
STATISTICAL FACTSHEET 2017

PROVISIONAL VALUES AS OF 4 MAY 2018

Net generation capacity 2017⁸

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 ⁹	6560	-	6455	-	-	4841	598	166	-	-	436	414	-	-	-	105	18472	-	2730	1031	-	482	90	1	22	-	5692	8424	-	-	-	25032	AT ⁹
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 ¹⁰	3544	3333	-	-	-	n.a.	-	n.a.	-	-	-	-	-	-	211	-	14072	-	60	1394	-	246	1	-	211	8156	4004	-	-	-	-	17616	CH ¹⁰
CY ¹¹	1478	-	1478	-	-	-	-	1478	-	-	-	-	-	-	-	-	279	-	155	-	-	-	-	-	-	-	-	-	-	124	-	1757	CY ¹¹
CZ	16610	4040	11298	8492	380	1226	1200	-	-	-	-	-	1172	-	100	-	4235	-	308	2040	-	350	450	-	-	753	334	-	-	-	-	20845	CZ
DE ¹²	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 ¹²
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 ¹³	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 ¹³
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 ¹⁴	6546	-	6214	-	-	4215	855	916	-	228	-	-	292	-	40	-	3696	-	3080	-	-	-	-	-	40	-	238	-	-	338	269	10510	IE ¹⁴
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 ¹⁵	31306	-	29582	8590	144	2377	18161	310	-	-	-	-	1398	-	40	286	8083	-	5652	285	-	850	325	-	-	177	416	378	-	-	-	39389	PL ¹⁵
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 [*]	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 ^{**}	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".

¹ 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.

² All "not available!" do not exist on monthly basis.

³ 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.

⁴ 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.

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

⁶ The values for Gas and Hard coal are derivative values.

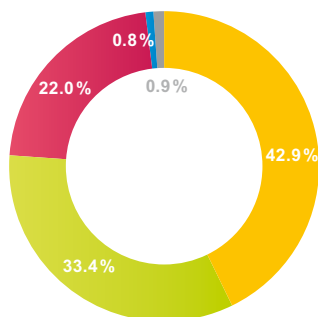
⁷ Generation data based on Polish monthly statistics and may not correspond with the data presented on PSE web site, where operational data is available only. Data is provisional, since not all information has been available on a monthly basis.

⁸ All values are calculated to represent 100% of the national values.

Generation

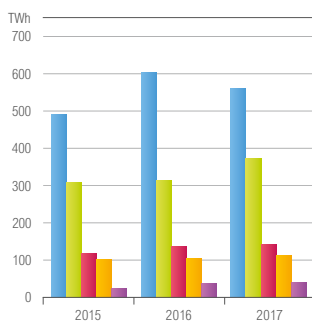
Generation mix in ENTSO-E member TSOs' countries in 2017^{1,2}

