

Public Utility
ELEKTROMREŽA SRBIJE 2006

COMPANY'S ID

Name of the Company:

Public utility for electric energy transmission and transmission system operation on the territory of the Republic of Serbia "Elektromreža Srbije"

Abbreviated Name:

JP EMS

Established:

By the Decision of the Government of the Republic of Serbia, EMS functions as an independant Public utility from the July 1 2005

Ownership Structure:

100% owned by the Rublic of Serbia

Registered:

By the Decision of the Business registers Agency of the Republic of Serbia BD 80469/2005

Address:

Belgrade, Kneza Miloša 11

Registration No.: 20054182 **VAT:** CP 103921661

Company Administration:

Managing Board, Supervisory Board and General Director

President of the Managing Board: Dobrica Perac

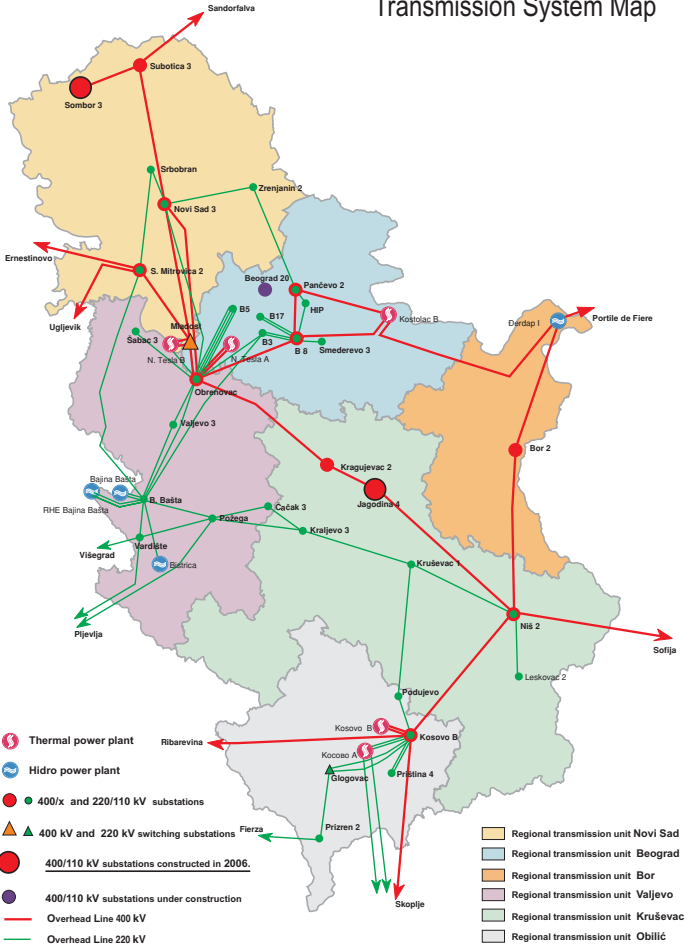
General Director: Dragan Vignjevic

Number of Employees: 1379 (on December 31 2006)

Core Acitivities:

- Transmission of electric energy
- Transmission system operationl
- Organiyation of electricity market
- Trade of electric energy for ancillary services
- Research and Development
- Design, construction, maintenance and operation of networks belonging to transmission system and electric power facilities and other power facilities
- Design, construction, maintenance and operation of telecommunication facilities and units
- Technical examination and analysis
- Engineering
- Foreign trade affairs

Transmission System Map



Management

PU EMS	BEOGRAD	Kneza Miloša 11
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Transmission Control Centres

