

Monthly report



September 2011

Monthly provisional values as of 18 January 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.
- UA_W Ukraine West represents the so-called Burshtyn Island synchronously interconnected with ENTSO-E
- 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	1546	2875	0	0	0	707	5128	687	368	5447	0,9
BA	0	638	269	0	0	0	0	907	18	0	925	1,3
BE ²	3945	2473	121	602	179	191	0	7141 ¹	-239	151	6751	-2,7
BG	1200	1943	227	40	40	0	0	3410	-976	97	2337	3,2
CH	1835	161	3539	108	5	0	0	5643 ¹	-502	195	4946	-1,5
CY	0	432	0	8	8	0	0	440	0	0	440	-13,2
CZ	1674	3951	186	242	22	221	0	6053 ¹	-1251	90	4712	-3,0
DE	7649	25353	1446	6644	2869	1887	0	41092 ¹	621	588	41125	-0,4
DK	0	1038	2	899	735	0	0	1939 ¹	820	0	2759	-0,1
EE	0	753	2	74	33	0	0	829	-267	0	562	-1,7
ES	4974	12030	1354	3877	2297	1022	32	22267	-556	187	21524	1,6
FI	1608	1103	907	693	42	0	49	4360 ¹	1824	0	6184	-3,4
FR	31482	2720	3251	1442	837	191	0	38895	-4244	496	34155	-2,7
GB	4417	18382	662	2000	960	0	0	25461	442	304	25599	1,2
GR	0	3592	318	301	239	41	0	4211 ¹	194	33	4372	3,1
HR	0	487	241	18	16	0	0	746	643	14	1375	2,2
HU	1171	1530	0	0	0	0	0	2701	743	0	3444	9,5
IE	0	1469	38	483	483	0	16	2006 ¹	3	0	2009	-2,9
IS	0	1	1022	343	0	0	0	1366	0	0	1366	1,3
IT	0	19709	3903	2406	623	1355	0	26018	2978	157	28839	6,1
LT	0	247	79	52	40	0	0	378 ¹	505	68	815	2,3
LU	0	26	80	17	5	2	0	123	549	0	672	21,5
LV	0	103	88	17	6	0	0	208	342	0	550	-0,2
ME ³	0	111	88	0	0	0	0	199	94	0	293	n.a.
MK	0	261	70	0	0	0	0	331	271	0	602	6,4
NI	0	585	1	117	112	0	0	703	-4	0	699	-0,3
NL	343	7103	0	704	392	n.a.	0	8150	1046	0	9196	0,5
NO	0	261	9991	109	109	0	0	10361 ¹	-1459	316	8586	-0,2
PL ⁴	0	11720	173	238	211	0	0	12131 ¹	-438	48	11645	2,1
PT	0	2487	525	701	459	25	0	3713 ¹	448	82	4079	-2,1
RO	885	2487	901	88	73	0	0	4361	-81	7	4273	4,2
RS	0	2389	489	0	0	0	0	2878	32	100	2810	-12,6
SE	3314	150	7210	1181	552	0	0	11855 ¹	-1677	0	10178	-1,0
SI	482	442	233	0	0	0	0	1157	-117	0	1040	6,0
SK	1229	330	220	101	0	60	76	1956 ¹	94	0	2050	-0,6
ENTSO-E	66208	128013	40511	23505	11347	4995	880	259117 ¹	543	3301	256359	n.a.
UA_W	0	561	4	0	0	0	0	565	-234	0	331	4,4

¹ Including deliveries from industry

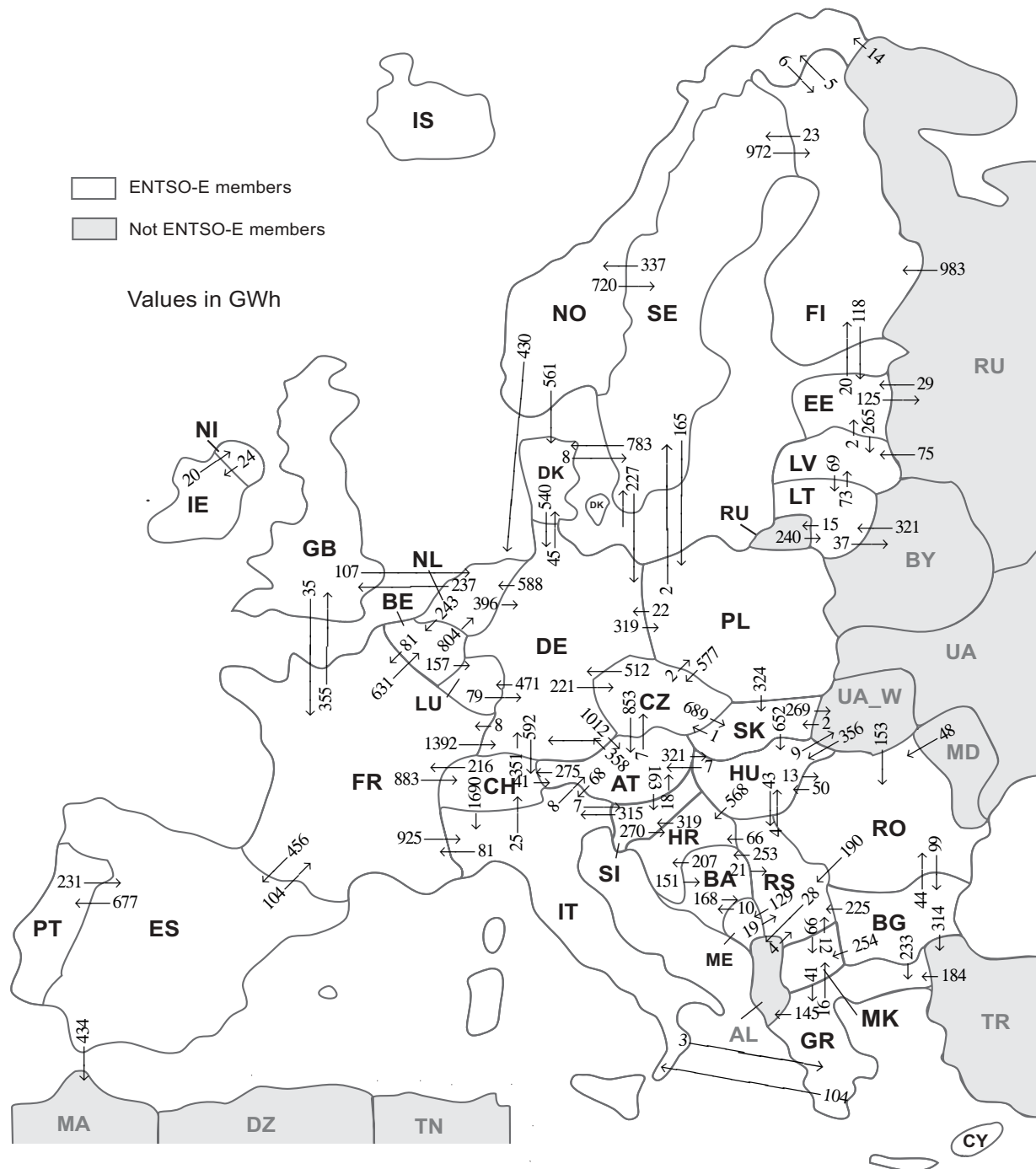
² The reported figures are best estimates based on actual measurements and extrapolations.

