

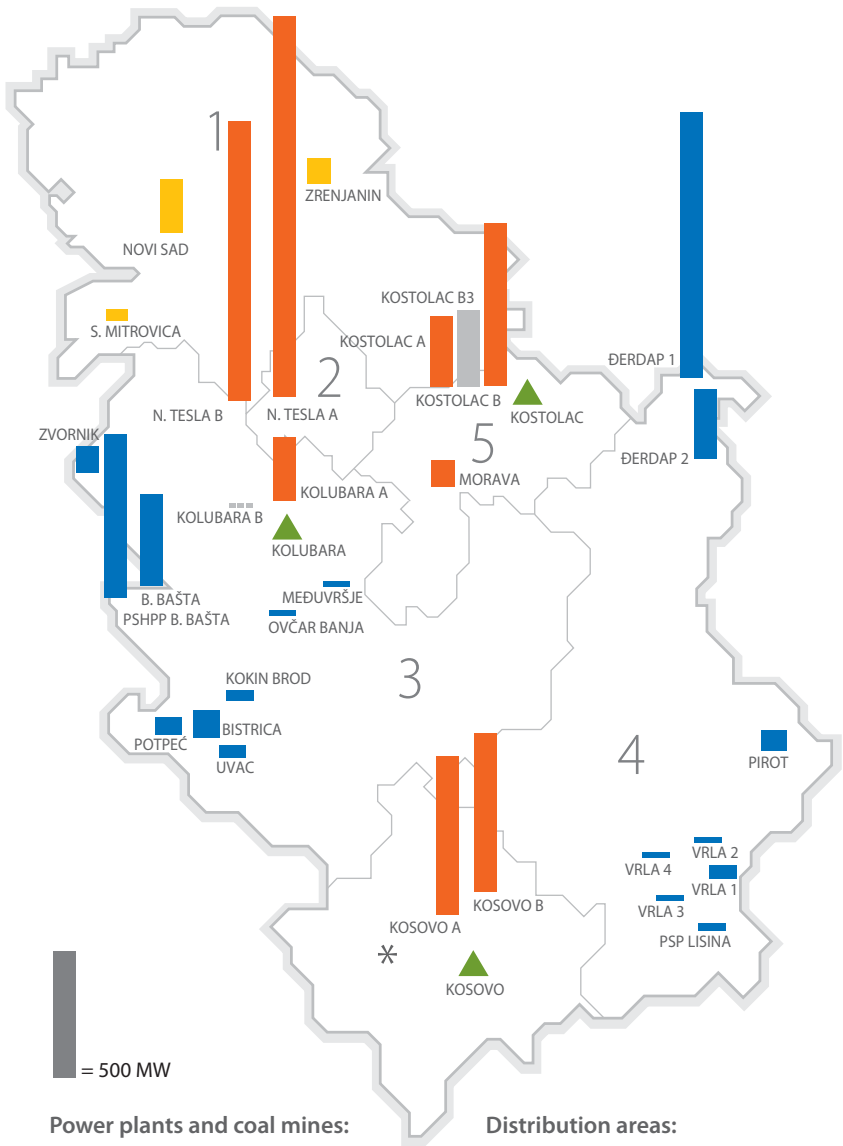
ELECTRIC POWER INDUSTRY OF SERBIA



TECHNICAL REPORT

2018

EPS INSTALLED CAPACITIES



Power plants and coal mines:

- TPP
- TPP UNDER CONSTRUCTION
- TPP potentially place
- CHP
- HPP
- ▲ COAL MINE

Distribution areas:

- 1_Novi Sad
- 2_Beograd
- 3_Kraljevo
- 4_Niš
- 5_Kragujevac
- *_PE Elektrokosmet, Priština

* As of June 1999, EPS does not operate its facilities on the territory of Kosovo and Metohija

EPS 2018

Data related to capacities managed by
Public Enterprise Electric Power Industry of Serbia

