Monthly report

January 2012

Monthly provisional values as of 07 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.
- CET Central European Time

1 Electricity supply situation of the countries

January 2012

Coun-tries	Net generation in GWh: Therm. nuclear	Fossil fuels	Hydro power	Other renew.	of which wind	of which solar	Non identi-fiable	Total	Exchange balance in GWh	Pump in GWh	Consumption monthly [GWh]	Consumption var. [%]
AT	0	2345	3074	0	0	0	767	**6186**	570	408	6348	-1,1
BA	0	863	275	0	0	0	0	**1138**	57	34	1161	0,5
BE [2]	4423	2509	160	636	309	35	0	**7728** [1]	335	152	7911	-9,2
BG	1445	2319	270	117	117	0	0	**4151**	-485	114	3552	2,3
CH	2437	192	2796	118	6	0	0	**5543** [1]	824	133	6234	-0,5
CY	0	423	0	23	23	0	0	**446**	0	0	446	0,0
CZ	2691	4743	343	136	72	65	0	**7913** [1]	-1768	116	6029	-2,0
DE [3]	8808	35730	1872	6668	3873	564	0	**53078** [1]	-2000	687	50391	-2,6
DK	0	2147	2	1360	1147	0	0	**3509** [1]	-246	0	3263	-3,9
EE	0	810	5	128	35	0	0	**943**	-123	0	820	-0,5
ES	5124	13493	1927	4663	3624	646	28	**25235**	-522	450	24263	2,7
FI	2059	2337	1270	1044	39	0	58	**6768** [1]	1762	0	8530	-3,8
FR	42824	5400	6762	2251	1583	158	0	**57237**	-5472	606	51159	-4,8
GB	5705	21760	890	2420	1307	0	0	**30775**	1334	324	31786	-2,8
GR	0	4002	278	387	306	45	0	**4667** [1]	160	50	4777	4,2
HR	0	558	303	38	32	0	0	**899**	741	30	1610	-2,8
HU	1523	1981	0	0	0	0	0	**3504**	321	0	3825	4,5
IE	0	1839	100	537	537	0	15	**2491** [1]	-113	0	2378	-6,6
IS	0	0	1058	432	0	0	0	**1490**	0	0	1490	1,0
IT	0	19007	2413	2512	1252	805	0	**23932**	4188	252	27868	0,3
LT	0	345	95	62	50	0	0	**502** [1]	533	69	966	-1,6
LU	0	222	99	14	9	0	0	**335**	362	130	567	-8,4
LV	0	288	209	22	6	0	0	**519**	205	0	724	3,0
ME [4]	0	126	326	0	0	0	0	**452**	-44	0	408	n.a.
MK	0	502	106	0	0	0	0	**608**	317	0	925	-3,7
NI	0	547	1	139	134	0	0	**687**	146	0	833	-6,2
NL	363	8186	0	1666	666	n.a.	0	**10215**	745	0	10960	-0,1
NO	0	282	15006	140	140	0	0	**15428** [1]	-1884	79	13465	-0,5
PL [5]	0	12623	209	917	422	0	0	**13749** [1]	-453	55	13241	0,2
PT	0	2480	496	879	651	20	0	**3855** [1]	860	78	4637	-5,6
RO	974	2936	751	287	271	0	0	**4948**	42	4	4986	-1,8
RS	0	3281	729	0	0	0	0	**4010**	-294	47	3669	-3,0
SE	5360	720	7165	1847	626	0	0	**15092** [1]	-567	0	14525	-3,3
SI	516	451	155	0	0	0	0	**1122**	17	0	1139	19,6
SK	1336	515	399	66	0	20	103	**2419** [1]	96	40	2475	-2,8
ENTSO-E	**85588**	**155962**	**49544**	**29509**	**17237**	**2358**	**971**	**321574** [1]	**-356**	**3858**	**317361**	**n.a.**

