



Nezavisni operator sistema u Bosni i Hercegovini
Независни оператор система у Босни и Херцеговини
Neovisni operator sustava u Bosni i Hercegovini
Independent System Operator in Bosnia and Herzegovina

REPORT

ON POWER FLOWS IN THE TRANSMISSION SYSTEM OF BOSNIA AND HERZEGOVINA IN 2020

Sarajevo, February 2021

This Report presents power flows in the transmission system in BiH in 2020. It includes main review of power flows and specific indicators and their comparison with previous year.

Electricity balance in the transmission system

Total amount of 18 211 GWh of electricity was available on the transmission network of BiH in 2020. Total of 14 830 GWh was produced in the transmission system and another 115 GWh of electricity was injected from the distribution system. From the neighbouring systems it was received 3 266 GWh of electricity.

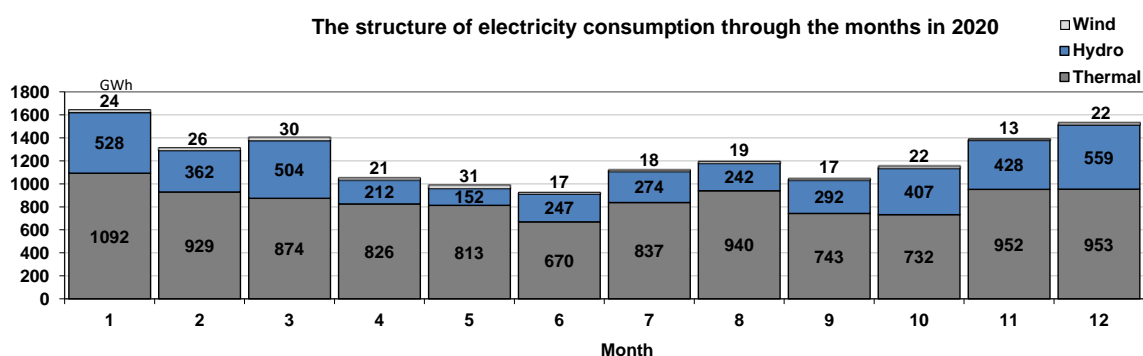
Out of totally available electricity on transmission network, distribution companies took over 9 604 GWh, customers directly connected to the transmission system took over 748 GWh, neighbouring systems were delivered 7 317 GWh, while transmission losses amounted to 317 GWh, which makes 1,74 % of totally available electricity on transmission network. In 2020, PSHPP Čapljina in pumping regime took over 113 GWh.

In 2020 takeover of electricity from the transmission system in BiH was reduced by 8% compared to 2019. One of the reasons for this reduced takeover from the system was the COVID-19 pandemic outbreak.

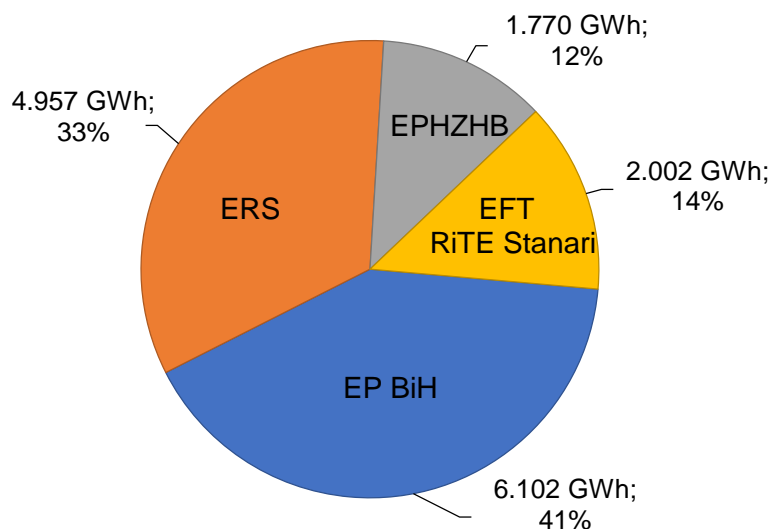
Electricity generation in the transmission system

Out of totally produced 14 830 GWh of electricity in the transmission system in 2020, Hydro Power Plants produced 4 207 GWh, i.e. 28% of electricity, and Thermal Power Plants produced 10 361 GWh, i.e. 70% of electricity. Wind Power Plants produced 262 GWh, i.e. 2% of electricity. In 2020 Thermal Power Plants generation is 8% larger and Hydro Power Plants generation is 24.1% lower.

The following diagrams show the structure of electricity generation over 12 months in 2020 and generation companies share in total amount of electricity generation in BiH.



Companies' shares in the electricity generation

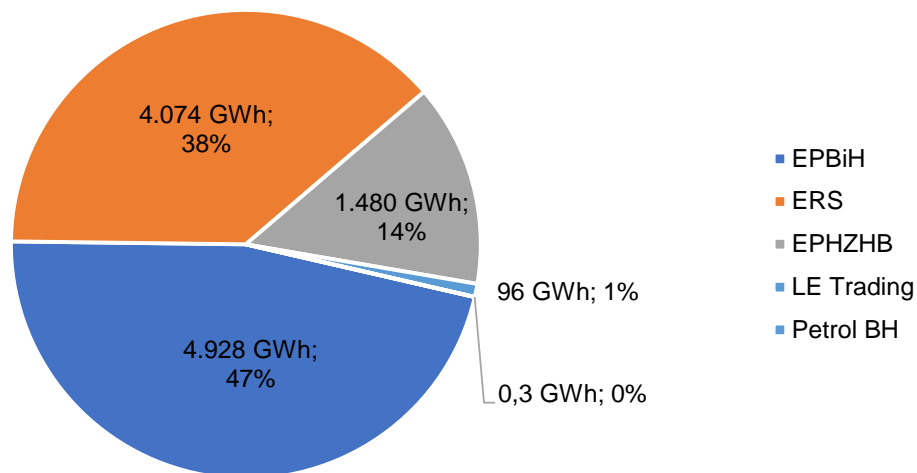


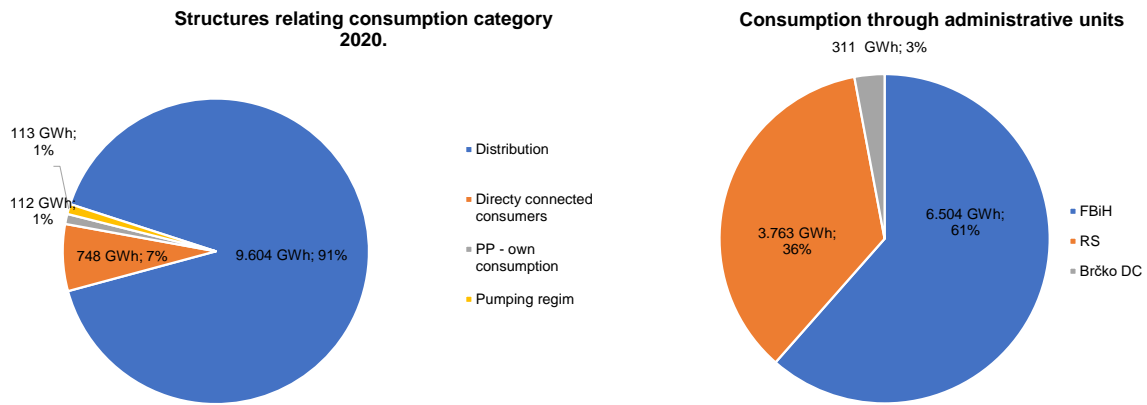
Electricity consumption in the transmission system

Electricity consumption in the transmission system of BiH in 2020 amounted to 10 578 GWh and was 7.53% lower than in 2019. Consumption of PSHHP Čapljina in pumping regime amounted to 113 GWh in 2020. Distribution companies took over 9 604 GWh from the transmission system, and customers directly connected to the transmission system took over 748 GWh of electricity. The power plants own consumption in 2020 amounted to 112 GWh.

