

Statistical Factsheet 2021

Provisional values as of March 2023

The Statistical Factsheet is based upon data reported to the ENTSO-E Central Transparency Platform, with the exception of grid statistics. Readers are reminded that the content of the Transparency Platform predominantly consists of operational data, which in some instances may be less suitable for statistical purposes.

ENTSO-E in figures – Electricity system data of member TSOs' countries in 2021

Area / Country	Aggregated generation ¹																							Consumption ¹				
	Non renewable net generation	Nuclear	Fossil fuels	Fossil Brown coal / Lignite	Fossil Coal-derived gas	Fossil Gas	Fossil Hard coal	Fossil Oil	Fossil Oil shale	Fossil Peat	Hydro Pumped Storage	Waste	Other non-renewable	Renewable Net Generation	Wind Offshore	Wind Onshore	Solar	Biomass	Geothermal	Hydro Run-of-river and poundage	Hydro Water Reservoir	Marine	Other renewable	Total net generation	Consumption of Hydro Pumped Storage	Net Consumption	Area / Country	
	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	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.4	AL
AT ²	15.7		9.3			9.3					5.3	0.9	0.2	40.7		7.0	0.8	1.4	0.0	26.9	4.5			56.4	2.7	62.9	AT ²	
BA	10.0		9.7	5.5			4.2				0.2			5.7		0.3				0.9	4.6			15.7	0.0	10.2	BA	
BE	75.6	48.0	19.2			19.2		0.0			0.9	2.0	5.6	17.8	6.8	4.0	4.7	2.2		0.2				93.4	1.2	84.5	BE	
BG ³	39.0	16.5	22.2	18.9		2.8	0.6				0.2	0.0		7.9		1.4	1.4	0.2		1.6	3.3			46.9	0.0	38.4	BG ³	
CH	25.2	18.7									6.5			15.6		0.1	2.5			2.1	10.8			40.8	0.0	63.5	CH	
CY	4.2		4.2					4.2						0.2		0.2								4.5	0.0	4.2	CY	
CZ	69.2	29.1	38.7	27.9	2.1	6.1	2.6	0.0			1.2	0.2	0.1	10.1		0.6	2.2	2.5		1.2	1.2		2.4	79.3	1.6	66.6	CZ	
DE	289.5	65.4	205.6	98.2		52.4	51.8	3.2			8.7	6.9	2.9	215.5	24.0	89.4	46.6	39.5	0.2	13.3	1.2		1.3	505.0	11.3	504.5	DE	
DK	10.3		8.8			2.6	5.8	0.4						22.4	7.2	8.9	1.4	4.9						32.6	0.0	36.3	DK	
EE	4.3		4.2		0.4	0.0			3.7	0.0				1.6		0.8	0.3	0.5				0.0		5.9	0.0	8.4	EE	
ES	125.2	54.2	68.0			61.6	5.1	1.3				2.5	0.5	122.0		59.0	25.4	4.2		8.5	24.1		0.9	247.2	4.6	243.9	ES	
FI	34.8	22.6	11.3			4.2	3.5	0.0		3.5				29.0		7.9		6.5		14.4			0.1	63.7	0.0	84.7	FI	
FR	403.9	359.4	38.2			32.5	4.1	1.7			4.6	1.7		108.3		35.2	13.7	3.1		40.6	15.7			512.1	4.9	465.8	FR	
GB ⁴	55.2	19.6	34.2			32.6	1.6	0.0			0.8		0.5	40.0	11.6	12.8	5.1	8.9		1.6				95.2	0.0	139.6	GB ⁴	
