are defined by the law and the Statute

#### Company Secretary:

- Goran Milošević





# KEY BUSINESS INDICATORS

## KEY BUSINESS INDICATORS

In 2013 Public Enterprise Elektroprivreda of Bosnia and Herzegovina d.d. – Sarajevo (PE EPBiH) generated 7,473 GWh of electricity. It achieved a total income in amount of 1,0008.3 million BAM and profit of 37 million BAM.

According to its capital, installed capacities, total generation and sale of electricity, and according to number of customers, PE EPBiH is the largest Elektroprivreda company in Bosnia and Herzegovina.

Public Enterprise Elektroprivreda of Bosnia and Herzegovina d.d. - Sarajevo is a shareholders' company with equity capital of 2.24 billion BAM. Federation of BiH has share amounting to 90% of the equity capital. The remaining 10% of the capital is privately owned (investment funds and other legal persons and physical persons).

PE EPBiH supplies electricity to over 720,000 customers in seven cantons of the Federation of BiH.

## KEY BUSINESS INDICATORS

Description		December 31st 2013	Plan	December 31st 2012
Shareholders' capital	billion BAM	2,237	2,237	2,237
Operational income	mil. BAM	972.7	973.9	888.0
Operational expenditures	mil. BAM	767.7	804.5	739.2
<b>EBITDA</b>	<b>mil. BAM</b>	<b>205.0</b>	<b>169.4</b>	<b>148.8</b>
Total income	mil. BAM	1.008.2	997.7	926.3
Income from sale of electricity	mil. BAM	936.2	932.9	850.1
Other income	mil. BAM	72.0	64.8	76.2
Total expenditures and costs	mil. BAM	971.2	987.4	919.2
Depreciation	mil. BAM	159.8	165.4	153.1
<b>Net profit</b>	<b>mil. BAM</b>	<b>37.0</b>	<b>10.3</b>	<b>7.1</b>
Description		December 31st 2013	Plan	December 31st 2012
Generation	GWh	7,473	7,286	6,509
Net distribution	GWh	3,980	4,101	3,934
Non-tariff sales	GWh	2,786	2,496	1,951
Number of customers		724,607	720,016	715,411
Number of employees in all categories		4,928	4,899	4,943





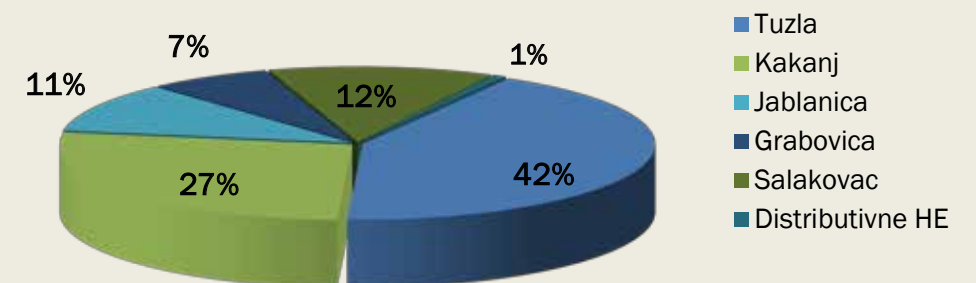
# ACTIVITIES - GENERATION

## ACTIVITIES - GENERATION

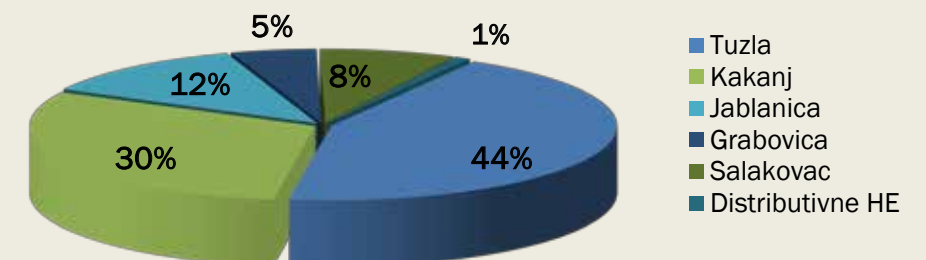
Generation is one of the main Elektroprivreda activities performed by PE EPBiH. Generation is carried out in three generation plants: TPP Tuzla, TPP Kakanj and HPPs on the Neretva River, as well as three distribution subsidiaries that manage small hydro power plants (ED Bihać, ED Tuzla and ED Sarajevo).

The total installed power of power facilities of PE EPBiH generation portfolio is 1,682 MW, of which 517 MW or 31% are hydro power plants, while 1,165 MW or 69% are thermal power plants. In the annual generation of 2013 hydro power plants participated with 26%, and 23% in average for the five-year period.

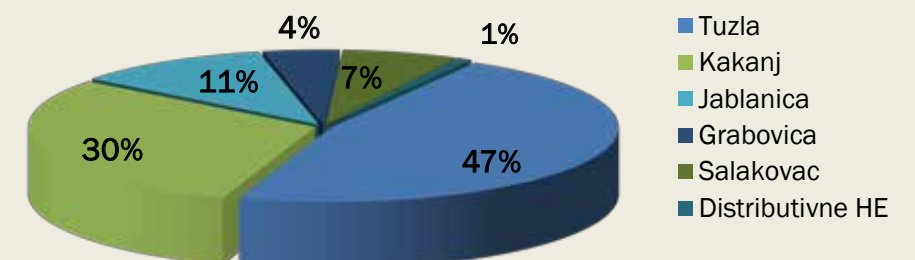
Installed JP EPBiH Capacities - 2013



JP EPBiH Generation Structure in 2013



JP EPBiH Generation Structure - average 2009-2013





Looking at Bosnia and Herzegovina, the share of installed capacities of PE EPBIH is 42%, while its share in total generation is approximately 50%.

In addition to generation of electricity, plants of TPP Tuzla and TPP Kakanj, also provide cogeneration of electricity and heat to some extent, which enables the remote heating for Tuzla, Lukavac and Kakanj.

### HYDRO POWER PLANTS

Generation in hydro power facilities of PE EPBIH is done in three major hydropower plants on the river Neretva and seven small hydro power plants.

A comprehensive refurbishment of all six units and other common facilities of HPP Jablanica was done in the period from 1997 to 2007, with new impeller and increased rated turbine flow (from 30 to 35 m<sup>3</sup>/s), and increased generator power from 25 MW to 30 MW. Rehabilitation of HPP Salakovac was done in 1997 and Grabovica in 1996 and 2011 when the reconstruction of Unit No. 2 took place after a serious malfunction.

The average realized annual generation of these plants (not counting the first year of operation and the period from 1992 to 1995) was 1,476 GWh. Approximately the same generation was achieved in the last five years and it is slightly above the generation corresponding to 70% probability of inflow that is used as planned generation. The fluctuations of the average annual flow, and hence the annual generation, may range widely, and as an illustration we can use the data on the achievement of historical minimum (821 GWh) and maximum generation (2,094 GWh).

### BASELINE DATA FOR HPPS ON THE NERETVA RIVER

Hydro power plant	Commissioning	Age as of 2014	Reconstruction	Usable volume hm <sup>3</sup>	Installed flow m <sup>3</sup> /s	Mean flow m <sup>3</sup> /s	Average generation GWh	Five year generation 2009-2013 GWh	Minimum generation 1990 GWh	Maximum generation of 2010 GWh	Generation with 70% inflow probability GWh	Installed power MW
Jablanica	1955	59	1997-2007	288.0	6 X 35	112	<b>747</b>	788	405	1.019	710	<b>6x30</b>
Grabovica	1982	32	1996/2011	5.4	2 X 190	136	<b>289</b>	205	171	407	296	<b>2 x 57</b>
Salakovac	1982	32	1997	15.6	3 X 180	183	<b>440</b>	463	245	668	406	<b>3 x 70</b>
<b>TOTAL</b>							<b>1476</b>	<b>1456</b>	<b>821</b>	<b>2094</b>	<b>1412</b>	<b>504</b>

Small hydro power plants that are connected to the distribution network have the total power available for JP EPBIH amounting to 13 MW and annual generation of about 65 GWh. EPBIH is the co-owner of two power plants (49% of Modrac and 28% of Bogatići), and the other five are 100% owned by EPBiH (Una Kostela, Bihać, Krušnica, Osanica, Snježnica). Small hydro power plant Hrid, built in 1917 ceased with generation during 1999.

### THERMAL POWER PLANTS

Generation from existing generating thermal power plants in JP EPBIH is done in two thermal power plants: TPP Tuzla and TPP Kakanj.

Of the seven units in both thermal power plants, just one unit is younger than 30 years. Therefore, all units have undergone reconstruction and revitalization with the primary objective of extending the life span and improving the reliability and energy efficiency, and reducing environmental impact.

