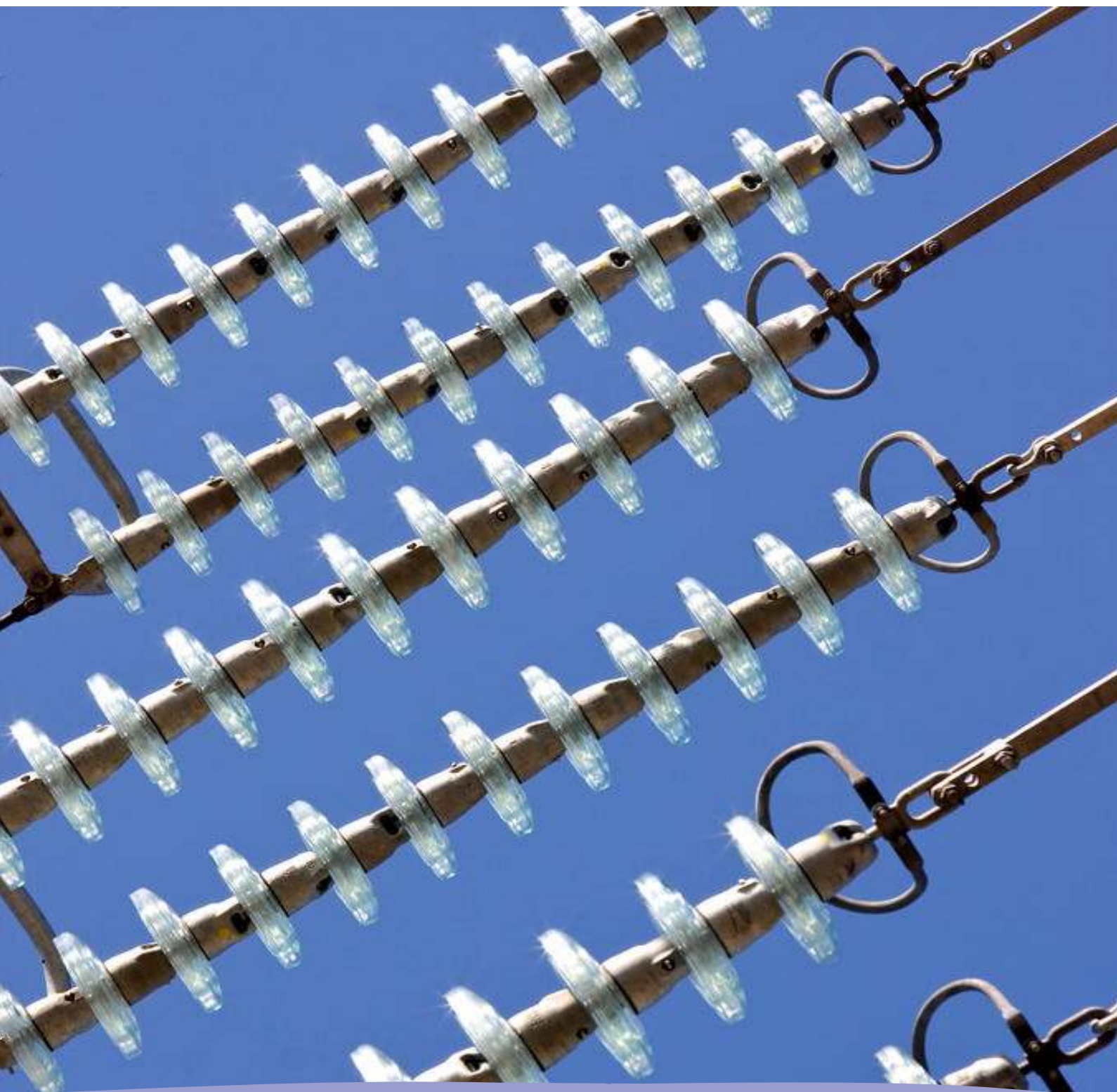


Monthly statistics



April 2013

Monthly provisional values as of 16 August 2013

European Network of
Transmission System Operators
for Electricity

entsoe

Table of contents		Page
1	Electricity supply situation of the countries	2
2	Electricity supply representativity of the countries	3
3	Physical energy flows	4
4	Overview of the detailed physical energy flows	5
5	Load flows (night)	6
6	Load flows (day)	7
7	Unavailability of international tie lines (major events)	8
8	Network reliability (major events)	10
9	Highest and lowest load on the 3 rd Wednesday	11
10	Load diagrams on the 3 rd Wednesday	12
11	Water reservoirs Nordic	13

General remarks and abbreviations used in the tables

- All values of generation and consumption on page 2, 11 and 12 are calculated to represent 100% of the national values.
- All data with the country code GB represents monthly statistical data as sum of England, Scotland and Wales.
- All data with the country code NI represents the monthly statistical data of the Northern Ireland.
- CET Central European Time

