



Nezavisni operator sistema u Bosni i Hercegovini
Nezavisni operator sistema u Bosni i Hercegovini
Neovisni operator sustava u Bosni i Hercegovini
Independent System Operator in Bosnia and Herzegovina

**ANNUAL REPORT
ON POWER FLOWS IN THE TRANSMISSION SYSTEM
OF BOSNIA AND HERZEGOVINA IN 2014**

Sarajevo, February 2015

This Report presents power flows in the transmission system in B&H for 2014. It includes main review of power flows and specific indicators and their comparison with the previous year.

Electricity balance in the transmission system

Total amount of 17.681 GWh of electricity was available on the transmission network of B&H in 2014. It was produced 14.472 GWh and another 47 GWh of electricity is injected from distribution networks. From the neighbouring systems it was received 3.162 GWh of electricity.

Out of totally available electricity on transmission network, distribution companies took over 9.100 GWh, customers directly connected to the transmission system took over 2.280 GWh, neighbouring systems were delivered with 5.998 GWh, while transmission losses amounted 304 GWh, which makes 1,72% of totally available electricity on transmission network. During 2014, the only reversible HPP in B&H PSHPP Čapljina hasn't worked in the pumping mode.

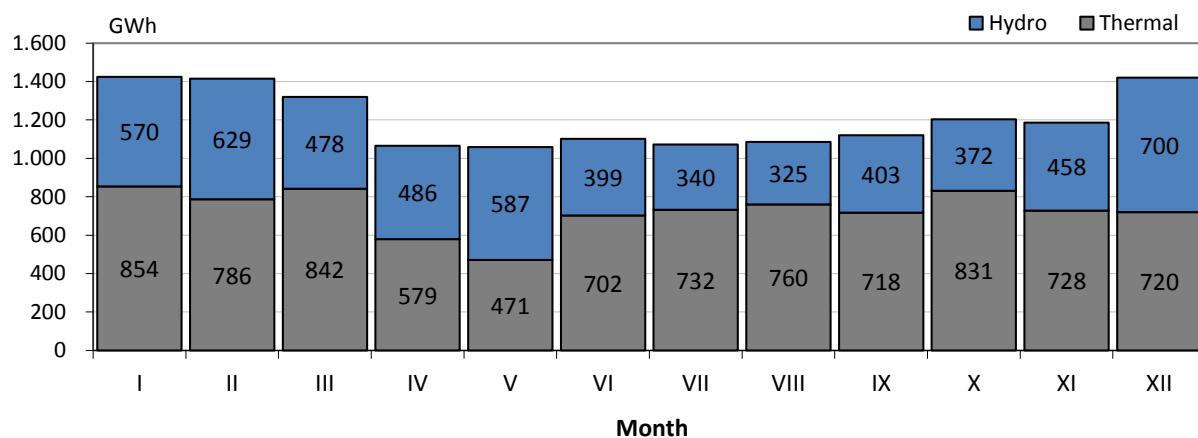
Electricity consumption in B&H in 2014 was for 3% smaller than consumption in 2013.

Electricity generation in the transmission system

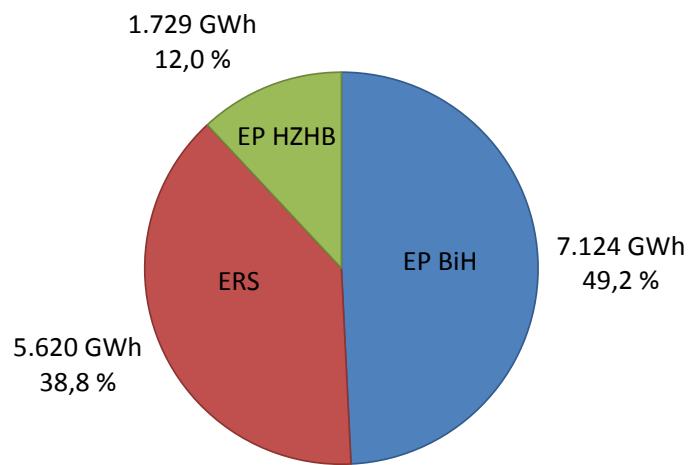
Out of totally produced 14.472 GWh of electricity in transmission system in 2014, Hydro Power Plants produced 5.747 GWh, i.e. 39,7%, and Thermal Power Plants produced 8.725 GWh, i.e. 60,3%. Hydro Power Plants in 2014 produced 17,6% less electricity in comparison to 2013 and Thermal Power Plants produced the same amount of electricity as was the case in 2013. It resulted with 7,9% of electricity less in the transmission system than in 2013.

The following diagrams show the structure of electricity generation through months for 2014 from facilities directly connected to transmission network of B&H as well as the generation companies' contribution in electricity generation in B&H.

Monthly overview of the net generation mix in 2014



Companies' shares in the electricity generation

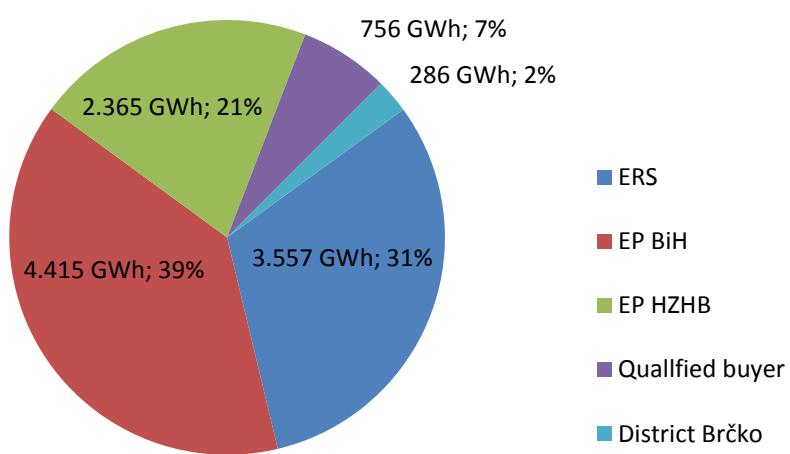


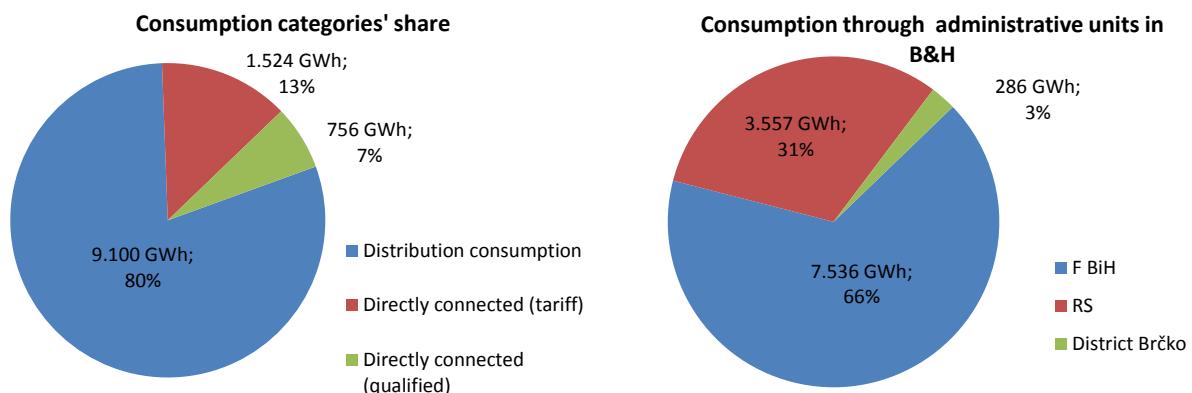
Electricity consumption in the transmission system

Electricity consumption in the transmission system of B&H in 2014 amounted 11.379 GWh and was 3% smaller in comparison to 2013. PSHHP Čapljina has not been working in pumping regime during 2014. Distribution companies took over 9.100 GWh and customers directly connected to the transmission network took over 2.280 GWh of electricity. Out of that amount, the qualified buyers took over 756 GWh of electricity, which made 6,64 % of overall electricity consumption on the transmission network of B&H.