³ National monthly values as of September 2010

⁵ Operational data

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 prod	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	97	100	95	100	98
FI	100	100	100	100	100	100
FR	100	100	100	100	100	100
GB	100	97	89	48	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
UA_W	100	100	100	100	100	100



Sum of physical energy flows between ENTSO-E countries: **27580GWh**¹

Total physical energy flows: **31365GWh**¹

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 and Ukraine West

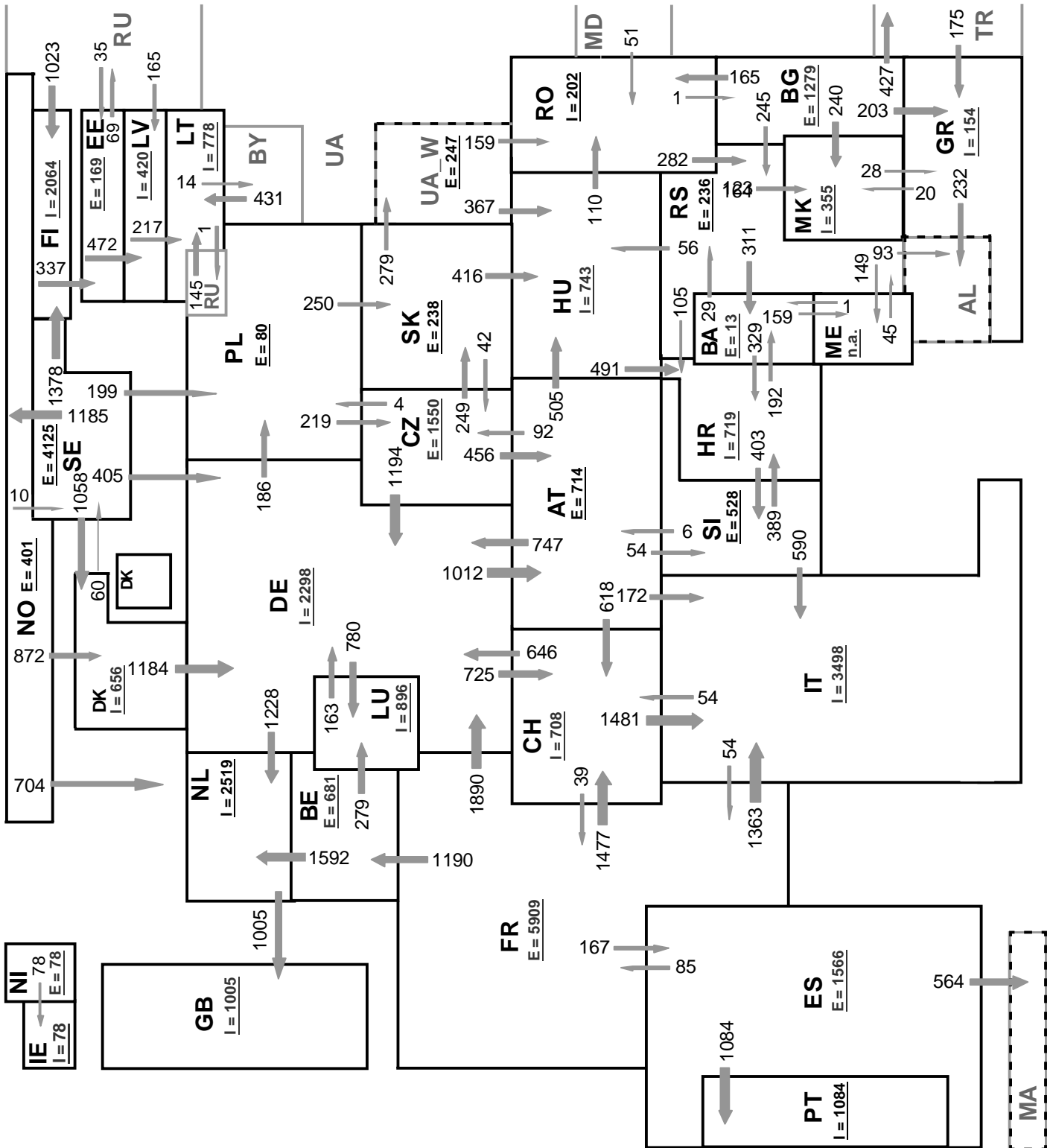
These physical energy flows were measured on the cross-frontier transmission lines (≤ 110 kV) listed in table characteristics of the cross-frontier lines published in the Statistical Yearbook. These values may differ from the official statistics and the exchange balances on page 2.