GENERATION CAPACITIES Net output capacity	7,401	MW
ELECTRICITY GENERATION	34,345	GWh
COAL PRODUCTION	36,977,836	t
OVERBURDEN REMOVAL	99,181,662	bcm
ELECTRICITY SALE	35,605	GWh
In EPS Group	33,387	GWh
Out of EPS Group	2,218	GWh
ELECTRICITY PURCHASE Out of EPS Group	1,259	GWh
NUMBER OF CUSTOMERS		
Total	3,507,133	
Guaranteed supply	3,482,885	
Last resort supply	3,941	
Commercial supply	20,307	

GENERATION CAPACITIES

POWER PLANT	Net output capacity MW
TPP Nikola Tesla A	1,622
TPP Nikola Tesla B	1,220
TPP Kolubara	216
TPP Morava	108
TPP Kostolac A	281
TPP Kostolac B	632
THERMAL Power Plants	4,079
CHP Novi Sad	208
CHP Zrenjanin	100
CHP Sremska Mitrovica	28
COMBINED Heat and Power Plants	336
HPP Đerdap 1	1,113
HPP Đerdap 2	270
Vlasina HPPs	129
HPP Pirot	80
HPP Bajina Bašta	420
PSHPP Bajina Bašta	614
HPP Zvornik	111
HPP Elektromorava	18
HPP Potpeć	51
HPP Bistrica and HPP Kokin Brod	124
HPP Uvac	36
Mini HPPs	20
HYDRO Power Plants	2,986
EPS POWER PLANTS	7,401

ELECTRICITY GENERATION

POWER PLANT	GWh
TPP Nikola Tesla A	7,878
TPP Nikola Tesla B	7,733
TPP Kolubara	560
TPP Morava	444
TPP Kostolac A	2,010
TPP Kostolac B	4,329
THERMAL Power Plants	22,954
CHP Novi Sad	238
CHP Zrenjanin	0
CHP Sremska Mitrovica	0
COMBINED Heat and Power Plants	238
HPP Đerdap 1	5,175
HPP Đerdap 2	1,475
Vlasina HPPs	394
HPP Piroć	145
HPP Bajina Bašta	1,811
PSHPP Bajina Bašta	754
HPP Zvornik	502
HPP Elektromorava	78
HPP Potpeć	230
HPP Bistrica and HPP Kokin Brod	473
HPP Uvac	72
Mini HPPs	44
HYDRO Power Plants	11,153
TOTAL	34,345

ELECTRICITY SUPPLY

SALES CHARACTERISTICS

Supply type	Number of metering points	Number of customers	Electricity (GWh)
GUARANTEED	3,513,409	3,482,885	14,852
LV I Level	14,100	12,098	321
CS	3,498,276	3,470,120	14,503
LV II Level	250,565	223,554	1,101
Households	3,247,711	3,246,566	13,402
PL	1,033	667	28
LAST RESORT	5,487	3,941	174
HV	1	1	3
MV	121	115	118
LV	5,365	3,825	53
COMMERCIAL	129,031	20,307	12,883
HV	34	31	21,835
MV	4,455	3,119	6,703
LV	104,252	16,874	3,529
PL	20,290	284	467
TOTAL	3,647,927	3,507,133	27,909

