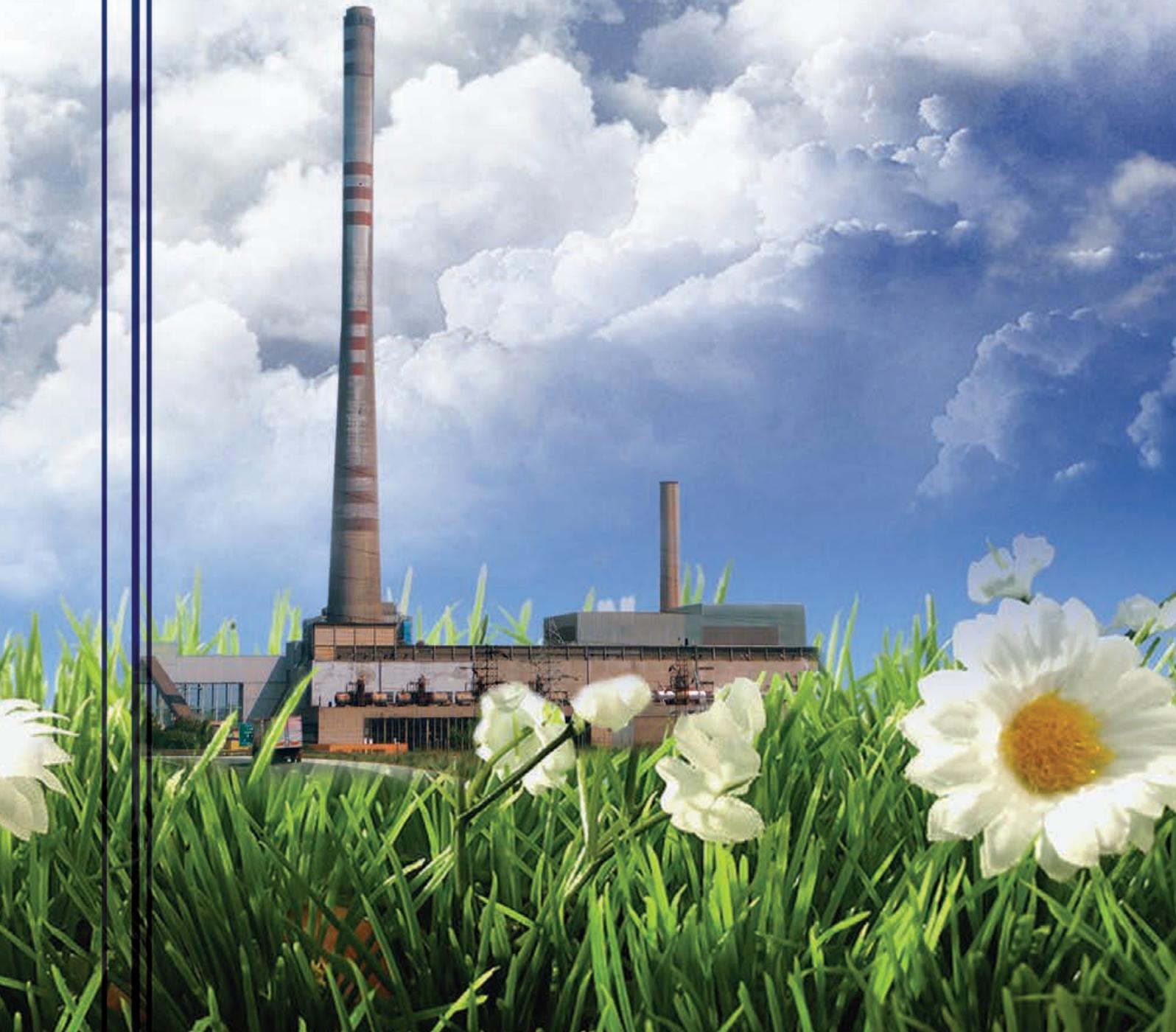




Javno preduzeće
ELEKTROPRIVREDA BOSNE I HERCEGOVINE
d.d. - Sarajevo

2012.

ANNUAL REPORT ON ENVIRONMENTAL PROTECTION





2012.

ANNUAL REPORT ON ENVIRONMENTAL PROTECTION

IMPRESUM CONTACTS

PUBLIC ENTERPRISE ELEKTROPRIVREDA OF BOSNIA AND HERZEGOVINA D.D. - SARAJEVO

71000 Sarajevo, 15
Vilsonovo Šetalište street
Bosnia and Herzegovina
Telephone: 387 33 751 000
Fax: 387 33 751 008

Environmental Management Department

Tel: 00387 33 751 895
Fax: 00387 33 751 896

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25. IZBOR 100 NAJVEĆIH
KOMPANIJA U BOSNI
I HERCEGOVINI



EMERIK
100 najvećih u privredi

**JP ELEKTROPRIVREDA BIH
DD SARAJEVO**

1. MJESTO

po ulaganju u zaštitu okoliša i energetske
efikasnost prema rezultatima iz 2011. godine
u kategoriji velikih kompanija



Č. Čučur

Privredna štampa



**POSLOVNE
KARTICE**

FOREWORD

General Manager

 dr. Elvedin Grabovica



The principle of sustainable development, implementation of the Environmental policy, set framework and operational objectives in the context of environmental protection and natural resources were crucial for business planning and implementation of numerous activities of JP Elektroprivreda BiH d.d. Sarajevo in 2012. Legislation and standards in the domain of environmental protection were the basis for our projects of modernization and rehabilitation of existing power plants and facilities, and development projects. In accordance with the fact that Bosnia and Herzegovina has natural potentials to generate electricity, which is the paradigm and chance for prosperity of civilization, planning of the construction of new generation and distribution capacities is conceived in this context. Indicators of study analyzes confirm that the started capital investments of JP Elektroprivreda BiH function for overall socio-economic development, and the dimensions of protection and improvement of the quality of the environment and living conditions of the population.

The Business Press Award "EMERIK - 1st place among the 100 largest companies in the economy for investing in environmental protection and energy efficiency according to the results from 2011. in the category of large companies" was not considered as a statistical fact, but as recognition and continuous commitment of planning and financing projects that will result in reducing negative environmental aspects of our business. In this context, in 201.2 we invested 136,465,077.00 KM, and on the basis of the supply of generated waste into recycling and reuse we achieved revenue of 2,826.680,40 KM.

Transparent activities, communication and understanding with government structures at all levels, with the media and the general public were our characteristic in 2012. In order to perform a timely transposition of obligations we followed international agreements, programs and legislation in the domain of sustainable development and environmental protection. By the end of 2012 we updated the issue number: 3 Environmental policy of Elektroprivreda BiH, which was adopted by the Supervisory Board on January 31st 2013.



Javno preduzeće
ELEKTROPRIVREDA BOSNE I HERCEGOVINE
d.d. - Sarajevo

OKOLINSKA POLITIKA

JP Elektroprivreda BiH d.d. - Sarajevo će razvojne planove i aktivnosti utemeljiti na konceptu održivog razvoja i uskladiti ih sa odredbama strategija, propisa i standarda zaštite okoline. Okvirni cilj je postati Društvo prijateljsko za okolinu i konkurentno u evropskom miljeu.

Odgovorno i kontinuirano će se provoditi organizacione i tehničke mjere sistemskog upravljanja i poboljšavanja okolinskih aspekata djelatnosti. U skladu sa tehno-ekonomskim mogućnostima poduzimat će se preventivne i korektivne mjere za smanjivanje negativnih uticaja, te praćenje njihovih učinaka na kvalitet okoline i stanovništvo.

U cilju ostvarivanja poslovnih i okolinskih rezultata, prioriteti su usmjerenje ka:

- izboru najboljih raspoloživih tehnika (BAT) i tehnologija, te okolinski podobnih materijala,
- kogeneraciji, kosagorjevanju i optimizaciji proizvodnje električne i toplotne energije,
- korištenju obnovljivih izvora energije i efikasnijem korištenju fosilnih goriva,
- povećanju energetske efikasnosti u proizvodnji, distribuciji i snabdjevanju,
- implementaciji okolinskih zahtjeva u okviru istraživanja, projektovanja i inženjeringa,
- kontroli kvaliteta uglja i drugih proizvodnih resursa, monitoringu i smanjivanju emisije polutanata i štetnih supstanci u okolinu,
- procjeni rizika i mogućih incidentnih uticaja na okolinu, planiranju preventivnih i interventnih mjera,
- adekvatnom upravljanju štetnim, opasnim i otpadnim materijama.

Razvojni planovi i projekti bit će usklađeni sa normama iz domena zaštite okoline i prirodnih resursa, te zahtjevima za očuvanje i unapređenje životnih uvjeta i društvenih aspekata.

U cilju realizacije okolinske politike i planova zaštite okoline vršit će se edukacija i stručno usavršavanje uposlenika. Uspostavit će se savremeni sistem komunikacija sa izvršnim vlastima, međunarodnim organizacijama, udruženjima građana i svim zainteresiranim društvenim subjektima.

Poslovnom disciplinom i nadzorom osigurat će se individualna i funkcionalna odgovornost za kontinuirano provođenje okolinske politike i poštivanje od strane poslovnih partnera.

Podružnice i zavisna društva će donijeti svoje okolinske politike, kompatibilne okolinskoj politici Društva.

Predsjednik Nadzornog odbora

Enver Agić
Mr. sci. Enver Agić, dipl. ing. el.

NO - 2087/13-21/5.
Sarajevo, 31.01.2013. godine
Izdanje: br. 3

1. ORGANIZATION STRUCTURE AND RESPONSIBILITIES OF PERSONNEL INVOLVED IN REALIZATION OF WORKS IN THE ENVIRONMENTAL MANAGEMENT DOMAIN

Public enterprise Elektroprivreda BiH d.d. - Sarajevo (hereinafter JP Elektroprivreda BiH), is a power company that performs the following activities: generation, distribution, supply of energy, i.e. first and second order electricity, trading, representation and mediation in the domestic electricity market, export and import of electricity, power system management, as well as other activities determined by statute and entered in the court register.

Business of JP Elektroprivreda BiH is realized within the basic organizational units: Headquarters and company subsidiaries.

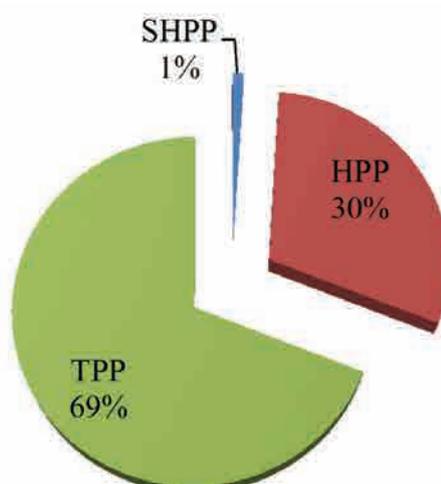
- Headquarters are organized in the Company's headquarters in Sarajevo, to perform common functions for the Company as a whole.

Parts of the Company – branch office are:

- Thermal power plant Tuzla
- Thermal power plant Kakanj
- Hydro power plants on river Neretva
- Elektrodistribucija Sarajevo
- Elektrodistribucija Tuzla
- Elektrodistribucija Zenica
- Elektrodistribucija Bihać
- Elektrodistribucija Mostar.

JP Elektroprivreda BiH has 1,682 MW of installed generating capacity, of which 30% are hydropower plants, 69% thermal power plants and 1% small hydro power plants.

Figure1. Installed generation capacity of JP Elektroprivreda BiH



Organization of activities in the environmental management domain in JP Elektroprivreda BiH is defined and profiled in accordance with the Rulebook on organization.

Department of Environmental Management of the Company Headquarters is an independent organizational unit with the Company Management. Department have five employees, including: Head of the Department, one senior independent professional associate, two independent professional associates and documentation technician. Department is working on the implementation and updating of environmental policy and environmental objectives, coordinating activities with Headquarters' sectors, environmental management departments and other departments in the company's subsidiaries. It develops plans and operational programs, coordinates the preparation of environmental and social impact assessment, audits documentation in the domain of environmental protection, and the establishment and improvement of management systems. It also monitors and guides the implementation of the legal obligations, standards and international obligations in the domain of environmental protection and natural resources management, relating to the business of the Company. It communicates with stakeholders, ministries at all levels of government, the relevant institutions and non-governmental organizations, in terms of protecting the environment and natural resources; participates in organization of public debates about the development of the Company and the environmental and social impact assessment of development projects, and it also participates in the adoption of strategic documents of the Federation of Bosnia and Herzegovina, which are important for the energy sector and the environment; and participates in the work of professional bodies in Bosnia - Herzegovina and at international level, in accordance with professional qualifications and competencies, and interests of JP Elektroprivreda BiH and Bosnia and Herzegovina.

The Register of legislation in the environmental protection domain and natural resources, which is regularly updated, was established within the Department of Environmental Management. In accordance with the obligation of implementation of a number of related legislation on electrical activity, and in some cases the provisions of international legislation relevant for the preparation and decision-making on funding development projects by international financial organizations, the Register of legislation includes acts adopted at all levels of the legislative authorities of Bosnia and Herzegovina, and the activity of the relevant international regulations. Department of Environmental Management reports to the Company Management on the new legislation and the relevant provisions related to the activities of JP Elektroprivreda BiH. The Internet portal of the Company Headquarters includes the updated register of legislation.

Company's branch offices, perform environmental management works within the Department for management systems, which is organizationally located within the Manager's office. In 2012 branch offices TPP Kakanj, TPP Tuzla, ED Sarajevo, ED Bihać, ED Zenica had one senior associate each for jobs of environmental management, and HPPs on river Neretva had two. These jobs were carried out as an additional task to the regular work duties of another position in ED Tuzla, and in ED Mostar activities in the domain of environmental management were performed by associate for operational management. As the position of the head of the department for operational manager was vacant the Manager of ED Mostar was responsible for jobs in the domain of environmental management. Employees report to managers of the sector for management systems for activities and results in the field of environmental management. In addition to the basic task and the expected target of the sector for management systems, employees who manage environmental aspects of activities of subsidiaries are included in the operations and development projects in the field of environmental protection, planning, supervision and monitoring of the environmental aspects and the implementation of legislation, communication with the public and stakeholders.

2. POWER AND THERMAL ENERGY GENERATION

In 2012 JP Elektroprivreda BiH generated electricity at a rate of 6509.0 GWh. Total sales of electricity amounted to 6331.3 GWh. Tariff customers bought 4,380.1 GWh, which fully met their needs, and 1951.2 GWh were sold to non-tariff electricity sales.

Of the total electricity generated, 5,367.8 GWh was generated in thermal power plants, 1086.7 GWh in hydro power plants Jablanica, Grabovica and Salakovac and 54.5 GWh in small distribution hydropower plants (including share of SHPP Bogatići).

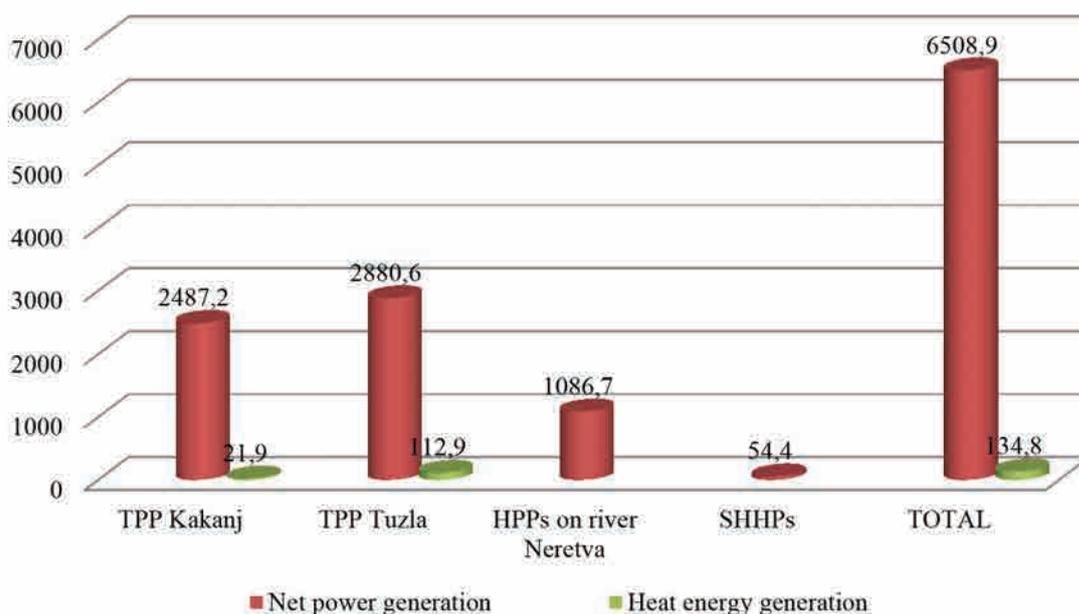
Total purchases of electricity was 335.6 GWh, of which 54.4 GWh was purchased from small hydro power plants owned by independent producers; 4.0 GWh from industrial and solar thermal power plants; 189.5 GWh per the contract on business and technical cooperation; 86.1 GWh on the basis of short-term trade, and 1.7 GWh was purchased on the basis of auxiliary services.

TPP Tuzla and TPP Kakanj generated and transmitted steam and heat energy in amounting to 134.7 GWh.

Operation of the power systems of JP EP BiH in 2012 was characterized by the following facts:

- extremely unfavorable hydrological conditions, given that actual inflows were 19.2% lower than planned, but 22.3% higher than the actual flow in extremely unfavorable 2011;
- higher total purchase of coal compared to the planned balance by 10.9% and 0.7% higher than the procurement in 2011;
- lower total power generation by 2.6% compared to plan and 10.8% less than the actual generation in 2011.

Figure 2: Power and heat energy generation in JP EP BiH in 2012

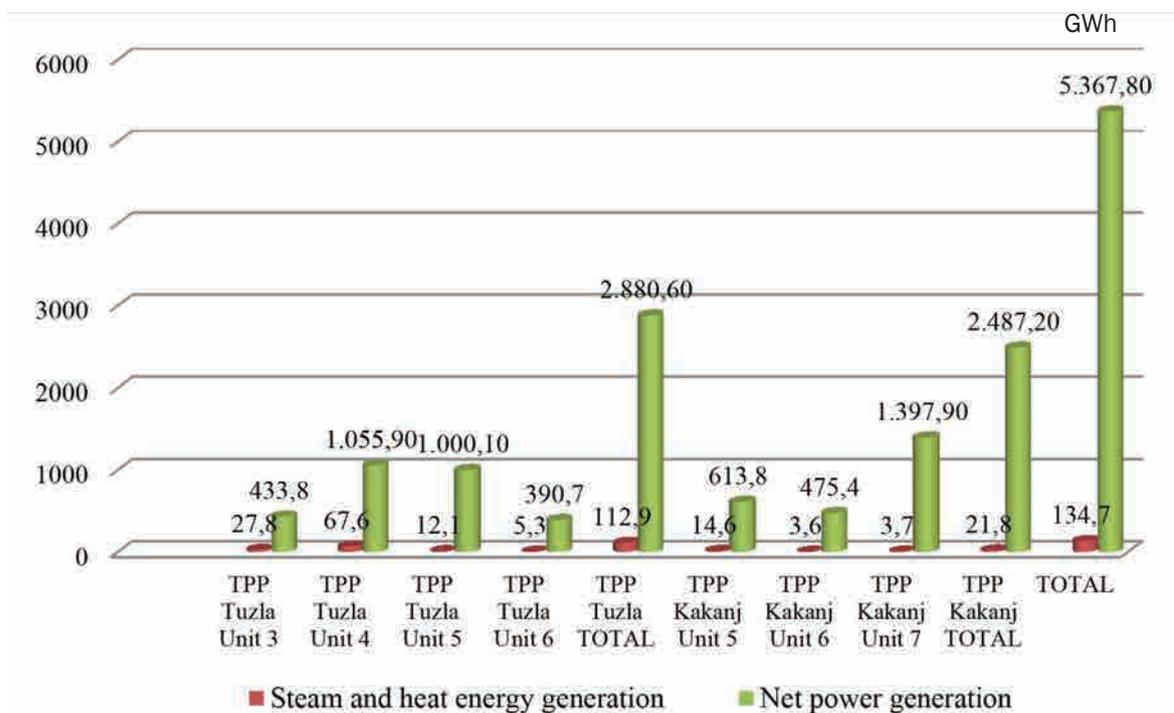


2.1. Thermal power plants

Table 1: Balance of power generation, process steam and heat in 2012 GWh

Plant	Gross power generation	Steam and heat energy generation	Net power generation
TPP Tuzla G3	494.0	27.8	433.8
TPP Tuzla G4	1185.8	67.6	1055.9
TPP Tuzla G5	1112.5	12.1	1000.1
TPP Tuzla G6	427.2	5.3	390.7
TPP Tuzla	3219.4	112.9	2880.6
TPP Kakanj G5	684.0	14.6	613.8
TPP Kakanj G6	530.4	3.6	475.4
TPP Kakanj G7	1,579.7	3.7	1397.9
TPP Kakanj	2794.1	21.8	2487.2
TOTAL	6013.5	134.7	5,367.8

Figure 3: Balance of net power generation, process steam and heat energy generation GWh

