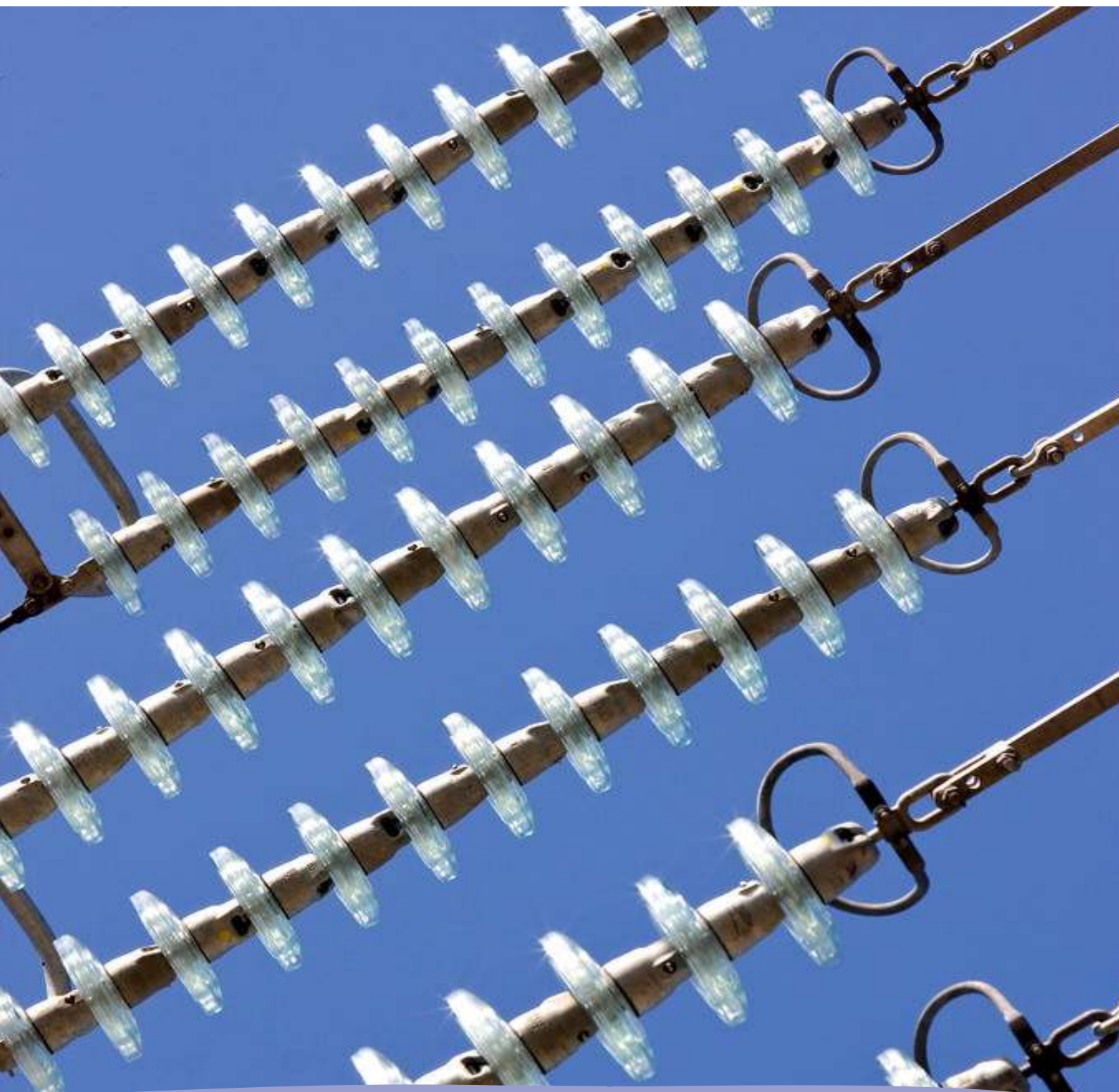


Monthly statistics



November 2013

Monthly provisional values as of 26 February 2014

European Network of
Transmission System Operators
for Electricity

entsoe

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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	1379	3316	464	n.a.	n.a.	n.a.	725	5884	595	428	6051	2,1
BA	0	818	511	0	0	0	0	0	1329	-299	0	1030	3,7
BE ²	4268	2425	146	692	366	57	269	0	7531 ¹	355	149	7737	5,9
BG	1369	1904	287	195	125	60	0	0	3755	-892	109	2754	1,6
CH	2395	183	3289	135	9	0	0	0	6002 ¹	-104	137	5761	1,1
CY	0	275	0	13	13	0	0	0	288	0	0	288	-4,3
CZ	2779	4269	252	116	54	61	146	0	7416 ¹	-1716	127	5573	1,1
DE ³	8346	27669	1819	8165	4609	762	2795	0	45999	-3516	602	41881	-6,7
DK	0	1734	1	1275	1051	0	224	0	3010 ¹	-77	0	2933	-2,3
EE	0	849	3	123	87	0	59	0	975	-278	0	697	-2,8
ES	4053	8038	3002	7774	6498	772	504	24	22891	-893	348	21650	1,4
FI	1971	1937	851	1095	96	0	999	89	5943 ¹	1442	0	7385	-1,2
FR	34631	4912	6383	2547	1800	181	566	0	48473	-2611	632	45230	2,2
GB	5404	19216	693	2715	1819	0	0	0	28028	1170	328	28870	-1,8
GR	0	2768	273	570	322	231	16	0	3611 ¹	357	15	3953	0,6
HR	0	360	664	63	63	0	0	0	1087	308	5	1390	1,6
HU	1101	1309	0	0	0	0	0	0	2410	1174	0	3584	9,6
IE	0	1620	77	346	336	0	0	11	2054 ¹	232	47	2239	-1,4
IS	0	0	1075	413	0	0	0	0	1488	0	0	1488	2,9
IT	0	14481	4405	2956	1516	997	0	0	21842	4037	211	25668	-2,0
LT	0	97	91	103	64	1	38	0	291 ¹	682	73	900	-2,2
LU	0	221	93	25	10	7	4	0	339	328	114	553	3,2
LV	0	259	151	63	15	0	23	0	473	157	0	630	-7,1
ME	0	124	256	0	0	0	0	0	380	69	0	449	65,1
MK	0	412	80	0	0	0	0	0	492	218	0	710	1,0
NI	0	531	1	118	110	0	5	0	650	134	0	784	0,0
NL	0	7952	0	1063	456	n.a.	n.a.	0	9015	1161	0	10176	14,4
NO	0	300	11719	209	209	0	0	0	12228 ¹	-417	72	11739	0,9
PL ⁴	0	11722	213	1154	649	0	506	0	13089 ¹	-523	91	12475	0,7
PT	0	1435	1128	1531	1273	33	224	0	4094 ¹	171	131	4134	1,4
RO	934	2389	1096	496	433	34	29	0	4915	-486	13	4416	-5,0
RS	0	2749	809	0	0	0	0	0	3558	-179	79	3300	-4,5
SE	5756	397	4747	2024	1109	0	915	0	12924 ¹	-601	0	12323	-1,0
SI	115	399	505	0	0	0	0	0	1019	42	0	1061	1,2
SK	1117	475	345	88	0	15	51	95	2120 ¹	197	34	2283	-0,8
ENTSO-E	74239	125608	48281	36531	23092	3211	7373	944	285603¹	237	3745	282095	-0,2