The following diagrams show licensed companies' consumption as well as the structure of consumption regarding consumption categories and administrative units in B&H.

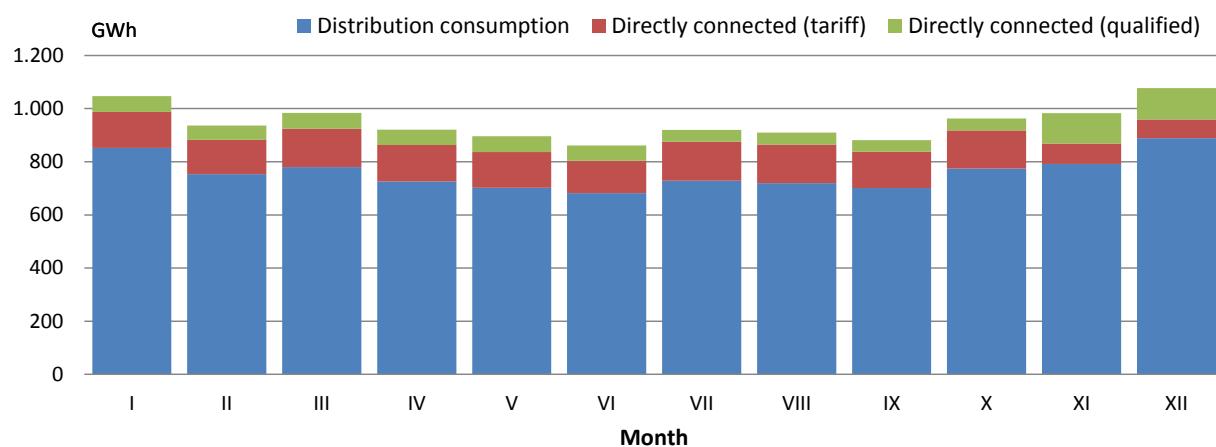
Electrical consumption in B&H in 2014- transmission network





The highest monthly consumption of 1.077 GWh on the transmission level in B&H in 2014 was measured in December 2014. The smallest monthly consumption was in June amounting 862 GWh of electricity. The following diagram shows monthly consumptions in the transmission system in B&H.

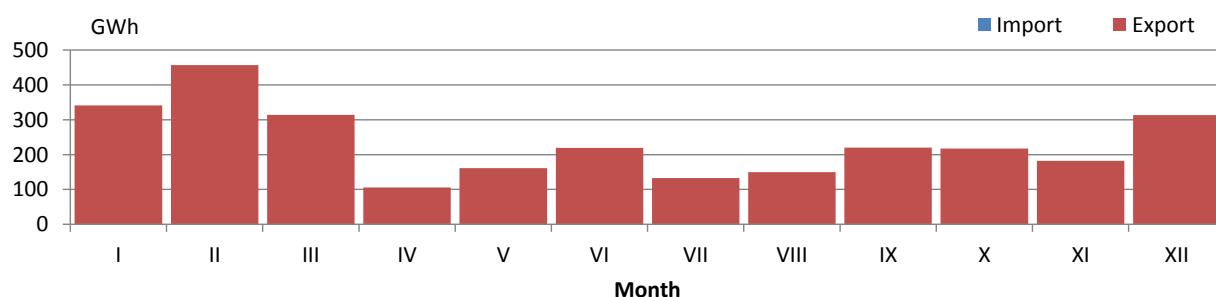
The structure of electricity consumption in B&H through the months in 2014



Nominated power exchange with the neighbouring systems

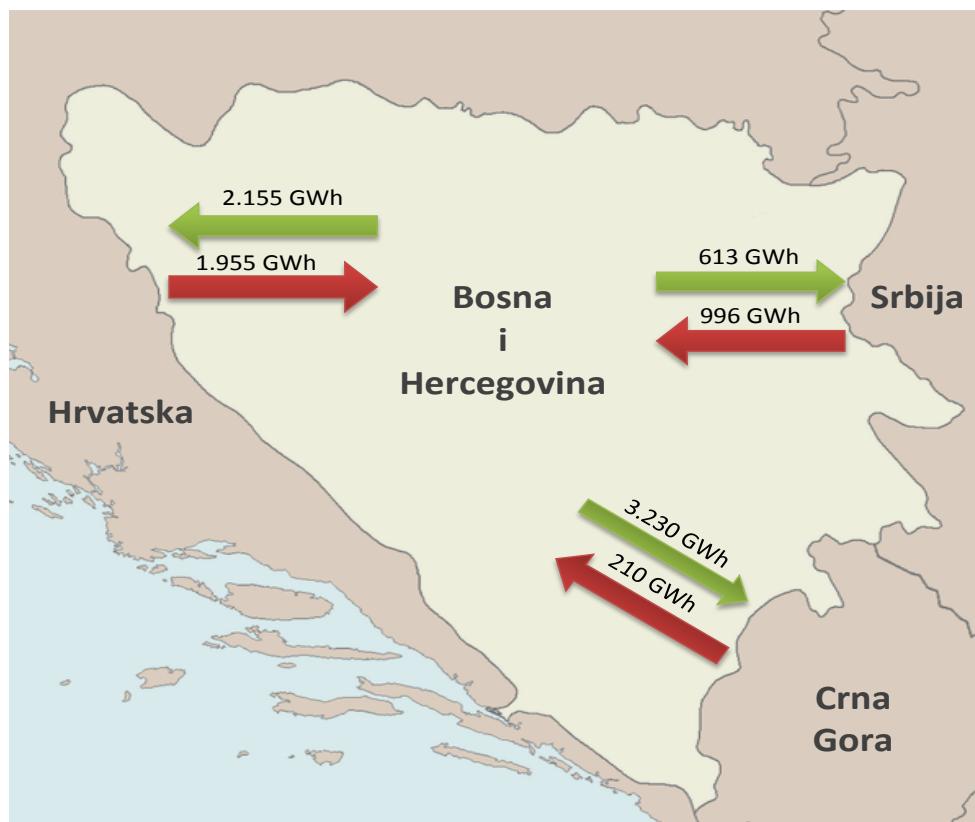
According to the nominated exchange programmes, 2.405 GWh of electricity was imported and 5.219 GWh was exported from the power system of B&H during 2014. Out of that amount, 1.448 GWh of electricity was transited over the B&H transmission network. The balance amount of 2.815 GWh of exported energy is a significant increase of 24% compared to 2013.

Schedule exchange balance in 2014



Crossborder power flows

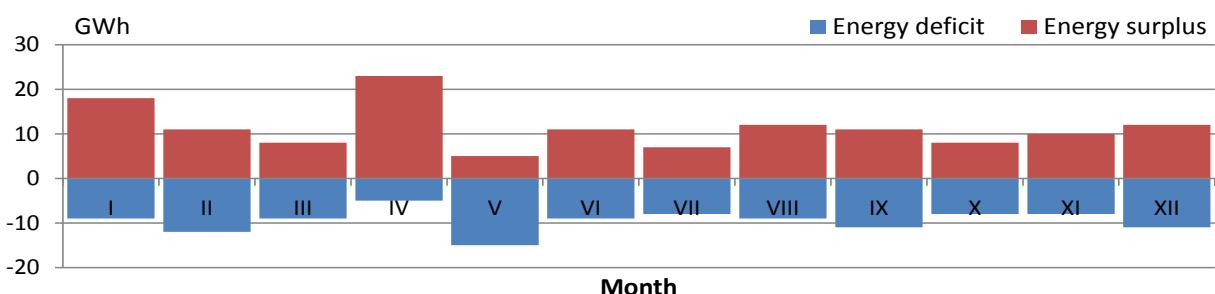
Physical power flows on tie-lines in 2014 provide the balance of B&H Control Area in amount of 2.836 GWh exported energy. From the neighbouring systems 3.162 GWh were injected in BiH transmission system and other systems were delivered 5.998GWh of electricity. Power flows on the borders with neighbouring systems were such that in 2014 on the border with Serbia 383 GWh were injected in BiH transmission system while on the border with Croatia 200 GWh were delivered and on the border with Montenegro 3.020 GWh were delivered.



