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# STATISTICAL FACTSHEET 2017

PROVISIONAL VALUES AS OF 4 MAY 2018

# ENTSO-E in figures – Electricity system data of member TSOs' countries

ENTSO-E Transmission network losses percentage of consumption: 1.70%

## Net generation 2017<sup>1</sup>

## Consumption 2017<sup>1</sup>

Country	Net generation 2017 <sup>1</sup>																Consumption 2017 <sup>1</sup>						Country														
	Non renewable net generation	Nuclear	Fossil fuels	Of which Fossil coal/Lignite	Of which Fossil Coal-derived gas	Of which Fossil Gas	Of which Fossil Hard coal	Of which Fossil Oil	Of which Fossil Oil shale	Of which Fossil Peat	Of which Mixed fuels	Of which Other fossil fuels	Hydro pure pumped storage	Hydro mixed pumped storage (non renewable part)	Waste (non renewable part)	Other non-renewable	Renewable net generation	Wind offshore	Wind onshore	Solar PV	Solar Thermal	Biomass		Biogas	Geothermal	Waste (renewable part)	Hydro Pure storage	Hydro Run-of-river and pondage	Hydro mixed pumped storage (renewable part)	Hydro Marine (tidal/wave)	Other renewable	Not identified	Total net generation	Pumping	Consumption	Variation (compared with 2016)	
	TWh	TWh	TWh	TWh	TWh	TWh	TWh	TWh	TWh	TWh	TWh	TWh	TWh	TWh	TWh	TWh	TWh	TWh	TWh	TWh	TWh	TWh	TWh	TWh	TWh	TWh	TWh	TWh	TWh	TWh	TWh	TWh	TWh	TWh	TWh	TWh	TWh
AL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.2	-	-	-	-	-	-	-	-	-	3.1	1.1	-	-	-	4.2	-	7.1	-	AL		
AT <sup>2</sup>	20.4	-	16.4	-	-	10.8	1.8	0.8	-	-	n.a.	3.1	-	3.9	-	44.1	-	6.5	n.a.	-	n.a.	n.a.	n.a.	n.a.	n.a.	25.4	9.1	-	3.1	5.7	70.2	5.6	72.3	-1.6	AT <sup>2</sup>		
BA	11.0	-	10.8	10.8	-	-	-	-	-	-	-	-	-	0.2	-	3.6	-	-	-	-	-	-	-	-	3.5	-	0.1	-	0.1	14.7	0.3	12.6	2.2	BA			
BE	65.9	40.0	23.6	-	2.2	21.3	-	0.1	-	-	-	-	1.1	-	1.0	0.2	14.4	2.8	3.3	2.9	-	3.1	0.9	-	1.1	-	0.2	-	0.0	-	80.3	1.5	84.8	0.8	BE		
BG <sup>3</sup>	34.8	14.7	19.5	17.6	-	1.5	0.3	-	-	-	-	-	0.6	0.1	-	6.0	-	1.5	1.4	-	0.3	-	-	-	-	1.3	1.2	0.2	-	-	40.8	1.0	34.4	1.9	BG <sup>3</sup>		
CH	21.7	19.5	0.8	-	-	0.8	-	0.0	-	-	-	-	-	-	1.4	-	39.8	-	0.1	1.1	-	0.2	0.4	-	1.3	20.7	15.9	-	-	-	61.5	4.2	63.4	0.4	CH		
CY	4.6	-	4.6	-	-	-	-	4.6	-	-	-	-	-	-	-	0.2	-	0.2	-	-	-	-	-	-	-	-	-	-	-	4.8	-	4.8	1.6	CY			
CZ	71.9	26.8	43.9	33.5	1.9	4.2	4.1	0.0	-	-	-	0.2	1.2	-	-	9.0	-	0.6	2.1	-	2.0	2.4	-	-	0.8	1.0	-	-	-	80.9	1.5	66.3	2.2	CZ			
DE <sup>4</sup>	396.4	72.2	312.9	137.3	-	82.9	84.2	4.3	-	-	4.2	-	5.9	0.5	5.0	-	205.9	17.4	86.0	35.5	-	40.6	n.a.	0.2	5.4	0.6	18.9	n.a.	-	1.3	-	602.3	8.3	538.7	-1.8	DE <sup>4</sup>	
DK	8.8	-	8.8	-	-	2.2	6.5	0.1	-	-	-	-	-	-	-	20.6	5.2	9.6	0.8	-	3.2	0.5	-	1.4	-	0.0	-	-	-	29.4	-	34.1	-1.6	DK			
EE	9.7	-	9.7	-	-	-	-	-	9.7	-	-	-	-	-	-	1.6	-	0.7	0.0	-	0.8	0.0	-	0.1	-	0.0	-	-	-	11.2	-	8.5	1.4	EE			
ES	178.1	55.6	117.4	4.7	-	61.2	40.5	11.0	-	-	-	-	1.9	0.4	2.6	0.2	84.5	-	47.9	8.4	5.3	2.5	1.1	-	0.9	10.6	5.7	2.1	-	0.0	-	262.6	3.7	268.1	1.1	ES	
FI	34.7	21.6	12.2	-	-	3.2	6.1	0.2	-	2.7	-	-	-	-	-	0.9	30.4	-	4.8	0.0	-	10.9	-	-	-	14.6	-	-	-	65.1	-	85.5	0.6	FI			
FR	440.5	379.1	54.4	-	-	40.9	9.7	3.8	-	-	-	-	4.9	2.1	-	88.9	-	24.0	9.2	-	2.8	2.2	-	2.1	-	47.2	1.0	0.6	-	-	529.4	7.1	482.0	-0.2	FR		
GB <sup>5</sup>	232.9	65.6	167.3	-	-	143.6	23.7	0.0	-	-	-	-	-	-	-	79.4	16.0	27.9	10.5	-	17.3	0.1	-	0.1	2.9	4.6	-	-	-	312.3	3.9	324.8	-2.8	GB <sup>5</sup>			
