

The logo for EPS (Electric Power Industry of Serbia) is centered on a white background. The letters 'EPS' are rendered in a large, bold, dark blue sans-serif font. Below the letters, the words 'ELECTRIC POWER' and 'INDUSTRY OF SERBIA' are stacked in a smaller, lighter blue sans-serif font. The background features abstract, overlapping geometric shapes in various shades of blue, including a large dark blue shape in the top right, a light blue shape in the bottom right, and a dark blue shape in the bottom left. A diagonal white band runs from the top right towards the bottom left, creating a sense of movement and depth.

EPS

ELECTRIC POWER
INDUSTRY OF SERBIA



About us

Public Enterprise Electric Power Industry of Serbia is the largest company in Serbia, representing economic and power backbone of the country. The main activities of PE EPS are electricity generation, supply, distribution and trading.

EPS' **7,330 MW** power plants generate about **35.3** billion kilowatt hours annually; on average during 2008-2017. As a market oriented company, EPS provides regular, secure and reliable electricity supply for about **3.5** million customers.

Lignite used for generation of about **70** percent of electricity in Serbia is produced in Kolubara and Kostolac open cast mines. Between **37** and **40** million tons of coal is mined in MB Kolubara and Kostolac mine Drmno annually.

Renewable energy hydro power plants generate about **10.6** billion kilowatt hours annually, which is about **30** percent of EPS' generation.

EPS also performs the activities of coal production, electricity and heat co-generation, electricity distribution and distribution system management, company management, and cable telecommunication activity.

Every year EPS invests between **200** and **300** million euros in system maintenance and modernization and it promotes Serbian economic development. In 2016, Electric Power Industry of Serbia was the company with the highest realized revenue in Serbia. EPS is also one of the largest Serbian budget contributors.

PE EPS is the founder and owner of two subsidiaries. Distribution System Operator EPS Distribution LLC Belgrade was founded on 1 July 2015 by merger of the previous five distribution companies. The first EPS' company abroad - EPS Trading LLC Ljubljana was founded on 1 July 2014 for electricity trading.

EPS also has founding rights in three public enterprises in Kosovo and Metohija. As of June 1999 EPS cannot operate its capacities in Kosovo and Metohija.

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Organization

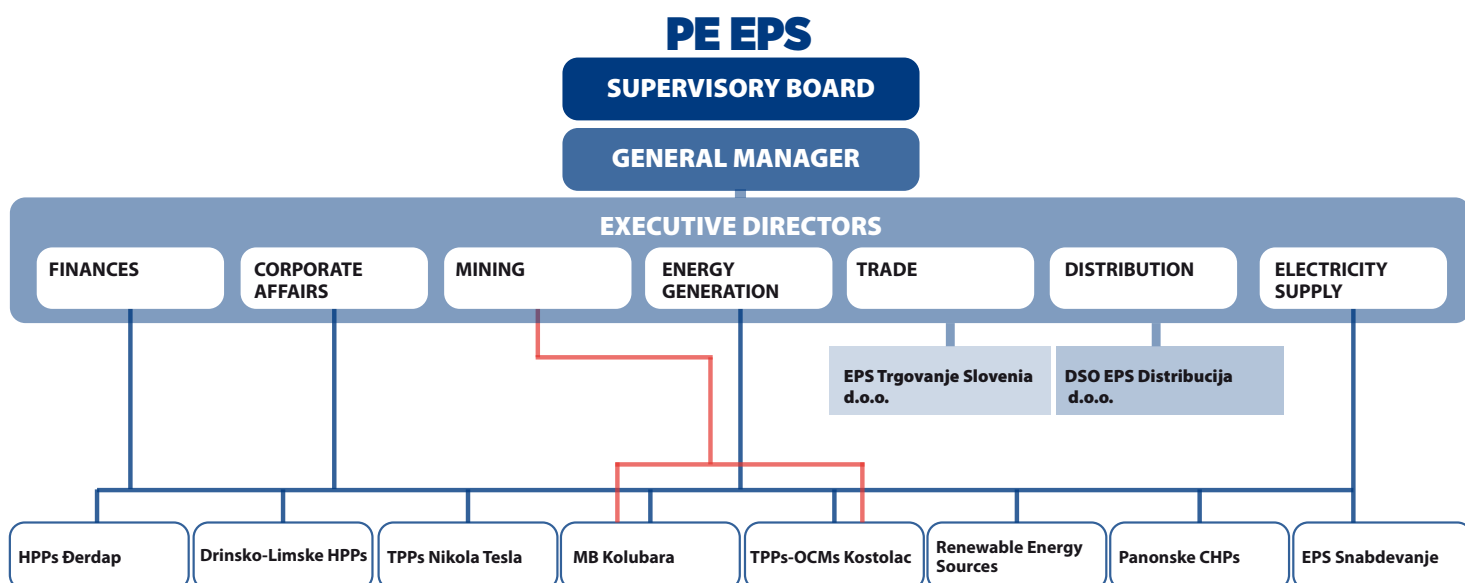
Public Enterprise Electric Power Industry of Serbia is vertically organized power company with subsidiaries - Distribution System Operator EPS Distribution LLC Belgrade and EPS Trading LLC Ljubljana.

The Republic of Serbia is the founder of PE EPS, and the Government of the Republic of Serbia exercises the founder’s rights. PE EPS is 100 percent owned by the Republic of Serbia.

Bodies of the Public Enterprise Electric Power Industry of Serbia are the Supervisory Board and the General Manager. The Supervisory Board members and the General Manager are appointed by the Government of the Republic of Serbia.

PE EPS has seven Executive Directors appointed by the General Manager.