¹ Including deliveries from industry

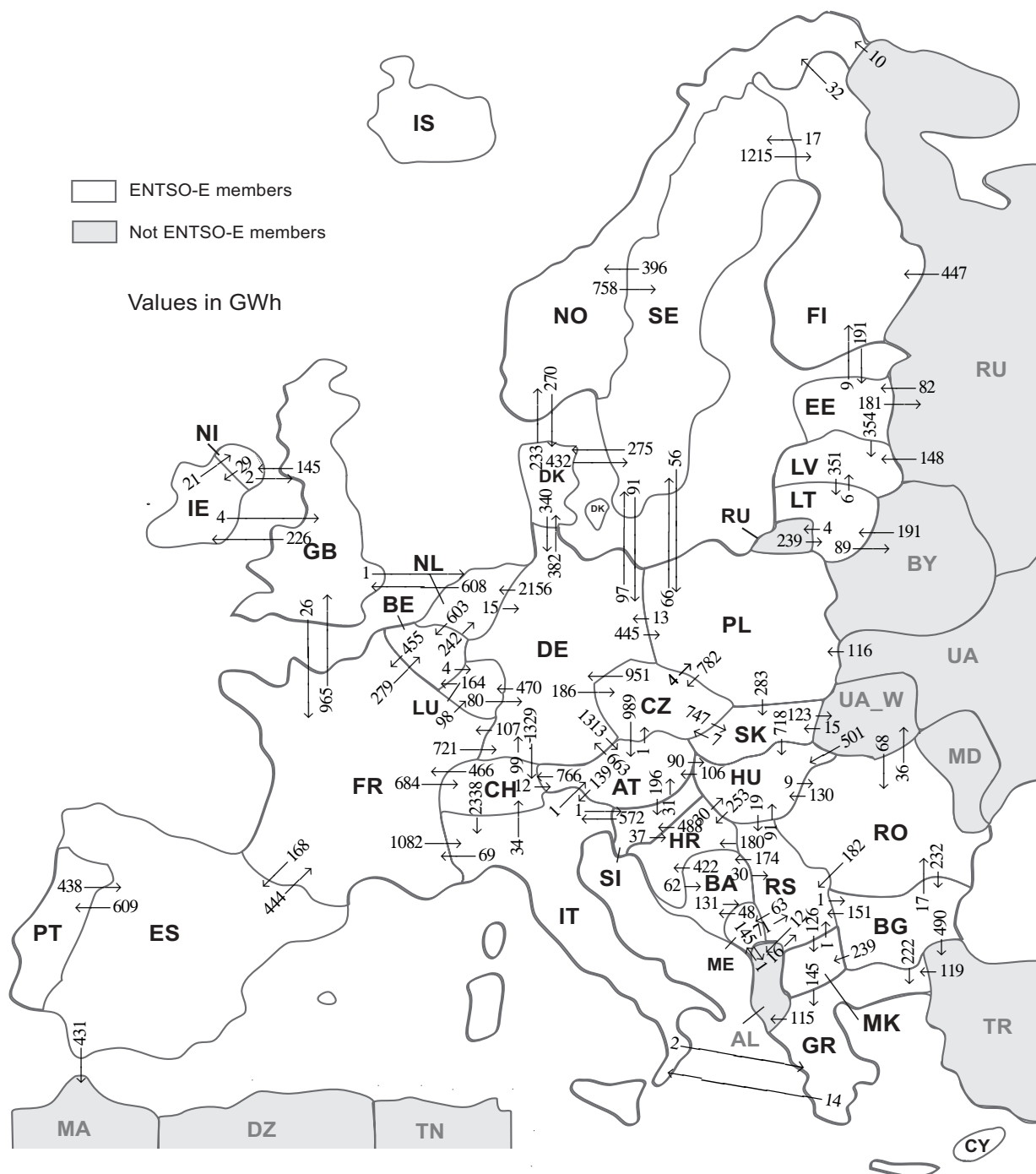
² The reported figures are best estimates based on actual measurements and extrapolations.

³ Wind and PV from TSO data, rest from official statistics.

⁴ 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	99	95	100	99
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	100	96	87	67	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: **33338 GWh**

Total physical energy flows: **36917 GWh**

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.