GR	31.9	-	31.8	16.4	-	15.4	-	-	-	-	-	-	-	0.1	-	13.9	-	4.8	3.7	-	0.3	-	-	-	3.0	0.6	0.4	-	1.2	-	45.8	0.1	51.9	1.2	GR		
HR	4.0	-	4.0	-	-	2.8	1.3	-	-	-	-	-	-	-	-	6.7	-	1.2	0.1	-	0.2	0.3	-	0.0	3.0	1.5	0.5	-	0.0	-	10.8	0.3	17.9	3.4	HR		
HU	25.9	15.2	10.8	4.7	-	6.0	0.0	0.1	-	-	-	-	-	-	-	3.1	-	0.7	0.1	-	1.5	0.2	-	0.4	-	0.2	-	-	-	29.1	-	41.9	2.6	HU			
IE	20.8	-	20.5	-	-	14.6	3.6	0.0	-	2.4	-	-	0.2	-	0.1	-	8.4	-	7.4	-	-	-	-	0.1	-	0.7	-	-	0.2	-	29.2	0.4	28.2	2.2	IE		
IS	0.0	-	0.0	-	-	-	-	0.0	-	-	-	-	-	-	-	18.6	-	0.0	-	-	-	-	4.7	-	13.8	0.1	-	-	-	18.6	-	18.6	3.1	IS			
IT	181.5	-	168.8	-	2.8	126.2	35.6	4.1	-	-	-	-	1.2	0.3	2.5	8.8	103.6	-	17.5	24.8	-	8.8	8.3	5.8	2.5	6.8	27.5	1.7	-	-	285.1	2.4	320.4	3.9	IT		
LT	1.4	-	0.6	-	-	0.5	-	-	-	-	0.1	-	0.6	-	0.1	0.2	2.4	-	1.4	0.1	-	0.2	0.1	-	0.1	-	0.6	-	-	3.9	0.8	11.7	2.6	LT			
LU	1.7	-	0.2	-	-	0.2	-	-	-	-	-	-	1.3	-	0.1	-	0.5	-	0.2	0.1	-	-	0.1	-	0.0	0.1	-	-	-	2.1	1.8	6.5	0.0	LU			
LV	2.0	-	2.0	-	-	1.4	-	-	-	-	0.6	-	-	-	-	5.4	-	0.1	-	-	0.5	0.4	-	-	-	4.4	-	-	-	7.3	-	7.3	-0.6	LV			
ME	2.0	-	1.3	1.3	-	-	-	-	-	-	-	-	0.7	-	-	0.3	-	0.1	-	-	-	-	-	-	0.2	-	-	-	-	2.3	-	3.4	5.6	ME			
MK	4.1	-	4.1	3.3	-	0.8	-	-	-	-	-	-	-	-	-	1.1	-	0.1	0.0	-	-	0.1	-	-	0.8	0.1	-	-	-	5.2	-	7.2	1.5	MK			
NL <sup>6</sup>	95.1	4.2	90.9	-	-	73.6	17.3	-	-	-	-	-	-	-	-	16.4	3.6	7.3	1.9	-	3.6	-	-	n.a.	-	0.1	-	-	-	111.5	-	115.4	0.8	NL <sup>6</sup>			
NO	3.1	-	3.1	-	-	3.1	-	-	-	-	-	-	-	-	-	144.8	-	2.7	-	-	-	-	-	-	142.1	-	-	-	0.7	148.6	-	133.7	0.3	NO			
PL <sup>7</sup>	133.1	-	132.0	46.4	2.2	7.5	73.6	2.2	-	-	-	0.5	0.0	0.2	0.5	24.6	-	14.4	0.2	-	6.4	1.0	-	-	0.5	1.8	0.2	-	-	157.7	0.7	159.3	2.6	PL <sup>7</sup>			
PT	33.4	-	31.6	-	-	17.6	13.6	0.1	-	-	-	0.3	-	1.8	-	21.2	-	12.0	0.9	-	2.8	-	-	-	-	3.4	2.1	-	-	54.5	2.2	49.6	0.7	PT			
RO	35.7	10.6	25.1	14.0	-	4.5	1.1	-	-	-	5.5	-	-	-	-	24.1	-	7.3	1.9	-	0.4	-	-	-	5.4	9.2	-	-	-	59.8	0.2	56.8	2.5	RO			
RS	30.3	-	29.7	29.5	-	0.2	-	-	-	-	-	-	0.6	-	-	9.0	-	-	-	-	-	-	-	-	0.8	8.1	-	-	-	39.2	0.9	39.6	2.1	RS			
SE	66.5	63.0	2.7	-	-	0.4	0.5	0.2	-	-	-	1.6	-	-	0.9	-	92.6	-	17.3	-	-	10.1	-	-	1.3	63.9	-	-	-	159.1	-	139.9	0.1	SE			
SI	10.7	6.0	4.3	4.3	-	0.0	-	-	-	-	-	-	0.3	0.0	0.2	4.3	-	0.0	0.3	-	0.1	0.1	-	-	-	3.8	-	-	15.0	0.4	14.2	2.8	SI				
SK	19.4	14.0	4.9	1.5	0.5	1.7	1.0	0.3	-	-	-	-	0.3	0.0	0.1	-	6.6	-	0.0	0.6	-	1.1	0.6	-	-	0.8	3.4	0.1	-	0.0	-	26.0	0.4	28.6	3.2	SK	
TR	207.7	-	207.7	40.5	-	108.2	57.0	2.0	-	-	-	-	-	-	-	87.8	-	17.9	2.7	-	2.8	-	6.0	-	41.4	17.1	-	-	-	295.5	-	294.5	-	TR			
ENTSO-E <sup>*</sup>	2441.6	808.0	1578.2	365.7	9.6	757.3	381.5	33.8	9.7	5.0	12.0	3.5	15.3	13.2	16.0	10.9	1228.1	45.1	325.7	109.0	5.3	122.5	18.7	16.7	16.6	325.9	218.6	17.7	0.6	6.0	6.5	3676.3	47.6	3634.2	-	ENTSO-E <sup>*</sup>	
%	66.42	21.98	42.93	9.95	0.26	20.60	10.38	0.92	0.26	0.14	0.33	0.10	0.42	0.36	0.44	0.30	33.41	1.23	8.86	2.96	0.15	3.33	0.51	0.45	8.87	5.95	0.48	0.02	0.16	0.18	100.00			%			
EU <sup>**</sup>	2161.7	788.5	1320.7	280.3	9.6	644.3	324.5	31.8	9.7	5.0	12.0	3.5	14.7	12.3	14.6	10.9	923.0	45.1	304.7	105.2	5.3	119.4	18.3	5.9	15.3	102.6	177.1	17.6	0.6	6.0	5.7	3090.6	42.3	3061.1	-	EU <sup>**</sup>	
%	69.95	25.51	42.73	9.07	0.31	20.85	10.50	1.03	0.31	0.16	0.39	0.11	0.48	0.40	0.47	0.35	29.87	1.46	9.86	3.40	0.17	3.86	0.59	0.19	0.50	3.32	5.73	0.57	0.02	0.19	0.19	100.00			%		