GE	0.1		0.1			0.1								0.1		0.0				0.1	0.0			0.2	0.0	0.4	GE	
GR	27.4		27.4	5.4		22.0								13.4		9.0	4.4							40.8	0.0	51.2	GR	
HR	4.5		4.0			2.6	1.3	0.0			0.5	0.0		9.5		2.1	0.1	0.6	0.1	1.7	4.6		0.4	14.0	0.2	18.2	HR	
HU	27.5	15.1	11.7	3.0		8.6	0.0	0.0				0.1	0.6	4.4		0.6	2.4	1.1	0.0	0.1	0.1		0.1	31.9	0.0	44.5	HU	
IE	13.3		12.9			5.8	3.2	3.2		0.7	0.3		0.1	10.1		9.4				0.7				23.4	0.5	30.3	IE	
IT	157.5		135.4		3.8	116.7	13.2	1.7			4.2	0.3	17.6	93.4		20.8	20.1	6.1	5.5	35.0	6.0			251.0	2.4	289.3	IT	
LT	2.1		1.1			1.1					0.7	0.1	0.1	2.1		1.3	0.1	0.4		0.3				4.2	0.0	12.4	LT	
LU	0.1		0.0			0.0								0.2		0.1	0.0	0.1		0.0				0.3	0.0	4.0	LU	
LV	2.3		1.8			1.8							0.5	3.3		0.1		0.5		2.6				5.6	0.0	7.3	LV	
MD	5.4		5.4			5.4								0.3		0.0		0.0		0.3				5.8	0.0	6.0	MD	
ME	1.3		1.3	1.3										2.1		0.3					1.8			3.5	0.0	3.3	ME	
MK	3.4		3.4	3.4										3.2		0.1				1.8	1.3			6.7	0.0	8.0	MK	
NL	85.0	3.6	62.2			41.7	20.5					3.2	15.9	13.1	7.9	4.7	0.3	0.2						98.0	0.0	106.4	NL	
NO	8.1		0.7			0.7					7.1	0.2		147.0		10.7				12.7	123.2		0.3	155.0	0.0	138.9	NO	
PL ⁵	137.8		136.8	41.6	0.5	12.3	80.3	2.1			1.0			23.6		15.3	4.6	1.9		1.7	0.1			161.5	0.0	174.6	PL ⁵	
PT ⁶	19.0		15.3			14.5	0.7				3.5		0.2	27.9	0.1	12.9	1.7	3.4		7.1	2.7			46.8	2.0	49.5	PT ⁶	
RO	32.4	11.1	21.3	10.3		10.5	0.5							25.4		6.4	1.3	0.6		11.2	5.9			57.7	0.0	59.8	RO	
RS	23.1		21.6	21.6		0.0					0.7		0.8	11.4				0.3		9.9	1.2			34.6	0.0	34.7	RS	
SE	60.7	51.7											8.9	100.9		26.7					74.2			161.5	0.0	139.4	SE	
SI	9.7	5.4	3.9	3.5		0.5					0.3	0.1		4.9		0.0	0.3	0.1		4.6				14.6	0.0	14.1	SI	
SK	23.1	15.7	5.8	1.0		4.0	0.4	0.4			0.3		1.4	6.1		0.0	0.5	0.9		3.9	0.3		0.5	29.2	0.4	29.6	SK	
UA	46.1	30.0	15.6			0.9	14.6				0.5		0.0	5.1		1.6	1.2				2.3			51.3	0.7	148.8	UA	
XK ⁷	2.1		2.1	2.1										0.0		0.0				0.0				2.1	0.0	2.5	XK ⁷	
ENTSO-E ^{***}	1 853.9	766.1	963.7	243.7	6.9	472.7	214.1	18.3	3.7	4.2	47.5	20.1	56.6	1 144.5	57.5	349.6	141.3	90.0	5.8	205.0	289.3	0.0	6.1	2 998.4	32.5	3 186.5	ENTSO-E ^{***}	
%	25.74	10.64	13.38	3.38	0.10	6.56	2.97	0.25	0.05	0.06	0.66	0.28	0.79	15.89	0.80	4.85	1.96	1.25	0.08	2.85	4.02	0.00	0.08	100.00			%	
EU ^{***}	1 673.8	697.7	869.4	209.7	6.9	432.8	193.7	18.3	3.7	4.2	31.6	19.9	55.2	913.8	45.9	323.6	132.4	80.8	5.8	175.6	144.0	0.0	5.7	2 587.7	31.8	2 630.7	EU ^{***}	
%	28.5	11.9	14.8	3.6	0.1	7.4	3.3	0.3	0.1	0.1	0.5	0.3	0.9	15.6	0.8	5.5	2.3	1.4	0.1	3.0	2.5	0.0	0.1	100.0			%	