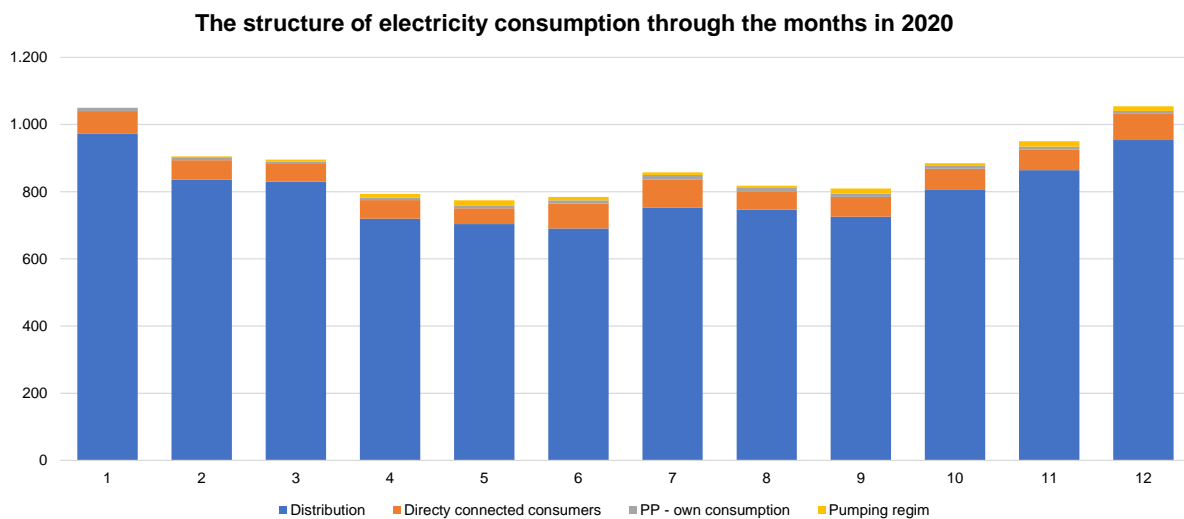
The following diagrams show the consumption of balance responsible parties and the consumption structure in terms of consumption categories and administrative units in BiH.

BRP's electricity takeover from the BiH transmission system in 2020.



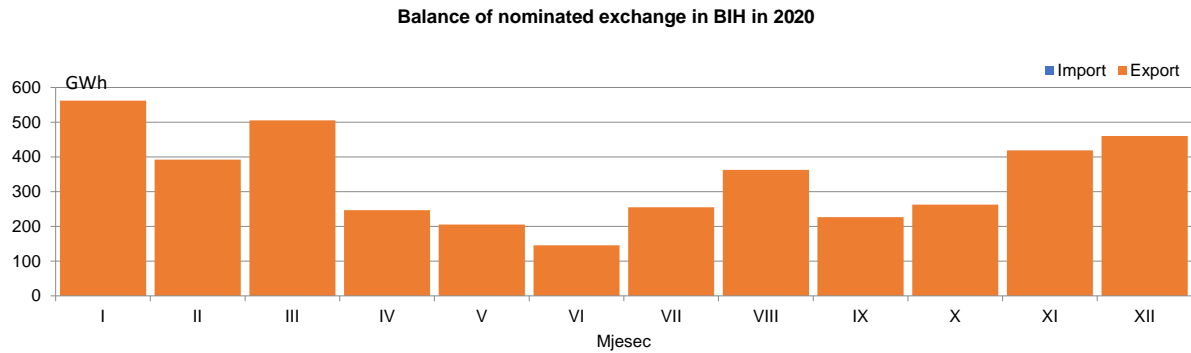


The highest monthly consumption in amount of 1 054 GWh in the transmission system in BiH was measured in December. The lowest monthly consumption was in May amounting to 774 GWh of electricity. The following diagram shows monthly consumption in the transmission system in BiH.



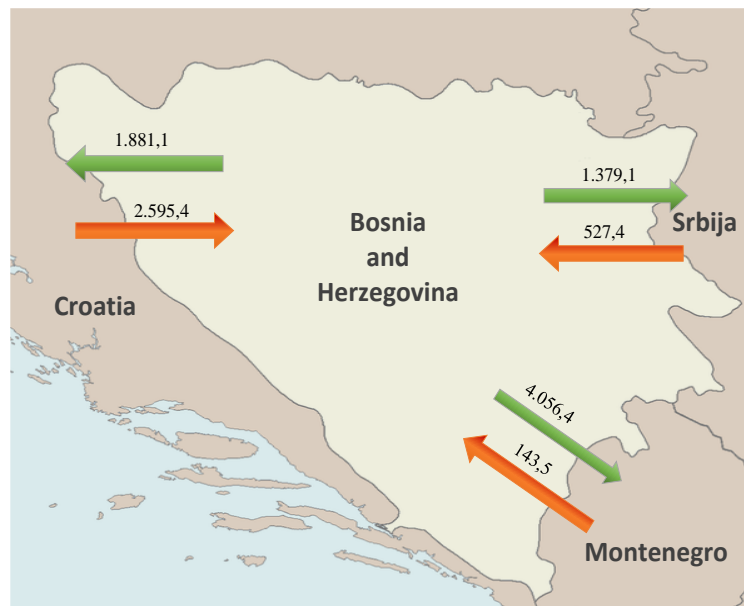
Nominated power exchange with neighbouring systems

According to nominated exchange programmes, in the year 2020, 5 021 GWh of electricity was imported in BiH power system, and 9 069 GWh of electricity was exported from BiH power system. In 2020, out of the above given amount 3 525 GWh of electricity was transited over BiH transmission network. The balance amount of 4 047 GWh of exported energy indicates that electricity export was 8% larger than in 2019.