### BASIC DATA FOR THERMAL POWER PLANTS OF JP EPBIH

Thermal Power Plants Thermal Power Plants	Commissioned	Age as of 2014	Reconstruction	Hours of operation as of December 31st 2013	Specific consumption in 2013 kJ/kWh	Efficiency Coefficient %	Installed power - gen. MW	Installed power - MW threshold	Average power 2013	Technical minimum MW	
<b>Tuzla A3</b>	1966	48	1997	319,114	13,602	26.5	100	91	66	60	
<b>Tuzla A4</b>	1971	43	2002	205,983	12,777	28.2	200	182	153	125	
<b>Tuzla A5</b>	1974	40	2008	200,019	12,054	29.9	200	180	155	125	
<b>Tuzla A6 *</b>	1978	36	2012/2013	194,836	10,625	33.9	215	200	171	115	
<b>TUZLA</b>					<b>12,051</b>	<b>29.9</b>	<b>715</b>	<b>653</b>	<b>545</b>	<b>425</b>	
<b>Kakanj A5</b>	1969	45	2004	239,356	12,147	29.6	110	100	88	60	
<b>Kakanj A6</b>	1977	37	2011/2012	185,749	12,042	29.9	110	100	87	55	
<b>Kakanj A7</b>	1988	26	2005	103,119	12,418	29.0	230	208	185	140	
<b>KAKANJ</b>					<b>12,249</b>	<b>29.4</b>	<b>450</b>	<b>408</b>	<b>360</b>	<b>255</b>	
<b>UKUPNO</b>					<b>12,131</b>	<b>29.7</b>	<b>1.165</b>	<b>1.061</b>	<b>905</b>	<b>680</b>	

\* Increased power of Unit 6 after reconstruction:

223

205





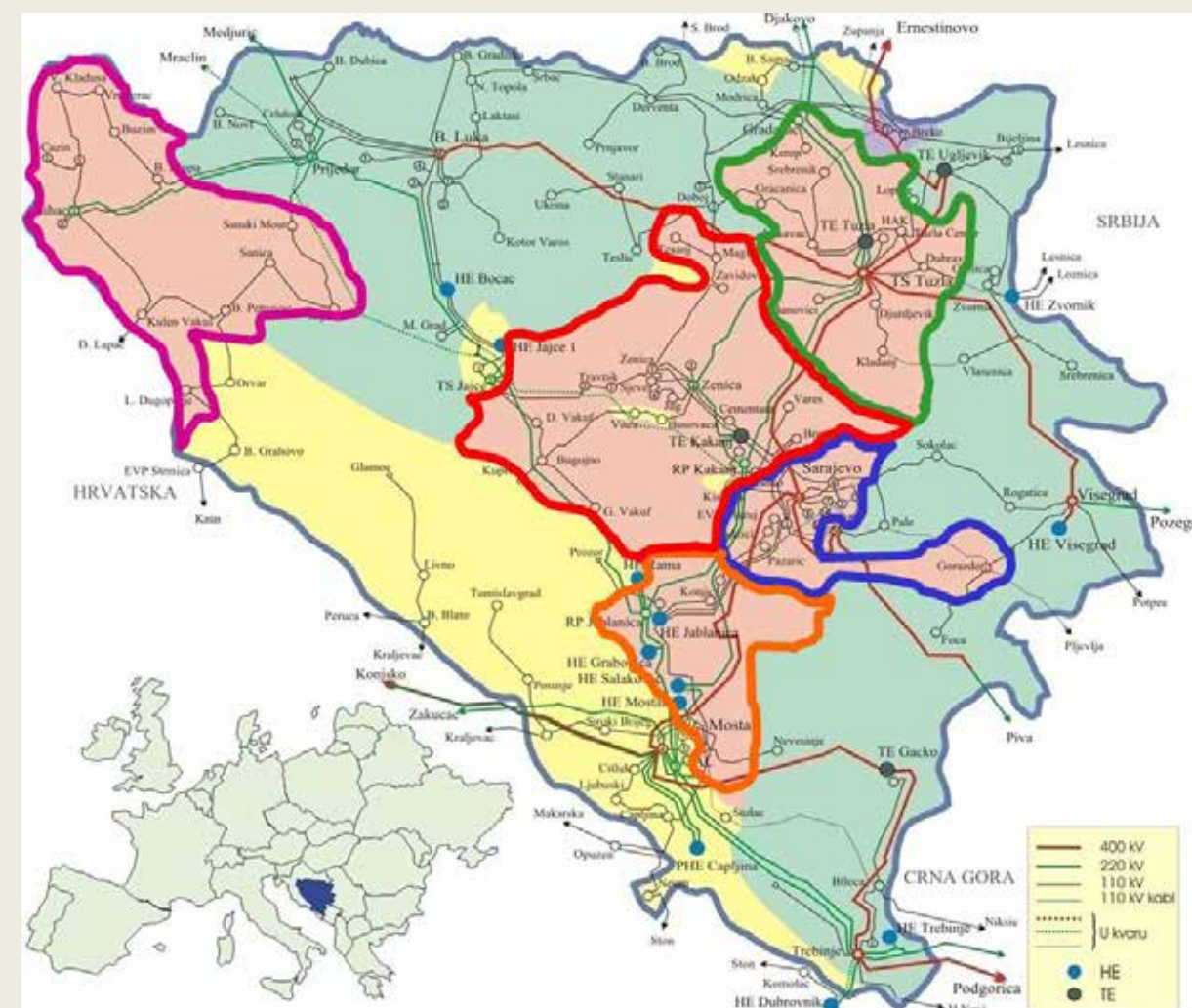
# ACTIVITY - DISTRIBUTION

## ACTIVITY - DISTRIBUTION

Activity of electricity distribution is one of the Elektroprivreda activities carried out by the PE EPBiH in the territory of seven cantons. It is organized through five subsidiaries: Bihać, Mostar, Sarajevo, Tuzla and Zenica.

All subsidiaries perform supply activities beside distribution, and subsidiaries Bihać, Sarajevo and Tuzla also generate electricity because they have small hydro power plants connected to the distribution network.

## AREAS OF DISTRIBUTION ACTIVITIES OF JP EPBiH





**Distribution activity includes:**

- operation,
- management,
- maintenance,
- construction and development of the distribution system and
- connecting new customers and generators.

According to the FBiH Law on Electricity the activity of distribution is performed by the Distribution System Operator (DSO) based on the work permit - license issued by the FBiH Electricity Regulation Commission. This activity is done as a public service at regulated tariffs and conditions established by the FERC.

After the formation of the Electricity Regulatory Commission PE EPBiH received the initial work permit - license for electricity distribution on December 1st 2005. Current license for distribution of electricity is issued for 15 years, for a period January 1st 2013 to December 31st 2027.

**Competences of the distribution system operator, among others include:**

- ensuring the reliability of the distribution system and the quality of electricity in accordance with the regulations,
- giving users information they need for efficient access to the network,
- providing network access and performing connection establishment,
- preparation of short and long term plans for development and construction of distribution network taking into account the changes in consumption and realistic possibilities for realization.

Operation and management of the distribution network are regulated by the Network distribution rules, and the General Conditions for the supply of electricity define the energy and technical requirements, and economic relations between generators, distributors, suppliers, network users and the end customer. These documents are adopted by FERC.

**DISTRIBUTION CAPACITY AND ELECTRICITY CONSUMPTION**

The distribution network is structurally composed of substations 35 / x kV and substations 20 (10) / 0.4 kV, and the networks with voltage levels of 35 kV, 20 kV, 10 kV and 0.4 kV and consumer installations. Electrification and development of the distribution networks began using the 35-10 – 0.4 kV concept, and the process of introducing a voltage level of 20 kV started in the beginning of the seventies.

PE EPBiH distribution area covers an area 17,657 km<sup>2</sup> and supplies electricity to 724,607 customers (as of December 31st 2013). The tables below provide distribution facilities by subsidiaries, as well as an overview of the development of the total distribution capacity of PE EPBiH by years and number of customers.

In the period from 1996 to 2013 distribution consumption doubled. This was possible thanks to an increase in capacity of the distribution network of 11,820 km, or 41%, i.e. of installed capacity of 551 MVA, or 24%. The actual scope of constructed or reconstructed capacities is objectively even greater because part of the old capacities was written off and put out of commission.

**BASIC DATA FOR SUBSIDIARIES**

2013		Sarajevo	Tuzla	Zenica	Bihać	Mostar	Ukupno
Number of customers		217,821	180,071	189,359	99,410	37,941	724,602
Gross Consumption	GWh	1.407	1.196	1.091	220	487	4.401
Net Consumption	GWh	1.284	1.082	989	197	429	3.980
Losses	GWh	123	114	102	24	59	422
Losses	%	8.7%	9.5%	9.4%	10.7%	12.0%	9.6%
Medium voltage	GWh	341	361	281	51	30	1.064
Low Voltage	GWh	943	721	707	378	167	2.916
Share of low-voltage	%	73%	67%	72%	192%	39%	73%
Installed power	MVA	919	682	690	322	193	2807
Length of MV network	km	1806	2014	2819	1795	803	9237
Length LV network	km	4851	6923	8524	3661	1652	25,611
Area	km <sup>2</sup>	1781	2649	6532	4125	2570	17,657
Density of customers	customers/km <sup>2</sup>	122	68	29	24	15	41
The density of consumption	MWh/km <sup>2</sup>	721	408	151	48	167	225
Length of MV network	Per 1000 customers	8.	11.	15.	18	21	13
Length of LV network	Per 1000 customers	22	38	45	37	44	35
Number of municipalities		12	13	23	8.	3.	59







## GROSS DISTRIBUTION CONSUMPTION - TREND BY YEAR AND SUBSIDIARY

	2006	2007	2008	2009	2010	2011	2012	2013	share in 2013.
ED Sarajevo	1183	1224	1282	1322	1357	1386	1401	1407	32%
ED Tuzla	1062	1068	1115	1140	1152	1164	1194	1196	27%
ED Zenica	859	875	965	981	1018	1030	1042	1091	25%
ED Bihać	437	450	475	480	491	485	480	487	11%
ED Mostar	181	192	206	210	215	219	223	220	5%
<b>TOTAL</b>	<b>3722</b>	<b>3809</b>	<b>4043</b>	<b>4133</b>	<b>4233</b>	<b>4284</b>	<b>4340</b>	<b>4401</b>	<b>100%</b>

## NUMBER OF CUSTOMERS- TREND BY YEAR

	2006	2007	2008	2009	2010	2011	2012	2013
Number of customers - distribution	659,332	666,300	678,489	688,514	695,828	707,301	715,411	724,602
Increasing of the number of customers	13,333	6968	12,189	10,025	7314	11,473	8110	9196
	2.1%	1.1%	1.8%	1.5%	1.1%	1.6%	1.1%	1.3%

## DISTRIBUTION CAPACITY - TREND BY YEAR

			2006	2007	2008	2009	2010	2011	2012	2013
	35/10 (20)	item	77	81	81	81	83	84	83	83
NUMBER	10 (20) / 0.4	item	6697	6799	6963	6953	7210	7231	7296	7398
	<b>Total</b>	<b>item</b>	<b>6774</b>	<b>6880</b>	<b>7044</b>	<b>7034</b>	<b>7293</b>	<b>7315</b>	<b>7379</b>	<b>7481</b>
	35/10 (20)	MVA	623	615	597	596	619	641	645	638
MVA	10 (20) / 0.4	MVA	1989	2205	2027	2026	2111	2113	2138	2169
	<b>Total</b>	<b>MVA</b>	<b>2612</b>	<b>2820</b>	<b>2624</b>	<b>2622</b>	<b>2730</b>	<b>2754</b>	<b>2783</b>	<b>2807</b>
35 kV	LINES	km	840	840	843	838	861	860	856	877
10 kV	LINES	km	8088	7997	7778	7493	7988	8038	8156	8360
0.4 kV	LINES	km	22,367	22,920	23,408	23,810	24,586	24,485	24,597	25,611
	<b>Total</b>	<b>km</b>	<b>31,295</b>	<b>31,757</b>	<b>32,029</b>	<b>32,141</b>	<b>33,435</b>	<b>33,383</b>	<b>33,609</b>	<b>34,848</b>

Losses in distribution network of EPBiH have been continuously decreasing from 26% in 1997 to 9.58% in 2013 in relation to gross consumption. The range of losses by subsidiaries goes from 8.75% to 12.02% and the total losses amounted to 422 GWh.