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



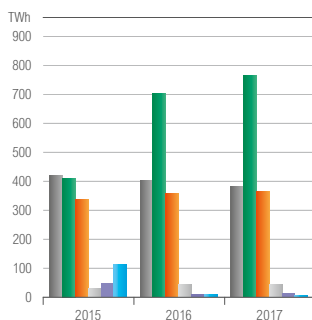
ENTSO-E renewable generation¹

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

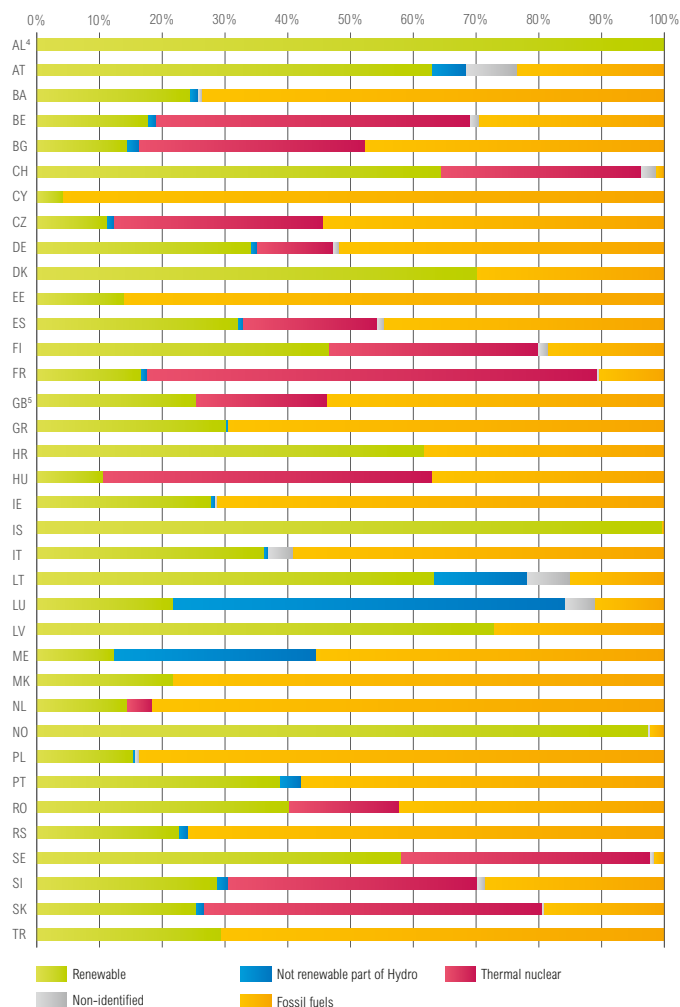


ENTSO-E fossil fuels generation¹

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



Share of energy produced of each member TSOs' country 2017 in %^{1,2}



¹ All values are calculated to represent 100% of the national values.

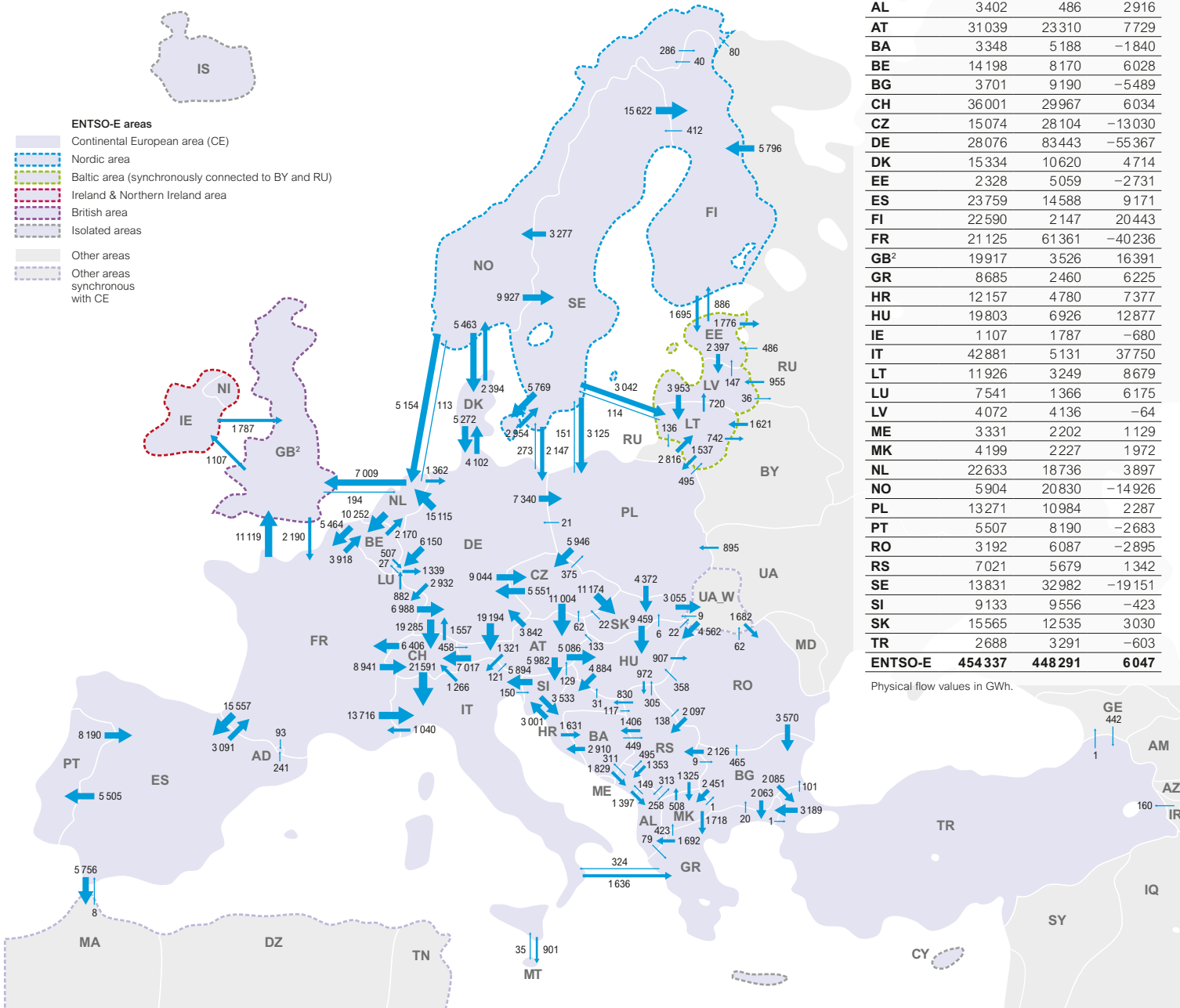
² Share of energy produced, based on the net generation for each TSO as a member of ENTSO-E per the table ENTSO-E in figures on page 2-7.