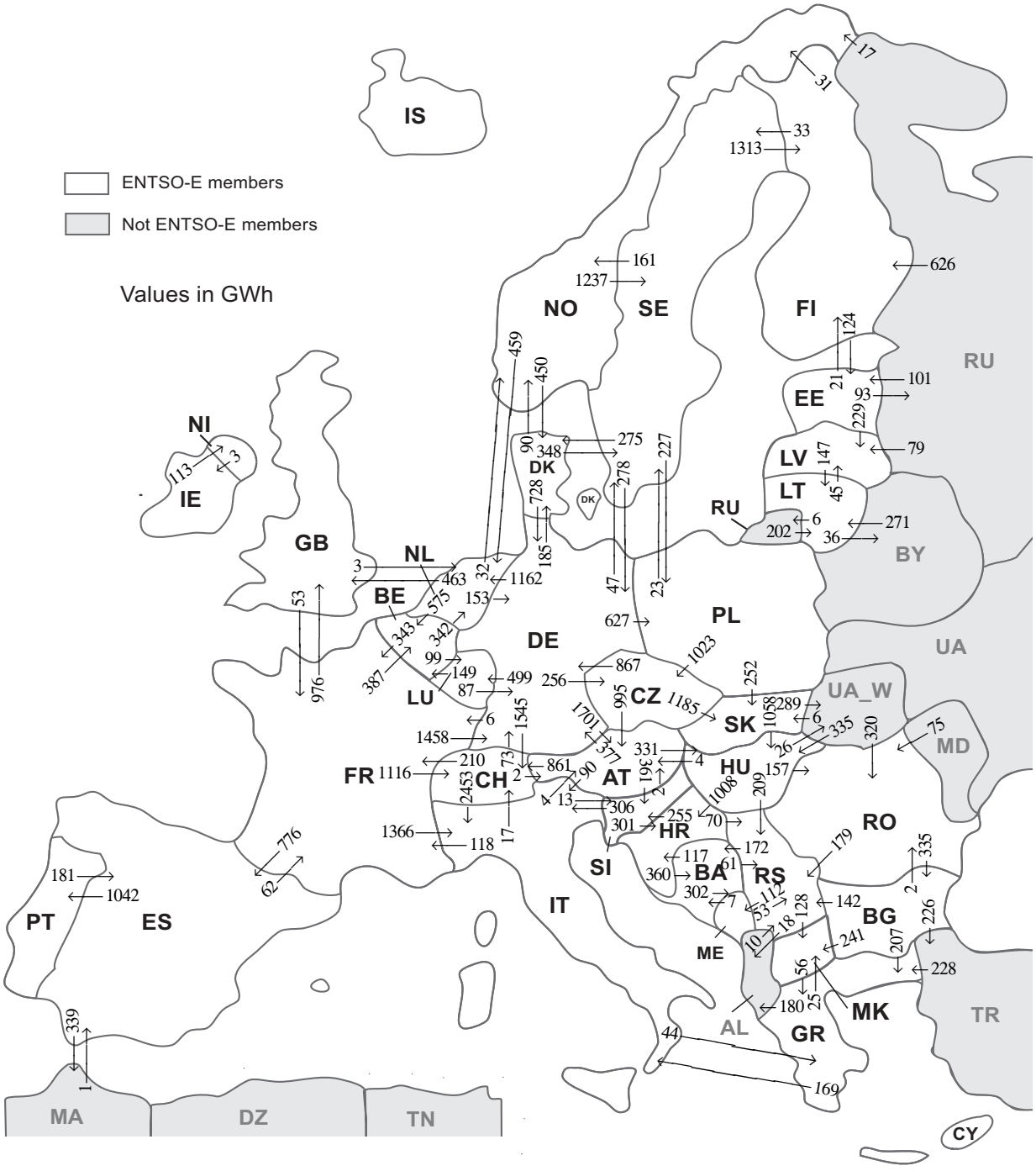
[1] Including deliveries from industry
[2] The reported figures are best estimates based on actual measurements and extrapolations.
[3] The reported figures are best estimates based on actual inquiries, measurements and extrapolations.
[4] National monthly values as of January 2011
[5] Operational data. 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 %					
	Thermal nuclear	Fossil fuels	Hydro prod	Other renewable	Non identifiable	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

3 Physical energy flows

January 2012



Sum of physical energy flows between ENTSO-E countries: **37388GWh** [1]

Total physical energy flows: **40873GWh** [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	-	-	-	-	861	0	377	-	-	-	-	-	-	-	-	331	-	90	-	-	-	-	-	-	-	-	-	-	-	-	361	-	-	-
BA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	117	-	-	-	-	-	-	302	-	-	-	-	-	-	-	61	-	-	-	-
BE	-	-	-	-	-	-	-	-	-	-	-	343	-	-	-	-	-	-	-	99	-	-	-	-	342	-	-	-	-	-	-	-	-	-
BG	-	-	-	-	-	-	-	-	-	-	-	-	-	207	-	-	-	-	-	-	-	241	-	-	-	-	-	-	2	142	-	-	-	226
CH	2	-	-	-	-	-	73	-	-	-	-	210	-	-	-	-	-	2453	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CZ	995	-	-	-	-	-	867	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1185	-	-
DE	1701	-	-	-	1545	256	-	185	-	-	-	6	-	-	-	-	-	-	-	499	-	-	-	-	1162	-	627	-	-	-	47	-	-	-
DK	-	-	-	-	-	-	728	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90	-	-	-	-	348	-	-	-
EE	-	-	-	-	-	-	-	-	-	-	21	-	-	-	-	-	-	-	-	-	229	-	-	-	-	-	-	-	-	-	-	-	-	93
ES	-	-	-	-	-	-	-	-	-	-	-	62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1042	-	-	-	-	-	-	339
FI	-	-	-	-	-	-	-	-	124	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31	-	-	-	-	33	-	-	0
FR	-	-	387	-	1116	-	1458	-	-	776	-	-	976	-	-	-	-	1366	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GB	-	-	-	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	-	-	-	38	3	-	-	-	-	-	-	-	-	-
GR	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	169	-	-	-	-	25	-	-	-	-	-	-	-	-	-	-	180
HR	-	360	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	70	-	255	-	-
HU	4	-	-	-	-	-	-	-	-	-	-	-	-	-	1008	-	-	-	-	-	-	-	-	-	-	-	-	-	157	209	-	-	0	26	-
IE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	113	-	-	-	-	-	-	-	-	-	-
IT	4	-	-	-	17	-	-	-	-	-	-	118	-	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	-	-	-
LT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	-	-	-	-	42
LU	-	-	149	-	-	-	87	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LV	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	147	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
ME	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	53	-	-	-	n.a.
MK	-	-	-	0	-	-	-	-	-	-	-	-	-	56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-
NI	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NL	-	-	575	-	-	-	153	-	-	-	-	-	463	-	-	-	-	-	-	-	-	-	-	-	-	32	-	-	-	-	-	-	-	-
NO	-	-	-	-	-	-	-	450	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	459	-	-	-	-	1237	-	-	-	0
PL	-	-	-	-	-	1023	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23	-	252	-	0
PT	-	-	-	-	-	-	-	-	-	181	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RO	-	-	-	335	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	179	-	-	-	0	0
RS	-	172	-	1	-	-	-	-	-	-	-	-	-	-	0	0	-	-	-	-	-	112	128	-	-	-	-	-	0	-	-	-	-	-	18
SE	-	-	-	-	-	-	278	275	-	-	1313	-	-	-	-	-	-	-	-	-	-	-	-	-	-	161	227	-	-	-	-	-	-	-	-
SI	2	-	-	-	-	-	-	-	-	-	-	-	-	-	301	-	-	306	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SK	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	1058	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	289	-
UA_W	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	335	-	-	-	-	-	-	-	-	-	-	-	-	320	-	-	-	6	-	-
Other III[1]	-	-	-	1	-	-	-	-	101	1	626	-	-	228	-	-	-	-	473	-	79	n.a.	-	-	-	17	0	-	75	10	-	-	-	-	-

