

Monthly report



March 2012

Monthly provisional values as of 25 June 2012

European Network of
Transmission System Operators
for Electricity

entsoe

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General remarks and abbreviations used in the tables

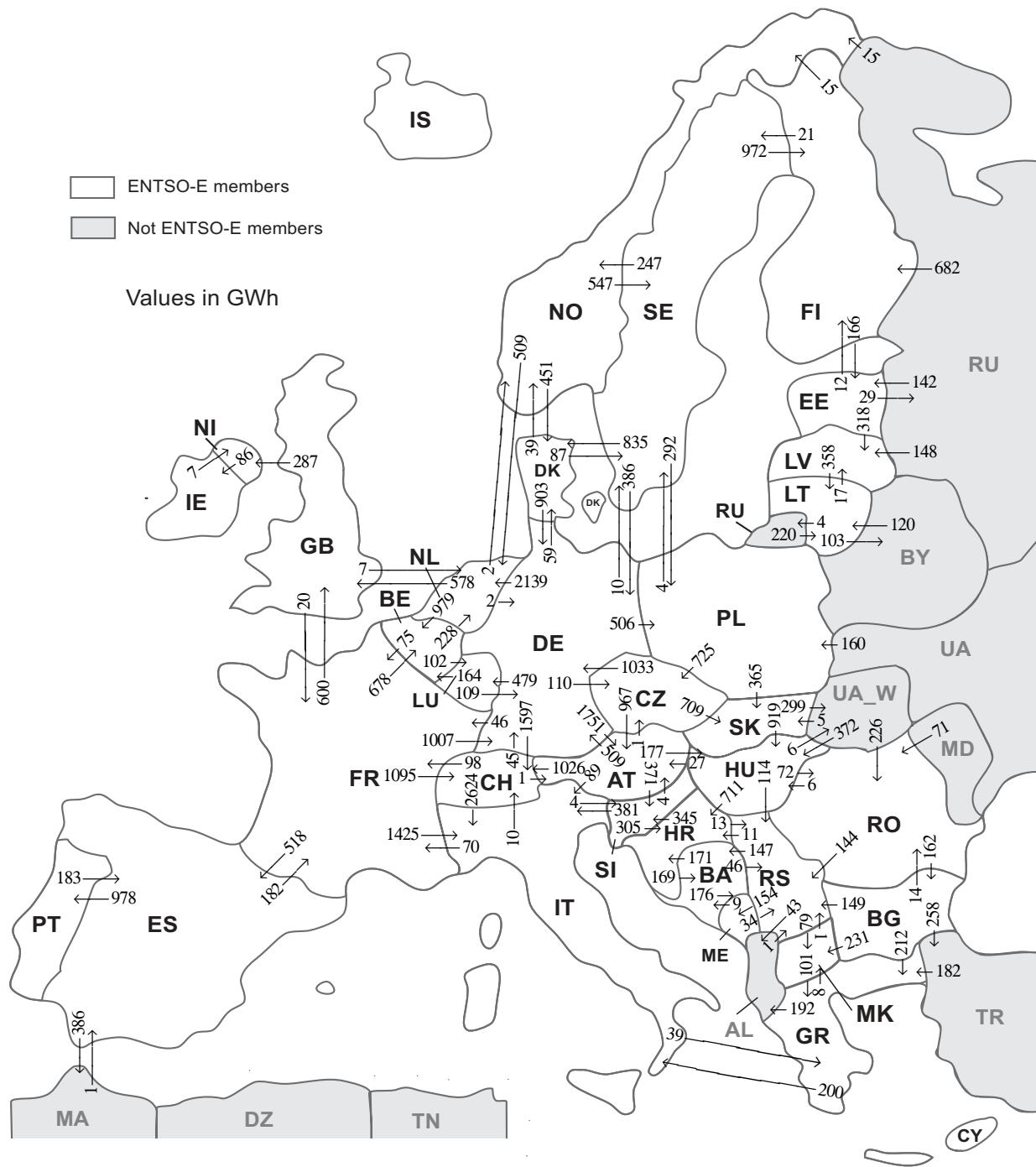
- All values of production and consumption on page 2, 11 and 12 are calculated to represent 100% of the national values.
- All data with the country code NI are monthly statistical data of the Northern Ireland.
- CET Central European Time