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	UA_W	Other III ¹	
AT	-	-	-	-	275	7	358	-	-	-	-	-	-	-	-	321	-	68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	163	-	-
BA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	207	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BE	-	-	-	-	-	-	-	-	-	-	-	81	-	-	-	-	-	-	-	157	-	-	-	-	804	-	-	-	-	-	-	-	-	-	-	
BG	-	-	-	-	-	-	-	-	-	-	-	-	233	-	-	-	-	-	-	-	-	-	254	-	-	-	-	44	225	-	-	-	-	-	-	314
CH	41	-	-	-	-	-	351	-	-	-	-	216	-	-	-	-	1690	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
CZ	853	-	-	-	-	-	512	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	689	-	-
DE	1012	-	-	-	592	221	-	45	-	-	8	-	-	-	-	-	-	-	471	-	-	-	-	-	588	-	319	-	-	-	0	-	-	-	-	
DK	-	-	-	-	-	-	540	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	8	-	-	-	-	
EE	-	-	-	-	-	-	-	-	-	20	-	-	-	-	-	-	-	-	-	265	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	125
ES	-	-	-	-	-	-	-	-	-	-	104	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	677	-	-	-	-	-	-	-	-	434
FI	-	-	-	-	-	-	-	118	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	23	-	-	-	-	0
FR	-	631	-	-	883	-	1392	-	456	-	-	355	-	-	-	-	925	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GB	-	-	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	-	-	-	-	0	107	-	-	-	-	-	-	-	-	-	-	-
GR	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	104	-	-	-	-	16	-	-	-	-	-	-	-	-	-	-	-	-	145
HR	-	151	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	319	-	-	-	
HU	7	-	-	-	-	-	-	-	-	-	-	-	-	-	568	-	-	-	-	-	-	-	-	-	-	-	-	13	43	-	-	0	9	-	-	
IE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-	-	-	-	-	-	-	-	-
IT	8	-	-	-	25	-	-	-	-	-	81	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	-	-	
LT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LU	-	0	-	-	-	-	79	-	-	-	-	-	-	-	-	-	-	-	-	-	73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52
LV	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
ME	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.
MK	-	-	-	0	-	-	-	-	-	-	-	41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NI	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NL	-	243	-	-	-	396	-	-	-	-	-	237	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-
NO	-	-	-	-	-	-	561	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	430	-	-	-	-	-	-	-	-	-	0
PL	-	-	-	-	577	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PT	-	-	-	-	-	-	-	-	231	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RO	-	-	-	99	-	-	-	-	-	-	-	-	-	-	-	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
RS	-	253	-	0	-	-	-	-	-	-	-	-	-	66	4	-	-	-	-	-	-	129	66	-	-	-	-	-	-	-	-	-	-	-	-	28
SE	-	-	-	-	-	227	783	-	-	972	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	337	165	-	-	-	-	-	-	-	-	-
SI	18	-	-	-	-	-	-	-	-	-	-	-	-	270	-	-	315	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SK	-	-	-	-	1	-	-	-	-	-	-	-	-	-	652	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	269
UA_W	-	-	-	-	-	-	-	-	-	-	-	-	-	-	356	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other III ¹	-	-	-	0	-	-	-	29	0	983	-	-	184	-	-	-	-	561	-	75	n.a.	-	-	-	-	14	0	-	48	4	-	-	-	-	-	