Crossborder power flows

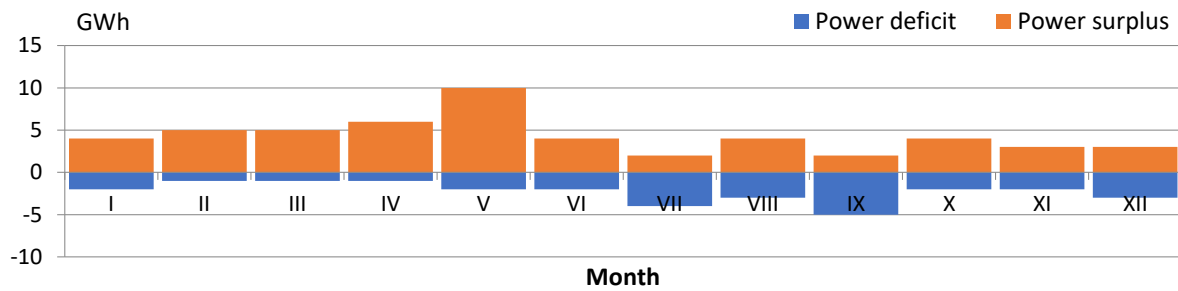
Actual physical power flows on interconnection lines in 2020 resulted with the balance of exchanged electricity of BiH Control Area in amount of 4 050 GWh in direction of export. From neighbouring systems 3 266 GWh was injected in BiH transmission system and in other systems 7 317 GWh of electricity was delivered. Power flows on the borders with neighbouring systems were such that in 2020 on the border with Serbia 852 GWh was delivered from BiH transmission system, while on the border with Montenegro 3 913 GWh of electricity was delivered. On the border with Croatia 714 GWh of electricity was delivered into BiH transmission system.



Deviations from nominated exchange programmes

Unintentional deviations from nominated exchange programmes in 2020 were 29 GWh in total for the hours with deficit registered, i.e. the total of 53 GWh for the hours with energy surplus registered in BiH Control Area. Maximum hourly electricity deficit in amount of 149 MWh/h was registered in May, and electricity surplus of 218 MWh/h was also registered in May 2020.

Monthly deviations of ees BiH toward the interconnection 2020



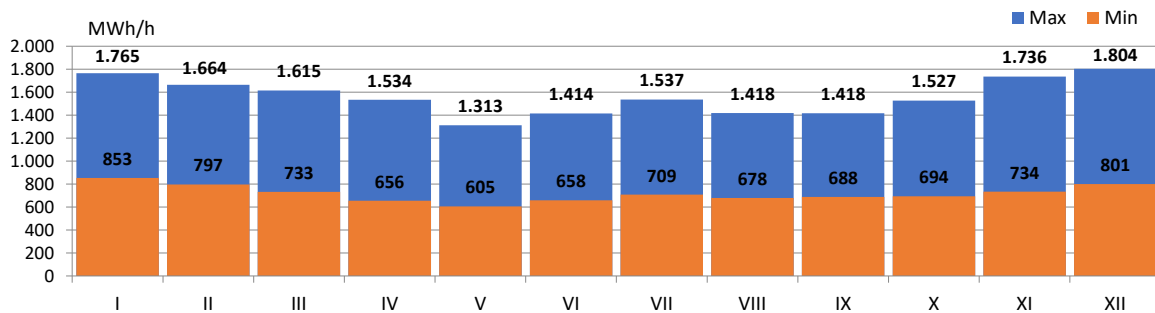
Specific values of hourly and daily consumption

Maximum hourly load in 2020 in amount of 1 804 MWh/h was realized on 2nd December 2020 in the 14th hour. Maximum daily consumption in amount of 35 786 MWh of electricity was realized on 2nd December. Minimum hourly consumption in amount of 605 MWh was registered on 25th May 2020 in the 4th hour, and minimum daily consumption of electricity in amount of 20 946 MWh was registered on 24th May.

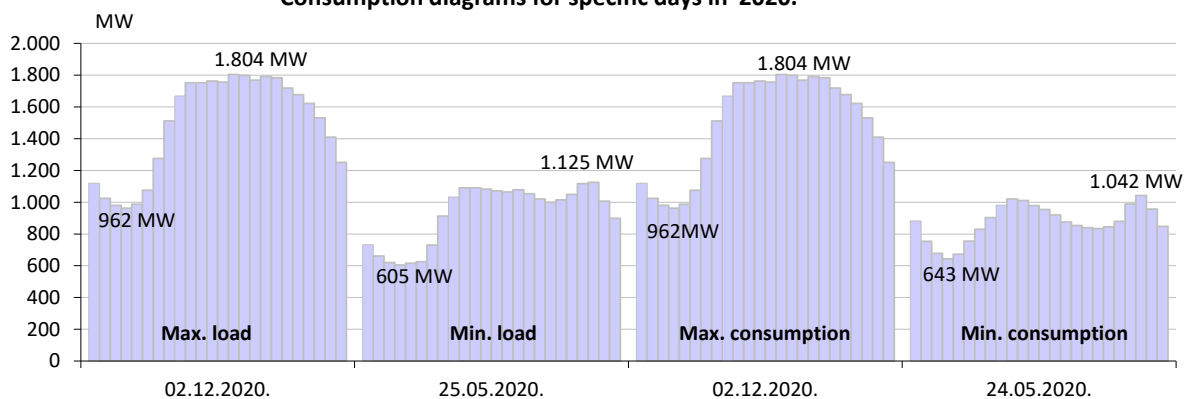
Specific values of electricity consumption in 2020

Max hourly consumption			Min hourly consumption			Max daily consumption		Min daily consumption	
MWh	Day	Hour	MWh	Day	Hour	MWh	Day	MWh	Day
1.804	02.12.2020.	14:00	605	25.05.2020.	4:00	35.786	02.12.2020.	20.946	24.05.2020.

Minimum and maximum hourly load through the months in 2020



Consumption diagrams for specific days in 2020.



BALANCE OF ELECTRICITY IN THE TRANSMISSION SYSTEM

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	2020	2020/2019
	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	%
Electricity generation in the transmission system														
(1) HPP	528	362	504	212	152	247	274	242	292	407	428	559	4.207	76%
(2) TPP	1.092	929	874	826	813	670	837	940	743	732	952	953	10.361	109%
(3) WPP	24	26	30	21	31	17	18	19	17	22	13	22	262	103%
(4) Generation TOTAL (1+2+3)	1.644	1.317	1.408	1.059	996	934	1.129	1.201	1.053	1.161	1.393	1.535	14.830	97%
(5) Energy received from the distrib. system	5	9	20	9	8	12	6	8	5	12	4	15	115	64%
Electricity import from the neighbouring power systems														
(6) from EES Croatia	187	206	115	161	217	217	242	143	167	332	270	339	2.595	144%
(7) from EES Serbia	8	28	48	42	25	54	45	66	120	43	28	21	527	64%
(8) from EES Montenegro	2	2	8	6	5	11	26	21	31	9	10	11	143	74%
(9) Import TOTAL (6.8)	198	235	171	208	247	282	313	231	318	384	308	371	3.266	116%
(10) AVAILABLE ENERGY (3+4+8)	1.846,7	1.561,6	1.599,2	1.275,9	1.251,8	1.229,1	1.447,7	1.439,9	1.375,8	1.557,3	1.704,6	1.921,8	18.211,4	99%
Takeover of electricity from the transmission system														
(11) Distribution companies	973	835	830	720	704	691	753	747	726	807	864	954	9.604	99%
(12) Directly connected consumers *	67	58	53	55	47	74	83	53	59	61	61	78	748	47%
(13) Power plants own consumption	9	9	7	8	7	9	13	13	10	9	9	9	113	119%
(14) Takeover TOTAL (11+12+13)	1.049	903	890	783	758	774	850	813	794	877	935	1.041	10.465	92%
Electricity Export to the neighbouring power systems														
(15) for EES Croatia	165	118	210	121	83	100	177	231	230	98	142	207	1.881	68%
(16) for EES Serbia	211	138	104	78	113	84	81	60	52	139	140	178	1.379	127%
(17) for EES Montenegro	387	373	363	263	260	239	305	307	259	410	443	447	4.056	150%
(18) Export TOTAL(15-18)	763	629	677	462	456	423	563	597	541	646	725	832	7.317	111%
(19) Pumping	1	3	6	11	17	10	8	5	15	8	16	13	113	117%
(20) REQUIRED POWER (14+18+19)	1.813,5	1.534,6	1.573,0	1.255,4	1.230,5	1.207,6	1.420,8	1.414,9	1.350,7	1.531,1	1.675,6	1.886,4	17.994,2	99%
Transmission losses														
(21) Transmission losses (10-20)	33	27	26	20	21	21	27	25	25	26	29	35	317	98%
(22) In relation to available power (21)/(10)	1,80%	1,73%	1,64%	1,60%	1,70%	1,74%	1,86%	1,73%	1,82%	1,68%	1,70%	1,85%	1,74%	99%