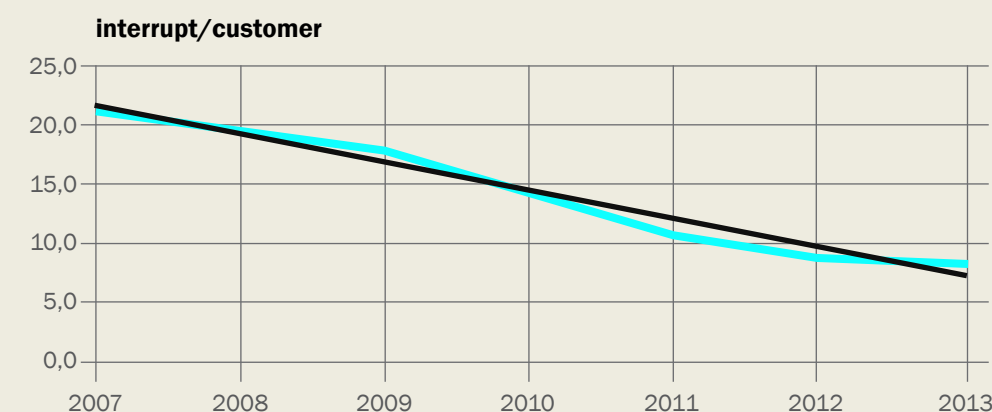
## SECURITY OF SUPPLY OF ENERGY AND RELIABILITY INDICATORS

## RELIABILITY INDICATORS IN 2007-2013. (TOTAL)

reliability indicators	2007	2008	2009	2010	2011	2012	2013
SAIFI (interruption / buyer)	20.6	19.2	17.5	14.2	10.8	8.8	8.1
SAIDI (min. / Buyer)	1.412	1.382	1.440	1.125	856	713	797

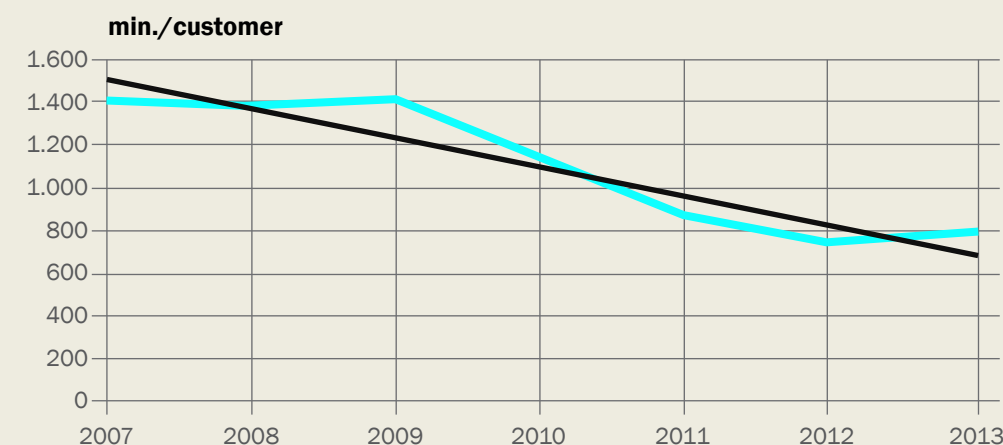
A system for monitoring of data on interruptions of power supply for network users (consumers) has been established since 2005 in a manner that allows for the determination and evaluation of indicators of continuity of supply to customers and the reliability of the distribution network. This system covers the supply continuity indicators that are monitored (SAIDI, SAIFI), and since 2007 we have established division by causes of power outages (planned / unplanned interruptions).

## SAIFI for the period 2007-2013



SAIFI ( interrupt/customer )      Linear ( SAIFI interrupt/customer )

## SAIDI for the period 2007-2013



SAIDI ( min./customer )      Linear ( SAIDI min./customer )



# ACTIVITY - SUPPLY AND SALES

## ACTIVITY - SUPPLY AND SALES

The activity of electricity supply includes delivery of electricity to end customers and trade activity includes the sale and purchase of electricity, excluding sales to the end customer.

The end customers can be unqualified and qualified. Unqualified customers are supplied by suppliers at regulated tariffs set by an independent regulatory commission. Qualified customers have the option to choose a supplier and get supply according to contracted unregulated tariffs.

Currently in Bosnia and Herzegovina all customers have this right except for households that will become qualified on January 1st 2015. However, all qualified customers have the right to keep supply at regulated tariffs based on public supply, which is what happened in BiH, so that so far not a single customer of PE EPBiH changed its supplier. After January 1st 2015 the right of supply using regulated tariffs will only be available to households and small customers using low voltage level who will be supplied by a public supplier (universal service), and everybody else will have to select a supplier in the market.

PE EPBiH currently performs the role of a public supplier on the basis of work permit - license for supply of 1st order and supplies energy to all customers in the service area of PE EPBiH at regulated tariffs. In addition, PE EPBiH possesses a work permit - a license for the supply of 2nd order on the basis of which it is carrying out trade activities within BiH and is qualified to perform the supply to end customers in the BiH at market, unregulated prices.

For the purposes of international trade PE EPBiH has a work permit - a license for international trade issued by SERC. Trade activity is carried out exclusively by the rules of competitive market.

### ELECTRICITY MARKET

The main participants in the EE sector in BiH are ISO BiH, Elektroprijenos BiH (Transco), three Elektroprivreda companies as public companies, and the company for distribution and supply in the Brčko District. In addition to the three Elektroprivreda companies the sector currently has additional 20 entities for electricity trade licensed by SERC (international trade) or entity regulators (internal trade). In addition, three buyers have permission to import energy for their own needs.

On the market there is a large number of small generators of electricity (mostly SHPs and SEs) which sell the electricity at regulated energy purchase prices. The number of licensed generators in late 2013 was 51, of which 9 refer to the three EPs, and 42 are other generators, of which 37 in FBiH and 5 in ERS).

Wholesale electricity market in BiH is based on bilateral trade and takes place in all time domains (year ahead, month ahead, hour ahead). Licensed companies from BiH may enter into contracts for export / import of electricity with foreign companies that do not have to be licensed in BiH.

Retail market is within the responsibility of the entity bodies and regulators. Although the entity regulators have issued 23 licenses that allow supply of end customers, and adopted the regulations that allow qualified customers the right to change suppliers, only three EPs still perform supply of end customers at regulated prices, i.e. not even one customer changed a supplier (partial exception is only Aluminij Mostar).