Deviations from the nominated exchange programmes

Unintentional deviations from the nominated exchange programmes in 2014 were in total 114 GWh for the hours when there was deficit registered and 136 GWh for the hours when energy surplus is registered in B&H Control Area. Maximum hourly electricity deficit in amount of 232 MWh/h was registered in June and electricity surplus of 197 MWh/h in April 2014.

Monthly overview of the unintentional deviations of CA B&H in 2014



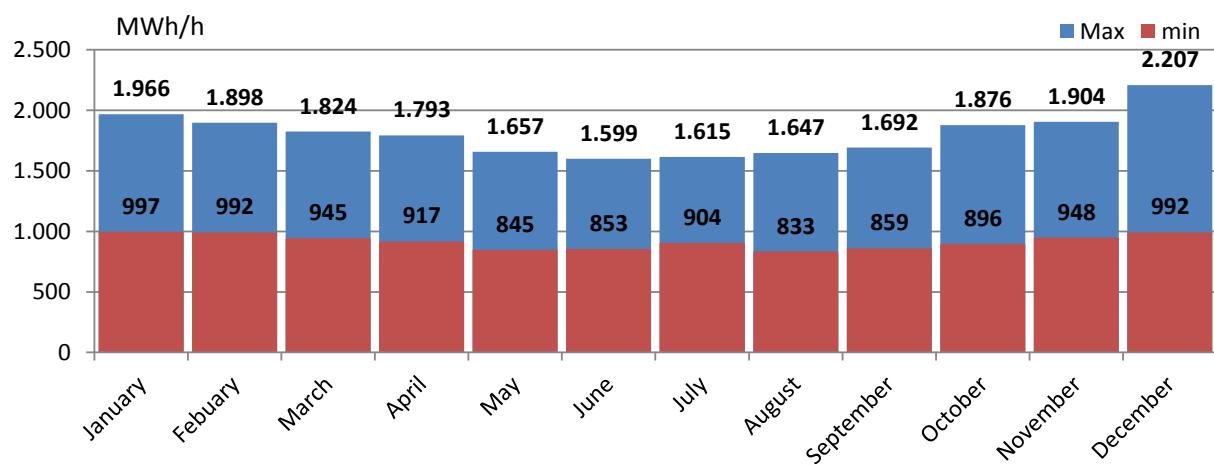
Specific values of hourly and daily consumption

Maximum hourly load in 2014 in amount of 2.207 MWh/h was realised on December 31th in 18th hour and this is the largest hourly consumption in BiH since 1995. It is important to emphasise that 31st December 2014 was a specific day with rather low temperatures in entire BiH. Maximum daily consumption in amount of 42.647 MWh of electricity was realised on December 31th, too. Minimum hourly load in amount of 833 MWh is registered on Avgust 5th in the 6th hour and smallest daily consumption in amount of 28.067 MWh on May 1st, 2014 (Labour Day).

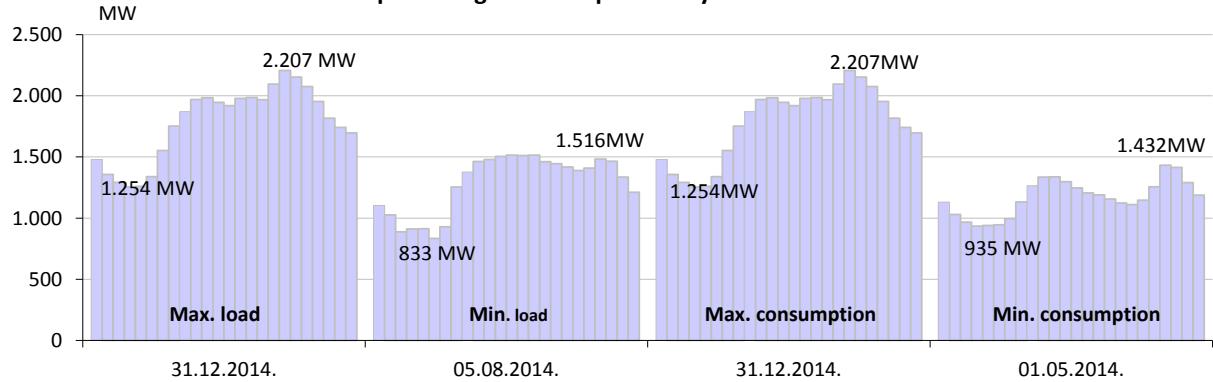
Specific consumption in 2014

Max. hourly load			Min. hourly load			Max. daily consumption		Min. daily consumption	
MWh	Day	Hour	MWh	Day	Hour	MWh	Day	MWh	Day
2.207	31.12.2014.	18:00	833	05.08.2014.	6:00	42.647	31.12.2014.	28.067	01.05.2014.

Monthly overview of the highest and lowest load in 2014



Consumption diagrams for specific days in 2014.



ELECTRICITY BALANCE FOR THE B&H TRANSMISSION SYSTEM IN 2014

	I GWh	II GWh	III GWh	IV GWh	V GWh	VI GWh	VII GWh	VIII GWh	IX GWh	X GWh	XI GWh	XII GWh	2014 %
Net generation													
(1) HPP	570,4	628,6	477,6	486,1	587,1	399,2	339,8	324,9	403,2	372,1	458,3	700,2	5,747,4 82,4%
(2) TPP	854,3	786,4	842,4	579,2	471,1	702,1	731,7	760,5	717,6	831,3	727,9	720,4	8,725,0 99,8%
(3) Generation TOTAL (1+2)	1.424,6	1.415,0	1.320,0	1.065,3	1.058,2	1.101,3	1.071,5	1.085,4	1.120,9	1.203,4	1.186,2	1.420,6	14,472,4 92,1%
(4) received from the distribution system	2,4	2,8	1,9	5,1	8,3	4,3	2,4	2,7	4,2	2,9	3,8	6,6	47,5 81,3%
Physical Inside Flows													
(5) Croatia	121,3	107,0	146,7	139,8	203,9	165,5	170,5	228,4	140,4	99,2	234,0	198,5	1,955,1 173,6%
(6) Serbia	132,9	88,1	129,2	168,5	65,9	45,9	81,6	67,7	41,0	84,4	61,2	29,8	996,2 65,4%
(7) Montenegro	18,5	17,0	8,3	22,7	12,4	11,1	10,0	20,6	36,8	16,4	24,1	210,3	40,7%
(8) Inside flows TOTAL (5+7)	272,7	212,0	284,3	331,0	282,3	223,8	263,2	306,0	202,0	220,4	311,6	252,4	3,161,6 99,8%
(9) AVAILABLE ENERGY (3+4+8)	1.699,7	1.629,9	1.606,2	1.401,3	1.348,8	1.329,4	1.337,1	1.394,2	1.327,1	1.426,6	1.501,6	1.679,6	17,681,4 93,4%
Consumption													
(10) Distribution companies	832,0	753,1	780,1	726,2	701,9	681,8	728,4	719,6	701,2	774,2	792,1	888,9	9,099,6 98,7%
(11) Directly connected customers	195,2	183,3	203,6	194,5	194,4	179,7	191,6	190,2	180,0	188,5	190,7	188,1	2,279,6 90,6%
(12) Consumption TOTAL (10+11)	1.047,2	936,4	983,7	920,7	896,3	861,5	920,0	909,8	881,2	962,7	982,8	1.977,0	11,379,2 97,0%
Physical Outside Flows													
(13) Croatia	291,0	289,5	184,9	177,4	120,0	142,5	129,6	95,0	154,5	271,1	119,0	180,3	2,154,8 51,2%
(14) Serbia	45,8	54,3	48,1	36,0	44,6	53,4	44,3	64,9	52,9	31,5	51,5	85,5	61,2,9 114,0%
(15) Montenegro	285,2	325,0	364,6	240,7	269,5	249,1	221,4	298,7	214,7	135,8	324,3	301,0	3,230,1 152,5%
(16) Outside flows TOTAL (13..15)	622,1	668,8	597,6	454,2	434,0	445,1	395,3	458,6	422,1	438,4	494,8	566,8	5,997,7 87,4%
(17) Consumption of Pump	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0 85,7%
(18) REQUIRED ENERGY (12+16+17)	1.669,3	1.605,1	1.581,3	1.374,8	1.330,3	1.306,6	1.315,2	1.368,5	1.303,3	1.401,1	1.477,6	1.643,8	17,377,0 93,5%
Transmission losses													
(19) Transmission losses (9-18)	30,4	24,7	24,9	26,5	18,5	22,8	21,8	25,7	23,8	25,5	24,0	35,8	304,5 88,7%
(20) In relation to the available energy (19)-(9)	1,79%	1,52%	1,52%	1,89%	1,37%	1,71%	1,63%	1,84%	1,79%	1,79%	1,60%	2,13%	1,72%