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Net Generation Capacity⁷

Area / Country	Non renewable net generation	Nuclear	Fossil fuels	Fossil Brown coal/Lignite	Fossil Coal-derived gas	Fossil Gas	Fossil Hard coal	Fossil Oil	Fossil Oil shale	Fossil Peat	Hydro Pumped Storage	Waste	Other non-renewable	Renewable Net Generation	Wind Offshore	Wind Onshore	Solar	Biomass	Geothermal	Hydro Run-of-river and poundage	Hydro Water Reservoir	Marine	Other renewable	Total NGC	Area / 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	
AL	97	0	97	0	0	0	0	97	0	0	0	0	0	2 203	0	0	0	0	0	527	1 676	0	0	2 300	AL
AT ²	9 132	0	4 613	0	0	4 449	0	164	0	0	3 459	103	957	13 918	0	3 198	1 851	497	1	5 941	2 430	0	0	23 050	AT ²
BA	2 315		1 875	988			887				440			1 935		145				1 083	707			4 250	BA
BE	15 189	5 943	7 557			7 282		275			1 308	362	19	10 519	2 254	2 629	4 788	672		176				25 707	BE
BG ³	8 611	2 000	5 741	4 119		1 266	356				864	6		4 375		705	1 246	75		539	1 810			12 986	BG ³
CH	9 651	2 970									6 681			6 193						605	5 588			15 843	CH
CY	1 478		1 478					1 478						422		158	252	12						1 900	CY
CZ	15 818	4 040	10 506	7 700	380	1 226	1 200	0			1 172	100	0	4 304		339	2 054	410		338	753		410	20 122	CZ
DE	10 0927	8 114	80 113	20 487	0	31 942	23 499	4 184			9 422	1 640	1 639	12 9550	7 774	54 499	53 302	8 400	44	3 814	1 298		420	23 0477	DE
DK	6 462		6 078			1 654	3 414	1 010				384		9 502	1 700	4 481	1 300	1 872		7			142	15 964	DK
EE	1 651	0	1 634	0	74	98	0	0	1 462	0	0	17	0	686	0	329	164	175	0	8	0	0	10	2 337	EE
ES	50 042	7 117	36 625	0	0	29 970	5 977	678	0	0	5 645	537	117	59 366	0	26 664	11 390	704	0	1 155	19 186	0	269	10 9408	ES
FI	9 148	2 794	5 755			1 849	1 682	1 089		1 135		163	436	7 715		2 422	7	1 860		3 153			273	16 863	FI
FR	85 086	61 370	17 940			12 218	2 977	2 746			4 655		1 120	45 474	10	17 217	10 213	1 579		9 554	6 655	246		13 0560	FR
GB	63 011	8 256	47 442			41 371	5 755	316			4 309		3 004	47 910	12 160	13 932	13 470	4 528		1 919			1 900	11 0921	GB
GE	1 189		1 189			1 189	0							3 344		21				942	2 381			4 533	GE
GR	8 162		7 463	2 561		4 902		0			699			9 726		3 755	3 055	95	0	312	2 403		106	17 888	GR
HR	1 324		1 037			743	217	77			281	6		2 925		796	85	108	10	427	1 445		54	4 249	HR
HU	7 440	1 910	5 480	1 007		4 011	42	420				49		2 495		323	1 829	213	3	30	28		69	9 935	HU
IE	7 675		6 736			4 265	855	1 272		344	292		647	2 152		1 919			17	216				9 826	IE
IT	60 694		52 456	0	2 064	41 925	6 987	1 480		0	7 276	125	837	32 663	0	10 302	4 979	1 587	869	10 472	4 454	0	0	93 357	IT
LT	2 872		1 887			1 887		0			900	48	37	936		540	169	99		128			0	3 808	LT
LU	117	0	96	0	0	96	0	0	0	0	0	21	0	486	0	167	236	47	0	25	11	0	0	603	LU
LV	1 021		1 021			1 021								1 822		84	11	149		1 578				2 843	LV
MD	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	MD
ME	210		210	210										767		118				307	342			977	ME
MK	1 075		1 075	824		251								541		35					506			1 616	MK
NL	23 778	485	22 512	0	0	18 500	4 012	0	0	0	780	1		18 354	2 460	4 188	11 108	560	0	38	0	0	0	42 132	NL
NO	1 825		639			639					1 065	90	31	38 565		5 105				6 677	26 683		100	40 390	NO
PL	33 501		31 707	7 597	272	2 555	20 925	359			1 794			11 527		6 570	3 473	880		447	157			45 028	PL
PT	9 189	0	6 341	0	0	4 585	1 756	0	0	0	2 820	0	28	10 834	25	5 183	569	684	0	2 857	1 515	0	0	20 023	PT
RO	6 953	1 300	5 653	2 483		2 184	986							10 353		2 957	1 145	117		2 746	3 388			17 306	RO
RS	6 624		5 957	5 661		297					642		25	2 944		429	3	2		2 037	472			9 568	RS
SE	14 848	6 871											7 977	26 351		10 017					16 334			41 199	SE
SI	2 410	696	1 529	981	0	548	0	0	0	0	180	4	0	1 603	0	3	459	16	0	1 125	0	0	0	4 013	SI
SK	5 265	2 003	1 719	276		1 183	1	259			916		627	2 514		3	532	234		1 212	418		115	7 779	SK
UA	43 269	13 835	27 947			9 360	18 587				1 488			11 502		1 111	5 363	199		192	4 637			54 771	UA
XK [*]	1 288		1 288	1 288										100		32				33	35			1 388	XK [*]
ENTSO-E ^{**}	619 345	129 704	411 396	56 181	2 790	233 465	100 115	15 905	1 462	1 479	56 307	4 436	17 502	536 576	26 383	180 377	133 051	25 775	944	60 620	105 312	246	3 868	1 155 920	ENTSO-E ^{**}
%	53.58	11.22	35.59	4.86	0.24	20.20	8.66	1.38	0.13	0.13	4.87	0.38	1.51	46.42	2.28	15.60	11.51	2.23	0.08	5.24	9.11	0.02	0.33	100.00	%
EU ^{***}	488 791	104 643	323 678	47 210	2 790	180 359	74 886	15 492	1 462	1 479	41 683	4 346	14 442	420 572	14 223	159 448	114 216	21 045	944	46 298	62 284	246	1 869	909 363	EU ^{***}
%	53.75	11.51	35.59	5.19	0.31	19.83	8.24	1.70	0.16	0.16	4.58	0.48	1.59	46.25	1.56	17.53	12.56	2.31	0.10	5.09	6.85	0.03	0.21	100.00	%

¹ "n.a." means "Not available".

² All values from Transparency Platform for Austria are for the control area AT and not the country AT (some power plants and lines located in Austria are part of the German control area).

³ The presented figures for BG are actually gross generation and gross consumption, power plants auxiliary consumption is included. This is due to the fact that data for this report is taken from Transparency Platform.

⁴ All data with the country code GB represents the available data in ENTSO-E Transparency Platform for England, Northern Ireland, Scotland and Wales.

⁵ The presented figures for PL are actual net generation and gross consumption, consumption of Hydro Pump Storage is not included. This is analogous to Transparency Platform, which is the source of the reported data.

⁶ Hydro Pumped Storage includes generation from natural flows and from pumped storage. This leads to a lower renewable generation share since generation from natural flows is not being considered renewable.

⁷ Sum of generation capacity (MW) installed for all existing production units equaling to or exceeding 1 MW installed generation capacity.

⁸ The given NGC for BG are gross figures.

^{*} This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo Declaration of Independence.