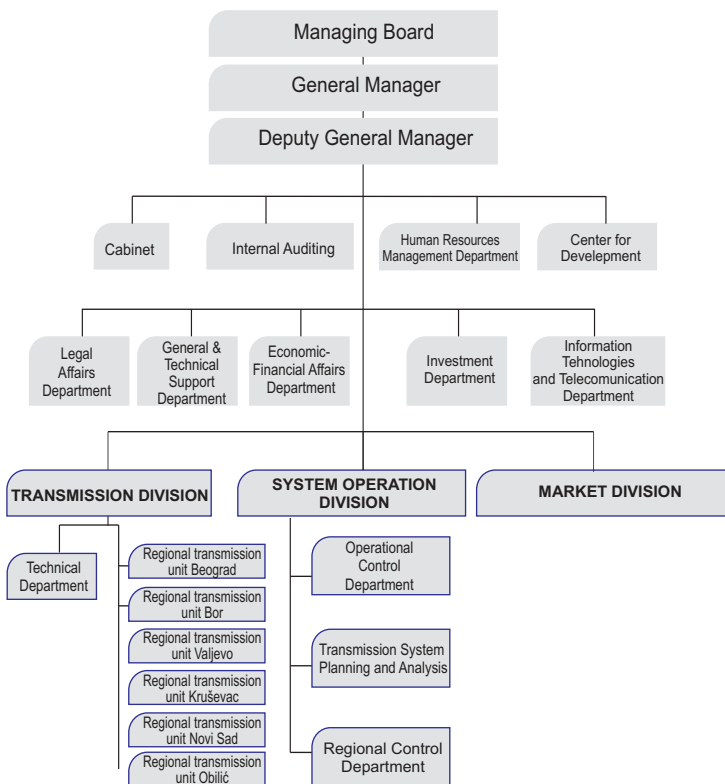
NDC*:	BEOGRAD	Vojvode Stepe 412
RDC**:	BEOGRAD	Rovinjska 14
	BOR	Nade Dimić 40
	VALJEVO	Bore Baruha 13
	KRUŠEVAC	Župski put b. b.
	NOVI SAD	Bulevar oslobođenja 100/ v
	OBILIĆ	Kruševac, Župski put b. b.

Regional transmission units

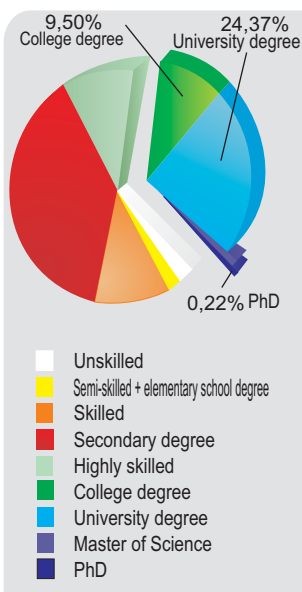
	BEOGRAD	Rovinjska 14
	BOR	Nade Dimić 40
	VALJEVO	Valjevo, Jasenica
	KRUŠEVAC	Župski put b. b.
	NOVI SAD	Bulevar oslobođenja 100/ v
	OBILIĆ	Kruševac, Župski put b. b.

* National dispatching centre
 ** Regional dispatching centres

Organizational structure of EMS



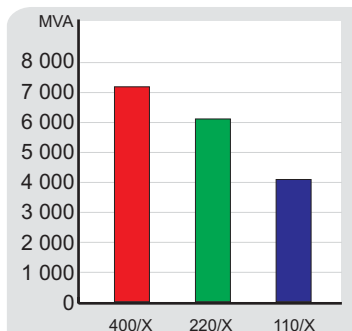
Educational Background of Employees



Level of Education	Number of Employees	Share in %
Unskilled	32	2,32%
Semi-skilled + elementary school degree	24	1,74%
Skilled	161	11,68%
Secondary degree	530	38,43%
Highly skilled	149	10,80%
College degree	131	9,50%
University degree	336	24,37%
Master of Science	13	0,94%
PhD	3	0,22%
Total	1.379	100,00%

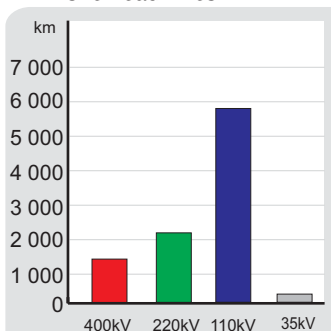
Basic Characteristics of EMS' Transmission Network

Transformers



400/x	220/x	110/x
MVA	MVA	MVA
7 150	6 131,5	4 050

Overhead Lines



400 kV	220kV	110kV	35kV
km	km	km	km
1 649	2 169	5 794	250

Transformers Installations in Regional Transmission Unit

Trasnmission ratio kV	Regional Transmission Unit	Number of Installations pcs.	Number of Transformers pcs.	Installed Power (MVA)
400/X	Beograd	6	7	2600,0
	Bor	2	1	150,0
	Valjevo	-	-	-
	Kruševac	3	6	1900,0
	Novi Sad	4	5	1700,0
	Obilić *	1	2	800,0
	Total		16	21
220/X	Beograd	6	11	2300,0
	Bor	-	-	-
	Valjevo	5	8	1081,5
	Kruševac	3	7	1050,0
	Novi Sad	2	7	1100,0
	Obilić *	3	4	600,0
	Total		19	37
110/X	Beograd	19	39	1652,5
	Bor	11	26	716,5
	Valjevo	9	19	495,0
	Kruševac	19	35	983,0
	Novi Sad	-	1	20,0
	Obilić *	3	6	183,0
	Total		61	126
Total	Beograd	31	57	6552,5
	Bor	13	27	866,5
	Valjevo	14	27	1576,5
	Kruševac	25	48	3933,0
	Novi Sad	6	13	2820,0
	Obilić *	7	12	1583,0
	Total		96	184

