

Monthly report



July 2012

Monthly provisional values as of 23 October 2012

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	Non identifiable	Total			monthly [GWh]	var. [%]
AT	0	862	4431	0	0	0	837	6130	-226	429	5475	1,5
BA	0	652	202	0	0	0	0	854	122	0	976	0,9
BE ²	3500	2126	142	582	163	188	0	6350 ¹	77	151	6276	-4,9
BG	1349	1801	302	86	60	26	0	3538	-982	81	2475	-0,5
CH	2236	193	4562	120	6	0	0	7111 ¹	-2029	317	4765	-0,7
CY	0	525	0	15	15	0	0	540	0	0	540	9,8
CZ	2653	3235	167	279	28	253	0	6334 ¹	-1719	20	4595	0,8
DE ³	6663	29735	1890	6353	900	3327	0	44641 ¹	-243	627	43771	1,1
DK	0	569	1	705	557	0	0	1275 ¹	1103	0	2378	-5,9
EE	0	608	2	65	27	0	0	675	-144	0	531	1,9
ES	5101	11976	1845	5096	3056	1613	26	24044	-630	286	23128	5,4
FI	1988	384	1495	659	30	0	59	4585 ¹	1264	0	5849	-0,8
FR	28840	2248	4912	1884	911	459	0	37884	-3231	520	34133	0,1
GB	5334	16972	448	1269	685	0	0	24023	1240	323	24940	1,2
GR	0	4199	561	385	251	117	0	5145 ¹	479	10	5614	2,8
HR	0	376	314	31	21	0	0	721	845	30	1536	3,6
HU	1094	1490	0	0	0	0	0	2584	968	0	3552	6,3
IE	0	1627	100	238	230	0	10	1975 ¹	55	40	1990	-0,1
IS	0	0	984	360	0	0	0	1344	0	0	1344	-2,2
IT	0	19394	4711	3538	887	2212	0	27643	3190	264	30569	1,1
LT	0	202	65	46	27	0	0	313 ¹	566	53	826	1,7
LU	0	201	92	12	4	4	0	305	334	121	518	-8,5
LV	0	130	209	32	8	0	0	371	202	0	573	8,7
ME ⁴	0	125	50	0	0	0	0	175	179	0	354	n.a.
MK	0	404	119	0	0	0	0	523	115	0	638	-2,0
NI	551	490	1	60	55	0	0	1102	103	0	1205	83,1
NL	373	5386	0	1291	291	n.a.	0	7050	2104	0	9154	-1,6
NO	0	190	10030	91	91	0	0	10311 ¹	-1816	583	7912	1,4
PL ⁵	0	10415	194	857	230	0	0	11466 ¹	15	57	11424	0,5
PT	0	2225	333	1028	764	40	0	3586 ¹	657	121	4122	-2,4
RO	868	2351	1198	224	209	n.a.	0	4641	-64	9	4568	5,2
RS	0	2178	717	0	0	0	0	2895	-39	46	2810	-13,9
SE	4523	128	5853	978	411	0	0	11482 ¹	-2485	0	8997	-0,3
SI	502	376	380	0	0	0	0	1258	-208	0	1050	1,4
SK	1102	335	360	126	0	68	62	1985 ¹	132	26	2091	2,2
ENTSO-E	66677	124108	46670	26410	9917	8307	994	264859¹	-66	4114	260679	n.a.

¹ Including deliveries from industry

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

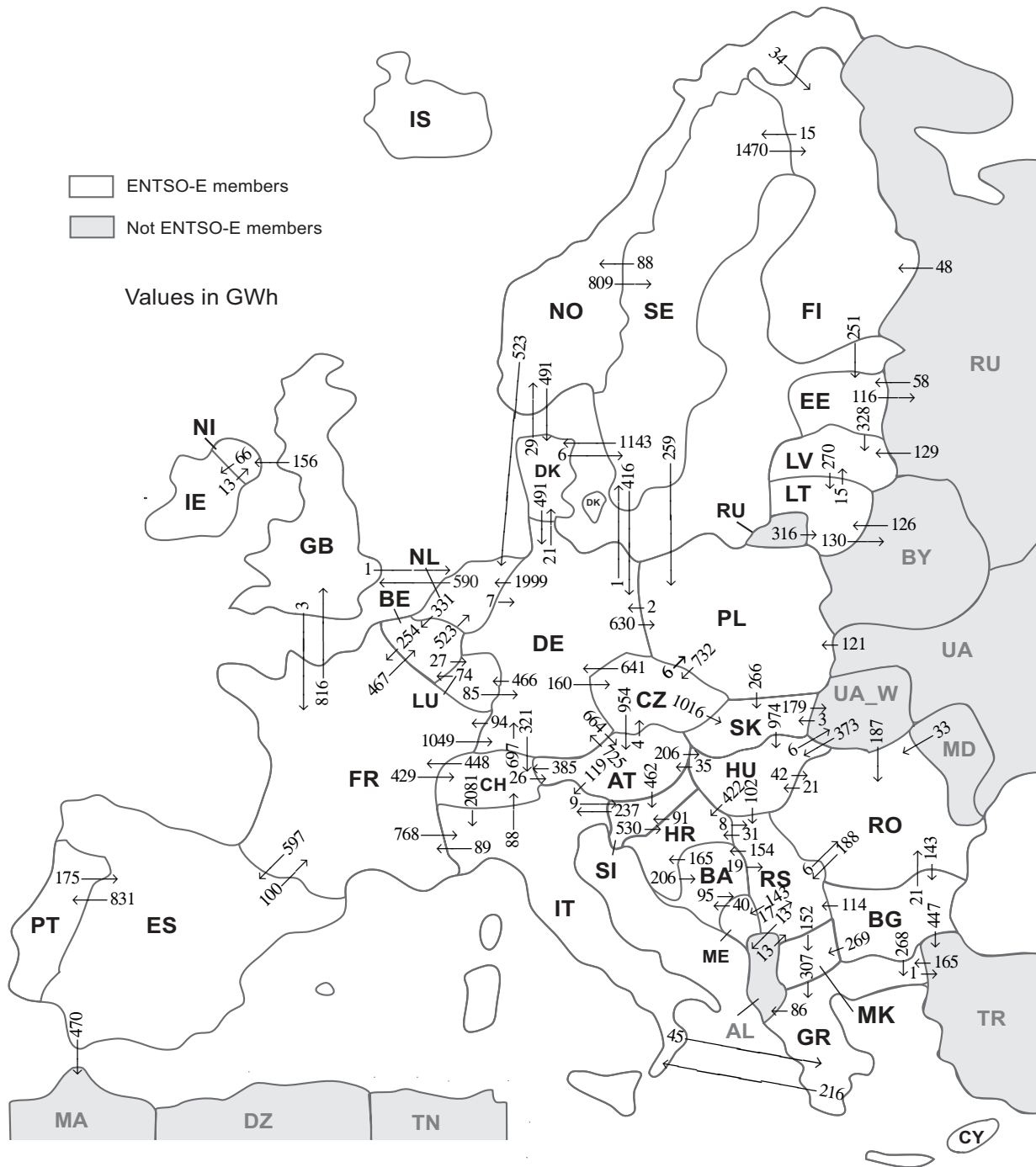
³ The reported figures are best estimates based on actual inquiries, measurements and extrapolations.