All footnotes on page 7

Net generation capacity 2017<sup>8</sup>

Country	Non renewable net generation	Nuclear	Fossil fuels	Of which Fossil Coal/Lignite	Of which Fossil Coal-derived gas	Of which Fossil Gas	Of which Fossil Hard coal	Of which Fossil Oil	Of which Fossil Oil shale	Of which Fossil Peat	Of which Mixed fuels	Of which Other fossil fuels	Hydro pure pumped storage	Hydro mixed pumped storage (non-renewable part)	Waste (non-renewable part)	Other non-renewable	Renewable net generation	Wind offshore	Wind onshore	Solar PV	Solar Thermal	Biomass	Biogas	Geothermal	Renewable Waste	Hydro Pure storage	Hydro Run-of-river and pondage	Hydro mixed pumped storage (renewable part)	Hydro Marine (tidal/wave)	Other renewable	Not identified	Total NGC	Country
	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW
AL	97	-	97	-	-	-	-	97	-	-	-	-	-	-	-	-	1835	-	-	-	-	-	-	-	-	1534	301	-	-	-	-	1932	AL
AT <sup>9</sup>	6560	-	6455	-	-	4841	598	166	-	-	436	414	-	-	-	105	18472	-	2730	1031	-	482	90	1	22	-	5692	8424	-	-	-	25032	AT
BA	2328	-	1888	1888	-	-	-	-	-	-	-	-	-	440	-	-	1656	-	-	-	-	-	-	-	-	1656	-	-	-	-	-	3984	BA
BE	14464	5919	6846	-	-	6688	-	158	-	-	-	-	1308	-	314	77	7115	878	1929	3380	-	806	-	-	-	-	122	-	-	-	-	21579	BE
BG	8041	2000	5044	4119	-	563	362	-	-	-	-	-	864	133	-	-	4032	-	701	1046	-	77	-	-	-	1537	613	57	-	-	-	12073	BG
CH <sup>10</sup>	3544	3333	-	-	-	n.a.	-	n.a.	-	-	-	-	-	-	211	-	14072	-	60	1394	-	246	1	-	211	8156	4004	-	-	-	-	17616	CH
CY <sup>11</sup>	1478	-	1478	-	-	-	-	1478	-	-	-	-	-	-	-	-	279	-	155	-	-	-	-	-	-	-	-	-	124	-	-	1757	CY
CZ	16610	4040	11298	8492	380	1226	1200	-	-	-	-	-	1172	-	100	-	4235	-	308	2040	-	350	450	-	-	753	334	-	-	-	-	20845	CZ
DE <sup>12</sup>	98188	9509	81577	20804	-	30582	25010	3777	-	-	1404	-	5220	1062	820	-	110041	5371	49701	42020	-	7250	n.a.	38	820	681	3652	n.a.	-	508	-	208229	DE
DK	7609	-	7609	-	-	2262	4300	1048	-	-	-	-	-	-	-	-	8130	1264	4233	908	-	1234	115	-	370	-	6	-	-	44	-	15784	DK
EE	2378	-	2351	-	-	200	-	9	1903	-	240	-	-	-	17	10	452	-	341	9	-	86	6	-	3	-	8	-	-	-	-	2831	EE
ES	56676	7117	45528	1056	-	32158	8949	3365	-	-	-	-	3329	-	648	53	47850	-	23005	4676	2299	512	232	-	107	11225	2705	3073	-	16	-	104526	ES
FI	9603	2782	6664	-	-	1865	2278	1386	-	1135	n.a.	-	-	-	157	n.a.	7127	-	1908	-	-	1813	-	-	n.a.	n.a.	3149	-	257	-	-	16730	FI
FR <sup>13</sup>	82076	63130	18946	-	-	11851	2997	4098	-	-	-	-	-	n.a.	n.a.	-	48653	n.a.	13539	7646	n.a.	653	428	-	868	-	21094	2455	240	1728	n.a.	130729	FR
GB	55392	9248	46144	-	-	31124	14145	875	-	-	-	-	-	-	-	-	37170	5400	12950	12900	-	2097	1	-	1	2828	992	1	-	-	-	92562	GB
GR	8172	-	8172	3904	-	4269	-	-	-	-	-	-	-	-	-	-	8220	-	2082	2448	-	60	-	-	-	2470	230	699	-	230	-	16392	GR
HR	2018	-	2018	-	-	743	325	320	-	-	630	-	-	-	-	-	2760	-	537	51	-	36	36	-	6	1388	421	281	-	4	-	4778	HR