Coun- tries	Net generation in GWh							Total	Exchange balance in GWh	Pump in GWh	Consumption	
	Therm. nuclear	Fossil fuels	Hydro power	Other renew.	of which wind	of which solar	Non identifi- able				monthly [GWh]	var. [%]
AT	0	1912	3371	0	0	0	756	6039	521	498	6062	-1,6
BA	0	771	316	0	0	0	0	1087	-67	0	1020	-5,1
BE ²	3139	2318	139	610	146	177	0	6206 ¹	1423	142	7487	-3,7
BG	1446	2042	215	96	96	0	0	3799	-704	118	2977	-3,4
CH	2357	202	2418	125	6	0	0	5102 ¹	957	157	5902	-0,1
CY	0	340	0	18	18	0	0	358	0	0	358	-12,9
CZ	2480	4478	359	246	33	215	0	7563 ¹	-1876	92	5595	-3,3
DE ³	8740	34587	2083	5955	1465	2224	0	51365 ¹	-2733	604	48028	-0,5
DK	0	1378	2	1292	1073	0	0	2672 ¹	308	0	2980	-5,1
EE	0	675	3	132	43	0	0	810	-57	0	753	-2,1
ES	5466	11518	1557	5285	3827	1066	28	23854	-870	429	22555	-0,9
FI	2049	1909	1208	1031	52	0	63	6260 ¹	1466	0	7726	-5,4
FR	37554	5290	3947	1760	977	259	0	48551	-4987	431	43133	-5,1
GB	4695	21670	666	1619	874	0	0	28650	855	367	29138	-0,5
GR	0	3548	283	293	215	62	0	4124 ¹	137	31	4230	-4,3
HR	0	456	254	38	30	0	0	748	674	17	1405	-9,5
HU	1506	1523	0	0	0	0	0	3029	543	0	3572	2,5
IE	0	1772	33	309	309	0	25	2139 ¹	81	0	2220	-4,8
IS	0	0	1038	438	0	0	0	1476	0	0	1476	1,2
IT	0	17336	2328	3371	1163	1770	0	23035	4596	228	27403	-5,2
LT	0	235	92	67	52	0	0	394 ¹	574	51	917	0,8
LU	0	234	117	11	4	3	0	362	362	153	571	5,7
LV	0	230	301	31	10	0	0	562	125	0	687	4,4
ME ⁴	0	125	175	0	0	0	0	300	70	0	370	n.a.
MK	0	493	55	0	0	0	0	548	217	0	765	-9,9
NI	0	466	1	91	86	0	0	558	215	0	773	-5,6
NL	362	7398	0	1265	265	n.a.	0	9025	1309	0	10334	0,0
NO	0	284	12414	183	183	0	0	12881 ¹	-1238	125	11518	-6,0
PL ⁵	0	11637	282	974	436	0	0	12893 ¹	-136	46	12711	-1,1
PT	0	1973	425	1047	797	27	0	3445 ¹	795	128	4112	-7,2
RO	972	2480	986	250	234	0	0	4688	70	7	4751	-3,5
RS	0	2702	993	0	0	0	0	3695	-68	148	3479	-17,5
SE	5571	483	6840	1867	746	0	0	14761 ¹	-2071	0	12690	-7,3
SI	510	389	140	0	0	0	0	1039	28	0	1067	-5,2
SK	1336	482	500	110	0	57	96	2524 ¹	-142	27	2355	-2,2
ENTSO-E	78183	143336	43541	28514	13140	5860	968	294542 ¹	377	3799	291120	n.a.

¹ Including deliveries from industry² 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 March 2011⁵ 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:

Coun-tries	Representativities of the national values in %					
	Thermal nuclear	Fossil fuels	Hydro power	Other renewable	Non identi-fiable	Consumption
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:

36188GWh¹

Total physical energy flows:

39858GWh¹

¹ Sum of physical energy flows without exchanges between ME-AL.

Not ENTSO-E members:

Albania, Belarus, Morocco, Republic of Moldavia, Republic of Turkey, Russia, Ukraine, 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.