³ 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.

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

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

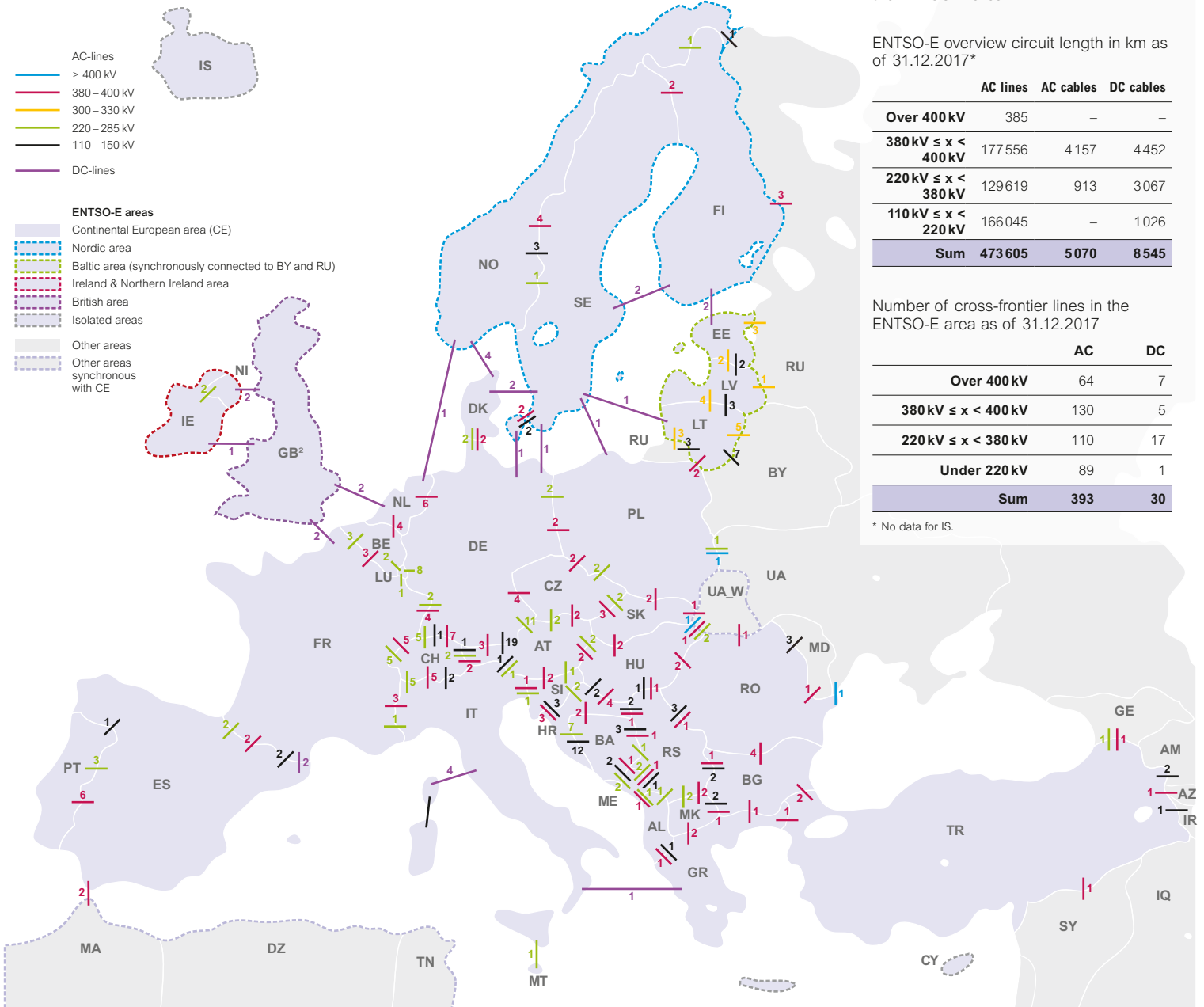
Physical energy flows



¹ 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.

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

Grid information



Members of ENTSO-E

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

Contact

ENTSO-E AISBL

Avenue de Cortenbergh 100 · 1000 Brussels · Belgium

Tel +32 2 741 09 50 · Fax +32 2 741 09 51

info@entsoe.eu · www.entsoe.eu