**SUPPLY**

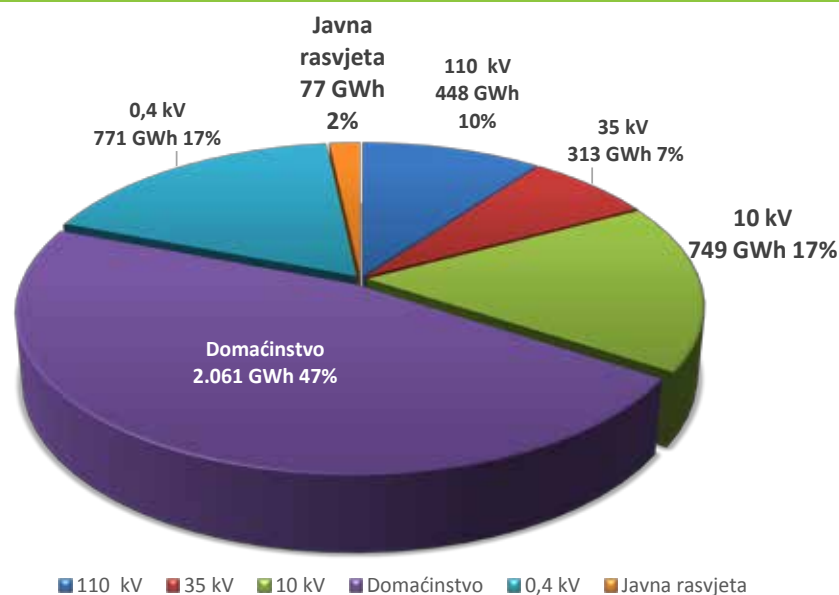
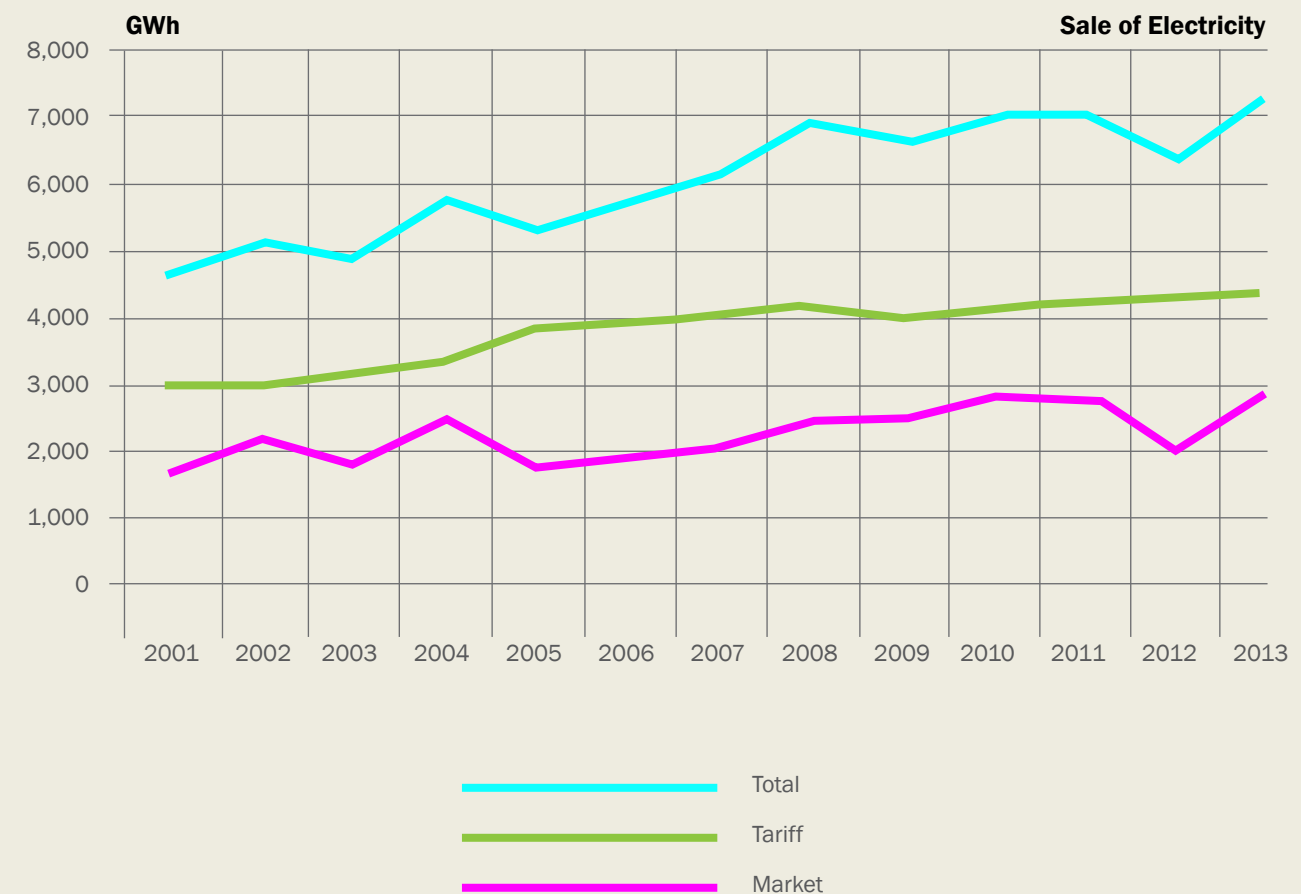
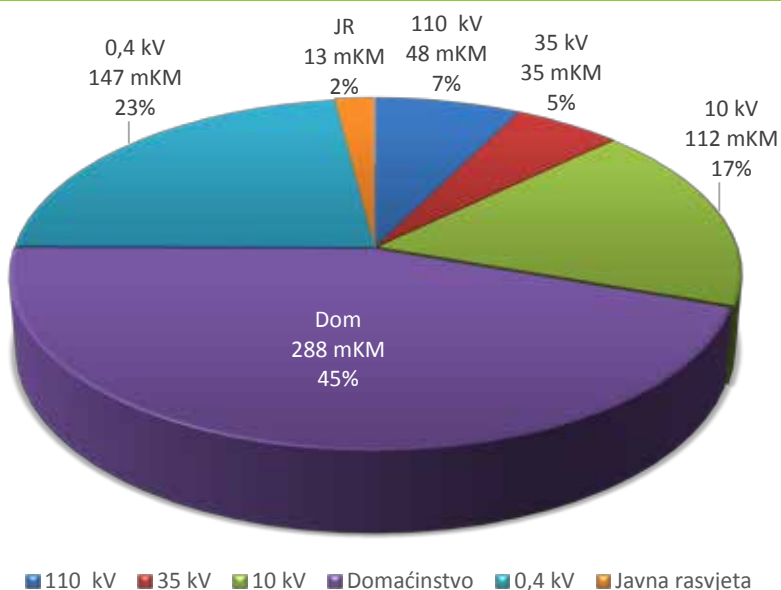
Supply activity of PE EPBIH is done through the Supply Department at the Company Headquarters and five distribution subsidiaries within which supply is organized by region.

In 2013 consumption of tariff customers of PE EPBiH amounted to 4,419 GWh, of which 66% at low voltage level. Total income from tariff customers amounted to 643 million BAM of which customers at low voltage made up 70%. The number of customers at the end of the year amounted to 724,607, of which 5 at high voltage, 814 at medium voltage, and 723,788 customers at low voltage.

**TRADE**

The electricity trade activity is the purchase and sale of electricity in the market, excluding sales to the end customer. In PE EPBIH trade is conducted within the Company Headquarters through the Department for Management and Trade. This Department, among other things, performs tasks of planning of operation of generating capacities, operational system management, implements contracts for delivery or receipt of energy, and has the role of balance responsible party. This activity is unregulated and is based on market principles.

After satisfying the needs of its tariff customers PE EPBIH has significant amounts of electricity which it sells in the market.

**STRUCTURE OF TARIFF CUSTOMER CONSUMPTION****Tariff Customers - Energy****SALE STRUCTURE****STRUCTURE OF INCOME FROM TARIFF CUSTOMERS****Tariff Customers - Income**



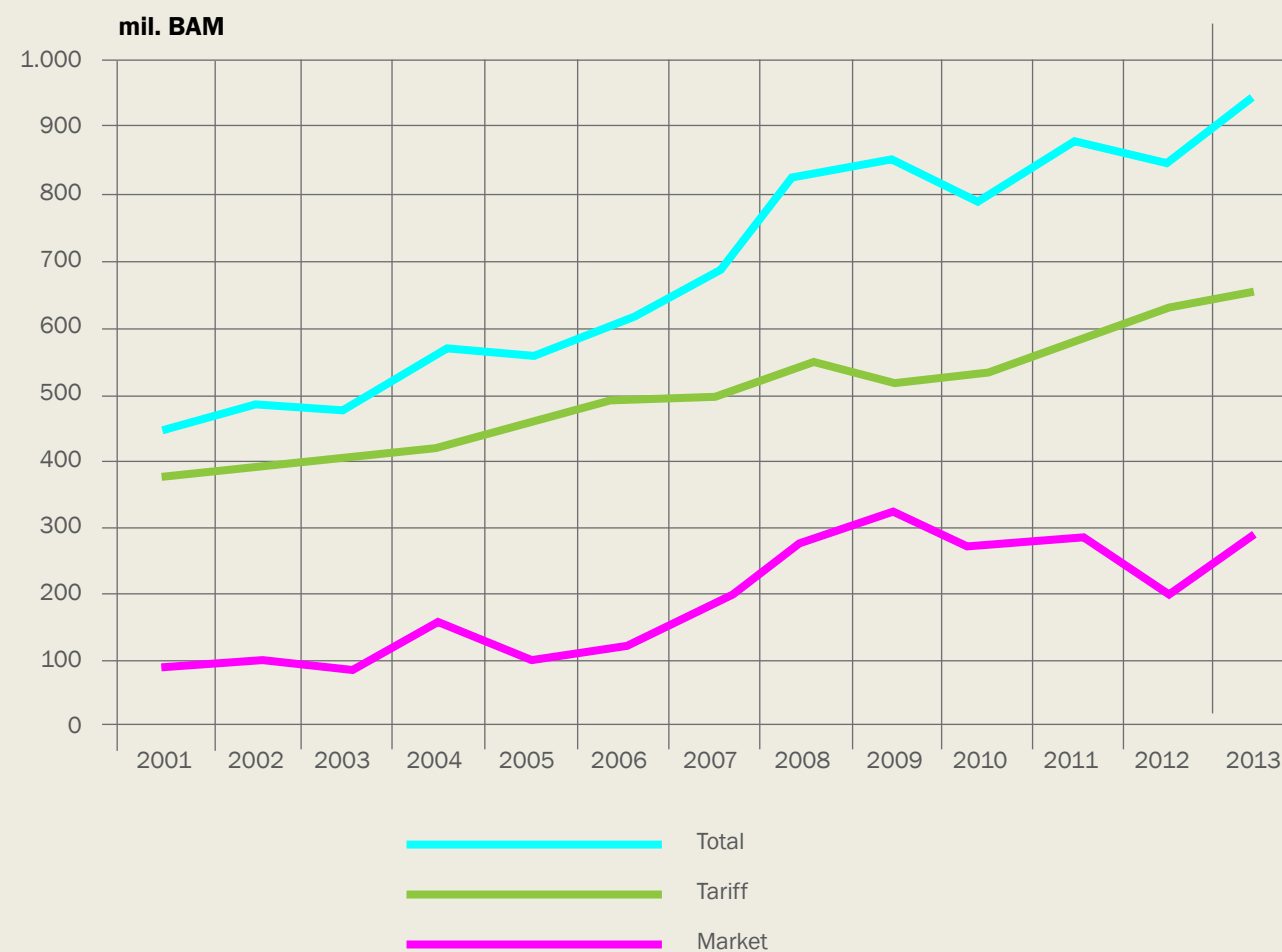
In the last five years the average non-tariff (market) sale amounted to 2,580 GWh per year, which represents a share of 38% of the total sales volume.

In the past five years this sale brought in the average annual income of 265 million BAM, representing 31% of the total income from electricity.

Market sale of electricity is carried out within the power system of BiH and through bilateral agreements at the borders of the power system of BiH with Croatia, Serbia and Montenegro. PE EPBiH has signed general contracts on trade with over 50 companies (including its subsidiaries in different countries) which regulate the issues related to short-term electricity trading.

Due to the fact that the quantity of electricity available for sale in the market is significant, and that income from the sale of these quantities significantly affects the business results of PE EPBiH, it is important to ensure that the placement of the electricity is protected from various risks. To this end, the sales of various products are combined at various time periods (from a single hour to a year) and diagrams. In addition to incomes from the sale of electricity, income is also realized from the sale of auxiliary services and ensuring reserve power in the market.