Other III[1]: Albania, Belarus, Morocco, Republic of Moldavia, Republic of Turkey, Russia and Ukraine

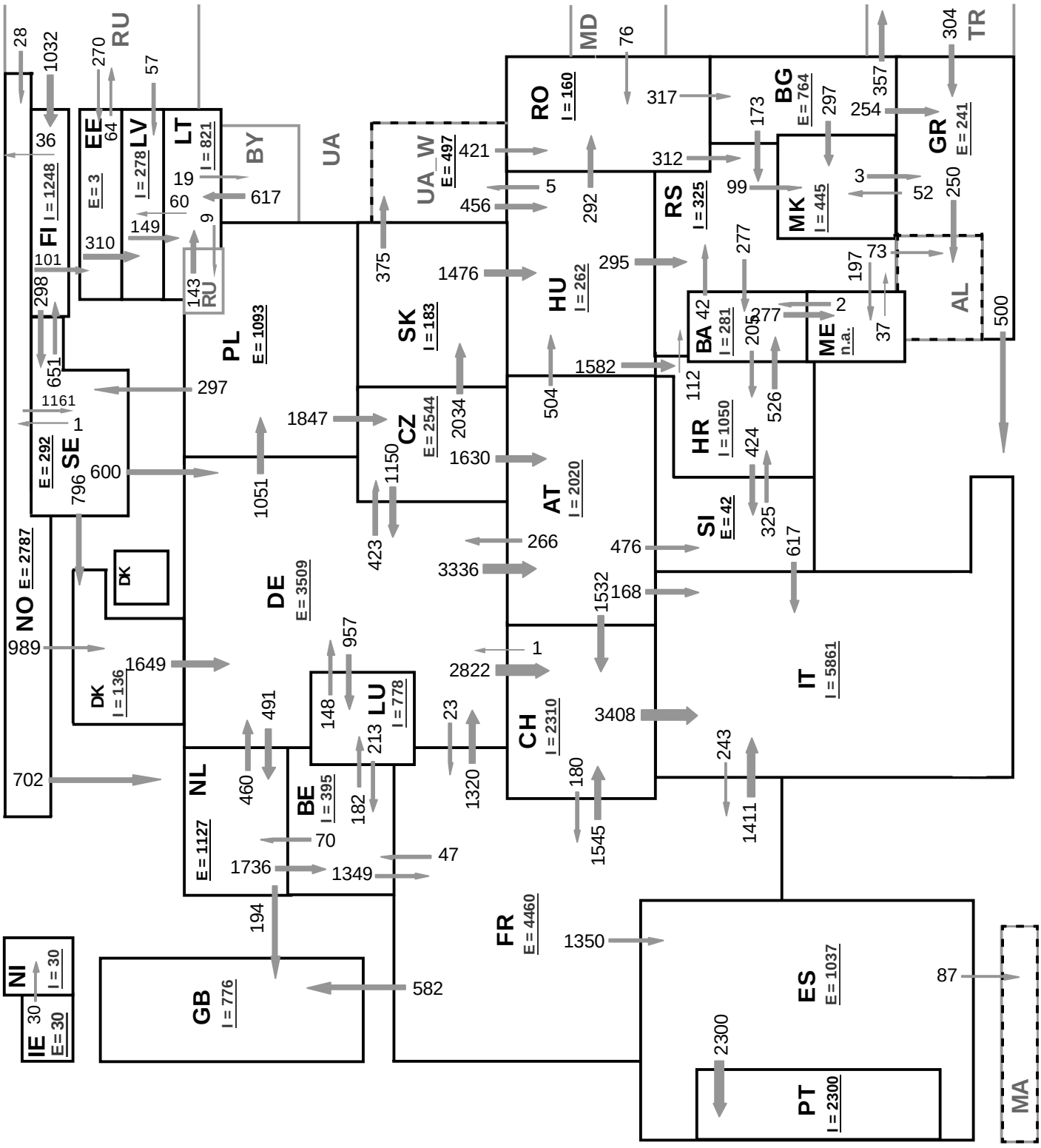
Sum of the monthly energy flows inside and outside of each country in GWh

