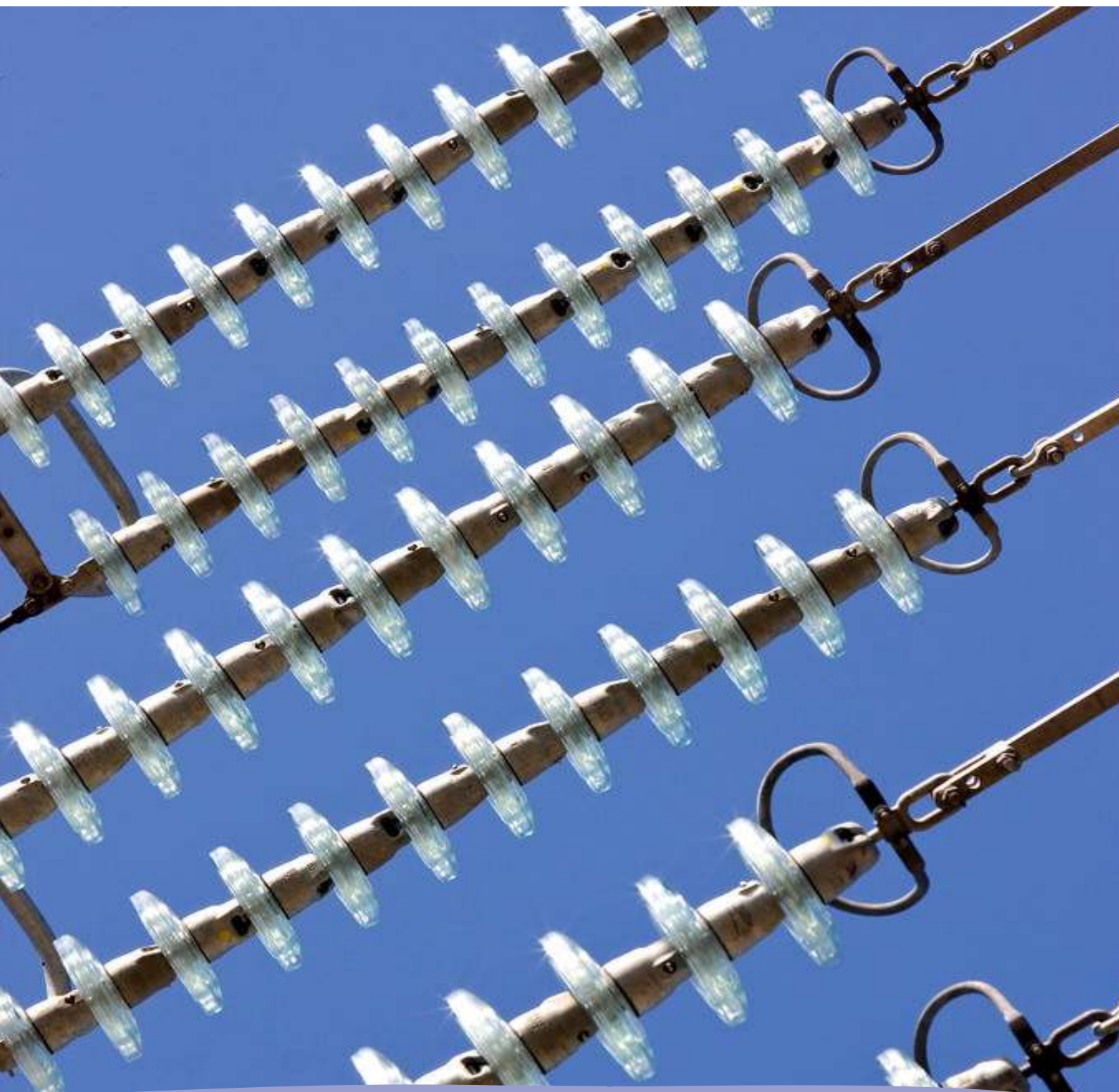


Monthly statistics



December 2013

Monthly provisional values as of 25 March 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	1499	2682	458	n.a.	n.a.	n.a.	603	5242	1583	561	6264	-0,8
BA	0	828	450	0	0	0	0	0	1278	-110	0	1168	2,5
BE ²	4411	2404	144	880	540	67	273	0	7839 ¹	-62	156	7621	1,9
BG	1269	2466	284	191	125	66	0	0	4210	-728	124	3358	1,3
CH	2476	192	2888	141	9	0	0	0	5697 ¹	579	190	6086	-0,1
CY	0	336	0	26	26	0	0	0	362	0	0	362	9,7
CZ	2552	4206	262	110	60	50	134	0	7130 ¹	-1353	126	5651	-1,3
DE ³	8779	25012	1657	11339	7747	732	2860	0	46787	-4690	683	41414	-15,5
DK	0	1620	2	1893	1669	0	224	0	3515 ¹	-467	0	3048	-6,6
EE	0	678	4	152	87	0	65	0	834	-86	0	748	-12,8
ES	3975	11040	2776	6108	4966	593	548	25	23924	-421	581	22922	2,0
FI	2008	1878	1122	1198	139	0	1059	87	6293 ¹	1456	0	7749	-10,7
FR	40426	4665	5708	2783	1995	211	576	0	53582	-2752	721	50109	1,0
GB	6026	18303	878	4104	2750	0	0	0	29311	802	359	29755	-5,3
GR	0	3535	370	543	310	215	18	0	4448 ¹	329	26	4751	2,7
HR	0	382	547	56	43	1	12	0	985	590	13	1562	-1,7
HU	1067	1115	18	116	66	0	50	0	2316	1062	0	3378	-0,1
IE	0	1462	104	687	677	0	0	15	2268 ¹	166	52	2382	1,2
IS	0	0	1125	433	0	0	0	0	1558	0	0	1558	3,2
IT	0	16317	3826	2561	1177	937	0	0	22704	3574	206	26072	-2,2
LT	0	188	97	140	103	1	38	0	425 ¹	587	70	942	-5,5
LU	0	175	98	30	12	7	4	0	303	348	120	531	5,6
LV	0	131	265	76	22	0	26	0	472	193	0	665	-10,4
ME	0	145	227	0	0	0	0	0	372	-3	0	369	4,8
MK	0	407	157	0	0	0	0	0	564	320	0	884	-0,9
NI	0	482	1	233	225	0	5	0	716	91	0	807	4,7
NL	0	8363	0	1415	808	n.a.	n.a.	0	9778	791	0	10569	-1,5
NO	0	315	12512	299	299	0	0	0	13126 ¹	-551	88	12487	-12,7
PL ⁴	0	11558	268	1529	988	0	541	0	13355 ¹	-342	127	12886	-0,7
PT	0	1802	1015	1501	1236	30	236	0	4318 ¹	317	142	4493	3,9
RO	924	2740	1158	554	493	31	30	0	5376	-487	9	4880	-0,2
RS	0	3317	803	0	0	0	0	0	4120	137	30	4227	-0,5
SE	5964	415	5133	2665	1585	0	1080	0	14177 ¹	-1083	0	13094	-13,6
SI	507	423	334	0	0	0	0	0	1264	-163	0	1101	0,0
SK	1339	501	308	78	1	13	49	110	2336 ¹	60	36	2360	-2,9
ENTSO-E	81723	128900	47223	42299	28158	2954	7828	840	300985¹	-313	4420	296253	-4,5