#### STRUCTURE OF INCOMES FROM SALES OF ELECTRICITY







## REALIZATION OF THE POWER BALANCE

In 2013 the overall electricity generation was 7,473 GWh, representing a record generation since 1990 achieved from PE EPBiH generation units.

Operation of the power system of PE EPBiH in 2013 was characterized by:

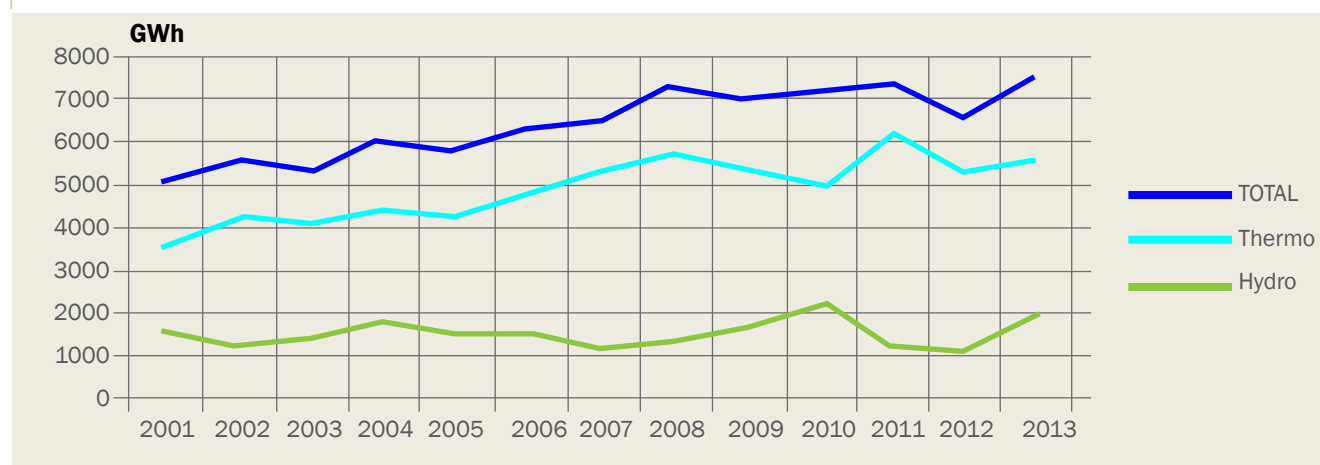
- growth in total electricity generation by 15% compared to the previous year,
- growth of hydro power plants generation by 69% and thermal power plants by 3%,
- favorable hydrological conditions – 39% higher water inflow in hydro power plants compared to planned,
- growth in electricity consumption by 1.6% compared to the previous year,
- growth in total electricity sales by 14% compared to the previous year,
- growth in electricity sales in the market by 43% compared to the previous year,
- completed work on the capital overhaul of the 200 MW Unit 5 at TPP Tuzla.





## GENERATION (GWh)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<b>Total</b>	5115	5540	5362	6112	5767	6363	6544	7295	6927	7181	7295	6509	7473
<b>Thermal</b>	3589	4307	4114	4435	4219	4812	5365	5750	5234	5013	6138	5368	5550
<b>Hydro</b>	1526	1233	1248	1677	1548	1551	1179	1545	1693	2168	1157	1141	1923
<b>Hydro share</b>	30%	22%	23%	27%	27%	24%	18%	21%	24%	30%	16%	18%	26%



Hydro power plants (Jablanica, Grabovica, Salakovac and distribution hydro power plants) generated 1.923 GWh. This high generation from hydro power plants was a result of favorable hydrological conditions during 2013 and it represents 26% of the total generation.

## REALIZATION OF The POWER BALANCE

	2011	2012	2013	Change % 13/14
<b>HYDRO POWER PLANTS</b>	<b>1,157</b>	<b>1,141</b>	<b>1,923</b>	<b>69%</b>
HPPs on Neretva	1114	1,086	1,854	71%
small HPPs	43	55	69	25%
Share of HPPS	16%	18%	26%	
<b>THERMAL POWER PLANTS</b>	<b>6,138</b>	<b>5,368</b>	<b>5,550</b>	<b>3%</b>
TPP Tuzla	3,904	2,881	3,290	14%
TPP Kakanj	2,234	2,487	2,260	-9%
<b>GENERATION</b>	<b>7,295</b>	<b>6,509</b>	<b>7,473</b>	<b>15%</b>
Received	295	355	324	-9%
<b>AVAILABLE</b>	<b>7,590</b>	<b>6,864</b>	<b>7,797</b>	<b>14%</b>
Gross distribution consumption	4,284	4,340	4,402	1%
Direct consumers	417	446	448	0%
Transmission losses	119	114	130	14%
<b>TOTAL CONSUMPTION</b>	<b>4,820</b>	<b>4,900</b>	<b>4,980</b>	<b>2%</b>
Supply	2,770	1,964	2,817	43%
<b>TOTAL NEEDS</b>	<b>7,590</b>	<b>6,864</b>	<b>7,797</b>	<b>14%</b>
Tariff sale	4,295	4,380	4,428	1%
Market sales	2,749	1,951	2,786	43%
<b>Total sales</b>	<b>7,044</b>	<b>6,331</b>	<b>7,214</b>	<b>14%</b>
Share of market sales	39%	31%	39%	







## ANNUAL REPORTE

### PE ELEKTROPRIVREDA BIH BUSINESS RESULTS IN 2013

#### INCOME STATEMENT in thousands BAM

	2013	plan 2013	2012	index 13/pl	index 13/12
	1	2	3	1/2	1/3
<b>1 Income from sales of electricity and auxiliary services</b>	<b>936,171</b>	<b>932,948</b>	<b>850,099</b>	100.3	110.1
- income from sale to tariff customers of EPBiH	567,524	576,997	556,734	98.4	101.9
- income from sales to customers based on UJS *	83,273	90,046	84,872	92.5	98.1
- income from sales to others in BiH	170,902	100,229	180,386	170.5	94.7
- income from export of electricity	109,453	161,557	22,772	67.7	480.6
- income from sales of reserve power and auxiliary services	5,019	4,120	5,336	121.8	94.1
<b>2 Income from sales of technical steam and heat and by products</b>	<b>14,771</b>	<b>16,938</b>	<b>14,326</b>	87.2	103.1
- income from sale of technological steam	3,494	3,352	3,460	104.2	101.0
- income from sale of heat	9,498	12,085	9,306	78.6	102.1
- income from sale of other byproducts	1780	1,501	1560	118.6	114.1
<b>3 Income from sale of materials and services</b>	<b>21,747</b>	<b>24,006</b>	<b>23,608</b>	90.6	92.1
<b>4 Financing income</b>	<b>16,247</b>	<b>10,999</b>	<b>18,217</b>	147.7	89.2
<b>5 Other income</b>	<b>19,288</b>	<b>12,829</b>	<b>20,031</b>	150.3	96.3
<b>TOTAL INCOME (1 through 5)</b>	<b>1,008,223</b>	<b>997,719</b>	<b>926,281</b>	101.1	108.3
<b>6 Material for generation of electricity</b>	<b>388,898</b>	<b>383,203</b>	<b>354,397</b>	96.3	104.1
<b>7 Maintenance material</b>	<b>15,553</b>	<b>20,347</b>	<b>17,125</b>	76.4	90.8
<b>8 Other costs of material</b>	<b>7,020</b>	<b>6,875</b>	<b>6,316</b>	102.1	111.1
<b>9 Coal transport costs</b>	<b>25,339</b>	<b>26,553</b>	<b>25,128</b>	95.4	100.8
<b>10 Maintenance services</b>	<b>16,704</b>	<b>21,319</b>	<b>15,308</b>	78.4	109.1
<b>11 Systematic studies</b>	<b>44</b>	<b>1188</b>	<b>214</b>	3.7	20.5
<b>12 Insurance premiums</b>	<b>4,550</b>	<b>4,408</b>	<b>4,780</b>	105.5	97.3
<b>13 Costs of other services</b>	<b>6,095</b>	<b>7,637</b>	<b>4,708</b>	79.8	129.5
<b>14 Depreciation costs</b>	<b>159,843</b>	<b>165,358</b>	<b>153,079</b>	96.7	104.4
<b>15 Costs of auxiliary services in electricity transmission</b>	<b>45,263</b>	<b>47,272</b>	<b>46,686</b>	95.7	97.0
<b>16 Salaries in contributions</b>	<b>157,459</b>	<b>158,454</b>	<b>158,114</b>	99.4	99.6
<b>17 Other labor costs</b>	<b>29,213</b>	<b>28,587</b>	<b>25,203</b>	102.2	115.9
<b>18 Water management fees</b>	<b>23,151</b>	<b>18,061</b>	<b>14,702</b>	126.2	157.5
<b>19 Fees for land and other</b>	<b>17,165</b>	<b>17,591</b>	<b>16,950</b>	97.6	101.3
<b>20 Other business costs</b>	<b>7,368</b>	<b>8,957</b>	<b>6,960</b>	82.3	105.9
<b>21 Financial costs and expenditures</b>	<b>5,283</b>	<b>4,177</b>	<b>5,140</b>	126.5	102.8
<b>22 Other expenditures</b>	<b>68,958</b>	<b>59,062</b>	<b>58,051</b>	116.8	118.8
<b>23 Reservation costs</b>	<b>13,174</b>	<b>8,345</b>	<b>6,334</b>	157.9	208.0
<b>TOTAL COSTS AND EXPENDITURES (6 through 23)</b>	<b>971,179</b>	<b>987,396</b>	<b>919,193</b>	98.4	105.7
<b>NET INCOME</b>	<b>37,044</b>	<b>10,324</b>	<b>7,087</b>	358.8	522.7

\*obuhvata kupce na 110 kV i 35 kV naponu kojima se električna energija prodaje po osnovu vršenja usluge javnog snabdjevača

**INCOME**

Total income of PE EPBiH in 2013 amounted to 1,008.2 million BAM and it was greater than planned by 10.5 million BAM, or 1.1%. Compared to 2012, total income increased by 81.9 million BAM or 8.8%.