Countries	Net generation in GWh									Exchange balance in GWh	Pump in GWh	Consumption	
	Therm. nuclear	Fossil fuels	Hydro power	Other renew.	of which wind	of which solar	of which bio-mass	Non identifiable	Total			monthly [GWh]	var. [%]
AT	0	1345	3576	0	0	0	0	838	5759	336	495	5600	2,9
BA	0	463	1012	0	0	0	0	0	1475	-529	0	946	-1,1
BE ²	2135	2280	131	881	299	294	288	0	5427 ¹	1693	131	6989	1,1
BG	827	1024	562	215	116	99	0	0	2628	-124	83	2421	3,7
CH	2352	197	2419	144	9	0	0	0	5112 ¹	253	124	5241	2,6
CY	0	260	0	19	19	0	0	0	279	0	0	279	-7,9
CZ	2361	3669	337	221	30	191	117	0	6588 ¹	-1382	105	5101	0,3
DE ³	6961	26536	2153	9630	3331	3159	2948	0	45280 ¹	-2531	601	42148	1,9
DK	0	1756	1	1092	885	0	207	0	2849 ¹	-159	0	2690	-0,1
EE	0	818	3	100	52	0	48	0	921	-230	0	691	4,9
ES	4422	5824	5625	5904	4478	1019	408	142	21917	-411	873	20633	0,4
FI	1994	2204	1097	977	59	0	918	69	6341 ¹	708	0	7049	1,7
FR	31479	3164	7149	2246	1479	346	422	0	44038	-3229	540	40269	0,3
GB	5531	18134	496	2819	1522	0	0	0	26980	1050	319	27710	2,4
GR	0	2178	416	539	259	262	0	18	3151 ¹	35	0	3186	0,7
HR	0	263	1073	47	36	0	11	0	1383	-44	13	1326	1,1
HU	1160	1069	0	0	0	0	0	0	2229	1142	0	3371	7,2
IE	0	1589	71	452	446	0	0	18	2130 ¹	64	50	2144	2,8
IS	0	0	1044	408	0	0	0	0	1452	0	0	1452	5,0
IT	0	12904	4774	3890	1323	2129	0	0	21568	3023	292	24299	-0,9
LT	0	167	126	90	55	3	32	0	383 ¹	544	81	846	2,7
LU	0	85	103	25	7	7	4	0	213	413	130	496	-3,5
LV	0	112	582	49	12	0	15	0	743	-130	0	613	0,8
ME ⁴	0	67	185	0	0	0	0	0	252	75	0	327	n.a.
MK	0	249	222	0	0	0	0	0	471	169	0	640	-4,5
NI	0	490	1	122	116	0	1	0	613	122	0	735	4,0
NL	139	6432	0	1079	472	n.a.	n.a.	0	7650	1115	0	8765	-2,6
NO	0	207	9127	140	140	0	0	0	9474 ¹	1410	65	10819	3,5
PL ⁵	0	10790	346	882	394	0	488	0	12018 ¹	-386	63	11569	1,2
PT	0	861	2263	1322	1061	39	222	0	4446 ¹	-525	69	3852	0,7
RO	945	1180	1661	513	466	20	27	0	4299	-48	38	4213	-0,7
RS	0	2242	1051	0	0	0	0	0	3293	-43	136	3114	1,6
SE	6242	435	4567	1825	871	0	954	0	13069 ¹	-1330	0	11739	0,7
SI	501	207	505	0	0	0	0	0	1213	-209	0	1004	2,4
SK	1027	417	546	112	0	62	0	79	2181 ¹	-8	34	2139	1,1
ENTSO-E	68076	109618	53224	35743	17937	7630	7110	1164	267825¹	834	4242	264416	n.a.

¹ Including deliveries from industry

² The reported figures are best estimates based on actual measurements and extrapolations.

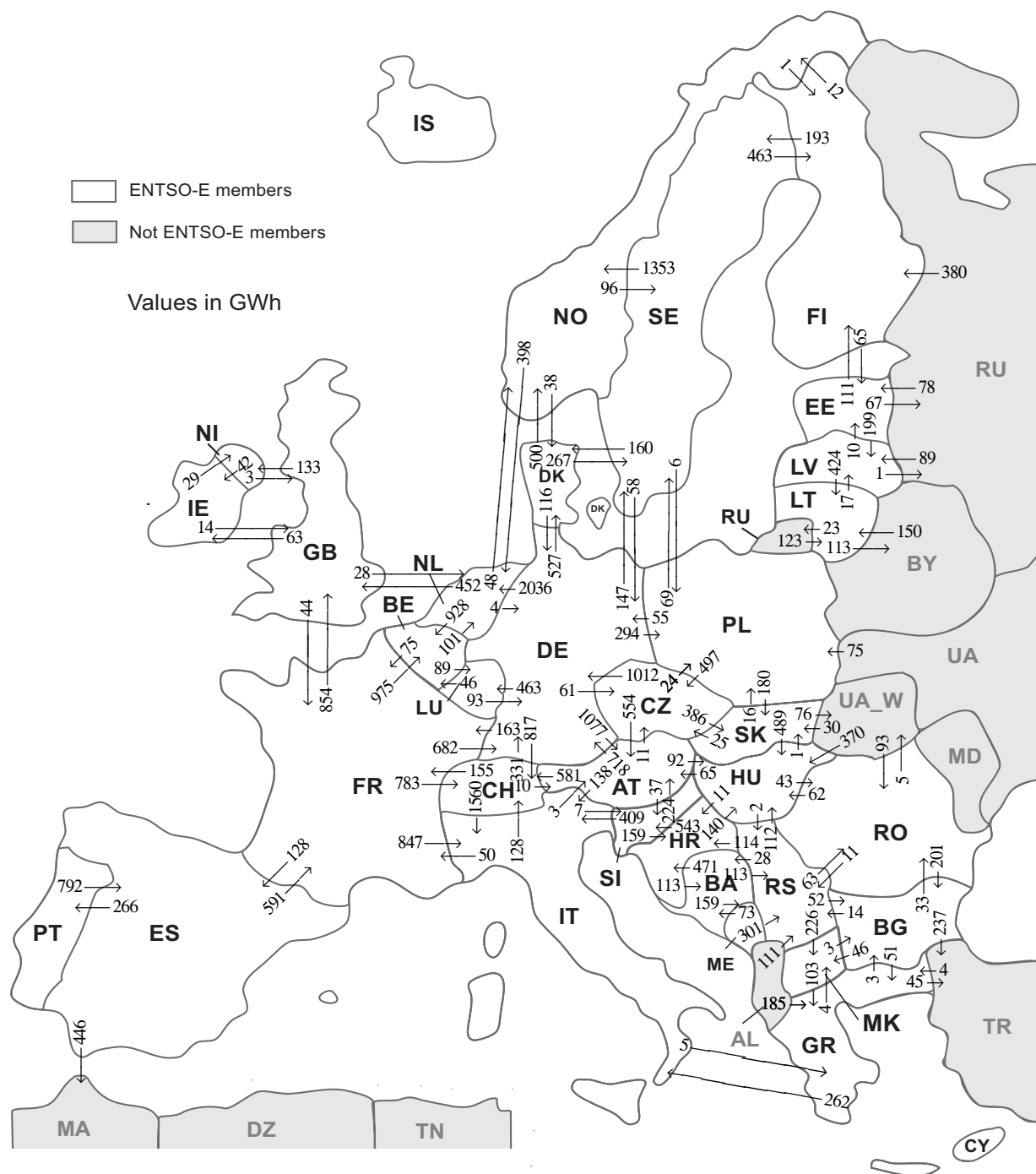
³ The reported figures are best estimates based on actual inquiries, measurements and extrapolations.

