

Monthly report



October 2011

Monthly provisional values as of 08 February 2012

European Network of
Transmission System Operators
for Electricity



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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	1897	3001	0	0	0	834	5732	469	447	5754	-0,8
BA	0	878	276	0	0	0	0	1154	-140	0	1014	-1,6
BE ²	3660	2702	124	658	239	141	0	7144 ¹	191	157	7178	-3,4
BG	793	2482	211	72	72	0	0	3558	-746	99	2713	-0,9
CH	2397	171	2772	115	5	0	0	5455 ¹	37	122	5370	-2,7
CY	0	348	0	10	10	0	0	358	0	0	358	-12,9
CZ	2243	4539	218	190	39	152	0	7190 ¹	-1795	90	5305	-2,1
DE	7307	30750	1757	7506	3926	1429	0	47320 ¹	-973	679	45668	-2,3
DK	0	1375	2	1177	977	0	0	2554 ¹	341	0	2895	-2,2
EE	0	740	3	116	40	0	0	859	-215	0	644	-4,0
ES	4483	10844	1443	4597	3098	879	32	21399	-382	302	20715	-1,2
FI	2026	1427	1331	749	52	0	42	5575 ¹	1264	0	6839	-6,1
FR	32824	4662	3268	1599	1046	128	0	42353	-3804	643	37906	-7,1
GB	4223	20321	765	2456	1179	0	0	27765	203	343	27625	-0,9
GR	0	3320	234	414	300	85	0	3968 ¹	190	49	4109	-0,7
HR	0	466	255	23	20	0	0	744	665	14	1395	-3,5
HU	1286	1569	0	0	0	0	0	2855	742	0	3597	7,5
IE	0	1677	70	451	451	0	16	2214 ¹	-28	0	2186	-0,7
IS	0	1	1039	397	0	0	0	1437	0	0	1437	1,6
IT	0	17306	3154	2462	878	1140	0	22922	4761	247	27436	-1,3
LT	0	234	84	58	49	0	0	376 ¹	578	86	868	-2,5
LU	0	77	103	17	6	1	0	197	447	0	644	9,0
LV	0	177	91	20	7	0	0	288	340	0	628	-0,6
ME ³	0	137	93	0	0	0	0	230	94	0	324	n.a.
MK	0	424	87	0	0	0	0	511	194	0	705	0,3
NI	731	611	0	119	114	0	0	1461	30	0	1491	94,9
NL	358	8616	0	813	501	n.a.	0	9787	406	0	10193	-0,1
NO	0	275	11672	154	154	0	0	12101 ¹	-1704	286	10111	-4,1
PL ⁴	0	12741	157	305	275	0	0	13203 ¹	-464	61	12678	1,6
PT	0	2173	610	1031	786	23	0	3814 ¹	342	87	4069	-1,0
RO	968	2723	689	150	134	0	0	4530	31	6	4555	-2,4
RS	0	2689	633	0	0	0	0	3322	-99	41	3182	-2,7
SE	3468	227	7061	1499	669	0	0	12255 ¹	-652	0	11603	-4,0
SI	512	371	298	0	0	0	0	1181	-122	0	1059	-0,2
SK	1147	494	312	89	0	37	85	2127 ¹	200	44	2283	-1,0
ENTSO-E	68426	139444	41813	27247	15027	4015	1009	277939¹	401	3803	274537	n.a.
UA_W	0	740	4	0	0	0	0	744	-341	0	403	2,5