LV - Low Voltage
 MV - Middle Voltage
 HV - High Voltage

CS - Consumer Spending
 PL - Public Lighting

HOUSEHOLD CATEGORY

AVERAGE CONSUMPTION
 per month

345 kWh

**NUMBER OF
 METERING POINTS**

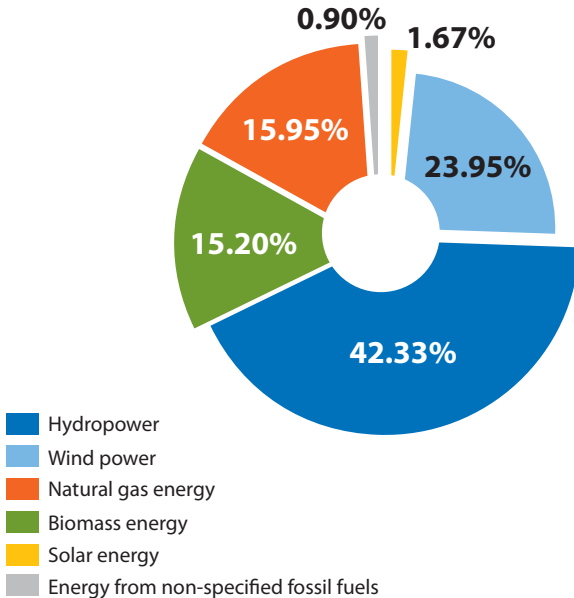
3,247,711

RES FEED-IN TARIFF ELECTRICITY GENERATION

Feed-in tariff electricity volumes

PRIMARY ELECTRICITY SOURCES	(MWh)
Solar energy	10,520.68
Wind power	150,418.69
Hydropower	265,916.74
Geothermal energy	0
Biomass energy	95,494.46
Energy from non-specified renewable energy sources	0
Hard coal energy	0
Lignite and bituminous coal energy	0
Natural gas energy	100,187.69
Energy from petroleum and petroleum products	0
Energy from non-specified fossil fuels	5,626.35
Nuclear power	0
TOTAL	628,164.61

Structure of feed-in tariff electricity generation



PURCHASE OF ELECTRICITY FROM RES BY PRIVILEGED PRODUCERS

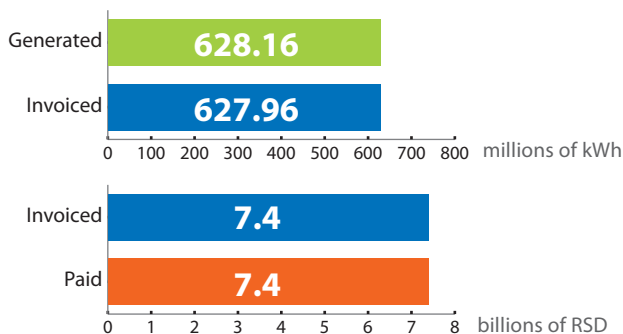
Collected and disbursed funds for incentives for privileged producers

INVOICED AND COLLECTED INCENTIVE FEES	Invoiced	Collected
	(excluding VAT, in billion RSD)	
Guaranteed supplier for end customers	1.38	1.35
Suppliers for end customers	1.35	1.32
Distribution / Transmission system operator for end customers	0.016	0.016
TOTAL	2.75	2.69

Fees for privileged electricity producers

0.093
RSD/ kWh

POWER VOLUME



177

Number of producers

237

Number of power plants

ELECTRICITY TRADE

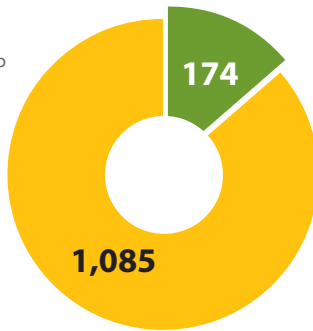
Total scope of electricity trade in
free wholesale market

3,221 GWh

PURCHASE

Out of EPS Group

GWh



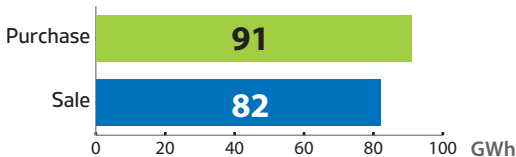
- Free market
- According to agreements on business and technical cooperation with ERS and JSC EMS* on electricity delivery for compensation programs

TOTAL

1,259

*ERS - Electric Power Industry of the Republic of Srpska
JSC EMS - Elektromreža Srbije Joint Stock Company

Cooperation with Electric Power Industry of the Republic of Srpska According to agreements on business and technical cooperation



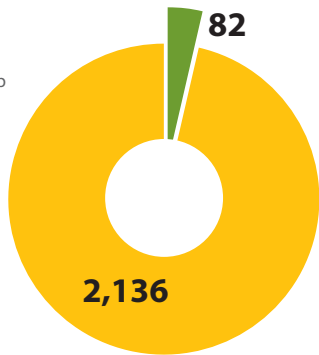
- ▲ Total sale at SEEPEX amounted to 213 GWh, while total purchase amounted to 230 GWh. Sales via EPS Trgovanje at the markets in Hungary (HUPX), Croatia (CROPEX) and Slovenia (BSP Southpool) amounted to 556 GWh, while total purchase at those markets amounted to 143 GWh.