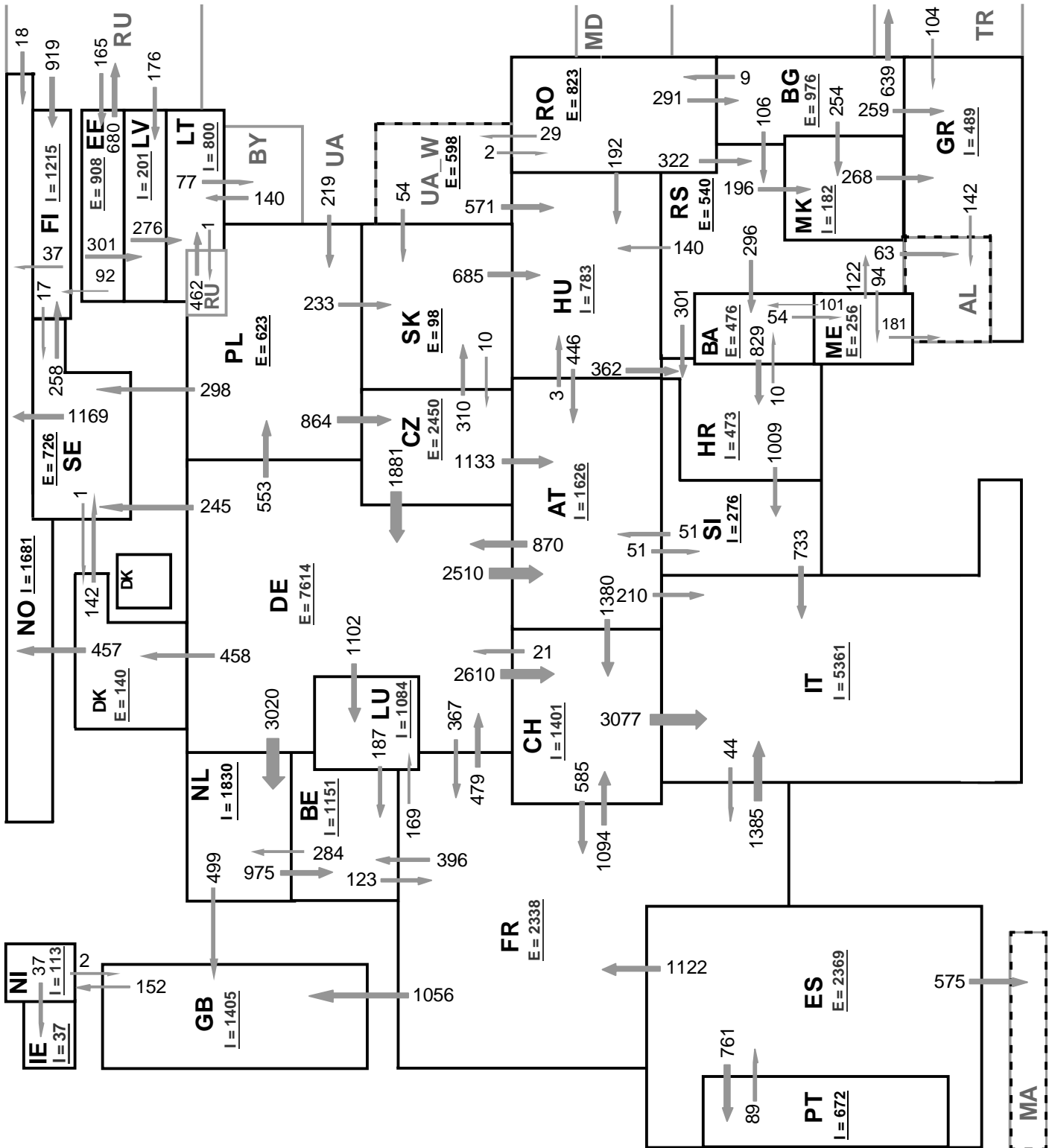
Outside flows countries	Inside flows of the countries																																			
	AT	BA	BE	BG	CH	CZ	DE	DK	EE	ES	FI	FR	GB	GR	HR	HU	IE	IT	LT	LU	LV	ME	MK	NI	NL	NO	PL	PT	RO	RS	SE	SI	SK	Other III ¹		
AT	-	-	-	-	766	1	663	-	-	-	-	-	-	-	90	139	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	196	-	-	
BA	-	-	-	-	-	-	-	-	-	-	-	-	-	422	-	-	-	-	-	-	-	131	-	-	-	-	-	-	-	30	-	-	-	-	-	
BE	-	-	-	-	-	-	-	-	-	-	-	455	-	-	-	-	-	-	4	-	-	-	-	242	-	-	-	-	-	-	-	-	-	-	-	
BG	-	-	-	-	-	-	-	-	-	-	-	-	222	-	-	-	-	-	-	-	-	239	-	-	-	-	-	-	17	151	-	-	-	-	490	
CH	12	-	-	-	-	99	-	-	-	-	466	-	-	-	-	-	2338	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
CZ	989	-	-	-	-	951	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	747	-	-
DE	1313	-	-	-	1329	186	-	382	-	-	107	-	-	-	-	-	-	-	470	-	-	-	-	-	2156	-	445	-	-	-	97	-	-	-	-	
DK	-	-	-	-	-	340	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	233	-	-	-	-	-	432	-	-	-	-	
EE	-	-	-	-	-	-	-	-	-	-	9	-	-	-	-	-	-	-	-	-	354	-	-	-	-	-	-	-	-	-	-	-	-	-	181	
ES	-	-	-	-	-	-	-	-	-	-	444	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	609	-	-	-	-	-	-	-	431	
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IE	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	21	-	-	-	-	-	-	-	-	-	-	-	-
IT	1	-	-	-	34	-	-	-	-	-	69	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
LT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	93
LU	-	-	164	-	-	80	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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ME	-	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	145	
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PT	-	-	-	-	-	-	-	-	438	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RO	-	-	-	232	-	-	-	-	-	-	-	-	-	-	130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36	-
RS	-	174	-	1	-	-	-	-	-	-	-	-	180	91	-	-	-	-	-	-	-	63	126	-	-	-	-	-	0	-	-	-	-	-	12	
SE	-	-	-	-	-	91	275	-	1215	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	396	56	-	-	-	-	-	-	-	-	-	-
SI	31	-	-	-	-	-	-	-	-	-	-	-	37	-	-	-	572	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SK	-	-	-	-	7	-	-	-	-	-	-	-	-	-	718	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	123
Other III ¹	-	-	-	0	-	-	-	82	0	447	-	-	119	-	501	-	-	430	-	148	1	-	-	-	10	116	-	68	16	-	-	-	-	15	-	-