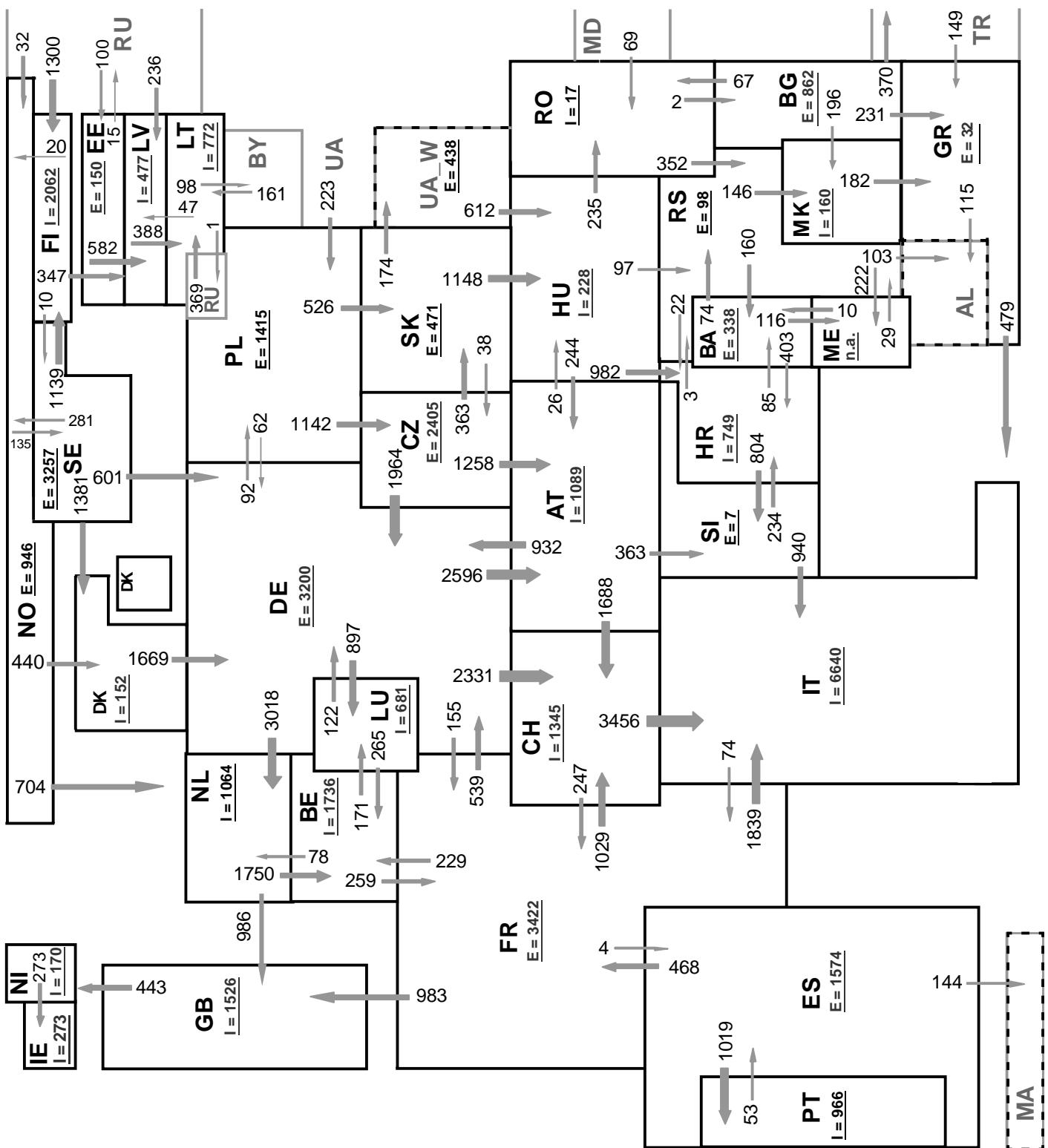
Outside flows	Inside flows of the countries																										Other III ¹								
	AT	BA	BE	BG	CH	CZ	DE	DK	EE	ES	FI	FR	GB	GR	HR	HU	IE	IT	LT	LU	LV	ME	MK	N	NL	NO	PL	PT	RO	RS	SE	SI	SK		
AT	-	-	-	-	1026	1	509	-	-	-	-	-	-	-	-	177	89	-	-	-	-	-	-	-	-	-	-	-	371	-	-				
BA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	171	-	-	-	-	-	176	-	-	-	-	-	-	46	-	-				
BE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	75	-	-	-	-	-	102	-	-	-	-	-	-	-	-	-	-			
BG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	212	-	-	-	-	-	-	-	-	231	-	-	-	-	-	-	14	149	-	
CH	1	-	-	-	-	-	45	-	-	-	98	-	-	-	-	-	2624	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
CZ	967	-	-	-	-	-	1033	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	709	-		
DE	1751	-	-	-	1597	110	-	59	-	-	46	-	-	-	-	-	-	-	-	-	479	-	-	-	-	-	-	-	-	-	10	-			
DK	-	-	-	-	-	-	903	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	87	-		
EE	-	-	-	-	-	-	-	-	-	-	12	-	-	-	-	-	-	-	-	-	-	318	-	-	-	-	-	-	-	-	-	-	29		
ES	-	-	-	-	-	-	-	-	-	-	182	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	386	-		
FI	-	-	-	-	-	-	-	-	-	-	166	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21	0		
FR	-	678	-	1095	-	1007	-	-	-	-	518	-	600	-	-	-	1425	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
GB	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-	-	-	-	-	-	200	-	8	-	-	-	-	-	-	-	-	192		
GR	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.		
HR	-	169	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	345	-	
HU	27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	711	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	72	114	0	
IE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
IT	0	-	-	-	10	-	-	-	-	-	70	-	39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	
LT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	-	-	-	-	-	-	-	-	-	-	107			
LU	-	164	-	-	109	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
LV	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	358	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
ME	-	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.			
MK	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	101	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-		
NI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
NL	-	979	-	-	2	-	-	-	-	-	578	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	
NO	-	-	-	-	-	-	451	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	547	-		
PL	-	-	-	-	725	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	365	0	
PT	-	-	-	-	-	-	-	-	-	-	183	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RO	-	-	162	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	144	-	
RS	-	147	-	0	-	-	-	-	-	-	-	-	-	-	-	11	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	43	
SE	-	-	-	-	386	835	-	-	972	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
SI	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	305	-	381	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SK	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	919	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	299
Other III ¹	-	-	0	-	-	-	142	1	682	-	-	187	-	372	-	-	340	-	148	n.a.	-	-	-	-	15	160	-	297	1	-	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	2750	2173
BA	325	393
BE	1821	405
BG	163	864
CH	3728	2768
CZ	839	2717
DE	4000	6697
DK	1345	1029
EE	308	359
ES	702	1546
FI	1670	202
FR	491	5323
GB	1178	314
GR	539	400
HR	1198	527
HU	1474	930
IE	86	7

	flows inside	flows outside
IT	4719	123
LT	698	124
LU	581	273
LV	483	358
ME	n.a.	n.a.
MK	318	103
NI	294	86
NL	2883	1561
NO	318	1511
PL	966	1100
PT	978	183
RO	383	312
RS	502	434
SE	669	2732
SI	720	690
SK	1079	1221
ENTSO-E	38538	37508