¹ Including deliveries from industry

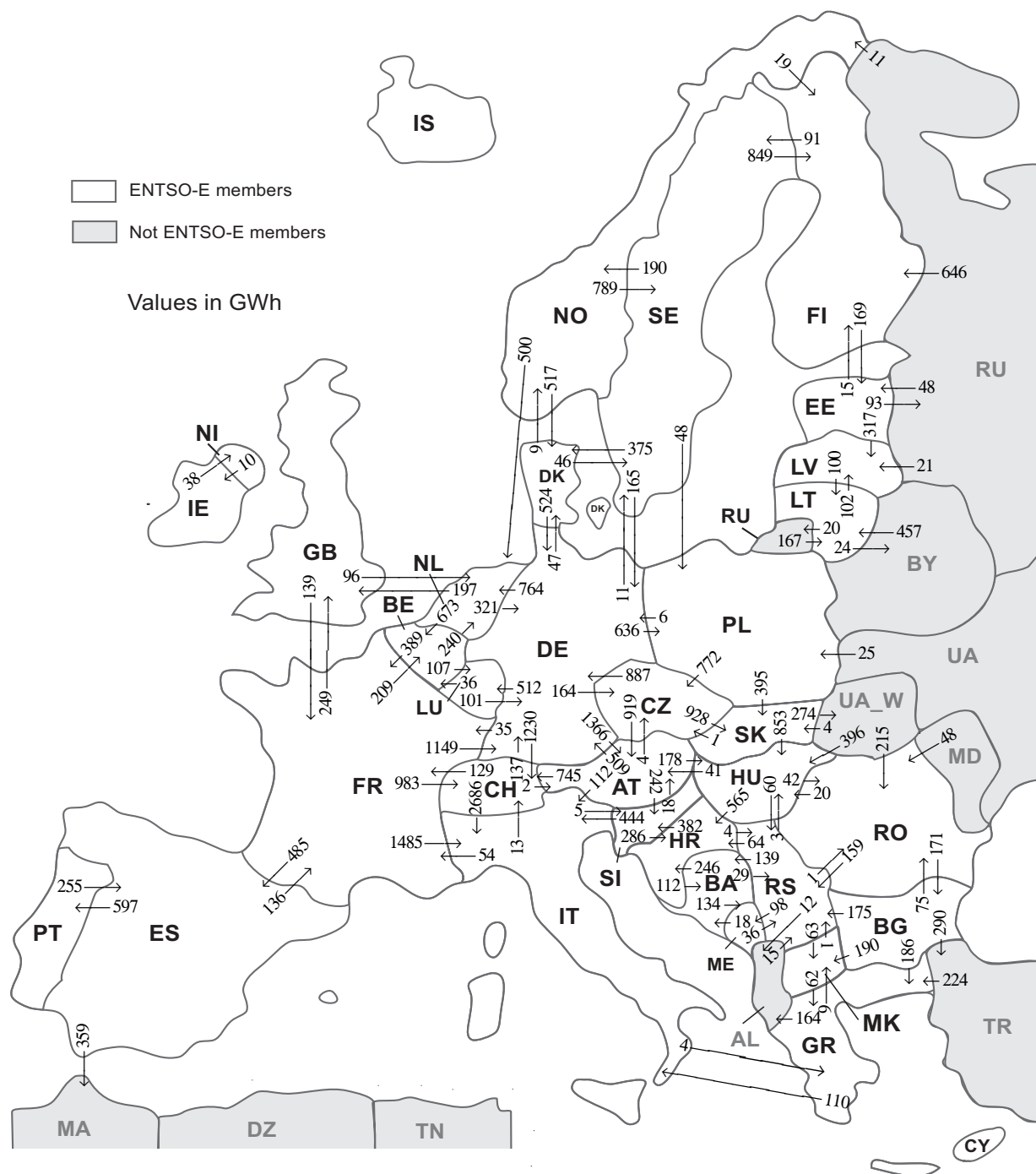
² The reported figures are best estimates based on actual measurements and extrapolations.

³ National monthly values as of October 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: **31009 GWh¹**

Total physical energy flows: **34522 GWh¹**

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

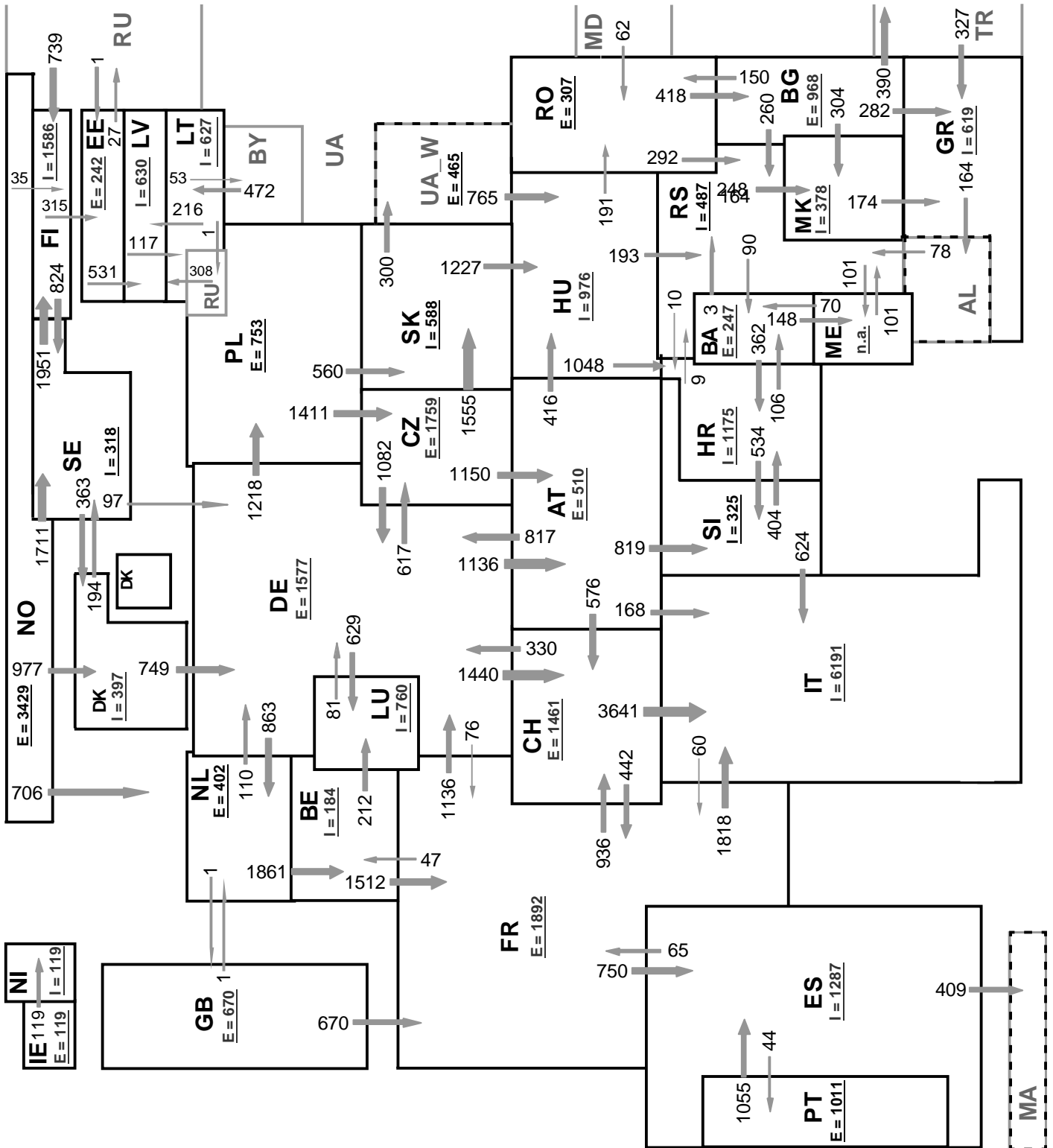
These physical energy flows were measured on the cross-frontier transmission lines (≤ 110 kV) listed in table characteristics of the cross-frontier lines published in the Statistical Yearbook. These values may differ from the official statistics and the exchange balances on page 2.