ELECTRICITY INJECTED IN THE TRANSMISSION SYSTEM

PREMISE	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	2020	2020/2019
	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	%
HPP Jablanica	81	56	62	30	22	28	35	32	43	57	50	64	558	74.82%
HPP Grabovica	28	20	24	11	8	10	11	10	15	21	18	27	205	72.66%
HPP Salakovac	34	24	38	12	10	10	10	9	18	32	20	50	265	63.05%
HPP Višegrad	59	57	111	54	49	51	46	48	37	79	52	68	709	82.61%
HPP Trebinje 1	48	26	33	20	4	13	32	25	27	29	47	21	326	90.97%
HPP Trebinje 2	0	0	0	0	0	0	0	0	0	0	0	0	0	
HPP Dubrovnik (G2)	0	2	36	10	3	28	51	33	59	57	63	67	410	1880.67%
HPP Bočac	15	16	22	13	13	17	10	11	7	16	12	32	185	64.06%
HPP Dub	2	5	7	4	3	4	3	3	2	3	2	3	41	64.01%
HPP Rama	104	59	33	15	2	49	45	43	43	42	83	65	583	78.89%
HPP Mostar	20	15	23	10	9	9	8	8	12	20	13	28	173	71.63%
HPP Jajce 1	21	15	22	14	13	14	9	8	6	17	11	32	181	65.81%
HPP Jajce 2	7	5	7	5	5	5	4	4	3	5	5	9	63	76.76%
PHE Čapljina	89	59	67	11	11	9	9	8	19	25	52	53	413	43.71%
HPP Peć-Mlini	12	3	7	2	1	1	0	0	0	1	1	14	40	47.31%
HPP Mostarsko Blato	9	2	12	0	0	0	0	0	0	0	1	27	54	39.92%
HYDRO POWER PLANTS	528.1	362.3	503.5	211.6	152.1	247.3	273.7	242.1	292.3	406.9	428.1	559.4	4,207.3	75.88%
TPP Tuzla	345	321	221	214	215	215	240	226	250	184	293	252	2,975	113.87%
TPP Kakaniž	214	195	136	152	121	103	202	205	169	181	183	238	2,099	114.94%
TPP Ugljevik	164	132	165	134	161	131	154	153	18	178	137	121	1,648	100.02%
TPP Gacko	166	149	150	131	145	123	42	156	147	149	143	138	1,638	119.55%
TPP Stanari	205	132	202	195	171	98	199	200	159	41	197	204	2,002	96.77%
THERMAL POWER PLANTS	1,092.1	928.5	874.2	825.8	812.7	670.1	837.2	939.6	743.3	732.3	951.9	953.1	10,360.9	108.78%
WPP Meshihovina	13	16	18	12	18	10	10	10	9	12	8	12	148	88.87%
WPP Jelovača	11	11	13	9	13	7	8	9	8	10	6	10	114	130.36%
WIND POWER PLANTS	24.2	26.3	30.2	21.4	31.1	17.1	17.6	19.1	17.1	22.0	13.3	22.5	261.8	103.21%
GENERATION	1,644.3	1,317.1	1,407.9	1,058.8	995.8	934.4	1,128.5	1,200.8	1,052.8	1,161.2	1,393.3	1,535.0	14,830.0	96.79%

Take over from the transmission system

CATEGORY	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	2020	2020/2019
	GW/h	GW/h	GW/h	GW/h	GW/h	GW/h	GW/h	GW/h	GW/h	GW/h	GW/h	GW/h	GW/h	%
Take over from the transmission system	1.050,4	905,3	895,8	793,4	774,1	784,4	857,5	817,9	809,7	885,0	950,1	1.054,1	10.577,7	92,47%
Distribution	434	373	371	326	319	312	335	332	323	361	381	418	4.285	99,19%
Direct consumers	48	48	51	48	39	48	51	38	46	47	47	51	561	109,58%
Power Plants - their own consumption	8	7	6	6	5	5	10	10	6	6	6	6	82	117,56%
EPBH	489,2	427,5	427,7	379,2	363,1	365,2	396,4	381,1	375,0	414,2	434,3	475,0	4.927,8	100,54%
Distribution	403	343	344	297	289	282	308	305	300	337	367	407	3.983	100,60%
Direct consumers	18	10	0	0	0	13	19	0	0	0	0	13	74	17,78%
Power Plants - their own consumption	1	2	1	1	1	3	1	1	2	1	1	2	16	100,33%
ERS	422,1	354,6	345,5	298,4	290,4	298,2	328,3	306,1	302,3	338,6	367,8	421,7	4.074,1	92,72%
Distribution	136	119	115	98	96	97	109	109	103	109	117	129	1.336	96,37%
Direct consumers	1	1	1	6	7	0	0	0	0	0	0	0	17	3,01%
Power Plants - their own consumption	1	1	0	1	1	1	2	2	2	1	2	1	14	159,89%
Pumping regime - PHE Čapljina	1	3	6	11	17	10	8	5	15	8	16	13	113	116,89%
EPHZHB	138,6	122,8	122,0	115,4	120,1	108,3	119,2	117,1	120,1	118,6	134,5	143,4	1.480,0	71,74%
Distribution	0	0	0	0	0	0	0	0	0	0	0	0	0	
Direct consumers	1	0	1	0	1	13	13	14	12	14	14	14	96	118,80%
Power Plants - their own consumption	0	0	0	0	0	0	0	0	0	0	0	0	0	
LE Trading	0,5	0,5	0,5	0,4	0,5	12,6	13,5	13,5	12,2	13,6	13,5	14,0	95,5	118,80%
Distribution	0	0	0	0	0	0	0	0	0	0	0	0	0	
Direct consumers	0	0	0	0	0	0	0	0	0	0	0	0	0	
Power Plants - their own consumption	0	0	0	0	0	0	0	0	0	0	0	0	0	
Petrol BH	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,0	0,3	