⁴ National monthly values as of April 2012

⁵ Operational data. Other renewable includes energy from biomass co-firing in conventional thermal units.

All representativities of the national generation and consumption values on page 2 used to calculate values at a representativity of 100% as stated in the table above:

Countries	Representativities of the national values in %					Consumption
	Thermal nuclear	Fossil fuels	Hydro power	Other renewable except hydro	Non identifiable	
AT	100	100	100	100	100	100
BA	100	100	100	100	100	100
BE	100	100	100	100	100	100
BG	100	100	100	100	100	100
CH	100	100	100	100	100	100
CY	100	100	100	100	100	100
CZ	100	100	100	100	100	100
DE	100	100	100	100	100	100
DK	100	100	100	100	100	100
EE	100	100	100	100	100	100
ES	100	100	100	100	100	100
FI	100	100	100	100	100	100
FR	100	100	100	100	100	100
GB	89	100	100	54	100	100
GR	100	100	100	100	100	100
HR	100	100	100	100	100	100
HU	100	100	100	100	100	100
IE	100	100	100	100	100	100
IS	100	100	100	100	100	100
IT	100	100	100	100	100	100
LT	100	100	100	100	100	100
LU	100	100	100	100	100	100
LV	100	100	100	100	100	100
ME	100	100	100	100	100	100
MK	100	100	100	100	100	100
NI	100	100	100	100	100	100
NL	100	100	100	100	100	100
NO	100	100	100	100	100	100
PL	100	100	100	100	100	100
PT	100	100	100	100	100	100
RO	100	100	100	100	100	100
RS	100	100	100	100	100	100
SE	100	100	100	100	100	100
SI	100	100	100	100	100	100
SK	100	100	100	100	100	100



Sum of physical energy flows between ENTSO-E countries: **29534 GWh**¹

Total physical energy flows: **32235 GWh**¹

¹ Sum of physical energy flows without exchanges between ME-AL and NO-RU.

Not ENTSO-E members:

Albania, Belarus, Morocco, Republic of Moldavia, Republic of Turkey, Russia, Ukraine and Ukraine West

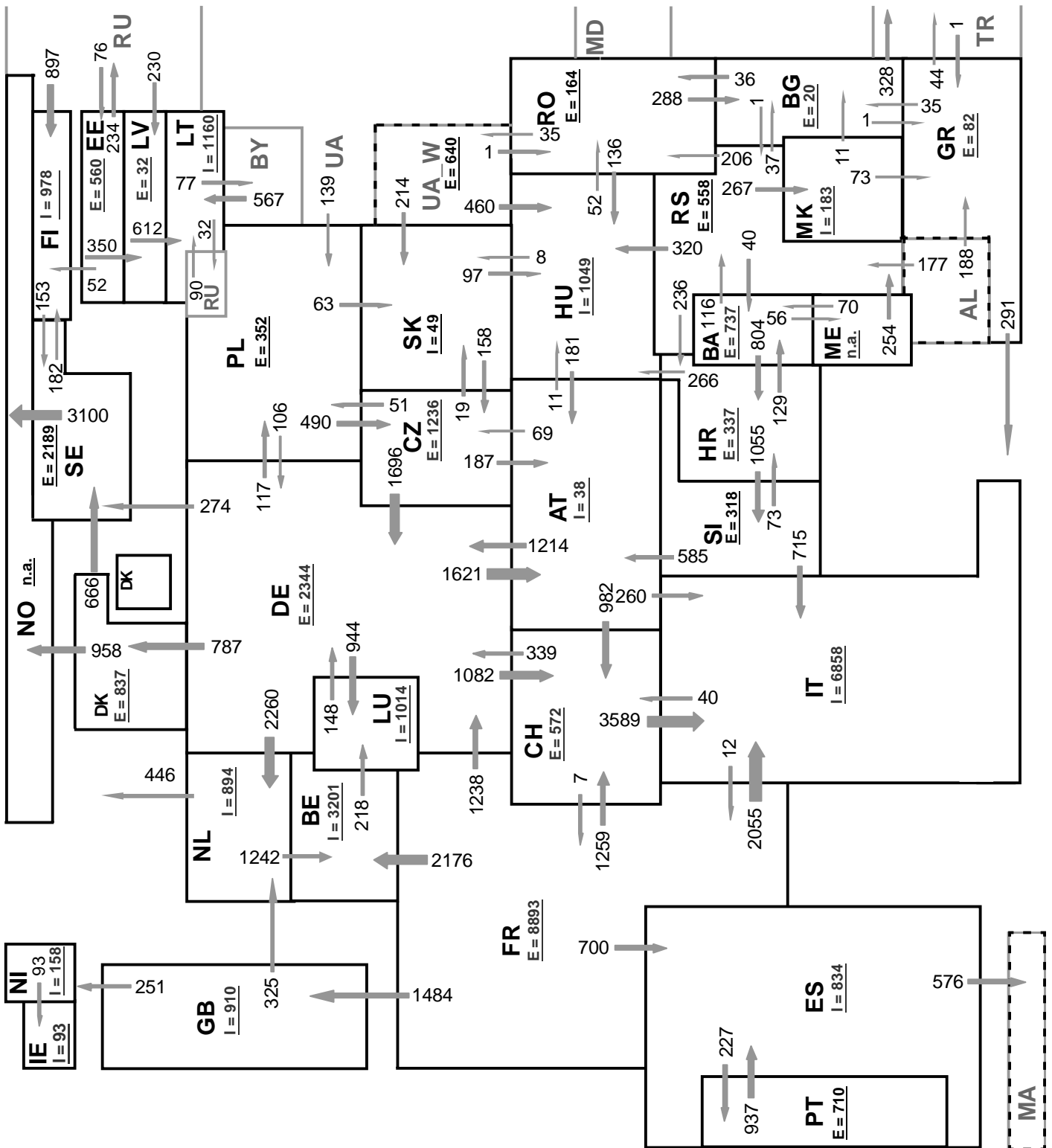
These physical energy flows were measured on the cross-frontier transmission lines (≤ 110 kV) listed in table characteristics of the cross-frontier lines published in the Statistical Yearbook. These values may differ from the official statistics and the exchange balances on page 2.