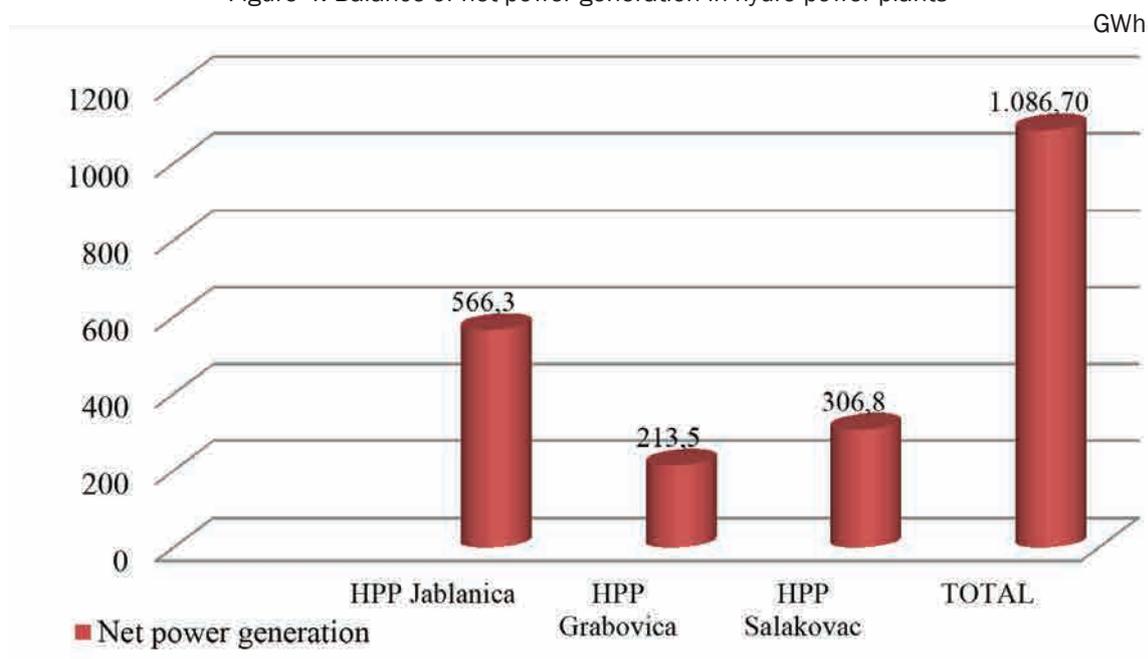


2.2. Hydro power plants on river Neretva

Table 2: Balance of power generation in hydro power plants

Plant	Gross power generation	Net power generation
HPP Jablanica	571.3	566.3
HPP Grabovica	216.1	213.5
HPP Salakovac	311.9	306.8
TOTAL	1099.4	1086.7

Figure 4: Balance of net power generation in hydro power plants

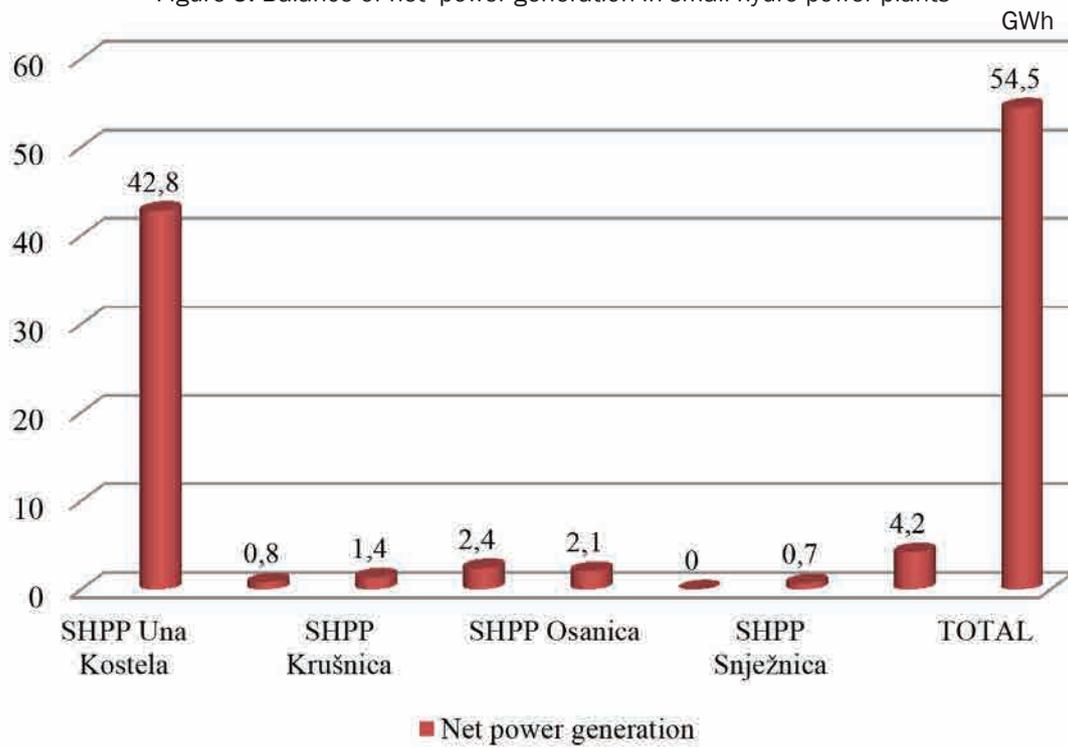


2.3. Small hydro power plants in the power distribution

Table 3: Balance of power generation in small hydro power plants

Small hydro power plants	Net power generation
Unna Costilla	42.8
Bihar	0.8
Krušnica	1.4
Modrac	2.4
Osanica	2.1
Hrid	0
Snježnica	0.7
Bogatići	4.2
TOTAL	54.5

Figure 5: Balance of net power generation in small hydro power plants



3. INDICATORS OF ENVIRONMENTAL IMPACT AND PROTECTION MEASURES

3.1. Thermal power plants

3.1.1 Air pollutants emissions

In accordance with the provisions of the Rulebook on the monitoring of air pollutants emissions and environmental permits for thermal power plants of JP Elektroprivreda BiH, the continuous monitoring system for emissions into the air is in operation. Generation sector of the Company Headquarters performs the balancing of emissions for CO₂, SO₂ and NO_x, which are generated by burning coal and liquid fuels to power and heat energy generated.

Thus, the total annual emissions into air from thermal power plants are the result of: indicators of continuous monitoring systems and calculation of CO₂, SO₂ and NO_x. The calculation is based on internationally recognized methodology EMEP - CORINAIR.

Table 4: Balance of consumption of coal, liquid fuel and air emissions for controlled parameters

Hours of operation for units	Total consumption of coal	Total consumption of liquid fuel	CO ₂	SO ₂	NO _x	Solid particles
h	10 ³ t	t	t	t	t	t
TPP Tuzla						
22,316	3,392.3	2662.1	3708245	43,728	4,712	2,139
TPP Kakanj						
19,608	2,198.7	1261.3	2788575	84,446	8,978	820
TOTAL			6496820	128 174	13.690	2,959

Figure 6: Indicators of hours of operation of units, total consumption of coal and liquid fuels in TPP Tuzla and TPP Kakanj

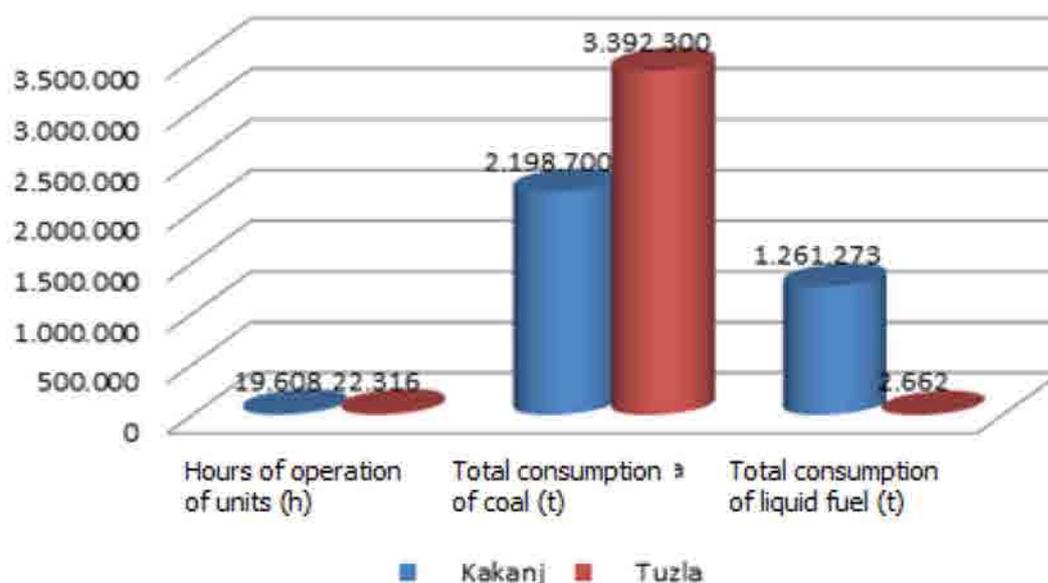
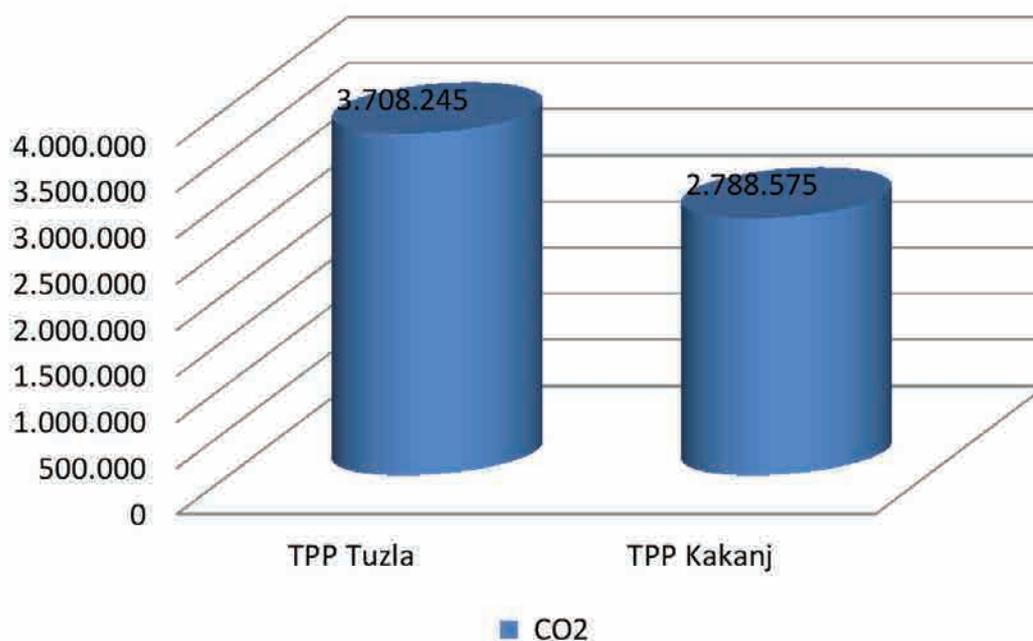
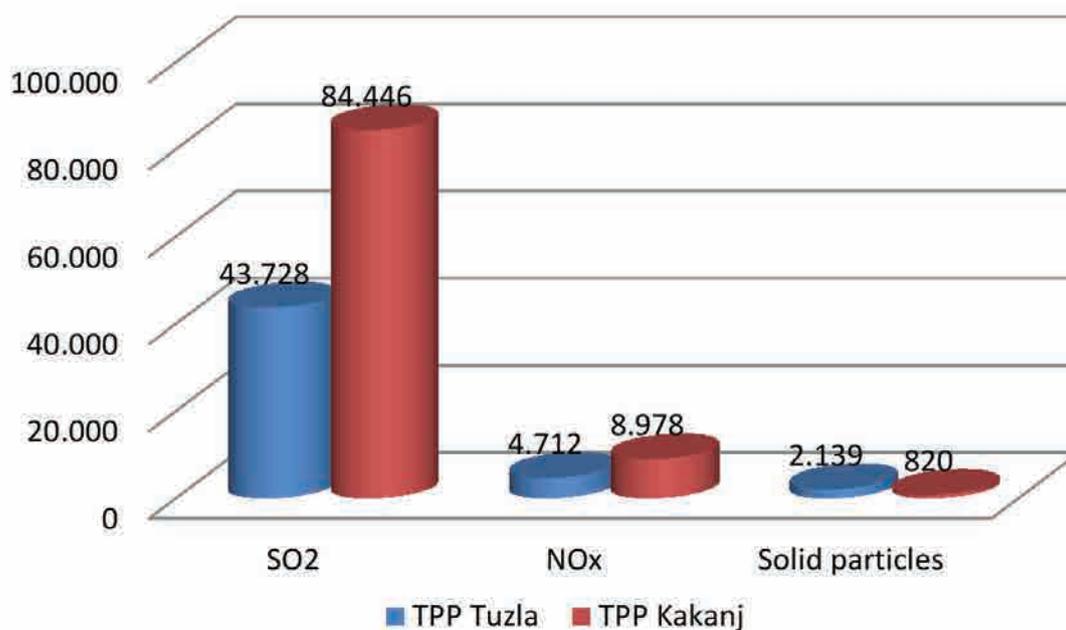


Figure 7: Indicators of CO₂ emissions into the air from TPP Tuzla and TPP KakanjFigure 8: Indicators of emissions of SO₂, NO_x and solid particles into the air from TPP Tuzla and TPP Kakanj

The reconstruction project for Unit 6 in TPP Kakanj, included the reconstruction of electrostatic precipitators, which significantly reduced the emissions of solid particles. Prior to the reconstruction the specific emissions of solid particles were 3.1 t/GWh, and after the reconstruction to 0,009 t/GWh.

We may conclude that the total emissions into the air from TPP Tuzla in 2012, compared to 2011, was also reduced due to delays during the revitalization of Unit 6, i.e. smaller scale of generation.

3.1.2 Water use and wastewater discharge

Table 5: Balance of use of waste water in power and heat energy generation and EBS

Thermal power plant	Total used amount of water	Total discharged amount of water	EBS
	m ³	m ³	
TPP Tuzla	14752480	3721334	793 129
TPP Kakanj	11095920	4553776	10,672

TPP Kakanj treated 4,584,603 m³ of waste water in water treatment facilities.

3.1.3. Consumption of chemicals for water treatment

Table 6: Balance of consumption of chemicals for water treatment

Thermal power plant	Name of the chemical	Quantity
	Hydrated lime	1537.8
	Hydrochloric acid	614.4
	Soda lye	681.3
	Iron (III) sulfate	242.8
	Nalco n-72 310	0.2
	Sodium chloride	85.5
	SODIUM	2.0
TPP Tuzla	Levoxine 15	8.4
	Trisodium phosphate	2.5
	Nalco n - 3DT 149	16.7
	Nalco n - 3 dt 199	1.2
	Nalco n - 3434	0.4
	Nalco phree 5200	40.6
	Nalco 1700	0.3
	Potassium hydroxide	0.2
TPP Kakanj	Whitewash	1163.0
	Fericsulfate	35.9
	Sodium hypochlorite	25.2
	Nalco N 7359	37.2
	Nalco N-3DT149	25.9
	Nalco 71,221	43.3
	Nalco 71605	2.6
	Hydrochloric acid	362.6
	NaOH	92.7
	Levoxine (hydrazine)	7.4

3.1.4. Noise and vibration emissions

Both power plants measured the noise level, which is an indicator of the potential impact of the facilities to the ambient noise.

Thermal power plant "Tuzla"

Mining Institute d.d. Tuzla performed the testing of comfort conditions in working environment in "TPP Tuzla". Measurement of the noise level was done in winter and in summer, and in the working and auxiliary spaces. On most jobs noise level is within the tolerable limits, and where it is slightly increased employees use appropriate legally prescribed protection.

Thermal power plant "Kakanj"

In 2012 measurements were conducted for noise emissions and vibrations from external coal transport systems. Measurements showed the absence of excessive vibrations caused by operation of the system. The measuring of noise emissions showed that the permitted noise emission values of the external coal transport were exceeded in the part of the transport system in village Čatići. The main project for the reduction of noise from the external coal transport system was developed in accordance with the obligation to ensure the maximum noise emissions within the limits established by the Law on Noise Protection of Federation of BiH.

3.1.5. Indicators for radioactivity monitoring

In accordance with the "Rulebook on maximum limits of radioactive contamination of the environment and performing decontamination" (Official Gazette of SFRY, 8/87, Official Gazette of RBH 2/92) for TPP Kakanj and TPP Tuzla we realized annual monitoring of radioactivity levels in the generation process and the nearby surroundings of the Thermal Power Plants.

Monitoring consisted of the checking of the level of radionuclides for coal used to produce electricity in the location near the plant for generation of electricity, within the plant, in front of and behind the power plant and at the slag and ash deposit site.

Measurements of radioactivity of slag and ash at landfill and in the generation process, i.e. ash from electrostatic precipitators and slag from the slag deposit site were also performed. Results of gama-spectrometer sample analysis confirmed that the levels of natural and artificial radionuclides do not exceed the established maximum allowed value.

Measurements of natural radionuclides in coal used in the generation process in TPP Kakanj found that, unlike others, the coal from coal mine Tušnica has significantly elevated content of natural radionuclides, particularly uranium-235 and thorium-232. In accordance with the findings the Report on the measurements indicated that the share of this coal may not increase in the generation process of TPP Kakanj.

Research and measurements were done by experts of the Veterinary Faculty in Sarajevo, Laboratory for radioactivity control, and they released the following certificates given below:

- Certificate of the results of measurements of gama-spectrometer samples of slag and ash from the landfill DIVKOVIĆI II and Jezero II for TPP,
- Certificate of the results of measurements of gama-spectrometer samples of slag and ash from the landfill for slag and ash and electric precipitator of the TPP Tuzla,
- Certification of the results of measurements gama-spectrometer samples of ash from electrostatic, slag ground slag, ash and slag landfill TPP Kakanj.

BOSNA I HERCEGOVINA
 FEDERACIJA BOSNE I HERCEGOVINE
 VETERINARSKI FAKULTET SARAJEVO
 VETERINARSKI INSTITUT
 CENTAR ZA KONTROLU ŽIVEŽNIH NAMIRNICA,
 STOČNE HRANE I ZAŠTITU ŽIVOTNE OKOLINE
 LABORATORIJ ZA KONTROLU RADIOAKTIVNOSTI
 Sarajevo, Zmaja od Bosne 90

JP ELEKTROPRIVREDA BIH d.d. SARAJEVO
 Podružnica TERMOELEKTRANA "TUZLA" TUZLA
 21. aprila br. 4
 75203 BUKINJE, TUZLA

CERTIFIKAT NA RADIOAKTIVNOST

Dostavljamo Vam rezultate gamaspektrometrijskih mjerenja uzoraka pepela i šljake sa deponije Divkovići II i Jezero II a na osnovu Ugovora broj: 166-TTZ/12 od 18.07.2012. godine te utvrđenih zadataka datih u ponudi broj: 21-05-1/12 od 21.05.2012. g. a prema Tehničkom opisu br. 08-303/0003/12 od 12.03.2012.g. za usluge "Mjerenje radioaktivnosti u procesu proizvodnje i u bližoj okolini TE TUZLA".

Radio-nuklid	Aktivnost (Bq/kg)		Pravilnikom maksimalno dozvoljene aktivnosti
	PEPEO + ŠLJAKA DIVKOVIĆI II	PEPEO + ŠLJAKA JEZERO II	
Ra-226	44.74 ± 5.74	45.38 ± 4.47	400
Th-232	34.42 ± 5.06	39.95 ± 5.15	300
K-40	289.10 ± 34.90	359.20 ± 33.20	5000
Cs-134	< 0.35	< 0.35	Ukupno umjetnih radionuklida 4000
Cs-137	< 0.20	< 0.20	

Mišljenje:

Na osnovu izvršene gamaspektrometrijske analize i Pravilnika o maksimalnim granicama radioaktivne kontaminacije čovjekove sredine i o obavljanju dekontaminacije, (Sl.L.SFRJ 8/87, Službeni list RBiH 2/92) utvrđeni nivoi prirodnih i umjetnih radionuklida u uzorcima pepela i šljake **ne prelaze** utvrđene maksimalno dozvoljene vrijednosti.

Rukovodilac Odjeljenja



(Prof. dr. Lejla Saračević)

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**BOSNA I HERCEGOVINA
FEDERACIJA BOSNE I HERCEGOVINE
VETERINARSKI FAKULTET SARAJEVO
VETERINARSKI INSTITUT
CENTAR ZA KONTROLU ŽIVEŽNIH NAMIRNICA,
STOČNE HRANE I ZAŠTITU ŽIVOTNE OKOLINE
LABORATORIJ ZA KONTROLU RADIOAKTIVNOSTI
Sarajevo, Zmaja od Bosne 90**

**JP ELEKTROPRIVREDA BIH d.d. SARAJEVO
Podružnica TERMOELEKTRANA "TUZLA" TUZLA
21. aprila br. 4
75203 BUKINJE, TUZLA**

CERTIFIKAT NA RADIOAKTIVNOST

Dostavljamo Vam rezultate gamaspektrometrijskih mjerenja uzoraka pepela iz elektrofiltera i šljake iz šljachišta na osnovu Ugovora broj: 166-TTZ/12 od 18.07.2012. godine te utvrđenih zadataka datih u ponudi broj: 21-05-1/12 od 21.05.2012. g. a prema Tehničkom opisu br. 08-303/0003/12 od 12.03.2012.g. za usluge "Mjerenje radioaktivnosti u procesu proizvodnje i u bližoj okolini TE TUZLA".

Radio-nuklid	Aktivnost (Bq/kg)		
	PEPEO iz elektrofiltera	ŠLJAKA iz šljachišta	Pravilnikom maksimalno dozvoljene aktivnosti
Ra-226	61.13 ± 9.40	35.71 ± 3.16	400
Th-232	38.00 ± 5.70	27.67 ± 3.93	300
K-40	315.04 ± 40.19	229.02 ± 25.02	5000
Cs-134	< 0.35	< 0.35	Ukupno umjetnih radionuklida 4000
Cs-137	< 0.20	< 0.20	

Mišljenje:

Na osnovu izvršene gamaspektrometrijske analize i Pravilnika o maksimalnim granicama radioaktivne kontaminacije čovjekove sredine i o obavljanju dekontaminacije, (Sl.I.SFRJ 8/87, Službeni list RBiH 2/92) utvrđeni nivoi prirodnih i umjetnih radionuklida u uzorcima pepela i šljake **ne prelaze** utvrđene maksimalno dozvoljene vrijednosti.