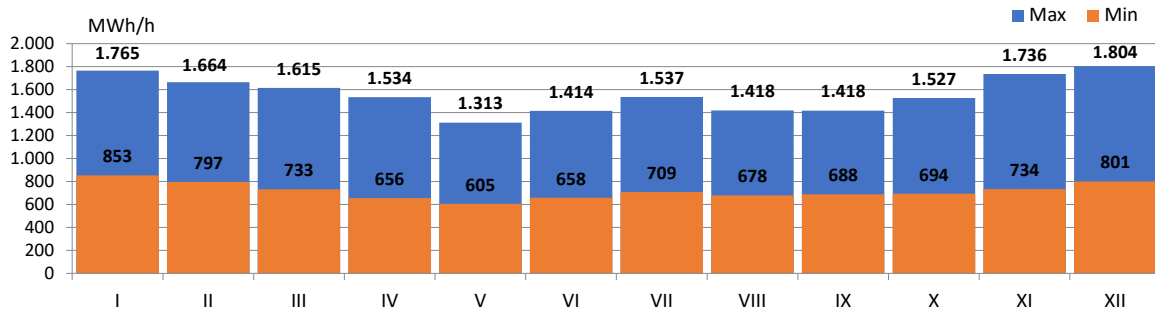
Data on specific hourly and daily consumption in 2020

Month	Max.hourly consumption			Min.hourly consumption			Max.daily consumption		Min.daily consumption	
	MWh/h	Dan	Sat	MWh/h	Dan	Sat	MWh	Dan	MWh	Dan
January	1.765	17.01.2020	18	853	29.01.2020	4	35.190	22.01.2020	30.882	01.01.2020
February	1.664	06.02.2020	19	797	24.02.2020	4	33.311	07.02.2020	28.486	23.02.2020
March	1.615	25.03.2020	14	733	22.03.2020	4	31.040	25.03.2020	24.753	29.03.2020
April	1.534	01.04.2020	15	656	20.04.2020	4	29.569	01.04.2020	22.496	19.04.2020
May	1.313	23.05.2020	22	605	25.05.2020	4	25.415	27.05.2020	20.946	24.05.2020
June	1.414	29.06.2020	15	658	01.06.2020	4	27.065	30.06.2020	23.019	07.06.2020
July	1.537	30.07.2020	15	709	19.07.2020	6	29.710	30.07.2020	23.865	19.07.2020
August	1.418	03.08.2020	15	678	16.08.2020	5	27.393	03.08.2020	23.297	16.08.2020
September	1.418	30.09.2020	20	688	28.09.2020	4	27.245	30.09.2020	23.828	06.09.2020
October	1.527	29.10.2020	18	694	05.10.2020	4	29.702	13.10.2020	24.075	04.10.2020
November	1.736	30.11.2020	18	734	02.11.2020	4	34.142	30.11.2020	26.016	01.11.2020
December	1.804	02.12.2020	14	801	07.12.2020	4	35.786	02.12.2020	29.232	06.12.2020
2020	1.804	02.12.2020	14	605	25.05.2020	4	35.786	02.12.2020	20.946	24.05.2020

Specific values of electricity consumption in 2020

Max hourly consumption			Min hourly consumption			Max daily consumption		Min daily consumption	
MWh	Day	Hour	MWh	Day	Hour	MWh	Day	MWh	Day
1.804	02.12.2020.	14:00	605	25.05.2020.	4:00	35.786	02.12.2020.	20.946	24.05.2020.

Minimum and maximum hourly load through the months in 2020



Diagrams of consumption for the days of the months with max.hourly consumption

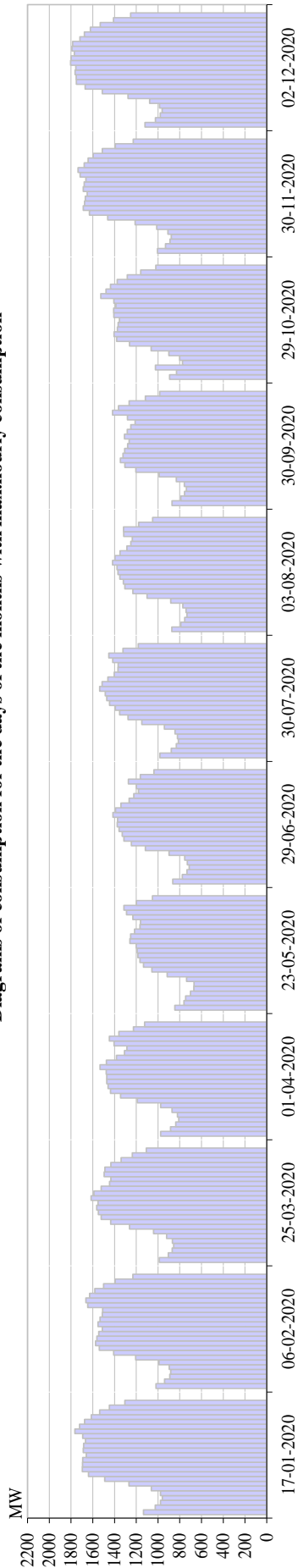


Diagram of consumption for a day in a month with max.hourly consumption

	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	1134	1026	978	960	977	1061	1268	1490	1639	1696	1694	1692	1661	1687	1684	1667	1693	1765	1721	1675	1614	1536	1447	1305	35.068
February	1018	940	892	882	897	991	1205	1408	1540	1575	1563	1545	1512	1551	1533	1513	1509	1646	1664	1630	1581	1501	1395	1231	32.722
March	988	906	869	855	868	921	1041	1262	1435	1523	1549	1564	1552	1615	1590	1522	1446	1433	1494	1488	1434	1339	1236	1108	31.040
April	976	885	837	809	820	871	975	1190	1344	1438	1458	1471	1471	1477	1534	1475	1382	1308	1286	1404	1448	1360	1227	1122	29.569
May	846	762	745	702	671	668	737	916	1056	1134	1166	1185	1192	1200	1259	1252	1215	1166	1160	1230	1290	1313	1199	1050	25.114
June	864	776	733	713	731	754	899	1116	1246	1314	1328	1359	1375	1414	1390	1341	1266	1223	1181	1199	1272	1162	1037	27.065	
July	983	877	832	813	821	843	941	1149	1276	1352	1393	1446	1472	1486	1537	1514	1462	1403	1369	1367	1417	1453	1323	1182	29.710
August	873	791	755	734	742	771	883	1101	1231	1304	1318	1351	1368	1377	1418	1397	1350	1285	1250	1237	1315	1317	1177	1049	27.393
September	871	790	756	738	758	832	990	1204	1304	1346	1321	1307	1280	1266	1309	1283	1251	1211	1280	1418	1362	1266	1117	985	27.245
October	894	830	1024	776	801	900	1063	1262	1380	1405	1374	1367	1355	1406	1408	1387	1406	1527	1478	1436	1376	1282	1160	1021	29.317
November	1006	930	889	877	908	1011	1211	1462	1631	1687	1676	1668	1652	1688	1679	1663	1716	1736	1679	1643	1597	1512	1392	1228	34.142
December	1119	1024	980	962	987	1076	1276	1512	1670	1752	1752	1763	1756	1804	1798	1769	1792	1784	1719	1677	1623	1531	1409	1252	35.786