There are also eight branches for electricity and coal production in PE EPS including electricity supply branch.





Tradition

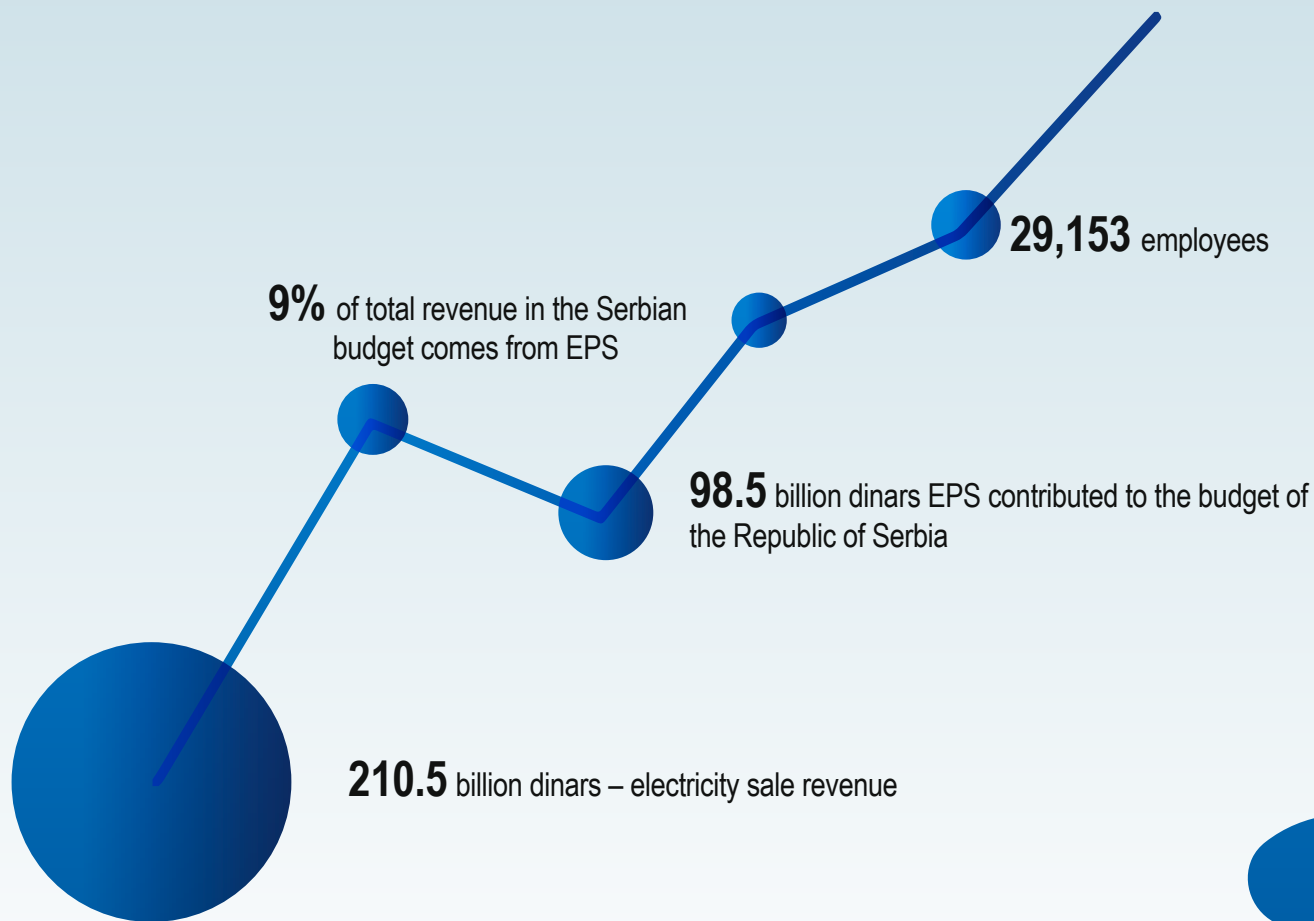
EPS has a tradition which started during the last decade of the 19th century with the beginning of electrification of Serbia. The first public power plant in Serbia, thermal power plant located at Dorćol in Belgrade was put into operation on 6th October 1893. Honoring that event, 6th October is celebrated as the Day of EPS.



Only four years after hydro power plant on Niagara Falls, hydro power plant Pod gradom in Užice on Djetinja River started operating on 2nd August 1900. This was the first power plant in Serbia that operated based on Tesla's principles of alternating currents. This was the first time when the lights were lit in **400** households in Užice.

Towns across Serbia were supplied with the electricity supplied from hydro power plants constructed at the end of 19th and at the beginning of 20th century. Until 1932, when thermal power plant Snaga i svetlost was put into operation in Belgrade, at the time it was the largest one in the Balkans, hydro power plants were the most significant resource of electricity. Five hydro power plants from that time still operate today.

The oldest thermal power plant in EPS' system is TPP Kolubara in Veliki Crljeni, built in 1956.



Mission

Secure electricity supply to all customers under the most favorable market conditions, with continuous service quality promotion, improvement of environmental protection and welfare of the community.

Vision

Socially responsible, market-oriented and profitable company, competitive on the European market with the major impact in the region, recognized as a reliable partner among the local and international companies.

COAL PRODUCTION



The main resource for electricity generation in PE EPS' thermal power plants is lignite from Kolubara and Kostolac mine basins. Production is organized on open cast mines of the branch Mine Basin Kolubara and mine Drmno, TPP-OCM Kostolac branch.