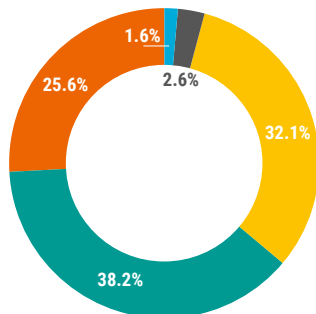
^{**} Calculated sum of the ENTSO-E member TSO's countries.

^{***} The 27 member countries of the EU are Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain and Sweden. Please note that, as it does not have a TSO, Malta is not a member of ENTSO-E and thus the Statistical Factsheet includes data from all EU countries except Malta.

Generation

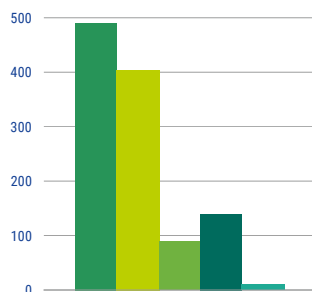
Generation mix in ENTSO-E member TSOs' countries in 2021¹

	TWh
Fossil fuels net generation (lignite and hard coal, gas, oil, mixed fuels, peat)	963.7
Renewable net generation (renewable hydro, wind, solar, biomass, geothermal)	1 144.5
Thermal nuclear net generation	766.1
Hydro net generation (except renewable part)	47.5
Net generation not identified	76.7



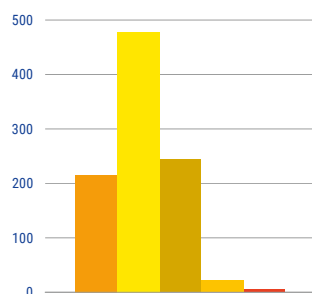
ENTSO-E renewable generation¹

	TWh	%
Renewable net generation 2021	1 144.5	
of which hydro	494.3	43
of which wind	407.1	36
of which biomass	90.0	8
of which solar	141.3	12
of which other renewable	11.9	1

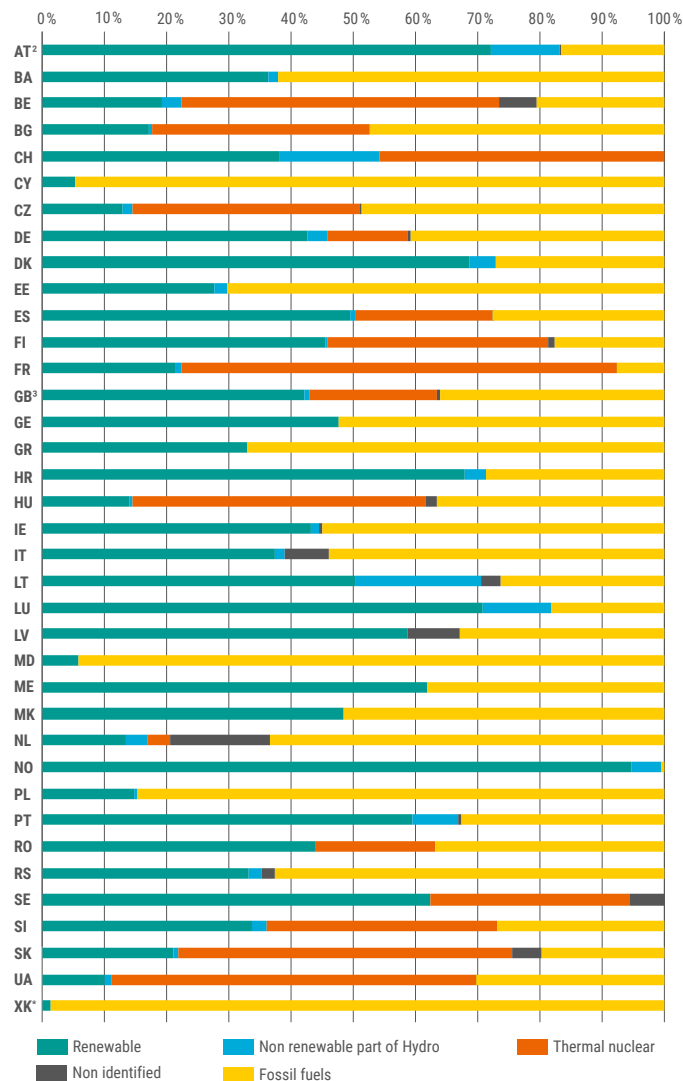


ENTSO-E fossil fuels generation¹

	TWh	%
Fossil fuels net generation 2021	963.7	
of which hard coal	214.1	22
of which gas	479.6	50
of which lignite	243.7	25
of which oil	22.1	2
of which other fuels	4.2	0.4



Share of energy produced of each member TSOs' country 2021 in %¹



¹ Share of energy produced, based on the aggregated generation for each ENTSO-E TSO.