Outside flows	Inside flows of the countries																															UA_W	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	-	-	-	-	745	4	509	-	-	-	-	-	-	-	-	178	-	112	-	-	-	-	-	-	-	-	-	-	-	-	-	-	242	-	-		
BA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	246	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
BE	-	-	-	-	-	-	-	-	-	-	-	389	-	-	-	-	-	-	-	107	-	-	-	-	-	240	-	-	-	-	-	-	-	-	-		
BG	-	-	-	-	-	-	-	-	-	-	-	-	186	-	-	-	-	-	-	-	-	-	190	-	-	-	-	-	75	175	-	-	-	-	-	290	
CH	2	-	-	-	-	-	137	-	-	-	-	129	-	-	-	-	-	2686	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
CZ	919	-	-	-	-	-	887	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	928	-	
DE	1366	-	-	-	1230	164	-	47	-	-	-	35	-	-	-	-	-	-	512	-	-	-	-	-	764	636	-	-	-	-	11	-	-	-	-	-	
DK	-	-	-	-	-	-	524	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	-	-	-	-	46	-	-	-	-	-	
EE	-	-	-	-	-	-	-	-	-	-	15	-	-	-	-	-	-	-	-	317	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	93	
ES	-	-	-	-	-	-	-	-	-	-	-	136	-	-	-	-	-	-	-	-	-	-	-	-	-	-	597	-	-	-	-	-	-	-	-	359	
FI	-	-	-	-	-	-	-	-	169	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	91	-	-	-	-	0	
FR	-	-	209	-	983	-	1149	-	-	485	-	-	249	-	-	-	-	1485	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
GB	-	-	-	-	-	-	-	-	-	-	-	139	-	-	-	-	-	-	-	-	-	-	-	0	96	-	-	-	-	-	-	-	-	-	-	-	-
GR	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	164
HR	-	112	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	110	-	-	-	-	9	-	96	-	-	-	-	-	4	-	382	-	-	-	
HU	41	-	-	-	-	-	-	-	-	-	-	-	-	-	565	-	-	-	-	-	-	-	-	-	-	-	-	42	60	-	-	-	0	0	-	-	
IE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
IT	0	-	-	-	13	-	-	-	-	-	-	54	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	
LT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	44	
LU	-	-	36	-	-	-	101	-	-	-	-	-	-	-	-	-	-	-	-	-	102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
LV	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
ME	-	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.	
MK	-	-	-	0	-	-	-	-	-	-	-	-	62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NI	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NL	-	-	673	-	-	-	321	-	-	-	-	-	197	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
NO	-	-	-	-	-	-	-	517	-	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	500	-	-	-	-	-	-	-	789	-	-	0	
PL	-	-	-	-	772	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	395	0	
PT	-	-	-	-	-	-	-	-	255	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
RO	-	-	-	171	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
RS	-	139	-	0	-	-	-	-	-	-	-	-	-	64	3	-	-	-	-	-	-	98	63	-	-	-	-	-	-	-	-	-	-	-	-	12	
SE	-	-	-	-	-	-	165	375	-	849	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	190	48	-	-	-	-	-	-	-	-	-	
SI	18	-	-	-	-	-	-	-	-	-	-	-	-	286	-	-	444	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SK	-	-	-	-	-	1	-	-	-	-	-	-	-	-	853	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	274	
UA_W	-	-	-	-	-	-	-	-	-	-	-	-	-	-	396	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	
Other III ¹	-	-	-	0	-	-	-	-	48	0	646	-	-	224	-	-	-	-	624	-	21	n.a.	-	-	-	11	25	-	48	15	-	-	-	-	-	-	