**COSTS AND EXPENSES**

The total realized costs and expenses in 2013 amounted to 971.2 million BAM, which is less than the planned by 16.2 million BAM or 1.6% less. Compared to 2012, costs and expenses increased by 52.0 million BAM or 5.7%, due to increased costs of other materials, maintenance services, other service costs, depreciation costs, other operating costs, water management fees, duties, other operating expenses, other expenses and costs of reservations.

**COLLECTION OF INCOME**

Collection rate of supplied electricity on the basis of electricity supply and distribution to qualified customers was realized at 94.2% and this represents the ratio of collected income and invoiced amounts in the current year, where the calculation includes claims from previous years and receivables won at court (as denominator) and payments (as numerator) by the accounts. This percentage is lower than what was achieved (95.0%) in 2012 by 0.8%.

The following table provides a chronological review of the level of collection for supplied electricity from the distribution and qualified customers for the past five years.

Year	2009	2010	2011	2012	2013
Collection rate	95.7	95.7	95.4	95.0	<b>94.2</b>

Collection rate is different in different distribution subsidiaries and ranges from 78.7% in subsidiary ED Mostar to 99.1% in subsidiary ED Bihać which is shown in the table below.

Subsidiaries JP EP BiH	2013	2012
	%	%
ED Sarajevo	94.7	96.4
ED Tuzla	98.8	98.3
ED Zenica	92.3	92.3
ED Bihać	99.1	98.5
ED Mostar	78.7	77.0
<b>TOTAL</b>	<b>94.6</b>	<b>94.8</b>
Qualified	89.8	97.4
<b>TOTAL</b>	<b>94.2</b>	<b>95.0</b>

The level of income from electricity sales, expressed as a ratio of income collected and the amount invoiced in the current year (excluding balances from unpaid claims from previous years), gives a better percentage of the collection, which is 99.1%.

Collected funds on the basis of the supply of second order and trade of electricity were realized in amount of 100%.

**FINANCIAL INDICATORS OF BUSINESS SUCCESS****INCOME STATEMENT INDICATORS**

	Realization 2013	plan	Realization 2012
Generation of electricity (GWri)	7,473.0	7,285.9	6,509.0
<b>Operational income (thousand BAM)</b>	<b>972,688.9</b>	<b>973,892.0</b>	<b>888,033.6</b>
Income from sale of electricity and auxiliary services	936,170.6	932,948.3	850,099.5
Income from auxiliary activities, materials and services	36,518.3	40,943.8	37,934.1
<b>Cash operational costs (thousand BAM)</b>	<b>767,649.1</b>	<b>804,517.2</b>	<b>739,256.6</b>
- Costs of material for generation of electricity and transport of coal	394,237.1	409,756.5	379,525.0
- material and maintenance services	32,256.3	41,666.1	32,433.1
- salaries and contributions for salaries	186,072.3	187,041.1	183,317.0
- sale dependent costs	78,368.1	94,719.4	85,116.0
- costs of fees	37,934.0	33,286.3	29,627.0
- other operational costs	33,181.3	38,047.8	29,238.5
<b>EBITDA</b>	<b>205,039.9</b>	<b>169,374.8</b>	<b>148,777.0</b>
Income from donations (depreciation of donated assets)	8,316.9	7,714.3	8,433.6
Depreciation (thousand BAM)	159,842.6	165,358.4	153,079.1
<b>EBIT</b>	<b>53,514.2</b>	<b>11,730.7</b>	<b>4,131.5</b>
Operational coefficient (operational costs + depreciation/operational income)	0.954	0.996	1.005
Cost effectiveness (total income/total costs and expenditures)	1.038	1.010	1.008
Productivity (income per employee)	204.01	201.89	186.34
Operational coefficient (operational costs/operational income)	0.789	0.826	0.832
Employee cost per employee	37.77	37.85	36.88
Production per employee	1.51	1.47	1.31
Participation of costs and expenditures in total income	96.3	99.0	99.2
Average number of employees (as of end of mont/12)	4,942	4.942	4.971

Production costs/operational income	40.53%	42.07%	42.74%
Cost of material and maintenance services/operational income	3.32%	4.28%	3.65%
Cost of labor/operational income	19.19%	19.21%	20.64%
Sale dependent costs/operational income	8.06%	9.73%	9.58%
Cost of fees/operational income	3.90%	3.42%	3.34%
Other costs/operational income	3.93%	3.91%	3.29%





# REALIZATION OF THE INVESTMENT PLAN

## REALIZATION OF THE INVESTMENT PLAN

In 2013 PE EPBIH achieved the level of investments in the amount of 138.7 million BAM. Investments were realized in the reconstruction and modernization of the existing power facilities, installations and networks, capital projects, ICT and joint projects.

### *Investments in generation*

The most important projects that were implemented in 2013, which have the character of investment and maintenance are:

- Capital overhaul of Unit 5 in TPP Tuzla,
- Capital overhaul of Unit 5 in TPP Kakanj,
- Procurement of boiler burners for Unit 7 in TPP Kakanj,
- Rehabilitation of dilapidated roof structure of warehouses and auxiliary facilities in TPP Tuzla,
- Restoration of the facade of Units 1-4 in TPP Kakanj,
- Procurement of conveyors for afterburners of Units 4 and 5 in TPP Tuzla,
- Procurement of slag transport from Units 3, 4, 5 and 6 in TPP Tuzla,
- Repair of the steel structure of transport bridges for slag and ash transport with corrosion protection in TPP Kakanj,
- Overhaul of wagons in TPP Tuzla,
- Acquisition of maneuver locomotives in TPP Tuzla,
- Completion of remediation of damages to Unit no. 2 at HPP Grabovica,
- Elimination of leakage through the dam body at HPP Grabovica,
- Reconstruction of 35 kV switchyard at HPP Jablanica dam, intake structure, and the replacement of 35 kV switchyard at HPP Grabovica and HPP Salakovac (realized approximately 30-40% of the project),
- Reconstruction of hydraulic control systems for control of spillway and discharge structure and overhaul of the regulation shutter of base discharge at HPP Salakovac,
- System improvement of local and remote management of HPP Salakovac,
- Regulation of the Neretva riverbed in section dam – discharge at HPP Jablanica.

### *Investments in distribution activity*

Of the projects that were implemented in 2013, it is important to emphasize the implementation of the project which enabled an alternative supply of customers in the area of Buna and Blagaj in ED Mostar, where the reconstruction of 35/10 kV substation Blagaj and construction of cable line Blagaj Buna with rated voltage of 35 kV was performed as well as reconstruction of primary substations Salakovac, Musala and Vrapčići with rated voltage 35/10 kV and repair of power lines:

- Overhead line 2x35 kV substation Tuzla SS 35/10/6 kV Dam Modrac and 35/6 kV and Cementara,
- Overhead line 2x35 kV substation Lukavac 110/35 kV - Dam modrac 35/10/6 kV and 35/6 kV Cementara, and reconstruction of substations Živinice 1, Živinice2, Tuzla 1, and Tuzla and Gračanica with rated voltage of 35/10 kV, in the area of ED Tuzla subsidiary.

In 2013 we completed the work on the realization of the Project of restoration of electricity II - EIB project "Supply and installation of facilities and equipment" which was financed by the EIB loan funds. Total value of the project which was implemented in the period 2010-2013 is 59.9 million BAM (loan funds 55.1 million BAM and own resources 4.8 million BAM).

This project reconstructed and built 300 km of medium voltage and 254 km of low-voltage distribution network, 127 substations and 9,000 household connections.

**CAPITAL INVESTMENTS**

In order to further ensure the basic part of generation of PE EPBiH, ensure the long-term continuity in the operation of the mines, and satisfy the emission limits at the level of PE EPBiH as a whole, and further increase the energy efficiency of generation and quality and security of supply of electricity, PE EP-BiH's

priority was to prepare activities to realize the construction of new thermal replacement capacities and new capacities based on renewable resources.

**Unit 7-450 MW TPP Tuzla**

- Obtained the preliminary approval for the construction of complex energy structures from the Federal Ministry of Physical Planning.
- Completed the tender document the third phase "Final and Best Offer" and sent it to the candidates who had passed the second phase of selection of project partners.
- Initiated the process of expropriation of property for the purposes of construction of Unit 7 at TPP Tuzla.
- Realized the Friendly Environment Program with Tuzla Municipality worth 3.6 million BAM.

**Unit 8-300 MW - TPP Kakanj**

- Obtained the preliminary approval for the construction of complex energy structures from the Federal Ministry of Physical Planning.
- Contracted 3.0 million BAM and realized and paid 2.3 million BAM on the basis of the signed Agreement on realization of a friendly environment with the Municipality of Kakanj.

**HPP Vranduk -19.63 MW on the river Bosna - Zenica Municipality**

- Obtained the preliminary approval for the construction of complex energy structures from the Federal Ministry of Physical Planning,
- Adopted the decision on investment in the construction of HPP Vranduk on the Bosna River,
- Selected technical consultant for the provision of consultancy services for preparation of tender documents and monitoring of the construction of the HPP,
- Implemented the first phase of the expropriation of property for the construction of HPP Vranduk,
- Signed a loan agreement with the EBRD for financing of the construction of projects HPP Vranduk and HPP Una Kostela in the amount of 35 million euros (26 million euros for Vranduk)

**HPP Ustikolina - 60.48 MW on the Drina River in the municipalities Foča and Goražde-Ustikolina**

- Completed the preliminary design,
- Amended and corrected the Environmental Impact Study on the basis of comments and suggestions of FMOiT and implemented a public debate.

**HPP Una Kostela and Aneks - 9.4 MW and 6.1 MW on the river Una in Bihać Municipality**

- Signed a loan agreement with the EBRD for financing of the project of construction of HPP Vranduk and HPP Una Kostela in the amount of 35 million euros (9 million euros for HPP Una Kostela)
- After completion of the prequalification process, six candidates qualified for the selection of consultants for the preliminary design development for reconstruction and expansion of HPP Una Kostela.

**HPP Janjići -13.2 MW on the Bosna River in Zenica municipality**

- Completed the development of the feasibility study for the purpose of renewing the application for concession, and started the negotiations to harmonize the elements of the concession contract for the construction of HPP Janjići,
- Signed the contract for preliminary design,
- BiH Council of Ministers appointed a delegation to conduct negotiations for the signing of the Loan Agreement and the project with KfW in the amount of 30 million euros.