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

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

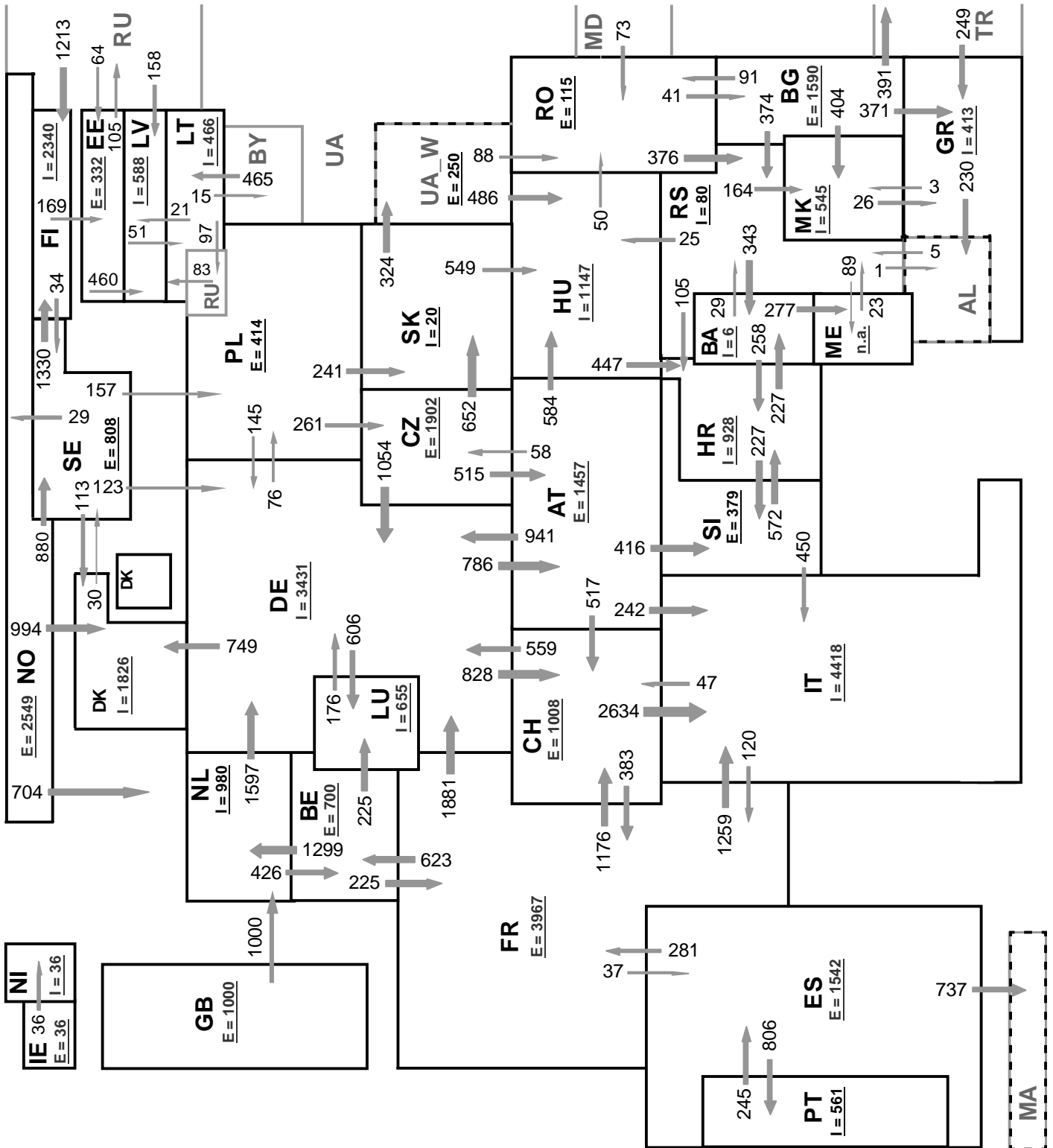
	flows inside	flows outside		flows inside	flows outside
AT	1939	1192	IT	3102	124
BA	414	396	LT	630	125
BE	874	1042	LU	628	79
BG	99	1070	LV	413	71
CH	1775	2298	ME	n.a.	n.a.
CZ	806	2056	MK	336	53
DE	3877	3256	NI	20	24
DK	1389	548	NL	1929	876
EE	149	410	NO	356	1717
ES	687	1215	PL	486	925
FI	1981	146	PT	677	231
FR	525	4642	RO	258	339
GB	592	142	RS	514	546
GR	461	265	SE	753	2484
HR	1111	470	SI	489	603
HU	1383	640	SK	1015	922
IE	24	20	UA_W	278	511



Sum of load flows in MW **ENTSO-E = 34319 MW** **Total = 38549 MW**
 (Sum of load flows without data between ME - AL)