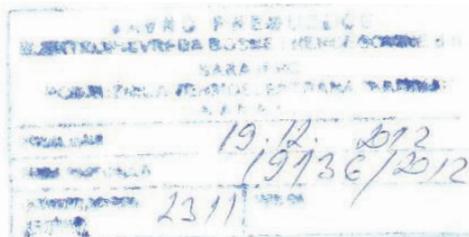
Rukovodilac Odjeljenja



(Prof. dr. Lejla Saračević)

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BOSNA I HERCEGOVINA
 FEDERACIJA BOSNE I HERCEGOVINE
 VETERINARSKI FAKULTET SARAJEVO
 VETERINARSKI INSTITUT
 CENTAR ZA KONTROLU ŽIVEŽNIH NAMIRNICA,
 STOČNE HRANE I ZAŠTITU ŽIVOTNE SREDINE
 LABORATORIJ ZA KONTROLU RADIOAKTIVNOSTI
 Sarajevo, Zmaja od Bosne 90



JP ELEKTROPRIVREDA BIH d.d. SARAJEVO
 Podružnica TERMOELEKTRANA "KAKANJ"
 K A K A N J



CERTIFIKAT NA RADIOAKTIVNOST

Dostavljamo Vam rezultate gamaspektrometrijskih mjerenja uzoraka pepela iz elektrofiltera, šljake iz šljačišta i pepela i šljake sa deponije, a na osnovu Ugovora broj: 135-TK/12 od 13.06.2012. godine te utvrđenih zadataka datih u Specifikaciji broj: 01/12 od 27.02.2012. godine za usluge "Mjerenje radioaktivnosti u procesu proizvodnje i bližoj okolini TE KAKANJ".

Radio-nuklid	Aktivnost (Bq/kg)			Pravilnikom maksimalno dozvoljene aktivnosti
	PEPEO iz elektrofiltera	ŠLJAKA iz šljačišta	DEPONIJA	
Ra-226	156.38 ± 4.67	90.53 ± 2.48	121.63 ± 3.05	400
Th-232	51.35 ± 4.63	42.60 ± 3.19	44.13 ± 3.96	300
K-40	419.54 ± 32.27	279.05 ± 19.54	327.25 ± 20.18	5000
Cs-134	< 0.35	< 0.35	< 0.35	Ukupno umjetnih radionuklida 4000
Cs-137	< 0.20	< 0.20	< 0.20	

Mišljenje:

Na osnovu izvršene gamaspektrometrijske analize i Pravilnika o maksimalnim granicama radioaktivne kontaminacije čovjekove sredine i o obavljanju dekontaminacije, (Sl.I.SFRJ 8/87, Službeni list RBiH 2/92) utvrđeni nivoi prirodnih i umjetnih radionuklida u uzorcima pepela i šljake **ne prelaze** utvrđene maksimalno dozvoljene vrijednosti.

Rukovodilac Odjeljenja
 (Prof. dr Lejla Saračević)

3.1.6. Control of coal quality

Control of the quality and quantity acceptance of coal and development of chemical analysis of weighted coal samples for TPP Tuzla and TPP Kakanj is continuous. Control covers all quantities of coal specified by locations and the assortments in the purchase contracts signed between Elektroprivreda BiH and suppliers of coal. Quantity and average calorific values of coal were determined through annual, monthly and daily dynamics. Control points are at receiving and takeover points in the coal mines and Thermal Power Plants, which are defined by organizational schemes. Determining the quality and quantity of coal, as well as an overview of purity and proper operation of means of transport is carried out continuously on the days of supply of coal, including Saturdays and Sundays.

Control of coal is realized in accordance with the standards BAS EN, ISO/IEC 17025, BAS EN ISO/IEC 17020, ASTM, and the provisions of the purchase contracts between JP Elektroprivreda BiH and suppliers of coal, and in particular the agreed Instructions on the quantitative and qualitative control of coal.

The following control measures are performed according to the agreed technical requirements for qualitative and quantitative control:

- Check of purity of cars and trucks before loading,
- Weighing check,
- Determining the assortment of coal,
- Visual evaluation of coal quality in terms of granules, humidity, purity of assortment, waste and other physical properties of coal,
- Coal sampling and processing of samples per lot,
- Analysis of samples for moisture, ash, sulfur and heat value using calorimeters for every 300 tons of supplied coal, elemental analysis of coal was also performed upon request of Elektroprivreda BiH.
- Super-analysis, when results deviate from the agreed value,
- Submission of documents for performed control, daily specifications, monthly certificates for coal analysis results, tables containing final calorific values,
- Storage of samples for super analyzes,
- Preparation and storage of weighted samples.

Data processing is done at the computer center, in order to obtain a better picture of the conducted control of coal from all suppliers and assortments, and it is delivered to the JP Elektroprivreda BiH Headquarters and Thermal Power Plants. The report contains the daily, monthly and annual ballast in coal shown in tables and a single diagram.

Chemical analysis of weighted coal samples for TPP Tuzla and TPP Kakanj

Chemical analysis was performed for 36 samples of weighted coal samples for TPP Tuzla and TPP Kakanj, of which 20 weighted coal samples for TPP Tuzla and 16 weighted coal samples for TPP Kakanj according to the given specifications. Analysis of the weighted samples is done every six months (2x18, or 2x10 for TPP Tuzla and 2x8 for TPP Kakanj).

Chemical analysis of each weighted sample includes the following:

- Technical, immediate and elemental analysis of coal:

Parameter	Units	Method
• Rough humidity	% M /m	ASTM D 3302
• Hygro humidity	% M /m	ASTM D 3173
• Total moisture	% M /m	ASTM D 3302

• Ash	% M /m	ISO 1171
• Volatile matter		ISO 562
• Combustible materials	% M /m	INS 8061030
• Coke	% M /m	INS 8061031
• C fix	% M /m	INS 8061031
• Total carbon	% M /m	ISO 609
• Hydrogen	% M /m	ISO 609
• Nitrogen	% M /m	JUS.B.H8. 320
• Oxygen	% M /m	ISO 1994
• Upper calorific value,	kJ / kg	ISO 1928
• Lower calorific value	kJ / kg	ISO 1928
• Total sulfur	% M /m	ASTM D 3177
• Sulfur in the ash	% M /m	INS 8061060 *
• Combustible Sulfur	% M /m	ASTM D 1757

- Chemical analysis of ash:

• SiO ₂ content	% M / m	BAS 1009
• Fe ₂ O ₃ content	% M / m	BAS 1011
• Al ₂ O ₃ content	% M / m	BAS 1013
• CaO content	% M / m	BAS 1014
• MgO content	% M / m	BAS 1015
• SO ₃ content	% M / m	BAS 1018
• TiO ₂ content	% M / m	BAS 1012
• Na ₂ O content	% M / m	BAS 1017
• K ₂ O content	% M / m	BAS 1017
• P ₂ O ₅ content	% M / m	

- Determination of the characteristic melting temperatures for ash:

• Start of sintering	°C	ASTM D 1857
• Softening point	°C	ASTM D 1857
• Semi-hemisphere point	°C	ASTM D 1857
• Spilling point	°C	ASTM D 1857

Quality control of coal is done by a qualified company Inspekt RHG, which has an accredited laboratory (EN ISO / IEC 17025) for testing of coal.



3.1.7. Waste Management

Quantity of generated waste and temporarily deposited waste in storages of TPP Tuzla and TPP Kakanj and waste supplied for recycling or final disposal to authorized companies for waste materials/waste management are given in the following tables.

Table 7: Generated, temporarily deposited and supplied non-hazardous waste

Key number	Type of waste	The total quantity currently in stock/t	Supplied through contracts/t
17 04 05	Iron	1. 570.00	1487.14
20 01 01	Waste paper	15.00	4.18
17 04 02	Aluminum scrap	4.20	3.02
17 04 01	Scrap copper	1.30	-
17 04 01	Scrap brass	1	-
20 01 36	Copper cables, insulated	3.10	27.89
17 04 05	Hammers	60.00	-
17 04 05	Steel	2.50	-
20 01 38	Waste planks	80.00	-
16 01 03	Tires	20.00	-
20 01 36	Electric motors	30.00	-
17 04 05	Boiler tubes	127.00	105.32
17 04 01	Scrap copper cables with lead insulation	-	18.74
15 01 02	Plastic containers of 100 l	-	4.00
17 02 03	Plastic	-	55.20
19 08 05	Sludge water from the bio-rotor/treatment of urban waste water - TPP Tuzla	-	48.00
19 08 09	A mixture of edible fats and oils from kitchen grease - TPP Tuzla	-	12.00
10 01 25	Liquid wastes from waste water reservoirs and canals around the coal depots - TPP Tuzla	-	170.00
TOTAL		1914.10	1935.49

Table 8: Generated, temporarily deposited and shipped hazardous waste

Key number	Type of waste	The total quantity currently in stock/t	Supplied through contracts/t
15 02 02 *	Absorbents, filter materials, absorbing materials	0.70	2.91
20 01 35 *	Discarded electrical and electronic equipment	0.22	0.30
16 01 07 *	Oil filters and air filters	0.23	0.03
20 01 21 *	Fluorescent tubes and waste containing mercury	0.15	0.42
08 03 17 *	Waste printing toner - TPP Kakanj	0.07	0.06
13 05 07 *	Sludge from oil separators - TPP Tuzla	-	77.00
13 08 99 *	Sludge and sediment from underground reservoirs - TPP Kakanj	-	2.80
17 06 05 *	Construction waste containing asbestos - TPP Kakanj	50.00	-
13 05 06 *	Oil and water (mix)	0.48	0.72
13 01 10 *	Non-chlorinated hydraulic oils	0.37	0.79
20 01 33 *	Batteries	0.30	7.64
13 02 08 *	Turbine oil	0.83	6.32
13 02 06 *	Synthetic oil for drive devices and lubrication		0.35
13 02 05 *	Waste oil and category I		50.50
16 02 13 *	Voltage metering transformer	3.75	-
TOTAL		57.10	149.84

- Combustion products disposed of in a landfill for slag and ash

Table 9: Slag and ash

Key number	Type of waste	Quantity of deposited slag and ash/t	Total quantity Supplied for use / t
	TPP Kakanj		
10 01 01	Slag from grates in furnaces, slag and boiler dust (excluding boiler dust mentioned in 10 01 04)	197 948	88,170
10 01 02	Fly ash from coal combustion	413 524	133 832
	TPP Tuzla		
10 01 01	Slag from grates in furnaces, slag and boiler dust (excluding boiler dust mentioned in 10 01 04)	617 833	-
10 01 02	Fly ash from coal combustion	-	113 978
TOTAL		1229305	335 980

Table 10: Generated non-hazardous waste disposed of at the landfill for slag and ash of TPP Kakanj

Key number	Type of waste	Total quantity deposited at slag and ash landfill/t
10 01 01	Slag and ash from cleaning	856.00
10 01 01	Waste slag from the plant for wastewater treatment	603.00
17 01 07	Construction waste from demolition of buildings	2.82
17 09 04	Mixed construction waste from demolition of buildings	1.30
17 05 06	Land excavations	1.26
19 08 05	Sludge from the preparation and treatment of wastewater	5.81
TOTAL		1470.19



In order to realize the request of the Federal Ministry of Environment and Tourism TPP Tuzla hired a consultancy company ENOVA for the development of waste management plan, with a solution for the permanent disposal of asbestos-containing waste.

3.2. Hydro power plants on river Neretva

3.2.1. Using water - hydro-energy for power generation

Table 11: Water quantity used in hydro power plants on river Neretva.

Plant	Used quantity of water/m ³
HPP Jablanica	2,384,227,344
HPP Grabovica	2,731,827,452
HPP Salakovac	3,131,093,967
TOTAL	8,247,148,763



3.2.2. Wastewaters

Monitoring of wastewaters prior to discharging into the public sewerage system or any other receiver in all plants was developed. Monitoring was done by "Dvokut" Sarajevo and it was concluded that the quality of waste water from HPP Jablanica and HPP Salakovac meet the prescribed maximum permissible concentrations of the controlled components. Quality of wastewater from HPP Grabovica coming from the device for treatment of waste water on the left bank of the Neretva River is not within the legal limits, due to increased concentrations of suspended solids, HPK and BPK5, and increased concentrations of total ammonia nitrogen and phosphorus. The cause of these results is breakdown of the treatment plant for treatment of sanitation - sewage, which will be repaired at the beginning of 2013.

3.2.3. Waste Management

According to the Plan for 2012 the storages of the HPPs on river Neretva selected the waste and temporarily deposited it until it was supplied to authorized operators of waste management, with which contracts were signed. Updated list of types and quantities of generated waste are given in the following tables.

Table 12: Generated, temporarily deposited and delivered non-hazardous waste

Key number	Type of waste	Total quantity currently in storage/ t	Supplied according to contracts/t
16 01 03	Waste tires	0.32	-
17 01 03	Insulators that do not contain oil	0.20	8.55
17 04 01	Scrap copper of various sizes	1.10	-
17 04 05	Waste iron of various sizes > 5mm	12.38	4.14
17 04 05	Waste iron of various sizes - sheet <5mm	1.03	10.20
17 04 05	Scrap steel cable	0.14	2.53
17 04 05	Iron chips	0.20	-
17 04 11	Scrap copper cables with insulation (power)	0.28	0.23
17 04 11	Scrap copper cables with lead insulation	0.08	1.10
17 04 11	Waste command and control multiple strand copper cables, insulated	-	0.16
17 04 11	Waste telecommunications cable	-	0.05
17 04 11	Waste insulated Al cables	-	0.38
17 04 11	Al-Fe rope with screws and clamps	-	0.80
20 01 01	Waste paper	0.05	-
20 01 02	Waste glass	0.40	-
20 01 39	Waste plastics (rubber)	0.10	-
TOTAL		16.28	28.14

Table 13: Generated and temporarily deposited communal waste, and collected and supplied floating debris accumulated along the dam

Key number	Type of waste	Total quantity currently in storage/ t	Supplied according to contracts/t
20 01 03	Mixed communal waste - bulky waste		
	HPP Jablanica	-	154
	HPP Grabovica	-	32
	HPP Salakovac	-	22
20 01 03	Mixed waste - floating debris from reservoirs		
	HPP Jablanica	-	21
	HPP Grabovica	-	306
	HPP Salakovac	-	-
TOTAL		-	535



Table 14: Generated, temporarily deposited and supplied hazardous waste

Key number	Type of waste	Total quantity currently in storage/ t	Supplied according to contracts/t
08 01 11 *	Waste paint and varnish containing organic solvents or other dangerous substances	-	0.23
08 03 17 *	Waste printing toner containing dangerous substances	0.01	0.07
11 01 13 *	Degreaser	0.06	0.45
13 01 10 *	Non-chlorinated hydraulic oil based on mineral oil (turbine oil)	-	8.26
13 02 05 *	Non-chlorinated engine oils and gear lubricating oils (gear oil)	0.02	-
13 03 07 *	Non-chlorinated insulating oils and heat transfer oils based on mineral oil (transformer oil)	-	2.10
13 05 07 *	Oily water	6.61	2.25
14 06 03 *	Other solvents and solvent mixtures	-	0.01
15 01 10 *	Packaging containing residues of hazardous substances or contaminated by hazardous substances (oily, paint and varnish, etc.).	-	0.01
15 02 02 *	Absorbents, filter materials (including oil filters not otherwise specified), cloth and wiping cloths and protective clothing contaminated by dangerous substances	0.55	1.23
16 01 21 *	Sewage pumps containing oil	-	3.28
16 02 13 *	Discarded equipment containing hazardous components	-	4.98
16 05 07 *	Discarded inorganic chemicals consisting of or containing dangerous substances	-	0.08
16 06 01 *	Lead-acid batteries and accumulators	0.06	-
16 06 02 *	Nickel - cadmium batteries (Ni-Cd)	0.01	0.02
17 06 05 *	Construction materials containing asbestos (asbestos - wavy)	-	5.55
20 01 21 *	Fluorescent tubes and other mercury-containing waste	0.06	0.18
20 01 23 *	Discarded equipment containing fluorine Chlorocarbon Hydrogens	-	0.04
20 01 35 *	Discarded electrical and electronic equipment	1.27	0.45
TOTAL		8.65	29.19

3.2.4. Maintenance of the aerial transmission line routes

In order to protect and secure transmission lines, people, property, flora and fauna a zone/route is established and regularly maintained. Access roads are also maintained in case of faults on transmission lines, and the regular cutting of tree branches and clearing is done on the transmission lines route 35 kV Jablanica - Jablanica dam, in span of 1,385 m and transmission line 35 kV HPP Grabovica – HPP Salakovac, in span of 830 meters and width of 6 m .Thus, a total of 13,290 m² was cleared of vegetation and waste materials.

3.2.5. Afforestation

In order to prevent infilling of the reservoir of HPP Jablanica and activation of landslides in the area, and reservoir, we realized the planned annual afforestation with seedlings of black pine (*Pinus nigra*) 2+0 or 3 +0 (2,000) and acacia (*Robinia pseudoacacia*) 2 +0 or 3 +0 (5,000 pieces). This action is in accordance with the "Study of protection of HPP Jablanica reservoir, with measures to prevent filling of the reservoir and activation of landslides."

3.2.6. Fish stoking

In order to solve the fundamental question of continuous stocking of fishing areas, i.e. establish the fishing documents with plans for fish stoking, and to protect natural regeneration of fish populations and the ecological balance of river Neretva ecosystem agreements/contracts were signed and implemented in April 2012 with goal to improve fish stocks in the Neretva river basin with each of the four associations that have fishing rights in the fishing zones, which are affected by the hydropower facilities of JP Elektroprivreda BiH.

Regular annual fish stocking in river Neretva in 2012 was not realized because the fishing documents, i.e. Plans for restocking of fishing zones in the Neretva river basin were submitted late by two users with fishing rights, and two users failed to submit restocking plans in accordance with the Law on Freshwater Fisheries. Objective circumstances and difficult communication with the associations that have fishing rights for fishing areas, within which three hydro-power facilities are managed by JP Elektroprivreda BiH, were the reason for the late start of activities for the purchase of fingerlings for restocking of fish in the Neretva river basin. According to the submitted fishing documents fishing area of Jablanica, where fishing rights are held by the association Glavatica and fishing area of Konjic, where fishing rights are held by association Konjic, tenders were opened for the purchase of fingerlings for restocking of these fishing zones. Due to appeal of one of the suppliers of fingerlings submitted to the competent agency for the procurement procedure for restocking of fishing area Jablanica, the procedure for selection of suppliers of fingerlings continued in 2013. Tender was published for the restocking of fishing area Konjic, but no bidder met the requirements of the tender, and thus it will be repeated in 2013, after the expiry of the period for appeals.

Fishing documents were not provided by users of fishing rights, associations of sport fishermen from Mostar – association "Neretva 1933" and from the area Prozor-Rama – association "Rama"

3.3. Power Distribution

3.3.1. "Elektro distribucija» Sarajevo

Waste Management

Branch office "Elektro distribucija» Sarajevo has a workshop for transformers repair on location Azići - Ilidža. During the normal process of repair and maintenance of substations and transformers, in the territory of Canton Sarajevo and Bosnian-Podrinje Canton in 2012 2.3% lower quantities of transformer oil were used compared to year 2011. Non-chlorinated insulating oils and heat transfer oils based on mineral oil were used in both cantons, and consequently smaller quantities of waste oil were generated.

All activities in the field of waste management are in accordance with the provisions of the Law on Waste Management and its sub laws. Waste Management Plan is regularly updated and submitted to the Environmental Management Department of the Company Headquarters, as well as the Annual Waste Management Report. Reports at the request of the Institute of Statistics are also regularly submitted.

In 2010 the main project was developed for creation of storage for hazardous and non-hazardous materials on the site of an open warehouse Azići and on February 6th 2012 application for an urban planning permit was submitted to the Municipality Ilidža. Consent was not granted because it lacked a preliminary water approval from the Agency for the Sava River Basin, Sarajevo. The main project was lacking in the area of water management, and project documentation was not developed by a legal person authorized to prepare documentation for less complex water facilities or activities. Project task to start the selection procedure of an authorized legal person for the warehouse construction project to build a warehouse for temporary storage in Azići was completed.

Selection procedure for bidders was initiated three times for the permanent disposal of decommissioned computer equipment. Procedure was canceled twice because no tenderers met the requirements of the tender because bidders failed to provide "Statement on submission of the original certificate from the competent authority of the third country on the permanent disposal of parts of computer equipment which are classified as hazardous waste" at least 12 (twelve) months from the date of takeover of decommissioned computer equipment. Therefore third process was started on December 17th 2012.

All quantities of waste material generated in 2012 were taken over by authorized waste management operators, Trgosirovina d.o.o. Sarajevo and Valbih d.o.o. Konjic, with whom JP Elektroprivreda BiH signed contracts.

Measures to mitigate negative impacts on the environment

One of the measures carried out continuously in order to mitigate negative impacts on the environment is fish stocking in the river Osanica in Goražde, where SHPP "Osanica 1" is located, and the river Željeznica due to reservoir of the SHPP Bogatići. Since there is a free flow of water and fish migration in the river profile at the dam Bogatići due to works on landslide stabilization, restocking was not done in 2012.

Annual fish stocking is done on the basis of the Agreement on the improvement of fish stocks in river

Osanica and the Plan for restocking of fishing areas in Bosnian Podrinje - Canton, which was signed with the Association of fishermen Goražde.