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

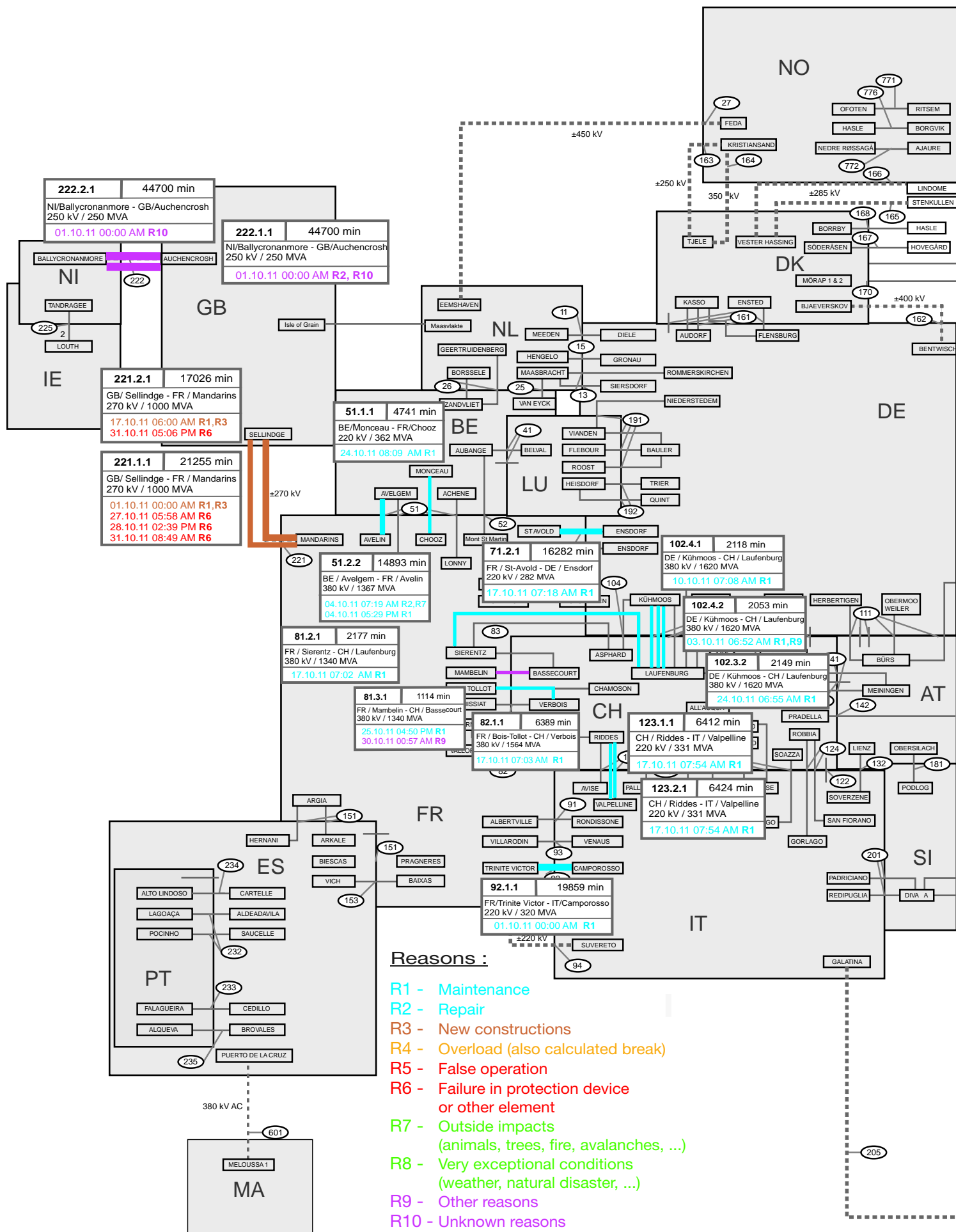
	flows inside	flows outside		flows inside	flows outside
AT	2346	1790	IT	4837	76
BA	269	409	LT	724	146
BE	918	736	LU	619	137
BG	171	916	LV	440	100
CH	2971	2954	ME	n.a.	n.a.
CZ	941	2734	MK	262	63
DE	3799	4765	NI	38	10
DK	939	579	NL	1600	1191
EE	217	425	NO	210	1825
ES	740	1092	PL	709	1173
FI	1529	260	PT	597	255
FR	882	4560	RO	381	350
GB	446	235	RS	479	380
GR	476	283	SE	937	1627
HR	1161	498	SI	629	748
HU	1450	708	SK	1327	1128
IE	10	38	UA_W	274	615



Sum of load flows in MW **ENTSO-E = 45028 MW** **Total = 49655 MW**
 (Sum of load flows without data between ME - AL)