¹ Including deliveries from industry

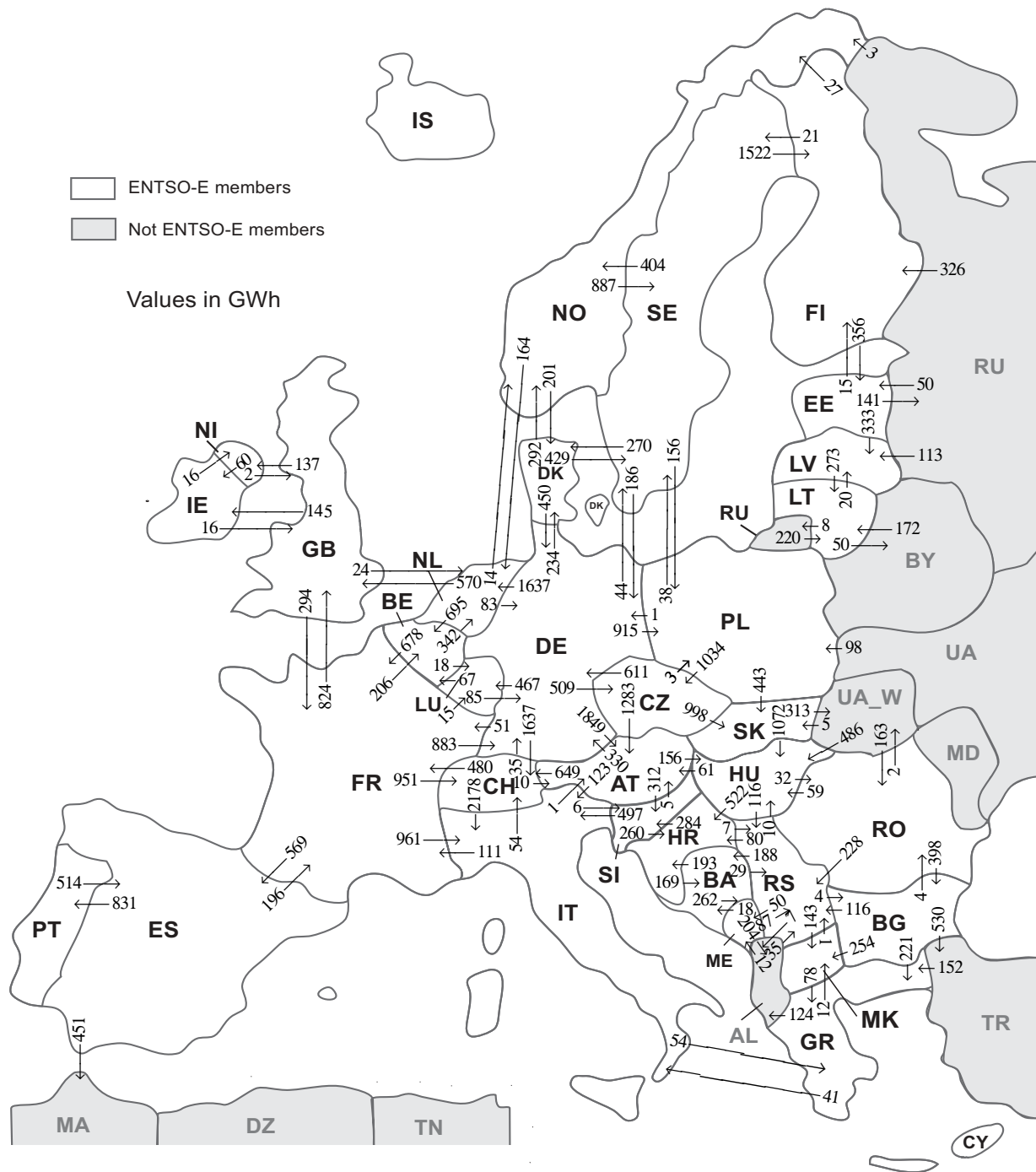
² The reported figures are best estimates based on actual measurements and extrapolations.

³ Wind, pv and biomass from TSO data, rest from official statistics.

⁴ Operational data. Subcategory biomass includes energy from biomass co-firing in conventional thermal unit.

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	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: **36956 GWh**

Total physical energy flows: **40621 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.