Kolubara basin mines produce three quarters of Serbian lignite and supply thermal power plants Nikola Tesla A, Nikola Tesla B, Kolubara and Morava. The mean annual production in MB Kolubara amounts to about **30** million tons of coal.

About **9** million tons of coal is produced annually in mine Drmno. Due to construction of the new unit B3 in TPP Kostolac B there is an on-going project dedicated to production increase to **12** million tons annually.

Coal produced in mine basin Kolubara provides for the generation of about **51%** of electricity in EPS, and coal from Kostolac mine provides for the additional **20%** of generation.

The record annual coal production in EPS was realized in 2011 and it amounted to **40.3** million tons of coal.





Total coal production in 2017 amounted to **39.06** million tons.

Overburden

In order to reach coal layers, about **100** million m³ of solid matter is mined and deposited annually at EPS' mines.



MB “Kolubara“

Kolubara coal basin is located in the Western part of Šumadija, between Rudovci (eastward), Koceljeva (westward), Stepojevac (northward) and Slovac (southward), and it expands over the area of about **600** square kilometres. The basin stretches East to West, and it is **55** kilometres long and **16** kilometres wide.

Kolubara open cast mines produce about **70** percent of lignite in Serbia.

Nowadays, coal is being excavated at four active mines: “Field B/C”, “Field D”, “Tamnava-West Field” and “Field G”. During operation, these four mines, which are located in the area of municipalities of Lazarevac, Lajkovac and Ub, together comprise one technological and production unit. The coal excavated from open cast mines is processed in refinement and coal separation plant in Vreoci and “Drobilani” in the open cast mine “Tamnava-Zapadno polje”.

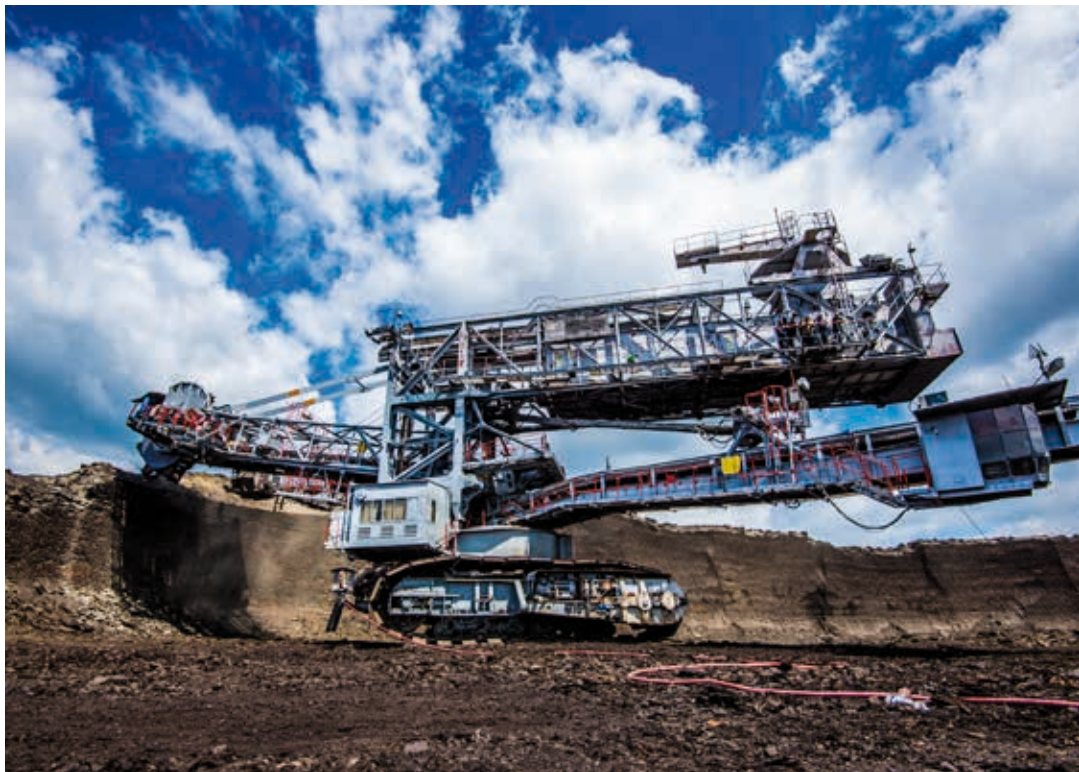
Kolubara coal basin is located approximately **40** kilometres from Thermal Power Plant Nikola Tesla (TENT).

CD “Drmno”

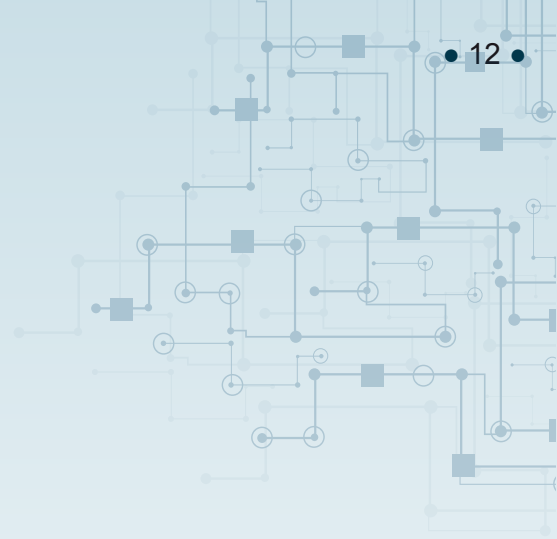
Coal deposit “Drmno” is located in the Eastern part of Kostolac coal basin, i.e. east of the River Mlava and it covers the area of approximately **50** square kilometres. Kostolac basin produces **30** percent of lignite in Serbia and supplies thermal power plants “Kostolac A” and “Kostolac B”.