* Including consumption of qualified buyers

NET GENERATION IN THE TRANSMISSION SYSTEM OF B&H IN 2014

GENERATION UNIT	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	2014	2014/13
	GWh	%												
HPP Jablanica	88,9	98,6	77,8	52,9	81,2	45,8	37,7	40,9	56,5	50,4	93,9	789,5	87,6%	
HPP Grabovica	35,0	36,2	27,9	20,0	29,1	16,7	13,3	14,4	20,8	23,2	34,8	294,6	80,7%	
HPP Salakovac	60,5	64,0	38,9	30,0	42,7	22,4	15,2	17,3	29,7	28,4	42,1	57,0	448,2	77,8%
HPP Višegrad	70,5	64,2	54,4	122,7	148,3	93,5	51,6	44,9	73,0	74,5	75,5	126,8	1.000,0	82,2%
HPP Trebinje 1	27,7	45,4	43,2	39,2	40,7	39,3	44,7	36,3	15,2	23,5	29,2	37,0	421,3	60,2%
HPP Trebinje 2	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
HPP Dubrovnik (G2)	72,5	74,1	68,7	64,0	55,4	45,0	68,1	55,7	35,5	15,3	74,6	84,2	713,1	114,8%
HPP Bočac	16,3	24,6	22,1	38,3	60,9	26,9	22,2	26,4	41,4	24,6	20,9	27,7	352,2	132,0%
HPP Rama	56,4	63,9	55,2	46,9	49,3	49,5	43,3	40,6	45,1	60,2	46,2	84,6	641,2	90,7%
HPP Mostar	31,8	34,6	23,0	19,0	24,7	14,7	11,2	12,3	18,3	17,9	24,6	31,8	263,7	88,1%
HPP Jajice 1	19,1	25,7	26,1	25,7	30,9	26,3	19,8	22,7	32,8	23,8	22,1	27,8	302,8	118,7%
HPP Jajice 2	6,8	8,3	8,1	8,4	10,7	9,7	7,7	7,3	8,1	8,7	8,0	9,7	101,5	114,5%
PS HPP Čapljina	48,7	33,4	4,6	6,3	0,5	4,2	1,6	2,4	14,3	0,6	13,6	42,5	172,8	24,2%
HPP Peć-Mimi	11,1	15,8	15,2	7,6	6,3	2,9	1,8	1,8	6,4	3,8	13,1	16,0	101,8	109,4%
HPP Mostarsko Blato*	25,1	40,0	12,5	5,0	6,4	2,3	1,6	1,9	6,2	2,6	15,0	26,3	144,8	85,8%
HPP TOTAL	570,4	628,6	477,6	486,1	587,1	399,2	339,8	324,9	403,2	372,1	458,3	700,2	5.747,4	82,4%
TPP Tuzla	280,1	341,7	337,2	229,5	187,2	247,9	320,6	325,9	283,0	362,8	295,5	286,2	3.497,6	112,2%
TPP Kakanj	238,5	175,8	184,4	189,5	134,5	250,4	235,3	198,8	113,5	122,0	124,6	126,5	2.093,8	93,8%
TPP Ugrijevik	177,6	138,0	162,1	0,0	0,0	116,3	161,7	127,2	180,3	186,1	167,2	175,0	1.591,4	98,4%
TPP Gacko	158,1	130,9	158,8	160,3	149,5	87,5	14,2	108,5	140,8	160,4	140,6	132,6	1.542,3	87,0%
TPP TOTAL	854,3	786,4	842,4	579,2	471,1	702,1	731,7	760,5	717,6	831,3	727,9	720,4	8.725,0	99,8%
GENERATION TOTAL	1.424,6	1.415,0	1.320,0	1.065,3	1.058,2	1.101,3	1.071,5	1.085,4	1.120,9	1.203,4	1.186,2	1.420,6	14.472,4	92,1%

ELECTRICITY CONSUMPTION IN THE TRANSMISSION SYSTEM OF B&H IN 2014

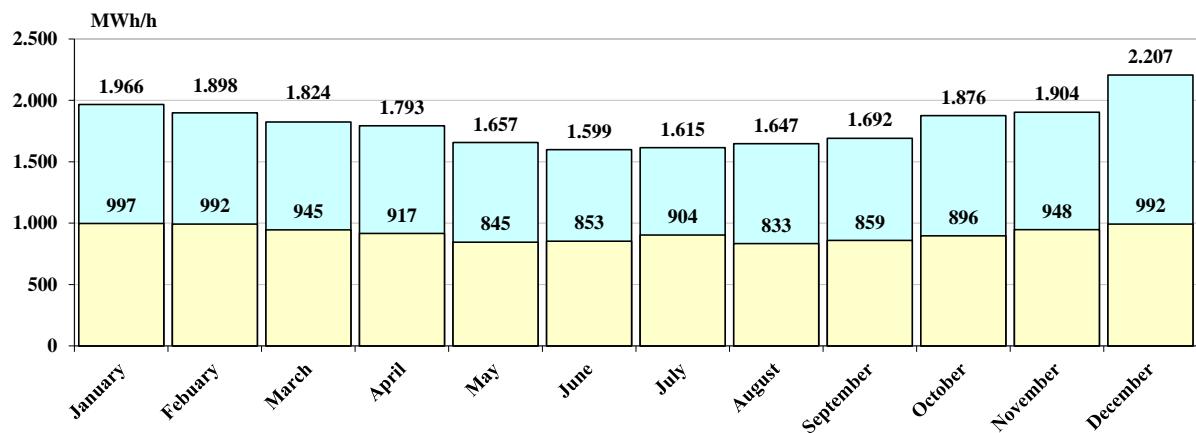
CONSUMPTION	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	2014	2014/2013
	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	%
Elektrokraina	166,8	153,0	155,3	138,5	138,0	129,2	135,3	128,7	132,2	145,9	154,5	171,9	1.749,3	97,4%
Elektrodomoboj	55,8	48,9	46,7	46,6	44,1	44,9	51,3	48,3	47,9	52,5	51,6	54,4	59,3	97,2%
Elektrobijeljina	64,7	56,5	60,3	56,9	53,6	52,5	57,3	55,5	53,6	58,8	59,5	65,9	69,5	105,9%
Elektrodistribucija Pale	28,6	23,7	25,7	23,1	22,3	21,1	22,6	24,0	24,1	26,2	26,8	29,6	297,7	99,4%
Elektrohercegovina	19,8	17,2	18,6	16,6	16,7	15,5	15,8	16,7	16,2	17,0	17,8	20,6	208,4	104,6%
RTE ERS (Ugjevik i Gacko)	0,9	1,4	0,7	1,0	1,1	1,6	1,8	1,8	0,6	0,2	0,9	1,0	13,2	108,6%
ERS	336,5	300,7	307,3	282,7	275,8	264,8	284,0	275,0	274,6	300,7	311,1	343,4	3,556,7	99,5%
ED Sarajevo	130,1	110,9	118,8	110,9	105,3	100,2	102,7	101,8	102,8	115,3	120,5	136,5	1.355,8	98,8%
ED Tuzla	89,7	82,4	85,3	81,4	78,7	79,7	85,0	83,6	84,2	89,1	87,3	91,4	1.017,8	98,2%
ED Zenica	85,5	75,9	81,4	77,6	74,3	73,4	76,0	74,6	73,8	82,6	83,8	95,3	954,2	101,2%
ED Mostar	20,0	17,1	17,3	16,1	16,2	16,2	17,7	17,2	14,6	18,6	18,6	21,4	211,1	103,7%
ED Bihać	37,1	33,7	35,0	34,3	34,0	34,4	38,1	38,9	34,6	37,2	35,2	40,6	433,2	98,1%
Directly connected customers	33,3	35,4	38,6	36,3	37,6	34,5	40,5	39,3	35,4	37,3	39,4	35,3	443,0	98,7%
EPBiH	395,7	355,4	376,4	356,7	346,2	338,5	360,0	355,3	345,4	380,2	384,8	420,6	4,415,1	99,2%
ED Hercegovačko-Neretvanska	47,6	40,6	39,8	35,4	34,6	33,6	36,5	38,2	33,4	36,8	38,5	47,4	462,5	93,9%
ED Zapadnohercegovačka	26,5	23,6	24,4	22,2	22,1	20,8	22,4	22,7	21,5	23,2	24,3	27,6	281,2	90,6%
ED Herceg Bosanska	12,5	12,0	11,8	11,4	10,8	11,6	12,2	11,2	11,9	12,0	13,8	142,7	97,8%	
ED Srednja Bosna	28,7	24,4	26,7	24,2	21,9	22,4	26,4	26,4	22,9	27,8	27,4	29,8	309,1	99,0%
ED Posavska	9,6	8,2	8,6	8,5	7,6	7,5	8,1	8,4	7,8	8,5	8,8	10,5	102,1	96,3%
Directly connected customers	101,5	92,7	104,8	99,6	96,1	86,0	104,7	104,5	100,8	106,3	106,5	134,2	1.067,6	91,1%
EPHZHB	226,3	201,6	216,1	201,3	193,8	181,1	209,5	212,5	197,5	214,5	147,4	163,4	2,365,1	93,2%
Aluminij (qualified buyer)	59,5	53,8	59,4	57,6	59,5	57,6	44,6	44,6	43,2	44,7	47,2	100,4	722,3	81,6%
District Brčko	29,1	24,9	24,4	22,4	21,0	19,5	21,7	22,4	20,4	22,6	25,7	32,1	286,4	99,2%
Consumption TOTAL	1.047,2	936,4	983,7	920,7	896,3	861,5	920,0	909,8	881,2	962,7	982,8	1.077,0	11.379,2	97,0%
Consumption of PSHHP Čapljina	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	85,7%
Overall Takeover	1.047,2	936,4	983,7	920,7	896,3	861,5	920,0	909,8	881,2	962,7	982,8	1.077,0	11.379,2	97,0%