* Information on Regional transmission unit Obilic refers to the year 1998

Overhead Lines (OHL)

Regional transmission unit	OHL 10 kV		OHL 35 kV		OHL 110 kV		OHL 220 kV		OHL 400 kV		TOTAL (km)
	(km)	Single circuit (km)	Double Circuit (km)	Single circuit (km)	Double Circuit (km)	Single circuit (km)	Double Circuit (km)	Single circuit (km)	Double Circuit (km)		
Beograd		4 73	43 52	738 35	496 76	227 94	85 43	352 69			1949 42
Bor		28,65	34,69	425,98	40,50			234,79			764,61
Valjevo		26,95		688,13	220,28	942,02	15,39				1892,77
Kraljevo	4,04	107,91		1206,16	35,16	305,48		395,96			2054,71
Novi Sad				1306,28	17,96	306,54		483,79	2,84		2117,41
Obilić*				614,42	6,38	286,80		179,56			1035,33
Total:	4 04	168 24	78 21	4977,32	817,04	2068,78	100,82	1646,79	2,84		9864,08

* Information on Regional transmission unit Obilic refers to the year 1998

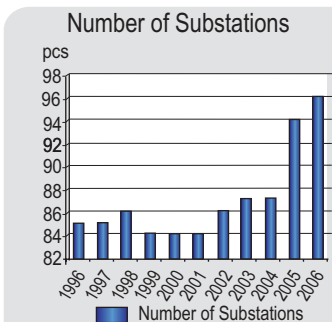
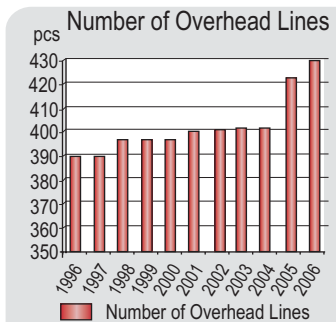
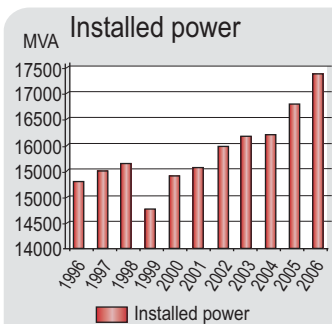
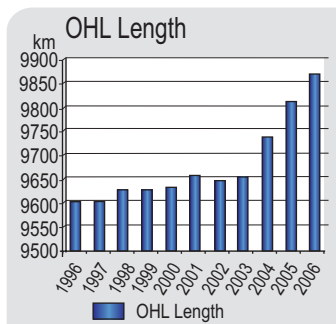
Dynamic of Construction in the Last 10 Years

Year of Commissioning	Substations (S/S)		Overhead Lines (OHL)	
	Number of Installations (units)	Installed capacity (MVA)	Number of OHLs (pieces)	Length (km)
1996	85	15 263 0	389	9 598,84
1997	85	15 456,0	389	9 598,98
1998	86	15 617,5	396	9 624,20
1999*	84	14 733,0	396	9 624,20
2000	84	15 370,0	396	9 626,84
2001	84	15 531,5	399	9 653,76
2002	86	15 943,0	400	9 648,46
2003	87	16 143,0	401	9 654,94
2004	87	16 174 5	401	9 733,85
2005**	94	16 759,0	422	9 807,49
2006	96	17 331 5	429	9 864,08

Note:

* Facilities destroyed during NATO bombing

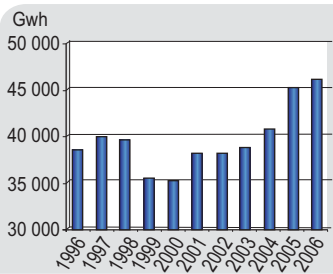
** Facilities transferred during the process of restructuring of Electric power utility of Serbia