Cleaning of the riverbed of river Osanica and maintaining of the water catchment was performed, and floating waste brought by water to the coarse and fine grid on the water catchment area (21 kg) is in the category of municipal waste and it is disposed of by the staff of organizational units PJD Goražde. River deposits (700 m³) in the sand trap of the intake structure are taken care of by engagement of a third party through investment maintenance of the facility.

Revitalization of the SHPP "Osanica 1" for improvement in terms of reducing any negative impact on the environment is envisaged in the long-term plan, depending on the situation. The fact is that in 2012 there were no observed negative consequences for the environment.

Other objects, primarily transformer substations near water protection areas, are regularly monitored, and any technical malfunction, which could lead to negative impacts on the environment, is immediately eliminated.

3.3.2. "Elektrodistribucija" Tuzla

Waste Management

According to developed and adopted the Waste management plan and in accordance with the provisions of law, sub laws and regulations in this field, which is regularly updated, waste and recyclables are continuously managed. Selective collection of waste materials is performed and they are sent for recycling and final disposal by licensed operators, with whom contracts were signed in accordance with regulations and internal regulations of the JP Elektroprivreda BiH. In 2012 adequate containers were procured for selective collection of various types of waste and deployed in business facilities of the branch office, in order to enable efficient and safe environment for temporary storage of waste, especially waste which has characteristics of hazardous waste.

Measures to mitigate negative impacts on the environment

One of the measures to mitigate the negative impact on the environment is regular participation in restocking of the Brzava river basin. This is done in proportion to the damage inflicted to the balance of the ecosystem and fish stocks by establishing dams and the use of reservoirs and Small hydro-power plant "Snježnica". Fish stocking is done once a year, and obligations of the JP Elektroprivreda BiH, or ED Tuzla set forth in the Agreement with the Association of fishermen from Teočak, which has fishing rights to the fishing area where dam and reservoir of HPP Snježnica are located. Fish stocking is done in December 2012.

In 2012 there were two series of observations and tests of the dam Snježnica. Regular control is in place for floating debris along the dam, which is collected and disposed of at the communal waste landfill.

Long-term environmental protection plan for SHPP "Snježnica" and SHPP "Modrac" planned for control of environmental aspects, according to the need to reduce any negative impacts. Negative impacts on the environment have not been noticed so far.

3.3.3. "Elektrodistribucija" Bihać

Waste Management

Waste management plan was developed pursuant to Article 34 of the Law on Waste Management and the Rulebook on Waste Categories. Waste management plan for generated waste and its disposal is regularly updated, and Annual Report on Waste Management is submitted to the Environmental Management Department of the Company Headquarters. In case of demolition, removal and rehabilitation of existing facilities construction waste is properly taken care of. Also, mixed waste is removed from the sites where it was produced during the construction and installation, and temporary stored for disposal of recyclables.

Selection procedure for designer of the main project for the construction of storage facilities in the locality of Vedro Polje was completed in 2010. In 2012 the main-detailed design was finished and the necessary urban planning and technical documentation were obtained on the basis of which approvals and building permits were obtained from the relevant municipal bodies. Start of works is planned for 2013, but it depends of financial options. In addition to waste materials, the design of the storage area in Vedro Polje envisaged a part for disposal of new equipment with components that can possibly pollute the environment, as well as for temporary disposal of used equipment that is usable and planned for overhaul or repair.

For now, branch office "Elektrodistribucija" Bihać, has no planned deposit site only for temporary storage. Waste that is generated in the ED Bihać is mostly deposited in working spaces of business units in makeshift spaces, depending on the type of waste. Most of the waste is in the exterior of the central warehouse of ED Bihać, which is with the Department for procurement and storage in the Department of Economic Affairs.

Measures to mitigate negative impacts on the environment

Possible effects of activities on the environment were assessed during the year and measures were undertaken to eliminate and mitigate negative impacts.

Pursuant to the legal requirements, there was financial and organizational participation in continuous fish stocking in rivers Una and Krušnica in 2012. According to Agreement and Contract number: 01-02-18523/12 from July 2nd 2012, and on the basis of the Plan for fish stocking and submitted Study on restocking aligned with Fishing - economic document, the fish stocking in the river Una was contracted, with 15% of the total cost of procurement of fingerlings for restocking in 2012. Also, according to the long-term Agreement, i.e. Contract Number: 32-24435/12 from July 31st 2012, the annual restocking of the river Krušnica was financed with 60% of the total cost of restocking.

According to the plan of the Department for maintenance of networks and plants, which includes the obligation to maintain the security of power grid, people, material goods and vegetation during 2012 the clearing of vegetation and clearing of bushes in the protection zone around the power plants was performed. Treated area was 358,225m².

3.3.4. "Elektrodistribucija" Zenica

Waste Management

Waste Management Plan in 2012 was updated twice a year (every six months) in accordance with the laws and regulations on the management of waste and recyclables, and as it was the case with the Waste Management Report it was submitted to the Department of Environmental Management of the Company Headquarters.

Tender documents for "Takeover, transport and final disposal of electronic waste containing hazardous components" were prepared in October 2012, for waste generated and accumulated in the plants of the Subsidiary.

Request for competitive bids for purchase was initiated; bids were open, selection of bidders performed and Contract No. EDZE-KZ-24/12 was signed for "Takeover, transport and final disposal of electronic waste containing hazardous components" for ED Zenica with the contractor GRIOSS d.o.o. Grude. Realization of these services is planned for January 2013.

Measures to mitigate negative impacts on the environment

In 2012 during the regular maintenance of buildings and performance of construction and craft works on rehabilitation of transformer substations in the Zenica-Doboj Canton and Central Bosnia Canton, care was taken to mitigate the negative impacts on the environment and increase the reliability of electric power facilities, in order to avoid accidents dangerous for the environment. Rehabilitation of transformer substations was performed in accordance with the technical recommendations, which include measures for environmental protection.

In order to increase the reliability of the protection zones and reduce number of breakdowns on the power plants, and meet the obligation to maintain security of power grid, people, material goods and vegetation maintenance services were performed during 2012, i.e. clearing of the routes of distribution grid in the Zenica-Doboj Canton and Central Bosnia Canton.

3.3.5. "Elektrodistribucija" Mostar

Waste Management

The branch office "Elektrodistribucija" Mostar has basic environmental aspects related to waste and waste materials, i.e. written-off equipment that is treated as a secondary raw material. Waste Management Plan is the basis for waste management and records are kept up to date on the collected and supplied waste and waste materials to authorized operators for waste management and disposal, with whom JP Elektroprivreda BiH has signed contracts.

Measures to mitigate negative impacts on the environment

In the domain of water protection, in accordance with regulations and internal acts, a continuous monitoring was performed for oil pits in 35/10 kV and 20 (10)/04 kV transformer substations made of bricks, and if necessary repair interventions were made.

Indicators for waste management in distribution subsidiaries

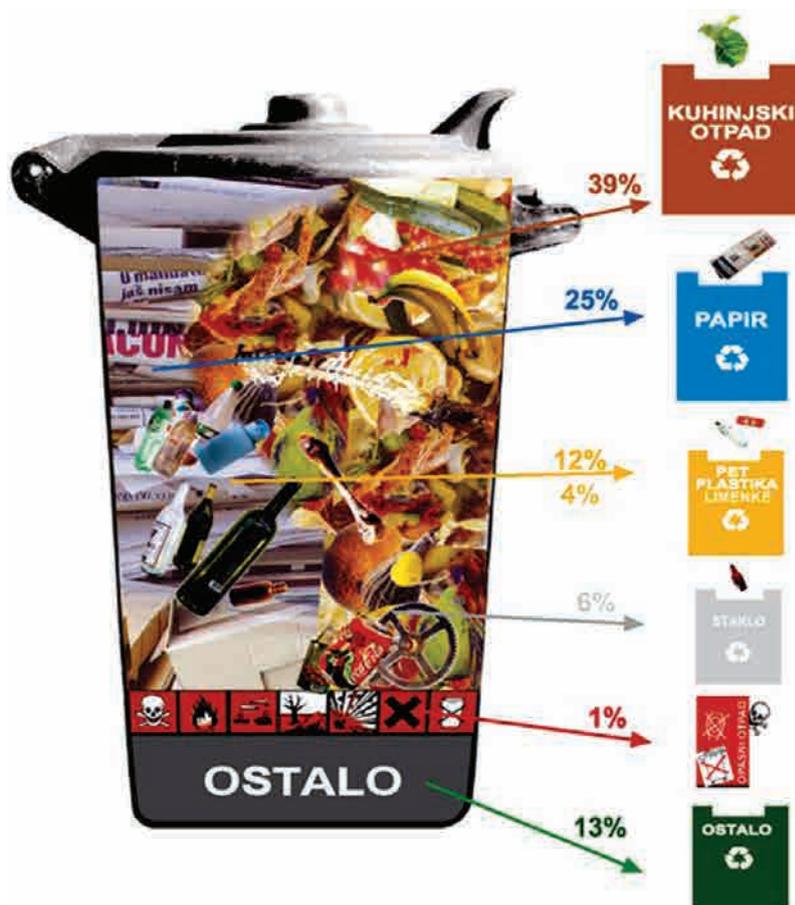
The total quantity of generated, temporarily deposited and supplied non-hazardous and hazardous waste to authorized operators at branch offices "Elektrodistribucija": Sarajevo, Tuzla, Bihać, Zenica and Mostar are shown below.

Table 15 Generated and temporarily deposited and supplied non-hazardous waste

Key number	Type of waste	Total quantity currently in stock/t	Supplied by contracts/t
15 01 01	Packaging paper and cardboard	1.05	7.60
15 01 03	Wooden packaging (drums for cable)	0.26	14.05
15 01 05	Waste packaging	-	1
15 01 02	Plastic packaging	0.08	0.14
15 01 07	Glass packaging	0.03	0.08
16 01 03	Old tires	0.35	1.44
16 02 14	Measuring devices (meters)	30.00	-
19 12 07	Wood (wooden poles)	0.04	36.38
17 01 01	Concrete - AB poles	12.00	-
16 01 19	Plastic	0.12	0.22
17 04 01	Copper	3.49	1.53
17 04 11	Aluminum, Al - Fe rope	47.57	53.46
17 04 11	Scrap copper cable	-	0.65
17 04 05	Iron and steel	20.37	56.99
17 04 11	Cables (elkalex, Cu and Al)	12.01	24.09
17 06 04	Insulators	0.26	29.21
16 02 14	Waste electric meters	30.00	31.53
17 04 05	Steel ropes	-	0.50
16 01 06	Old motor vehicles	-	6.23
16 01 06	Car shells that do not contain hazardous substances	5.22	3.29
16 02 14	Waste from electronic and electrical equipment (measuring instruments and meters)	10.12	32.74
16 02 14	Low-voltage cabinets (low voltage equipment)	1	2.56
16 02 14	Transformers – oil - voltage	0.07	3.60
16 06 05	Other batteries and accumulators	0.27	-
17 04 07	Mixed metals	1.27	16.45
20 01 08	Municipal waste from industrial and other plants	1.95	-
16 05 05	Firefighting appliances - waste	0.03	-
17 04 11	Scrap copper cables with electrical insulation	3.24	0.43
TOTAL		180.80	324.17

Table 16: Generated, temporarily deposited and supplied hazardous waste

Key number	Type of waste	Total quantity currently in stock/t	Supplied by contracts/t
13 03 07 *	Non-chlorinated-mineral oil	-	12.95
13 02 08 *	Other motor oils	0.70	0.13
13 03 07 *	Used transformer oils and oil for switches	0.35	0.46
16 01 04 *	Old motor vehicles containing hazardous materials	-	21.24
16 06 01 *	Lead batteries	0.16	5.12
16 06 02	Nickel-cadmium batteries	-	0.38
20 01 35 *	Discarded electrical and electronic equipment	12.29	6.20
16 02 09 *	Waste power transformer without oil	-	76.50
15 02 02 *	Material for absorption - oily cleaning cloths	0.23	-
16 02 09 *	Transformers and capacitors containing PCBs	9.40	-
TOTAL		23.13	123.13



4. TREND OF ENVIRONMENTAL IMPACT INDICATORS FOR 2008 - 2012

Figure 9: Total power generation and consumption of the JP Elektroprivreda BiH for the period 2008 - 2012

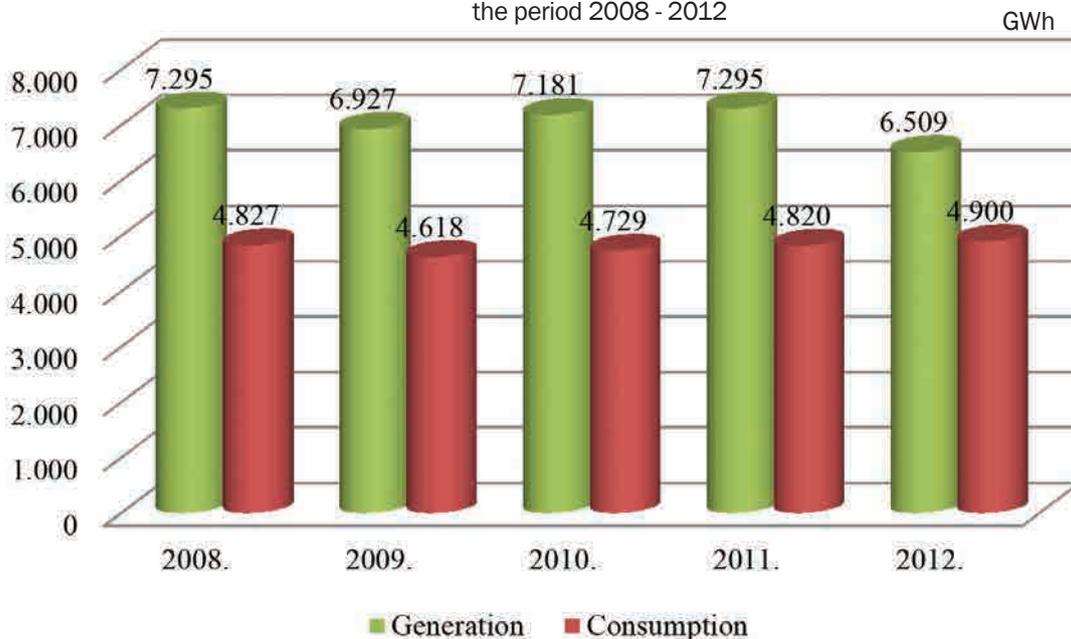


Figure 10: Power generation in thermal power plants for the period 2008 - 2012

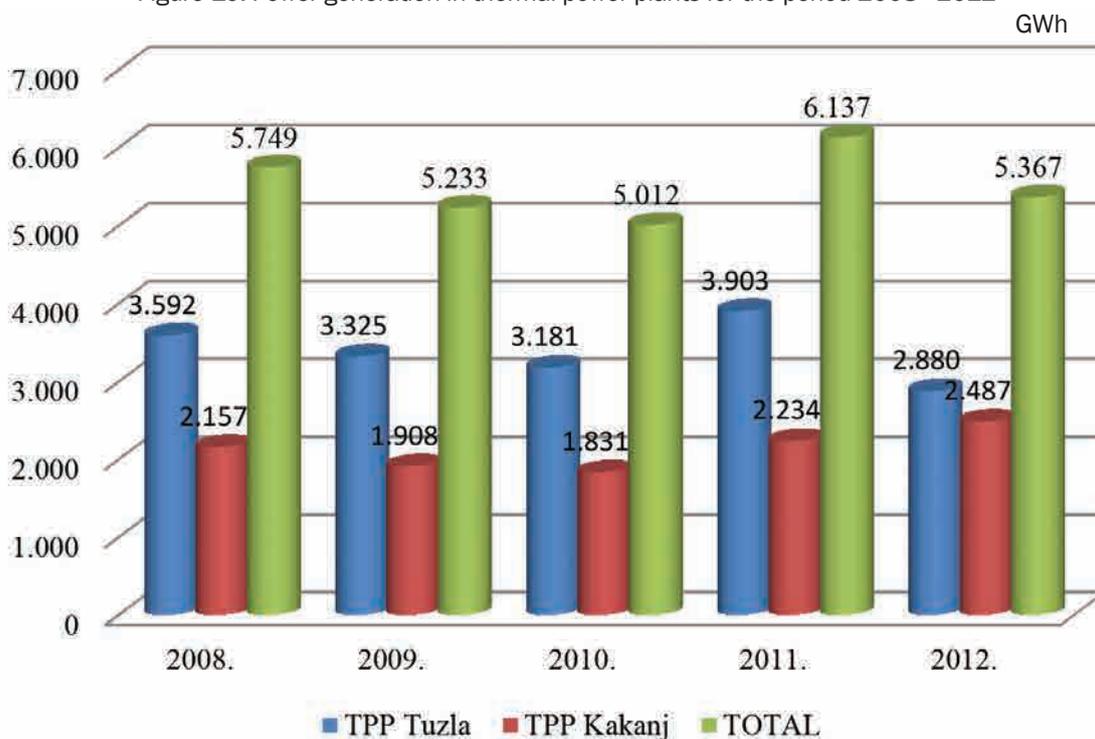


Figure 11: Coal consumption

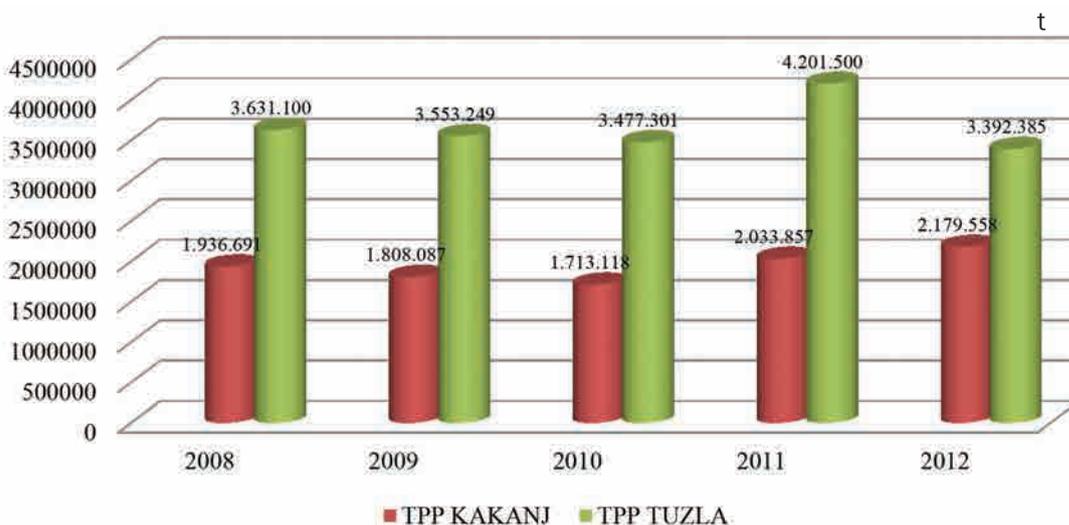


Figure 12: Emissions of SO₂

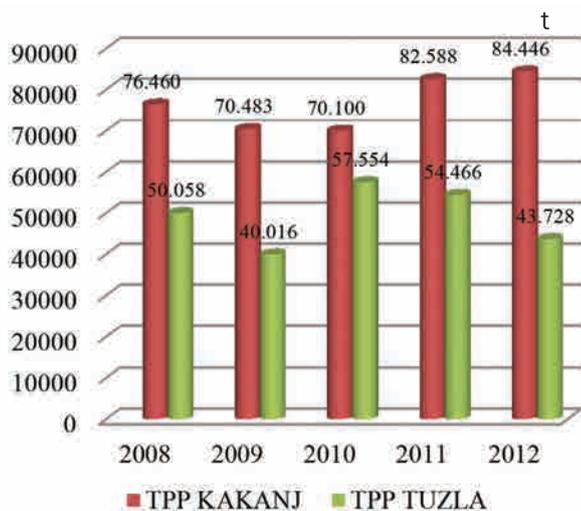
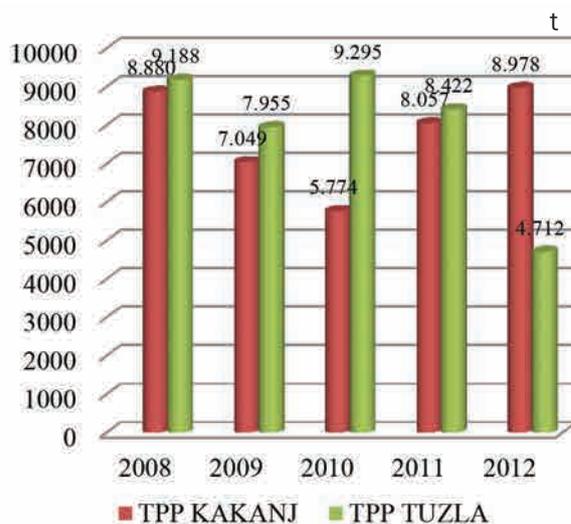