Synchronous operation with ENTSO-E region

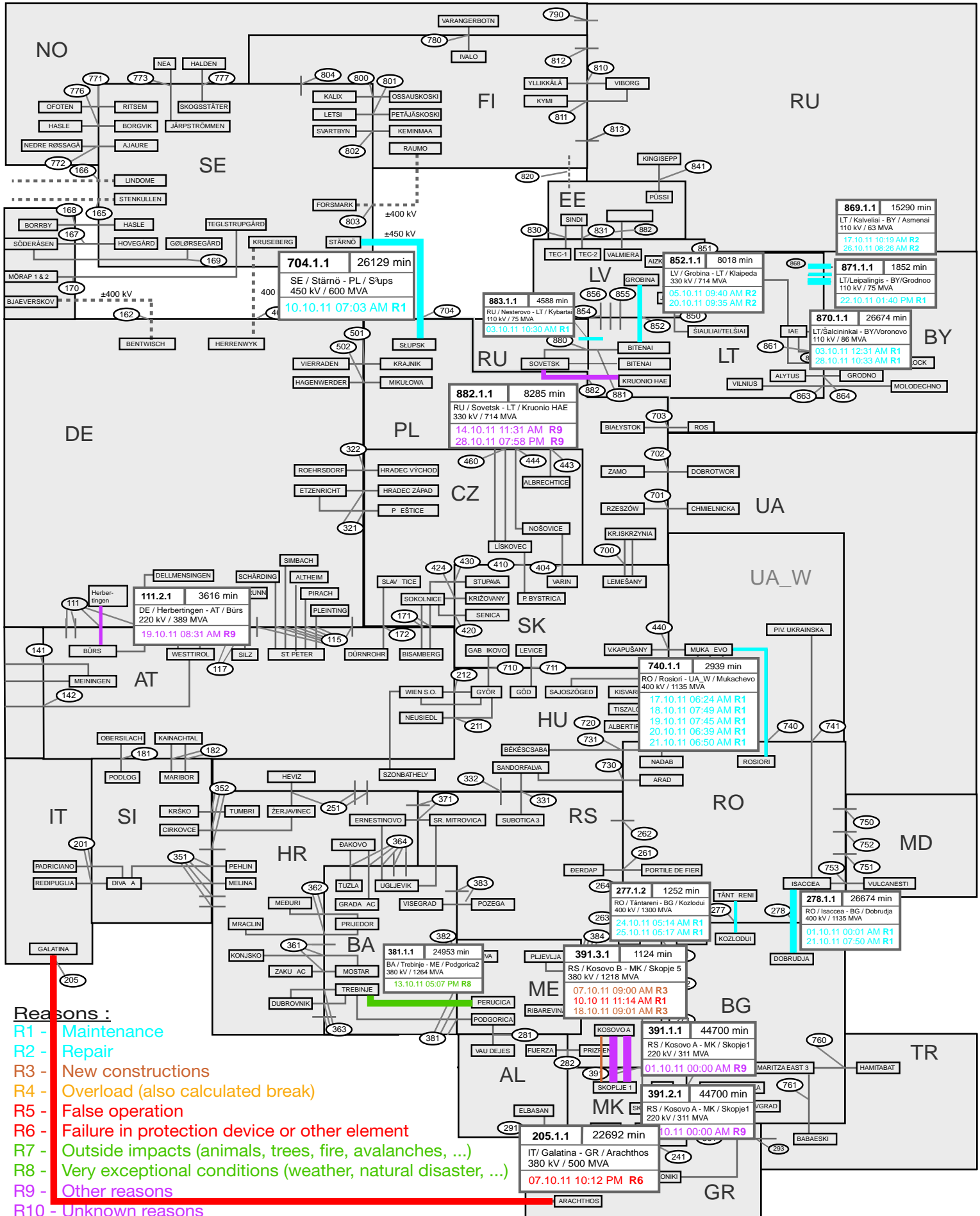
I = Import balance
 E = Export balance

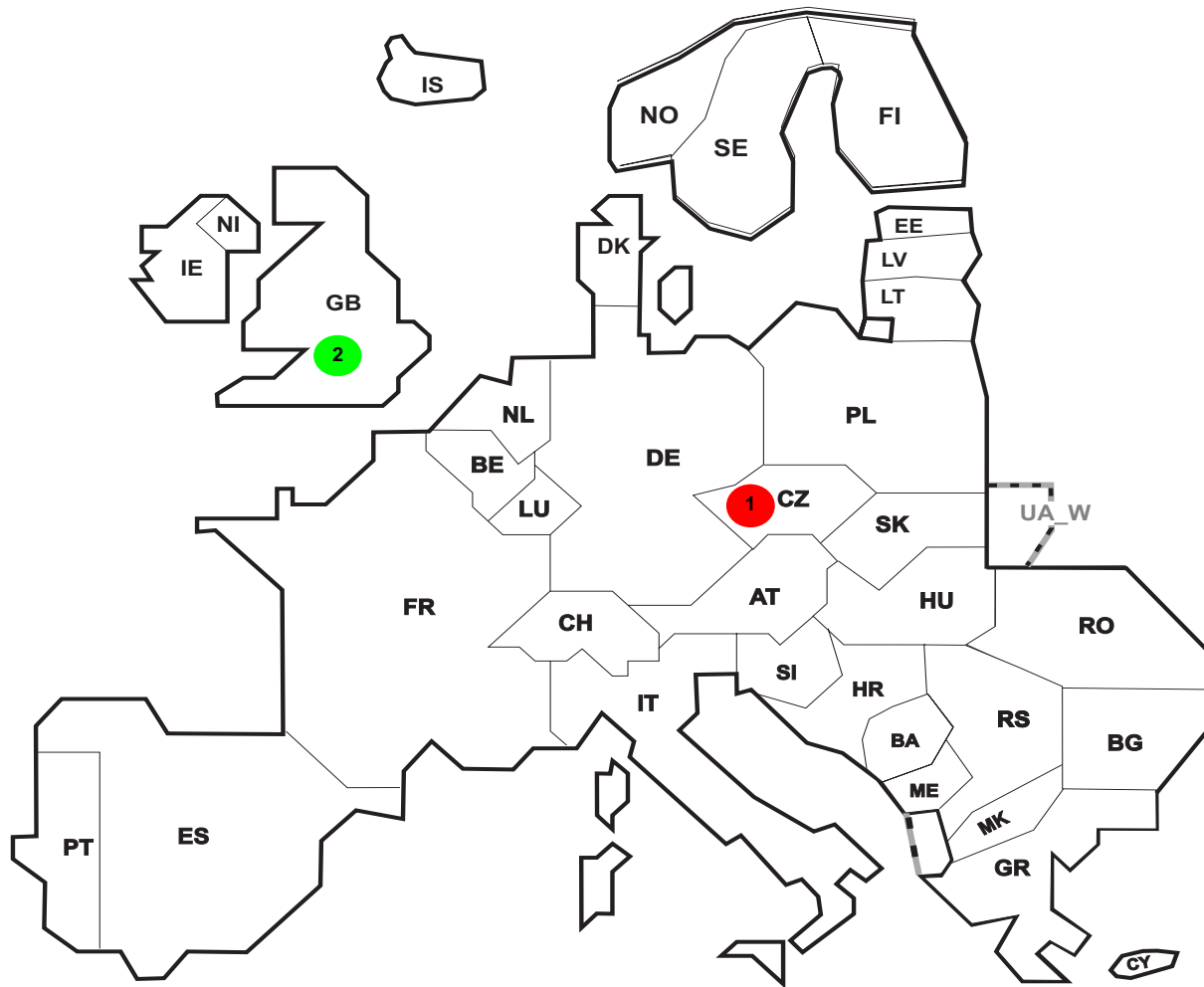


7

Unavailability of international tie lines (major events with sum over 1000 minutes)

October 2011





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	CZ	Tábor	R6	2	21	2	0,017
2	GB	Wymondley	R7	0	1	4	0,001

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 19.10.2011 CET of each country

	Highest		Lowest		Load representativity %
	load MW	variation % ¹	load MW	variation % ¹	
AT	8475	0,2	5271	1,2	100
BA	1812	3,6	1093	6,2	100
BE	11844	-3,8	8361	-2,6	100
BG	5679	14,4	3814	21,8	99
CH	9292	0,2	5730	-10,3	100
CY ³	627	-13,2	343	10,3	100
CZ	8642	0,2	6220	-0,8	100
DE	77479	1,3	48795	-8,9	91
DK	4987	-1,0	2940	-0,1	100