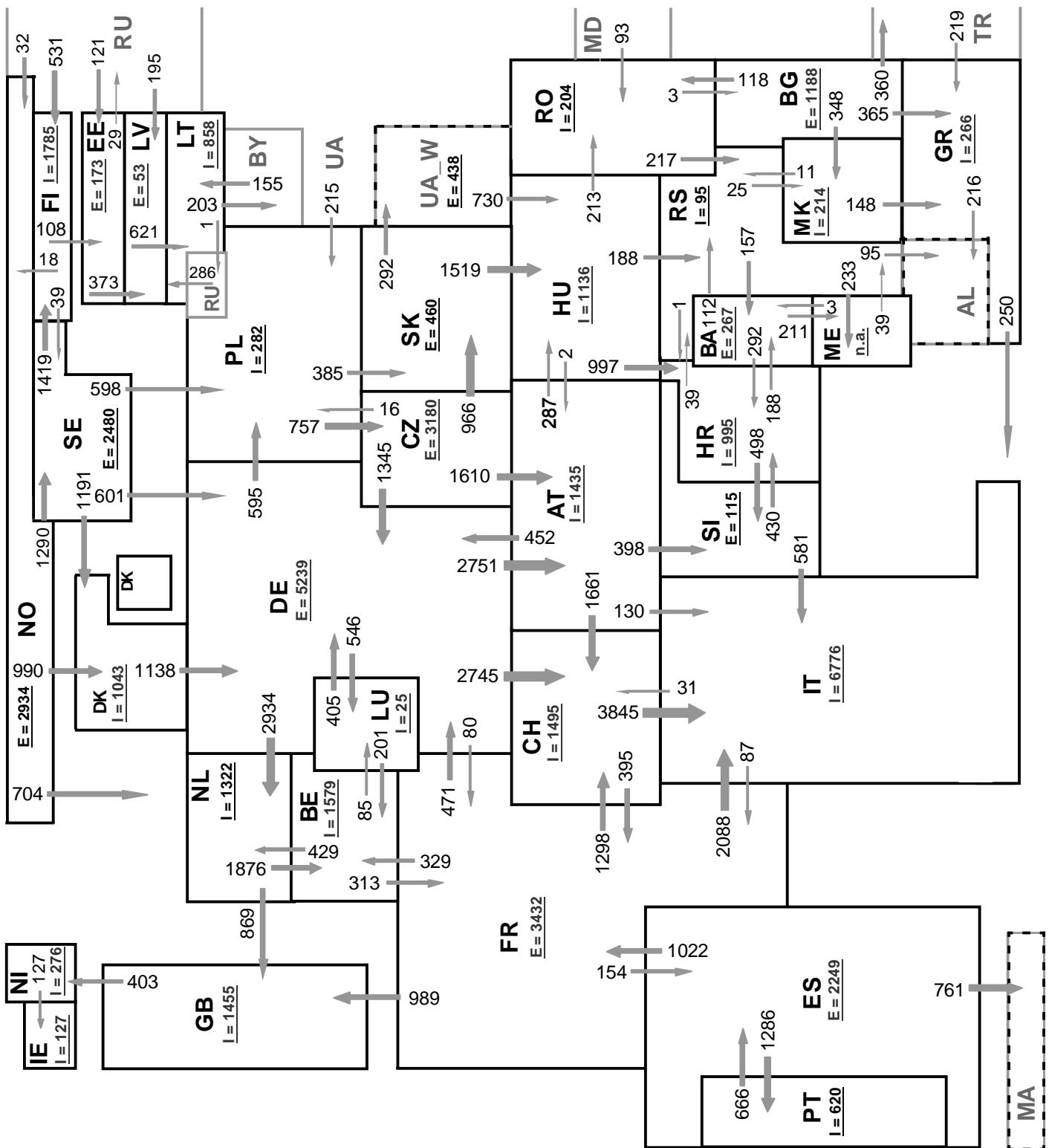
**Sum of load flows in MW
(Calculated sum without data between ME - AL)**

ENTSO-E = 46945 MW

Total = 51216 MW

Synchronous operation with ENTSO-E region

I = Import balance
E = Export balance



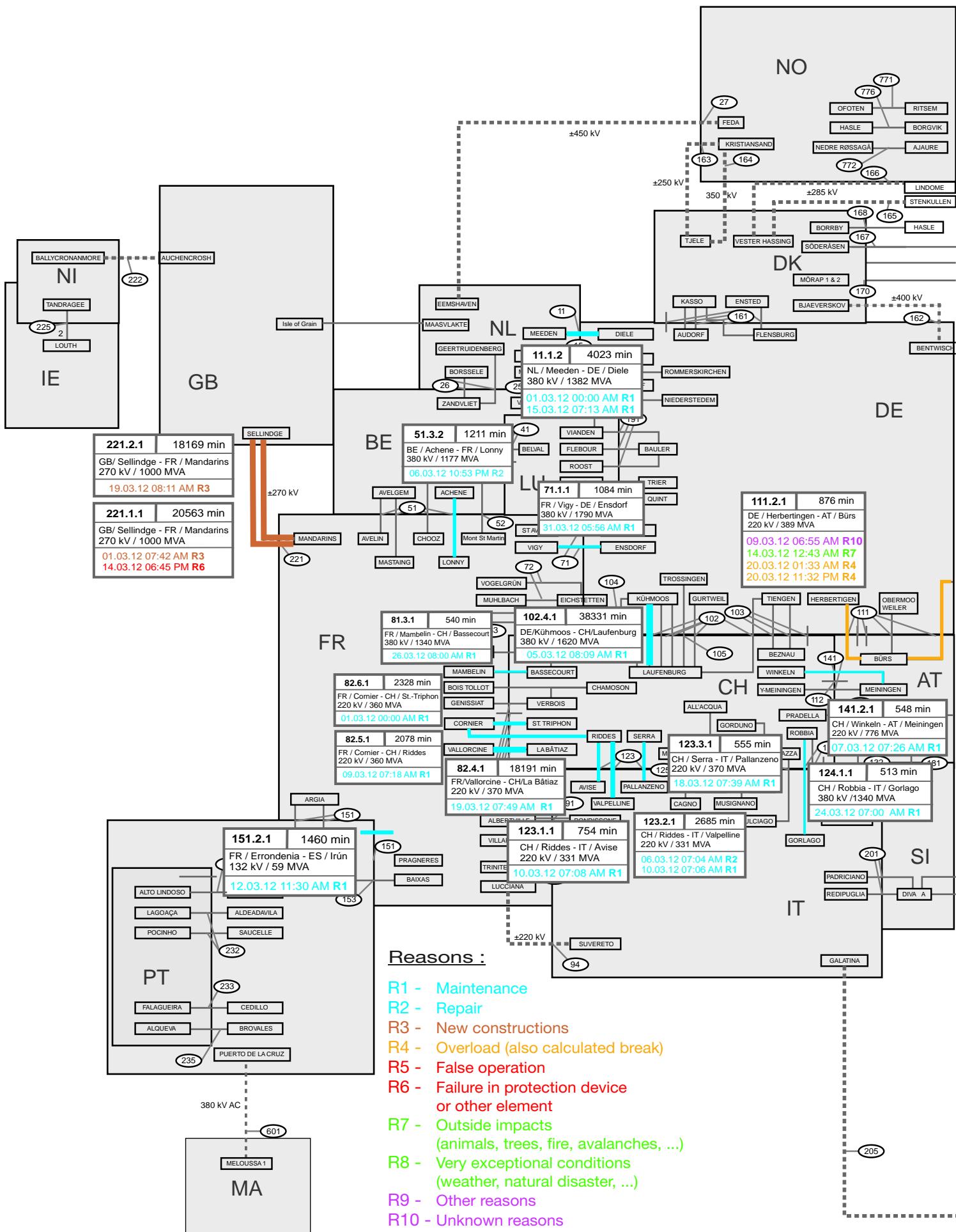
Sum of load flows in MW
(Calculated sum without data between ME - AL)