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
AT	2452	1855
BA	284	583
BE	1046	701
BG	233	1119
CH	2813	2915
CZ	976	2691
DE	2973	6485
DK	927	1005
EE	273	544
ES	606	1484
FI	1671	240
FR	1567	3997
GB	1579	398
GR	488	129
HR	892	580
HU	1560	387
IE	255	25

	flows inside	flows outside
IT	4145	107
LT	781	99
LU	572	244
LV	508	351
ME	195	264
MK	365	146
NI	166	31
NL	2399	1226
NO	671	1028
PL	621	1144
PT	609	438
RO	94	580
RS	470	647
SE	1370	2033
SI	685	640
SK	1045	848
ENTSO-E	35291	34964



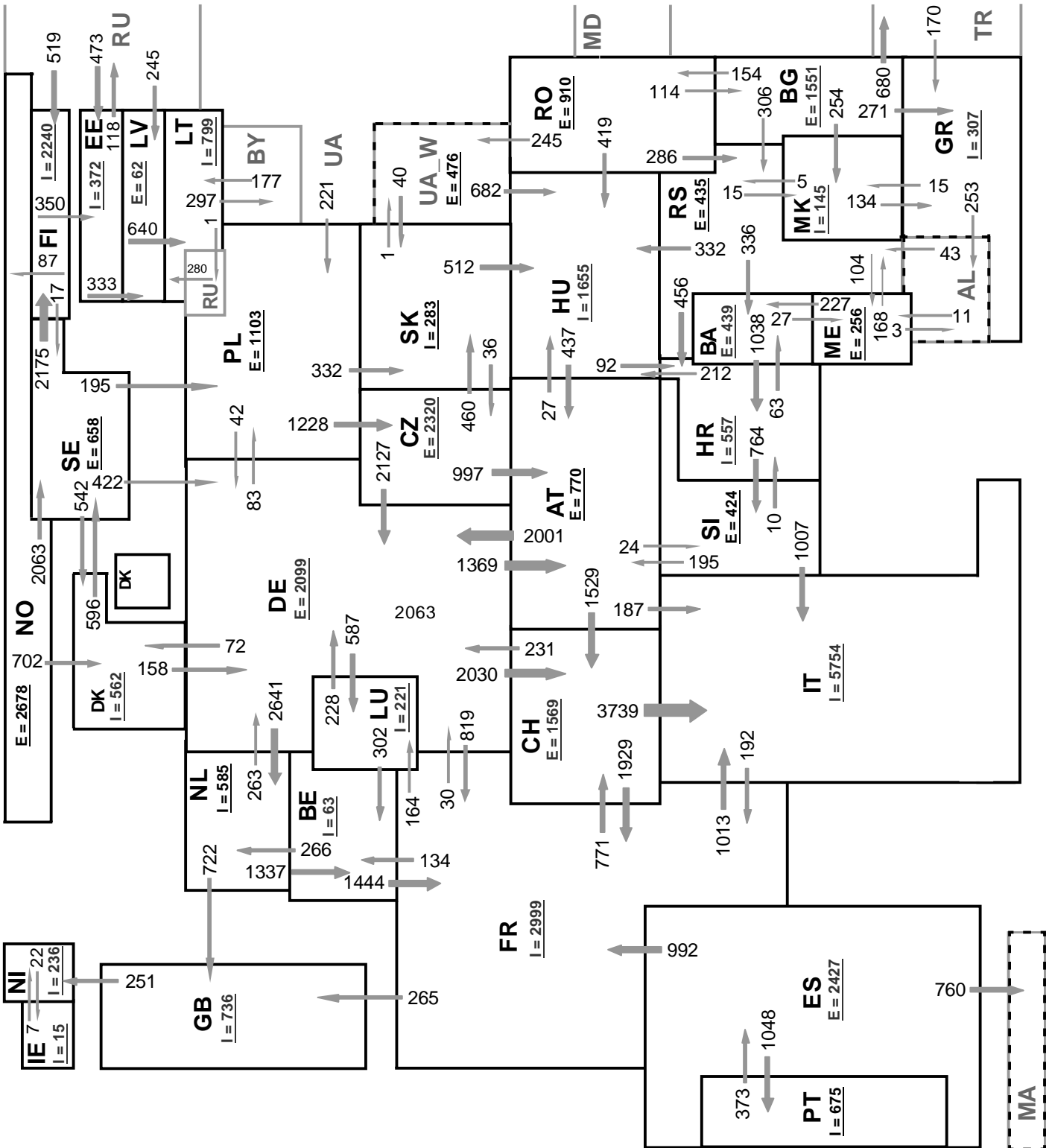
Sum of load flows in MW

ENTSO-E = 40525 MW

Total = 45742 MW

Synchronous operation with ENTSO-E region

I = Import balance
E = Export balance



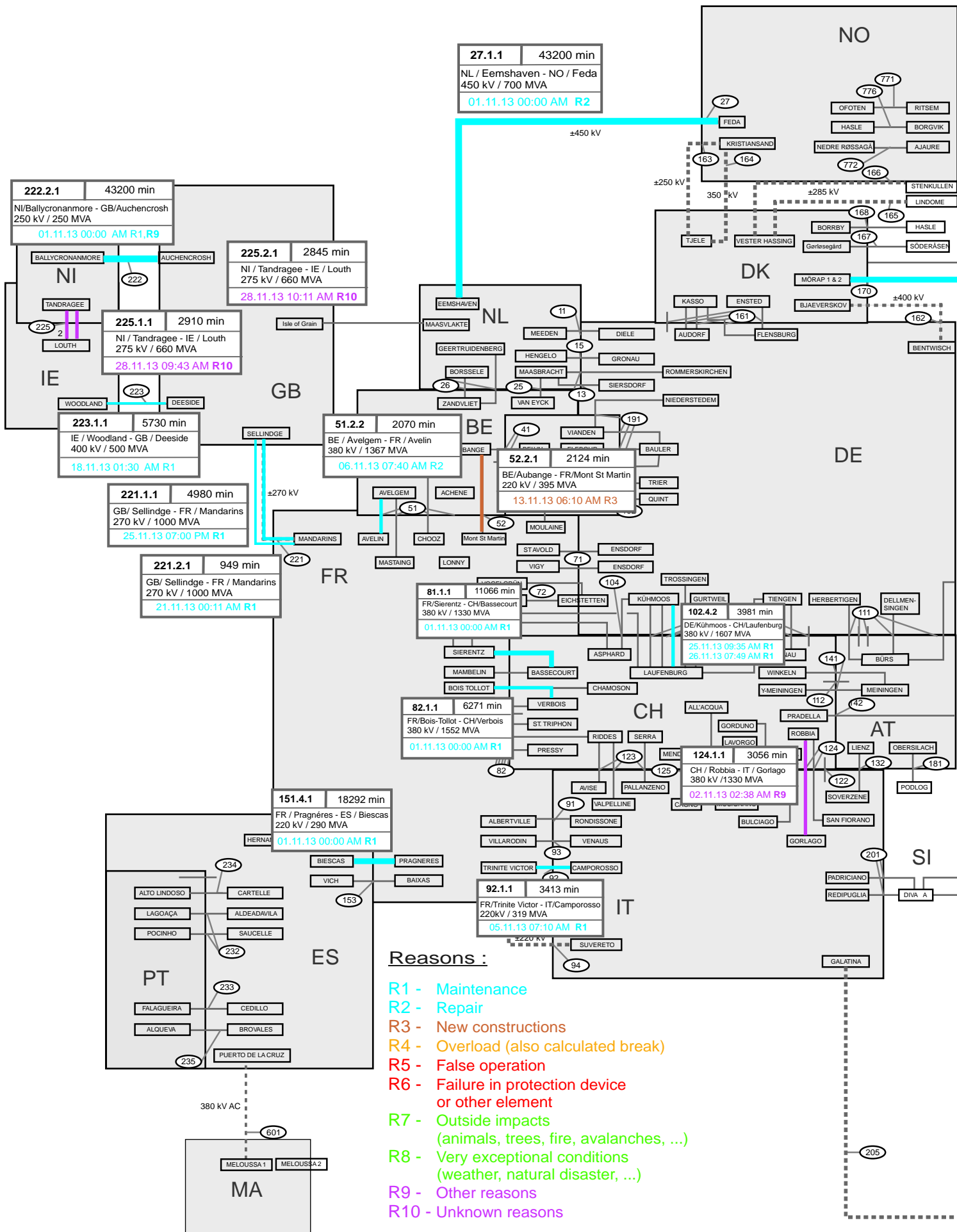
Sum of load flows in MW