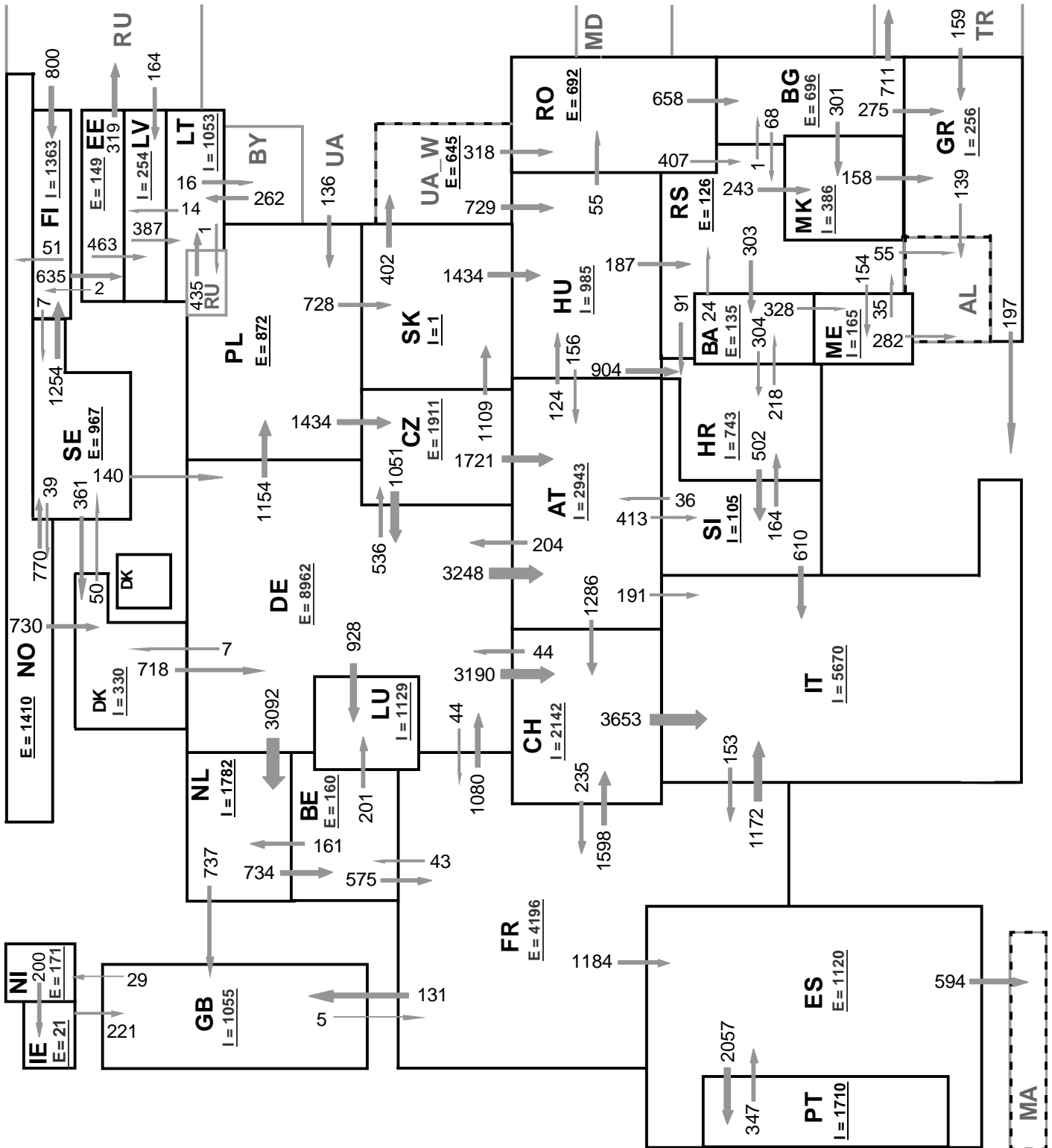
Outside flows countries	Inside flows of the countries																											Other III ¹						
	AT	BA	BE	BG	CH	CZ	DE	DK	EE	ES	FI	FR	GB	GR	HR	HU	IE	IT	LT	LU	LV	ME	MK	NI	NL	NO	PL		PT	RO	RS	SE	SI	SK
AT	-	-	-	-	649	0	330	-	-	-	-	-	-	-	-	156	-	123	-	-	-	-	-	-	-	-	-	-	-	-	-	-	312	-
BA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	193	-	-	-	-	-	-	262	-	-	-	-	-	-	-	-	29	-	-	
BE	-	-	-	-	-	-	-	-	-	-	-	678	-	-	-	-	-	-	18	-	-	-	-	-	342	-	-	-	-	-	-	-	-	
BG	-	-	-	-	-	-	-	-	-	-	-	-	221	-	-	-	-	-	-	-	-	254	-	-	-	-	-	-	4	116	-	-	-	530
CH	10	-	-	-	-	35	-	-	-	-	480	-	-	-	-	-	-	2178	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
CZ	1283	-	-	-	-	611	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	998	-
DE	1849	-	-	-	1637	509	-	234	-	-	51	-	-	-	-	-	-	-	467	-	-	-	-	-	-	1637	915	-	-	44	-	-	-	
DK	-	-	-	-	-	450	-	-	-	-	-	-	-	-	-	-	-	-	-	467	-	-	-	-	-	292	-	-	-	429	-	-	-	
EE	-	-	-	-	-	-	-	-	-	-	15	-	-	-	-	-	-	-	-	-	333	-	-	-	-	-	-	-	-	-	-	-	141	
ES	-	-	-	-	-	-	-	-	-	-	196	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	831	-	-	-	-	-	451	
FI	-	-	-	-	-	-	-	356	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27	-	-	-	21	-	-	0		
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HU	61	-	-	-	-	-	-	-	-	-	-	-	-	522	-	-	-	-	-	-	-	-	-	-	-	-	-	32	116	-	-	0	0	
IE	-	-	-	-	-	-	-	-	-	-	-	16	-	-	-	-	-	-	-	-	-	-	-	16	-	-	-	-	-	-	-	-	-	
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LT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	58	
LU	-	-	67	-	-	85	-	-	-	0	-	-	-	-	-	-	-	-	-	20	-	-	-	-	-	-	-	-	-	-	-	-	-	
LV	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	273	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
ME	-	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	87	-	-	204	
MK	-	-	-	0	-	-	-	-	-	-	-	-	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	
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RO	-	-	-	398	-	-	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	228	-	-	2
RS	-	188	-	4	-	-	-	-	-	-	-	-	80	10	-	-	-	-	-	-	-	50	143	-	-	-	-	0	-	-	-	-	7	
SE	-	-	-	-	-	186	270	-	1522	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	404	156	-	-	-	-	-	-	-	
SI	5	-	-	-	-	-	-	-	-	-	-	-	260	-	-	-	497	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SK	-	-	-	-	0	-	-	-	-	-	-	-	-	-	1072	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	313
Other III ¹	-	-	-	0	-	-	-	50	0	326	-	-	152	-	486	-	-	392	-	113	12	-	-	-	3	98	-	163	35	-	-	5	-	