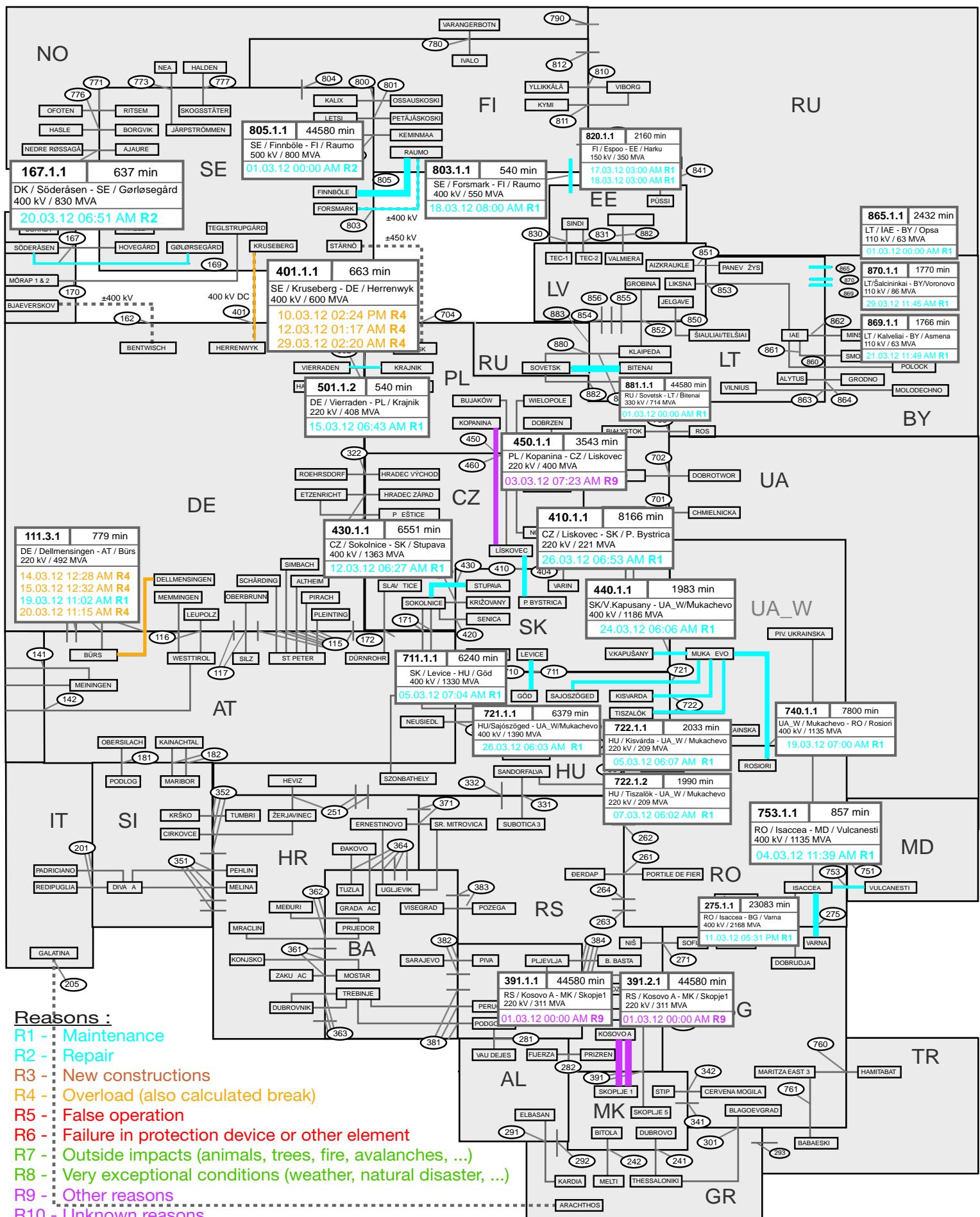
ENTSO-E = 50942 MW

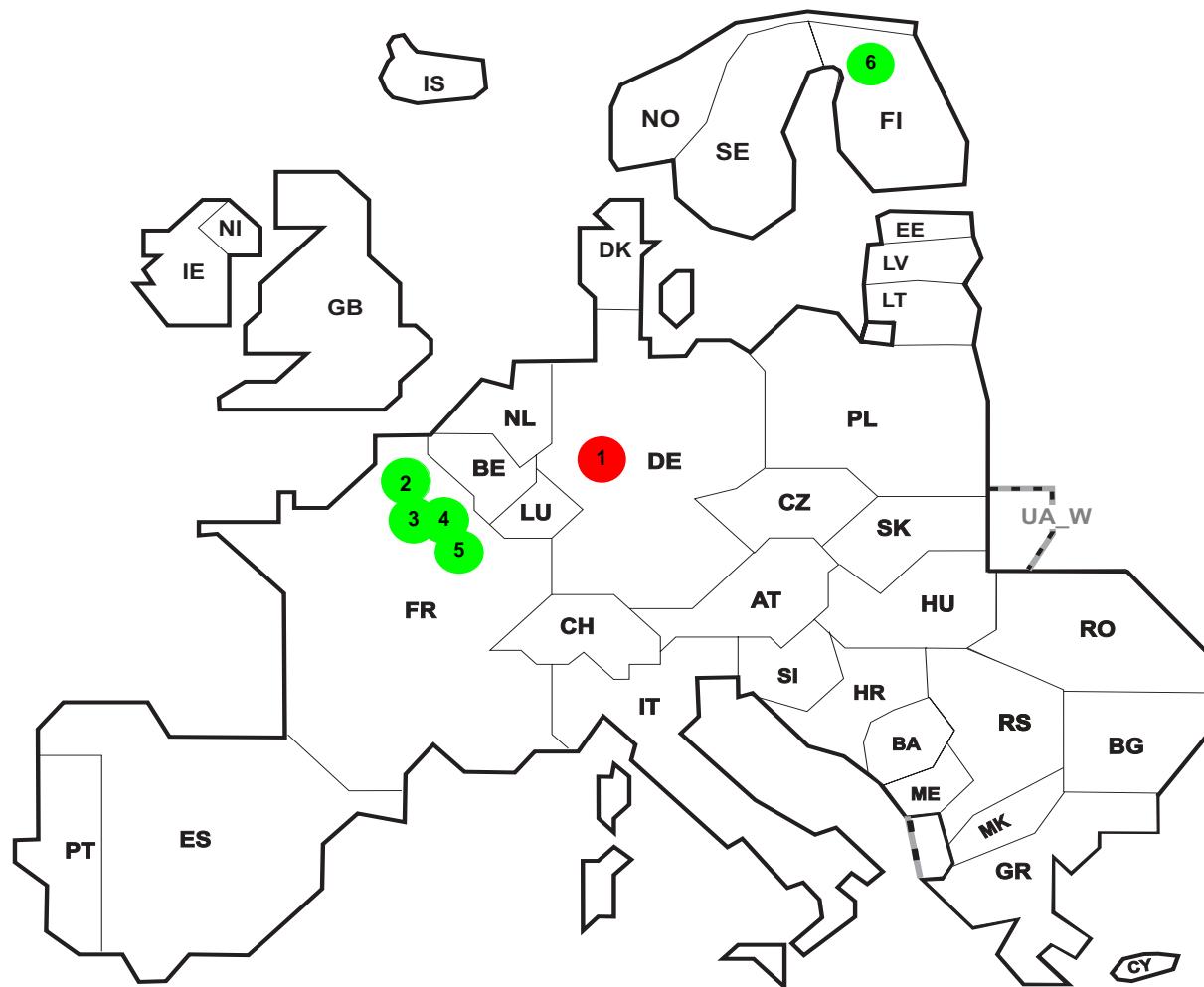
Total = 55849 MW

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	DE	Brauw eiler	R6	731	138	318	0,709
2	FR	Mastaing	R8	637	214	179	0,697
3	FR	Avelin	R8	608	62	588	0,665
4	FR	Avelin	R8	508	60	508	0,556
5	FR	Douvrin	R8	50	58	51	0,054
6	FI	Petäjäskoski	R7	1	2	33	0,005