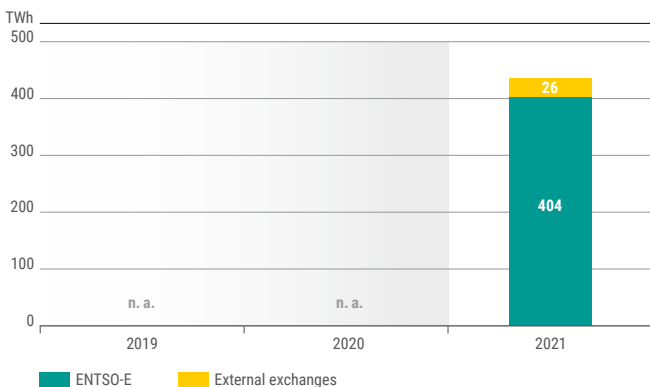
² All values from Transparency Platform for Austria are for the control area AT and not the country AT (some power plants and lines located in Austria are part of the German control area).

³ All data with the country code GB represents the available data in ENTSO-E Transparency Platform for England, Northern Ireland, Scotland and Wales.

⁴ This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo Declaration of Independence.

Development of exchanges

Development of overall cross-border exchanges of ENTSO-E member TSOs'



Overview electricity exchanges for the past 3 years in GWh

	All Exchanges	ENTSO-E	External ¹
2019	n. a.	n. a.	n. a.
2020	n. a.	n. a.	n. a.
2021	429 314	403 805	25 509

¹ External exchanges include Andorra, Armenia, Azerbaijan, Belarus, Georgia, Iraq, Iran, Moldova, Morocco, Russia, Syria and Ukraine

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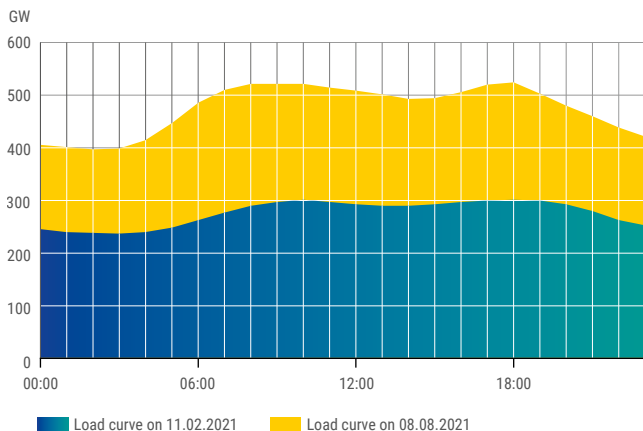
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ENTSO-E peak load 2021

2021 ENTSO-E load diagram on the days of the highest and lowest load values



Country values in MW on the days of highest and lowest ENTSO-E load values^{1,2}

	11.02.2021 18:00 – 19:00	08.08.2021 05:00 – 06:00		11.02.2021 18:00 – 19:00	08.08.2021 05:00 – 06:00		11.02.2021 18:00 – 19:00	17.06.2018 05:00 – 06:00
AT ³	9 383	5 817	FI	13 680	7 217	ME	451	356
BA	1 415	1 377	FR	83 831	30 756	MK	1 076	558
BE	12 569	7 002	GR	6 605	5 802	NL	16 363	9 564
BG ⁴	5 261	3 609	HR	2 759	1 716	NO	23 398	10 317
CH	9 765	5 806	HU	6 689	3 909	PL ⁵	26 502	13 793
CY	576	584	IE	5 279	2 297	PT	7 563	3 844
CZ	10 468	4 937	IT	42 260	24 076	RO	8 632	5 545
DE	74 405	41 115	LT	1 875	1 147	RS	5 205	2 788
DK	5 663	3 025	LU	768	420	SE	23 911	10 009
EE	1 420	704	LV	1 074	681	SI	2 101	1 073
ES	33 990	20 901	MD	888	513	SK	4 250	2 602
						UA	21 450	14 219
						ENTSO-E⁷	471 524	248 079

¹ This is the average of the hour. The values are not scaled to 100 % coverage ratio. No country uses a coverage ratio less than 100 %.

² All times are in UTC.

³ All values from Transparency Platform for Austria are for the control area AT and not the country AT (some power plants and lines located in Austria are part of the German control area).

⁴ The presented load for BG includes power plant auxiliary consumption in it.