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	3209	1570
BA	375	484
BE	968	1038
BG	402	1125
CH	3291	2703
CZ	1543	2895
DE	2664	7343
DK	705	1171
EE	406	489
ES	1083	1478
FI	1863	404
FR	1810	4409
GB	1412	600
GR	505	177
HR	1055	460
HU	1783	731
IE	205	32

	flows inside	flows outside
IT	3800	226
LT	665	78
LU	500	152
LV	466	273
ME	324	309
MK	409	79
NI	153	62
NL	2167	1362
NO	740	1252
PL	1172	1516
PT	831	514
RO	199	687
RS	619	482
SE	1419	2538
SI	602	762
SK	1446	1385
ENTSO-E	38791	38786



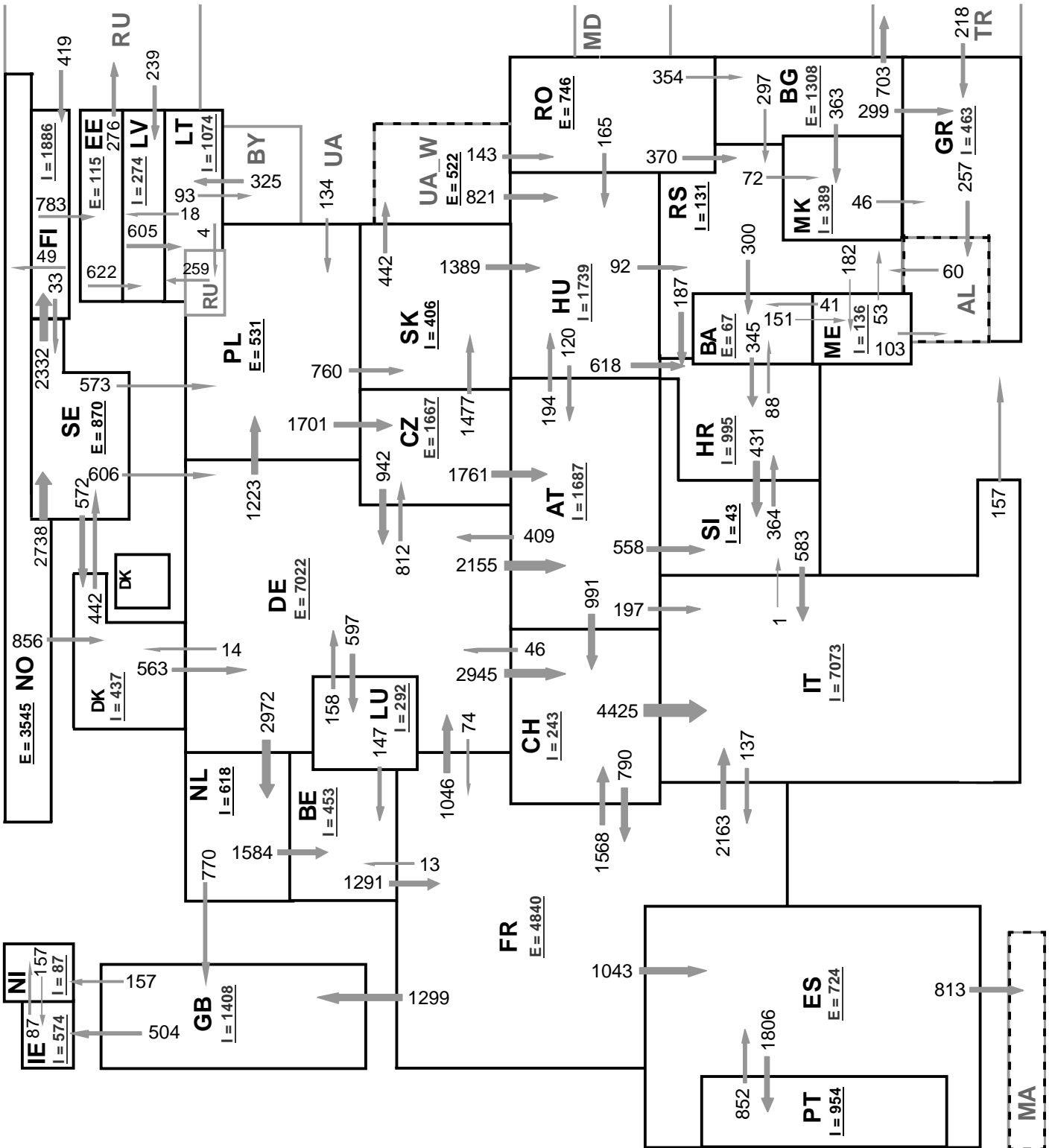
Sum of load flows :