⁴ National monthly values as of July 2011

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	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	100	96	89	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: **32373 GWh¹**

Total physical energy flows: **35393 GWh¹**

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.

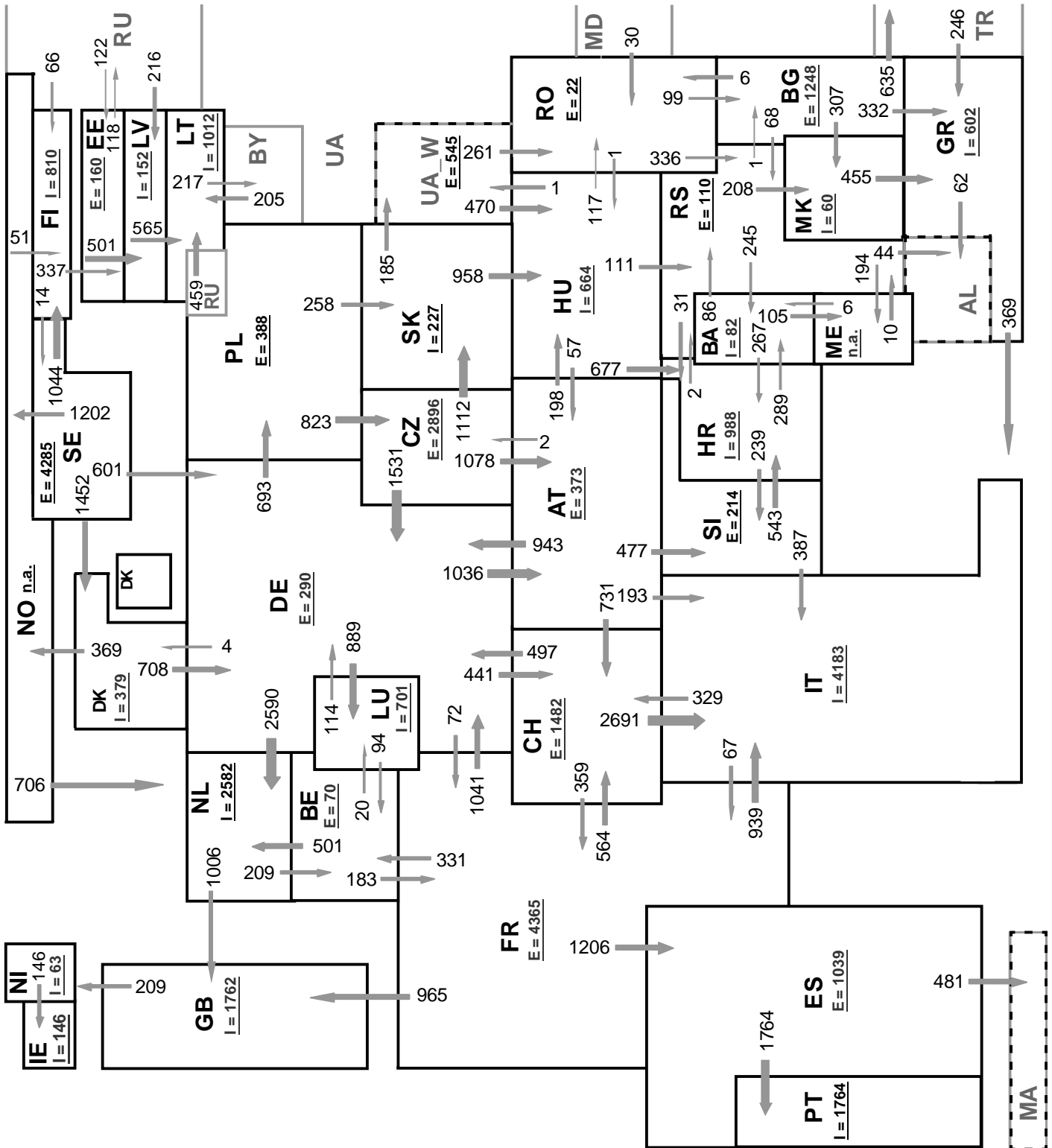
Outside flows	Inside flows of the countries																																			
	AT	BA	BE	BG	CH	CZ	DE	DK	EE	ES	FI	FR	GB	GR	HR	HU	IE	IT	LT	LU	LV	ME	MK	NI	NL	NO	PL	PT	RO	RS	SE	SI	SK	Other III ¹		
AT	-	-	-	-	385	4	725	-	-	-	-	-	-	-	206	-	119	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	462	-	
BA	-	-	-	-	-	-	-	-	-	-	-	-	-	165	-	-	-	-	-	-	-	95	-	-	-	-	-	-	-	-	19	-	-	-	-	
BE	-	-	-	-	-	-	-	-	-	-	-	254	-	-	-	-	-	-	27	-	-	-	-	-	523	-	-	-	-	-	-	-	-	-		
BG	-	-	-	-	-	-	-	-	-	-	-	-	268	-	-	-	-	-	-	-	-	269	-	-	-	-	-	21	114	-	-	-	-	447		
CH	26	-	-	-	-	697	-	-	-	-	448	-	-	-	-	-	2081	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
CZ	954	-	-	-	-	641	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	1016	-		
DE	664	-	-	-	321	160	-	21	-	-	94	-	-	-	-	-	-	466	-	-	-	-	-	-	1999	630	-	-	-	1	-	-	-	-		
DK	-	-	-	-	-	491	-	-	-	-	-	-	-	-	-	-	-	-	466	-	-	-	-	-	29	-	-	-	-	6	-	-	-	-		
EE	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	328	-	-	-	-	-	-	-	-	-	-	-	-	-	116		
ES	-	-	-	-	-	-	-	-	-	-	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	831	-	-	-	-	-	-	470		
FI	-	-	-	-	-	-	-	251	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	15	-	-	-	-	0		
FR	-	-	467	-	429	-	1049	-	-	597	-	816	-	-	-	-	768	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
GB	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	156	1	-	-	-	-	-	-	-	-	-	-	
GR	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	87	
HR	-	206	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	91	-	-	-		
HU	35	-	-	-	-	-	-	-	-	-	-	-	422	-	-	-	-	-	-	-	-	-	-	-	-	-	42	102	-	-	0	-	6	-		
IE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	-	-	-	-	-	-	-	-	-	-	-	
IT	0	-	-	-	88	-	-	-	-	-	89	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	-	-		
LT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	130	
LU	-	-	74	-	-	85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
LV	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
ME	-	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.	
MK	-	-	-	0	-	-	-	-	-	-	-	-	307	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	
NL	-	-	-	-	-	-	-	-	-	-	-	0	-	-	66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
NO	-	-	331	-	-	7	-	-	-	-	-	590	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	
PL	-	-	-	-	732	2	491	-	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	523	-	-	-	-	-	-	809	-	-	n.a.	
PT	-	-	-	-	-	-	-	-	175	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
RO	-	-	-	143	-	-	-	-	-	-	-	-	-	-	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
RS	-	154	-	0	-	-	-	-	-	-	-	-	31	0	-	-	-	-	-	-	-	143	152	-	-	-	-	6	-	-	-	-	-	-	13	
SE	-	-	-	-	-	416	1143	-	-	1470	-	-	-	-	-	-	-	-	-	-	-	-	-	-	88	259	-	-	-	-	-	-	-	-	-	
SI	0	-	-	-	-	-	-	-	-	-	-	-	530	-	-	-	237	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SK	-	-	-	-	0	-	-	-	-	-	-	-	-	974	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	179
Other III ¹	-	-	-	0	-	-	-	-	58	0	48	-	165	373	-	-	442	-	129	n.a.	-	-	-	n.a.	121	-	220	13	-	-	-	-	-	3	-	

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	1679	1901
BA	400	279
BE	872	804
BG	143	1119
CH	1223	3252
CZ	896	2617
DE	4113	4356
DK	1655	526
EE	309	444
ES	772	1401
FI	1552	266
FR	988	4126
GB	1406	160
GR	785	303
HR	1148	305
HU	1574	607
IE	66	13