	flows inside	flows outside
AT	2708	2020
BA	539	480
BE	1111	784
BG	337	818
CH	3539	2738
CZ	1279	3048
DE	4028	6028
DK	910	1166
EE	226	343
ES	958	1443
FI	1960	188
FR	792	6079
GB	1439	94
GR	535	374
HR	1426	685
HU	1724	1404
IE	3	113

	flows inside	flows outside
IT	4384	196
LT	620	87
LU	598	236
LV	353	148
ME	n.a.	n.a.
MK	394	56
NI	151	3
NL	1966	1223
NO	331	2146
PL	855	1305
PT	1042	181
RO	554	514
RS	724	431
SE	1688	2254
SI	629	609
SK	1443	1347
UA_W	315	661

5 Load flows (night) on 18.01.2012 at 03:00 a.m. CET in MW

January 2012

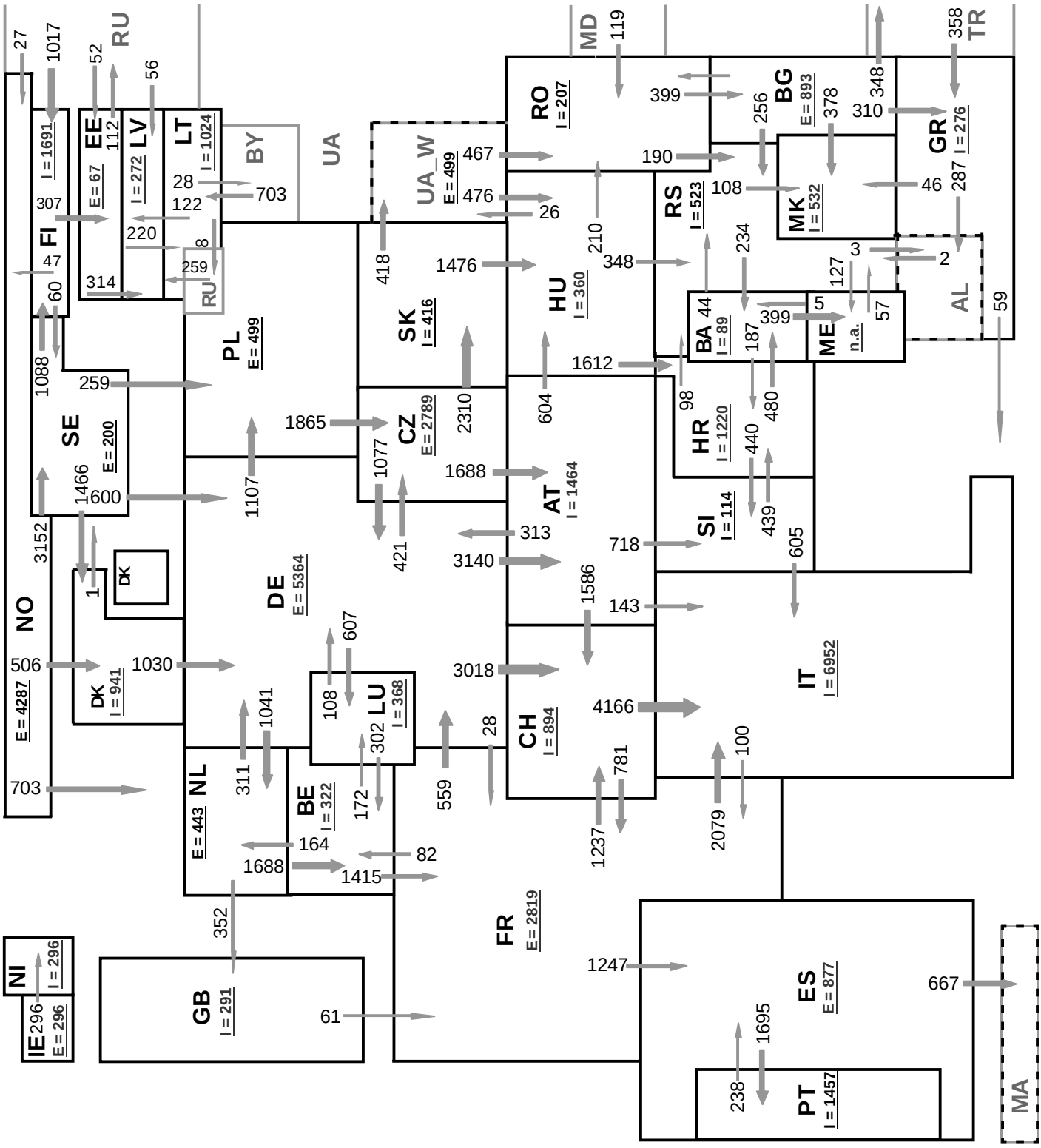


Sum of load flows in MW **ENTSO-E = 51972 MW** **Total = 56615 MW**

(Calculated sum without data between ME - AL)