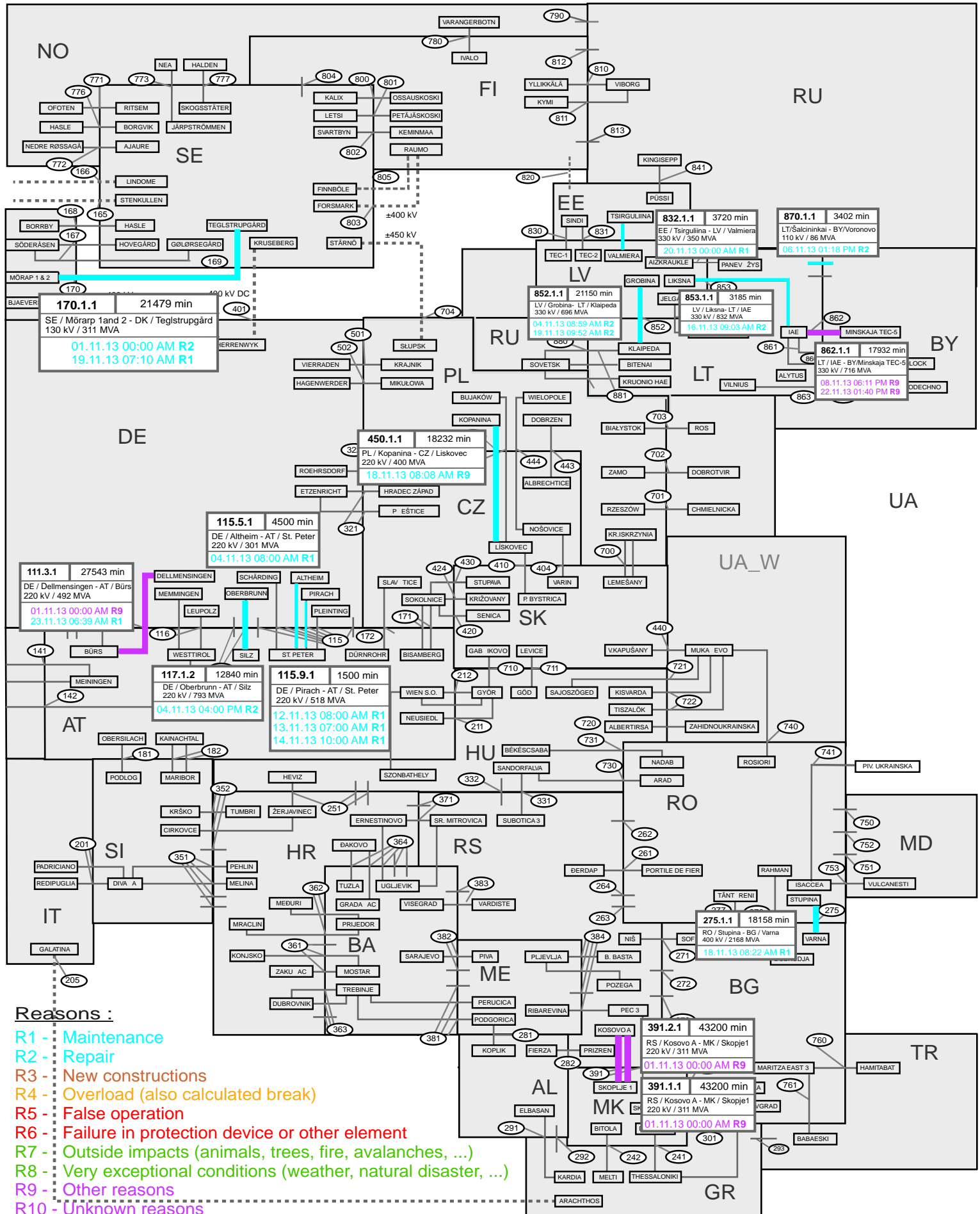
ENTSO-E = 48539 MW

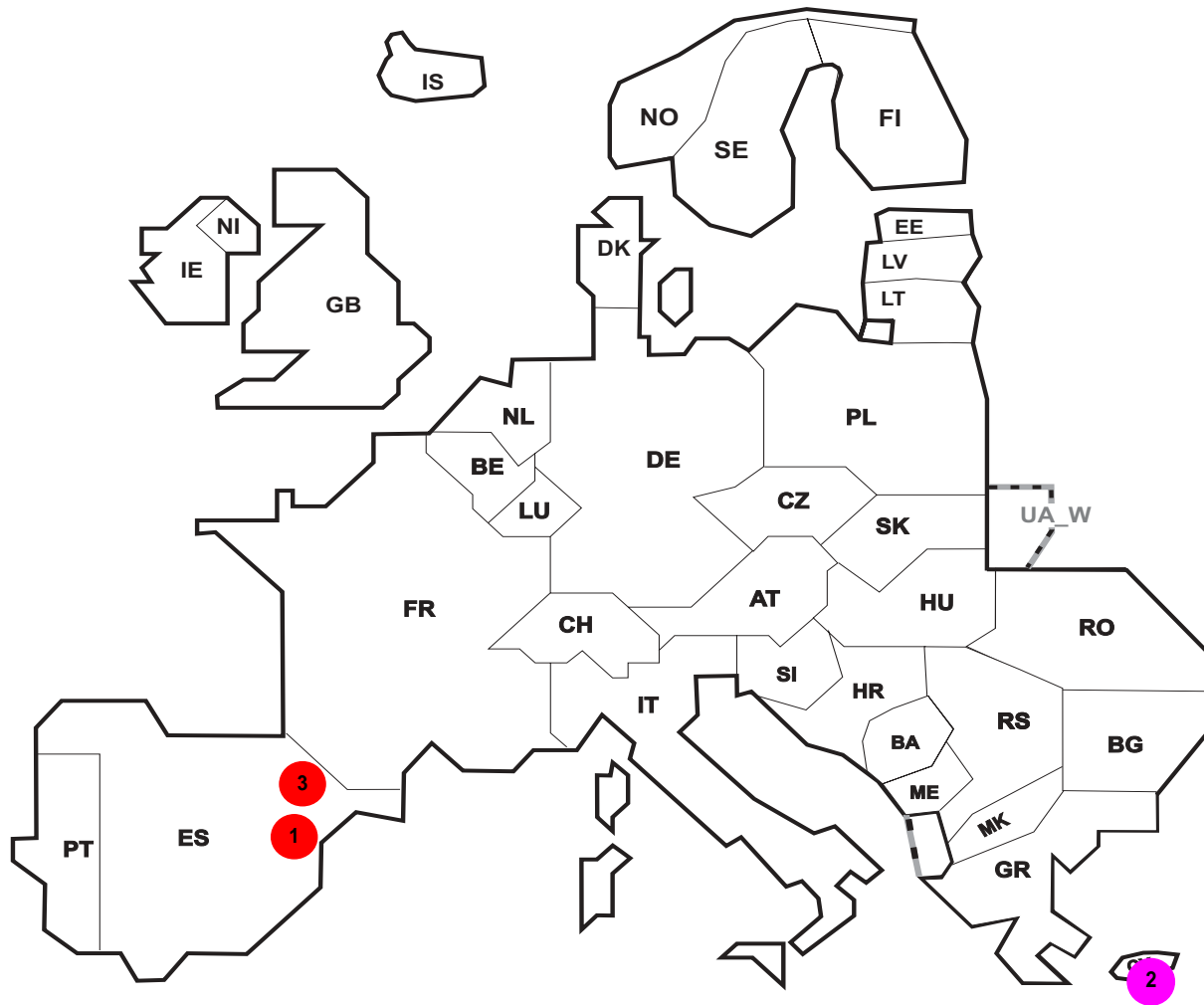
Total = 53758 MW

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	ES	CA CIDEDO	R6	581	75	463	1,168
2	CY	VPS GENERATOR 2	R9	3	75	2	0,380
3	ES	MANSO FIGUERES	R6	1	32	2	0,002

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 20.11.2013 CET of each country