SALE

Out of EPS Group

GWh



- Free market
- According to agreements on business and technical cooperation with ERS

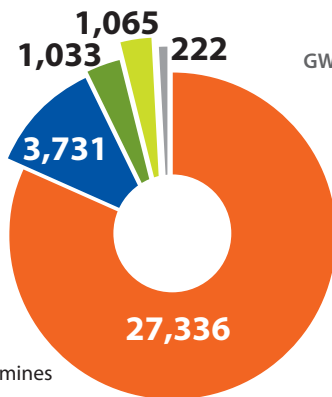
TOTAL

2,218

SALE

In EPS Group

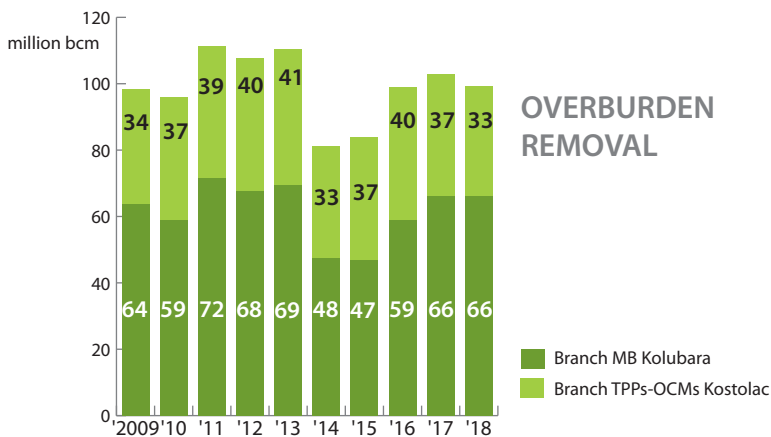
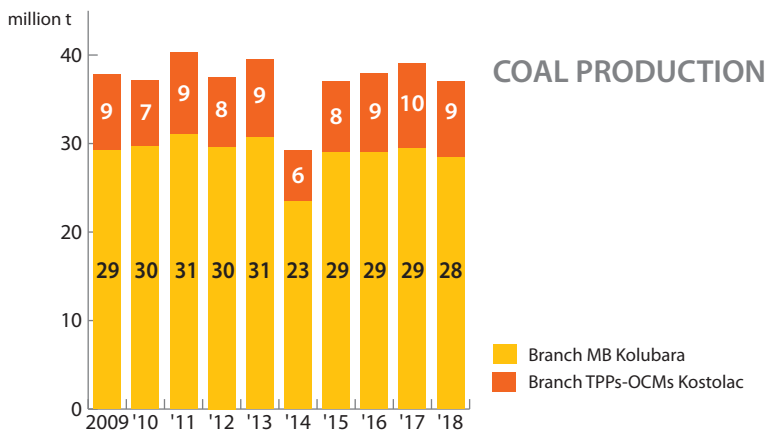
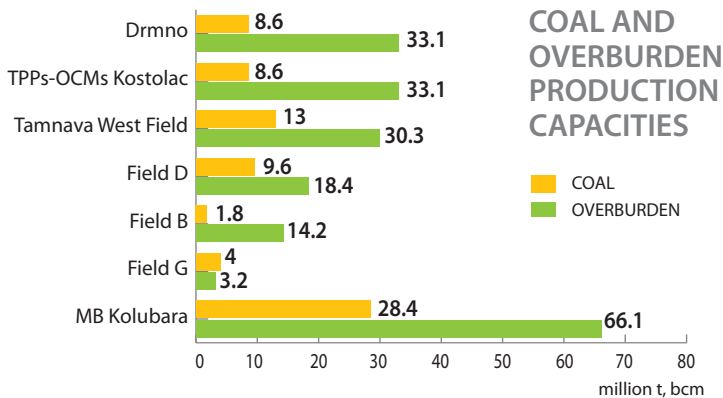
GWh