EE	1088	-5,4	689	-6,9	100
ES	35207	-4,3	22916	-1,5	98
FI	10325	-7,2	7833	-10,5	100
FR	64030	-6,2	43549	-10,9	100
GB	46656	-7,5	25556	-10,0	100
GR	6817	1,4	4092	3,8	100
HR	2513	-1,6	1451	3,5	100
HU	5522	1,2	3686	2,8	100
IE	3967	-1,0	2032	-3,5	100
IS	2054	1,1	1897	2,8	100
IT	46506	0,2	28503	0,6	100
LT	1499	-2,3	878	-0,9	100
LU	933	0,8	672	-3,6	100
LV	1060	0,0	610	11,3	100
ME ⁴	525	n.a.	327	n.a.	100
MK	1309	18,4	857	28,9	100
NI	1402	0,1	730	1,2	100
NL	15564	-1,1	9638	-0,4	100
NO	16304	-5,5	12096	-6,1	100
PL ⁵	21475	2,8	14464	2,1	100
PT	6878	-3,2	4353	-0,4	100
RO	7662	3,7	5506	8,2	100
RS	5960	1,8	3854	9,7	100
SE	18209	-8,5	13234	-3,7	100
SI	1854	4,9	1143	-5,2	100
SK	3796	2,4	2832	2,5	100
ENTSO-E	454078	n.a.	298726	n.a.	
UA_W	914	2,7	613	5,1	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.