Synchronous operation with ENTSO-E region

I = Import balance
E = Export balance

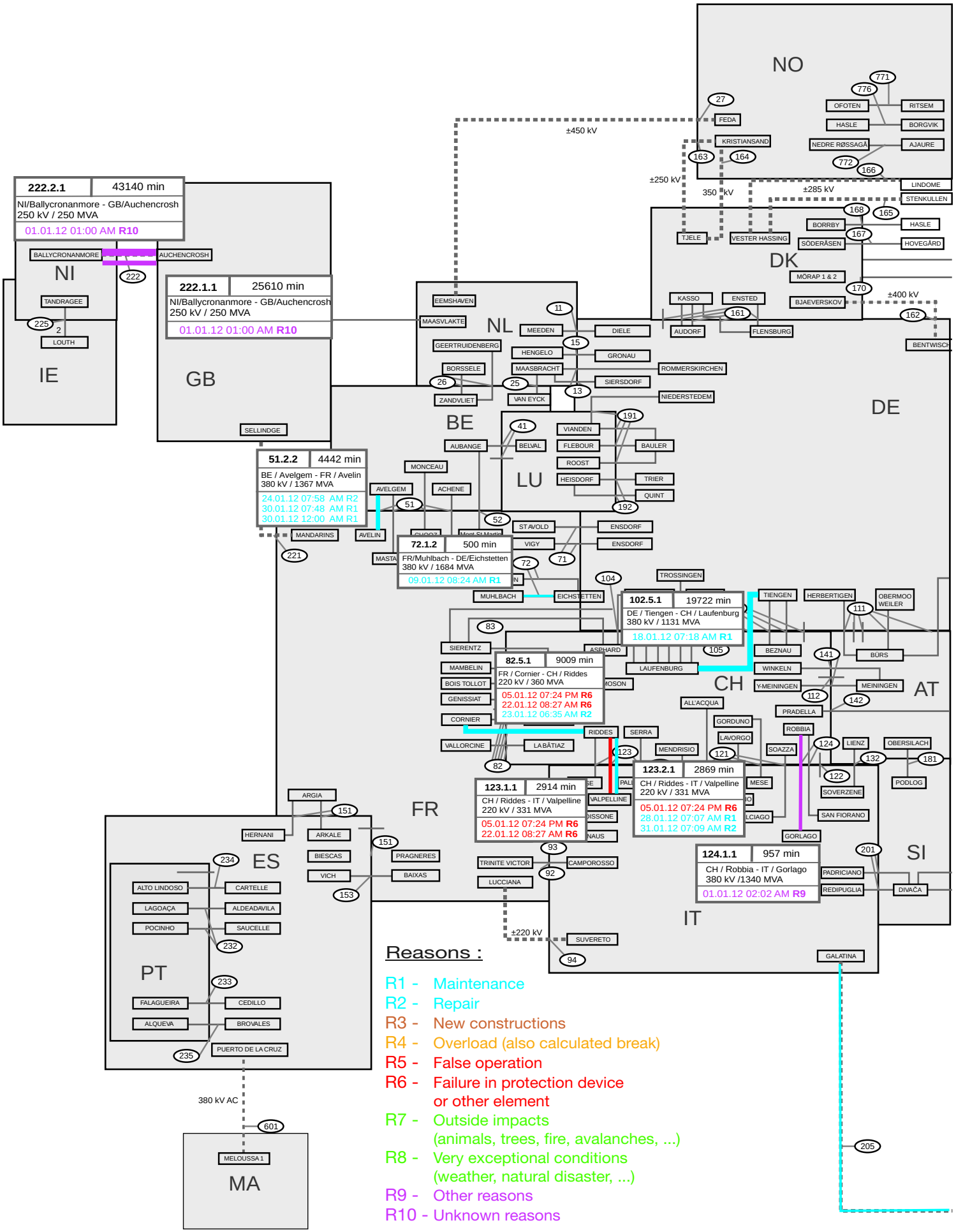


Sum of load flows in MW ENTSO-E = 54787 MW Total = 60534 MW
(Calculated sum without data between ME - AL)