Eastern and Southern borders of the deposit are natural, i.e. defined by the geological conditions. The Northern border of the deposit is the River Danube, even though the coal seam continuously expands beneath Danube and into the deposit Kovin. Kostolac coal basin is in the close vicinity of thermal power plants “Kostolac A” and “Kostolac B”.





ELECTRICITY



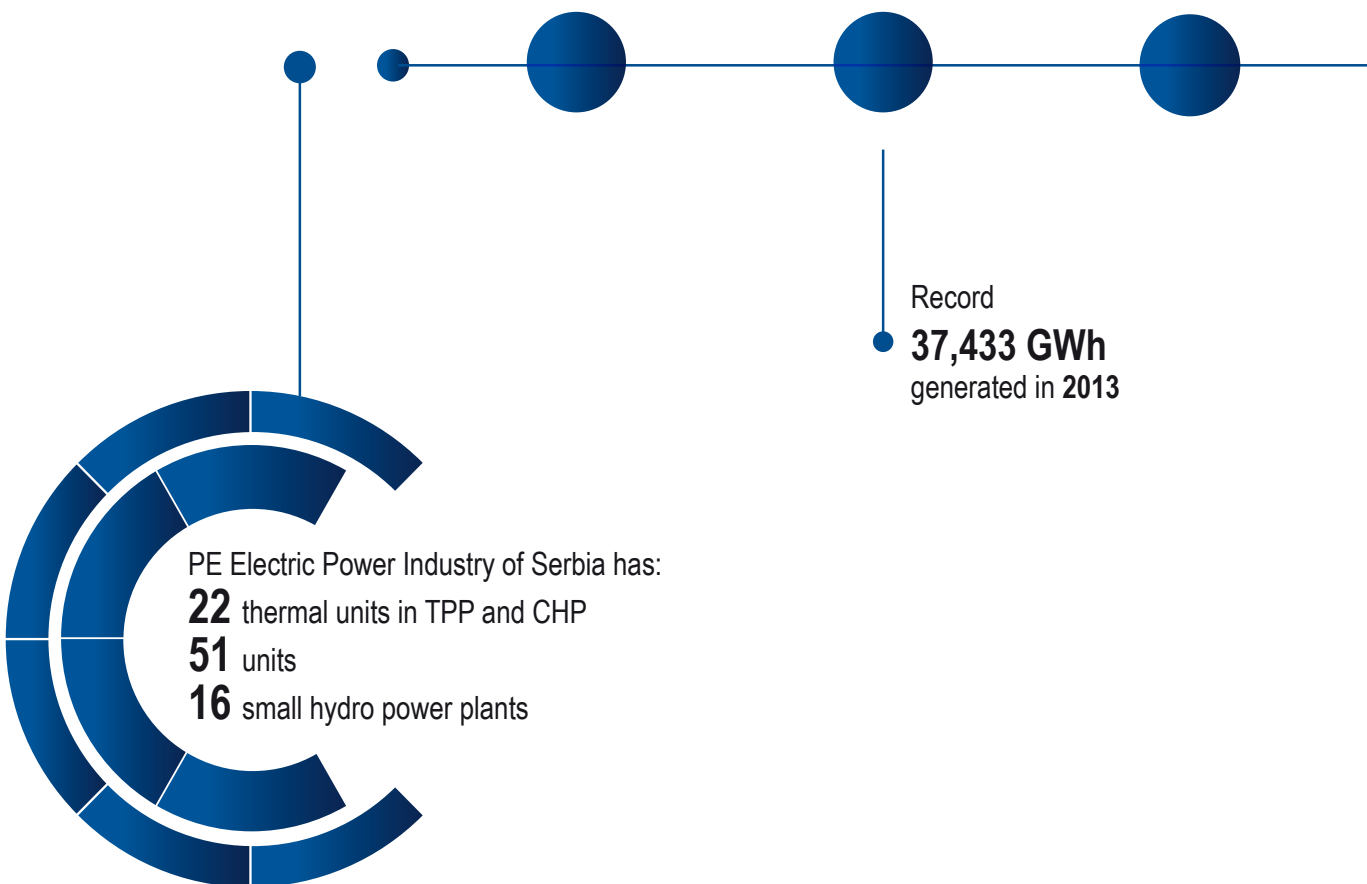
Electricity generation capacities in PE EPS

- **6** thermal power plans
- **3** combined heat and power plants
- **16** hydro power plants
- **16** small hydro power plants

Mean annual generation is **35,292 GWh**

The total power plants capacity is **7,330 MW**

Record **37,433 GWh** generated in **2013**





THERMAL POWER PLANTS



6 thermal power plants

18 units

Total outlet capacity **4,054 MW**.

Погонско гориво је лигнит.

Drive fuel is lignite.

Record annual thermal power plants generation was achieved
in 2013 - **26,537 GWh** of electricity.





TENT

The branch Thermal Power Plants Nikola Tesla is one of the biggest electricity generator in South East Europe.

It comprises of **14** units with total installed capacity of **3,141 MW**, which is more than one third of the installed capacities of Electric Power Industry of Serbia.

Branch Thermal Power Plant Nikola Tesla comprises:

- TPP "Nikola Tesla A"
- TPP "Nikola Tesla B"
- TPP "Kolubara"
- TPP "Morava"

Railway transport of TENT transports up to **100,000** coal on a daily basis.

TENT generates more than **50%** of electricity in Serbia.

The largest units are in TPP "Nikola Tesla B". Those are units B1 and B2, having **610 MW** outlet capacity respectively.