**HPP Kruševo -10.69 MW along with HPP Zeleni Vir - 2.36 MW on the river Bioštica - Municipalities Olovo**

- Developed the "Mine clearing projects" for area of all buildings and reservoirs planned for HPP Kruševo and HPP Zeleni Vir, and preformed mine clearing within the project "Pridvornica 5,
- After completion of the tender procedure, selected the contractor for the technical survey of the area planned for the construction of HPP Kruševo.
- Agreed on the timing of the contract with WBIF representatives,
- Announced a tender for the selection of contractors for review of the Preliminary designs for HPP Kruševo and HPP Zeleni Vir.

**HPP Kovanići -13.5 MW on the Bosna River in Zenica and Žepče**

- Published invitation for expression of Interest for Consultancy services - Feasibility Study for HPP

Kovanići,

- Signed the Financing Agreement between KfW and PE EPBiH in amount of 0.85 million euros (1.67 million BAM) for preceding and preparatory activities for the construction of HPP Kovanići,
- Sent the application for carrying out of survey works to municipalities Zenica and Žepče.

**HPP Čapljje-11.62 MW on the river Sana - Sanski Most**

- WBIF selected the consultant and development of technical documentation started,
- Obtained approvals / opinions of users/owners of the land for the establishment of the application for obtaining Physical planning approvals to perform survey works,
- After the presentation of the project, the Municipal Council of Sanski Most did not provide support or approval to perform survey works, and Federal Ministry for Physical Planning FMPU rejected the request for Physical planning approval,

**Unac - peak HPP with installed capacity of 72 MW on the river Unac - Municipality of Bihać**

- Bihać Municipality Council supported the expert opinions and suggestions of PE EPBiH presented during public hearings of the Plan "Una River Basin" and adopted the Conclusion on approval for the implementation of Phase II of investigative works to determine reservoir water impermeability of HPP Unac. The conclusion of the Municipality of Bihać was delivered to FMPU for implementation,
- The Federal Ministry of Physical Planning refused to issue an approval for conduct of investigative works, stressing that such action is in stark contrast with the planning solutions in the Physical Plan of the Federation of BiH.

**HPP Vinac and HPP Babino Selo - on the river Vrbas**

- Position of the Jajce Municipality not to allow the construction of hydropower facilities over 5 MW in the territory of the municipality prevents the realization of the project HPP Vinac and the new, more acceptable technical solution was analyzed for HPP Torlakovac that is convenient for realization in terms of land expropriation, population displacement and submerging buildings.
- Obtained the approval of the Municipal Council of Donji Vakuf to perform investigative works for HPP Babino Selo and HPP Torlakovac.

**HPP Tegare and HPP Kozluk - on the River Drina**

- Activities have been initiated to sign the Intergovernmental Agreement between Bosnia and Herzegovina and Serbia in order to realize this project.

**Preparation and construction of the first and the second phase of the SHPP on the River Neretva river basin**

- Federal Ministry of Environment and Tourism (FMOiT) issued an environmental license for SHPP: Donji Obalj, Obaščica, Duboki potok 2, Podhum 1, Podhum 2 and Mala Neretva – river mouth,
- Completed the preliminary and preparatory activities (hydrological and geological documents, geodetic surveys) in order to optimize the design parameters of the first phase of construction of small hydro power plants,
- The upgrading of the Preliminary design and development of the main and as built designs for four SHPPs from the 1st construction phase is ongoing,
- Completed the activities aimed at the commencement of the expropriation of land for the construction of three SHPPs from the 1st construction phase,
- FBiH Ministry of Physical Planning (FMPU) gave the preliminary physical planning permit for: Srijanski most, Gorovnik-river mouth and Crna Rijeka,
- Implemented a part of the activities of the friendly environment program with the Municipality of Konjic.

**Wind farm projects "Preparation and construction of the Wind farm Podveležje, City of Mostar"**

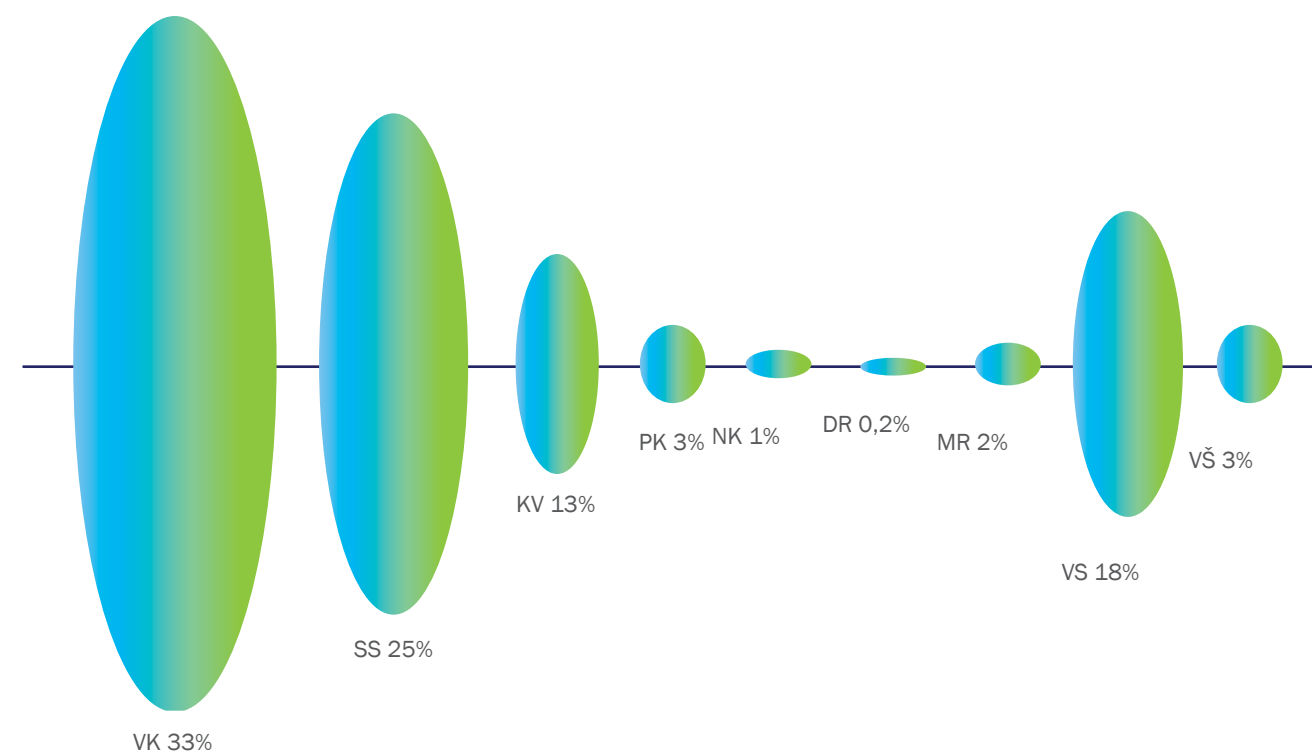
- Conducted the tender procedure for the selection of consultants under the rules of KfW,
- Completed the tender procedure for the project of baseline study of birds and bats at the site of the wind farm Podveležje, and signed the contract with the selected bidder
- Obtained the preliminary Consent for the construction of complex structures by the Herzegovina – Neretva Canton - The Ministry of Construction and Physical Planning,
- Obtained the Environmental permit issued by the Federal Ministry of Environment and Tourism,
- Published the tender for the construction project for access roads and installation of the plateaus,
- Prepared the tender for the construction project for the substation 110/35 kV.



## REALIZATION OF THE HUMAN RESOURCES PLAN

As of December 31st 2013 the Company had 4,928 employees in all categories. Last year there were 427 terminations of employment on various basis.

### QUALIFICATION STRUCTURE OF PERMANENTLY EMPLOYED EMPLOYEES



NK	PK	KV	SS	VK	VŠ	VS	MR	DR
48	162	644	1227	1617	168	876	89	17

A significant number of internal and external trainings, workshops, presentations, specialized seminars, professional consultative workshops was implemented in various areas of interest to the Company. Various forms of training covered about 1,000 employees.

“NK – no qualifications, PK – low qualifications, KV - qualified, SS high school, VK highly qualified, VŠ – college education, VS university education, MR- Master Degree, DR – Ph.D.”



## NUMBER OF EMPLOYEES BY SUBSIDIARIES

		2012		2013		Share
		Total	Without trainees and replacements	Total	Without trainees and replacements	
<b>HEADQUARTERS</b>		<b>382</b>	<b>375</b>	<b>382</b>	<b>376</b>	<b>7.7%</b>
	<b>Ukupno</b>	<b>4561</b>	<b>4506</b>	<b>4546</b>	<b>4479</b>	<b>92.3%</b>
<b>SUBSIDIARIES</b>	HE na Neretvi	388	385	391	388	8.0%
	TE Kakanj	628	621	631	621	12.8%
	TE Tuzla	723	714	724	714	14.7%
	ED Bihac	424	422	428	422	8.7%
	ED Mostar	230	227	227	224	4.6%
	ED Sarajevo	658	652	639	633	13.0%
	ED Tuzla	704	692	706	689	14.2%
	ED Zenica	806	793	800	788	16.2%
<b>TOTAL EPBiH</b>		<b>4943</b>	<b>4881</b>	<b>4928</b>	<b>4855</b>	

## NUMBER OF EMPLOYEES BY ACTIVITY

	2012		2013		Share
	Total	Without trainees and replacements	Total	Without trainees and replacements	
<b>Management and support functions</b>	<b>316</b>	<b>309</b>	<b>316</b>	<b>311</b>	6,4%
<b>GENERATION</b>	<b>1792</b>	<b>1773</b>	<b>1800</b>	<b>1777</b>	36.6%
<b>DISTRIBUTION</b>	<b>2425</b>	<b>2395</b>	<b>2406</b>	<b>2365</b>	48.7%
<b>SUPPLY</b>	<b>387</b>	<b>381</b>	<b>382</b>	<b>379</b>	7.8%
<b>TRADE</b>	<b>23</b>	<b>23</b>	<b>24</b>	<b>23</b>	0.5%
<b>TOTAL EPBiH</b>	<b>4943</b>	<b>4881</b>	<b>4928</b>	<b>4855</b>	





# ENVIRONMENTAL PROTECTION

## ENVIRONMENTAL PROTECTION

During 2013 Public Enterprise Elektroprivreda of Bosnia and Herzegovina d.d. - Sarajevo (PE Elektroprivreda), continued with the activities of environmental management within its business activities. Environmental management is implemented through the competent services of the Headquarters of the Company and its subsidiaries, as well as professional teams that are formed according to current issues.