	Highest load MW	variation % ¹	Low est load MW	variation % ¹	Load representativity %
AT	10283	1,6	6586	-1,3	100
BA	1869	7,5	1061	3,3	100
BE ²	12211	-0,1	8617	1,2	100
BG	5519	-0,6	3539	2,6	99
CH	9634	0,0	6776	0,0	100
CY	535	-2,7	274	-1,1	100
CZ	10139	11,3	7110	10,6	100
DE	76012	-2,6	50114	-1,2	91
DK	5563	0,4	2990	2,2	100
EE	1179	-0,6	685	-7,3	100
ES	36863	4,8	22864	4,2	100
FI	11526	3,5	8671	1,1	100
FR	83682	12,8	59072	11,8	100
GB	53994	-1,1	29386	0,3	100
GR	6766	-2,6	3973	-1,5	100
HR	2454	1,2	1505	-3,8	100
HU	5664	1,4	3664	1,7	100
IE	4357	2,7	2296	2,1	100
IS	2187	2,4	1990	1,5	100
IT	48920	1,8	27643	0,0	100
LT	1591	-2,3	912	-1,5	100
LU	773	-12,9	521	-15,6	100
LV	1134	-3,9	617	-0,5	100
ME	448	3,7	268	-6,6	100
MK	1193	1,7	789	3,5	100
NI	1647	4,4	765	4,9	100
NL	16101	-4,7	9290	-2,7	100
NO	19941	16,7	14974	16,5	100
PL ³	21929	0,1	14481	0,6	100
PT	7527	4,7	4543	1,6	100
RO	7410	-5,4	5044	-8,2	100
RS	5970	5,4	3754	-0,7	100
SE	21380	7,4	14513	5,9	100
SI	1807	-2,0	1252	-1,8	100
SK	3922	-1,6	2843	-1,2	100
ENTSO-E	494647	2,8	326726	3,3	

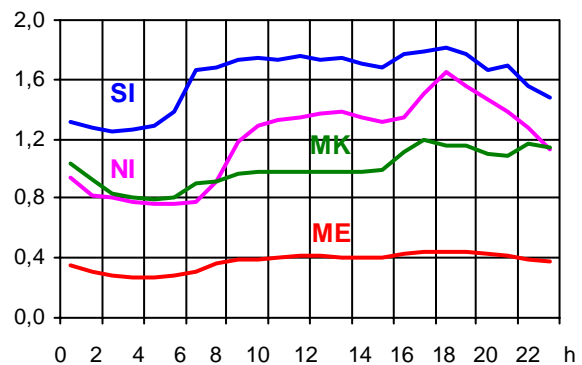
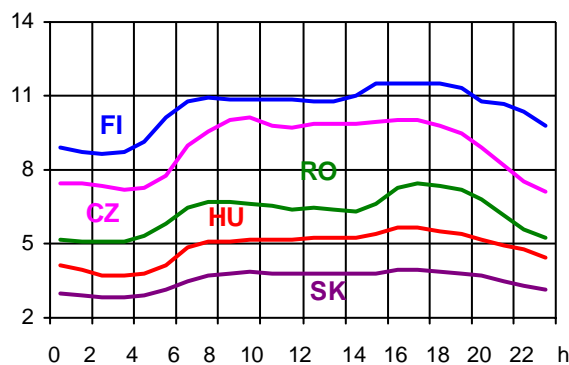
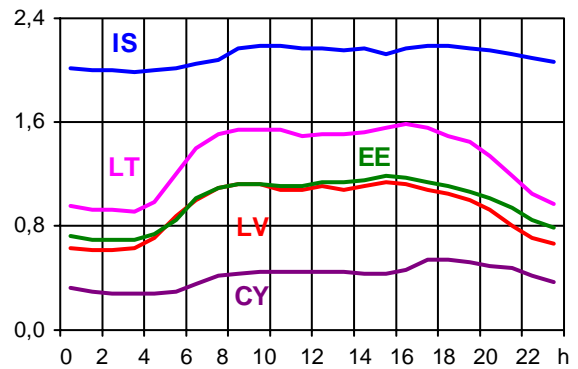
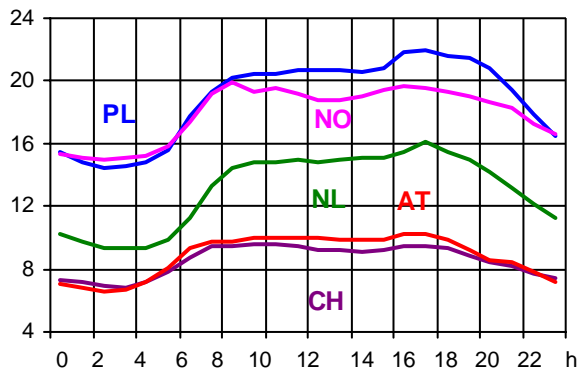
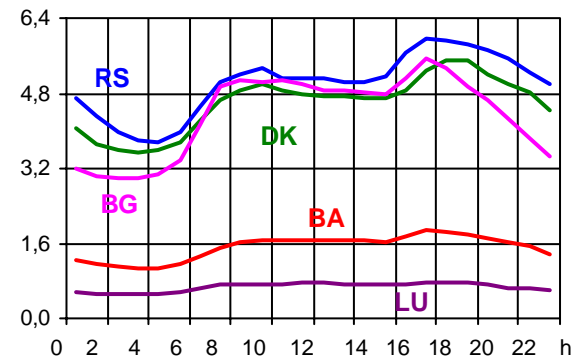
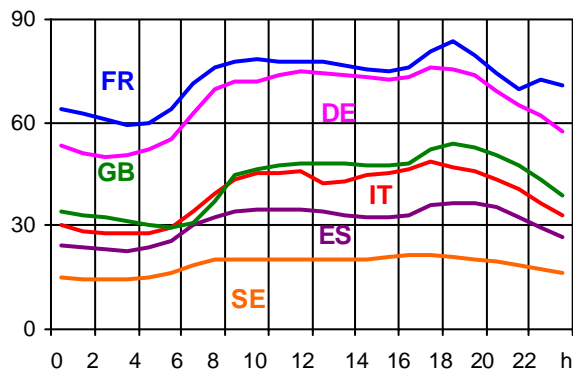
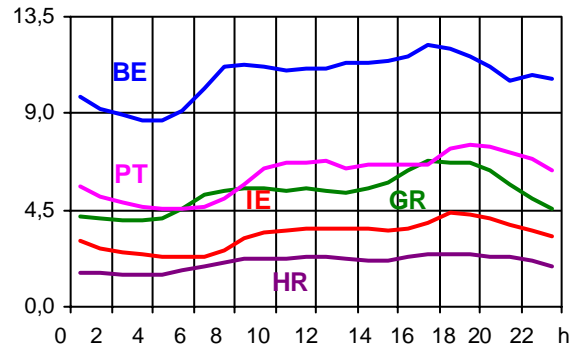
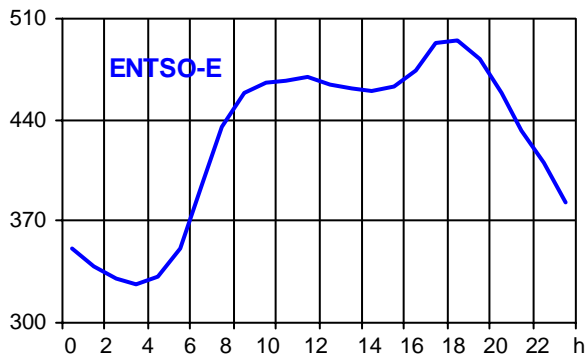
¹ Variation as compared to corresponding month of the previous year