Outside flows countries	Inside flows of the countries																											Other III ¹							
	AT	BA	BE	BG	CH	CZ	DE	DK	EE	ES	FI	FR	GB	GR	HR	HU	IE	IT	LT	LU	LV	ME	MK	NI	NL	NO	PL		PT	RO	RS	SE	SI	SK	
AT	-	-	-	-	581	11	718	-	-	-	-	-	-	-	92	-	138	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37	-	-	
BA	-	-	-	-	-	-	-	-	-	-	-	-	-	471	-	-	-	-	-	-	159	-	-	-	-	-	-	-	-	113	-	-	-	-	
BE	-	-	-	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	89	-	-	-	-	101	-	-	-	-	-	-	-	-	-	-	
BG	-	-	-	-	-	-	-	-	-	-	-	-	51	-	-	-	-	-	-	-	-	46	-	-	-	-	-	-	33	14	-	-	-	-	237
CH	10	-	-	-	-	331	-	-	-	-	-	155	-	-	-	-	1560	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
CZ	554	-	-	-	-	1012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	-	-	-	-	-	-	386	-	
DE	1077	-	-	-	817	61	-	527	-	-	-	163	-	-	-	-	-	-	463	-	-	-	-	-	2036	-	294	-	-	-	147	-	-	-	
DK	-	-	-	-	-	116	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	500	-	-	-	-	267	-	-	-	
EE	-	-	-	-	-	-	-	-	-	-	111	-	-	-	-	-	-	-	-	-	199	-	-	-	-	-	-	-	-	-	-	-	-	67	
ES	-	-	-	-	-	-	-	-	-	-	591	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	266	-	-	-	-	-	446	
FI	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	-	-	193	-	-	0	
FR	-	-	975	-	783	-	682	-	128	-	-	854	-	-	-	-	847	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
GB	-	-	-	-	-	-	-	-	-	-	44	-	-	-	-	63	-	-	-	-	-	-	-	133	28	-	-	-	-	-	-	-	-	-	-
GR	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	262	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	45	
HR	-	113	-	-	-	-	-	-	-	-	-	-	-	-	140	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	543	-	-	-	
HU	65	-	-	-	-	-	-	-	-	-	-	-	-	11	-	-	-	-	-	-	-	-	-	-	-	-	-	43	2	-	1	0	-	-	
IE	-	-	-	-	-	-	-	-	-	-	-	14	-	-	-	-	-	-	-	-	-	-	-	29	-	-	-	-	-	-	-	-	-	-	
IT	3	-	-	-	128	-	-	-	-	-	-	50	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	-	-	
LT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	-	-	-	-	-	-	-	-	-	-	-	-	136	
LU	-	-	46	-	-	93	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
LV	-	-	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	424	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
ME	-	73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	301	-	-	-	n.a.	
MK	-	-	-	3	-	-	-	-	-	-	-	-	103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	
NL	-	-	-	-	-	-	-	-	-	-	-	3	-	-	42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
NL	-	-	929	-	-	4	-	-	-	-	-	455	-	-	-	-	-	-	-	-	-	-	-	-	-	48	-	-	-	-	-	-	-	-	
NO	-	-	-	-	-	-	38	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	398	-	-	-	-	-	96	-	-	n.a.	
PL	-	-	-	-	497	55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	69	-	180	0	-	
PT	-	-	-	-	-	-	-	-	792	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
RO	-	-	-	201	-	-	-	-	-	-	-	-	-	-	62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	
RS	-	28	-	52	-	-	-	-	-	-	-	-	-	114	112	-	-	-	-	-	0	226	-	-	-	-	-	63	-	-	-	-	0	-	
SE	-	-	-	-	-	58	160	-	-	463	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1353	6	-	-	-	-	-	-	-	
SI	224	-	-	-	-	-	-	-	-	-	-	-	-	159	-	-	409	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SK	-	-	-	-	25	-	-	-	-	-	-	-	-	-	489	-	-	-	-	-	-	-	-	-	-	-	16	-	-	-	-	-	-	76	
Other III ¹	-	-	-	0	-	-	-	-	78	0	380	-	-	189	-	370	-	-	273	-	89	n.a.	-	-	-	n.a.	75	-	93	111	-	-	30	-	

Other III¹: Albania, Belarus, Morocco, Republic of Moldavia, Republic of Turkey, Russia, Ukraine and Ukraine-West