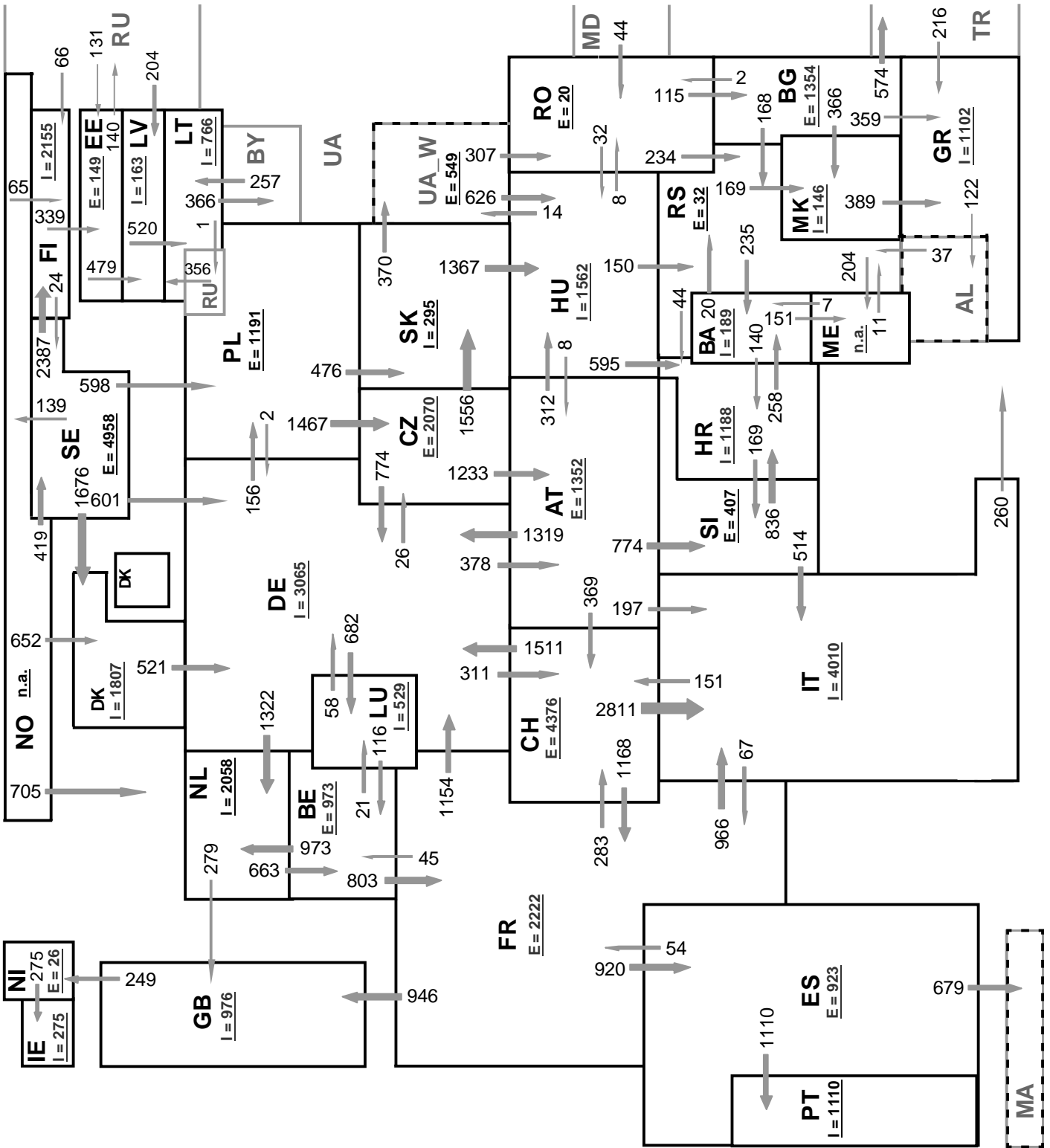
	flows inside	flows outside
IT	3421	231
LT	712	145
LU	493	159
LV	472	270
ME	n.a.	n.a.
MK	421	307
NI	169	66
NL	3046	928
NO	n.a.	n.a.
PL	1016	1000
PT	831	175
RO	289	352
RS	461	499
SE	831	3376
SI	562	767
SK	1285	1153
ENTSO-E	33945	33821



Sum of load flows in MW ENTSO-E = 40362 MW Total = 44180 MW
 (Calculated sum without data between ME - AL and NO - RU)