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

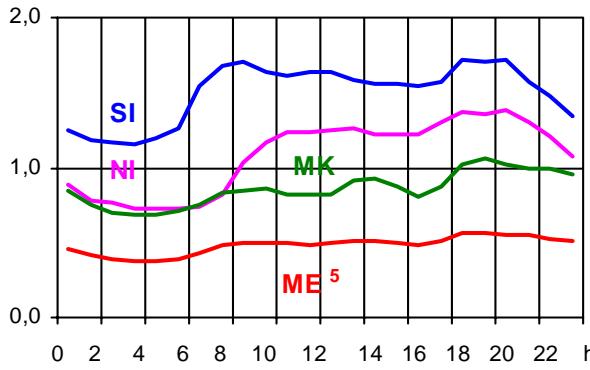
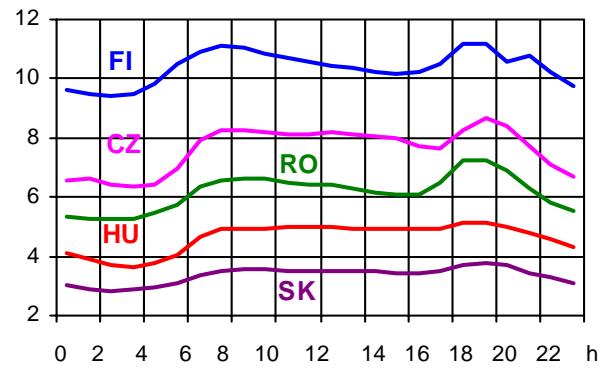
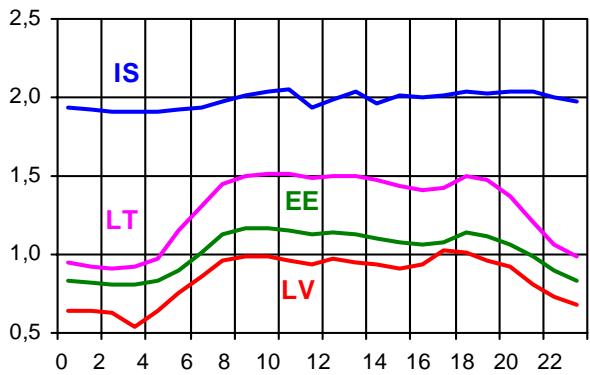
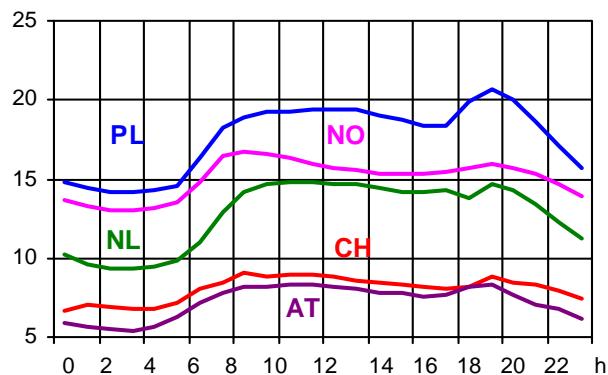
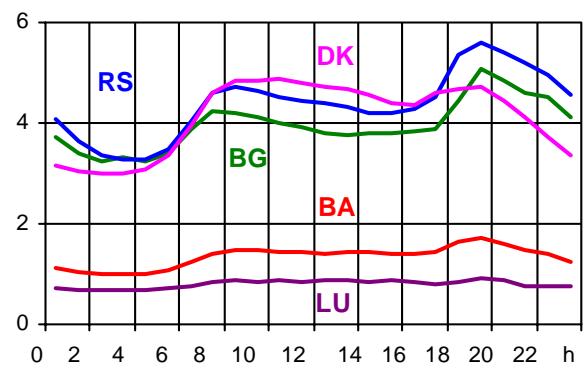
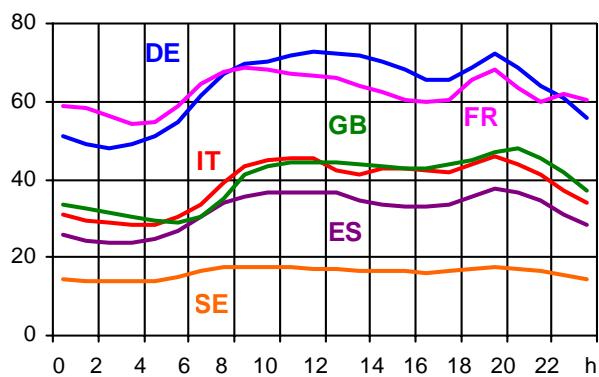
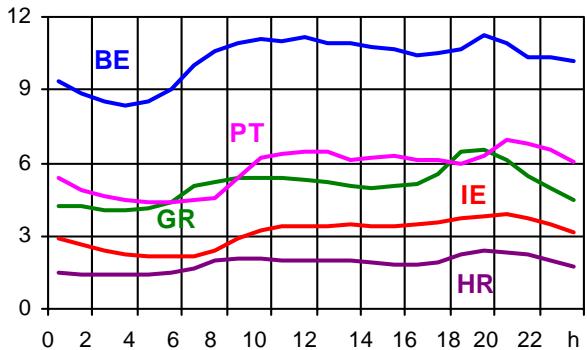
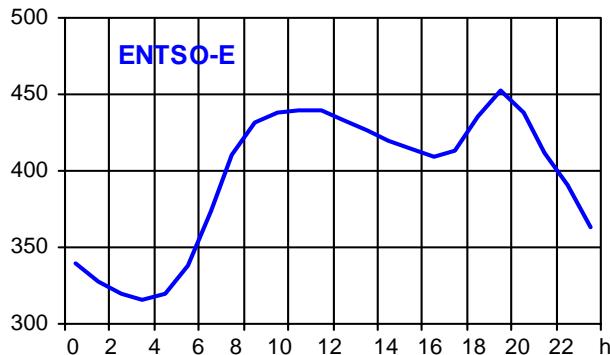
Highest and lowest load on the 21.03.2012 CET of each country