Highest and lowest hourly load values of each country 2021 in MW¹

	HIGHEST LOAD		VALUE	LOWEST LOAD		VALUE
	Date	Time ²	(in MW)	Date	Time ²	(in MW)
AL	23.08.21	00:00 – 01:00	1 000	10.08.21	00:00 – 01:00	125
AT ³	09.12.21	10:00 – 11:00	10 358	06.06.21	02:00 – 03:00	4 472
BA	07.12.21	16:00 – 17:00	16 591	02.01.21	01:00 – 02:00	0
BE	08.02.21	17:00 – 18:00	13 485	08.08.21	02:00 – 03:00	6 671
BG ⁴	18.01.21	16:00 – 17:00	6 805	03.05.21	01:00 – 02:00	2 525
CH	10.12.21	11:00 – 12:00	10 242	27.07.21	03:00 – 04:00	4 377
CY	05.08.21	13:00 – 14:00	1 020	08.02.21	15:00 – 16:00	0
CZ	15.02.21	08:00 – 09:00	11 281	01.08.21	03:00 – 04:00	4 530
DE	30.11.21	10:00 – 11:00	81 077	06.06.21	03:00 – 04:00	36 619
DK	08.02.21	16:00 – 17:00	6 393	03.10.21	01:00 – 02:00	2 148
EE	18.02.21	07:00 – 08:00	1 591	27.06.21	01:00 – 02:00	525
ES	08.01.21	12:00 – 13:00	41 754	25.12.21	04:00 – 05:00	17 458
FI	18.02.21	07:00 – 08:00	14 267	06.06.21	02:00 – 03:00	6 450
FR	11.01.21	08:00 – 09:00	88 174	08.08.21	04:00 – 05:00	30 366
GB ⁶	10.02.21	18:00 – 19:00	53 423	31.10.21	04:00 – 05:00	452
GE	27.12.21	14:00 – 15:00	2 294	20.12.21	00:00 – 01:00	1 560
GR	02.08.21	11:00 – 12:00	10 547	03.05.21	03:00 – 04:00	3 056
HR	16.08.21	11:00 – 12:00	3 069	02.05.21	02:00 – 03:00	1 231
HU	09.12.21	15:00 – 16:00	7 083	24.05.21	03:00 – 04:00	3 309
IE	08.12.21	17:00 – 18:00	5 328	08.08.21	03:00 – 04:00	2 275
IT	08.07.21	13:00 – 14:00	49 554	05.04.21	02:00 – 03:00	17 157
LT	08.12.21	07:00 – 08:00	2 220	16.05.21	02:00 – 03:00	894
LU	03.12.21	10:00 – 11:00	809	15.08.21	04:00 – 05:00	394
LV	09.12.21	14:00 – 15:00	1 237	13.06.21	02:00 – 03:00	502
MD	23.12.21	15:00 – 16:00	1 074	02.04.21	05:00 – 06:00	0
ME	17.08.21	17:00 – 18:00	752	05.06.21	04:00 – 05:00	174
MK	13.02.21	13:00 – 14:00	1 419	18.07.21	04:00 – 05:00	306
NL	04.01.21	16:00 – 17:00	17 246	30.05.21	12:00 – 13:00	6 545
NO	12.02.21	08:00 – 09:00	25 230	25.07.21	03:00 – 04:00	9 820
PL ⁵	12.02.21	09:00 – 10:00	27 375	06.06.21	03:00 – 04:00	12 240
PT	12.01.21	19:00 – 20:00	9 828	04.04.21	06:00 – 07:00	3 405
RO	19.01.21	08:00 – 09:00	9 614	06.08.21	00:00 – 01:00	1 449
RS	23.12.21	16:00 – 17:00	5 620	03.05.21	03:00 – 04:00	2 168
SE	10.02.21	07:00 – 08:00	25 657	27.06.21	03:00 – 04:00	8 865
SI	09.12.21	10:00 – 11:00	2 331	02.05.21	01:00 – 02:00	931
SK	09.12.21	10:00 – 11:00	4 441	14.06.21	07:00 – 08:00	0
UA	24.12.21	07:00 – 08:00	24 969	21.06.21	00:00 – 01:00	11 568
XK [*]	21.12.21	21:00 – 22:00	1 370	24.08.21	19:00 – 20:00	49

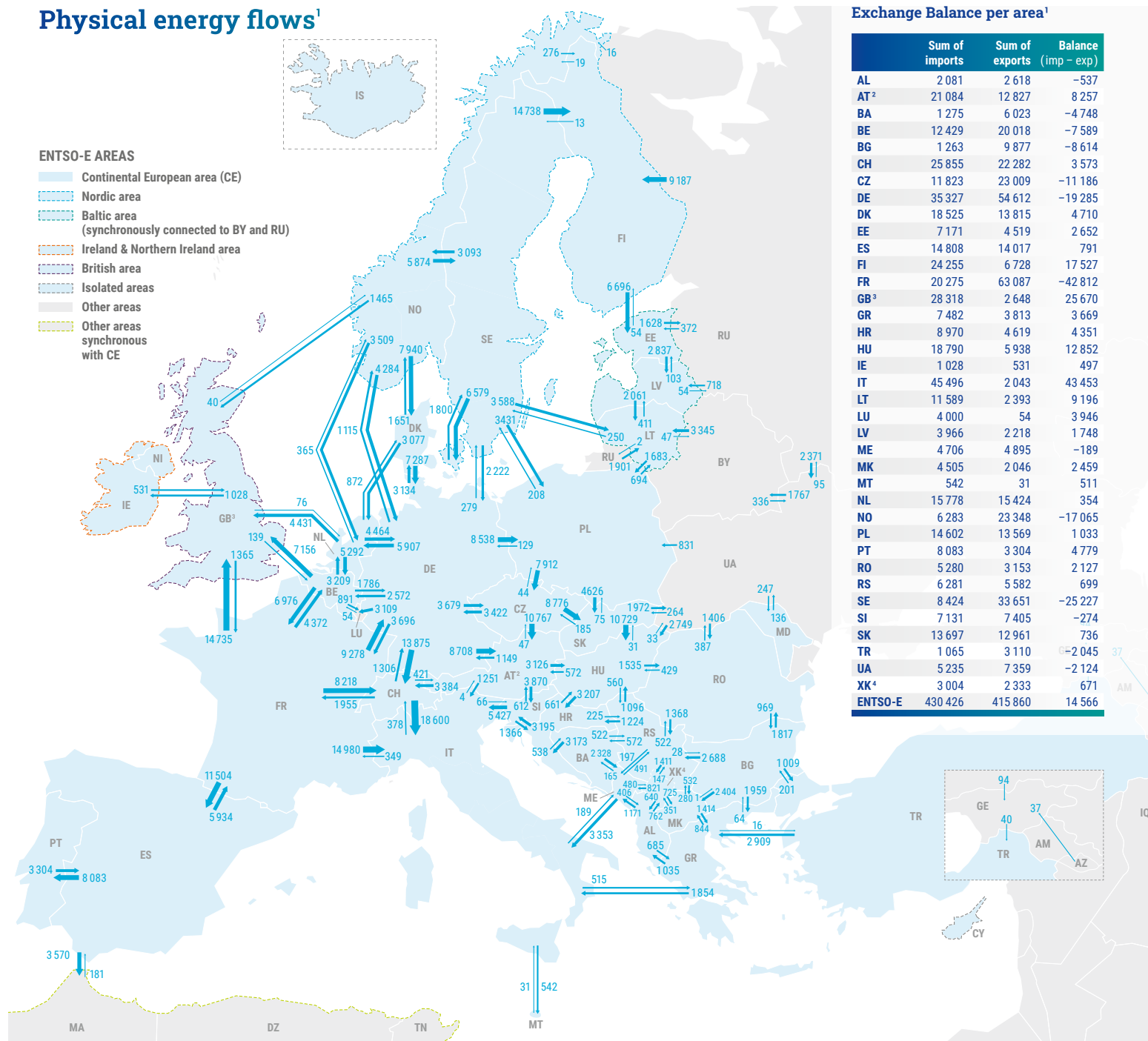
⁵ Gross value.