Figure 13: NOx emissions



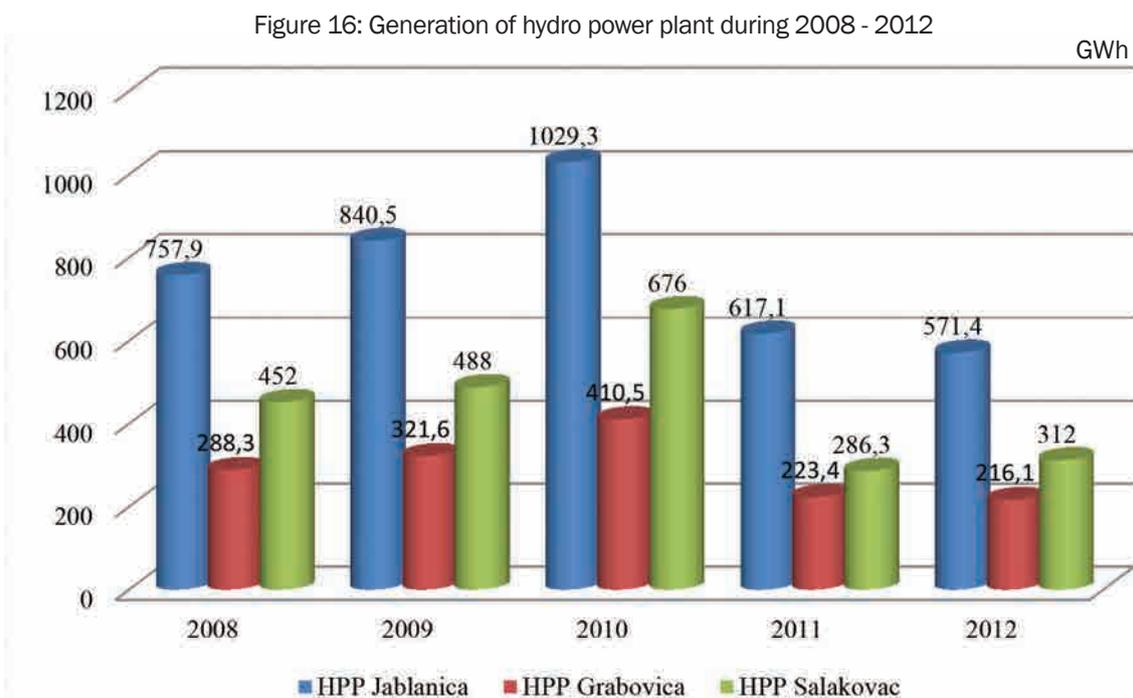
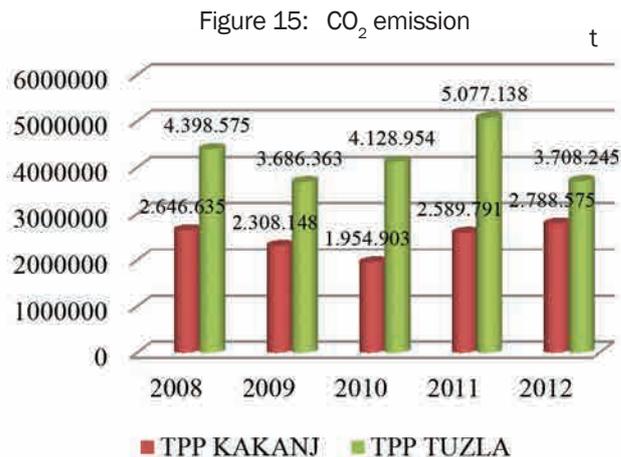
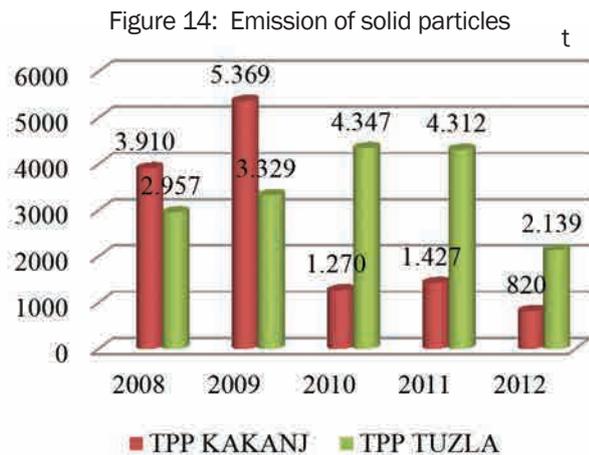


Figure 17: Quantity of water used in hydro power plants in the period 2008 -2012

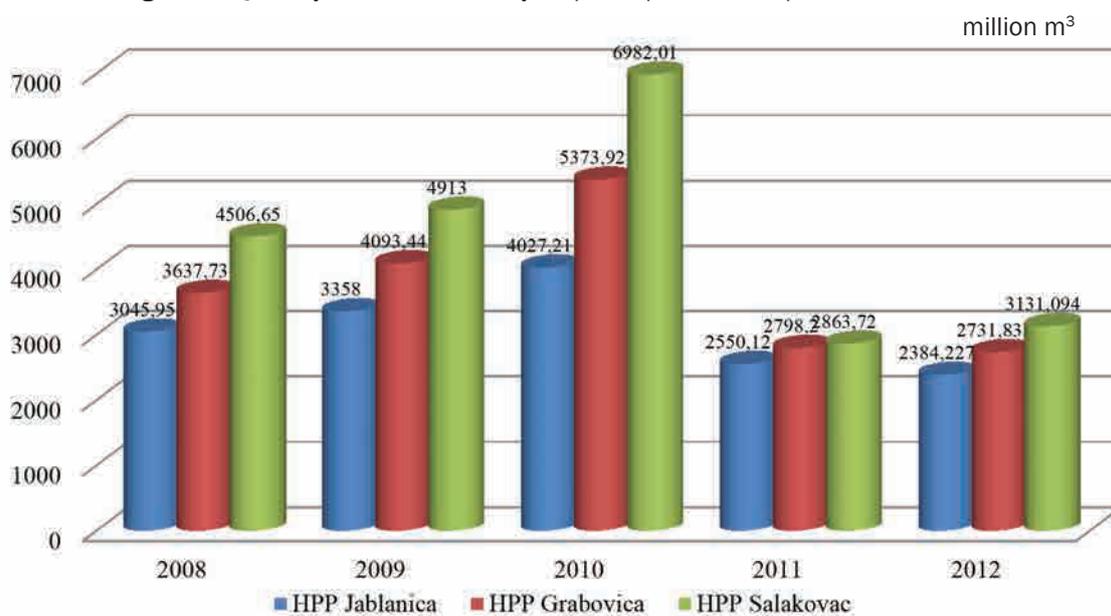


Figure 18: Total quantity of non-hazardous waste in TPP Kakanj and TPP Tuzla

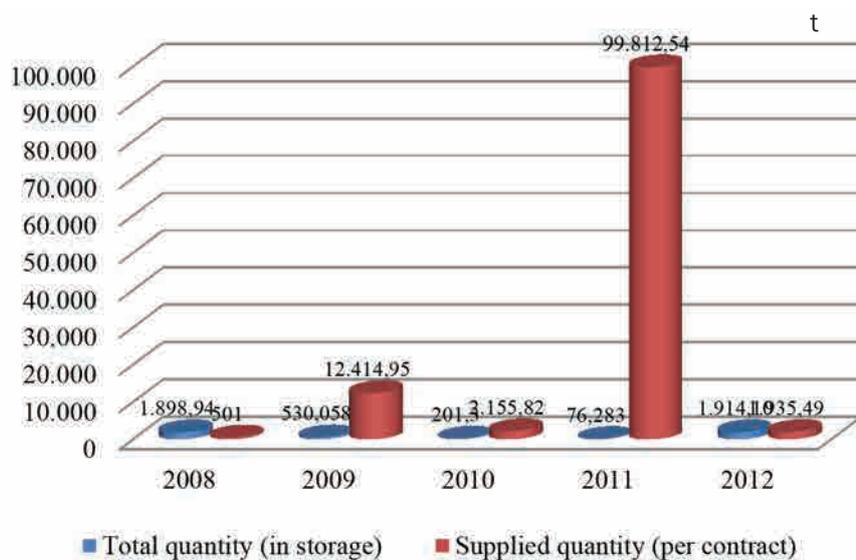


Figure 19: The total quantity of hazardous waste* in TPP Kakanj and TPP Tuzla

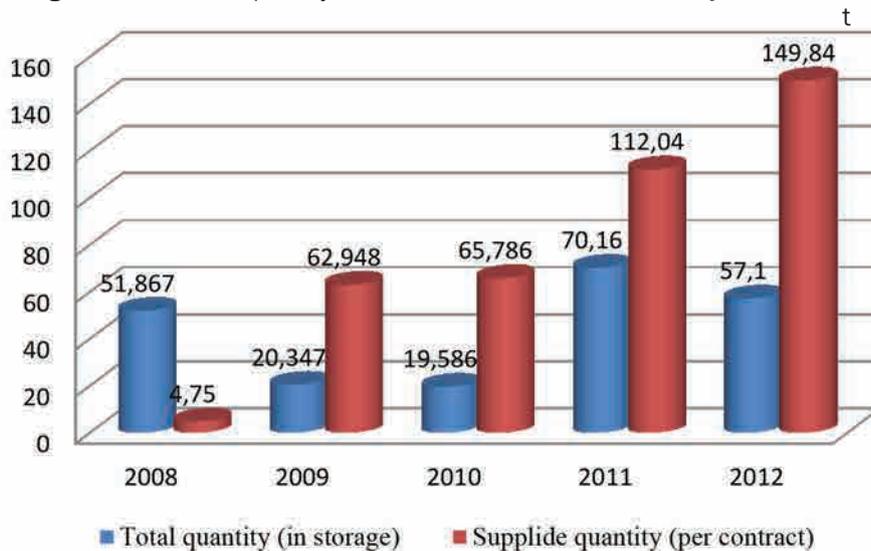


Figure 20: Total quantity of slag and ash at TPP Kakanj and TPP Tuzla

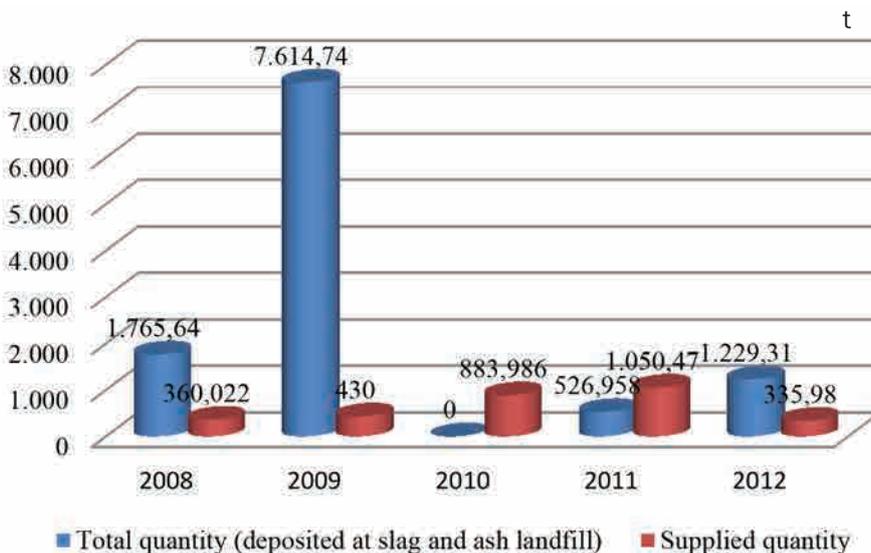


Figure 21: Total quantity of non-hazardous waste in HPP on river Neretva

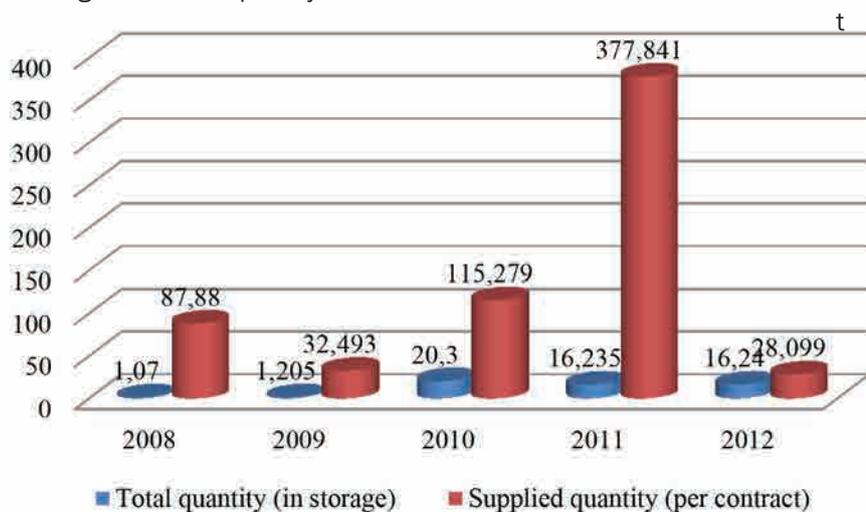


Figure 22: Total quantity of hazardous waste* in HPP on river Neretva

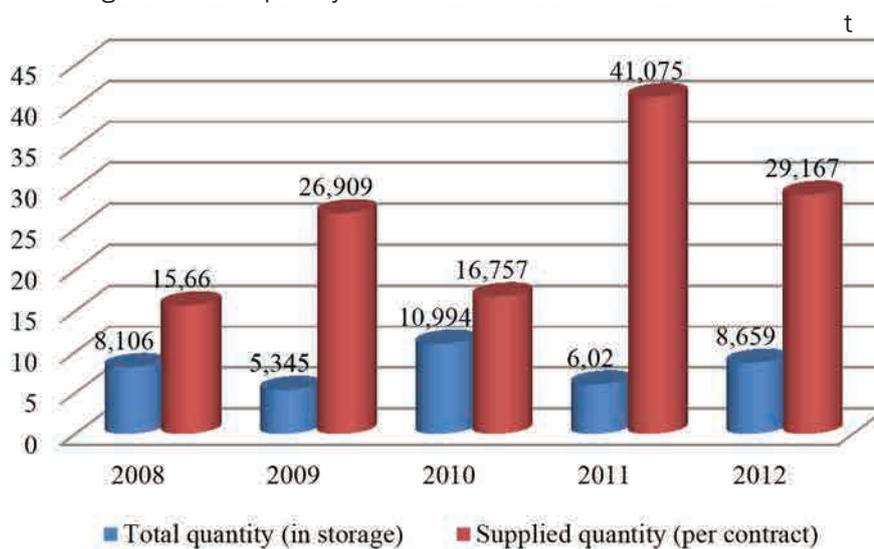


Figure 23: Total quantity of non-hazardous waste “Elektrodistribucija”: Sarajevo, Tuzla, Bihać, Zenica and Mostar t

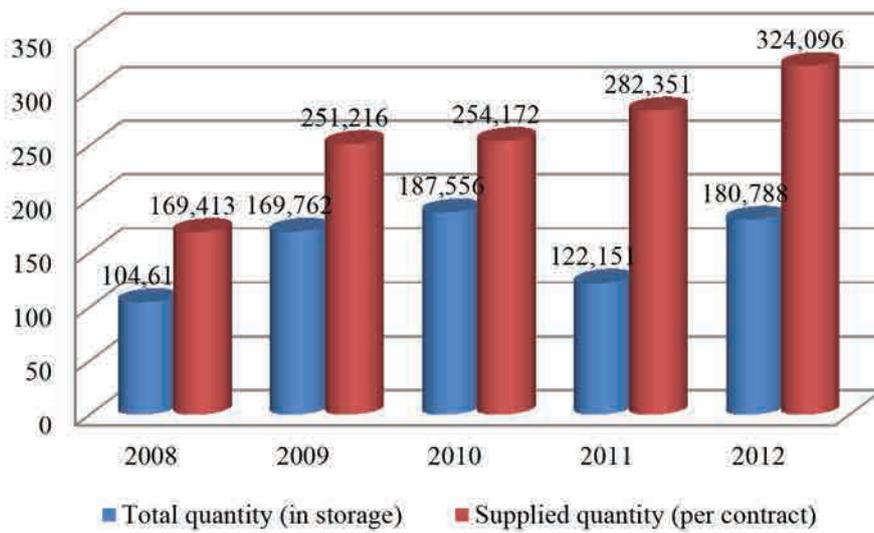
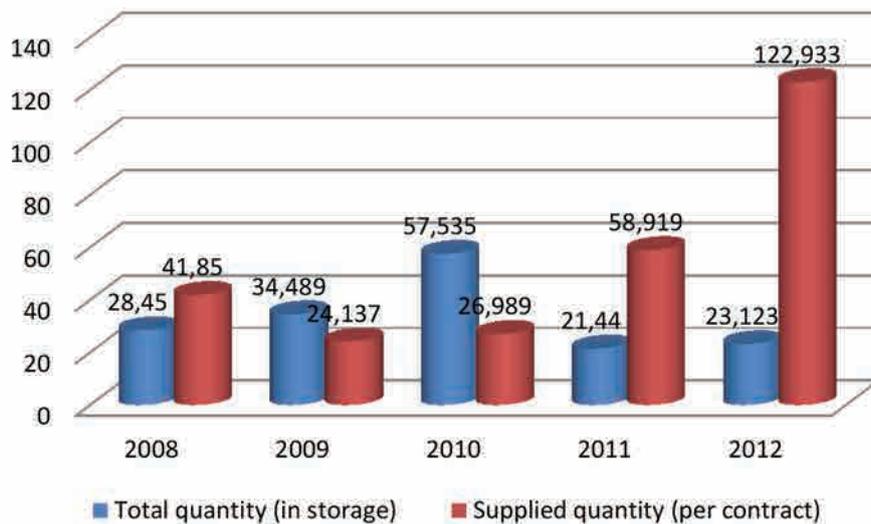


Figure 24: Total quantity of hazardous waste* in “Elektrodistribucija”: Sarajevo, TPP Tuzla, Bihać, Zenica and Mostar t



5. REALIZATION OF CONDITIONS OF ENVIRONMENTAL AND WATER PERMITS

5.1. Thermal power plants

5.1.1. Thermal power plant "Tuzla"

On July 8th 2011 the Federal Ministry of Environment and Tourism issued an environmental permit, Number: MR UP-I/05-23-25/07 under specific conditions and validity up to July 18th 2016.

In order to fulfill the obligations set in the environmental permit projects and tasks were defined, and their realization was launched.

The goals of individual projects and the level of their realization in the 2012 were:

Building a closed system for circulating water in TPP Tuzla, which will:

- meet the legal requirements on the quality of wastewater discharged into natural recipient,
- reduce the intake of wastewater and pollution load into the recipient Jale for up to 80%,
- provide pre-treatment for oily wastewater, sanitary sewage waste water, surface precipitation,
- separately treat the excess wastewater from the hydraulic transport system for slag and ash,
- primarily include the most polluted wastewater in the hydraulic transport system for slag and ash, i.e. water returned from slag and ash disposal site, total industrial wastewater, wastewater from desalting of radiator, part of waste water from the GPO and groundwater from coal deposits, and
- avoid investing in the construction of the new retention pool, due to use of a collecting ring of the cooling tower No. 2 as retention pool

Level of implementation of the Project:

- developed and revised the main design,
- obtained urban planning permit,
- developed amendments to the main project, as subsequent analysis concluded that the system for returned water in the thermal power plant, could be simplified using total quantities for all units,
- submitted request to amend obtained urban planning permit,
- conducted a procurement procedure for the demolition of cooling tower, which is covered by this project

Construction of a new silo for electrostatic precipitator ash, which will:

- increase sales of electrostatic precipitator ash,
- reduce the quantity of ash disposal,
- extend the life of existing landfills for ash and slag,
- reduce the consumption of raw water for the transport of ash and
- introduce environmentally friendly technologies for the transport of ash.

Level of implementation of the Project:

- developed and revised the main project,
- obtained urban planning and building permits,
- supplied part of the equipment and construction works completed up to the ground level.

Recultivation of slag and ash landfill DIVKOVIĆI I and II,

- Landfill will be brought to environmentally acceptable condition.

Level of implementation of the Project:

- completed the technical part of the recultivation of landfill Divkovići,
- developed tender for development of an elaborate and three studies that will be the basis for development of recultivation-regulation plan

Agency for the Sava River Basin District issued a Water permit for TPP Tuzla, No. UP-I-25-3-40-008-4/11, on June 7th 2011, valid up to July 6th 2013. Numerous obligations established in the Water permit have been completed or are being continuously implemented, except for obligations related to construction projects of a closed system for return water at TPP "Tuzla". With the completion of the project realization all of the requirements of the Water permit will be met.

5.1.2. Thermal power plant "Kakanj"

The Federal Ministry of Environment and Tourism issued the Environmental permit, Number: UP-I/05-23-16/07 MR, from August 11th 2011, under specific conditions and with validity period up to August 19th 2016.

In order to implement the obligations set in the Environmental permit the following projects and activities were defined:

Construction of storage for chemicals

- application of standard methods of storage and management of raw materials and products.

Level of implementation of the project:

- Completed selection of a designer.

Cleaning and the use of siphon with cascades and oil separator

- continuous measure with goal to prevent the intrusion of large waste and improper concentration of fat in waste water.

Status of the Project:

- Installed eight oil separators with sand traps.

Continuous monitoring of quantitative and qualitative characteristics of industrial waste water

- quality of discharged wastewater must be brought to a level that meets legal requirements

Status of the Project:

- Installed stations to monitor the quality of the waste water from the wastewater treatment plant.

Examine the possibility of installing a wastewater treatment plant and building a device for treatment of industrial waste water

- quality of discharged wastewater will comply with the legal requirements.

Status of the Project:

- activities started on the development of optimization project for operation of the wastewater treatment plant, as well as optimization project for water consumption in TPP Kakanj

Project of remote control of humidity of the coal depot surface and systems for coal depot surface wetting.

- this will reduce dust emissions from the coal depot.

Status of the Project:

- designed measures to reduce dust emissions from the coal depot.

Project for arrangement of slag and ash landfill - Phase II

- this will reduce the negative impacts of the landfill on the environment

Status of the Project:

- preparation of fencing for slag and ash landfill - Phase II,
- preparing recultivation of the area where disposal of slag and ash was located is finished, as well as establishment of a system to collect precipitation - Phase II,
- surface preparation for disposal of ash and slag.

Reduction in specific consumption of primary energy by increasing the share of cogeneration

- this will, among other things, increase the energy efficiency of district heating systems.

Status of the Project:

- developed study on reduction of specific energy consumption through increase of scale of cogeneration.

Increasing the scale of cogeneration**Status of the Project:**

- Activities to prepare the project have been initiated.

Desulphurization and denitrification of flue gases

- this will reduce emissions of SO₂ and NO_x to prescribed limit values.