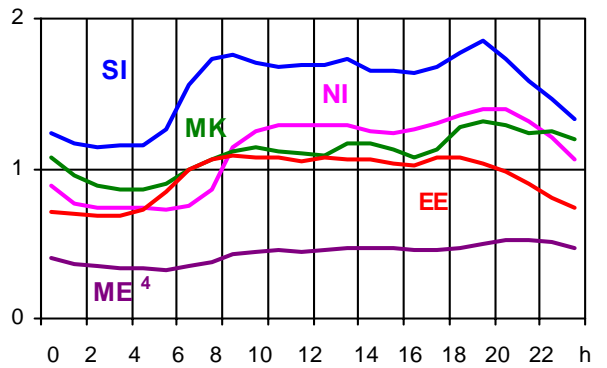
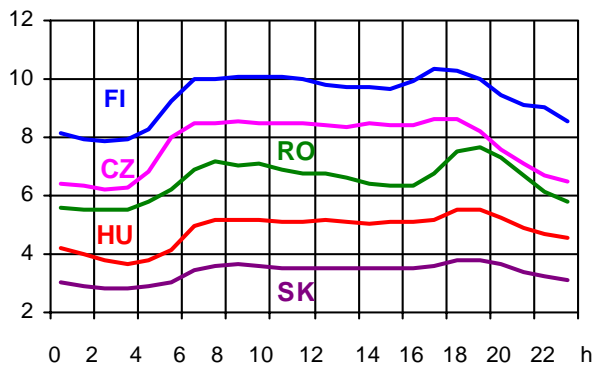
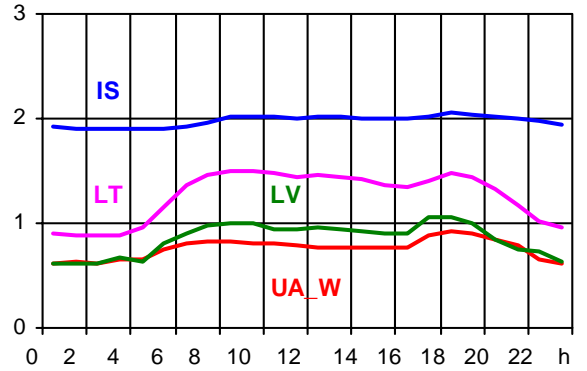
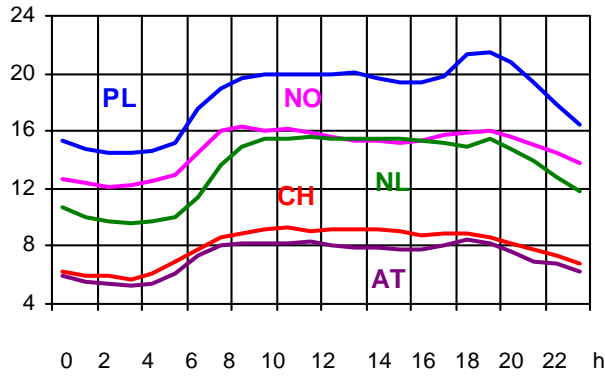
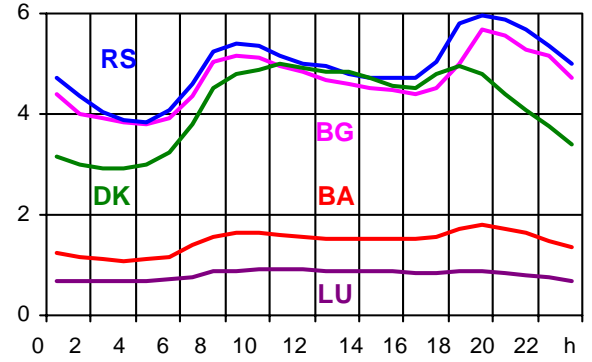
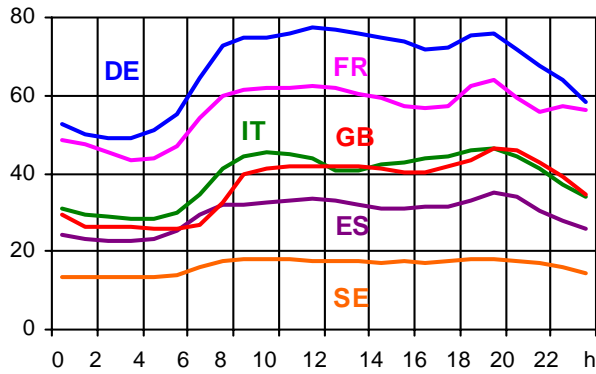
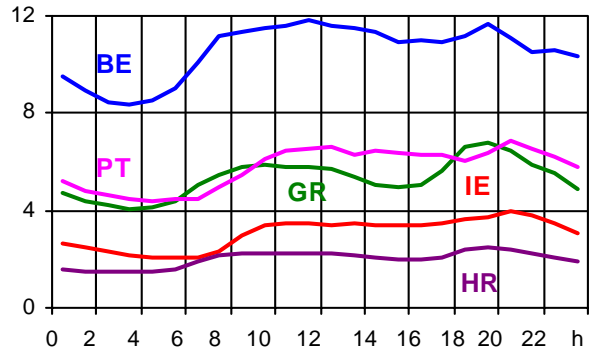
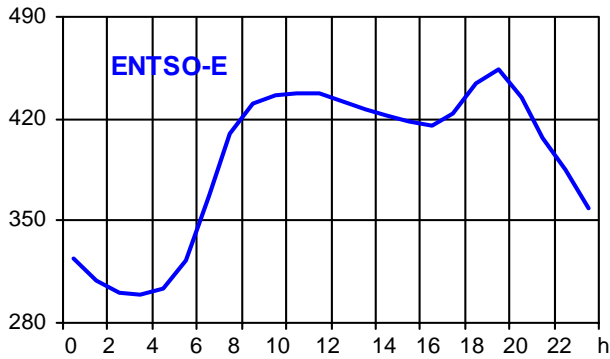
³ Only highest and lowest load value available.