TENT A has the largest capacity in PE EPS.



“TPPs-OCMs Kostolac“

The branch “TPPs-OCMs Kostolac“ comprises the following thermal power plants:

TPP “Kostolac A“

TPP “Kostolac B“



Record – **6,862 GWh** generated in 2017.

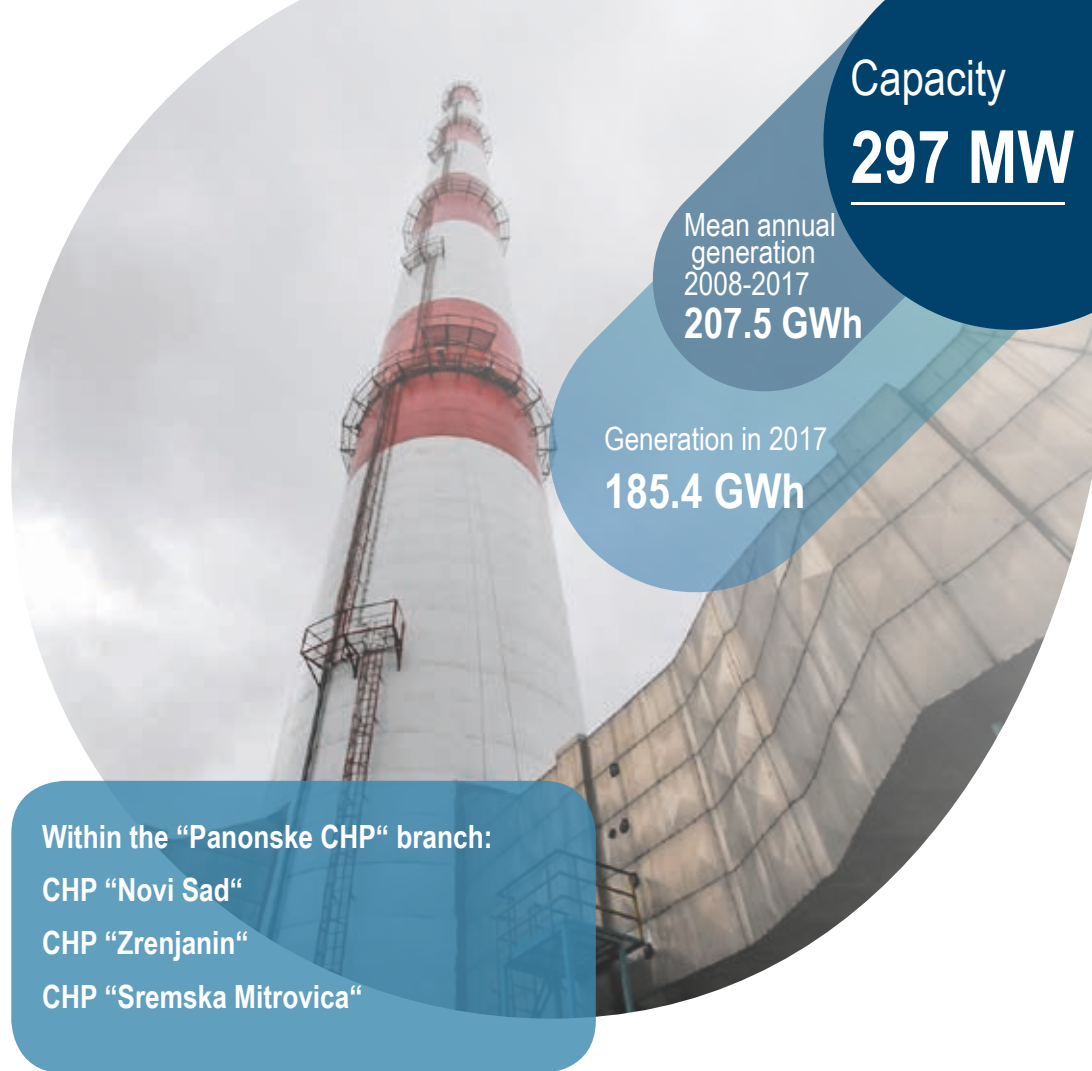
TPP “Kostolac A“ and TPP “Kostolac B“ had mean annual generation of **5,717 GWh** for the period from 2008 until 2017.

Installed capacity:

310 MW TPP “Kostolac A“

700 MW TPP “Kostolac B“





Combined heat and power plant

“Panonske Combined heat and power plant“ Novi Sad (Panonske CHP) generate electricity for the need of Serbian electrical power system, heating power for the needs of heating plants in Novi Sad, Zrenjanin and Sremska Mitrovica, and process steam for the needs of industry.

The plants generate electricity using contemporary, cogeneration process that enables savings in the use of main fuel – natural gas or fuel oil, up to **25%** when compared to the separate generation of electricity and heating. CHP in Sremska Mitrovica uses the combustor for burning sunflower shells.

Total outlet capacity is **297 MW** for electricity generation, **505 MW** for heating power generation, and **830 t/h** (tons per hour) of process steam for processing industry.



HYDRO POWER PLANTS

PE EPS comprises **15** hydro power plants with **49** units, **1** pumped-storage hydro power plant with **2** units, **1** pumping plant with **2** pumps and **16** small hydro power plants.

Total installed capacity **2,979 MW**.

In the period from 2008 until 2017 hydro power plants had mean annual electricity generation of **10,614 GWh**, i.e. approximately **30%** of PE EPS electricity generation.