ENTSO-E = 48257 MW

Total = 53976 MW

Synchronous operation with ENTSO-E region

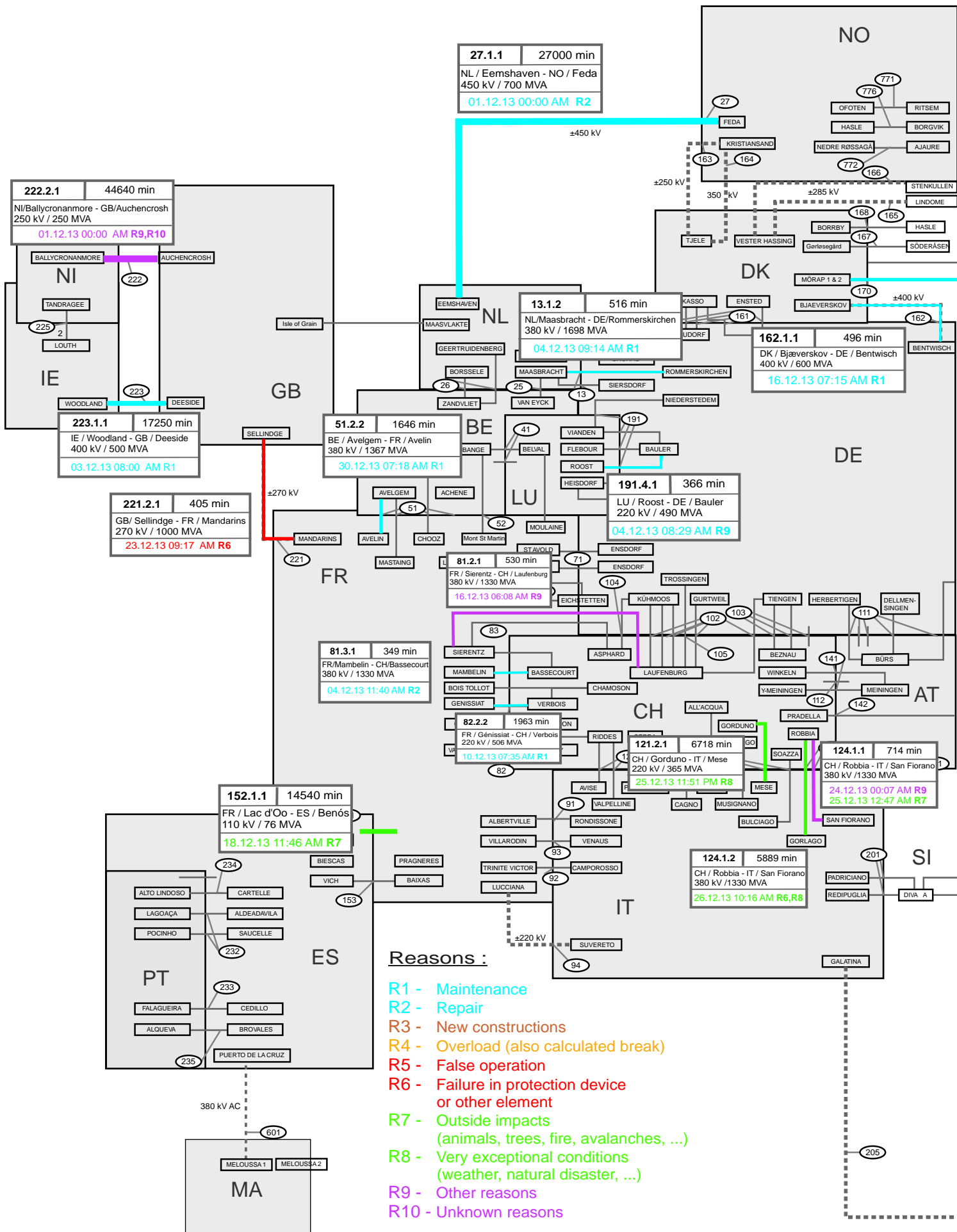
I = Import balance
E = Export balance

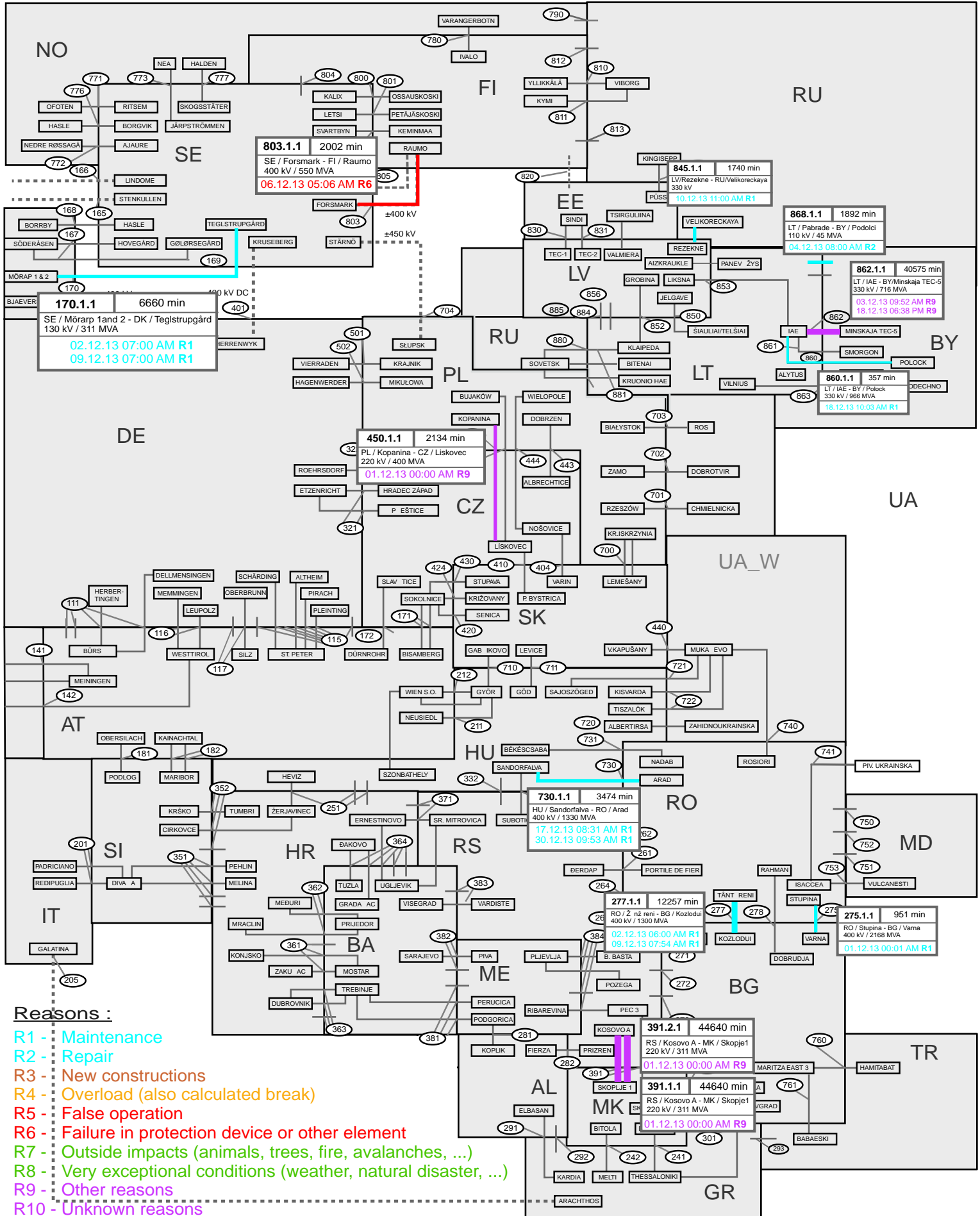


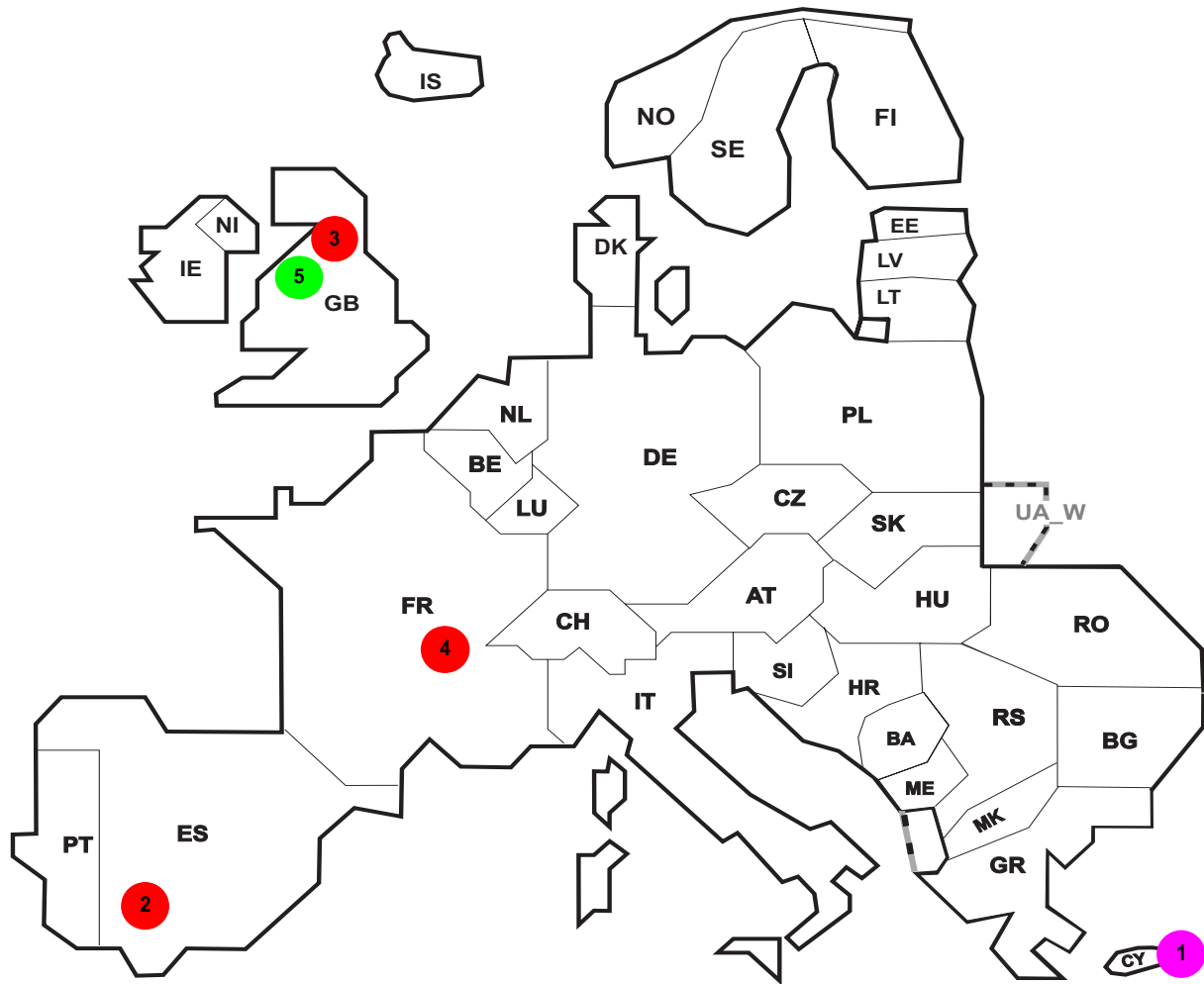
Sum of load flows : **ENTSO-E = 57685 MW** **Total = 62994 MW**

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	CY	VPS Generator 3	R9	20	86	15	2,511
2	ES	Salteras	R6	96	32	181	0,193
3	GB	West Burton 132kV	R5	49	174	17	0,079
4	FR	Cretaine	R6	35	150	14	0,037
5	GB	Frodsham 400kV	R8	1	19	3	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 18.12.2013 CET of each country