Status of the Project:

- Plan and program to reduce emissions from existing Thermal Power Plants has been developed, according to LCPD/IED at the level of JP Elektroprivreda BiH. A study of desulphurization and denitrification of flue gases in TPP Kakanj was completed, but techniques for desulfurization and denitrification of flue gases were not selected.

Reduction of noise emission**Status of the Project:**

- Activities of sound isolation for the coal transporter were started.

The Agency for Sava River Basin District issued the Water permit for TPP Kakanj No. UP-I-25-3-40-402-8/9, from June 7th 2011, valid up to March 2nd 2014. Under the conditions of the Water permit, numerous realized and sustained measures to protect water resources were accompanied with the following:

Treatment of precipitation water discharges into river Bosna

Status of the Project:

- Separator with the settling tank was built for oil and grease, in which the precipitation water is collected through sewerage system from asphalt surfaces and roads and will be treated prior to release into the recipient - the river

Stabilization and recultivation of the downstream slope of slag and ash landfill

Status of the Project:

- Phase I completed.

Monitoring of waste water discharged into the river Bosna

- Safer monitoring

Status of the Project:

- Manholes for review at all discharges into the river Bosnia were built.

5.2. Hydro power plants on river Neretva

Environmental permits

Environmental permit for HPP Jablanica was issued by the Federal Ministry of Environment and Tourism on February 18th 2009, Number: UPI/05-23-38-1/07 VI, with a validity period of 5 years

Environmental permit for HPP Grabovica was issued by the Federal Ministry of Environment and Tourism on February 18th 2009, Number: UPI/05-23-38-2/07 VI, with a validity period of 5 years.

Environmental permit for HPP Salakovac was issued by the Federal Ministry of Environment and Tourism on February 18th 2009, under the number: UPI/05-23-38-3/07 VI, with a validity period of 5 years.

In order to meet the obligations set in environmental permits, the activities and projects were defined and their realization was launched. Many tasks have been completed in recent years and they are continuously performed. Among other things, in 2012 the following is done:

The design of technical monitoring for dams and soil in the area of the dams of HPP Jablanica, HPP Grabovica and HPP Salakovac was updated

- Monitoring equipment was procured in the scope of this project.

Status of the Project:

- Main design was developed and implementation completed in 2012.

Project of technical observation for landslides Kukovi

- Updating of measurement points.

Status of the Project:

- Completed the technical observation for landslides Kukovi.

Visual observations of landslides in the Neretva river basin, “Kukovi”, “Jezernica” and landslide in the villages Ribići and Aleksin han

Task Status:

- Continuous, monthly monitoring of landslides and reporting.

Regular maintenance of torrential barriers to prevent introduction of sediment in accumulation

Task Status:

- Activities are regularly carried out.

Regular visual observation of erosion processes in the Neretva river basin

Task Status:

- Activities are regularly carried out, with photo and video records.

Water permits

On May 13th 2010 the Agency for the Adriatic Sea River Basin District issued a water permit for the three hydropower plants in the Neretva river basin, for a period of five years, as follows:

- Water permit for water for operation of HPP Jablanica, No. UP/40-1/25-4-63-1/09
- Water permit for water for operation of HPP Grabovica No. UP/40-1/25-4-63-2/09
- Water permit for water for operation of HPP Salakovac No. UP/40-1/25-4-63-3/09

Many definite conditions in water permits have already been met within the realized projects, and continuous activities and monitoring of impacts on ecosystems of river Neretva and the environment in general are performed. Among other things, the following was done in 2012:

Study to carry out the necessary activities and works to ensure the flow of water in the river Neretva, on the section downstream of the HPP Jablanica dam to the mouth of the river Doljanka.

Status of the Project:

- Study was developed and submitted to the Agency for the Adriatic Sea River Basin District for consideration.

Study documentation for phase II “Evaluation of the technical feasibility and justification of bringing of a secondary discharge at the dam of HPP Jablanica in functional status”

- Envisaged in “Pre-study in the present context”.

Status of the Project:

- Developed study documentation.

5.3. Power distribution

5.3.1. "Elektrodistribucija" Sarajevo

The branch office "Elektrodistribucija" Sarajevo, manages electricity facilities, SHPP "Osanica 1" in Goražde with installed power of 994 kW. Environmental permit for the facility was issued by the Ministry of Urban Planning, Spatial Planning and Environmental Protection of Bosnian-Podrinje Canton, on June 26th 2009, No. UP-1:09-23-5/09, for the period of five years. Deficiencies, which were found in the environmental license, were eliminated in 2010. Conditions from the environmental license are followed, as well as priority environmental flow. Environmental protection measures are implemented, as confirmed by the inspection report from September 17th 2012. Measures and conditions of the Decision on water permit for SHPP "Osanica 1", UP-1 :04-25-577/10, which was issued by the competent Cantonal Ministry on January 14th 2011, is also implemented.

5.3.2. "Elektrodistribucija" Tuzla

Branch office "Elektrodistribucija" Tuzla has facilities: SHPP "Modrac" in Lukavac and SHPP "Snježnica" with reservoir in Teočak. Environmental permit for SHPP "Snježnica" was previously issued, as well as water permits for both plants. Environmental permit for SHPP "Modrac" was issued on August 1st 2012, No. UPI 05-23-139/09.

Environmental and water permits defined the conditions and measures to be taken to reduce negative impacts on the environment, and accordingly the following is done:

- regular observation of dams and reservoirs, control of operating parameters, visual control of erosive processes, etc.
- technical, physical and geodetic observation of the dam twice a year (series I of observations was carried out in the first quarter of 2012, and series II in the third quarter of 2012)
- selective separation of waste and keeping records on waste quantities,
- annual restocking of fish in the river basin of Brzava.

Cleaning of the hydro reservoir Snježnica in 2012 was not carried out, due to the very complex process of cleaning. For 2013 it is planned to examine the quality and measure the height of the sediment in the reservoir. Based on the test results, and as required, cleaning of sediment will be performed.

5.3.3. "Elektrodistribucija" Bihać

In accordance with the provisions of the legislation, activities on obtaining water and environmental permits were completed for the three Hydro Power Plants operated by "Elektrodistribucija" Bihać.

1. HPP "Una" Kostela-Bihać - 9.4 MW

Environmental permit was issued with the decision of the Federal Ministry of Environment and Tourism No. UPI/05-23-254/08 IV from February 18th 2009 for the period of five years. Paragraphs 7.3, 7.4. and 7.5 of the environmental license set the conditions for the protection of water quality and waste management for waste generated at the facility. Environmental permit conditions set the conditions for use of auxiliary resources, established general obligations to protect the environment, as well as measures, technologies and techniques to prevent negative impacts on the ecosystem of the river Una in general.

Water permit for the existing facility was issued by the Agency for the Sava River Basin with the Decision No. UP-I/25-3-40-016-5/08 from September 8th 2008, for a period of five years, and the obligation for renewal. The conditions defined in this decision are being implemented.

2. SHPP “Krušnica” - 2 x 230 kW

On the basis of the approved action plan the Cantonal Ministry of Construction, Urban Development and Environment of the Una-Sana Canton with its Decision No. 11-23-6159-UP-1/11 from August 9th 2011 issued an Environmental Permit to JP Elektroprivreda BiH d.d. Sarajevo, for Subsidiary “Elektrodistribucija” Bihać for SHPP “Krušnica” in Bosanska Krupa, for five years.

Water permit was issued for the existing facility with Decision No. 08/0-25-13418-UP-1/8 from November 10th 2008, for a period of five years and with the legal obligation of renewal.

Conditions lay in the water permit and environmental permit are continuously monitored and implemented, as well as general obligation to protect the environment and the ecosystem of the river Krušnica, and measures, technologies and techniques to prevent negative impacts on the river ecosystem and the environment in general, and to manage the quantity of auxiliary resources.

3. SHPP “Bihać” - 160 kW

Cantonal Ministry of Construction, Urban Development and Environment of the Una – Sana Canton issued the Environmental Permit with its Decision No. 11-23-6160-UP-1/11 from August 9th 2011 to JP Elektroprivreda BiH d.d. Sarajevo, the Subsidiary “Elektrodistribucija” Bihać for SHPP “Bihać” in Bihać, in the street Krupska. In addition to standard measures and conditions of the Environmental Permit for SHPP "Bihać" in Bihać an obligation was established to monitor impact of constructed facilities and the condition of the bed of supply channel, because, during its repair, water is diverted to natural riverbed.

Water Permit was issued by the Agency for the Sava River Basin District with Decision No. UP-1/25-3-40-017-4/08, from August 18th 2008, for a period of five years, and the obligation of renewal.

In practice, the conditions from the environmental and water permits are obeyed. No disturbance of the ecological balance has been detected or any significant threat to aquatic and semi-aquatic organisms in rivers and Una and Krušnica.

On the basis of the Law on Environmental Protection and regulations and legislation in this field it is not necessary to develop the Action Plan for the purpose of obtaining environmental permits for other existing energy facilities, except for the reconstruction of large scale generation facilities, and the facilities that are or could be built within the area of the National Park “Una”.



6. ENVIRONMENTAL MANAGEMENT SYSTEMS

6.1. Thermal power plants

6.1.1. Thermal power plant "Tuzla"

Certification Company TÜV Pty. d.o.o. Croatia, performed the recertification audit of integrated business management system of TPP "Tuzla" in October 2012. After completing the audit, the certification company was satisfied with the integrated business management system of TPP "Tuzla" as fully compliant with: EN ISO 9001:2008 and EN ISO 14001:2006.

6.1.2. Thermal power plant "Kakanj"

Certification Company TÜV Pty. d.o.o. Croatia, performed the certification audit of the environmental management system. The audit showed satisfactory conditions and a new certificate of compliance with the requirements of EN ISO 14001:2006 was issued.

Regular internal audit of environmental management system was carried out by the end of 2012, and the assessment of the compatibility of work of TPP "Kakanj" with the legal and other environmental requirements was initiated.

Improving of the environmental management system is largely manifested in the increased level of implementation of EN ISO 14001:2006 requirements, as a great tool in the systemic approach to the implementation of a number of legal environmental requirements.

6.2. Hydro power plants on river Neretva

Monitoring audits were performed in October 2012 for ISU EN ISO 9001:2008 and 14001:2006, by the authorized certification company "TUV NORD" from Croatia.

6.3. Power distribution

6.3.1. "Elektrodistribucija" Sarajevo

Monitoring audit was carried out by the certification body "TUV NORD" CERT GmbH in 2012.

6.3.2. "Elektrodistribucija" Tuzla

Preparations for the development and implementation of environmental management systems, in accordance with EN ISO 14001, have been completed. Two procedures in the field of environmental management have been issued: EPTZ 447/01 - Preparedness and response to environmental hazards and EPTZ 446/01 - Waste management. Other procedures have been made as draft versions and are waiting for adoption.

Full implementation and certification of the system is planned for the future, when the Executive manager for distribution gives consent for the introduction of environmental management systems in the branch office “Elektrodistribucija” Tuzla.

6.3.3. “Elektrodistribucija” Bihać

Introduction and development of the environmental management system, according to BAS / EN ISO 14001 is planned for 2013, and during the 2012 an analysis of the situation and the effects of implementation of quality systems according to ISO 9001 were performed.

6.3.4. “Elektrodistribucija” Zenica

The branch office “Elektrodistribucija” Zenica has not developed an environmental management system, according to EN ISO 14001:2006.

6.3.5. “Elektrodistribucija” Mostar

The introduction of the environmental management system in accordance with EN ISO 14001:2006 is planned in the future, after a detailed analysis of the situation and the effects of the introduction of the Quality Management System.



7. ENVIRONMENTAL PROTECTION IN SCOPE OF DEVELOPMENT OF ELECTRIC POWER FACILITIES

With the aim of contributing to sustainable development of the energy sector, especially the power sector and the implementation of the commitments under the Energy Community Treaty, which are related to transposition and compliance with the Acquis of the European Union in the domain of environmental protection, as well as documents that are obligations of Bosnia and Herzegovina under other international agreements, the representatives and formed professional teams of JP Elektroprivreda BiH were very engaged in 2012. They participated actively and objectively protected the interests of JP Elektroprivreda BiH in the meetings at the international and national level regarding the issue of sustainable development of the energy sector, and the development of public discussions in the process of:

- transposing of EU environmental legislation into local legislation - IPPC Project for BiH.
- development of the Spatial Plan of the Federation BiH, Cantons and the Spatial Plan for Areas of Special Interest for the Federation "Una River Basin".
- Adoption of the Strategy for Low-Carbon Development and Climate Change Adaptation for Bosnia and Herzegovina.
- Preparation of the Report on the State of Environment in Bosnia and Herzegovina, II National Report on Climate Change, etc.

Expert associate for environmental management of the Company Headquarters was a representative of Bosnia and Herzegovina, as a member of the Working Group on Environment of the Energy Community of South East Europe, and actively participated in all the activities and meetings organized by the Energy Community Secretariat in Sarajevo and Vienna.

7.1. Reconstruction and modernization of existing power facilities

7.1.1. Thermal power plants

Thermal power plant "Tuzla"

Revitalization of Unit 6-215 MW

The project achieved:

- increase in energy efficiency of the Unit by 4.5%,
- reduction of dust emissions $<50 \text{ mg} / \text{m}^3 \text{ n},,$
- reduction of NOx emissions $<450 \text{ mg} / \text{m}^3 \text{ n},,$
- replacement of asbestos-cement filling with plastic one and installation of eliminator for water drops at RT 5,
- installation of pneumatic transport for electrostatic precipitator's ash to the ash silo.

Project of revitalization of Unit 6 is in the final stage, and commissioning of the Unit is scheduled for early 2013.

Thermal power plant "Kakanj"

By the beginning of 2012 revitalized Unit 6-110 MW was put into operation. Revitalization accomplished the following:

- increase of the level of boiler efficiency $\eta_k \geq 89\%$,
- installation of modern burners with low NO_x, so that NO_x emissions are reduced to a maximum of 950 mg/m³n,
- result of built in bag-filters in the casing of the existing electrostatic precipitators is reduction of emissions of solid particles from this Unit from about 300 mg/m³n, to less than 10 mg/m³n,
- achieved removal of dust from flue combustion products during the liquid fuel combustion phase, which was not the case previously,
- reduced consumption of fuel oil (Unit 6 has a more stable regime of operation, i.e. a smaller number of entries into operation)
- increased energy efficiency of the turbine and turbine facility compared to the initially projected state, with the condensation mode of operation, and
- reduced its own energy consumption.

In addition to these reductions of impact of Unit 6 on the environment, it is especially important to mention that the reduction in specific consumption of coal has proportionately reduced specific emissions by about 17% of all pollutants from Unit 6

7.1.2. "Hydro power plants on river Neretva"

Due to safety of the Jablanica dam and in order to reduce the risk and incidents, the project "Geophysical studies of sides of the stilling basin, and stability testing of the dam (static and dynamic) and cracks in the C Gallery of the Jablanica dam" was initiated. The project was developed in 2011 and 2012, and completion of all work is scheduled for 2013.

7.1.3. Power distributios

All new electric power facilities, i.e. transformer substations, built in 2012 were built with hermetically sealed oil transformers, and under each transformer in cable substations foundations were designed to allow collection of the entire quantity of oil from power transformers, so that technical design meets the standards in terms of environmental protection. It was taken into account that substations mounted on poles should not be located in water protection zones. In 2012, new transformer substations, distribution lines and low voltage connections at metering points was built and put into operation in accordance with energy approvals (see tables no. 17 and 18.). There were also reconstructions of power plants and the expansion of the distribution network, which took care of environmental protection and protection of population and material goods (see Table 19.). Special attention was given to waste management and cleaning and bringing temporarily devastated land and locations to acceptable condition upon completion of works.

Table 17: Overview of power facilities built in 2012

New facilities			ED Sarajevo	ED Tuzla	ED Bihać	ED Zenica	ED Mostar
110 / x kV	TS	Pcs.	0	0	0	0	0
35 kV	35/10 (20)	Pcs	0	1	0	0	0
		kVA	0	8050	0	0	0
	LINES	km	0	2,835	0	0	0
10 (20) kV	10 (20) / 0.4	Pcs	18	19	28	34	5
		kVA	11,210	7060	3,260	8390	1,290
	LINES	Km	50.3	21.1	40.7	37.64	5879
0.4 kV	LINES	Km	107.1	90.9	111.6	216.43	36,864

Table 18: Connections to the metering points on the basis of energy approval

New facilities		ED Sarajevo	ED Tuzla	ED Bihać	ED Zenica	ED Mostar
Low voltage connections on the basis of energy approval	Pcs	4,991	1843	1,173	1,275	656

Table 19: Reconstruction of power facilities and expansion of the distribution network in 2012

Reconstruction			ED Sarajevo	ED Tuzla	ED Bihać	ED Zenica	ED Mostar
35 kV	35/10 (20)	Pcs	0	2	0	0	0
		kVA	0	50	0	0	0
	LINES	Km	0	1,166	0	0	0
10 (20) kV	10 (20) / 0.4	Pcs	7	11	0	5	7
		kVA	2530	630	0	0	60
	LINES	Km	9.2	35.0	57.6	12.98	3,75
0.4 kV	LINES	Km	83.0	57.9	19.7	3.20	46.661
	OMM	Pcs	12,580	2,230	1,541	5,652	611

In 2012 “Elektrodistribucija” Zenica performed a routine maintenance of buildings (construction and craft works on rehabilitation of transformer substations) in Zenica - Dobož Canton and Central Bosnia Canton. The aim was to mitigate the negative impacts on the environment and increase the safety of power facilities, and to avoid accidents hazardous to population, property and the environment in general. Rehabilitation of substations was performed in accordance with the technical recommendations, which included measures to protect the environment.

During the reconstruction and modernization of the existing energy facilities in the area of “Elektrodistribucija” Bihać the assessment of environmental impacts is developed only in cases where it is established that there is a possibility that changes may affect the environment. In 2012 there were no constructions of energy plants or facilities, for which environmental permit was required in accordance with the Law on Environmental Protection and the implementing regulations of the Federation of BiH.

During the dismantle, removal and rehabilitation of existing buildings in all power distributions in accordance with the Rulebook of JP Elektroprivreda BiH on environmental protection and waste management of branch offices, construction waste, obsolete and dismantled power equipment and other waste was properly collected and temporarily deposited. Mixed waste was removed from the locations where the waste was generated during construction and reconstruction processes, and it was selected and temporarily deposited in specified locations until it was supplied as raw materials and waste for recycling or final disposal in an environmentally acceptable manner. Waste oil and greasy substances were collected separately and properly packaged and labeled as hazardous waste. A significant part of the waste generated in 2012 was supplied exclusively to authorized operators for waste management and processing or final disposal of waste with which JP Elektroprivreda BiH signed contracts for takeover of waste in accordance with the regulations.

7.2. POWER IV

7.2.1. Thermal power plant "Tuzla"

Modernization of the system for coal storage

The project achieved the following:

- increase in the degree of homogenization of all types of coals for Units 3, 4 and 5,
- improvement of the technological process of storage and transportation of coal at the depot 1,
- collection and disposal of surface water and water leaking from the depots No.1, 2 and 3,
- minimizing of the risk of fire, i.e. combustion of coal at the depot and possible emission of pollutants,
- reduction of coal dust.

7.2.2. Thermal power plant "Kakanj"

In 2012 the remainder of reclamation activities on the western slope of the slag and ash landfill were realized.

7.2.3. Power distributions

Power IV included realization of assets from the loans of the European Investment Bank - EIB, which were invested in the standard works and equipment for electric power facilities: transformer stations, aerial lines and low voltage lines. There were no incidents and risk situations for population, property or endangering of the quality of the environment.

7.3. Capital investments

7.3.1. Thermal power plants

Unit 7 - 450 MW at Thermal power plant "Tuzla"

Obtained approvals and permits

- Following the revision of the study for connection of Unit 7-450 MW at TPP Tuzla into EES BiH, which was done by a joint commission of ISO BiH and Elektroprenos BiH (Transco), the study was accepted.
- Company Elektroprenos BiH set the requirements for connection to the 400 kV transmission network - the act Number: 01-2796/12 from May 16th 2012.
- The decision of the Government of FB&H on determining of the public interest for the construction of power plants in FB&H No. 1076/2012 from May 10th 2012 (for the expropriation of property).
- Ministry of Spatial Planning issued a Decision on the extension of validity of urban planning approval, No. UPI/03-23-2-79-1/11 ID from January 9th 2013.

Program for friendly environment

On the basis of the signed Contract on implementation of the "Program of friendly environment" with the Municipality of Tuzla, all planned projects were contracted. Most of the projects have been completed and others are in the process of implementation.

Other Projects

- Completed and audited expropriation study and determining of purchase prices for real estate in the location for construction of Unit 7, in the business area Tuzla. Completed study and amendments to this study will be the basis for the purchase of the remaining land.
- Completed and revised preliminary design of the connection for Unit 7 from TPP Tuzla to TS Ljubače.
- Completed and audited project for preparatory works on the site of Unit 7.
- Completed and audited contract for laboratory testing of coal from PK Šikulje and PK Dubrava.
- Completed and revised detailed design of railway infrastructure and plan for leveling off the ground at the location of Unit 7 at TPP Tuzla.

Realization of the obligations established in environmental permit

- Completed and revised preliminary design of alternative transportation and disposal of products of combustion of the replacement Unit 7 at TPP Tuzla, in frame of the rehabilitation of mines Kreka and Đurđevik.
- Completed and revised study dealing with ensuring limestone for Unit of 7.
- Completed and revised study of possibilities for commercial use and sale of solid residues of combustion processes (byproducts), during operation of Unit 7 at TPP Tuzla.

Meeting conditions from the preliminary water approval - basis for obtaining water approval

- Completed monitoring project for wastewater from Unit 7 at TPP Tuzla, analysis of technical solutions and the amendment to preliminary design of Unit 7, regarding the cleaning of waste water (revision in progress).