Diagrams of consumption for the days of the months with min. hourly consumption

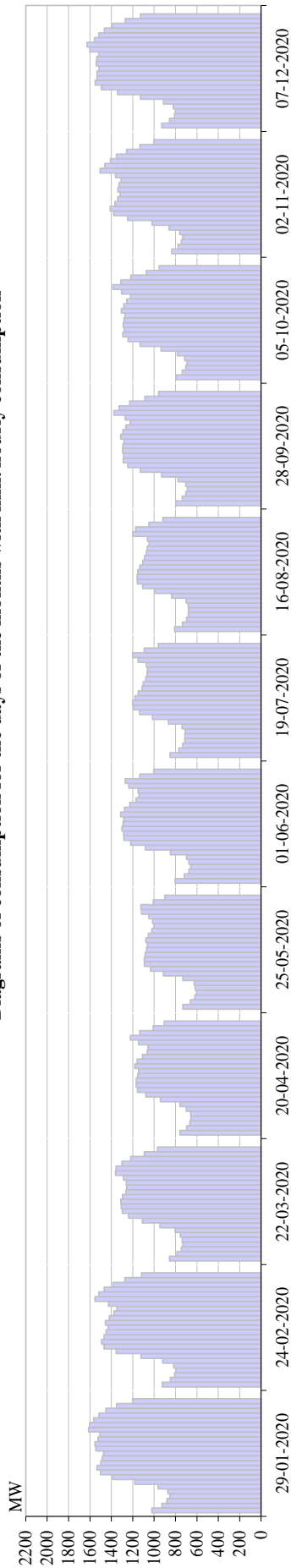


Diagram of consumption for a day in a month with min. hourly consumption

	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	1022	927	880	853	872	963	1181	1387	1501	1533	1499	1484	1472	1545	1553	1524	1507	1614	1602	1564	1516	1452	1351	1201	32.004
February	923	848	809	797	818	921	1123	1354	1470	1491	1468	1449	1431	1455	1418	1374	1348	1427	1554	1517	1468	1385	1274	1117	30.236
March	857	787	745	733	739	756	804	946	1111	1239	1298	1308	1311	1296	1262	1256	1259	1287	1361	1355	1301	1218	1091	969	26.287
April	758	696	667	656	657	699	760	941	1078	1155	1168	1167	1154	1145	1181	1158	1109	1064	1057	1144	1222	1135	1009	907	23.686
May	732	661	619	605	616	626	731	913	1033	1091	1091	1083	1071	1065	1078	1054	1021	1000	1015	1050	1117	1125	1007	899	22.302
June	803	717	674	658	676	697	848	1082	1218	1283	1285	1300	1291	1283	1312	1277	1227	1169	1141	1150	1237	1270	1134	1004	25.738
July	852	769	733	713	713	709	741	867	1017	1136	1195	1201	1178	1148	1112	1102	1078	1065	1062	1073	1150	1202	1092	961	23.865
August	809	735	696	680	678	681	700	837	992	1106	1157	1158	1154	1134	1105	1090	1073	1065	1048	1063	1198	1172	1049	918	23.297
September	798	737	704	688	704	777	930	1130	1245	1289	1285	1294	1292	1282	1313	1292	1265	1224	1270	1376	1327	1230	1086	957	26.495
October	795	737	704	694	714	783	935	1130	1244	1292	1278	1289	1282	1272	1305	1284	1256	1222	1305	1384	1311	1218	1072	952	26.458
November	836	776	744	734	761	861	1020	1248	1378	1411	1365	1341	1318	1339	1328	1310	1360	1505	1461	1409	1352	1258	1133	1001	28.249
December	928	857	810	801	820	913	1127	1343	1492	1551	1534	1534	1515	1542	1536	1520	1601	1627	1558	1517	1466	1388	1270	1128	31.379

Diagrams of consumption on a 3rd Wednesday in each month

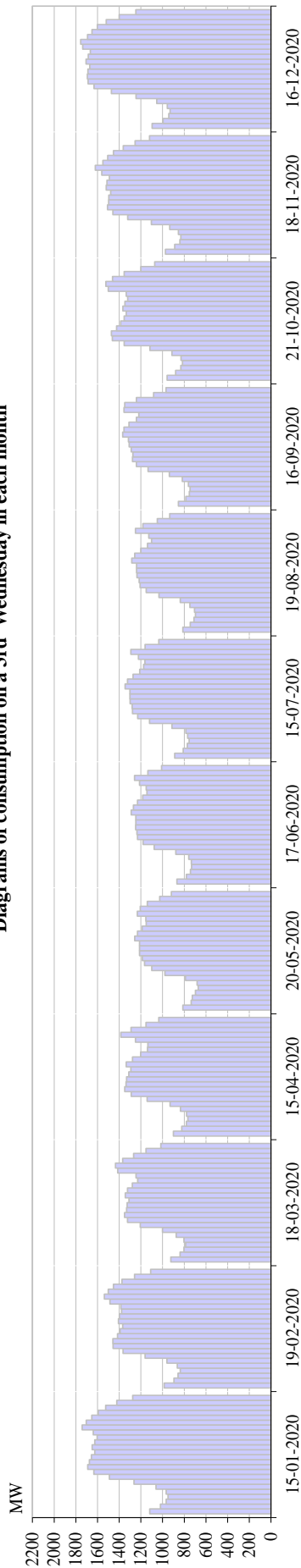


Diagram of consumption on the third Wednesday in a month

	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	1119	1020	966	950	967	1061	1263	1491	1635	1691	1675	1656	1626	1649	1625	1603	1640	1742	1703	1653	1593	1524	1423	1276	34.551
February	986	894	857	837	864	960	1161	1364	1457	1458	1415	1391	1368	1406	1398	1377	1385	1485	1537	1501	1453	1374	1258	1110	30.298
March	924	839	802	787	802	874	1000	1206	1323	1351	1332	1327	1309	1344	1323	1280	1229	1245	1414	1435	1367	1266	1153	1017	27.950
April	900	824	781	767	778	834	930	1142	1289	1348	1338	1333	1311	1293	1335	1278	1203	1139	1135	1250	1385	1292	1153	1035	27.073
May	814	736	727	697	671	681	788	979	1100	1166	1187	1212	1213	1212	1257	1231	1188	1152	1155	1232	1206	1141	1027	918	24.692
June	867	781	743	733	735	758	878	1078	1180	1230	1237	1248	1247	1246	1290	1268	1231	1183	1144	1152	1213	1258	1136	1009	25.847
July	889	809	772	756	768	785	914	1120	1229	1277	1280	1300	1302	1302	1345	1324	1272	1211	1174	1164	1223	1292	1162	1035	26.703
August	813	745	710	697	706	747	836	1034	1150	1207	1216	1237	1239	1239	1284	1257	1200	1138	1102	1127	1250	1181	1048	934	25.100
September	855	787	754	747	762	819	938	1133	1241	1278	1274	1289	1308	1315	1368	1355	1310	1242	1219	1355	1349	1242	1083	969	26.991
October	958	879	831	817	831	914	1116	1354	1464	1471	1424	1387	1354	1336	1365	1347	1322	1335	1500	1523	1461	1354	1201	1073	29.617
November	974	888	841	831	854	934	1103	1321	1458	1507	1497	1496	1479	1520	1514	1490	1560	1620	1550	1506	1454	1362	1253	1121	31.133
December	1096	996	943	930	957	1054	1245	1472	1632	1687	1693	1688	1671	1705	1685	1666	1736	1755	1692	1650	1602	1520	1399	1246	34.721