“Đerdap Hydro Power Plants“

Branch “HPP Đerdap“ comprises **7** HPPs with **28** units, having installed capacity of **1,592 MW** and mean annual electricity generation of **7,324 GWh** for the period 2008 – 2017, which makes approximately **20%** of PE EPS electricity generation.

HPP “Đerdap 1“ with **6** units with installed capacity of **1,113 MW**.

HPP “Đerdap 2“ with **10** units with installed capacity of **270 MW**.



“Vlasinske HPP” – “Vrla 1“, “Vrla 2“, “Vrla 3“ and “Vrla 4“ with **10** units with installed capacity of **129 MW**.

HPP “Piroć” with **2** units with installed capacity of **80 MW**.



“Drinsko-Limske hydro power plants”

9 HPPs with **23** units having installed capacity of **1,366 MW**.
 Mean annual generation in “Drinsko-Limske HPPs” for the period from 2008 until 2017 is **3,281 GWh** electricity, which represents approximately **10%** of PE EPS total generation.

“Bajina Bašta” HPP with **4** units having installed capacity of **420 MW**.

“Bajina Bašta” PS HPP with **2** pumped-storage units having installed capacity of **614 MW**.

“Zvornik” HPP with **4** units having installed capacity of **103 MW**.

Limske hydro power plants HPP “Bistrica”, HPP “Kokin Brod”, HPP “Uvac” and HPP “Potpeć”.
 Limske hydro power plants have **8** units with installed capacity of **211 MW**.

HPP “Elektromorava”, comprising HPP “Međuvršje” and HPP “Ovčar Banja”, with total **5** units having installed capacity of **18 MW**.

Capacity
1,366 MW

3,281 GWh
 annually



DISTRIBUTION

EPS distribution system enables uninterrupted operation of electricity market in accordance with the legislation of the Republic of Serbia and European Union directives.

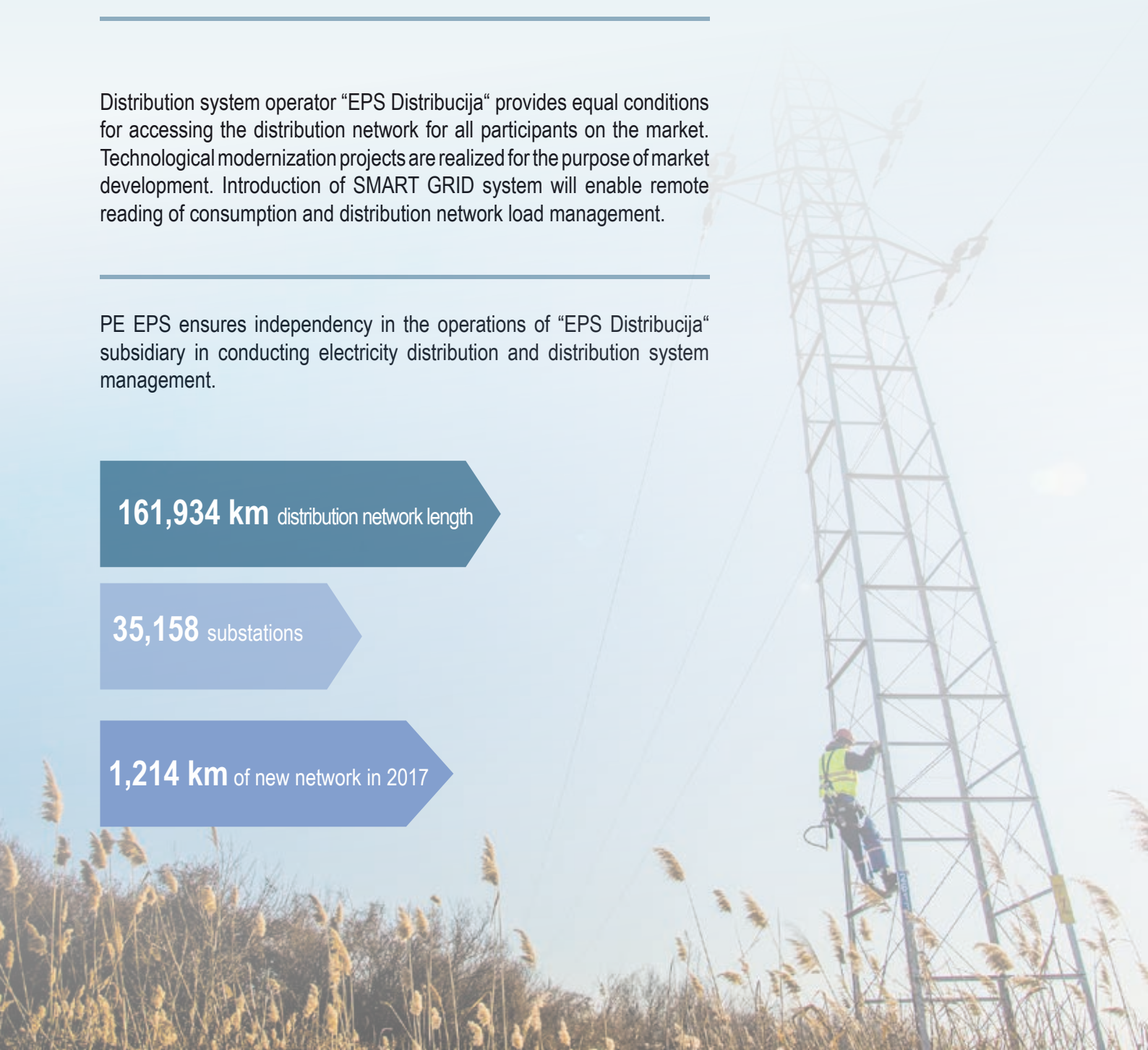
Distribution system operator “EPS Distribucija” provides equal conditions for accessing the distribution network for all participants on the market. Technological modernization projects are realized for the purpose of market development. Introduction of SMART GRID system will enable remote reading of consumption and distribution network load management.