Synchronous operation with ENTSO-E region

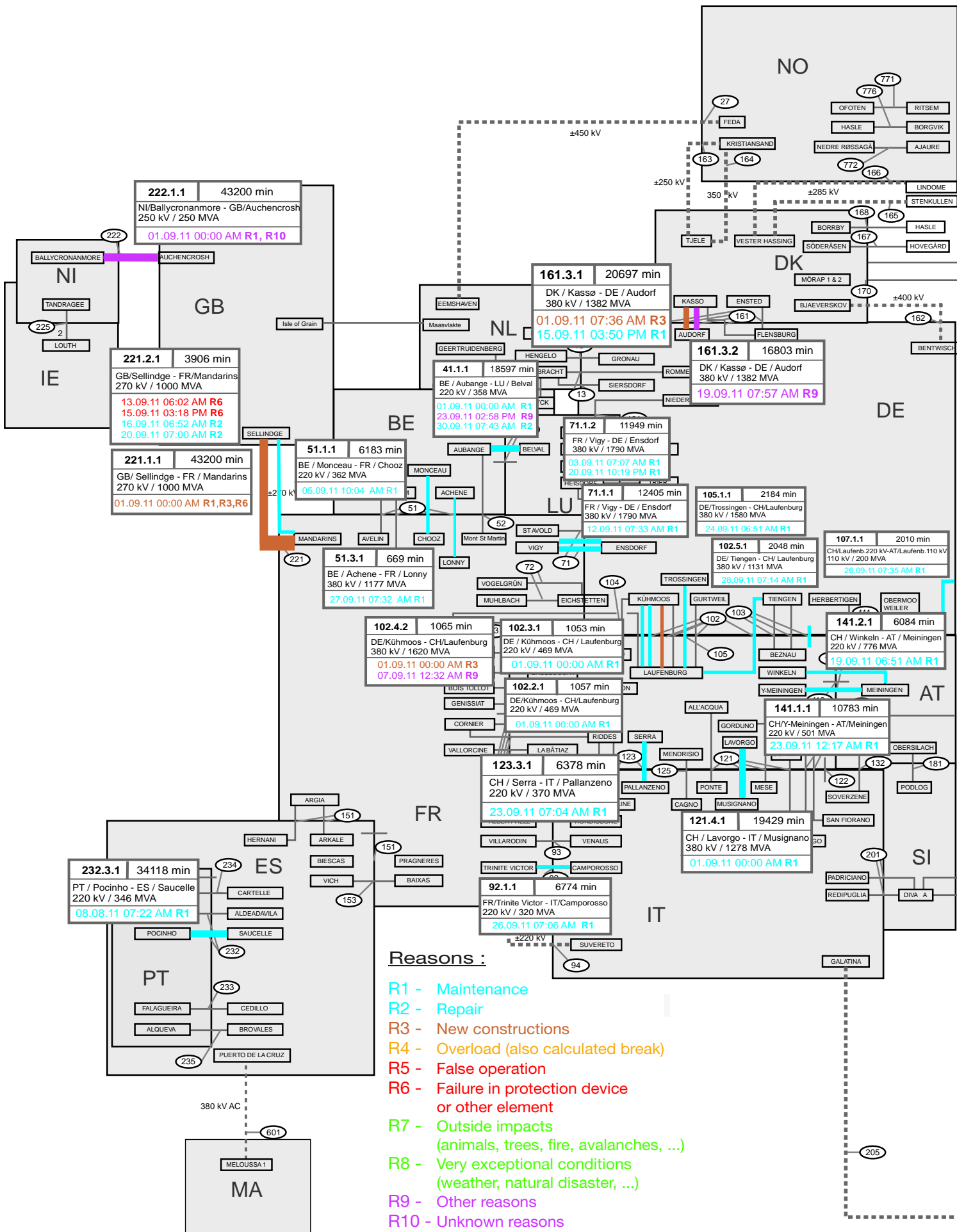
I = Import balance
 E = Export balance

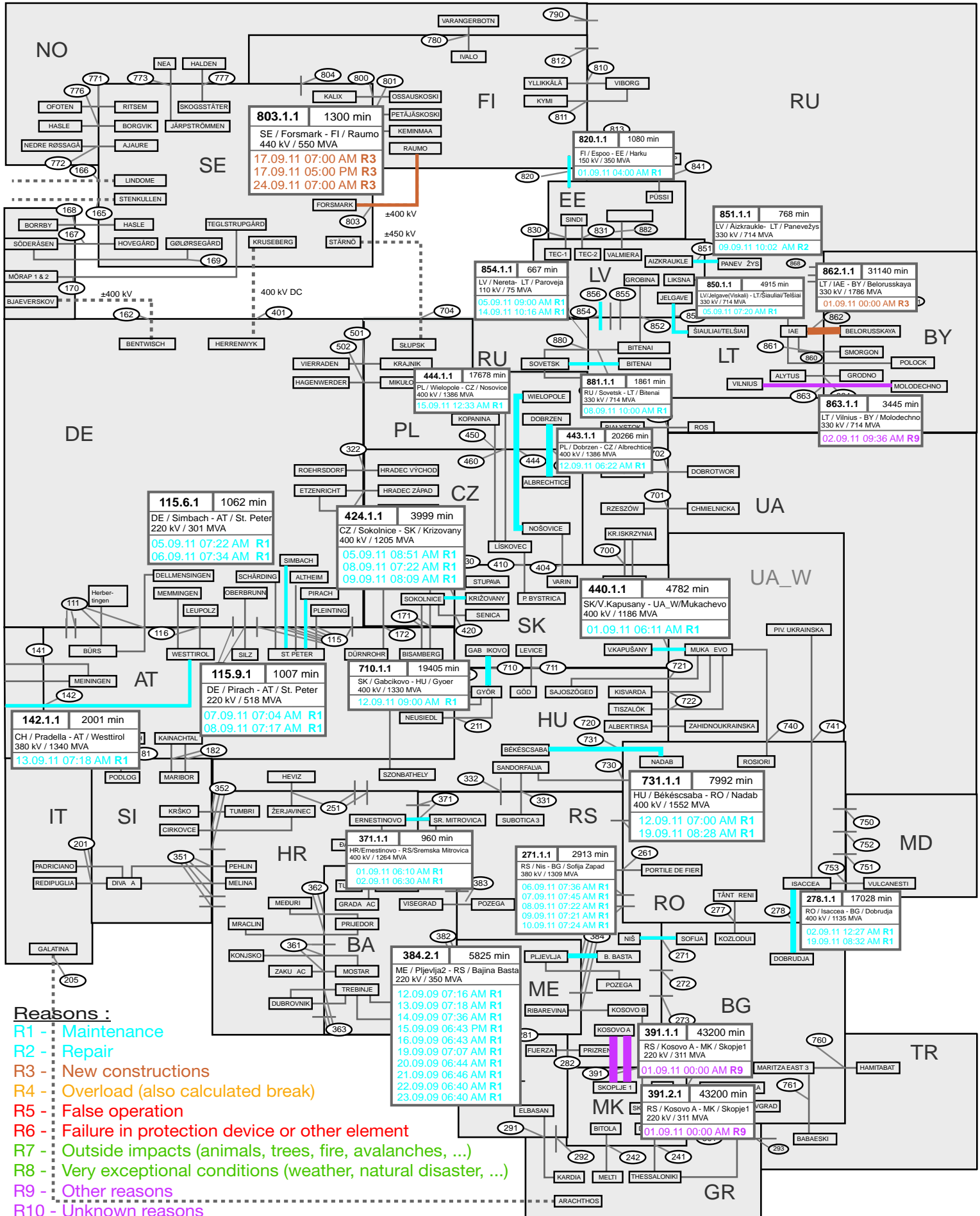


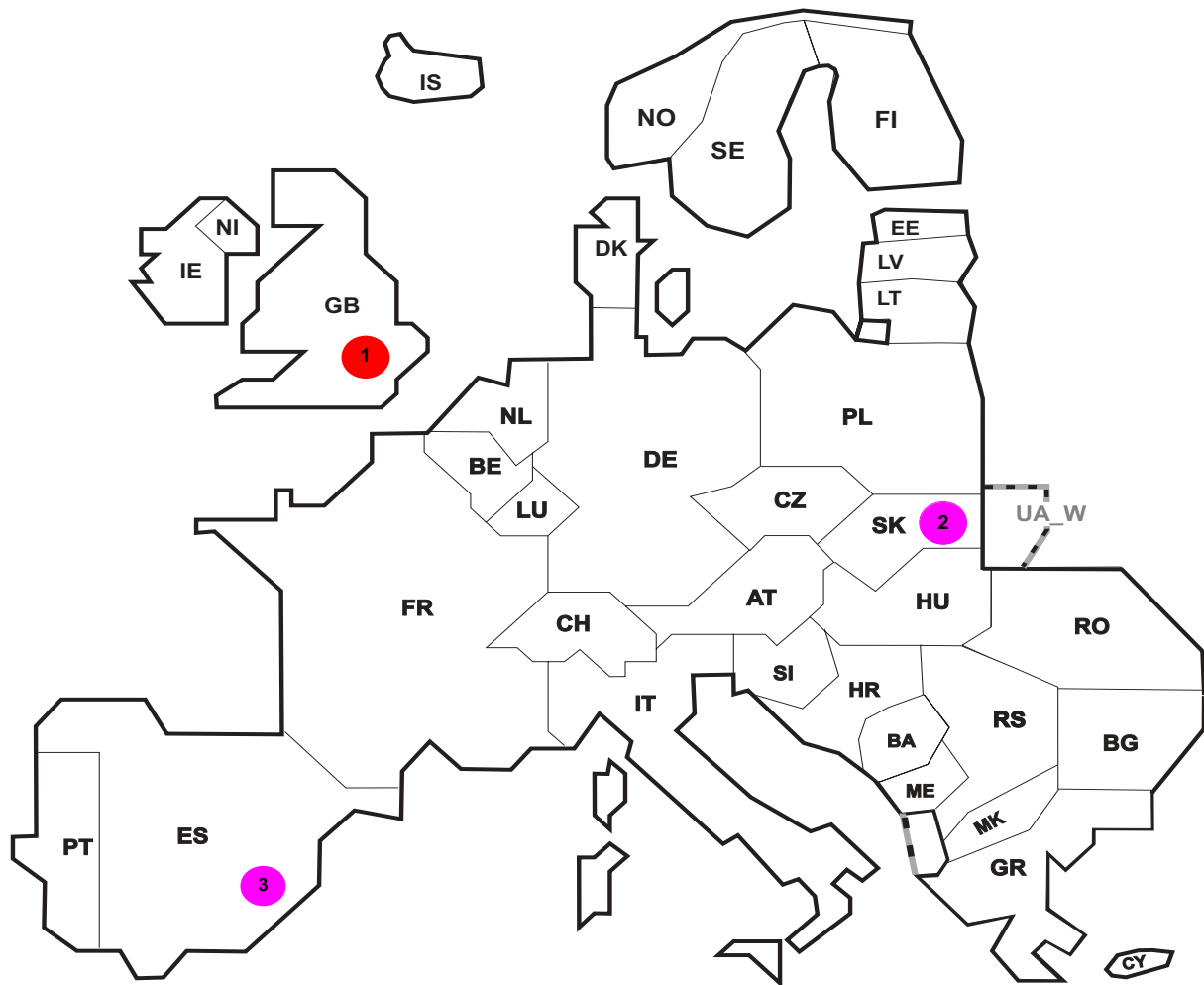
Sum of load flows in MW ENTSO-E = 33862 MW Total = 39106 MW
 (Sum of load flows without data between ME - AL)

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	GB	St John's Wood	R6	371	174	128	0,585
2	SK	Moldava	R9	12	75	13	0,239
3	ES	aena oeste	R10	0	2	2	0,000

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 21.09.2011 CET of each country

	Highest		Lowest		Load representativity %
	load MW	variation % ¹	load MW	variation % ¹	
AT	8099	0,7	4775	-1,0	100
BA	1581	-4,8	975	1,4	100
BE ²	10877	-5,6	7608	-5,2	100
BG	4386	-4,5	2861	-3,1	99
CH	8520	-2,6	5279	-1,0	100
CY ³	765	-10,0	468	10,3	100