HU	7758	1887	5871	1049	-	4120	292	410	-	-	-	-	-	-	-	-	811	-	323	94	-	246	64	-	28	28	28	-	-	-	-	8569	HU
IE <sup>14</sup>	6546	-	6214	-	-	4215	855	916	-	228	-	-	292	-	40	-	3696	-	3080	-	-	-	-	-	40	-	238	-	-	338	269	10510	IE
IS	11	-	11	-	-	-	-	11	-	-	-	-	-	-	-	-	2680	-	2	-	-	-	-	706	-	1948	25	-	-	-	-	2691	IS
IT	77414	-	69239	-	2057	44283	7354	15545	-	-	-	-	4753	-	166	3256	55718	-	9778	19662	-	1626	1336	962	166	5102	12591	4179	-	316	-	133132	IT
LT	2688	-	1752	-	-	560	-	-	-	-	1192	-	900	-	20	15	821	-	521	82	-	51	40	-	-	-	127	-	-	-	-	3509	LT
LU	1447	-	136	-	-	136	-	-	-	-	-	-	1290	-	21	-	291	-	120	128	-	-	11	-	-	17	15	-	-	-	-	1738	LU
LV	1140	-	1140	-	-	1031	-	-	-	-	109	-	-	-	-	-	1789	-	74	-	-	80	63	-	-	-	1572	-	-	-	-	2929	LV
ME	880	-	220	220	-	-	-	-	-	-	-	-	-	660	-	-	72	-	72	-	-	-	-	-	-	-	-	-	-	-	-	952	ME
MK	1157	-	1157	718	-	250	-	189	-	-	-	-	-	-	-	-	733	-	36	17	-	n.a.	4	-	-	567	109	-	-	-	-	1890	MK
NL	23550	486	23064	-	-	18433	4631	-	-	-	-	-	-	-	-	-	8426	957	3675	2584	-	489	-	-	683	-	38	-	-	-	-	31976	NL
NO	448	-	448	-	-	448	-	-	-	-	-	-	-	-	-	-	32809	-	1083	6	-	-	7	-	17	31660	n.a.	n.a.	0	36	72	33329	NO
PL <sup>15</sup>	31306	-	29582	8590	144	2377	18161	310	-	-	-	-	1398	-	40	286	8083	-	5652	285	-	850	325	-	-	177	416	378	-	-	-	39389	PL
PT	6403	-	6403	-	-	4607	1756	22	-	-	-	18	-	-	-	-	13397	-	5090	490	-	624	-	-	-	1515	2858	2820	-	-	-	19799	PT
RO	9201	1300	7901	3312	-	1829	1155	-	-	-	1605	-	-	-	-	-	10756	-	2975	1285	-	121	-	-	-	3730	2645	-	-	-	-	19957	RO
RS	6111	-	5497	5289	-	208	-	-	-	-	-	-	614	-	-	-	2383	-	-	-	-	-	-	-	-	401	1982	-	-	-	-	8494	RS
SE	12900	8586	3869	-	-	849	205	2695	-	-	120	n.a.	-	-	445	-	26137	-	6691	-	-	3145	-	-	n.a.	16301	-	-	-	-	-	39037	SE
SI	2371	696	1379	924	-	455	-	-	-	-	-	-	-	180	8	107	1446	-	3	271	-	12	29	-	-	-	1117	-	-	14	-	3816	SI
SK	5041	1940	2348	333	-	1106	221	257	-	-	431	-	734	-	19	-	2680	-	3	530	-	225	105	-	-	318	1205	282	-	12	-	7721	SK
TR	46292	-	46292	9773	-	26637	9576	298	-	-	6	2	-	-	-	n.a.	38908	-	6516	3421	-	634	-	1064	-	19776	7497	-	-	-	-	85200	TR
ENTSO-E <sup>*</sup>	617897	121973	464639	70471	2581	239915	104370	37429	1903	1363	6173	434	21874	2475	3027	3909	533736	13870	159874	108403	2299	23806	3342	2770	3342	113769	75785	22649	240	3583	385	1152017	ENTSO-E
%	53.64	10.59	40.33	6.12	0.22	20.83	9.06	3.25	0.17	0.12	0.54	0.04	1.90	0.21	0.26	0.34	46.33	1.20	13.88	9.41	0.20	2.07	0.29	0.24	0.29	9.88	6.58	1.97	0.02	0.31	0.03	100.00	%
EU <sup>**</sup>	557029	118640	409029	52583	2581	212372	94794	36835	1903	1363	6167	432	21260	1375	2816	3909	438587	13870	152104	103566	2299	22926	3330	1001	3114	48071	61867	22649	240	3547	313	995929	EU
%	55.93	11.91	41.07	5.28	0.26	21.32	9.52	3.70	0.19	0.14	0.62	0.04	2.13	0.14	0.28	0.39	44.04	1.39	15.27	10.40	0.23	2.30	0.33	0.10	0.31	4.83	6.21	2.27	0.02	0.36	0.03	100.00	%