Synchronous operation with ENTSO-E region

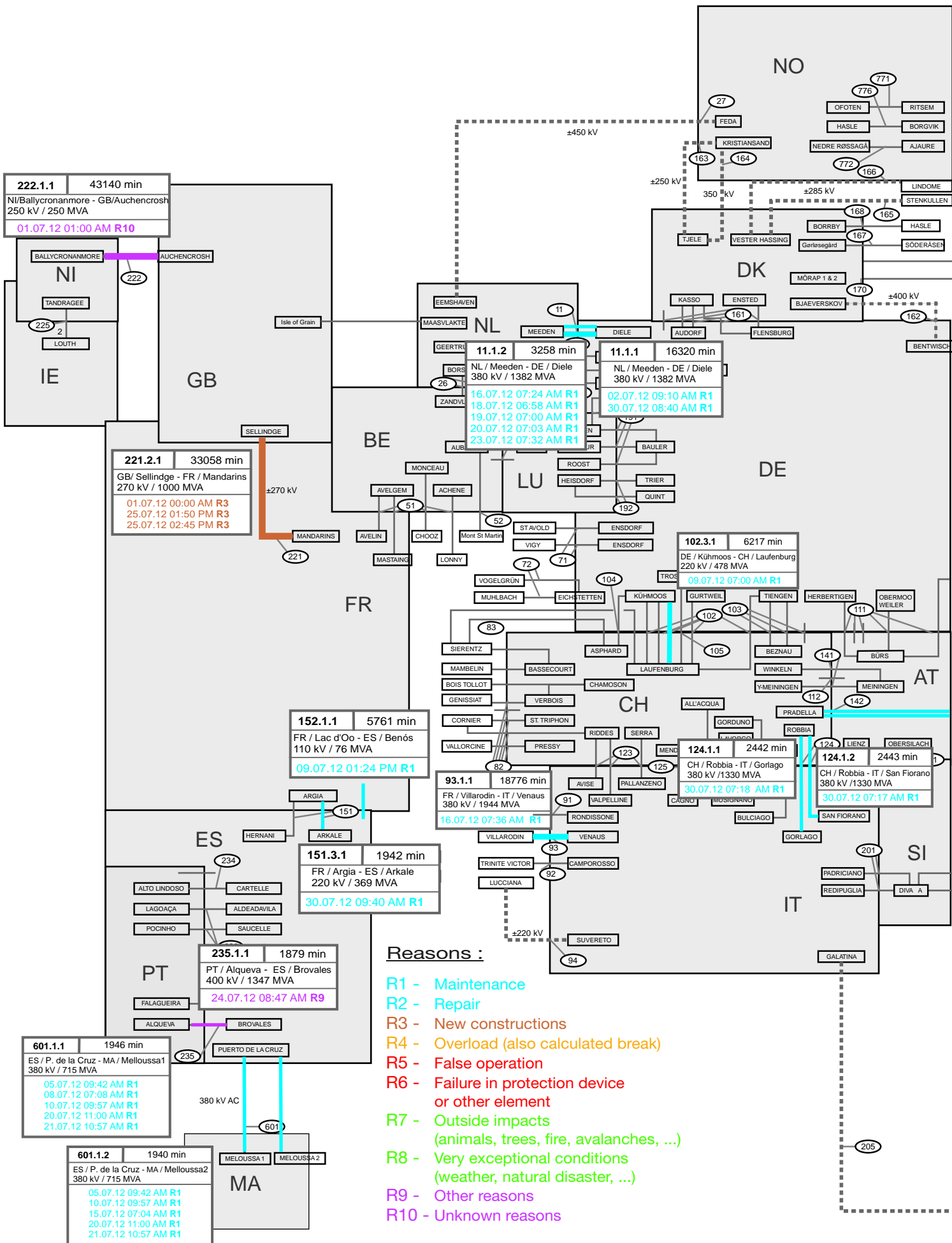
I = Import balance
 E = Export balance

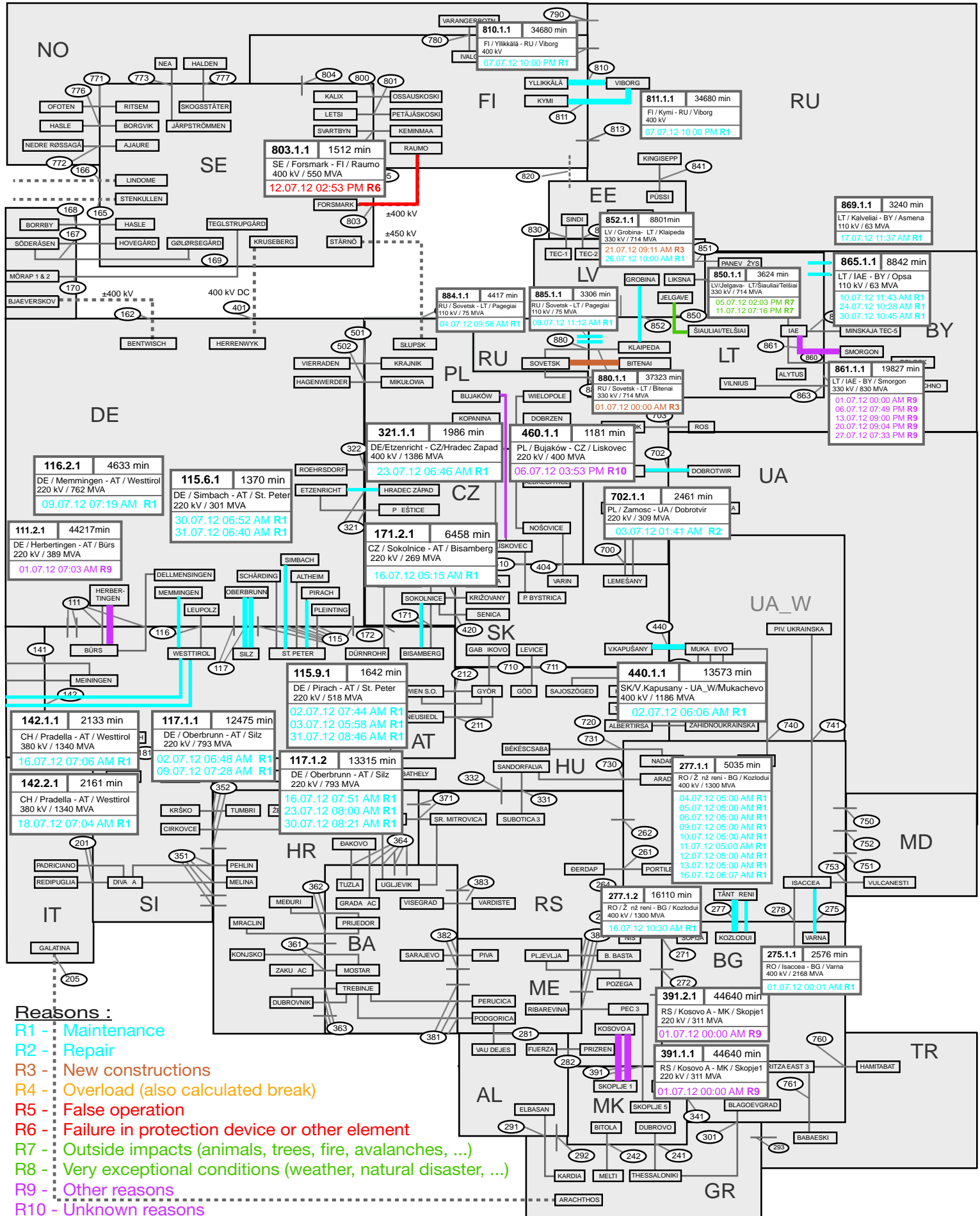


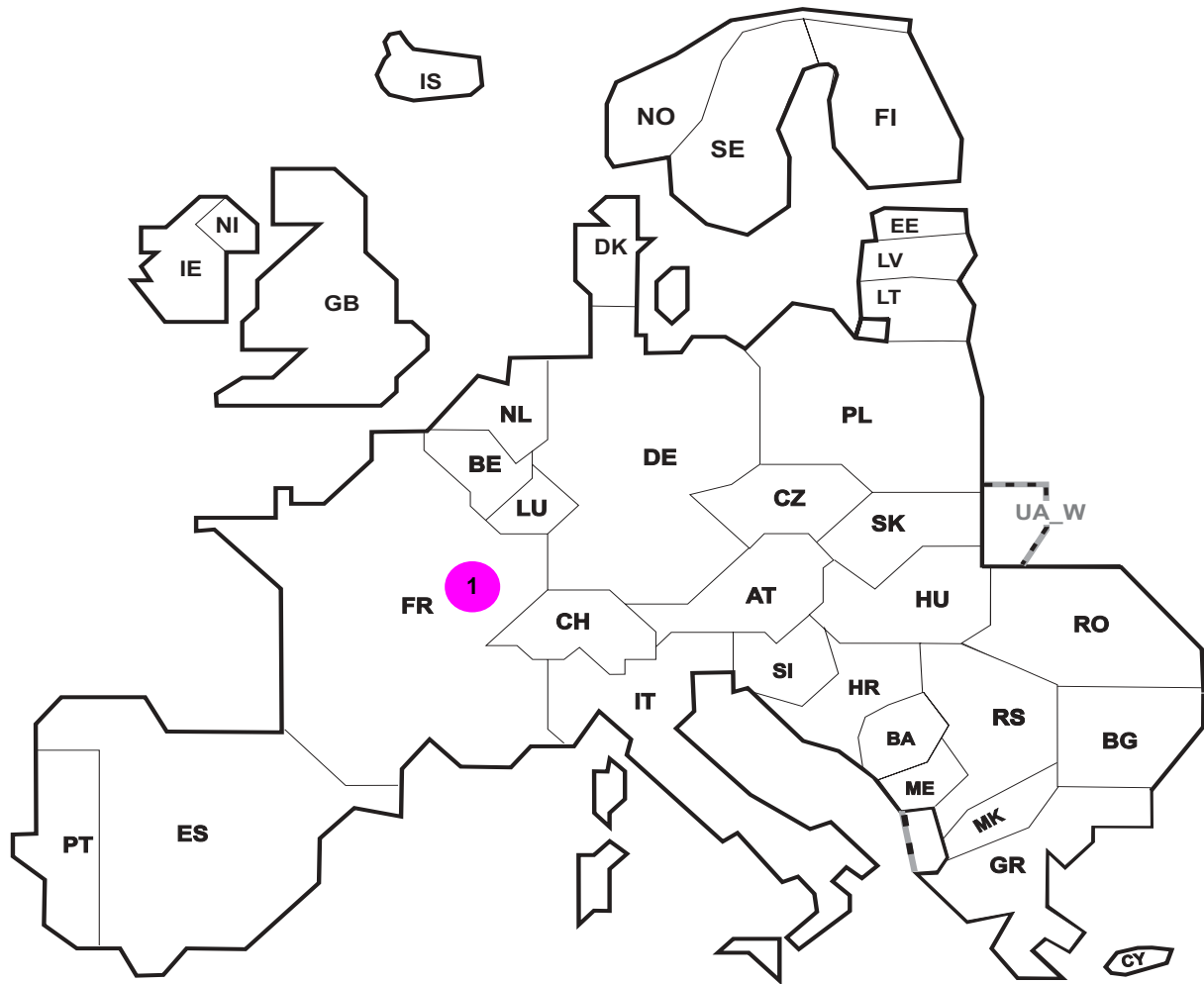
Sum of load flows in MW ENTSO-E = 41434 MW Total = 46423 MW
 (Calculated sum without data between ME - AL and NO - RU)

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	Crouzet	R9	13	6	145	0,015

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 18.07.2012 CET of each country

	Highest		Lowest		Load representativity %