CZ	7813	-1,0	5687	-0,2	100
DE	74981	-0,9	46700	-10,6	91
DK	4964	2,2	2903	3,9	100
EE	981	0,7	604	0,0	100
ES	35197	-7,7	23568	-3,9	98
FI	9613	-2,8	7129	-3,2	100
FR	56124	-2,3	39191	-1,5	100
GB	40825	-3,1	23250	0,7	100
GR	6671	-5,0	4405	1,1	100
HR	2334	-2,6	1456	2,5	100
HU	5268	2,2	3476	1,1	100
IE	3608	2,5	1903	0,5	100
IS	1985	1,3	1832	0,8	100
IT	45239	-0,7	28830	-2,3	100
LT	1364	-1,0	826	4,2	100
LU	980	3,2	713	9,4	100
LV	933	0,1	489	-0,4	100
ME ⁴	506	n.a.	322	n.a.	100
MK	1094	10,1	638	18,8	100
NI	1242	-1,1	637	2,2	100
NL	15232	0,8	9484	0,4	100
NO	14124	4,5	10696	5,4	100
PL ⁵	20127	3,1	13384	3,2	100
PT	6917	-5,7	4592	-5,9	100
RO	6842	-1,7	4948	3,8	100
RS	4700	-3,1	2694	0,1	100
SE	16893	4,2	11913	3,9	100
SI	1730	3,3	1090	7,5	100
SK	3471	8,1	2598	2,7	100
ENTSO-E	416065	n.a.	279907	n.a.	
UA_W	738	6,5	465	20,2	100