⁶ All data with the country code GB represents the available data in ENTSO-E Transparency Platform for England, Northern Ireland, Scotland and Wales.

⁷ Calculated load values as sum of the ENTSO-E member TSOs' countries.

^{*} This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo Declaration of Independence.

Physical energy flows¹



Exchange Balance per area¹

Country	Sum of imports	Sum of exports	Balance (imp - exp)
AL	2 081	2 618	-537
AT ²	21 084	12 827	8 257
BA	1 275	6 023	-4 748
BE	12 429	20 018	-7 589
BG	1 263	9 877	-8 614
CH	25 855	22 282	3 573
CZ	11 823	23 009	-11 186
DE	35 327	54 612	-19 285
DK	18 525	13 815	4 710
EE	7 171	4 519	2 652
ES	14 808	14 017	791
FI	24 255	6 728	17 527
FR	20 275	63 087	-42 812
GB ³	28 318	2 648	25 670
GR	7 482	3 813	3 669
HR	8 970	4 619	4 351
HU	18 790	5 938	12 852
IE	1 028	531	497
IT	45 496	2 043	43 453
LT	11 589	2 393	9 196
LU	4 000	54	3 946
LV	3 966	2 218	1 748
ME	4 706	4 895	-189
MK	4 505	2 046	2 459
MT	542	31	511
NL	15 778	15 424	354
NO	6 283	23 348	-17 065
PL	14 602	13 569	1 033
PT	8 083	3 304	4 779
RO	5 280	3 153	2 127
RS	6 281	5 582	699
SE	8 424	33 651	-25 227
SI	7 131	7 405	-274
SK	13 697	12 961	736
TR	1 065	3 110	-2 045
UA	5 235	7 359	-2 124
XK ⁴	3 004	2 333	671
ENTSO-E	430 426	415 860	14 566

Map section of the Balkan countries



¹ Hourly netted physical flow values measured in GWh.
² All values from Transparency Platform for Austria are for the control area AT and not the country AT (some power plants and lines located in Austria are part of the German control area).
³ All data with the country code GB represents the available data in ENTSO-E Transparency Platform for England, Northern Ireland, Scotland and Wales.
⁴ This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo Declaration of Independence.