PE EPS ensures independency in the operations of “EPS Distribucija” subsidiary in conducting electricity distribution and distribution system management.

161,934 km distribution network length

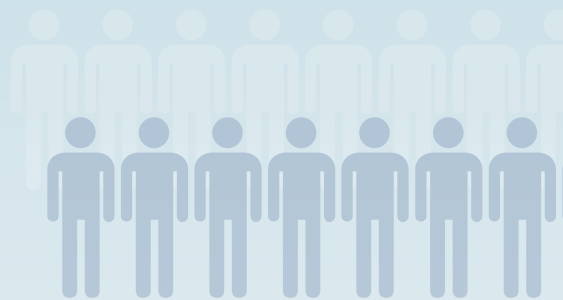
35,158 substations

1,214 km of new network in 2017





CUSTOMERS



Electric Power Industry of Serbia provides regular, safe and reliable supply for all its customers.

Total number of customers – **3,477,716**

Electric Power Industry of Serbia is ready to keep its position of the leading company even on the fully liberalized market, fighting the competition, not only in Serbia but in the region as well. The customer recognizes and always returns to EPS since EPS offers the most favourable prices and the most complete service.

Priorities:

- Continuous improvement of customer relations
- Introduction of new technologies and modern trends in business operation for the purpose of application of new services on the market
- Winning over new customers in market competition conditions

By creating the partnership with customers, EPS can retain the leading position on the electricity market in Serbia. The aim is for the customers to still recognize EPS as the stable and competitive supplier, which can only be achieved through quality and new services and constant communication.

According to the latest data, in the first half of 2018, EPS had a share of **98** percent on Serbian electricity market, while the other suppliers' remaining share was **2** percent.

Redesigned corporate website: **www.eps.rs**.

New EPS website represents only the first step in improving its market competitiveness and in getting closer to the customers. Services and applications are being prepared to enable customers to get quickly and easily informed and to avoid coming to the counter. EPS plan is to develop customer's service (call centre) to enable more quality operations with customers and to improve business operations.



Supply

In accordance with EU directives on electricity market deregulation and liberalization, the activities of electricity supply and distribution are unbundled in EPS. Unbundling was necessary for the purpose of the second phase of market opening as of 1 January 2014, while as of 1 January 2015 the market was opened for all customers...

EPS is guaranteed supplier of all electricity customers being supplied at the regulated prices. As of 1 January 2014 it performs the activities of supplying other end customers at the open electricity market.

supply	2017	2016	2015
guaranteed	15,601 GWh	16,130 GWh	17,221 GWh
commercial	11,911 GWh	11,070 GWh	9,640 GWh
last resort supply	187 GWh	207 GWh	543 GWh
total sale	27,699 GWh	27,407 GWh	27,404 GWh

Electricity Trading

2,235 GWh sale on the free market in 2017

Electricity trading is performed for the purpose of balancing and optimizing single electric energy portfolio of PE EPS BRP (PE EPS balance responsible party) with the aim of achieving maximum profit from the available primary energy and sale of system services to the transmission system operator.

Company "EPS Trgovanje" d.o.o. Ljubljana was established on 1 July 2014 as the first company that PE EPS established abroad for the purpose of electricity trading. PE EPS is trading through its daughter company "EPS Trgovanje" d.o.o. Ljubljana on the electricity exchange HUPX (Hungary) as of 2 April 2015.

Electricity sale	2016	2015	2014
Full supply (to end customers and according to the contracts)	33,371 GWh	33,729 GWh	32,461 GWh
On the free market	3,943 GWh	2,901 GWh	985 GWh

INVESTMENTS



Every year EPS invests between **200** and **300** million euros into system.

Investments into modernization of generation, revitalization of power plants, system safety and investments into environmental protection are some of the measures that EPS implements towards the income increase and more successful business operations.

Construction of a modern and efficient **350 MW** “Kostolac B3” unit in TPP “Kostolac B” which will be compliant with all ecology-related EU regulations, has begun.



Projects:

- Coal quality management
- Environmental protection improvement
- Revitalization and modernization of TPP and HPP
- EPS generation capacities energy efficiency increase
- Introduction of advanced networks in the distribution sector
- Reconstruction and modernization of metering equipment for management and control of consumption by introducing advanced Smart metering infrastructure
- Automation of middle voltage network



RENEWABLE ENERGY SOURCES AND ENERGY EFFICIENCY



Committed to:

- Application of the state-of-the-art technologies in the field of renewable energy sources use;
- Increase of the level of utilization and economically justifiable and sustainable energy development, primarily based on water resources.

Priorities:

- Revitalization and modernization of the existing large and small hydro power plants.
- Construction of new hydro power plants;
- Development of wind farms and solar power plants.

Energy efficiency is becoming more and more important. That is one of the priorities in the Strategy of Sustainable Development of the Republic of Serbia and an important element of energy policy of the company.

The aim is also to increase energy efficiency of all EPS capacities and introduction of energy management system.

Strategic interest -

to increase the share
of renewable energy sources in
electricity generation



Integrated Management System

One of the most important priorities of EPS is process-based organization of business operations and compliance with the requirements of international standards through implementation of the project on introduction and certification of management system and their integration into unique integrated management system – IMS. Through implementation, maintenance and continuous improvement of various management systems, EPS improves its business effectiveness and efficiency, continually works on satisfying the expectations of the users and all other interested parties, identifying and reducing risks, as well as understanding the company's business context.