¹ Variation as compared to corresponding month of the previous year

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

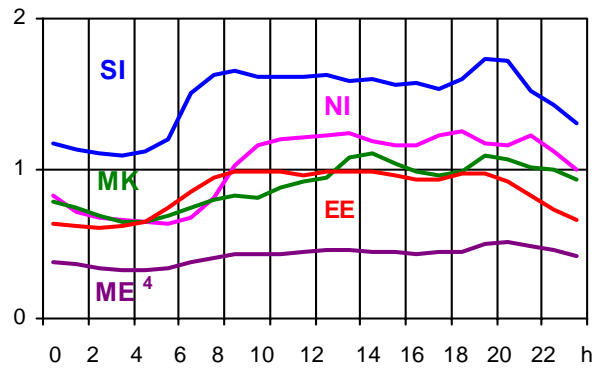
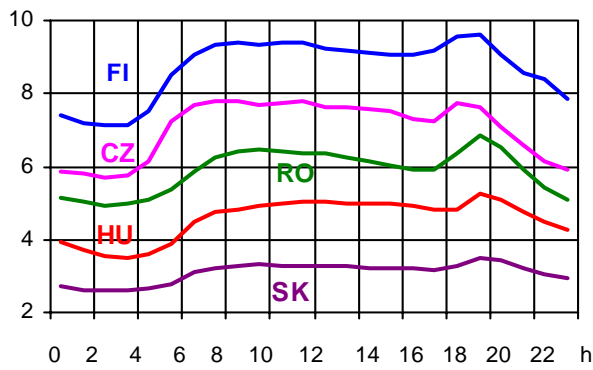
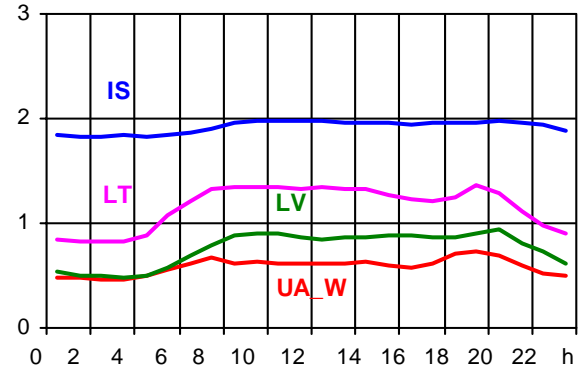
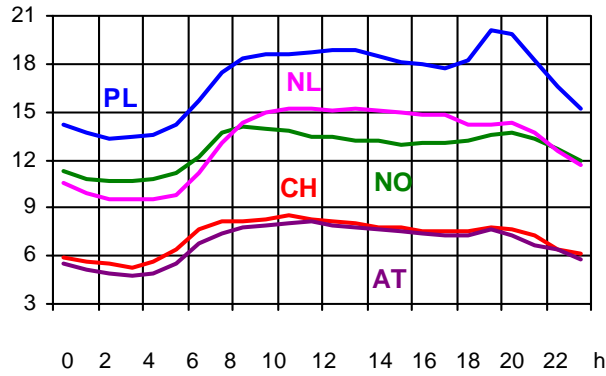
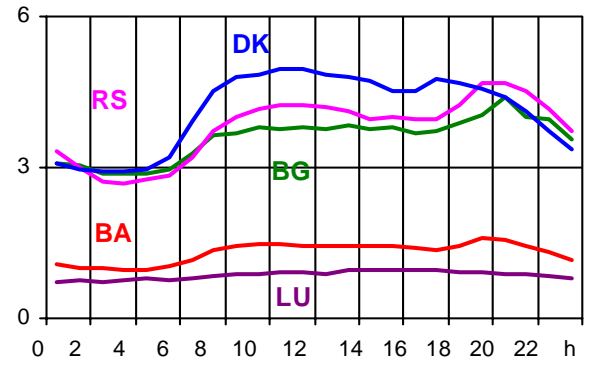
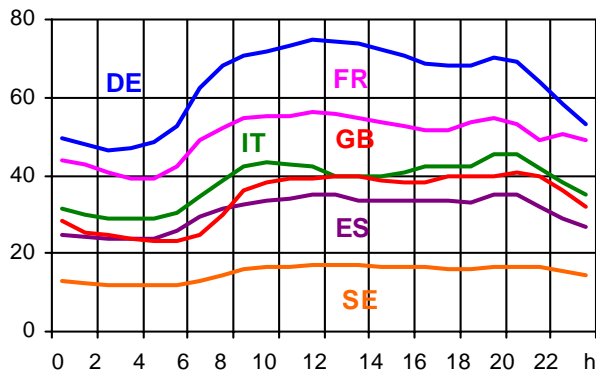
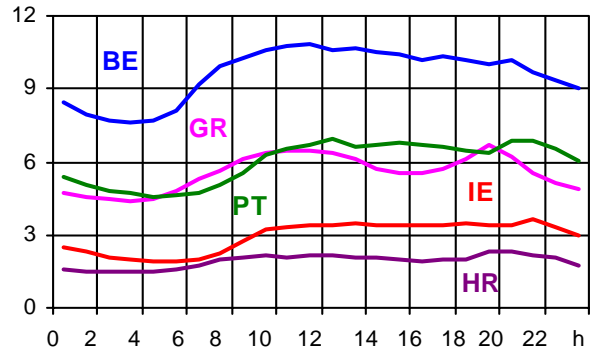
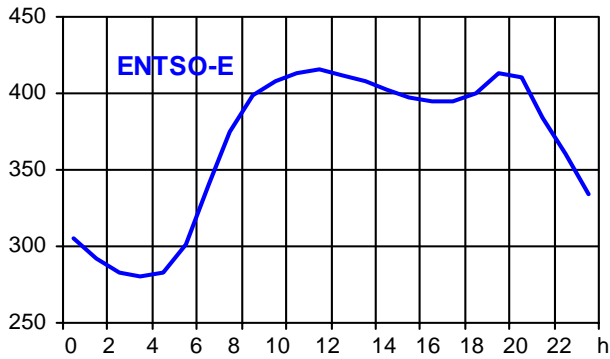
³ Only highest and lowest load value available.