Sum of the monthly energy flows inside and outside of each country in GWh

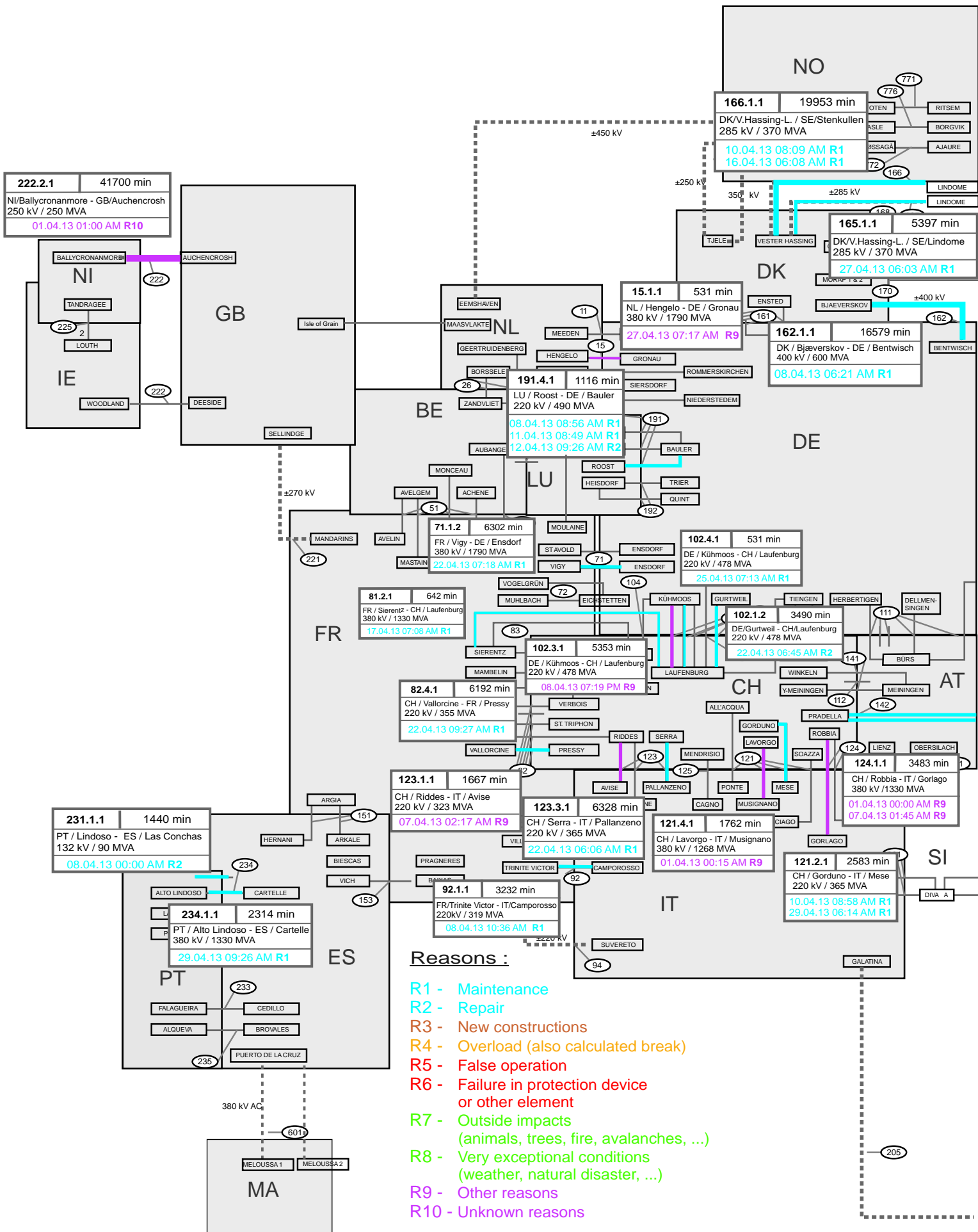
	flows inside	flows outside		flows inside	flows outside
AT	1933	1577	IT	3216	193
BA	214	743	LT	697	153
BE	1950	265	LU	552	139
BG	259	381	LV	305	435
CH	2309	2056	ME	n.a.	n.a.
CZ	594	1976	MK	276	106
DE	3069	5585	NI	162	45
DK	725	883	NL	2563	1436
EE	153	377	NO	n.a.	n.a.
ES	920	1303	PL	415	801
FI	955	270	PT	266	792
FR	1078	4269	RO	232	279
GB	1326	268	RS	552	595
GR	348	314	SE	772	2040
HR	755	796	SI	587	792
HU	1265	122	SK	597	606
IE	105	43	ENTSO-E	n.a.	n.a.