A dash instead of a value means "Not expected", "n.a." means "Not available" on a monthly basis and "n.d.", "Not delivered".

<sup>1</sup> All values are calculated to represent 100% of the monthly national values. When 0.0 is displayed, the values is higher than 0.0 but lower than 0.05.

<sup>2</sup> All "not available!" do not exist on monthly basis.

<sup>3</sup> Losses in the 110kV grid are also included. Biogas generation is included into Biomass subcategory as there is no viable way to estimate it separately and correctly.

<sup>4</sup> RES (other than hydro), exchanges and losses from TSO data, rest from official statistics; non-renewable part of Hydro mixed pumped storage also contains renewable parts; biomass also contains biogas.

<sup>5</sup> All data with the country code GB represents data as sum of England, Northern Ireland, Scotland and Wales.

<sup>6</sup> The values for Gas and Hard coal are derivative values.

<sup>7</sup> Generation data based on Polish monthly statistics and may not correspond with the data presented on PSE web site, where operational data is available only. Data is provisional, since not all information has been available on a monthly basis.

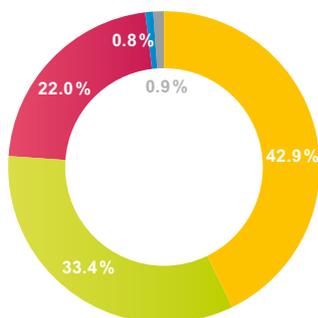
<sup>8</sup> All values are calculated to represent 100% of the national values.

<sup>9</sup> For Hydro Pure storage and Hydro mixed pumped storage (renewable part) no official separate data available

# Generation

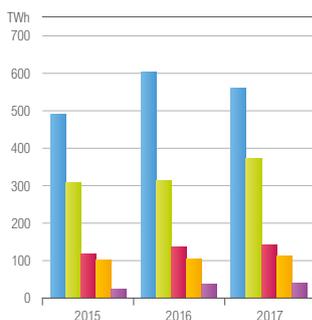
Generation mix in ENTSO-E member TSOs' countries in 2017<sup>1,2</sup>

	TWh
<b>Fossil fuels net generation</b> (lignite and hard coal, gas, oil, mixed fuels, peat)	1578.2
<b>Renewable net generation</b> (renewable hydro, wind, solar, biomass, geothermal)	1228.1
<b>Thermal nuclear net generation</b>	808.0
<b>Hydro net generation</b> (except renewable part)	28.5
<b>Net generation not identified</b>	33.5



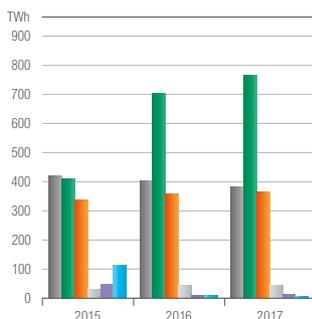
ENTSO-E renewable generation<sup>1</sup>

	year	TWh	%
<b>Renewable net generation</b>	2015	1042.4	
	2016	1200.0	
	<b>2017</b>	<b>1228.1</b>	
	of which hydro	489.2	47
	2016	604.6	50
	<b>2017</b>	<b>562.8</b>	<b>46</b>
	of which wind	310.6	30
	2016	316.1	26
	<b>2017</b>	<b>370.8</b>	<b>30</b>
	of which biomass	116.2	11
2016	136.1	11	
<b>2017</b>	<b>141.1</b>	<b>11</b>	
of which solar	102.0	10	
2016	105.0	9	
<b>2017</b>	<b>114.3</b>	<b>9</b>	
of which other renewable	24.5	2	
2016	38.3	3	
<b>2017</b>	<b>39.3</b>	<b>3</b>	