### MONITORING OF INTERNATIONAL AND DOMESTIC LEGISLATION

PE Elektroprivreda continuously monitors the international and domestic legislation and promptly reacts to the resulting obligations. In accordance with the obligations of the implementation of the acquis in the field of the environment according to the Treaty establishing the Energy Community of South East Europe we prepared and adopted the plan and program of Elektroprivreda BiH for the reduction of emissions from the existing thermal power plants. The plan also served as a basis for the preparation of the Long term development plan of PE EPBiH by 2030 with the Strategic Plan. The above plan will be a part of the national emission reduction plan for air pollutants from the existing large combustion plants (LCP NERP).

PE Elektroprivreda has actively participated in the activities of the Energy community through membership in the Working Group for Environment - Enz. Through the aforementioned activities PE EPBiH was ready for all the decisions taken by the EnC Council of Ministers, related to the acquis in the field of environment.

### *Environmental and water permits*

During 2013 PE EPBiH continued with the implementation of activities related to valid environmental and water management permits in the subsidiaries of the Company.

The thermal power plants Tuzla and Kakanj continued with the realization of the conditions set by the current environmental and water management permits. Specific projects were started as well. Thermal power plant Tuzla (TPP Tuzla) launched the following projects: the construction of a closed system of returnable water, construction of a new electrostatic precipitator ash silo, reclamation of landfill space for slag and ash Divkovići I and II. It is important to note that the slag and ash landfill Jezero II received the renewed environmental permit. It also obtained a new Water management permits.

Thermal power plant Kakanj (TPP Kakanj) initiated the preparatory activities on the development of the investment - technical documentation for the reduction of SO<sub>2</sub> and NO<sub>x</sub> emissions. It also launched the project of reconstruction of electrostatic precipitator of the Unit 7 - its extension with bag filters to meet the emission limit values for particulate matter in the air. Activities have been initiated to obtain a new water permit.

The distribution subsidiaries are implementing activities imposed by valid environmental and water permits.

### MODERNIZATION / RECONSTRUCTION OF EXISTING POWER PLANTS

As part of the modernization / rehabilitation of existing energy systems the project of revitalization of Unit 6 (215 MW) was completed in subsidiary TPP Tuzla. The project achieved:

- Increase of the energy efficiency of Unit by 4.5%,
- Reduction in emissions of particulate matter (<30 mg/mn<sup>3</sup>)
- Reduction of NO<sub>x</sub> emissions (<350 mg/mn<sup>3</sup>)
- Installed the pneumatic transport of ash to the ash silo.

The project of modernization of the system for coal storage in TPP Tuzla was completed within the POWER IV project. The effects of the project are:

- Increase in the degree of homogenization of all types of coal for Units 3, 4, and thereby reducing pollutant emissions into the air,
- Improvement of the technological process of storage and transportation of coal at depot 1,
- Collection and disposal of rainwater and leachate from depots 1, 2 and 3,
- Minimization of the risk of fire, i.e. the spontaneous combustion of coal at the depot,
- Reduction of coal dust.





Full overhaul of Units 5, 6 and 7 was completed at TPP Kakanj. HPPs on Neretva initiated the activities on the reconstruction of generator No. 1 at HPP Grabovica. Investment - technical documentation was prepared and repairs contracted for the generator unit.

Distribution subsidiaries implemented the project of restoring electricity II - EIB project. The project included building of 127 substations. All substations were built with hermetically sealed oil transformers, and under each transformer in cable substations foundations are solved in a manner that allows the collection of the entire volume of the power transformer oil.

#### **DEVELOPMENT PROJECTS**

Within the framework of development projects, activities continued on the preparation of project documentation which includes the documentation relating to the protection of the environment. ESAP / OSAP (Environmental and Social Action Plan) has been developed for the project HPP Vranduk, for the purpose of approving the loan funds from the EBRD (European Bank for Reconstruction and Development). With this document PE EPBiH pledged to implement a series of measures to avoid, reduce or otherwise control potential impacts of projects on population and the environment. In the implementation of the measures from the environmental permit, it launched the activities to develop a management plan for maintenance of the historic site Stari Grad Vranduk - selected a consultant. Within the Wind farm Podveležje project it obtained the Environmental permit. Baseline study for birds and bats has been contracted. ESAP / OSAP has been done for the reconstruction project of HPP Una Kostela. Activities have been launched to develop the Feasibility Study for Wind farm Vlašić at the level of the preliminary design, including an evaluation of the environmental and social aspects of the project (grant funds form the European Investment Bank).

#### **ENERGY EFFICIENCY**

Within the structure of the Energy Efficiency Management System of PE EPBiH activities were implemented in accordance with the “Energy Efficiency Goals of PE EPBiH for 2013 with the plan and program of measures for achieving the goals”. Education of teams for energy efficiency was conducted. A brochure Energy Efficiency - Employee Contribution to increase of energy efficiency and promotional flyer for consumers “Saving Electricity” were published.

TPP Kakanj initiated the activities of the first energy audit in order to determine the baseline in terms of energy efficiency. TPP Tuzla and TPP Kakanj are carrying out activities to reduce the specific consumption of heat. With the entry of Unit 6 in TPP Tuzla in operation a significant improvement in specific consumption of heat has been achieved.







## SUMMARY

- In 2013 PE EPBiH achieved a record income of 1008.2 million BAM, total costs and expenses of 971.2 million BAM and net profit of 37.0 million BAM.

*Business of the company in 2013 was characterized by:*

- Operational readiness and beneficial hydrological situation resulted in record generation of electricity of 7473.0 GWh, which is record since 1990 (observing generation units that are now in operation);
- realized inflows at HPPs were 39.4% higher compared to the Plan, or 72.5% higher compared to inflows in 2012,
- favorable hydrological conditions resulted in increased generation of hydroelectric power compared to the plan (by 468.2 GWh) which led to a reduction in average unit cost of generation,
- increase of market sales of electricity by 11.6% compared to the planned sale, and 42.8% higher compared to 2012,
- continuation of activities to realize the preparation of significant capital and other investments in the generation and distribution activities (adopted decision to invest in the construction of HPP Vranduk and signed a loan agreement with the EBRD for financing of the construction projects for HPP Vranduk and HPP Una Kostela and completed works on the realization of the project of reconstruction of electrical energy II-EIB project "Supply and installation of plants and equipment"),
- regular and reliable supply of electricity to consumers in addition to fulfilling all contractual obligations in the electricity market and a satisfactory level of collection of 94.2% (with a balance of receivables from previous years)
- maintained solid liquidity of the Company with regular payment of obligations to suppliers, employees and the state, and achieved net profit of 37.0 million BAM which is one of the best financial results in the last 20 years.

## Independent Auditors' Report to the shareholders of JP Elektroprivreda BiH d.d. - Sarajevo

We have audited the accompanying separate financial statements of JP Elektroprivreda BiH d.d. - Sarajevo ("the Company"), which comprise the separate statement of financial position as at 31 December 2013, and the separate statements of comprehensive income, changes in equity and cash flows for the year then ended, and notes, comprising a summary of significant accounting policies and other explanatory information.

### Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with International Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

### Auditors' Responsibility

Our responsibility is to express an opinion on these separate financial statements based on our audit. We conducted our audit in accordance with International Standards on Auditing. Those standards require that we comply with relevant ethical requirements and plan and perform the audit to obtain reasonable assurance on whether the separate financial statements are free of material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the separate financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the entity's preparation and fair presentation of the separate financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting principles used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the separate financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our qualified opinion.

### Basis for Qualified Opinion

- As disclosed in *Note 16 – Property, plant and equipment*, the fair value of property, plant and equipment was last appraised on 31 December 2004. According to International Financial Reporting Standard IAS 16, "Property, plant and equipment", when the fair value of a revalued asset differs materially from its carrying amount, a further revaluation is required. The Company is in the process of preparation of the appraisal of property, plant and equipment, however the appraisal was not completed as at the reporting date. There are indications that the carrying amount of property, plant and equipment might differ from that which would be determined using fair value at the end of the reporting period. The effects of this departure from International Financial Reporting Standards, if any, on the separate financial statements for the year ended 31 December 2013 have not been determined.

This version of the report is a translation from the original, which was prepared in the Bosnian language. In all matters of interpretation of information, views or opinions, the original language version of the report takes precedence over this translation.

## Independent Auditors' Report to the shareholders of JP Elektroprivreda BiH D.D. – Sarajevo (continued)

- As disclosed in *Note 19 – Investments in subsidiaries*, the Company has investments with a carrying value of BAM 170,287 thousand. The investment in subsidiaries has been accounted for at cost. There are indications that the recoverable amount of investments in subsidiaries may be lower than its cost. International Financial Reporting Standard IAS 36 "Impairment of Asset" requires that, where such indications exist, management makes a formal estimate of the recoverable amounts. No such estimate has been made. The effects of this departure from International Financial Reporting Standards on the separate financial statements have not been determined.

### Qualified Opinion

In our opinion, except for the effects of the matters described in the *Basis for Qualified Opinion* paragraphs, the separate financial statements give a true and fair view of the unconsolidated financial position of the Company as at 31 December 2013, and of its unconsolidated financial performance and its unconsolidated cash flow for the year then ended in accordance with International Financial Reporting Standards.

### Other matters

The financial statements of the Company as at and for the year ended 31 December 2012 were audited by another auditor whose report dated 22 March 2013 expressed a qualified opinion on those financial statements.

### KPMG B-H d.o.o. za reviziju

Registered auditors  
Zmaja od Bosne 7-7A/III  
71000 Sarajevo  
Bosnia and Herzegovina

30 April 2014



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