Specific data on hourly and daily consumption in 2014

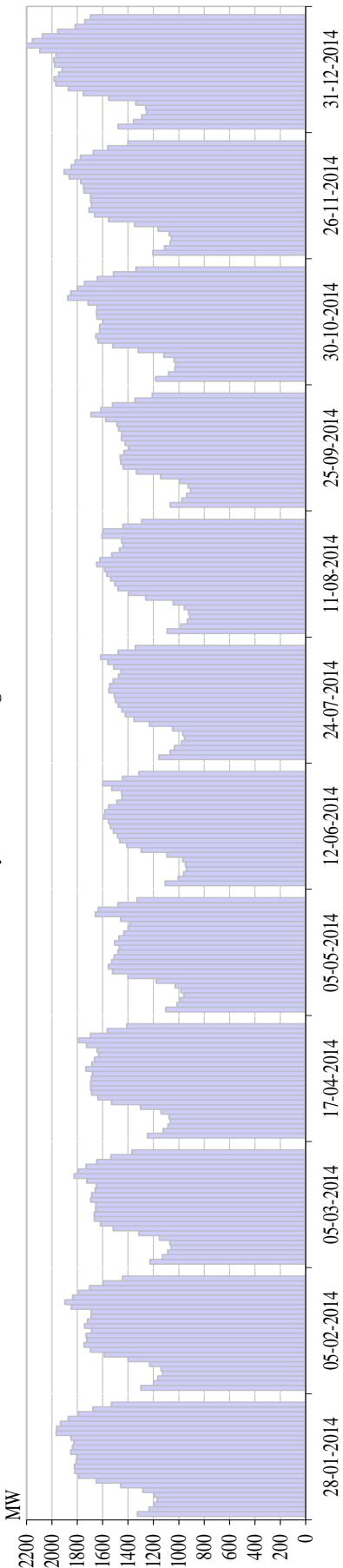
Month	Max load (hourly)			Min load (hourly)			Max daily consumption		Min daily consumption	
	MWh/h	Day	Hour	MWh/h	Day	Hour	MWh	Day	MWh	Day
January	1.966	28.1.2014	18	997	6.1.2014	4	39.654	28.1.2014	33.219	1.1.2014
February	1.898	5.2.2014	19	992	17.2.2014	4	37.689	5.2.2014	33.264	16.2.2014
March	1.824	5.3.2014	19	945	31.3.2014	4	36.119	5.3.2014	30.195	30.3.2014
April	1.793	17.4.2014	21	917	28.4.2014	4	36.201	17.4.2014	30.200	27.4.2014
May	1.657	5.5.2014	21	845	19.5.2014	4	32.470	5.5.2014	28.067	1.5.2014
June	1.599	12.6.2014	22	853	1.6.2014	6	32.278	12.6.2014	28.448	1.6.2014
July	1.615	24.7.2014	22	904	13.7.2014	6	32.443	25.7.2014	29.338	13.7.2014
August	1.647	11.8.2014	15	833	5.8.2014	6	32.610	13.8.2014	29.100	24.8.2014
September	1.692	25.9.2014	20	859	30.9.2014	4	32.113	26.9.2014	29.198	14.9.2014
October	1.876	30.10.2014	18	896	6.10.2014	5	35.865	30.10.2014	29.254	5.10.2014
November	1.904	26.11.2014	18	948	10.11.2014	4	37.310	27.11.2014	31.956	9.11.2014
December	2.207	31.12.2014	18	992	3.12.2014	4	42.647	31.12.2014	34.254	7.12.2014
2014	2.207	31.12.2014	18	833	5.8.2014	6	42.647	31.12.2014	28.067	1.5.2014

Specific values of electricity load in 2014

Highest load			Lowest load			Max daily consumption		Min daily consumption	
MWh	Day	Hour	MWh	Day	Hour	MWh	Day	MWh	Day
2.207	31.12.2014.	18:00	833	05.08.2014.	6:00	42.647	31.12.2014.	28.067	01.05.2014.

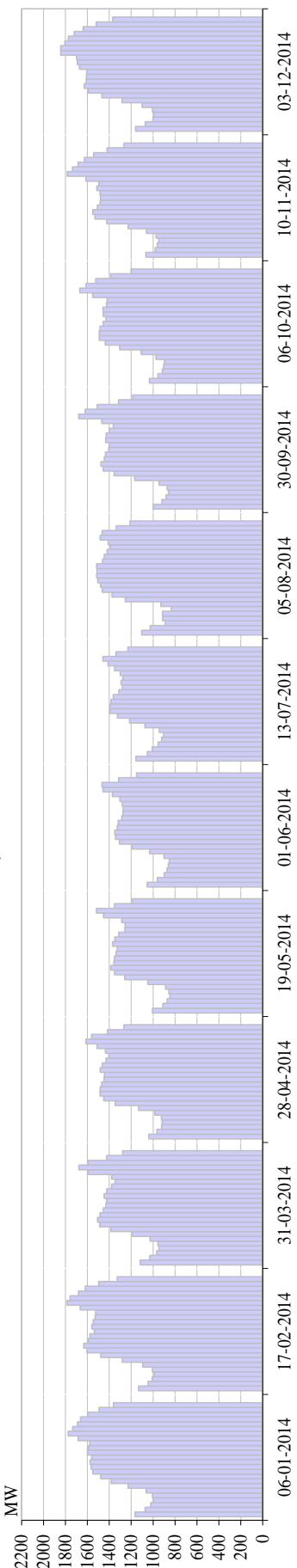
Monthly overview of the highest and lowest load in 2014