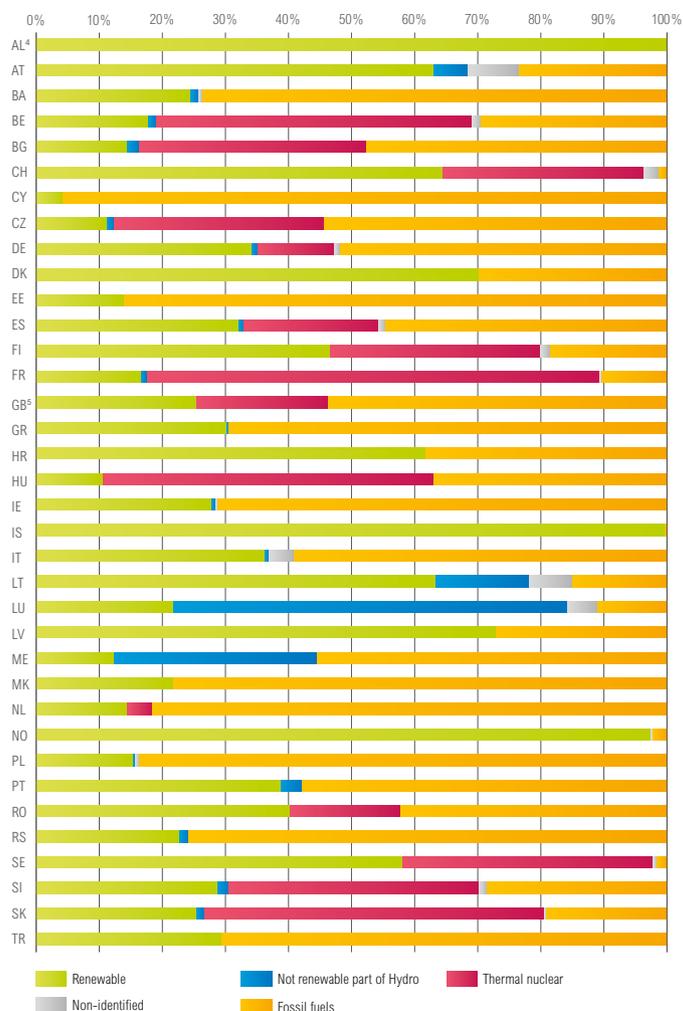


ENTSO-E fossil fuels generation<sup>1</sup>

	year	TWh	%
<b>Fossil fuels net generation</b>	2015	1360.6	
	2016	1534.8	
	<b>2017</b>	<b>1578.2</b>	
	of which hard coal	418.3	31
	2016	405.4	26
	<b>2017</b>	<b>381.5</b>	<b>24</b>
	of which gas <sup>3</sup>	409.4	30
	2016	707.0	46
	<b>2017</b>	<b>767.0</b>	<b>49</b>
	of which lignite	338.9	25
2016	359.3	23	
<b>2017</b>	<b>365.7</b>	<b>23</b>	
of which oil	31.9	2	
2016	43.5	3	
<b>2017</b>	<b>43.4</b>	<b>3</b>	
of which mixed fuels	48.8	4	
2016	10.0	1	
<b>2017</b>	<b>12.0</b>	<b>1</b>	
of which other fuels	113.31	8	
2016	9.56	1	
<b>2017</b>	<b>8.53</b>	<b>1</b>	



Share of energy produced of each member TSOs' country 2017 in %<sup>1,2</sup>



<sup>1</sup> All values are calculated to represent 100% of the national values.

<sup>2</sup> Share of energy produced, based on the net generation for each TSO as a member of ENTSO-E per the table ENTSO-E in figures on page 2-7.

<sup>3</sup> The huge increase for the category "of which gas" is mainly due to the following facts:

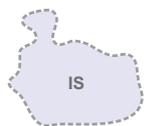
- Turkey (with 83 TWh) is included in ENTSO-E statistics since January 2016,
- Due to the further diversity in categories, a shift is being noticed from the general Fossil Fuels categories to the detailed ones
- and a general increase of gas power production as very flexible solution to solve congestion.

<sup>4</sup> Albanian grid operator, OST, joined ENTSO-E as member in January 2017.

<sup>5</sup> All data with the country code GB represents data as sum of England, Northern Ireland, Scotland and Wales.