Diagrams of consumption for the days of the months with max. consumption

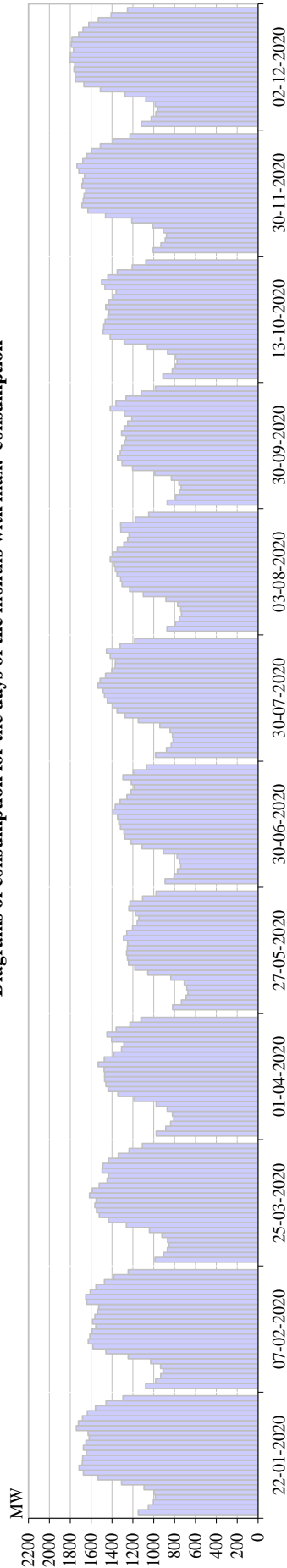


Diagram of consumption for a day in a month with max. consumption

	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	1149	1052	1003	985	997	1094	1309	1536	1675	1716	1685	1682	1645	1674	1649	1620	1629	1740	1722	1682	1636	1558	1457	1295	35,190
February	1078	982	932	910	935	1030	1244	1459	1583	1628	1612	1592	1555	1586	1564	1538	1527	1641	1652	1609	1553	1472	1382	1245	33,311
March	988	906	869	855	868	921	1041	1262	1435	1523	1549	1564	1552	1615	1590	1522	1446	1433	1494	1488	1434	1339	1236	1108	31,040
April	976	885	837	809	820	871	975	1190	1344	1438	1458	1471	1471	1477	1534	1475	1382	1308	1286	1404	1448	1360	1227	1122	29,569
May	819	734	690	673	683	706	837	1057	1180	1242	1252	1260	1254	1250	1289	1258	1204	1160	1144	1173	1239	1227	1107	977	25,415
June	891	806	773	741	752	775	906	1113	1219	1278	1284	1319	1335	1346	1392	1370	1323	1257	1219	1188	1216	1295	1195	1069	27,065
July	983	877	832	813	821	843	941	1149	1276	1352	1393	1446	1472	1486	1537	1514	1462	1403	1369	1367	1417	1453	1323	1182	29,710
August	873	791	755	734	742	771	883	1101	1231	1304	1318	1351	1368	1377	1418	1397	1350	1285	1250	1237	1315	1317	1177	1049	27,393
September	871	790	756	738	758	832	990	1204	1304	1346	1321	1307	1280	1266	1309	1283	1251	1211	1280	1418	1362	1266	1117	985	27,245
October	912	822	791	776	790	868	1060	1283	1418	1485	1479	1466	1440	1430	1460	1431	1390	1360	1468	1499	1439	1350	1207	1076	29,702
November	1006	930	889	877	908	1011	1211	1462	1631	1687	1676	1668	1652	1688	1679	1663	1716	1736	1679	1643	1597	1512	1392	1228	34,142
December	1119	1024	980	962	987	1076	1276	1512	1670	1752	1752	1763	1756	1804	1798	1769	1792	1784	1719	1677	1623	1531	1409	1252	35,786