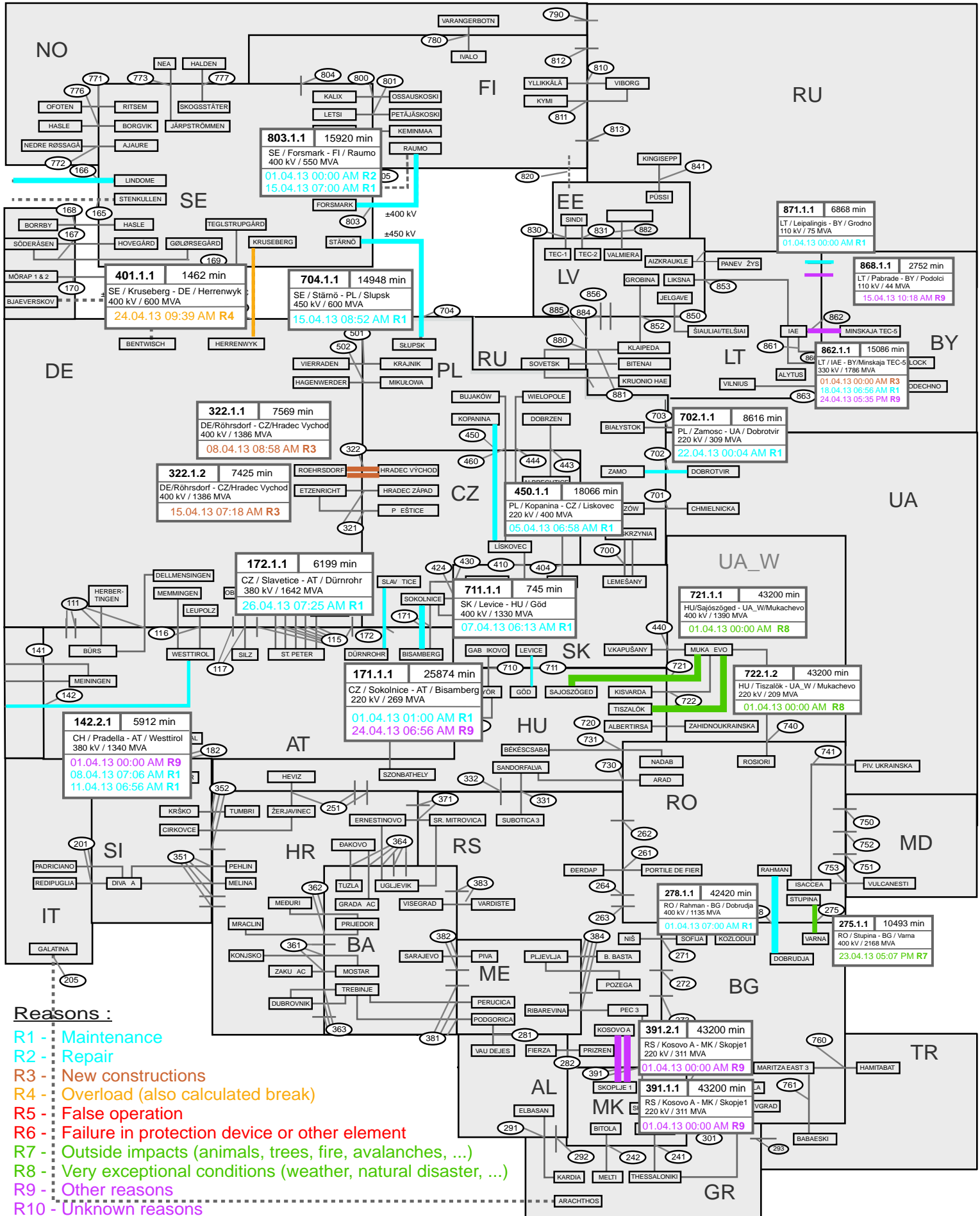


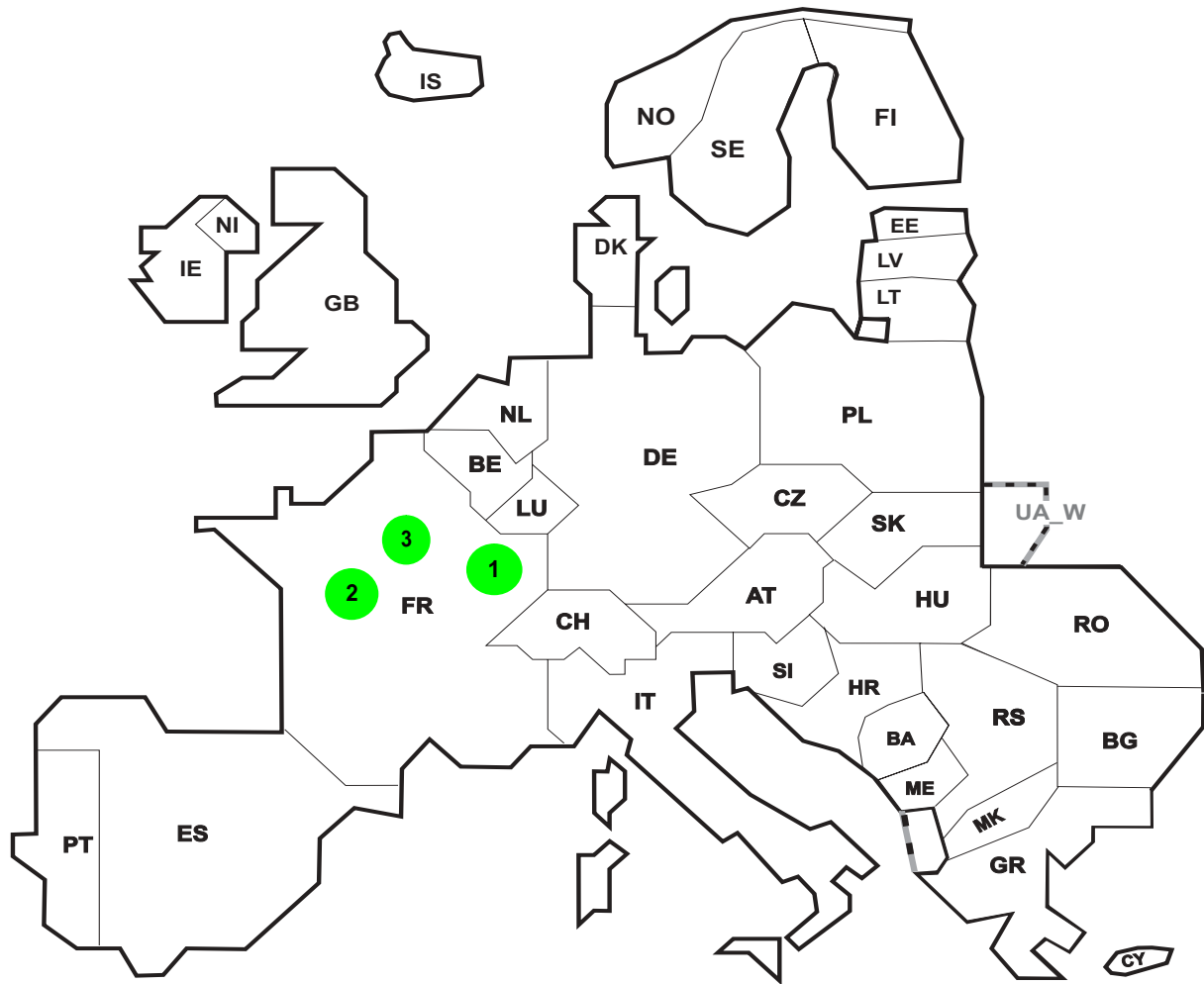
Sum of load flows in MW ENTSO-E = 41663 MW Total = 46029 MW
 (Calculated sum without data between ME - AL and NO - RU)

Synchronous operation with ENTSO-E region

I = Import balance
 E = Export balance







Reasons:

R4 Overload (also calculated break)

R5 False operation

R6 Failure in protection device or other element

R7 Outside impacts (animals, trees, fire, avalanches, ...)

R8 Very exceptional conditions (weather, natural disaster, ...)

R9 Other reasons

R10 Unknown reasons

No	Country	Substation	Reason	Energy not supplied [MWh]	Total loss of power [MW]	Average interruption duration [min]	Equivalent time of interruption ¹
1	FR	JEXUEY	R7	218	84	156	0,232
2	FR	EGUZON	R8	109	143	46	0,116
3	FR	NATION	R7	11	144	4	0,012

Information about incidents in other countries are not shown with energy not supply equal zero or unavailable in the database.