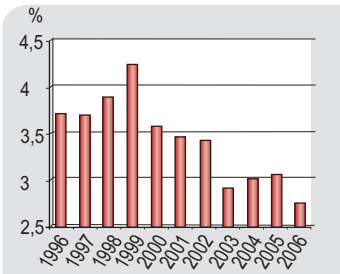
Electricity Delivered and Transmission Losses

Year	Electricity Delivered GWh	Losses (%)
1996	38.376	3,73
1997	39.717	3,71
1998	39.373	3,90
1999	35.341	4,26
2000	35.026	3,59
2001	37.957	3,47
2002	37.954	3,44
2003	38.531	2,91
2004	40.612	3,01
2005	45.111	3,06
2006	45.834	2,75

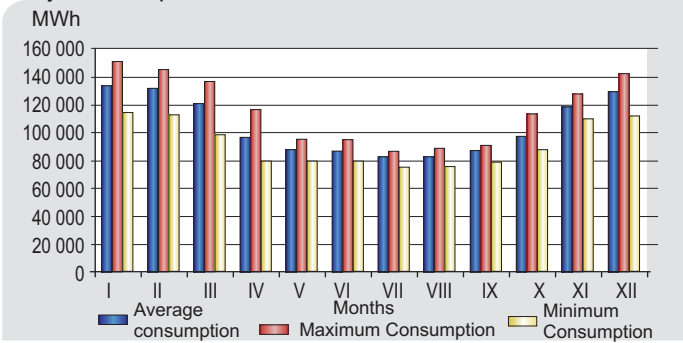
Electricity delivered



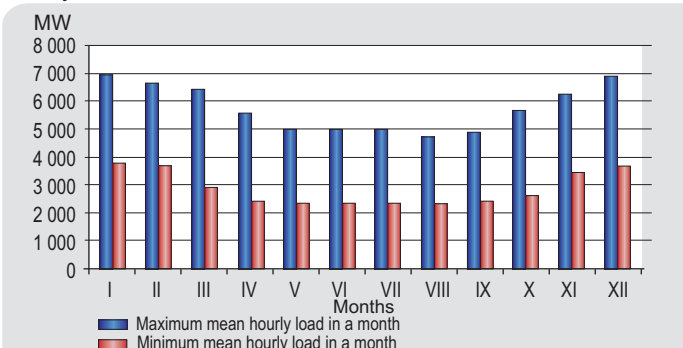
Transmission Network Losses



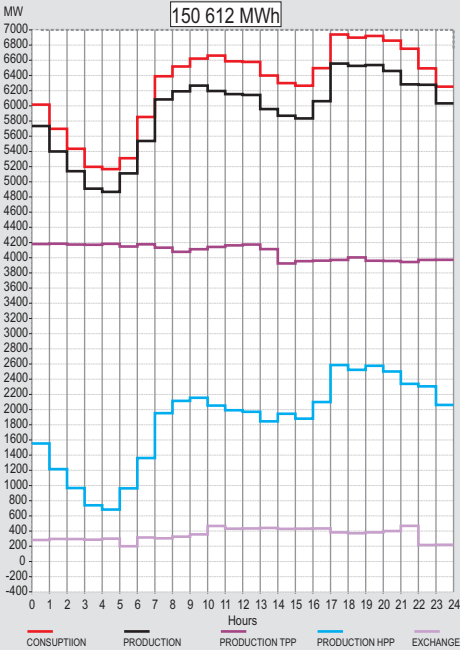
Daily consumption



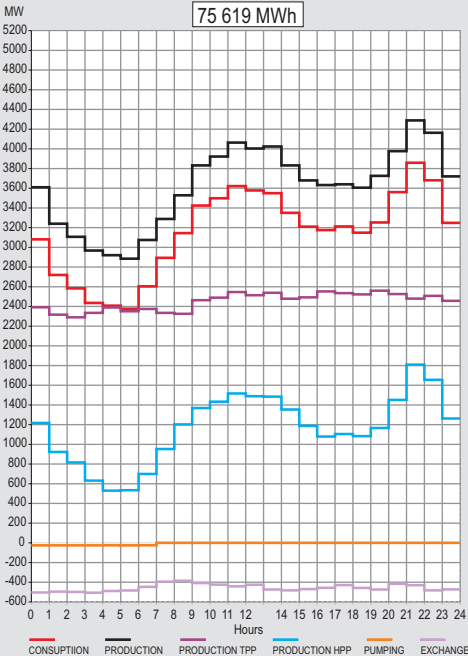
Hourly Load



Serbian power system hourly load diagram for maximum consumption day (Thursday 26 January 2006)