	Highest load MW	variation % ¹	Low est load MW	variation % ¹	Load representativity %
AT	10814	4,6	7125	1,9	100
BA	2037	8,3	1173	3,8	100
BE ²	12787	5,7	8652	2,5	100
BG	6446	-0,9	4351	4,2	99
CH	9905	0,0	7160	0,0	100
CY	682	5,1	348	14,1	100
CZ	9505	3,8	6987	3,6	100
DE	75401	-0,6	50778	3,2	91
DK	5566	-3,0	3111	-2,1	100
EE	1228	-18,8	738	-27,1	100
ES	37488	3,4	23356	3,4	100
FI	11912	-11,8	9432	-14,1	100
FR	76684	-1,2	57617	0,1	100
GB	53165	-5,9	29140	-8,5	93
GR	8426	4,9	4819	8,8	100
HR	2768	2,1	1697	10,3	100
HU	5736	3,5	3750	2,9	100
IE	4461	3,0	2331	-4,1	100
IS	2158	0,4	1979	0,0	100
IT	50129	-0,9	27387	-2,0	100
LT	1610	-9,3	939	-10,6	100
LU	977	17,6	667	36,7	100
LV	1146	-17,0	636	-19,5	100
ME	547	0,9	336	-6,7	100
MK	1404	4,3	966	2,8	100
NI	1628	-1,8	727	0,7	100
NL	18200	6,8	10289	8,0	100
NO	19555	-6,2	15056	-6,0	100
PL ³	22491	0,4	14912	0,7	100
PT	7944	7,5	4818	5,4	100
RO	8040	-4,1	5552	-4,6	100
RS	6930	10,1	4743	2,5	100
SE	21557	-7,5	15076	-9,3	100
SI	1966	6,7	1425	10,1	100
SK	4072	4,2	3037	5,9	100
ENTSO-E	499367	-1,2	334470	-0,7	

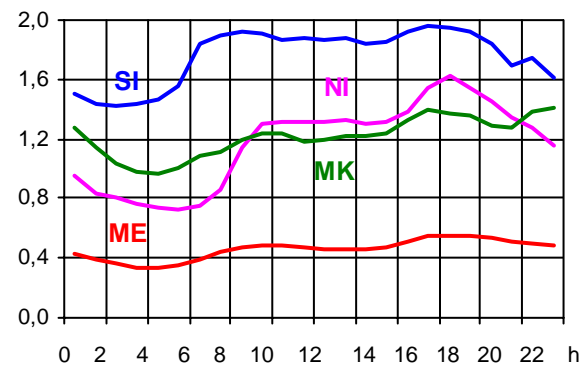
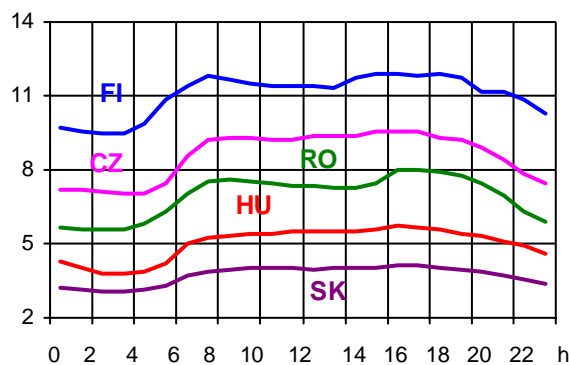
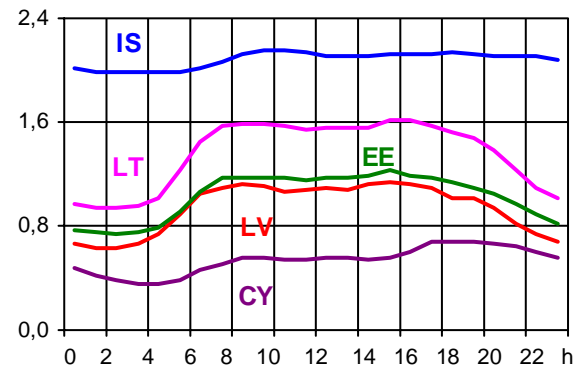
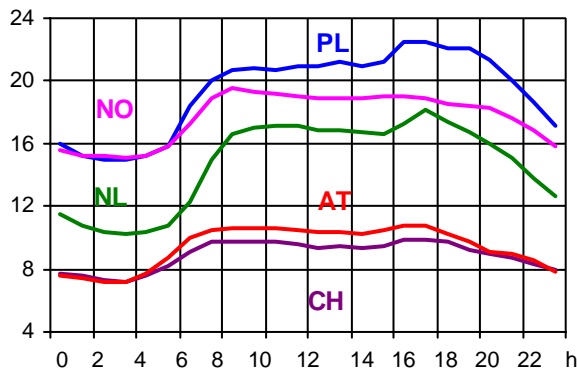
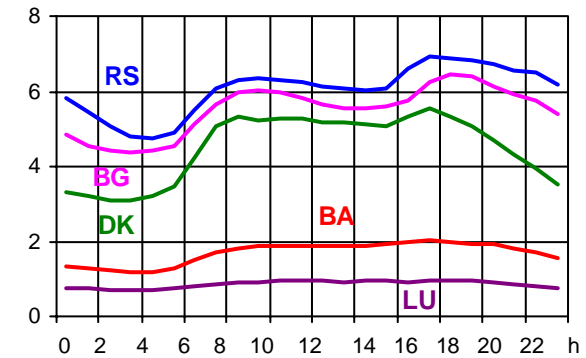
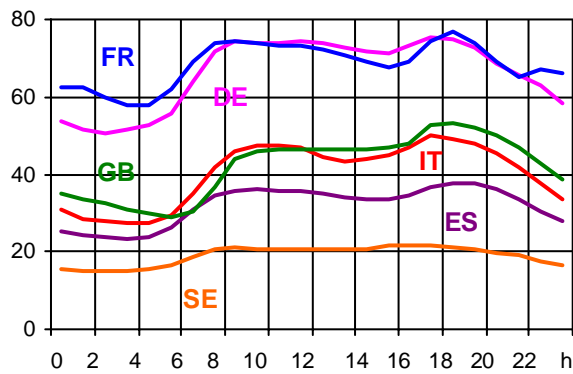
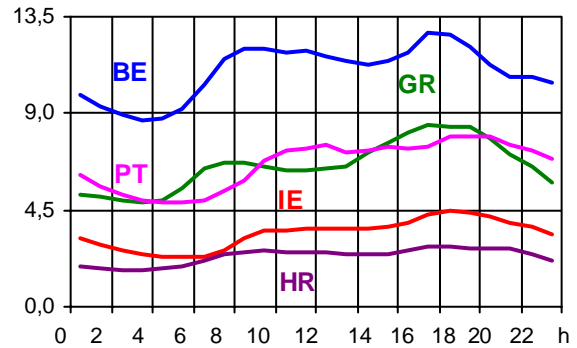
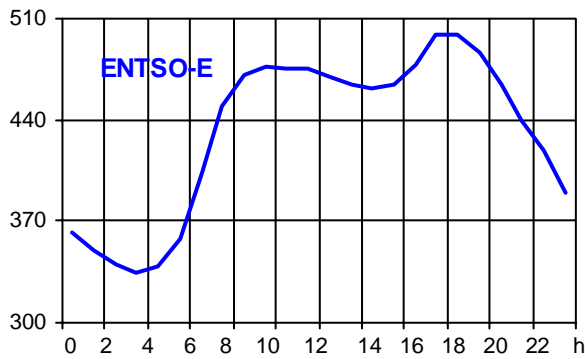
¹ Variation as compared to corresponding month of the previous year