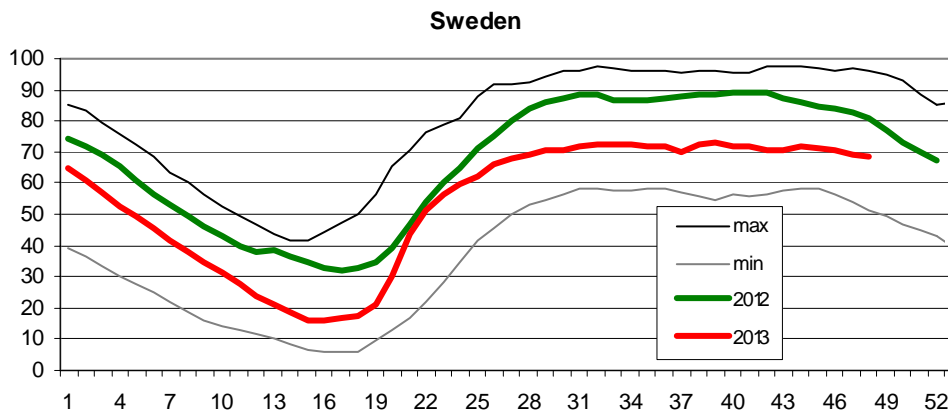
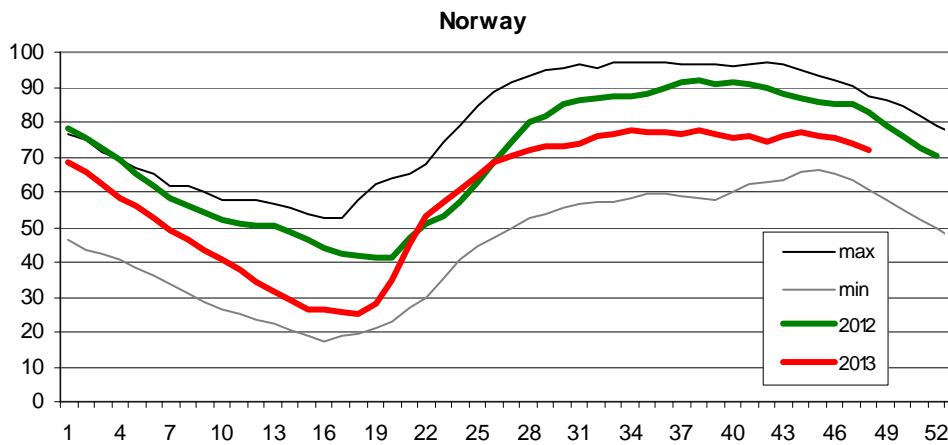
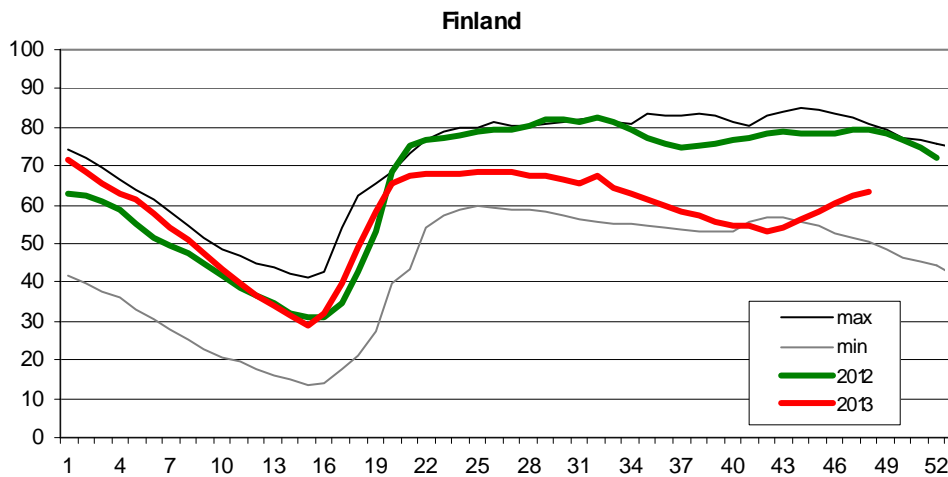
² The reported figures are best estimates based on actual measurements and extrapolations.

³ Operational data

Consumption hourly load curves on 20.11.2013 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

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