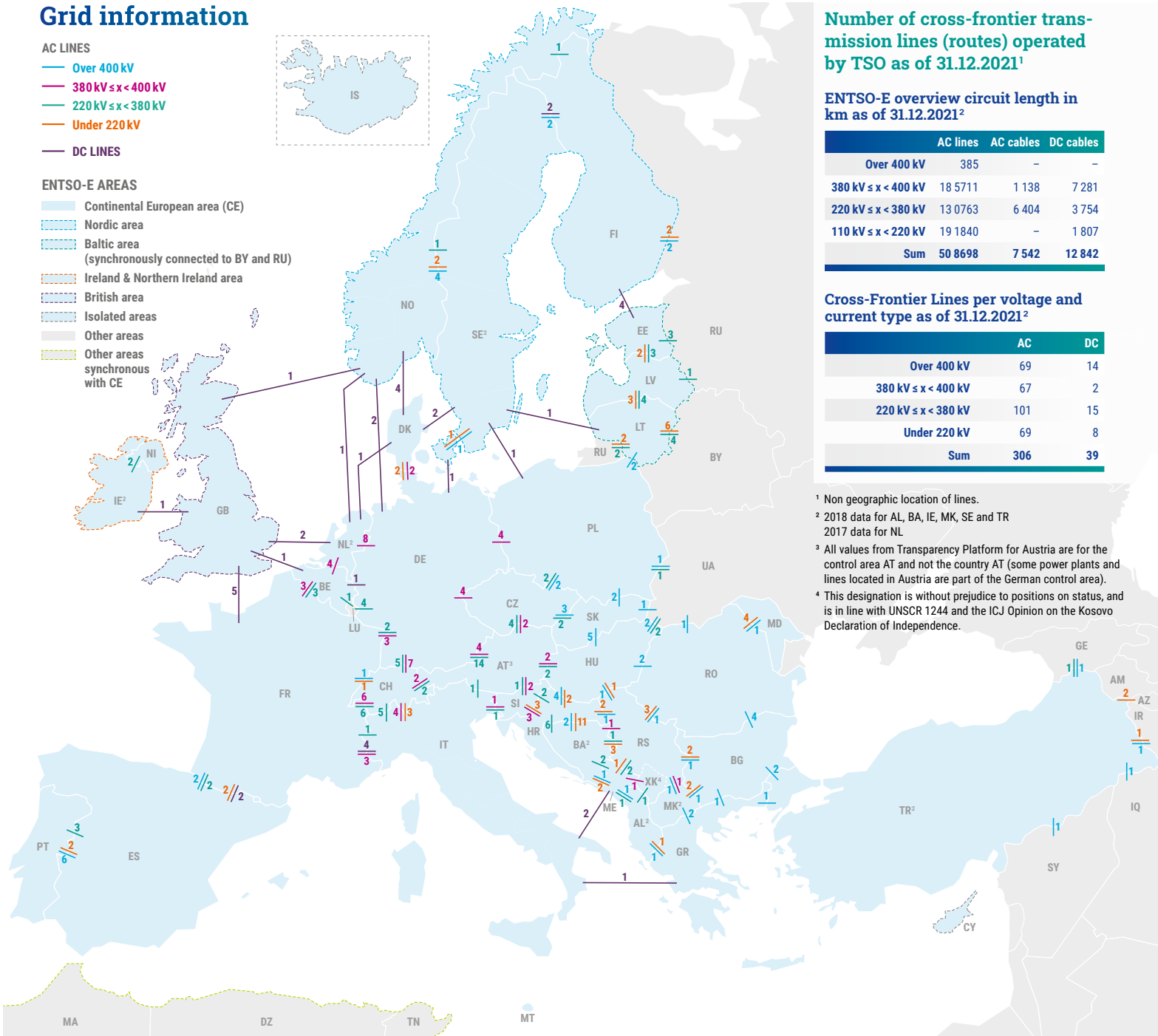
Grid information

AC LINES

- Over 400 kV
- 380 kV ≤ x < 400 kV
- 220 kV ≤ x < 380 kV
- Under 220 kV
- DC LINES

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



Number of cross-frontier transmission lines (routes) operated by TSO as of 31.12.2021¹

ENTSO-E overview circuit length in km as of 31.12.2021²

	AC lines	AC cables	DC cables
Over 400 kV	385	-	-
380 kV ≤ x < 400 kV	18 5711	1 138	7 281
220 kV ≤ x < 380 kV	13 0763	6 404	3 754
110 kV ≤ x < 220 kV	19 1840	-	1 807
Sum	50 8698	7 542	12 842

Cross-Frontier Lines per voltage and current type as of 31.12.2021²

	AC	DC
Over 400 kV	69	14
380 kV ≤ x < 400 kV	67	2
220 kV ≤ x < 380 kV	101	15
Under 220 kV	69	8
Sum	306	39

¹ Non geographic location of lines.

² 2018 data for AL, BA, IE, MK, SE and TR
2017 data for NL

³ All values from Transparency Platform for Austria are for the control area AT and not the country AT (some power plants and lines located in Austria are part of the German control area).

⁴ This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo Declaration of Independence.

Members of ENTSO-E

AL	Albania	OST	OST sh.a – Albanian Transmission System Operator
AT	Austria	APG VUEN	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 SA
BG	Bulgaria	ESO	Electroenergien Sistemen Operator EAD (Електроенергиен системен оператор)
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	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'Electricité
GR	Greece	IPTO	Independent Power Transmission Operator S.A.
HR	Croatia	HOPS	HOPS d.d.
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	AST	AS Augstsprieguma tīkls
ME	Montenegro	CGES AD	Crnogorski elektroprenosni sistem AD
MK	Republic of North Macedonia	MEPSO	Transmission System Operator of the Republic of North Macedonia
NI	Northern Ireland ¹	SONI	System Operator for Northern Ireland Ltd
NL	The Netherlands	TenneT NL	TenneT TSO B.V.
NO	Norway	Statnett	Statnett SF
PL	Poland	PSE S.A.	Polskie Sieci Elektroenergetyczne S.A.
PT	Portugal	REN	Rede Eléctrica Nacional, S.A.
RO	Romania	Transelectrica	C.N. Transelectrica S.A.
RS	Serbia	EMS	Akcionarsko društvo Elektromreža Srbije
SE	Sweden	Svenska Kraftnät	Svenska Kraftnät
SI	Slovenia	ELES	ELES, d.o.o.
SK	Slovak Republic	SEPS	Slovenská elektrizačná prenosová sústava, a.s.
Observer member			
TR	Turkey	TEİAŞ	Turkish Electricity Transmission Corporation
UA	Ukraine ²	Ukrenergo	National Power Company Ukrenergo

¹ In compliance with 12 February 2021 EC Notice to Stakeholders on the Withdrawal of the UK and EU rules in the field of the Internal Energy Market.

² Ukraine is an observer member starting from 2022.

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