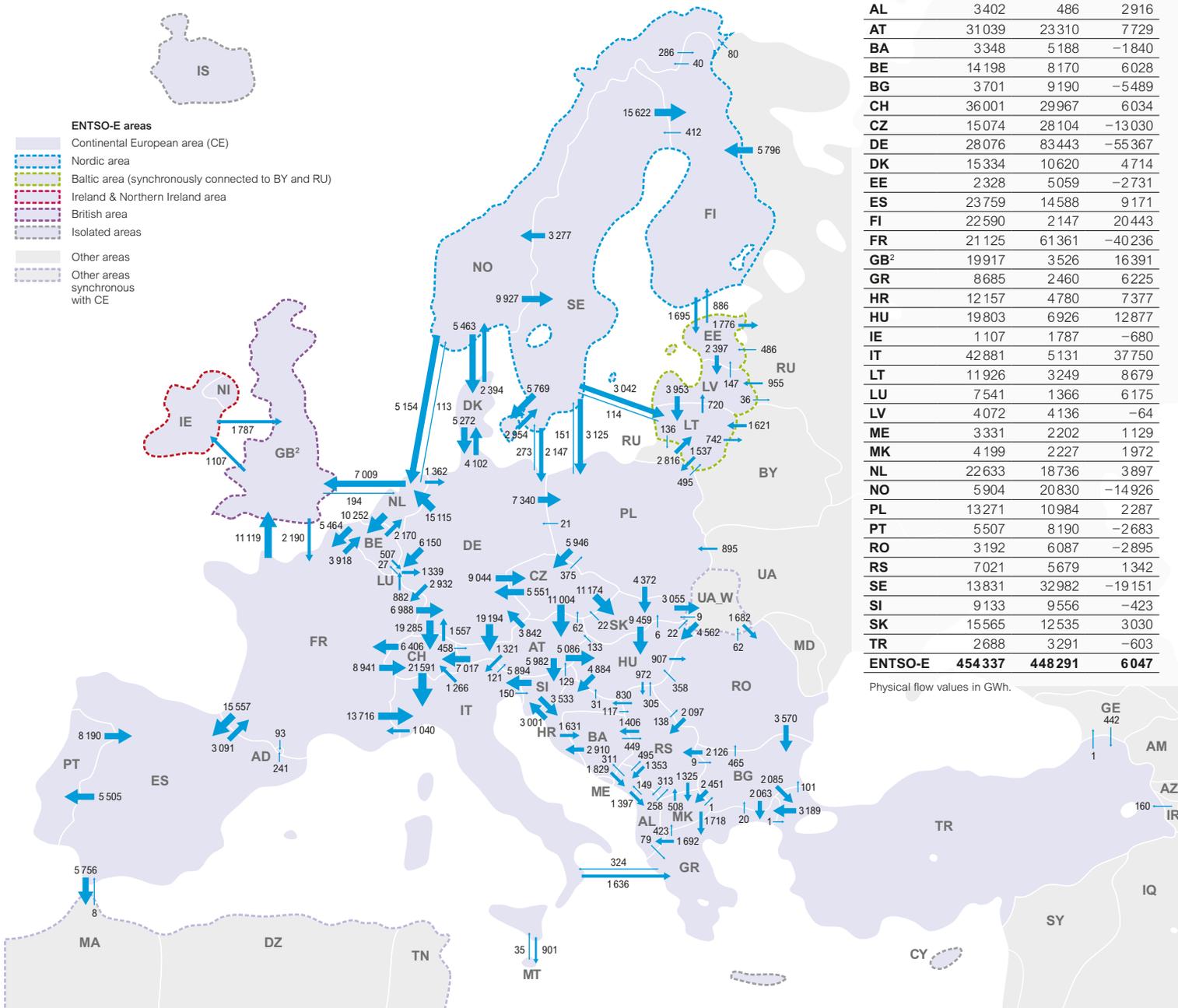


# Physical energy flows



## ENTSO-E areas

- Continental European area (CE)
- Nordic area
- Baltic area (synchronously connected to BY and RU)
- Ireland & Northern Ireland area
- British area
- Isolated areas
- Other areas
- Other areas synchronous with CE



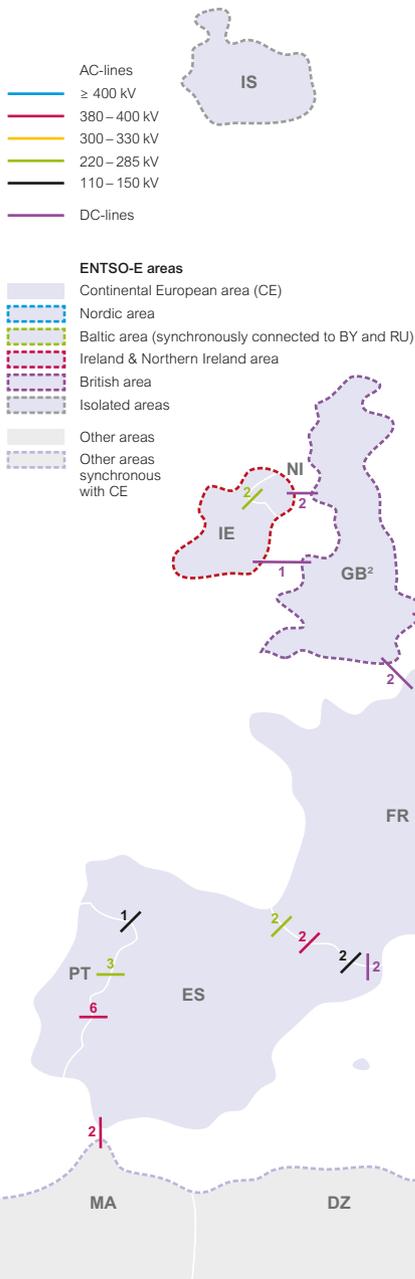
	Sum of imports <sup>1</sup>	Sum of exports <sup>1</sup> (imp-exp)	Balance
AL	3402	486	2916
AT	31039	23310	7729
BA	3348	5188	-1840
BE	14198	8170	6028
BG	3701	9190	-5489
CH	36001	29967	6034
CZ	15074	28104	-13030
DE	28076	83443	-55367
DK	15334	10620	4714
EE	2328	5059	-2731
ES	23759	14588	9171
FI	22590	2147	20443
FR	21125	61361	-40236
GB <sup>2</sup>	19917	3526	16391
GR	8685	2460	6225
HR	12157	4780	7377
HU	19803	6926	12877
IE	1107	1787	-680
IT	42881	5131	37750
LT	11926	3249	8679
LU	7541	1366	6175
LV	4072	4136	-64
ME	3331	2202	1129
MK	4199	2227	1972
NL	22633	18736	3897
NO	5904	20830	-14926
PL	13271	10984	2287
PT	5507	8190	-2683
RO	3192	6087	-2895
RS	7021	5679	1342
SE	13831	32982	-19151
SI	9133	9556	-423
SK	15565	12535	3030
TR	2688	3291	-603
<b>ENTSO-E</b>	<b>454337</b>	<b>448291</b>	<b>6047</b>

Physical flow values in GW.h.