¹ (year [in min] * energy not supplied) / consumption last 12 months

Highest and lowest load on the 17.04.2013 CET of each country

	Highest		Low est		Load representativity %
	load MW	variation % ¹	load MW	variation % ¹	
AT	8083	-0,6	4993	-5,0	100
BA	1676	-2,7	961	-7,0	100
BE ²	10823	-1,2	7997	-9,9	100
BG	4604	-4,6	3423	12,0	99
CH	8393	-8,9	5344	-15,3	100
CY	513	-10,8	275	-6,8	100
CZ	7855	-5,0	5925	-6,1	100
DE ³	73558	-13,4	45230	-10,6	91
DK	4059	-17,2	2628	-9,5	100
EE	1130	1,3	760	2,3	100
ES	31420	-10,4	21107	-8,6	100
FI	10959	0,6	8940	-1,0	100
FR	56184	-18,2	41553	-21,2	100
GB	44215	-4,9	28540	-2,8	93
GR	6232	1,5	3767	6,7	100
HR	2263	-5,0	1295	-19,2	100
HU	4975	-2,3	3463	-1,1	100
IE	3521	-0,2	2163	-1,1	100
IS	2076	3,0	1939	2,9	100
IT	42868	-5,8	27344	-0,5	100
LT	1421	-0,3	864	-1,6	100
LU	808	-6,7	589	-3,6	100
LV	1122	4,3	636	6,5	100
ME ⁴	554	n.a.	371	n.a.	100
MK	1123	-10,0	755	-1,0	100
NI	1313	4,0	722	3,6	100
NL	13923	-7,4	8480	-7,8	100
NO	16168	-7,3	12733	-6,0	100
PL ⁵	19421	-2,2	13413	-4,7	100
PT	6370	-9,2	4280	-3,1	100
RO	6847	-6,3	4962	-0,4	100
RS	5323	-8,1	3206	-6,8	100
SE	17506	-8,8	13293	-10,6	100
SI	1654	-5,6	1168	1,0	100
SK	3513	-1,5	2684	0,4	100
ENTSO-E	413670	n.a.	288018	n.a.	

¹ Variation as compared to corresponding month of the previous year

² The reported figures are best estimates based on actual measurements and extrapolations.

³ A comparison with previous figures may be limited for statistical reasons related to renewable energies feed-in like direct marketing.

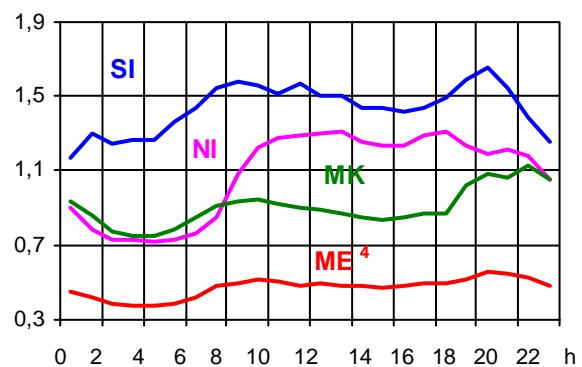
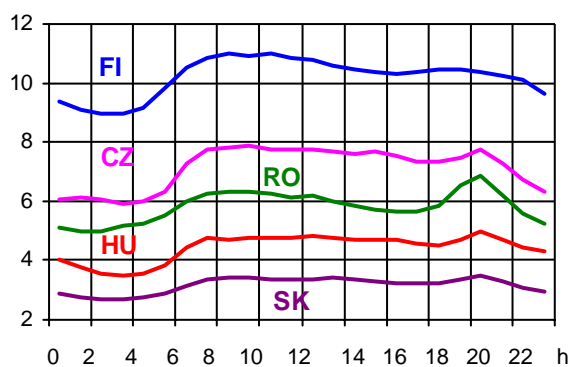
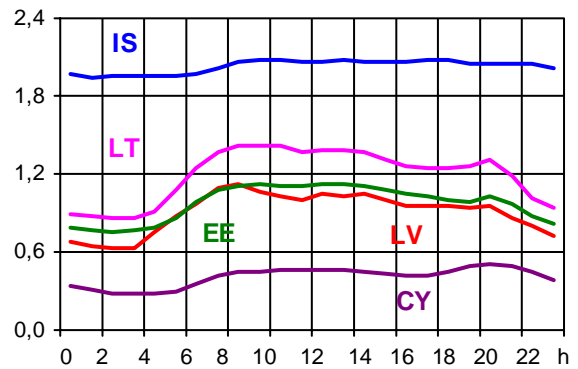
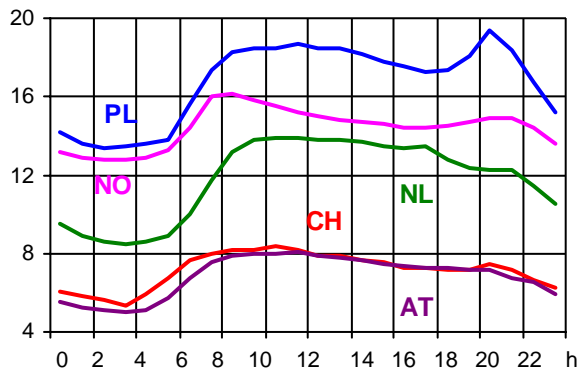
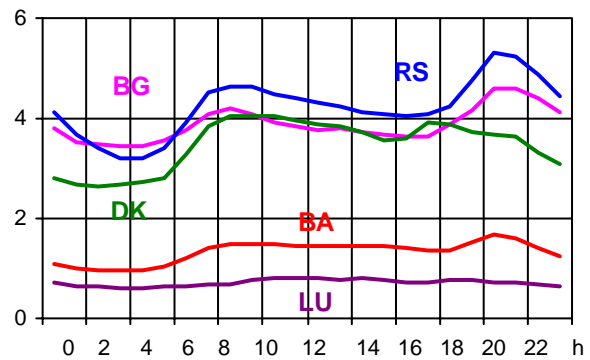
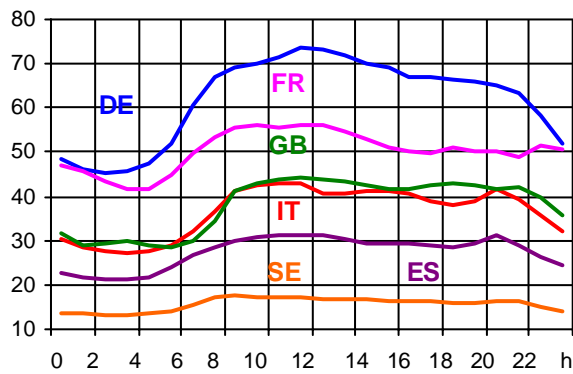
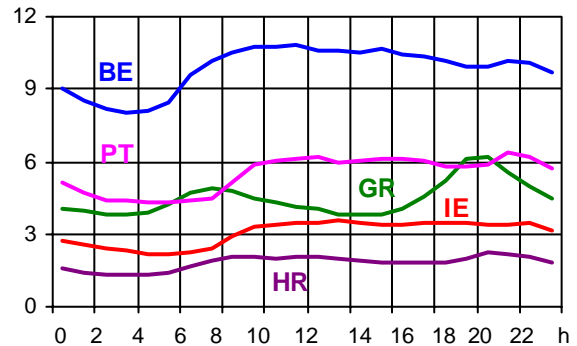
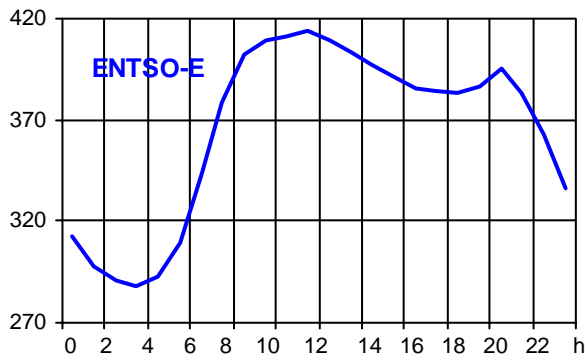
German TSOs are working on a modified system concerning gathering of data of voltage levels downstream the transmission grid. There may be remarkable deviations in future and current data might no longer be directly comparable with historical data. Also already available data for past periods may be changed retroactively and significantly in future.