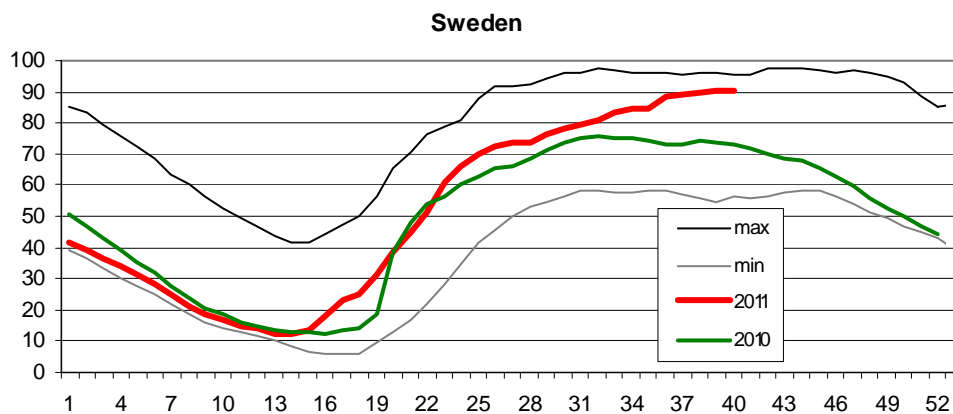
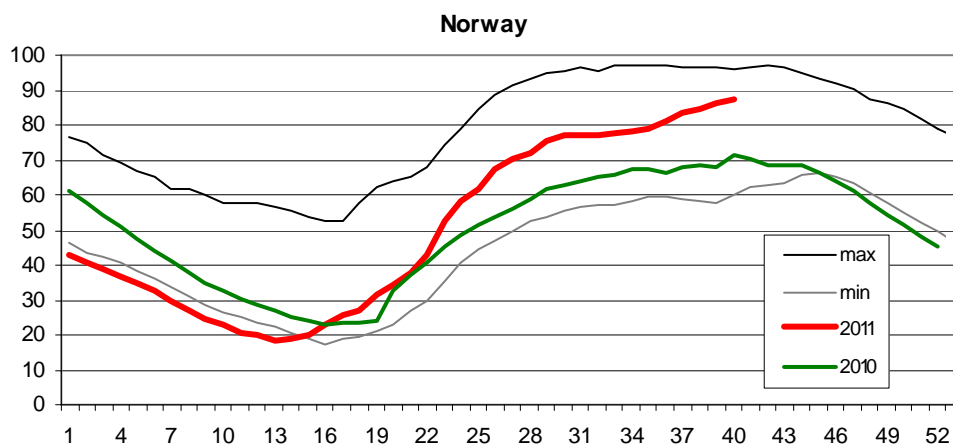
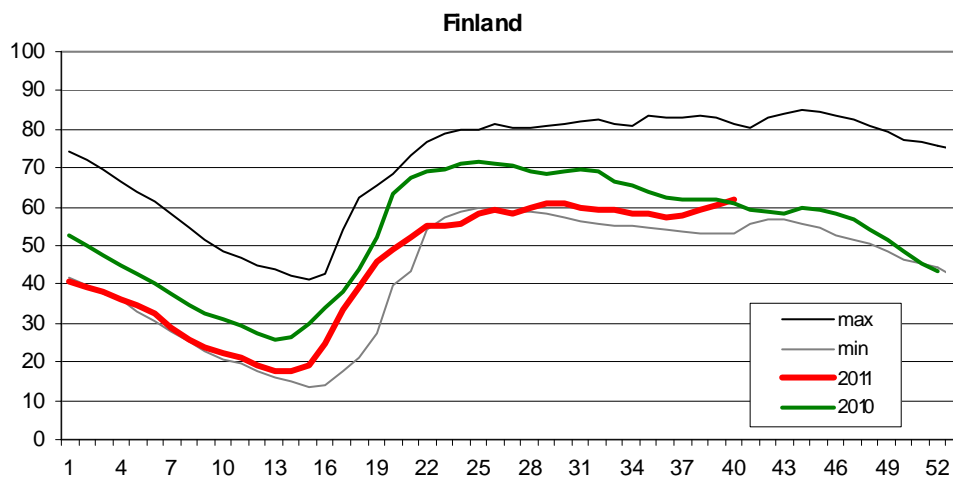
⁴ Monthly load values as of 15 September 2010

⁵ Operational data

Consumption hourly load curves on 21.09.2011 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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