Synchronous operation with ENTSO-E region

I = Import balance
E = Export balance

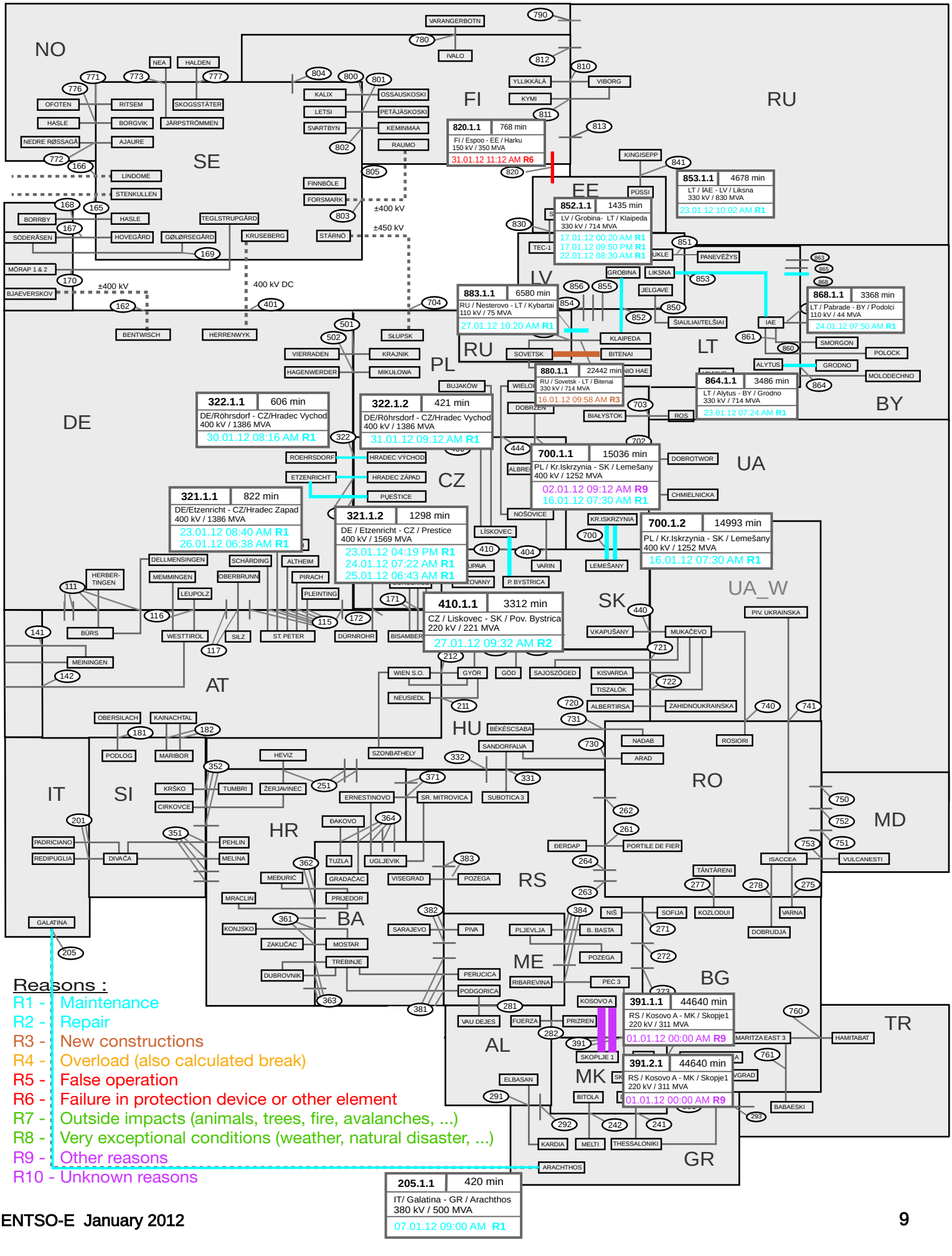
Unavailability of international tie lines
(major events with sum over 400 minutes)



7

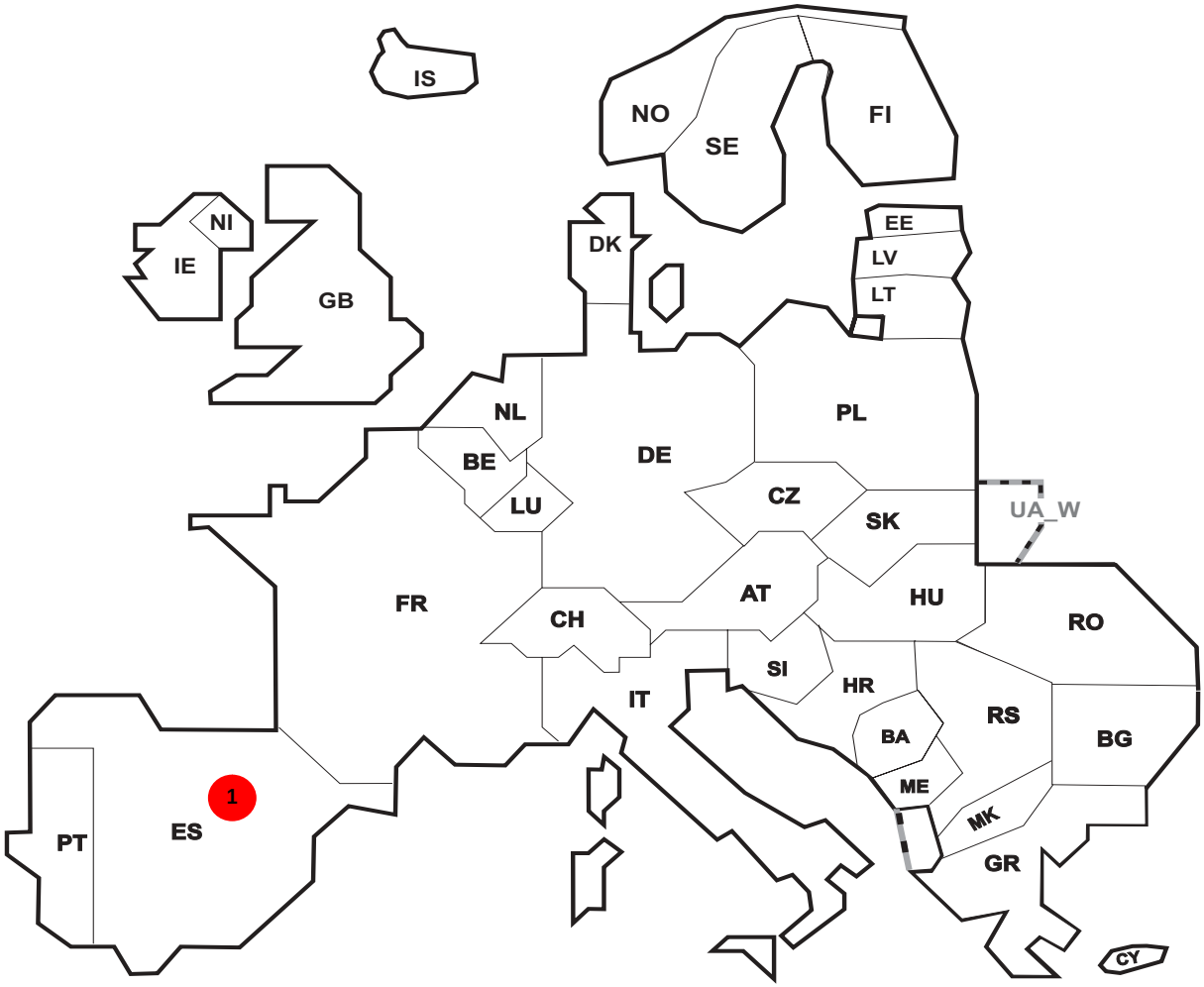
Unavailability of international tie lines
(major events with sum over 400 minutes)