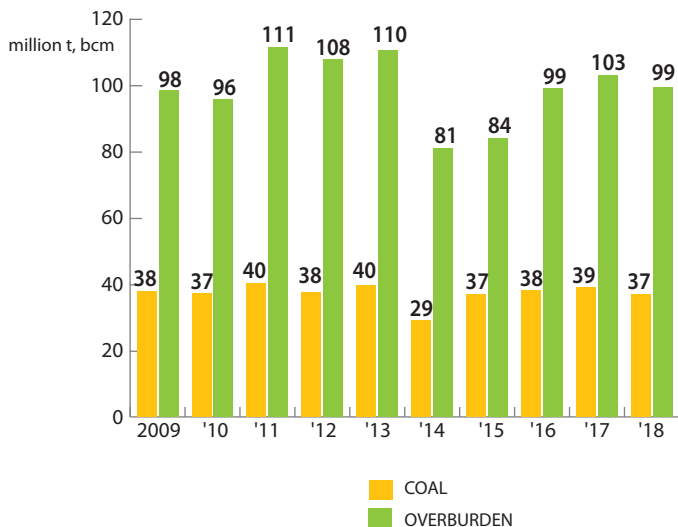
- EPS Supply
- DSO EPS Distribucija
- Power plants and coal mines
- PSHPP and PSP
- PE Elektrokosmet

TOTAL

33,387



TOTAL COAL AND OVERBURDEN OUTPUT



STRUCTURE OF SUPPLY OF THE PRODUCED COAL

(t)	MB Kolubara	TPPs-OCMs Kostolac	EPS
For TPPs	27,211,080	8,425,112	35,636,192
For drying	779,188	/	779,188
For industry	175,047	179,101	354,148
For heating plants	208,308	/	208,308
TOTAL	28,373,623	8,604,213	36,977,836

STATISTICAL DATA ON DISTRIBUTION GRID

Distribution areas	Number of substations	Installed capacity of substations (MVA)
Novi Sad	7,964	7,031
Beograd	5,433	7,044
Kraljevo	12,477	8,102
Niš	6,665	5,406
Kragujevac	2,865	2,409
TOTAL	35,404	29,992



- THE PERCENTAGE OF REALIZED LOSSES IN DISTRIBUTION NETWORK

12.16

- CONSTRUCTION/RECONSTRUCTION/RENOVATION OF TRANSFORMER STATIONS

2 to 110/x kV

5 to 35/10 kV

234 to 20 (10)/0.4 kV

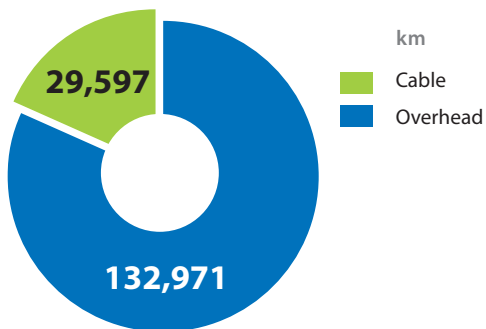
- CONSTRUCTION OF CABLE LINES

35 kV **27.02 km**

20 kV **155.88 km**

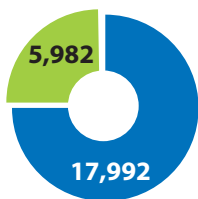
10 kV **174.21 km**

STRUCTURE OF DISTRIBUTION LINES (owned by DSO EPS DISTRIBUCIJA)

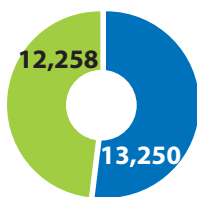


TOTAL **162,568** km

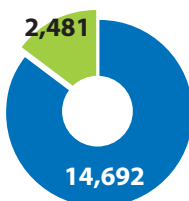
DISTRIBUTION AREAS



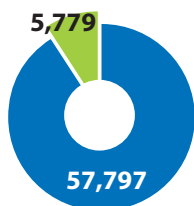
Novi Sad



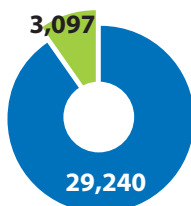
Beograd



Kragujevac



Kraljevo



Niš

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