Former companies for coal production and electricity generation (now PE EPS branches) and companies for electricity distribution (now distribution system operator) set and certified their business systems according to the requirements of international standards ISO 9001, ISO 14001, OHSAS 18001 and performed their integration. Some of them have implemented, integrated and certified management systems also according to ISO/IEC 27001 and ISO 50001 requirements. Significant changes in the existing management systems are ongoing due to the transition to new versions of standards.

Developed integrated management systems contribute to significant savings at the national level and provide identifiable benefits to society. EPS is absolutely committed to ethics in business, environmental protection care, safety and protection at work, raising awareness of the importance of energy efficiency and information security and social responsibility.

The necessity of applying the quality infrastructure requirements and fulfilling the legal requirements of the technical regulations, in a systematic and systematic manner, in accordance with the Energy Law and the requirements of the Third Package of EU Directives in the field of energy, has been recognized.

In the forthcoming period, activities are planned related to standardization of application of quality infrastructure requirements in the entire company, as well as the exercise of rights and obligations on that basis.



CORPORATE SOCIAL RESPONSIBILITY

As the socially responsible company, EPS is fully committed to development of the community in which it operates, and improvement of life quality, through the support for the science and education, healthcare, culture, sport, humanitarian activities and preservation of spiritual values.

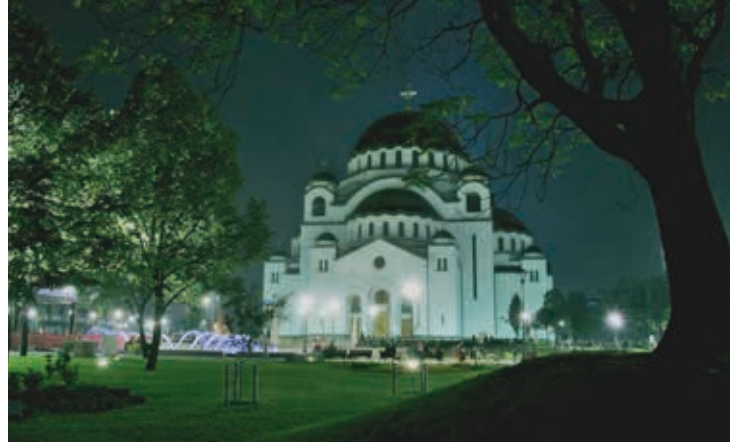
Electric Power Industry of Serbia is the major donor of Serbian healthcare. The company has provided financial assistance for the improvement of work conditions of the largest healthcare institutions in Serbia, as well as for the procurement of medical apparatus, equipment and drugs.

EPS supports the work of institutions specialized for persons with disabilities. The company has provided financial assistance to equip sensor rooms at homes of the persons with developmental disabilities in Belgrade, Veternik, Kulina, Šabac and Niš.

The event “Games without boundaries for children with special needs”, the association “In center” within the project for development of social entrepreneurship, as well as the project “Little Big People” were supported. EPS provides full support for the youngest and their safe growing up and is the largest corporate donor to UNICEF’s “Schools without Violence”. The company also supports the program for the development of children in early childhood and became part of campaign “Each moment matters” implemented by UNICEF, in cooperation with the Government of the Republic of Serbia and competent ministries.

Electric Power Industry of Serbia has supported work of The National Association of Parents of Children with Cancer (NURDOR) in order to assist parents whose children suffer from this disease.





За свако дете најбољи почетак

Развојна саветовалишта помажу развој Ваше деце

Управно министарство Србије EPIC UNICEF

ENVIRONMENTAL PROTECTION



Environmental protection is one of the priorities of business operation of Electric Power Industry of Serbia and substantial part of the strategy of company management. Ecologically sustainable business operation aligned with EU regulations, EPS conducts by a number of activities on environmental preservation, simultaneously upgrading the generation productivity and generation capacities' efficiency.

In the period from 2016 to 2025 EPS shall invest about EUR **860** million in order to meet stringent EU environmental criteria. In order to reduce environmental impact to the minimum, systematic investments into modernization of equipment and introduction of state-of-the-art technologies in coal production and electricity generation are being made. Air protection projects are the first on the list.

Measures that EPS undertakes shall reduce emissions of particulate matter until 2026 by **94** percent, emissions of nitrogen oxide shall be reduced almost by half. The largest effect shall be seen in sulphur dioxide emission that shall be reduced by **90** percent.

Most significant environmental protection projects are the following:

- Electrostatic Precipitator Reconstruction;
- Construction of Ash and Slag Handling System;
- Construction of Desulphurization and Denitrification Plant;
- Landfills Modernization;
- Preservation of Accumulation Water Ecosystem and Riparian Area Ecosystem;
- PCB Oils Removal from Power Facilities;
- Waste Management.





EMPLOYEES

People represent the most valuable resource of EPS and their health and safety at work are the priority for human resources management.

Continuous reduction of injuries at work is recorded. Contemporary technical, ergonomic, organizational and health measures are being applied in order to reduce injury risk. Preventive and periodical tests and controls of operational equipment and working conditions are being conducted.

EPS organizes medical check-ups and specialized health controls. It monitors the employees' health status and encourages rehabilitation and recreation.

Employees have the opportunity for professional training, knowledge and skill improvement. They may attend the trainings and take part in the work of professional conferences.

Each new project, business step and decision is aligned with the realization of the vision of the company that is turned towards the market – a competitive, profitable and socially responsible company. Thus EPS is recognized as reliable partner to business community and as one of the most desirable employers in Serbia.