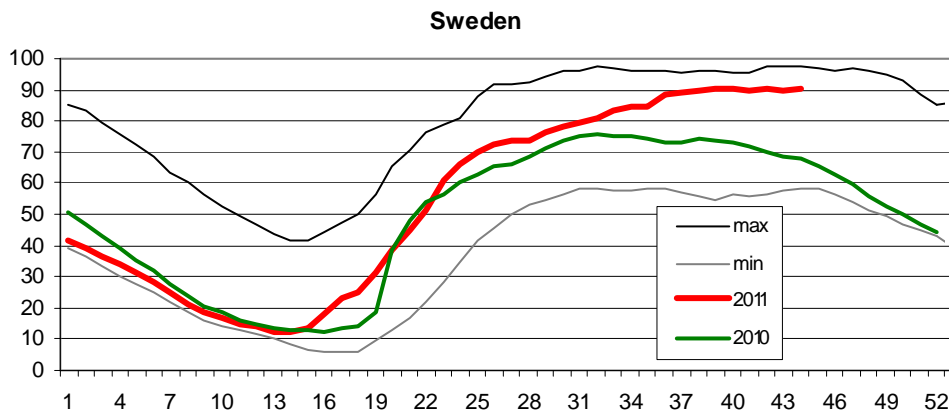
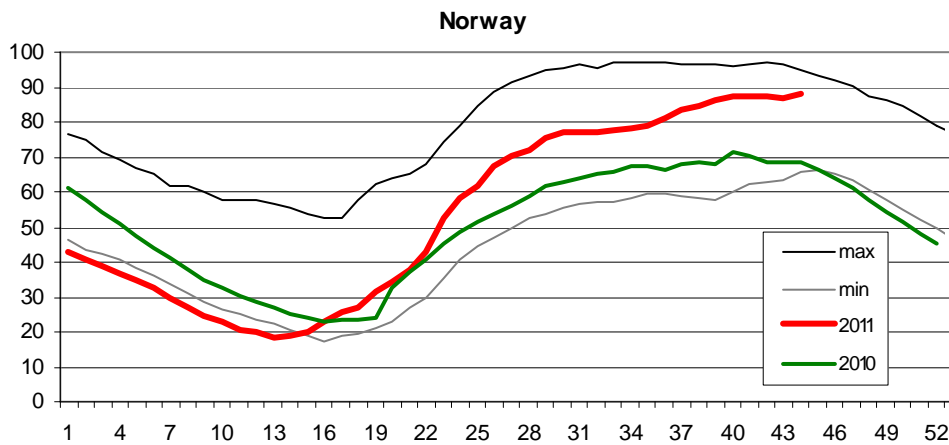
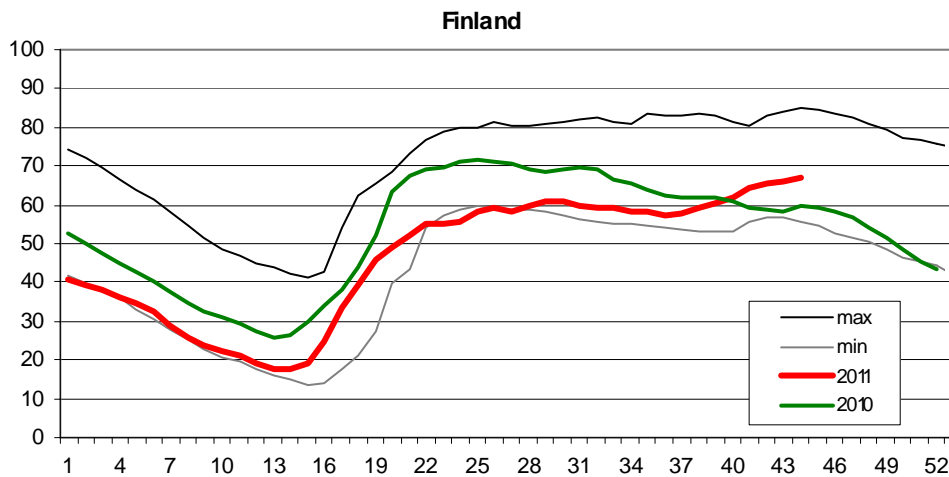
⁴ Monthly load values as of 20 October 2010

⁵ Operational data

Consumption hourly load curves on 19.10.2011 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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