Load curves for days in month with highest load



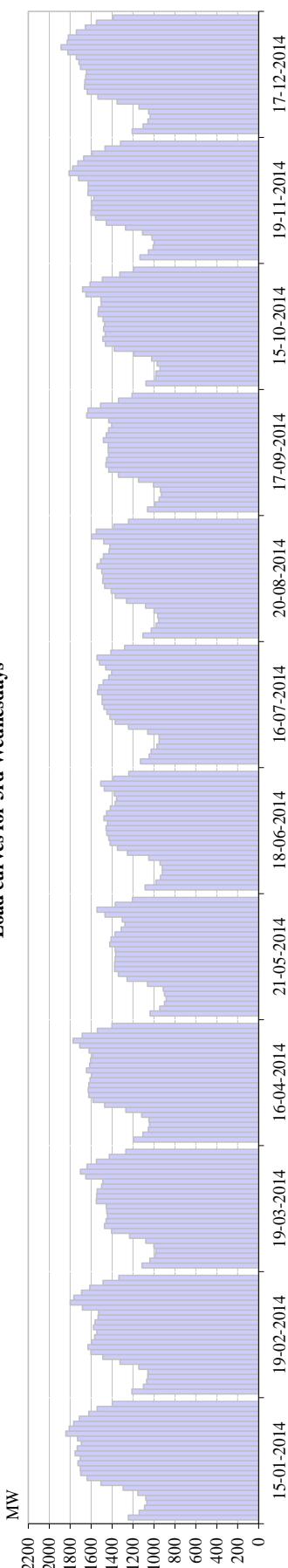
Load curves for days in month with highest load

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Σ
January	1326	1.234	1.195	1.170	1.192	1.283	1.458	1.650	1.790	1.820	1.823	1.809	1.804	1.852	1.839	1.828	1.850	1.966	1.963	1.932	1.870	1.792	1.677	1.530	39.654
February	1.298	1.199	1.165	1.127	1.139	1.231	1.400	1.587	1.697	1.746	1.726	1.730	1.688	1.742	1.719	1.692	1.689	1.847	1.898	1.837	1.792	1.703	1.593	1.443	37.689
March	1.226	1.128	1.086	1.058	1.069	1.151	1.314	1.517	1.618	1.666	1.655	1.653	1.695	1.685	1.658	1.651	1.725	1.824	1.793	1.731	1.647	1.534	1.370	36.119	
April	1.246	1.122	1.085	1.066	1.076	1.140	1.302	1.530	1.637	1.688	1.695	1.689	1.682	1.732	1.685	1.665	1.632	1.643	1.727	1.793	1.696	1.565	1.410	36.201	
May	1.101	1.013	989	961	981	1.028	1.177	1.400	1.521	1.554	1.529	1.510	1.479	1.469	1.505	1.473	1.433	1.400	1.386	1.459	1.657	1.635	1.480	1.330	32.470
June	1.107	1.005	961	939	946	969	1.094	1.296	1.410	1.466	1.483	1.515	1.540	1.553	1.590	1.582	1.553	1.488	1.446	1.450	1.529	1.599	1.444	1.314	32.278
July	1.156	1.068	1.033	979	955	969	1.048	1.231	1.352	1.422	1.449	1.477	1.498	1.509	1.551	1.545	1.517	1.474	1.456	1.513	1.559	1.615	1.478	1.342	32.197
August	1.092	984	932	914	922	956	1.043	1.261	1.395	1.480	1.505	1.538	1.568	1.584	1.647	1.621	1.529	1.468	1.439	1.451	1.607	1.598	1.440	1.291	32.266
September	1.068	975	938	908	926	991	1.143	1.334	1.439	1.457	1.462	1.432	1.392	1.423	1.452	1.449	1.474	1.487	1.576	1.692	1.614	1.522	1.344	1.209	31.706
October	1.181	1.080	1.032	1.025	1.037	1.116	1.320	1.520	1.638	1.654	1.624	1.623	1.599	1.646	1.643	1.716	1.876	1.852	1.799	1.742	1.642	1.516	1.337	35.865	
November	1.204	1.111	1.068	1.057	1.074	1.162	1.349	1.553	1.663	1.708	1.689	1.695	1.747	1.751	1.773	1.863	1.904	1.848	1.817	1.775	1.674	1.560	1.401	37.143	
December	1.478	1.356	1.292	1.254	1.260	1.339	1.554	1.753	1.871	1.969	1.984	1.946	1.919	1.978	1.987	1.967	2.095	2.207	2.154	2.076	1.954	1.816	1.741	42.647	

Load curves for days in month with lowest load**Load curves for days in month with lowest load**

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Σ			
January	06-01-2014	1164	1.074	1.022	997	1.006	1.064	1.229	1.382	1.477	1.549	1.565	1.574	1.560	1.600	1.591	1.578	1.685	1.733	1.689	1.662	1.596	1.494	1.361	34.427		
February	17-02-2014	1.132	1.046	1.008	992	1.005	1.095	1.232	1.478	1.603	1.634	1.590	1.577	1.535	1.560	1.545	1.528	1.524	1.666	1.785	1.758	1.680	1.619	1.497	1.327	34.467	
March	31-03-2014	1.117	1.029	966	945	957	1.029	1.191	1.385	1.487	1.507	1.484	1.454	1.430	1.424	1.447	1.423	1.423	1.379	1.346	1.379	1.591	1.677	1.593	1.424	1.278	31.942
April	28-04-2014	1.039	966	922	917	925	983	1.133	1.346	1.451	1.485	1.483	1.470	1.449	1.443	1.484	1.464	1.429	1.404	1.436	1.511	1.612	1.562	1.415	1.266	31.593	
May	19-05-2014	1.006	910	871	845	856	886	1.049	1.258	1.351	1.387	1.358	1.353	1.337	1.327	1.370	1.349	1.314	1.258	1.256	1.287	1.453	1.516	1.352	1.191	29.139	
June	01-06-2014	1.054	961	898	872	861	853	900	1.031	1.191	1.307	1.343	1.349	1.327	1.320	1.286	1.275	1.275	1.272	1.282	1.303	1.371	1.457	1.467	1.316	1.152	28.448
July	13-07-2014	1.157	1.052	1.008	952	922	904	943	1.075	1.214	1.326	1.396	1.394	1.383	1.364	1.313	1.279	1.291	1.276	1.300	1.351	1.411	1.457	1.340	1.229	29.338	
August	05-08-2014	1.104	1.026	888	912	913	833	929	1.254	1.376	1.464	1.479	1.505	1.514	1.511	1.516	1.461	1.446	1.419	1.390	1.409	1.483	1.464	1.336	1.211	30.842	
September	30-09-2014	998	918	881	859	872	944	1.168	1.356	1.455	1.475	1.445	1.435	1.405	1.400	1.433	1.428	1.400	1.363	1.468	1.679	1.619	1.511	1.315	1.188	31.016	
October	06-10-2014	1.033	954	915	903	896	973	1.108	1.304	1.437	1.491	1.491	1.485	1.456	1.430	1.455	1.425	1.420	1.551	1.669	1.612	1.524	1.387	1.199	31.576		
November	10-11-2014	1.066	981	962	948	972	1.061	1.228	1.424	1.530	1.550	1.508	1.484	1.480	1.485	1.514	1.495	1.612	1.783	1.736	1.685	1.626	1.543	1.419	1.265	33.356	
December	03-12-2014	1.159	1.072	1.001	992	1.005	1.099	1.283	1.468	1.592	1.628	1.610	1.608	1.606	1.672	1.698	1.843	1.844	1.805	1.773	1.720	1.639	1.519	1.368	35.697		