	load MW	variation % ¹	load MW	variation % ¹	
AT	8017	-2,0	4726	-1,3	100
BA	1559	0,8	988	-5,5	100
BE ²	9842	-4,2	7262	0,9	100
BG	4557	-3,2	3277	0,5	99
CH	8089	-2,4	5112	2,4	100
CY ³	983	28,2	603	4,7	100
CZ	7453	-0,4	5338	-4,4	100
DE ⁴	73384	-0,8	42697	-6,8	91
DK	3898	-4,0	2411	-0,5	100
EE	889	0,2	538	3,5	100
ES	37338	4,1	24427	1,9	98
FI	8627	-2,3	6700	-0,7	100
FR	56290	0,6	38762	-0,5	100
GB	40878	-1,3	23550	-3,3	92
GR	8120	-17,7	6185	-4,0	100
HR	2370	-2,2	1667	-1,0	100
HU	4963	-2,7	3340	-9,4	100
IE	3387	0,9	1775	-5,6	100
IS	1961	1,4	1809	4,6	100
IT	51095	9,3	32488	0,9	100
LT	1365	-2,8	835	-0,9	100
LU	911	5,4	610	0,0	100
LV	900	2,3	460	0,7	100
ME ⁵	565	n.a.	400	n.a.	100
MK	1013	-4,3	627	-2,0	100
NI	1173	-0,7	621	11,7	100
NL	14378	-3,0	9034	-4,4	100
NO	11837	3,8	9545	6,7	100
PL ⁶	18102	-3,3	12309	-3,0	100
PT	7350	7,0	4808	8,0	100
RO	6872	-4,2	5109	-2,2	100
RS	4380	-3,0	2636	-10,1	100
SE	13463	-2,5	9823	-1,9	100
SI	1600	-2,1	1272	0,2	100
SK	3308	-1,9	2534	1,2	100
ENTSO-E	417499	n.a.	276924	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 Only highest and lowest load value available.