January 2012



Reasons :

- R1 - Maintenance
- R2 - Repair
- R3 - New constructions
- 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



Reasons:

R4	Overload (also calculated break)	R8	Very exceptional conditions (weather, natural disaster, ...)
R5	False operation		
R6	Failure in protection device or other element	R9	Other reasons
R7	Outside impacts (animals, trees, fire, avalanches, ...)	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	ES	Morata	R6	2	6	21	0,004

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 18.01.2012 CET of each country

	Highest load MW	variation %[1]	Lowest load MW	variation %[1]	Load representativity %
AT	9432	2,0	6189	8,8	100
BA	1967	3,0	1218	9,6	100
BE [2]	13212	-4,8	9735	-2,6	100
BG	6589	8,6	4528	10,7	99
CH	7773	-22,3	6329	-10,7	100
CY [3]	831	10,9	443	8,3	100
CZ	9577	1,0	7200	1,5	100
DE [4]	78488	-10,8	55352	-2,5	91
DK	5826	-1,2	3105	-5,3	100
EE	1317	-0,2	883	0,9	100
ES	40973	-0,9	25445	0,0	98
FI	12328	-1,0	9960	-1,8	100
FR	86539	5,0	68826	13,7	100
GB	56467	-7,3	32540	-2,2	92
GR	8243	12,0	5150	13,2	100
HR	2841	1,5	1810	8,1	100
HU	5707	0,2	3792	1,8	100
IE	4207	-7,1	2324	-9,8	100
IS	2111	1,6	1928	1,2	100
IT	51927	1,4	29624	3,4	100
LT	1660	3,3	952	0,7	100
LU	989	-7,7	662	-7,4	100
LV	1184	4,8	690	12,9	100
ME [5]	615	n.a.	405	n.a.	100
MK	1568	15,1	1059	7,7	100
NI	1599	-4,9	795	-6,0	100
NL	17301	0,5	9794	-1,1	100
NO	20208	-2,0	15695	-3,3	100
PL [6]	22130	1,9	15065	4,2	100
PT	8143	-0,2	4927	-1,1	100
RO	8272	0,5	5724	-0,6	100
RS	6765	2,5	4837	8,6	100
SE	22263	-4,1	16176	-2,7	100
SI	1944	1,9	1249	-2,3	100
SK	4124	1,1	3096	1,6	100
ENTSO-E	**521097**	**n.a.**	**360961**	**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.

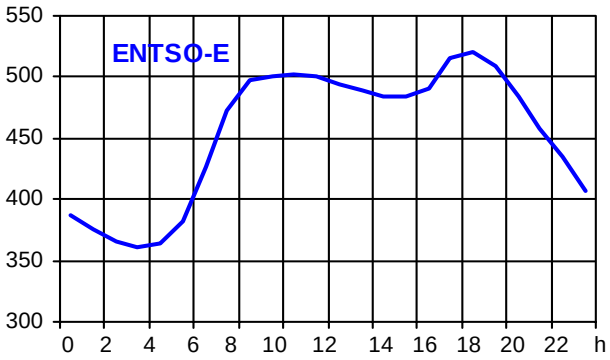
[4] The reported figures are best estimates based on actual inquiries, measurements and extrapolations.