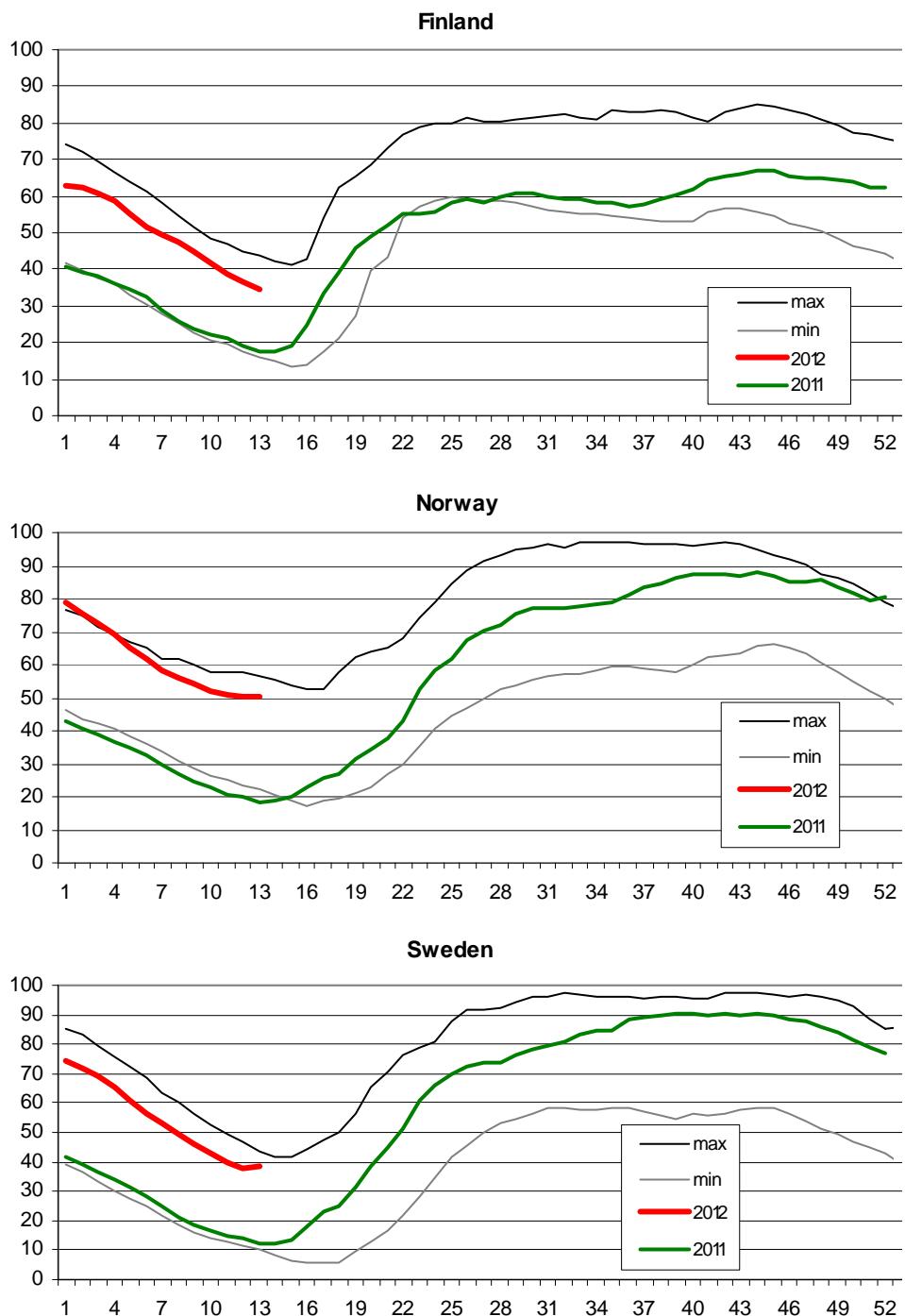
	Highest		Low est		Load representativity
	load MW	variation % ¹	load MW	variation % ¹	
AT	8367	-2,9	5427	2,9	100
BA	1713	-4,0	988	-5,0	100
BE ²	11217	-8,7	8353	-4,3	100
BG	5091	-1,8	3233	-7,6	99
CH	9017	-4,0	6734	5,8	100
CY ³	589	-12,6	321	-15,1	100
CZ	8634	-0,4	6380	-2,7	100
DE ⁴	72978	-3,5	48015	-2,3	91
DK	4868	-8,3	2991	-10,1	100
EE	1171	-4,1	808	-6,0	100
ES	37782	-0,8	23744	-1,4	98
FI	11196	-8,3	9428	-10,6	100
FR	68657	2,1	54238	8,8	100
GB	48205	-6,1	28984	-5,6	92
GR	6566	-4,9	4014	-7,5	100
HR	2407	-7,6	1419	-6,5	100
HU	5162	-2,3	3617	18,0	100
IE	3904	-0,2	2157	-12,5	100
IS	2054	1,0	1909	0,5	100
IT	45979	-5,5	28340	-2,9	100
LT	1511	1,8	909	-1,4	100
LU	906	-2,8	684	-8,2	100
LV	1025	-0,7	544	-8,6	100
ME ⁵	561	n.a.	376	n.a.	100
MK	1054	-13,5	678	-19,0	100
NI	1385	-6,2	727	-12,0	100
NL	14855	-4,7	9290	-2,8	100
NO	16742	-11,2	12965	-15,1	100
PL ⁶	20664	-0,9	14178	0,5	100
PT	6965	-12,6	4362	-9,0	100
RO	7268	-2,3	5235	-1,0	100
RS	5590	-3,9	3262	-10,9	100
SE	17783	-17,7	13754	-19,6	100
SI	1723	-4,5	1156	-8,3	100
SK	3786	-0,1	2837	-1,2	100
ENTSO-E	452814	n.a.	315604	n.a.	

¹ Variation as compared to corresponding month of the previous year² The reported figures are best estimates based on actual measurements and extrapolations.³ Only highest and lowest load value available.⁴ The reported figures are best estimates based on actual inquiries, measurements and extrapolations.⁵ Monthly load values as of 16 March 2011⁶ Operational data

Consumption hourly load curves on 21.03.2012 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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