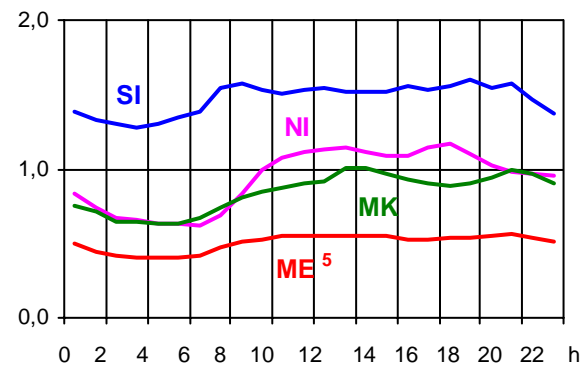
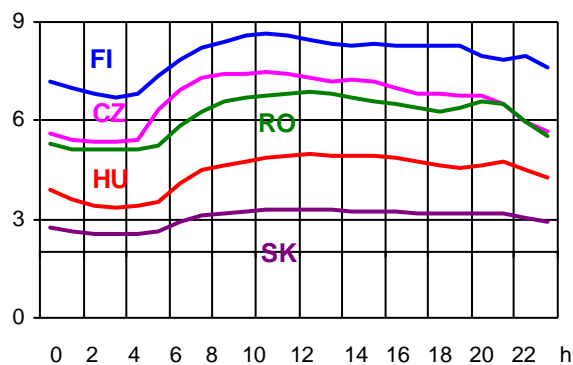
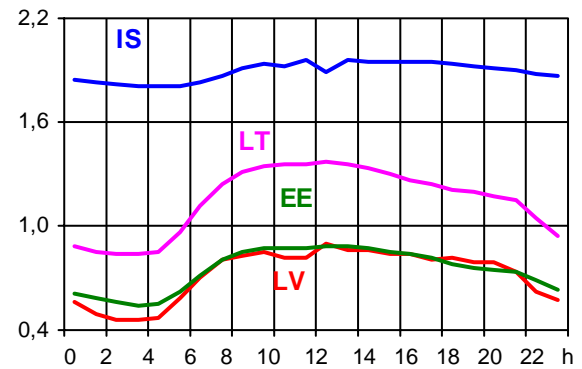
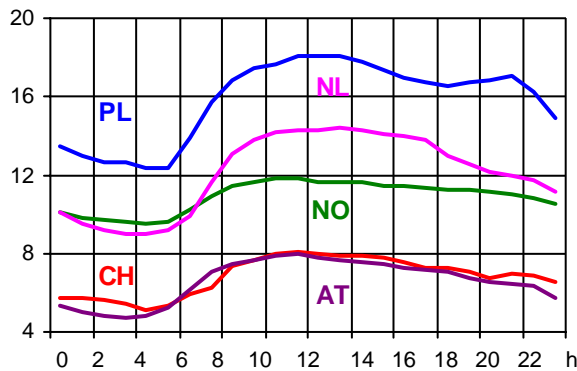
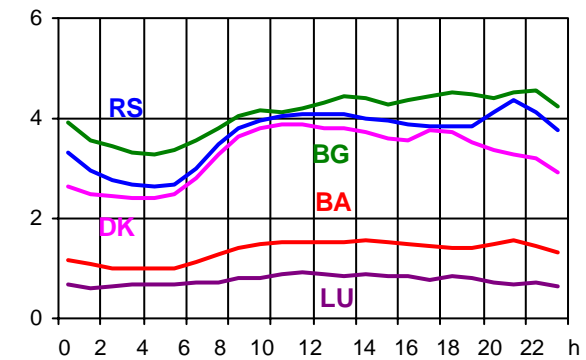
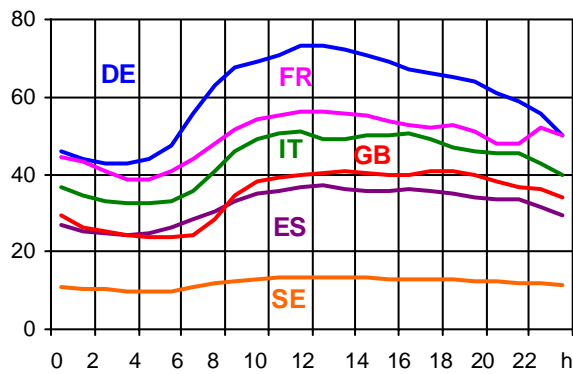
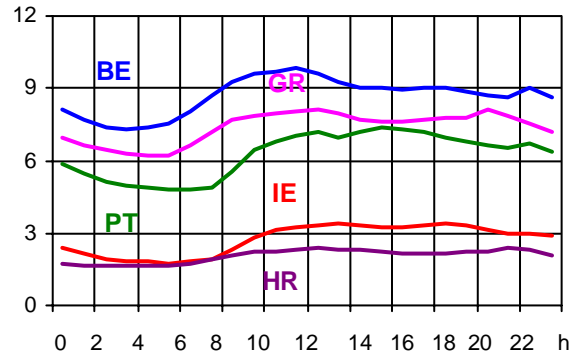
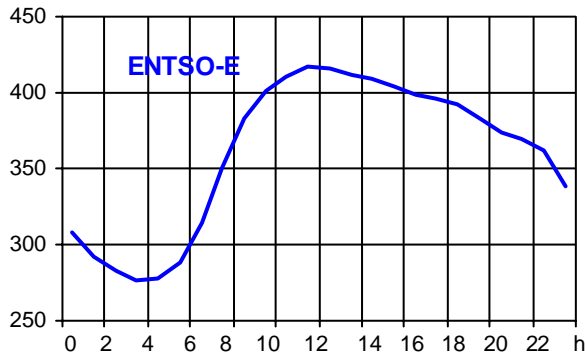
⁴ A comparison with previous figures may be limited for statistical reasons related to renewable energies feed-in like direct marketing.