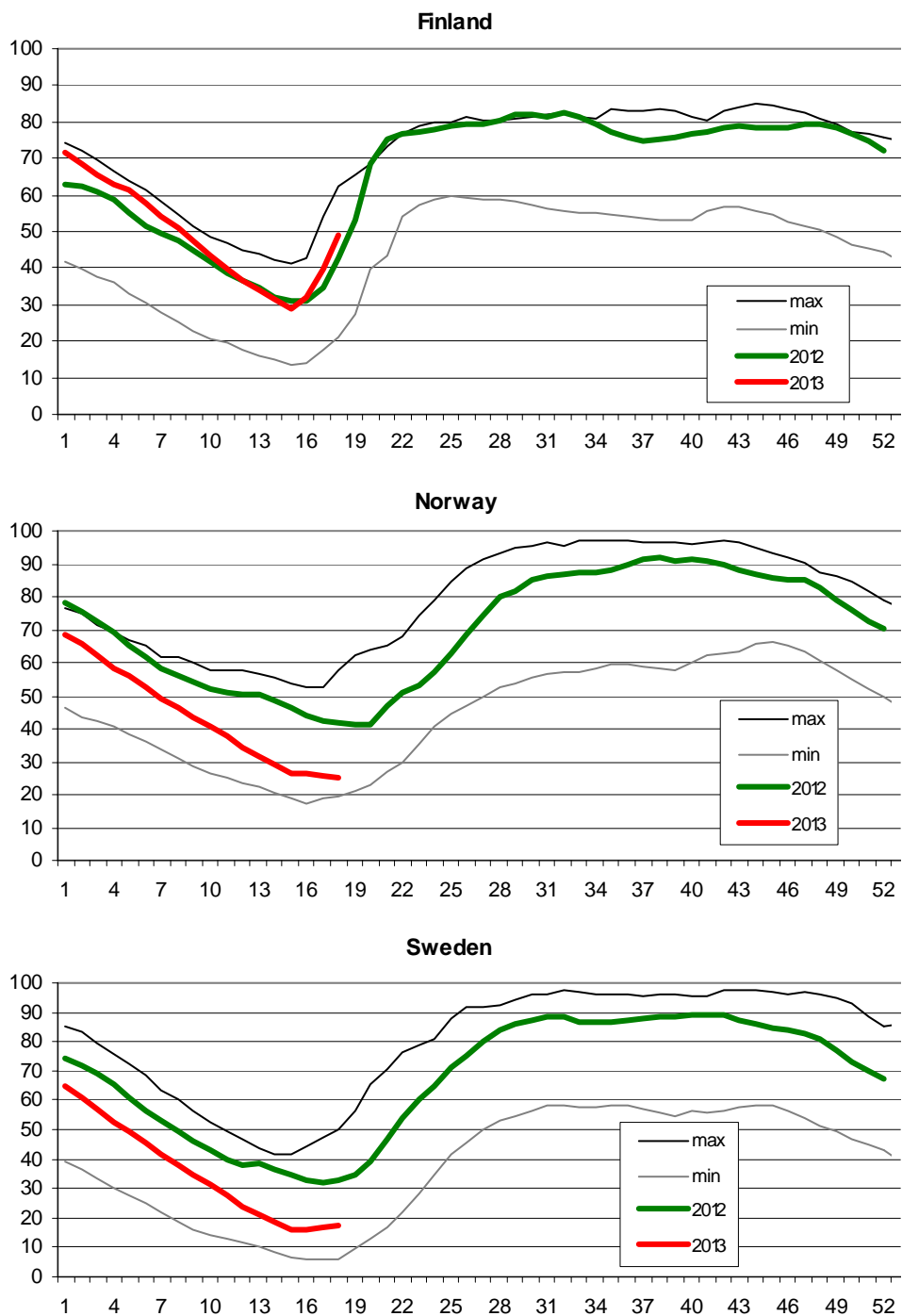
⁴ Monthly load values as of 18 April 2012

⁵ Operational data

Consumption hourly load curves on 17.04.2013 CET

Values in GW





- Finland:** Reservoir capacity: 5.530 GWh
Minimum and maximum limits are based on values for the years 1990-2002
- Norway:** Reservoir capacity: 81.729 GWh
The statistics are supposed to cover 97.1 percent of the total reservoir capacity.
The total reservoir capacity is 84 147 GWh
Minimum and maximum limits are based on values for the years 1990-2003
- Sweden:** Reservoir capacity: 33.758 GWh
Minimum and maximum limits are based on values for the years 1950-2006

Contact

Avenue de Cortenbergh, 100
B-1000 Brussels – Belgium
Tel + 32 2 741 0950
Fax + 32 2 741 0951

info@entsoe.eu
www.entsoe.eu