Diagrams of consumption for the days of the months with min. consumption

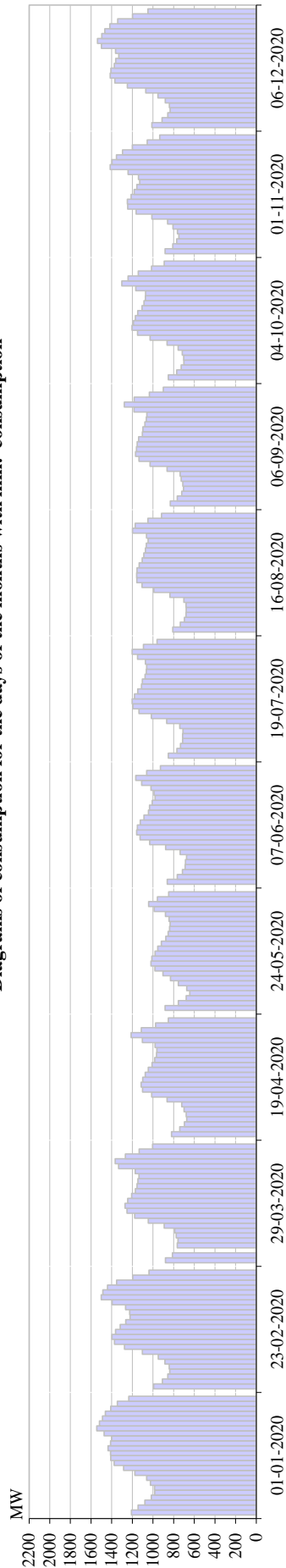


Diagram of consumption for a day in a month with min. consumption

	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	1209	1.144	1.079	1.016	983	985	1.025	1.061	1.176	1.284	1.377	1.409	1.411	1.435	1.411	1.401	1.473	1.545	1.519	1.490	1.462	1.409	1.345	1.234	30.882
February	993	908	856	837	842	885	949	1.103	1.276	1.373	1.396	1.362	1.318	1.264	1.221	1.226	1.265	1.396	1.501	1.485	1.441	1.352	1.197	1.038	28.486
March	879	812	0	765	758	775	790	892	1.046	1.177	1.252	1.271	1.245	1.207	1.170	1.155	1.146	1.136	1.172	1.333	1.366	1.267	1.135	1.004	24.753
April	820	741	695	674	679	699	722	864	1.013	1.100	1.115	1.098	1.076	1.046	1.008	984	966	963	980	1.103	1.211	1.113	975	851	22.496
May	882	754	678	644	672	755	830	903	982	1.020	1.011	979	954	920	875	853	839	834	845	880	989	1.042	957	848	20.946
June	861	765	714	689	685	675	737	878	1.032	1.125	1.157	1.151	1.123	1.087	1.044	1.033	1.007	979	990	1.020	1.110	1.167	1.061	927	23.019
July	852	769	733	713	713	709	741	867	1.017	1.136	1.195	1.201	1.178	1.148	1.112	1.102	1.078	1.065	1.062	1.073	1.150	1.202	1.092	961	23.297
August	809	735	696	680	678	681	700	837	992	1.106	1.157	1.158	1.154	1.134	1.105	1.090	1.073	1.065	1.048	1.063	1.198	1.172	1.049	918	23.865
September	832	765	721	705	710	727	738	864	1.028	1.135	1.168	1.160	1.153	1.140	1.103	1.097	1.078	1.065	1.059	1.184	1.277	1.183	1.035	899	23.828
October	851	771	728	701	703	716	756	864	1.029	1.150	1.203	1.189	1.170	1.148	1.107	1.087	1.073	1.072	1.167	1.302	1.241	1.143	1.014	892	24.075
November	883	809	770	749	763	807	858	1.010	1.163	1.245	1.249	1.213	1.182	1.156	1.128	1.141	1.241	1.415	1.397	1.353	1.295	1.200	1.056	935	26.016
December	1.011	912	856	834	842	881	951	1.070	1.248	1.370	1.414	1.407	1.374	1.361	1.331	1.362	1.500	1.537	1.495	1.467	1.418	1.341	1.198	1.050	29.232

NOMINATED EXCHANGE PROGRAMME WITH NEIGHBOURING EESs

NOMINATED EXCHANGE	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	2020
	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh
BiH <- CRO (HEP-OPS)	245,0	263,4	125,1	237,7	310,2	255,3	222,6	161,0	199,6	424,6	258,2	262,1	2.964,8
BiH <- SR (EMS)	55,2	66,3	95,4	114,4	97,8	132,8	105,7	223,2	155,2	73,2	116,3	90,0	1.325,4
BiH <- MG (EPCG)	115,4	67,7	25,8	62,1	60,4	86,2	48,1	36,8	42,1	41,9	76,8	67,6	730,9
(1) Received BiH	415,6	397,4	246,3	414,2	468,5	474,3	376,3	421,0	396,8	539,8	451,3	419,8	5.021,2
BiH -> CRO (HEP-OPS)	296,8	274,4	317,1	191,3	185,9	161,8	218,5	144,1	201,2	252,4	260,7	289,8	2.794,0
BiH -> SR (EMS)	361,6	292,9	259,1	300,1	252,4	228,6	189,8	382,3	203,4	370,2	380,4	326,0	3.546,6
BiH -> MG (EPCG)	319,9	222,6	175,5	169,8	235,5	229,7	223,6	257,6	219,3	180,3	229,5	264,8	2.728,0
(2) Delivered BiH	978,2	789,8	751,7	661,2	673,9	620,0	631,9	784,0	623,9	802,8	870,6	880,6	9.068,6
(3) Balance BiH (2) - (1)	562,6	392,5	505,4	247,1	205,4	145,8	255,6	363,0	227,1	263,0	419,3	460,8	4.047,4
Balance CRO (HEP-OPS)	51,7	10,9	192,0	-46,4	-124,3	-93,5	-4,0	-16,9	1,6	-172,3	2,5	27,7	-170,9
Balance SR (EMS)	306,4	226,6	163,8	185,7	154,6	95,8	84,1	159,1	48,2	296,9	264,1	236,0	2.221,2
Balance MG (EPCG)	204,5	154,9	149,6	107,8	175,1	143,5	175,5	220,8	177,2	138,3	152,7	197,2	1.997,1
Transit	344,0	285,1	155,2	272,2	296,3	306,9	289,7	322,1	274,1	351,0	337,1	291,4	3.525,1
Internal trade													

PHYSICAL EXCHANGE OF BiH WITH NEIGHBOURING EES IN THE TRANSMISSION SYSTEM

PHYSICAL FLOWS	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	2020
	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh
BiH <- CRO (HEP-OPS)	187,1	205,7	114,7	160,6	216,9	217,3	242,1	143,5	166,5	331,9	270,1	338,9	2.595,4
BiH <- SR (EMS)	7,9	27,9	47,7	41,5	25,1	53,8	45,3	66,1	120,1	42,9	27,5	21,4	527,4
BiH <- MG (EPCG)	2,5	1,7	8,3	5,9	5,5	11,1	25,6	21,2	31,3	9,4	9,9	11,2	143,5
(1) Received BiH	197,6	235,3	170,8	208,0	247,5	282,2	313,0	230,7	318,0	384,2	307,6	371,5	3.266,3
BiH -> CRO (HEP-OPS)	165,0	118,2	210,0	120,8	83,0	99,8	176,6	231,0	229,7	97,7	142,0	207,3	1.881,1
BiH -> SR (EMS)	211,3	138,1	104,4	78,2	113,1	84,2	81,3	59,5	52,2	138,8	140,4	177,6	1.379,1
BiH -> MG (EPCG)	386,9	373,0	362,8	263,0	260,3	239,3	305,3	306,6	259,1	409,6	443,1	447,4	4.056,4
(2) Delivered BiH	763,1	629,3	677,2	462,0	456,4	423,3	563,3	597,0	541,0	646,0	725,5	832,3	7.316,5
(3) Balance BiH (2) - (1)	565,6	394,0	506,4	254,0	208,9	141,1	250,3	366,3	223,1	261,9	417,9	460,8	4.050,3
Balance CRO (HEP-OPS)	-22,2	-87,5	95,3	-39,8	-133,9	-117,5	-65,4	87,5	63,1	-234,2	-128,2	-131,6	-714,4
BALANCE SR (EMS)	203,4	110,2	56,6	36,6	88,1	30,4	36,0	-6,6	-67,9	95,9	112,8	156,2	851,7
BALANCE MG (EPCG)	384,4	371,3	354,5	257,1	254,8	228,2	279,7	285,4	227,9	400,2	433,2	436,3	3.912,9

Deviations of EES BiH towards the Interconnection in 2020

Month	Deviation - Energy shortage			Deviation - Energy surplus			Deviation - Total		
	Max. hourly	Average	Total	Max. hourly	Average	Total	Max. Hourly	Average	Total
	MWh/h	MWh/h	MWh	MWh/h	MWh/h	MWh	MWh/h	MWh/h	MWh
January	-31	-6	-1.543	109	8	3.602	109	3	2.058
February	-55	-7	-1.306	53	10	4.719	-55	5	3.414
March	-62	-7	-1.413	48	10	5.100	-62	5	3.687
April	-67	-6	-1.458	76	13	6.369	76	7	4.911
May	-149	-10	-1.566	218	17	10.042	218	11	8.476
June	-43	-8	-2.499	55	10	4.043	55	2	1.544
July	-106	-10	-4.484	56	7	2.092	-106	-3	-2.392
August	-50	-7	-2.510	62	11	4.453	62	3	1.943
September	-69	-13	-5.454	45	8	2.271	-69	-4	-3.182
October	-58	-8	-1.985	44	8	3.988	-58	3	2.003
November	-79	-7	-2.200	69	7	2.943	-79	1	743
December	-113	-7	-2.854	55	8	2.898	-113	0	44
2020	-149	-8	-29.318	218	10	52.587	218	3	23.250