<sup>1</sup> Consolidated yearly values might differ from detailed flow data from the ENTSO-E database due to ex-post consolidation taking into account national statistical resources.

<sup>2</sup> All data with the country code GB represents monthly statistical data as sum of England, Northern Ireland, Scotland and Wales.

# Grid information



Number of circuits on cross-frontier transmission lines as of 31.12.2017 in the ENTSO-E area<sup>1</sup>

ENTSO-E overview circuit length in km as of 31.12.2017\*

	AC lines	AC cables	DC cables
<b>Over 400 kV</b>	385	–	–
<b>380 kV ≤ x &lt; 400 kV</b>	177556	4157	4452
<b>220 kV ≤ x &lt; 380 kV</b>	129619	913	3067
<b>110 kV ≤ x &lt; 220 kV</b>	166045	–	1026
<b>Sum</b>	<b>473605</b>	<b>5070</b>	<b>8545</b>

Number of cross-frontier lines in the ENTSO-E area as of 31.12.2017

	AC	DC
<b>Over 400 kV</b>	64	7
<b>380 kV ≤ x &lt; 400 kV</b>	130	5
<b>220 kV ≤ x &lt; 380 kV</b>	110	17
<b>Under 220 kV</b>	89	1
<b>Sum</b>	<b>393</b>	<b>30</b>

\* No data for IS.

<sup>1</sup> Non geographic location of lines.

<sup>2</sup> All data with the country code GB represents data as sum of England, Northern Ireland, Scotland and Wales.

# Members of ENTSO-E

<b>AL</b>	Albania	OST	OST sh.a – Albanian Transmission System Operator
<b>AT</b>	Austria	APG VÜN	Austrian Power Grid AG Vorarlberger Übertragungsnetz GmbH
<b>BA</b>	Bosnia and Herzegovina	NOS BiH	Nezavisni operator sustava u Bosni i Hercegovini
<b>BE</b>	Belgium	Elia	Elia System Operator NV/SA
<b>BG</b>	Bulgaria	ESO	Electroenergien Sistemen Operator EAD
<b>CH</b>	Switzerland	Swissgrid	Swissgrid AG
<b>CY</b>	Cyprus	Cyprus TSO	Cyprus Transmission System Operator
<b>CZ</b>	Czech Republic	ČEPS	ČEPS, a.s.
<b>DE</b>	Germany	TransnetBW TenneT DE Amprion 50Hertz	TransnetBW GmbH TenneT TSO GmbH Amprion GmbH 50Hertz Transmission GmbH
<b>DK</b>	Denmark	Energinet.dk	Energinet.dk
<b>EE</b>	Estonia	Elering AS	Elering AS
<b>ES</b>	Spain	REE	Red Eléctrica de España S.A.U.
<b>FI</b>	Finland	Fingrid	Fingrid Oyj
<b>FR</b>	France	RTE	Réseau de transport d'électricité
<b>GB</b>	United Kingdom	National Grid SONI (NI) SHE Transmission SPTransmission	National Grid Electricity Transmission plc System Operator for Northern Ireland Ltd Scottish Hydro Electric Transmission Ltd Scottish Power Transmission plc
<b>GR</b>	Greece	IPTO	Independent Power Transmission Operator S.A.
<b>HR</b>	Croatia	HOPS	HOPS d.o.o.
<b>HU</b>	Hungary	MAVIR ZRt.	MAVIR Magyar Villamosenergia-ipari Átviteli Rendszerirányító Zártkörűen Működő Részvénytársaság
<b>IE</b>	Ireland	EirGrid	EirGrid plc
<b>IS</b>	Iceland	Landsnet	Landsnet hf
<b>IT</b>	Italy	Terna	Terna – Rete Elettrica Nazionale SpA
<b>LT</b>	Lithuania	Litgrid	Litgrid AB
<b>LU</b>	Luxembourg	Creos Luxembourg	Creos Luxembourg S.A.
<b>LV</b>	Latvia	Augstsprieguma tīkls	AS Augstsprieguma tīkls
<b>ME</b>	Montenegro	CGES AD	Crnogorski elektroprenosni sistem AD
<b>MK</b>	FYROM	MEPSO	Macedonian Transmission System Operator AD
<b>NL</b>	The Netherlands	TenneT NL	TenneT TSO B.V.
<b>NO</b>	Norway	Statnett	Statnett SF
<b>PL</b>	Poland	PSE	Polskie Sieci Elektroenergetyczne S.A.
<b>PT</b>	Portugal	REN	Rede Eléctrica Nacional, S.A.
<b>RO</b>	Romania	Transelectrica	C.N. Transelectrica S.A.
<b>RS</b>	Serbia	EMS	JAkcionarsko društvo Elektromreža Srbije
<b>SE</b>	Sweden	Svenska Kraftnät	Svenska Kraftnät
<b>SI</b>	Slovenia	ELES	ELES, d.o.o., sistemski operater prenosnega elektroenergetskega omrežja
<b>SK</b>	Slovak Republic	SEPS	Slovenská elektrizačná prenosová sústava, a.s.
<b>Observer member</b>			
<b>TR</b>	Turkey	TEİAŞ	Türkiye Elektrik İletim A.Ş.

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