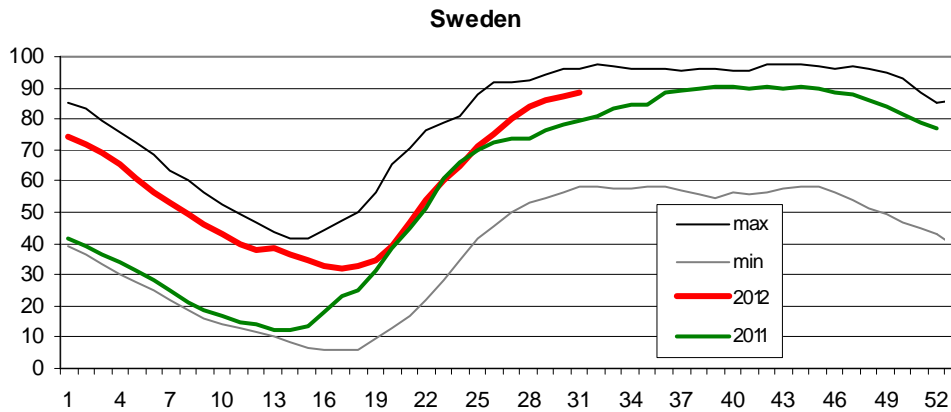
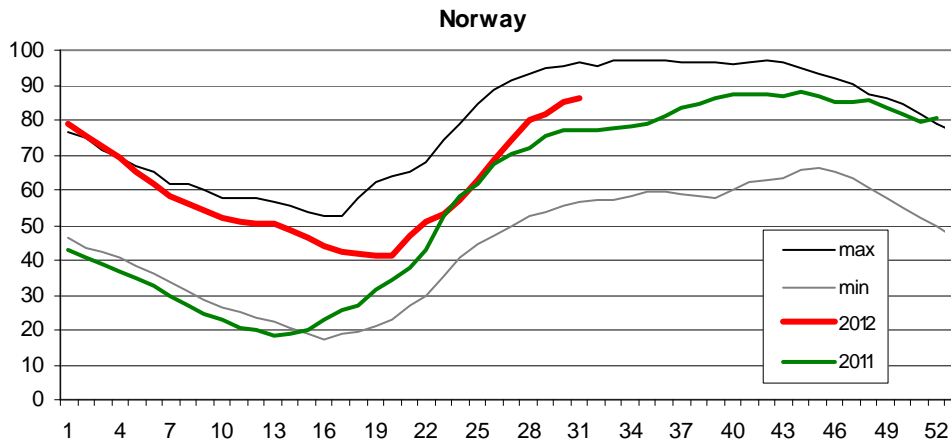
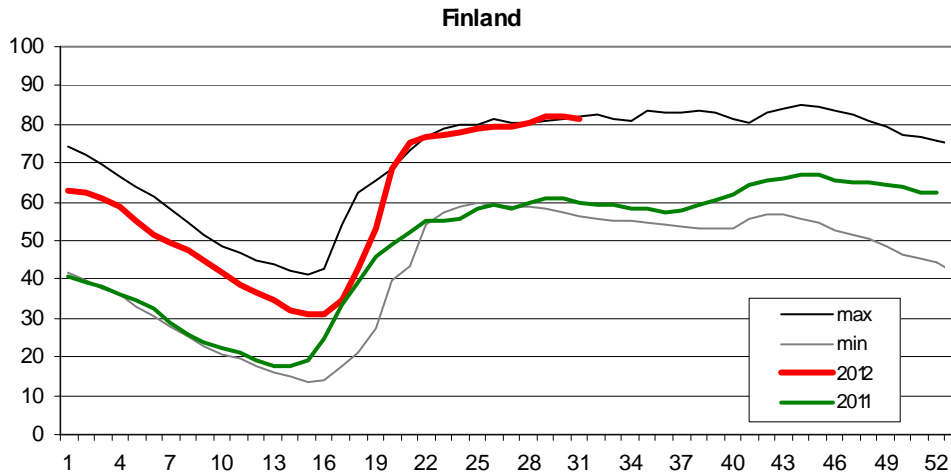
⁵ Monthly load values as of 20 July 2011

⁶ Operational data

Consumption hourly load curves on 18.07.2012 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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