Unit 8 - 300 MW in Thermal power plant "Kakanj"

Obtained approvals and permits

Based on the developed, revised and validated investment and environmental documentation, the competent institutions gave consents necessary for investment decision making on the construction of Unit 8, as follows:

- Following the revision of the study on connection of Unit 8-300 MW at TPP Kakanj to EES BiH, which was done by a joint committee of ISO BiH and Company Elektroprenos BiH, the study was accepted.
- Company Elektroprenos BiH set the requirements for connection to the 400 kV transmission network, with its act Number: 01-2060/12 from April 12th 2012.
- Ministry of Spatial Planning issued a decision on the extension of validity of urban planning permit, No. UPI/03-23-2-78-1/11 ID from November 5th 2012.

Program for friendly environment

On the basis of the Contract on realization of "Program for friendly environment" signed with the municipality Kakanj, most of the contracted projects have been completed or they are in the course of implementation, and planned to be completed by mid-2013.

Other Projects

- Realized and revised contracts for test burning of coal using classical and CFBC technology for Unit 8.
- Completed and revised the study to ensure limestone for Unit 8.
- Ongoing geo-mechanical tests on the location of Unit 8-G21 Mission.

Unit 1 - 300 MW power complex including Coal mine and Thermal power plant "Bugojno"

Research works

- Tender for conducting of detailed geological exploration of coal at Kotezi place has been updated and revised.

Preparatory activities

- Collecting the necessary approvals and resolving property relations, which are a requirement to perform investigative works.
- Based on the obtained preliminary permit to perform investigative works given by the municipalities Bugojno and Donji Vakuf, the process of contract signing for the determination of compensation for owners of land in private ownership is in progress.

7.3.2. Hydro power plants

Hydropower Plant "Vranduk" - 19.63 MW

- Contract and "Program for friendly environment" were signed with the municipality of Zenica to compensate the local community, with the aim of improving the environment and living conditions in the vicinity of the planned HPP "Vranduk". In accordance with this in November 2012 the Municipality of Zenica received funds from JP Elektroprivreda BiH dd - Sarajevo, in the amount of 1,498,300.00 KM for participation in realization of 34 agreed projects.
- Study on the determination of the limits of public water resources of the river Bosna in location for future HPP "Vranduk" was developed, and it was approved by the Federal Ministry of Agriculture, Water and Forestry.

- Concession contract for HPP "Vranduk" No. 01-07-22488/12 was signed on August 10th 2012.
- Ministry of Spatial Planning issued the Decision on the urban planning approval for the construction of HPP "Vranduk" No. UPI/03-23-2-144/12ID from September 4th 2012, which has been in force since October 11th 2012.
- Activities on the resolution of property - legal relations (expropriation) for an area that will include construction of HPP "Vranduk"
- Preparation of a Plan for management and maintenance of the monument "Stari grad Vranduk" in accordance with the urban-technical conditions for the construction of HPP "Vranduk".

Hydropower plant "Ustikolina" - 60.48 MW

- Internal review of the document for preliminary environmental impact assessment for HPP "Ustikolina", which was developed by Company CETEOR d.o.o. Sarajevo, was done.
- Several interviews with the representatives of local authorities were conducted about the plan to construct HPP "Ustikolina" with a presentation of basic components of the preliminary project and the possible negative and positive effects of implementation of the Project.
- Request for environmental license issue "with studies for preliminary environmental impact assessment of construction of HPP "Ustikolina" was submitted. The Federal Ministry of Environment and Tourism adopted a Conclusion on environmental impact of the planned hydro-power plant, with a defined content, No. UP-AND 05/2-23-11-17-2/12 from June 1st 2012.
- A Draft study of the environment impact of HPP "Ustikolina" was discussed and assessed as insufficient, and with specific and numerous comments and suggestions it was sent for amendments for revision to its author - CETEOR d.o.o. Sarajevo.
- Upon request of JP Elektroprivreda BiH, No. 01-4-33617/12 from October 28th 2012 the Federal Ministry of Environment and Tourism extended the deadline until July 1st 2013 for the submission of the Environmental impact assessment study for the planned HPP "Ustikolina" on the basis of which procedures for its approval and the issuance of environmental permits will be initiated.

Hydropower plant "Una" Kostela - 9.4 MW and Aneks - 6.1 MW

- Document "Reconstruction and expansion - a description of the project with information on the location, purpose and size of HPP "Una" Kostela was developed. On the basis of this document a presentation of the project was prepared, with preliminary estimated negative and positive impacts on the environment and society through the implementation of the HPP.
- According to application to EBRD for loan support for project implementation, two missions of the EBRD visited HPP "Una" Kostela. Main indicators of the Project and the possible impacts on the environment and population were presented, and the wide area of HPP "Una" Kostela was observed. During the second mission of EBRD representatives, i.e. consulting firm Mott MacDonald from England, meetings were held with the representatives of the Ministry of Economy and the Ministry of Spatial Planning and Environment of Una-Sana Canton from Bihać, NGO "Unski smaragdi", association of citizens "Una Bihać", and the owner of a nearby hotel Kostelski buk. Project was presented at these meetings and discussion of justification and acceptability of the planned renovation and expansion of HPP "Una" Kostela was organized in terms of protecting the environment and the population. After an audit using check-lists of the company Mott MacDonald, with a focus on environmental and social aspects, the plan was prepared for involvement of stakeholders (PUIG), with the complaint form, which is available to everyone on www.elektroprivreda.ba.
- Upon the request from JP Elektroprivreda BiH from November 9th 2012, for a preliminary water approval for reconstruction and expansion - construction of a new plant with installed capacity of 6.14 MW at HPP "Una" Kostela in Bihać, the Agency for Sava River Basin District adopted the Decision on preliminary water approval, No. UP-I / 25-1-40-625-2/12 from December 5th 2012.

Hydropower plant "Janjići" - 13.2 MW

- A Feasibility Study for HPP "Janjići" with exploration activities and preliminary assessment of environmental impacts was developed based on the grant for technical assistance provided by Company "KfW" Germany.
- Assessment mission of the representatives of Company "KfW", financial institution of the German Government, under the procedure for deciding on funding for this project, visited the site of the planned hydropower plant, and in conversation with the expert staff of JP Elektroprivreda BiH analyzed indicators of the Feasibility Study for HPP "Janjići" and Preliminary Environmental Impact Assessment.

Hydropower plant "Čaplje" - 11.626 MW

- After the negotiating mission, detailed explanations of the possibilities and planning of water use of the Sana river for power generation, Western Balkans Investment Framework (WBIF) approved a grant for technical assistance in the amount of 0.8 million EUR. JP Elektroprivreda BiH d.d. - Sarajevo and WBIF agreed on the scope of work and the manner of implementation of a feasibility study as well as investment and technical documentation on the preliminary design and investigative works and study impacts on society and the environment for HPP "Čaplje".

Hydropower plant "Kruševo" - 10.05+0.646 MW with Hydropower plant "Zeleni Vir"-2,362 MW

- Study "Hydropower Utilization of river Bioštica in the Municipality Olovo with Preliminary design of hydropower plants and a preliminary environmental impact assessment" was developed.
- Western Balkan Investment Framework approved a grant for technical assistance in amount of 1,000,000.00 EUR, and agreement about the volume of work and ways of realization of feasibility study as well as investment and technical documentation on the preliminary design and investigative work and study of impacts on society and the environment are all in progress.

Hydropower plant "Kovanići" - 13.5 MW

- After the delivery of the basic data for HPP "Kovanići", visits to locations of future power plants and meeting with the representatives of the expert team of the Company "KfW", it was confirmed that the project of construction of HPP "Kovanići" is accepted. It was assessed that grant funding of EUR 0.8 million will be approved for the feasibility study with exploration activities and preliminary environmental impact assessment.
- Draft terms of reference (ToR) were developed for a feasibility study with exploration activities and the environmental impact assessment for HPP "Kovanići", and subsequently delivered in December 2012 for the Company KfW's consent.

7.3.3. Project of 15 small hydropower plants on river Neretvica basin

- Pursuant to the Contract signed with the municipality of Konjic for "Program for friendly environment" with the aim of improving living conditions in the vicinity of the planned construction of small hydro power plants on river Neretvica in December 2012, the municipality of Konjic received an amount of 441,945 KM from JP Elektroprivreda BiH d.d. - Sarajevo.
- Implementation of the first phase included expropriation studies for three (3) small hydro power plants, with the aim of initiating procedures for resolution of property relations, which are led by Konjic Municipality.

- The procedure for issuing of environmental permits for the six planned SHPPs is the responsibility of the Federal Ministry of Environment and Tourism, and it has been in process since 2007 and has not yet been completed. After the adoption of a surprising Conclusion No. UP-I/05-23-177 to 192-9/07 from June 26th 2012, which rejected as incomplete the application of JP Elektroprivreda BiH for review of environmental impact assessment studies for issue of environmental permits for the six small hydropower plants, out of ten considered EIAs for SHPPs in the River Neretvica basin, the arguments required the return of the case to the prior status. The proposal was adopted, and issue of environmental permits for the remaining six small hydropower plants is expected.
- The Federal Ministry of Spatial Planning received requests in May 2012 to issue spatial planning approvals for the construction of two (2) small hydro power plants, and in November 2012 for another one from the project's first phase. Procedures for obtaining and providing some of the necessary approvals/permits from the competent institutions have not been finished.

7.3.4. Project of Wind Farm Podveležje - Mostar with 16 wind turbines - individual power 2-3 MW

- After considering the legal provisions of the Federation of BiH regulating the environmental impact assessment and the requirements of environmental permit for Wind Farm Podveležje in November 2012, the amendments were agreed in the context of the observation of current situation of fauna sensitive to wind, in the final stages of appraisal mission of the representatives "KfW", the financial institution of the German Government that is interested in credit loan financing of the Project.
- Completed Terms of Reference. This document is important for the updating of the environmental impact assessment of wind farms in the locality Podveležje in Mostar.

7.4. Preparation of planning and study documents

- Completed and revised study "Justification of thermal energy supply from TPP Kakanj area to/and Zenica". The study was approved by the Supervisory Board of JP Elektroprivreda BiH. Negotiations with the Municipality of Zenica for the project are in progress.
- Completed and revised the study "Cogeneration KDIII-2 - Feasibility study and cost-effectiveness".
- Completed and revised Study "Utilization of hydropower potential of triver Bijela and the upper flow of river Crna and their tributaries in the Municipality Trnovo", including the environmental aspects.
- Completed and revised the Terms of reference for the study, "Possibility of using waste wood and agricultural biomass in Thermal power plants of JP Elektroprivreda BiH". Tender procedure for the selection of processors was implemented subsequently.
- Completed and revised the Terms of reference for the study "Analysis of the available and potential capacities for the generation and supply of thermal energy from the plant TPP Tuzla, in terms of current and future demands of heat consumers in the system for district heating of surrounding towns". Tender procedure for the selection of bidders was implemented subsequently.
- Completed and revised the Terms of reference for the study, "Influence of coal quality on the generation costs of electricity and the price of coal."
- Completed and revised study "Present state of power generation facilities, with the projection of state until 2030 or the expiration of their life cycle".

- Developed "Plan – program of EP BIH to reduce emissions from the existing Thermal power plants, according to LCPD/IED". Document was adopted by the Board.
- Process of public procurement for the study "Integrated water resources management in the basin of the river Bosna" was initiated.
- Activities on the development of "Long-term plan for power plants until 2030" were started and it will deal with "Environment".



8. ENERGY EFFICIENCY

In an effort to improve the organizational structure of Energy Efficiency Management, and to institutionalize the issue of energy efficiency and energy savings in all aspects of Company operations, the Decision on the definition of the structure and functioning of the Energy Efficiency Management system in JP Elektroprivreda BiH d.d. - Sarajevo, extended the energy efficiency management structure to all activities of the company, including subsidiaries and dependent companies.

The Company Policy of energy efficiency - 3rd Edition was redefined. A structure with clear responsibility and authority for the management of energy efficiency, with four levels of authority was established:

- Energy Committee, as the authoritative body of the company for issues of energy efficiency, responsible for the adoption of plans and strategies.
- Manager of energy efficiency of JP Elektroprivreda BiH, as the chief operating authority at the level of the company, responsible for proposals and coordination of the implementation of all activities and measures to increase energy efficiency and energy savings.
- Energy managers in the activities for "Generation", "Distribution" and "Supply and Trade," as chief operating authorities on energy efficiency in their activities, who are also team leaders for energy efficiency in their activities.
- Teams for energy efficiency in the activities for the "Generation", "Distribution" and "Supply and Trade", which are responsible for the development and operationalization of measures for achieving the objectives of energy efficiency and energy savings.

The introduction of management structure for energy efficiency, meant that the company has established a solid foundation for the establishment of an energy efficiency management system, according to EN 16001 and EN ISO 50001 (Energy Management System), and further increase of energy efficiency and energy savings in the future. Aligning of the energy efficiency management systems of JP Elektroprivreda BiH with EN 16001 and EN ISO 50001 is envisaged in the Master Plan of Activities for 2012/2013 and it was started during 2012, and this activity has particular importance. Introduction of energy efficiency is explicitly stated in the recent Directive on Energy efficiency 2012/27/EU and JP Elektroprivreda BiH aligns its actions with the latest developments, trends and action measures proclaimed by EU Directives (2012/27/EU) and the EU (EU 2020 strategy - 20/20/20, EU Energy Roadmap 2050, and EU Power perspectives 2030).

In frame of the introduction of the energy efficiency management system in JP Elektroprivreda BiH and implementation of the energy efficiency policy the following activities were implemented:

- Developed Master Plan of activities in the field of energy efficiency for the period 2012 to 2013.
- Updated energy efficiency policy - Issue 3.
- Developed Plan for energy efficiency promotion of JP Elektroprivreda BiH.
- Developed Education plan for energy efficiency for the period 2012-2013.
- Adopted decisions on the expert teams for energy efficiency in generation, distribution and supply and trade.
- Developed reports for all three activities: "Identification of the current state of the Energy efficiency" as well as a summary report for JP Elektroprivreda BiH.
- Developed the document: "The goals of energy efficiency of JP Elektroprivreda BiH for 2013, with the plan and program of measures for achievement of goals".

Effects of activities and projects in function of energy efficiency in the previous period for all three activities are given in detail in the document "Report on the current state of energy efficiency in JP Elektroprivreda BiH", which can be found on the Internet portal of JP Elektroprivreda BiH/Management Systems/Energy Efficiency Management System/Documents/Reports.

9. EDUCATION

Expert associate for environmental management of the Company Headquarters participated in the preparation of the workshop on the implementation of the LCP (Large Combustion Plants) Directive (2001/80/EC), under the Treaty Establishing the Energy Community, organized by the B&H Ministry of Foreign Trade and Economic Relations, in cooperation with the European Commission and TAIEX. The workshop actively involved several employees of JP Elektroprivreda BiH.

In the framework of the International Fair of Energy, Industry and Mining held in Tuzla on June 7th and 8th 2012, in parallel with the Conference ENERGA, there was a roundtable "Best Available Techniques (BAT) for large combustion plants in the western Balkans". Several representatives of JP Elektroprivreda BiH participated in the conference and roundtable.

Conference on "Energy efficiency and renewable energy - from theory to practice" in frame of the 19th General B&H Fair "ZEPS 2012", was held on October 4th and 5th 2012 in Zenica, and it was organized by the Company CETEOR from Sarajevo and business system RMK Zenica, and several representatives of JP Elektroprivreda BiH actively participated.

The Project for introduction of energy efficiency management system in JP Elektroprivreda BiH d.d. - Sarajevo, organized and implemented the training in the domain of energy efficiency for targeted groups of employees of JP Elektroprivreda BiH, according to the following plan and education topics for 2012:

- Energy Efficiency in JP Elektroprivreda BiH;
- Energy efficiency of processes and systems in the generation of electricity and heat;
- Energy efficiency in distribution, supply and trading of electricity;
- Problems of reducing CO2 emissions.

Education was attended by 101 participants from all parts of the Company. Education was of external type, i.e. Company CETEOR d.o.o. Sarajevo was engaged for the implementation.

Within the framework of the implementation of OHSAS 18001:2007 standards the expert associate for environmental management from the Department of Environmental Management of the Company Headquarters, participated in the seminar "Implementation of the management for health and safety at work, in accordance with the requirements of OHSAS 18001:2007."

Education organized by subsidiaries

Thermal power plant " Tuzla"

The Head of the unit for measurement, maintenance and management and the electrical mechanic, who are responsible for proper technical operation and maintenance of the measuring devices for air emissions, attended the seminar "Practical training for professionals who deal with the measurement and monitoring of emissions into the air" in the organization of the Company CETEOR d.o.o. Sarajevo.

"Hydro power plants on river Neretva"

In order to provide additional training on management, legal framework and risks related to hazardous waste, and the methods and procedures for collection, transport and export of hazardous wastes the Lead expert associate for Environmental Management and the Expert associate for environmental management attended the seminar organized by Company CETEOR d.o.o. Sarajevo, which was held in October 2012 in Neum city.

"Elektrodistribucija" Bihać

In 2012 the Head of the Sector for management systems attended a seminar organized by JP Elektroprivreda BiH with the aim of further development and adoption of standards that are necessary for the implementation of measures and tasks in the domain of environmental protection. Although the plan of education of employees was adopted for branch office "Elektrodistribucija", Bihać for year 2012 the topics were not realized, because the Business Plan did not provide for training of the Sector for management systems.

"Elektrodistribucija" Zenica

The Conference "Energy efficiency and renewable energy - from theory to practice" held in frame of the 19th General B&H Fair "ZEPS 2012", on 4th and 5th of October 2012 in Zenica, was organized by the Company CETEOR and business systems RMK Zenica. The conference was attended by seven employees of the branch office "Elektrodistribucija", Zenica. This training achieved the goals of rising of awareness and encouraging of the use of renewable energy and more efficient use of energy.



10. FINANCIAL INDICATORS

For now JP Elektroprivreda BiH does not keep separate records of investments and investment costs for the implementation of plans and programs in the field of protection of the environment and natural resources. The funds are planned and implemented in the framework of investments and regular maintenance of plants and facilities. There is no harmonized procedure of presenting objective indicators of total financial investments in realized activities, which includes fees for the use of natural resources. Therefore, it is difficult to provide secure and comprehensive data on total funds spent by JP Elektroprivreda BiH in this context. According to the data available for the preparation of this document, the sum total is *136,465,077.00 KM*. This indicator is a confirmation that environmental protection is an important part of the total business and in financial part as well.

Adequate waste management and supply of generated waste to recycling and reuse, is a significant fact in financial context. The total revenue from the sale of waste materials in 2012 was *2,826.680,40 KM*.



The following table, according to available data, provides financial indicators by subsidiaries at the level of the Company Headquarters and the total for JP Elektroprivreda BiH d.d. - Sarajevo.