Load curves for 3rd Wednesdays



Load curves for 3rd Wednesdays

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Σ			
January	1245	1.141	1.090	1.068	1.079	1.153	1.294	1.506	1.638	1.701	1.704	1.726	1.732	1.754	1.732	1.694	1.729	1.841	1.809	1.767	1.713	1.623	1.543	1.397	36.651		
February	1.210	1.101	1.070	1.060	1.058	1.145	1.324	1.488	1.602	1.630	1.595	1.567	1.546	1.578	1.562	1.533	1.529	1.683	1.799	1.765	1.692	1.613	1.486	1.334	34.973		
March	1.115	1.039	986	982	1.000	1.078	1.233	1.404	1.472	1.457	1.443	1.451	1.456	1.550	1.548	1.542	1.500	1.487	1.652	1.702	1.639	1.652	1.548	1.427	1.269	32.978	
April	1.196	1.105	1.054	1.043	1.047	1.118	1.268	1.471	1.583	1.622	1.627	1.622	1.610	1.595	1.644	1.614	1.606	1.586	1.619	1.709	1.772	1.684	1.541	1.401	35.136		
May	1.038	944	899	882	899	911	1.061	1.256	1.340	1.376	1.376	1.371	1.365	1.370	1.421	1.409	1.372	1.312	1.277	1.303	1.468	1.544	1.369	1.206	29.770		
June	1.085	980	939	920	919	942	1.049	1.253	1.349	1.419	1.432	1.450	1.458	1.444	1.478	1.452	1.416	1.368	1.357	1.381	1.474	1.508	1.385	1.239	30.698		
July	1.129	1.046	1.028	970	950	951	1.059	1.244	1.370	1.421	1.448	1.477	1.495	1.494	1.539	1.527	1.485	1.432	1.404	1.460	1.520	1.544	1.412	1.281	31.685		
August	20-08-2014	1.105	1.025	981	956	963	998	1.079	1.261	1.369	1.408	1.471	1.490	1.486	1.498	1.545	1.510	1.483	1.429	1.421	1.480	1.596	1.550	1.384	1.243	31.730	
September	17-09-2014	1.062	988	951	928	939	1.005	1.148	1.341	1.432	1.458	1.453	1.433	1.437	1.437	1.483	1.456	1.424	1.405	1.432	1.642	1.629	1.511	1.338	1.209	31.550	
October	15-10-2014	1.077	985	982	943	969	1.022	1.192	1.379	1.465	1.489	1.466	1.481	1.470	1.486	1.534	1.528	1.504	1.507	1.649	1.682	1.611	1.493	1.326	1.195	32.435	
November	19-11-2014	1.134	1.053	1.009	998	1.018	1.110	1.272	1.455	1.558	1.601	1.592	1.596	1.575	1.631	1.628	1.629	1.721	1.811	1.777	1.725	1.671	1.591	1.467	1.319	34.942	
December	17-12-2014	1.207	1.103	1.035	1.058	1.051	1.143	1.353	1.051	1.660	1.663	1.638	1.536	1.533	1.645	1.651	1.660	1.645	1.702	1.716	1.742	1.823	1.887	1.828	1.817	1.741	36.592

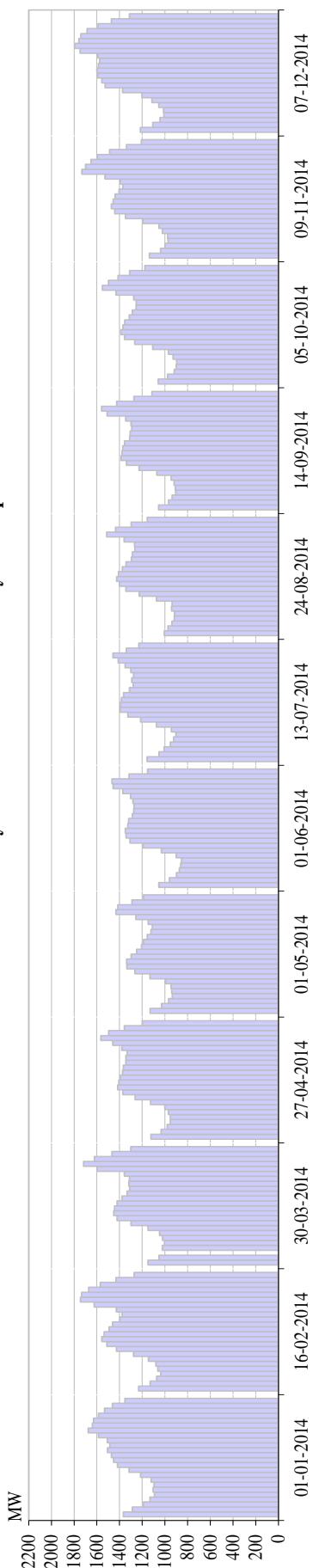
Load curves for days in month with highest daily consumption



Load curves for days in month with highest daily consumption

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Σ
January	1326	1.234	1.195	1.170	1.192	1.283	1.458	1.650	1.790	1.820	1.809	1.804	1.852	1.839	1.828	1.850	1.966	1.963	1.932	1.972	1.792	1.677	1.530	39.654	
February	1.298	1.199	1.165	1.127	1.139	1.231	1.400	1.587	1.697	1.746	1.726	1.730	1.688	1.742	1.719	1.692	1.689	1.847	1.898	1.837	1.792	1.703	1.593	1.443	37.689
March	1.226	1.128	1.086	1.058	1.069	1.151	1.314	1.517	1.618	1.666	1.666	1.655	1.655	1.685	1.695	1.658	1.651	1.725	1.824	1.793	1.731	1.647	1.534	1.370	36.119
April	1.246	1.122	1.085	1.066	1.076	1.140	1.302	1.530	1.637	1.688	1.695	1.695	1.689	1.682	1.732	1.685	1.665	1.632	1.643	1.727	1.793	1.696	1.565	1.410	36.201
May	1.101	1.013	989	961	981	1.028	1.177	1.400	1.521	1.554	1.529	1.510	1.479	1.469	1.505	1.473	1.433	1.400	1.386	1.459	1.657	1.635	1.459	1.330	32.470
June	1.107	1.005	961	939	946	969	1.094	1.296	1.410	1.466	1.483	1.515	1.540	1.553	1.590	1.582	1.553	1.488	1.446	1.450	1.529	1.599	1.444	1.314	32.278
July	1.197	1.096	1.074	1.016	975	977	1.068	1.250	1.367	1.445	1.464	1.515	1.529	1.528	1.562	1.526	1.499	1.462	1.449	1.501	1.559	1.594	1.457	1.334	32.443
August	1.146	1.038	989	971	984	1.078	1.283	1.415	1.491	1.511	1.549	1.576	1.579	1.599	1.579	1.536	1.479	1.445	1.453	1.505	1.595	1.446	1.302	32.610	
September	1.073	984	935	921	935	1.008	1.163	1.364	1.457	1.491	1.479	1.481	1.478	1.450	1.496	1.498	1.488	1.484	1.555	1.685	1.624	1.514	1.330	32.113	
October	1.181	1.080	1.032	1.025	1.037	1.116	1.320	1.520	1.638	1.654	1.624	1.623	1.599	1.646	1.648	1.643	1.716	1.876	1.852	1.799	1.742	1.642	1.516	33.865	
November	1.236	1.152	1.102	1.088	1.099	1.193	1.371	1.568	1.678	1.706	1.698	1.693	1.736	1.737	1.749	1.851	1.900	1.856	1.815	1.724	1.685	1.577	1.413	37.310	
December	1.478	1.356	1.292	1.254	1.260	1.339	1.554	1.753	1.871	1.969	1.984	1.966	1.919	1.978	1.987	1.967	2.095	2.207	2.154	2.076	1.954	1.816	1.741	42.647	