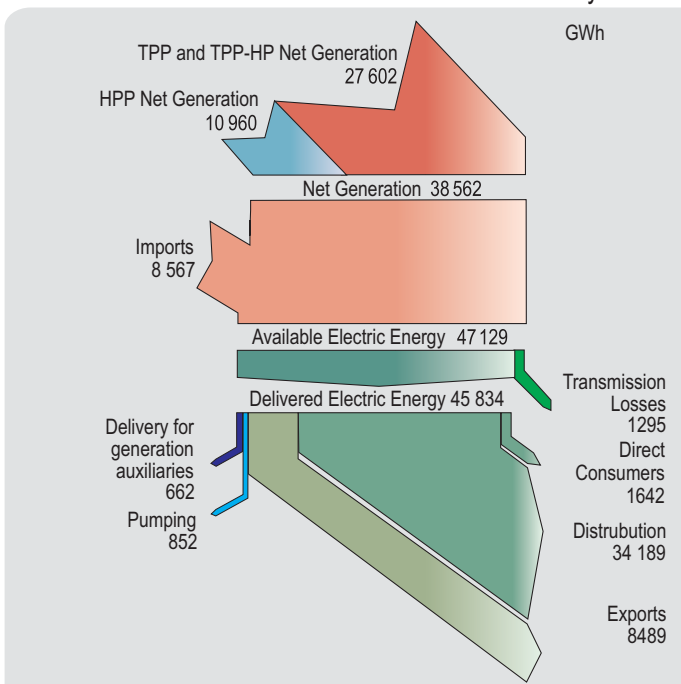
Serbian power system hourly load diagram for minimum consumption day (Sunday 16 July 2006)



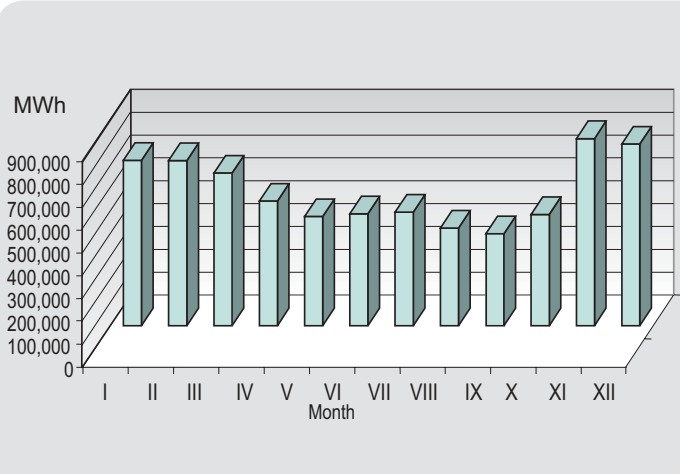
Generation Capacities in Serbia on December 31 2006 (Power plants with power higher than 10MW)

POWER PLANT	NET POWER MW
TPP NIKOLA TESLA A	1 502
TPP NIKOLA TESLA B	1 160
TPP KOLUBARA	245
TPP MORAVA	108
TPP KOSTOLAC A	281
TPP KOSTOLAC B	640
TPP KOSOVO A	617
TPP KOSOVO B	618
TERMO POWER PLANTS	5 171
TPP-HP NOVI SAD	208
TPP-HP ZRENJANIN	100
TPP-HP SREMSKA MITROVICA	28
TERMAL POWER PLANTS - HEATING PLANTS	336
HPP ĐERDAP I	1 058
HPP ĐERDAP II	270
HPP VLASINA	129
HPP PIROT	80
HPP BAJINA BAŠTA	364
PUMPED STORAGE PP BAJINA BAŠTA	614
HPP ZVORNIK	92
HPP ELEKTROMORAVA	13
HPP LIMSKE	211
HPP GAZIVODE	35
HIDRO POWER PLANTS	2 866
TOTAL TPP+ TPP-HP + HPP	8 373
PSPP Lisina	28
RSPP B. Bašta	622
PUMPED STORAGE	650

Achieved Balance of Transmission of Electricity



Transit through Serbian Transmission network



Electricity Exchange on Tie Lines (physical flow)