Table 20: Financial indicators of activity in the domain of environmental management KM

Organization	Financial resources
<i>Subsidiaries</i>	
TPP Tuzla	81,194,067.00
TPP Kakanj	2,429,692.00
HPPs on river Neretva	12,654,791.00
ED Sarajevo	174,065.00
ED Tuzla	1,042,405.00
ED Mostar	217,196.00
ED Bihać	433,607.00
ED Zenica	766,445.00
<i>Fees for air pollution</i>	
Fee for air pollution TPP Tuzla (preliminary budget)	2,194,995.00
Fee for air pollution TPP Kakanj (preliminary budget)	3,497,324.00
Fee for air pollution from TPP Tuzla with interest rates (litigation)	13,796,314.00
<i>Company Headquarters</i>	
POWER IV	10,405,818.00
Capital investments	7,431,359.00
Strategic Development	102,131.00
Education	11,480.00
Water charges and communal utilities	111,888.00
Promotional activities	1,500.00
TOTAL	136,465,077.00

Table 21: Annual sales of waste - recyclables

KM

Organization	Financial resources
Slag and ash from Thermal power plants Kakanj and Tuzla	1,544,980.72
Waste material from JP Elektroprivreda BiH	1,281,699.68
TOTAL	2,826,680.40



Available data for integration of data on investments and costs for environmental protection and use of natural resources are differently profiled and delivered from the branch offices and the Company Headquarters. A large number of activities were realized, which includes significant financial investments, but it was complicated to complete and provide safe financial indicators in this context. Financial indicators for organizational units can be seen from the following tabular overview:

Thermal power plant "Tuzla"

Table 22: Financial indicators of activity in the domain of environmental management

KM

Activity	Financial resources
Closed system of return water	42,075.40
Development of the main design for river Jezero with the development of the peripheral canal for high water	17,000.00
Monitoring of wastewater	13,200.00
Construction of slag and ash landfill Jezero II (closed hydraulic transport system)	244,806.96
Project of reclamation for slag and ash landfill Divkovići I and II	943,210.29
The project of building a new electrostatic precipitator ash silo with capacity $V \geq 3000$ t	191,694.00
Revitalization of Unit 6-215 MW	76,400,572.10
Waste disposal by a certified operator	41,921.10
Financing the development of a Waste Management Plan (disposal of asbestos)	6,000.00
Monitoring of radioactivity	14,000.00
Supply of a device for measuring of the concentration of solid particles in the flue gases for Units 4 and 5	49,240.00
Delivery, installation, commissioning and calibration of measuring devices	30,656.15
Maintaining a system of air emissions monitoring	164,350.00
Water charges, fees for forests and utilities	2,999,320.12
Special water management fee for used water	975,231.00
Promotional activities	4,000.00
TOTAL	81,194,066.83

Thermal power plant "Kakanj"Table 23: Financial indicators of activity in the domain of environmental management KM

Realized activities	Financial resources
Disposal of hazardous waste by a certified operator	5,000.00
The landfill for slag and ash landfill Turbići	506,920.00
Monitoring of radioactivity	22,000.00
Replacement of obsolete equipment and servicing for equipment monitoring system to monitor the environmental impacts of TPP	58,671.51
Building a system for spraying of coal depots	500,000.00
Procurement of equipment for dusting on reloading nodes PČ5 and PČ6	199,460.00
Construction of the fence around the slag and ash landfill	56,360.00
Preparation and revision of the project to reduce the specific consumption of primary energy by increasing the cogeneration	72,600.00
Monitoring of wastewater	33,208.80
Cleaning oil separators	6,720.00
Supply of oil and grease separator with sedimentation pool	133,060.00
Special water management fee for used water	332,940.82
Water charges and communal utility services	502,750.98
TOTAL	2,429,692.11

“Hydro power plants on river Neretva”

Table 24: Financial indicators of activity in the domain of environmental management

KM

Activities I	Financial resources
Geophysical testing and stability testing of Jablanica dam	69,958.00
Improvement of fish stocks in the Neretva river basin (agreements with organizations of sport fishermen)	145,700.00
Supply of concentrate-solution of effective microorganisms for wastewater treatment	9,806.00
Maintenance of green areas and horticultural works	31,655.00
Disposal of municipal solid waste (garbage)	32,000.00
Disposal of waste from the reservoir	2,728.00
Clearing and cleaning of route below transmission lines HPP Jablanica – dam	15,955.20
Clearing and cleaning of route below transmission lines Grabovica-Salakovac	9,462.00
Reforestation which is made on the basis of studies on the protection of reservoirs	112,000.00
Tests for chemical, physical and biological characteristics of wastewater	2,380.00
Disposal of hazardous waste	17,817.50
Procurement of absorbents for oil and chemical pollution	6,242.00
Monitoring of wastewater	6,997.00
Cleaning reservoirs and disposal of oily water	9,632.00
General water charges and charges for water protection and communal utility services	220,492.73
Total	701,825.43
Water charges II	
Special water charges for used water	
HPP Jablanica	566,273.60
HPP Grabovica	213,499.08
HPP Salakovac	306,859.69
	1,086,632.37
Contribution for reservoirs	
HPP Jablanica	5,662,745.96
HPP Grabovica	2,134,990.87
HPP Salakovac	3,068,596.80
	10,866,333.63
Total	11,952,966.00
TOTAL I + II	12,654,791.43

«Elektrodistribucija» Sarajevo

Table 25: Financial indicators of activity in the domain of environmental management KM

Activity	Financial resources
Restocking of the river Osanica - municipality Goražde	2,574.00
Investment maintenance costs SHPP Osanica 1	10,500.00
Special water charges for used water	2,212.21
Water charges and communal utility services	116,185.74
Contribution for reservoir "Bogatići"	41,750.72
Testing of oil for the presence of hazardous substances	87,589.05
TOTAL	174,065.93

«Elektrodistribucija» Tuzla

Table 26: Financial indicators of activity in the domain of environmental management KM

Activity	Financial resources
Tax for protection from natural disasters	59,870.26
Fee for the use of roads	361.55
Restocking of fish in the river Brzava	30,100.00
Testing of oil for the presence of hazardous substances	300.00
Safety testing and observation of the dam	47,000.00
Repair of control gallery of the dam SHPP Snježnica	132,000.00
Purchase of containers and cans for garbage disposal	6,000.00
Hygiene services	48,448.93
Services of clearing of bushes	60,073.80
Special water charges for used water	151,432.90
Contribution for reservoir "Snježnica"	73,738.80
Water charges, fees for forests and communal utility services	433,078.51
TOTAL	1,042,404.75

“Elektrodistribucija” Bihać

Table 27: Financial indicators of activity in the domain of environmental management KM

Activities	Financial resources
Fish stocking	40,779.30
Fee for the use of roads	51,085.20
Tax for protection from natural disasters	2,020.08
Services of clearing of bushes	82,655.00
Demining services	20,000.00
Special water charges for used water	45,462.27
Water charges, fees for forests and communal utility services	191,605.27
TOTAL	433,607.12

“Elektrodistribucija” Zenica

Table 28: Financial indicators of activity in the domain of environmental handling payments KM

Activity	Financial resources
Routine maintenance of buildings	58,703.06
Services of clearing of bushes	87,589.05
Tax for protection from natural and other disasters	72,727.18
Hygiene services	72,515.27
Disposal of hazardous waste	4,095.00
Fee for the use of roads	14,487.32
Water charges and communal utility services	456,327.81
TOTAL	766,444.69

“Elektrodistribucija” Mostar

Table 29 : Financial indicators of activity in the domain of environmental management KM

Activity	Financial Resources
Services of clearing of bushes	2,550.00
Tax for protection from natural disasters	21,000.00
Fee for fire insurance	13,730.00
Hygiene services	43,630.00
Fee for the use of roads	7,310.00
Water charges and communal utility services	128,976.59
TOTAL	217,196.59



11. INSPECTION AND ORDERS

Thermal power plant "Tuzla"

- Federal Inspector for Environmental Protection in Urban Planning - Environmental Inspectorate performed inspection in TPP Tuzla on April 18th 2012 according to report of Community Bukinje. He assessed that report was unjustified. Complaints from Community Bukinje referred to the worsening of living conditions of the population, because of the operation of TPP Tuzla and high dust emissions from landfills Divkovići to the surrounding villages, fields and forests.
- On April 25th 2012 Federal inspector issued a decision, ordering that a report on the amount of emissions of pollutants into the air in 2011 must be submitted by June 30th 2012 to the Environmental Protection Fund and Report for the register of plants and pollution to the Federal Ministry of Environment and Tourism. Obligations from this decision were fulfilled in a timely fashion and the Federal Administration for Inspection received notification of executed orders.

Thermal power plant "Kakanj"

- In 2012 there were three inspections in the field of environmental protection, on the basis of which inspector made three records. Two of the above were regular inspections, and one was a control of compliance with measures imposed.
- Based on the records inspector issued a decision ordering the submission of data on emissions of pollutants in 2011 2012 to the Environmental Protection Fund and Report for the register of plants and pollution to the Federal Ministry of Environment and Tourism. In accordance with the aforementioned required data was submitted within given deadlines.
- Another inspector in his records ordered the update of the Plan of measures in case of excessive air pollution in TPP Kakanj and its submission to the municipal headquarters in charge of air quality. The order was carried out.
- In addition, the federal inspector demanded that the management of packaging and packaging waste must be harmonized with the applicable rulebook prescribing how to manage packaging waste. In respect to this request activities have been initiated in order to adapt the existing system of packaging waste management with the rulebook.

"Elektrodistribucija" Sarajevo

- In 2012 the Water and Environmental Inspector of the Inspectorate of Bosnian - Podrinje Canton executed four controls of generation facility SHPP "Osanica 1";
- First inspection was carried out on March 22nd 2012, and included a review of the calculation, the procedure and terms of payment of obligations under the general water charges and special water charges. Record No. UP-1-12-25-00485/2012-7ES-0001-P was made, in which it was concluded that there was a timely calculation and payment of special water charges for water used for generation of electricity, i.e. that the subject of inspection complied fully with its obligations.
- Another inspection was conducted on August 18th 2012, and included a review of all buildings of SHPP "Osanica 1" as well as the required documents necessary for work. Record, No. UP-1-12-25-00042/2012-7ES-P-7ES-0001-P was made, which confirmed that the subject had necessary water acts and operates in accordance with those acts. There were no objections.

- Third inspection was carried on September 17th 2012 by the Environmental Inspector, who inspected the conditions and measures from the environmental license. Record No. UP-1-12-23-00002/2012-2DŽ-P-2DŽ-0001-P was made where it was stated that subject of inspection met all measures from environmental permits, and that it regularly submitted reports on monitoring and state of safety of buildings. Record also stated that the operator does not manage waste without monitoring.
- On the same day there was the fourth inspection by the water inspector. He re-inspected facilities of SHPP "Osanica 1" as well as the complete documentation for operation. Record No. UP-1-12-25-01487/2012-7ES-0002-P was made, where an infringement was recorded: Inspected subject uses natural resources or goods in general use without a concession contract. Given that SHPP "Osanica 1" was built at a time when there was no legislation in this context, thus no concession contract was made. In accordance with the existing law on concession activities have been initiated for the signing of the concession contract for SHPP "Osanica 1" with the Ministry of Economy of the Bosnian-Podrinje Canton and the text of the contract has been agreed as well as obligations of JP Elektroprivreda BiH for the use of hydropower of the river Osanica.
- Water Inspector of the Cantonal Inspectorate of Canton Sarajevo visited the plant Azići in Sarajevo in December 2012. On that occasion information was exchanged regarding the implementation of the Law on Water.

“Elektrodistribucija” Tuzla

Federal Environmental Inspector performed an inspection of the facilities of SHPP "Snježnica" and SHPP Modrac. The inspector issued two decisions on inspections, with an order to:

- Regulate waste management in accordance with the Law,
- Harmonize internal contingency plan with the municipal civil protection.

Adequate measures and actions were taken on the orders of the inspector in a given period, and the Federal Environmental Inspector was informed.

“Elektrodistribucija” Bihać

Communal Inspectorate of municipality Bihać conducted the following inspections:

- Clearing, cutting and decorating of embankments and banks of supply channels to SHPP "Una" Bihać
- Investigation and review based on the report of the association of sport fishermen "Una" Bihać, with a request for compensation for damage to fish stocks due to work of HPP "Una" Kostela.

Record was made and activities were taken based on the inspector's order for SHPP "Una" Bihać. Based on the report of the association of sport fishermen "Una" Bihać after the inspection, the inspector found that there was no responsibility in the management of generation activities of HPP "Una" Kostela.

In 2012 there were no inspections in other branch offices.

12. RISK ASSESSMENT AND INCIDENT SITUATIONS

Thermal power plant "Tuzla"

There were no incidents, and plan to prevent accidents - incidents threatening environment is described in the procedure PT 44/02 - Preparedness and response in case of emergency. This procedure provides for a program of activities, which are carried out in TPP Tuzla, in identifying potential hazardous situations and unexpected events that may have adverse effects on the environment, as well as the actions to be taken to mitigate the consequences. TPP Tuzla has identified six potential risks of environmental incidents/hazards, such as:

- Explosion of hydrogen during electrolysis, storage and during use and maintenance of the hydrogen plant
- Fire/explosion of a propane-butane bottle or propane-butane storage or explosion in its use,
- Explosion in a warehouse for technical gases (acetylene, oxygen and argon),
- Uncontrolled emissions of SF6 and its decomposition products,
- Fire - explosion in storage of fuel oil,
- Fire in a warehouse of oils and lubricants.

In December 2012 a training and introduction of all employees with the programs and activities to be carried out in the event of environmental incidents was performed.

Thermal power plant "Kakanj"

There were no incidents in 2012 and the following activities were implemented in conjunction with risk assessments and incidents in TPP Kakanj, in accordance with legal provisions, and the requirements of EN ISO 14001:2006:

- Update of the plan to prevent accidents threatening environment,
- Potential environmental incidents that may occur in TPP Kakanj were identified in frame of the procedures of Environmental Management System, which describes how risk assessment and potential incidents. Response programs were developed for cases of each of the identified potential incidents.

"Hydro power plants on river Neretva"

In the facility of the HPP Salakovac there was an oil spill from the caps of the operating circuit into the diffuser of the unit No. 2. Diffuser was cleared and then the valve that failed was dismantled. For the purposes of remediation and cleanup of oil, a team from the HPP Salakovac was engaged according to the procedure OPN 447/01: Reaction in case of environmental hazards, and equipment and supplies from the set for action in the event of an accident was used, as follows:

- Mobile car for accidents with equipment SKO XLT,
- Eco first aid kit.

The facility of HPP Grabovica had an oil spill incident of minor importance due to cracking of temperature probes for bearings oil, and according to the aforementioned procedure the team from the HPP Grabovica facility was engaged in remediation of contamination using the resources and equipment to operate in accident situations.

“Elektrodistribucija” Sarajevo

Plan for prevention of accidents/incidents threatening the environment from December 2010 was updated in September 2012. Procedures in risky situations and incidents and protection measures identified in the Plan are obligation for all employees and there are no exemptions in such unforeseen circumstances.

Rehabilitation of landslides - Bogatići

In 2012 the activities related to the rehabilitation of landslides – Bogatići continued according to the signed Memorandum No. 01-4551/11 on joint activities to address the problem of landslides - Bogatići (Phase I), between the Council of Ministers of Bosnia and Herzegovina, Government of Republika Srpska, Government of the Federation of Bosnia and Herzegovina, JP EP BiH - Sarajevo and Elektrodistibucija a.d. Pale. The implementation of this Memorandum refers to funding of the monitoring of landslide Bogatići with taking of urgent measures and development of studies for rehabilitation of the landslide (Preliminary Design), as the basis for the Main design, which will show how many future phases and financial resources will be necessary to complete remediation of the landslide.

The Agreement on the implementation of the activities envisaged by the Memorandum of joint activities to address the problem of landslide Bogatići between JP EP BiH - Sarajevo and Elektrodistibucija a.d. Pale served as a basis for coordinated activities of research papers and works under Phase I rehabilitation works, which included the following:

- Construction of the access road to the landslide, i.e. area envisaged for removal of excess material,
- Removal of buildings in the area covered by landslide,
- Removal of excess material and biomass to take some load of the landslide,
- Terraced landscaping of the slope (terraces) and leveling of surface to minimize water penetration,
- Construction of drainage channel behind the sliding surface.

These works were completed and subsequently there was drilling for installation of measuring instruments to monitor the sliding and groundwater. On January 23rd 2012 the expert team, appointed by JP Elektroprivreda BiH - Sarajevo and Elektrodistibucija a.d. Pale to coordinate activities submitted its first periodic Information on the joint activities to solve the problem of landslide - Bogatići undertaken on the implementation of the Phase I of Bogatići landslide remediation, with financial indicators, to all signatories.

Rulebook on the content, form, conditions, method of issuing and keeping of water acts (Official Gazette of FB&H, No. 06/08) tightened the measures in the process of construction (rehabilitation, reconstruction and construction), and it is now an obligation to obtain a study environmental impact with aspects of the impact on water from an authorized institution, and to enclose it with the necessary project documentation for obtaining water acts. Such document was internally developed and delivered to the local water agency in the process of obtaining the Water Act for management over reservoir Bogatići in frame of the research works and monitoring for a preliminary design for Bogatići landslide remediation.

On April 19th 2012 JP Elektroprivreda BiH d.d. Sarajevo, branch office "Elektrodistribucija" Sarajevo submitted an application for a water act for filling of the reservoir "Bogatići" in Trnovo to the Agency for the Sava River Basin in Sarajevo, with the aim of monitoring of the impact of reservoir on landslide, and for the purposes of completing investigation works and development of preliminary and main design for the rehabilitation/stabilization of the landslide. On April 25th 2012 the Agency for

Sava River Basin in Sarajevo, issued the Water Order No. UP-I-25-3-40-225-2/12 to branch office "Elektrodistribucija" Sarajevo, approving the filling of the reservoir "Bogatići" on river Željeznica in order to observe the landslide and this order was acted upon and the reservoir filling was started on April 26th 2012.

On the basis of the monitoring results and the completion of investigative works, a proposal of project documentation for reconstruction/stabilization of the landslide was developed, i.e. preliminary design was developed and submitted for review to authorized contracted reviewer.

"Elektrodistribucija" Tuzla

As part of the Plan to prevent major accidents, Management Plan for incidents/accidents threatening environment, an internal intervention plan was developed for this subsidiary. This Internal intervention plan was updated in September 2012, and harmonized with the Intervention plans of territorially competent Civil Protection Headquarters. Procedure EPTZ 447/01 - Preparedness and response to environmental hazards was developed in accordance with it, and training of SHPP "Snježnica" employees was implemented.

"Elektrodistribucija" Zenica

In April 2010 the Subsidiary "Elektrodistribucija", Zenica developed and adopted the Report on the state of security, and the Plan for prevention of major accidents, Description of location of facilities and plants, Description of facilities and plants, Identification and analysis of risks and prevention measures, Protection measures and plan of interventions for prevention of the spread of consequences of accidents, Information on safety precautions, Internal intervention plan and External intervention plan, which were submitted to relevant departments for their further use. In 2012 the Plan for prevention of accidents/incidents, dangerous for the environment was updated.

Plants and facilities of the Subsidiary "Elektrodistribucija", Zenica, which may represent a hazard and cause accidents threatening the environment, are:

- Transmission lines with voltage levels 35 kV, 20 kV and 10 kV, - forest fire – low risk;
- Transformer substations - voltage levels 35 kV, 20 kV and 10 kV, - fire, explosion and transformer oil leaking into the soil and/or water – low risk
- Storage of hazardous waste - fire and explosion, spills of hazardous substances in large quantities and their flow into the city sewer or surrounding permeable soil and/or water, mechanical damage of hazardous waste due to non-compliance with the operating instructions, improper procedures for reloading and handling of hazardous substances and performing other activities at the site, the effects of natural disasters (earthquakes, floods, storms, heavy snow, etc.), the unforeseen actions of third parties and the deliberate actions of third parties (diversions) – low risk;
- Oil pits - fire and leakage of transformer oil into the ground and/or water – low risk
- Solid objects - fire, the effects of natural disasters (earthquakes, floods, storms, heavy snow, etc.) – low risk.

Branch office (Elektrodistribucija) in Tuzla, Zenica, Bihać and Mostar in 2012 had no incidents or emergency measures in the field of environmental protection.

13. DISPUTES IN THE DOMAIN OF ENVIRONMENTAL PROTECTION

Thermal power plant "Tuzla"

In the lawsuit with Tuzla Canton - Ministry of Physical Planning and Environmental Protection, as suitor represented by Cantonal Public Attorney Tuzla, against the Public Enterprise JP Elektroprivreda BiH d.d. – Sarajevo, branch office Thermal power plant "Tuzla", a second instance judgment was adopted No. 03 0 002 804 09 Pž from May 28th 2012, which confirmed the first instance judgment of the Municipal Court in Tuzla No. 032-0-Ps-06-000519 from July 3rd 2009, about compensation for air pollution. Thermal Power Plant "Tuzla", Tuzla, filed an appeal to the Supreme Court on July 4th 2012 with support from the departments of the Company Headquarters.

On July 27th 2012 the Public Enterprise Elektroprivreda BiH d.d. - Sarajevo and Tuzla Canton Government, signed the Agreement on Settlement of Debt according to the final judgment of the Municipal Court in Tuzla, according to which they agreed on the payment of the principal debt, interest rates and litigation costs in installments, and according to which payment of the last installment (installment of principal debt), should happen in January 2013. They also reached an agreement to release debt of – JP Elektroprivreda BiH d.d. – Sarajevo, branch office Thermal power plant "Tuzla" on behalf of the default interest rates for the period from June 30th 2012 until January 1st 2013. godine, and that the signing of this Agreement shall not prejudice the outcome of the appellate proceedings before the Supreme Court. Payment of the final installment took place on December 28th 2012.

Thermal power plant "Kakanj"

Judgment of the Municipal Court in Sarajevo, No. 65 0 136 193 PS 10 PS from August 14th 2012, rejected as unfounded the case of suitor: Zenica - Dobož Canton, represented by the Cantonal Public Attorney Zenica, dealing with compensation for air pollution from Thermal power plant Kakanj for the period June 2003 - December 2004, in the amount of 1,526,105.00 KM including legally prescribed default interest rates starting with September 28th 2009.

Company Headquarters are now being tried by Zenica-Dobož Canton, which submitted an appeal against the above judgment to the Cantonal Court in Sarajevo.

"Hydro power plants on river Neretva "

In the case with suitor Alikadić Adi, as the owner of SZR "ZE-RI-KO" Drežnica against defendant JP Elektroprivreda BiH, Sarajevo for the payment of compensation for damage on the fish pond in amount of 157,000.00 KM, Mostar Municipal Court pronounced the first instance judgment, No. 58 0 Ps 093 973 11 Ps on April 17th 2012 rejecting the claim.

Prosecutor Alikadić Adi appealed against the above first instance judgment of the Municipal Court Mostar before the Cantonal Court in Mostar.

“Elektrodistribucija” Bihać

- Suitor USR "Krušnica" from Bosanska Krupa filed a lawsuit before Municipal Court in Bihać on May 7th 2005, against defendants ED Bihać and Sport Fishermen's Association "Una" from Bihać, for failure to pay an amount of 20,250.00 KM. The lawsuit was filed under case number 017 0 014 788 Ps 05 Ps.

Municipal Court in Bihać ruled on June 24th 2011, dismissing the suitor's claim in its entirety. Suitor appealed against this judgment before the Cantonal Court in Bihać on July 27th 2011. The appeal is still in process.

On September 6th 2010 The Department of Communal - Housing services and Infrastructure of the municipality Bosanska Krupa adopted the Decision No. UP-1-05-14-315/10, with which it set an obligation for ED Bihać to pay the following compensations:

- amount of 14,858.45 KM for 1,485,845 kWh of generated electricity;
- amount of 1,056,547.76 KM for use of 105,654,776 m³ of industrial water

Branch office Elektrodistribucija Bihać timely submitted an appeal against decision on March 22nd 2010 to the Commission for protection of human rights and civil liberties of the Municipal Council of Bosanska Krupa. On April 27th 2010 the Commission adopted the Decision No. 01/V-UP-2-05-14-60/10 with which it dismissed the appeal of Elektrodistribucija Bihać, as unfounded.

Appeal against this decision was filed on October 28th 2010 before the Cantonal Court in Bihać, which rendered its judgment on December 22nd 2010 under No. 01 0 004 172 U 10 U and adopted the appeal and annulled both decisions of the Municipality Bosanska Krupa and returned the case to repeated procedure.

On February 7th 2011 oral hearing was held before the Department for Communal - Housing services and Infrastructure of the Municipality Bosanska Krupa and after that there was no new decision in the administrative proceedings.







Javno preduzeće
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d.d. - Sarajevo

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