Load curves for days in month with smallest daily consumption



Load curves for days in month with smallest daily consumption

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Σ			
January	1367	1.286	1.189	1.131	1.091	1.103	1.096	1.121	1.215	1.316	1.417	1.452	1.472	1.506	1.486	1.507	1.586	1.676	1.640	1.628	1.532	1.463	1.352	33.219				
February	16-02-2014	1.232	1.129	1.073	1.036	1.062	1.080	1.145	1.277	1.426	1.511	1.555	1.536	1.493	1.461	1.397	1.377	1.428	1.623	1.744	1.733	1.671	1.570	1.432	1.271	33.264		
March	30-03-2014	1.148	1.052	0	1.023	1.004	1.021	1.046	1.149	1.300	1.422	1.451	1.444	1.421	1.378	1.333	1.333	1.312	1.319	1.312	1.357	1.598	1.716	1.621	1.466	1.301	30.195	
April	27-04-2014	1.123	1.033	979	952	952	969	1.000	1.127	1.263	1.372	1.417	1.405	1.393	1.374	1.366	1.366	1.343	1.343	1.334	1.380	1.459	1.565	1.495	1.358	30.200		
May	01-05-2014	1.130	1.029	967	935	939	946	996	1.132	1.265	1.335	1.336	1.297	1.248	1.206	1.189	1.189	1.155	1.155	1.123	1.111	1.147	1.256	1.432	1.414	1.291	1.188	28.067
June	01-06-2014	1.054	961	898	872	861	853	900	1.031	1.191	1.307	1.343	1.349	1.327	1.320	1.286	1.275	1.275	1.272	1.282	1.303	1.371	1.457	1.467	1.316	1.152	28.448	
July	13-07-2014	1.157	1.052	1.008	952	922	904	943	1.075	1.214	1.326	1.396	1.394	1.383	1.364	1.313	1.313	1.279	1.291	1.276	1.300	1.351	1.411	1.457	1.340	1.229	29.338	
August	24-08-2014	1.006	973	939	917	917	942	937	1.074	1.226	1.345	1.402	1.424	1.409	1.375	1.342	1.296	1.287	1.264	1.268	1.359	1.513	1.436	1.297	1.155	29.100		
September	14-09-2014	1.056	967	937	905	908	919	945	1.071	1.229	1.338	1.386	1.378	1.372	1.357	1.310	1.305	1.293	1.299	1.345	1.510	1.557	1.425	1.273	1.114	29.198		
October	05-10-2014	1.060	975	917	900	898	928	970	1.107	1.266	1.355	1.389	1.370	1.354	1.315	1.288	1.255	1.252	1.275	1.432	1.551	1.498	1.413	1.311	1.177	29.254		
November	09-11-2014	1.137	1.039	999	974	976	1.023	1.052	1.194	1.348	1.442	1.471	1.456	1.439	1.404	1.371	1.393	1.528	1.731	1.699	1.651	1.595	1.488	1.338	1.208	31.956		
December	07-12-2014	1.216	1.108	1.044	1.099	1.012	1.054	1.115	1.202	1.373	1.526	1.556	1.591	1.600	1.585	1.575	1.590	1.747	1.758	1.740	1.586	1.589	1.472	1.313	34.254			

SCHEDULED PROGRAMS WITH NEIGHBOURING TSOs

SCHEDULED FLOWS	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	2014
	GWh												
BiH <- HR (HOPS)	82,4	28,0	45,0	71,8	148,7	129,8	150,7	163,6	180,7	84,6	136,2	119,3	1.340,8
BiH <- SR (EMS)	51,2	34,7	78,5	118,2	69,3	56,9	72,2	72,8	37,4	82,6	80,8	80,4	834,9
BiH <- CG (CGES)	17,8	45,0	32,4	27,2	13,2	33,2	13,0	5,4	3,5	12,2	8,4	17,6	228,8
(1) Inside	151,3	107,7	155,9	217,1	231,2	219,9	235,9	241,8	221,5	179,4	225,4	217,2	2.404,5
BiH --> HR (HOPS)	169,8	250,6	153,4	146,9	93,2	130,0	95,2	88,9	91,4	142,3	96,1	158,6	1.616,4
BiH --> SR (EMS)	158,9	146,8	127,8	78,4	142,6	118,8	70,8	103,5	100,1	104,7	137,7	186,8	1.476,9
BiH --> CG (CGES)	163,8	167,3	188,8	97,9	156,8	190,2	202,8	199,2	250,1	150,1	173,9	185,0	2.125,9
(2) Outside	492,5	564,7	470,0	323,2	392,6	439,0	368,9	391,7	441,6	397,0	407,6	530,4	5.219,3
(3) Exchange balance (2)-(1)	341,2	457,0	314,2	106,1	161,4	219,1	132,9	149,9	220,0	217,6	182,2	313,1	2.814,7
Balance HR (HOPS)	87,4	222,6	108,4	75,1	-55,5	0,2	-55,5	-74,7	-89,2	57,7	-40,1	39,3	275,6
Balance SR (EMS)	107,7	112,1	49,3	-39,7	73,3	61,9	-1,4	30,7	62,7	22,2	56,9	106,4	642,0
Balance CG (CGES)	146,1	122,3	156,5	70,7	143,6	157,1	189,9	193,8	246,6	137,8	165,4	167,4	1.897,1
Transit	106,6	78,2	89,6	109,5	146,6	122,4	144,1	193,4	168,3	66,9	118,7	103,4	1.447,8

PHYSICAL FLOWS IN 2014

PHYSICAL FLOWS	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	2014
	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh
BiH <- HR (HOPS)	121,3	107,0	146,7	139,8	203,9	165,5	170,5	228,4	140,4	99,2	234,0	198,5	1.955,1
BiH<-SR (EMS)	132,9	88,1	129,2	168,5	65,9	45,9	81,6	67,7	41,0	84,4	61,2	29,8	996,2
BiH<-CG (CGES)	18,5	17,0	8,3	22,7	12,4	12,4	11,1	10,0	20,6	36,8	16,4	24,1	210,3
(1) Inside flows	272,7	212,0	284,3	331,0	282,3	223,8	263,2	306,0	202,0	220,4	311,6	252,4	3.161,6
BiH--> HR (HOPS)	291,0	289,5	184,9	177,4	120,0	142,5	129,6	95,0	154,5	271,1	119,0	180,3	2.154,8
BiH--> SR (EMS)	45,8	54,3	48,1	36,0	44,6	53,4	44,3	64,9	52,9	31,5	51,5	85,5	612,9
BiH--> CG (CGES)	285,2	325,0	364,6	240,7	269,5	249,1	221,4	298,7	214,7	135,8	324,3	301,0	3.230,1
(2) Outside flows	622,1	668,8	597,6	454,2	434,0	445,1	395,3	458,6	422,1	438,4	494,8	566,8	5.997,7
(3) Balance (2) - (1)	349,4	456,7	313,4	123,2	151,7	221,3	132,1	152,6	220,0	218,0	183,3	314,4	2.836,2
Balance HR (HOPS)	169,7	182,5	38,2	37,6	-84,0	-23,0	-40,9	-133,4	14,1	171,9	-114,9	-18,2	199,6
Balance SR (EMS)	-87,1	-33,8	-81,1	-132,5	-21,4	7,5	-37,2	-2,7	11,9	-52,9	-9,7	55,7	-383,3
Balance CG (CGES)	266,8	308,1	356,3	218,1	257,0	236,7	210,3	288,7	194,1	99,0	307,9	276,9	3.019,9

Unintentional deviations in 2014

Month	Deviation - deficit			Deviation - surplus			Deviation - TOTAL		
	Max	Average	Total	Max	Average	Total	Max	Average	Total
	MWh/h	MWh/h	MWh	MWh/h	MWh/h	MWh	MWh/h	MWh/h	MWh
January	-148	-31	-9.286	171	39	17.546	171	11	8.260
February	-184	-33	-11.660	125	35	11.386	-184	0	-274
March	-99	-21	-8.659	100	25	8.352	100	0	-307
April	-78	-23	-4.689	197	44	22.886	197	25	18.197
May	-141	-29	-14.858	117	23	5.382	-141	-13	-9.476
June	-232	-28	-8.695	170	26	10.890	-232	3	2.196
July	-106	-21	-8.282	105	21	7.324	-106	-1	-957
August	-189	-28	-9.164	186	29	11.892	-189	4	2.729
September	-121	-29	-10.748	175	30	10.514	175	0	-233
October	-91	-22	-8.443	89	22	7.976	-91	-1	-466
November	-120	-25	-8.242	178	26	10.026	178	2	1.784
December	-160	-30	-11.403	123	32	11.685	-160	0	282
2014	-226	-33	-157.732	275	33	138.410	275	-2	21.735