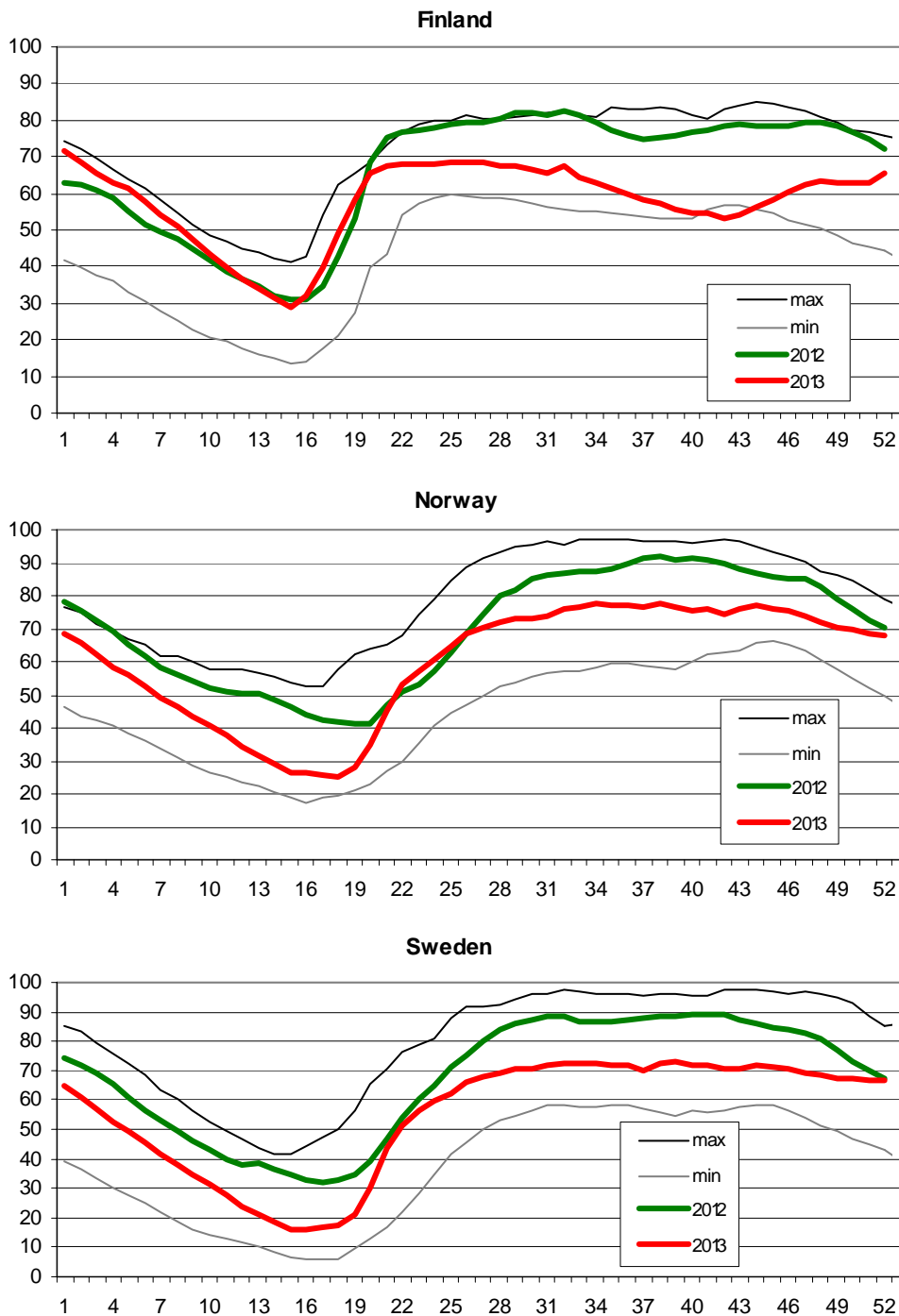
² The reported figures are best estimates based on actual measurements and extrapolations.

³ Operational data

Consumption hourly load curves on 18.12.2013 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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