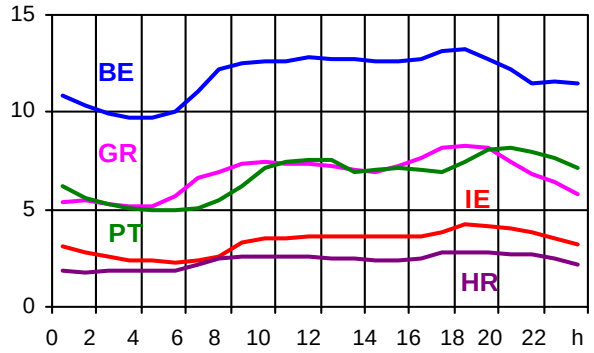
[5] Monthly load values as of 19 January 2011

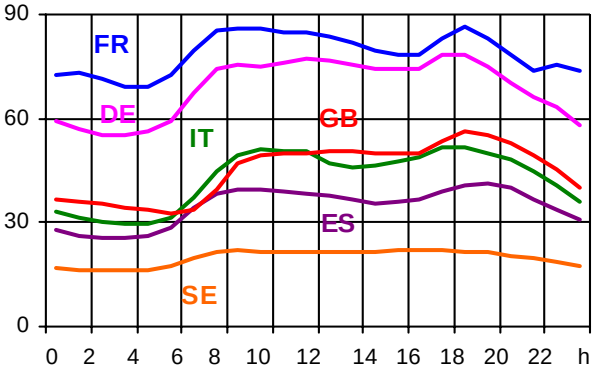
[6] Operational data

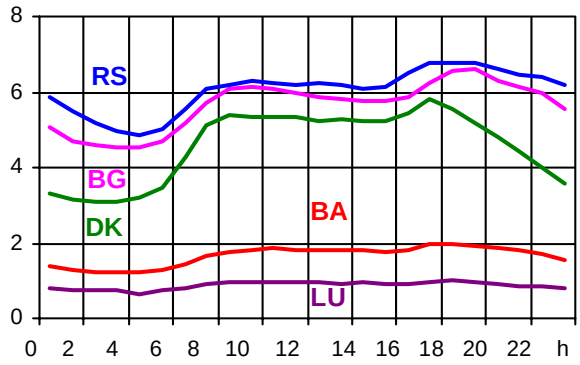
Consumption hourly load curves on 18.01.2012 CET

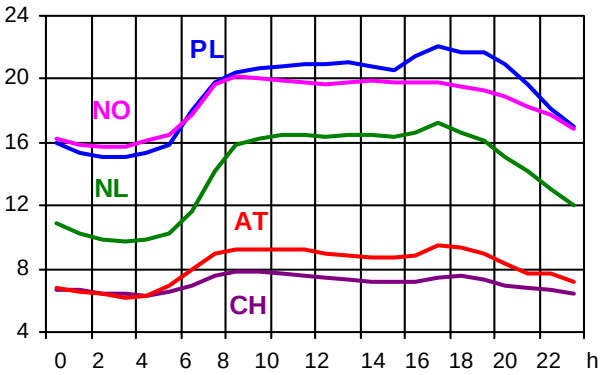
Values in GW

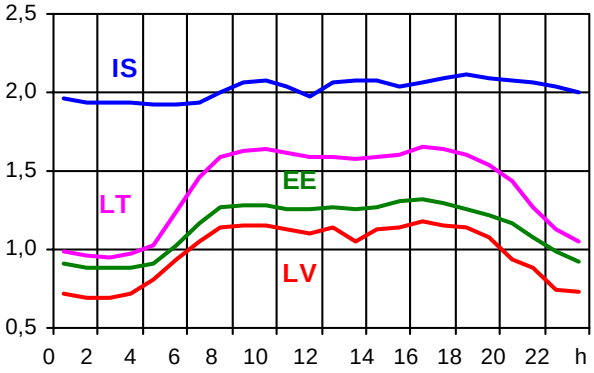


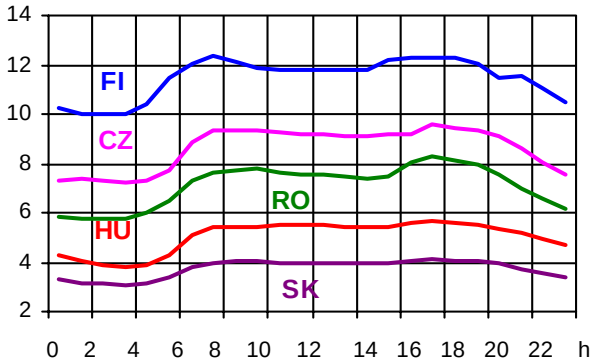


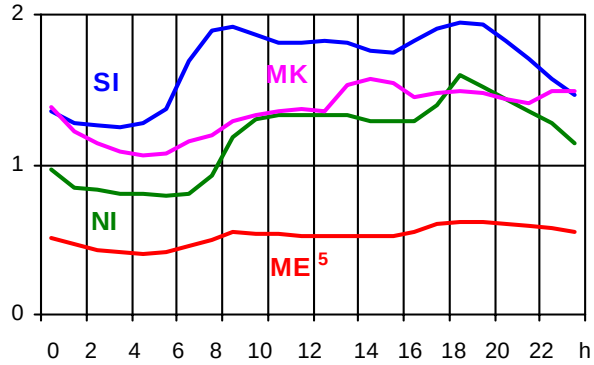


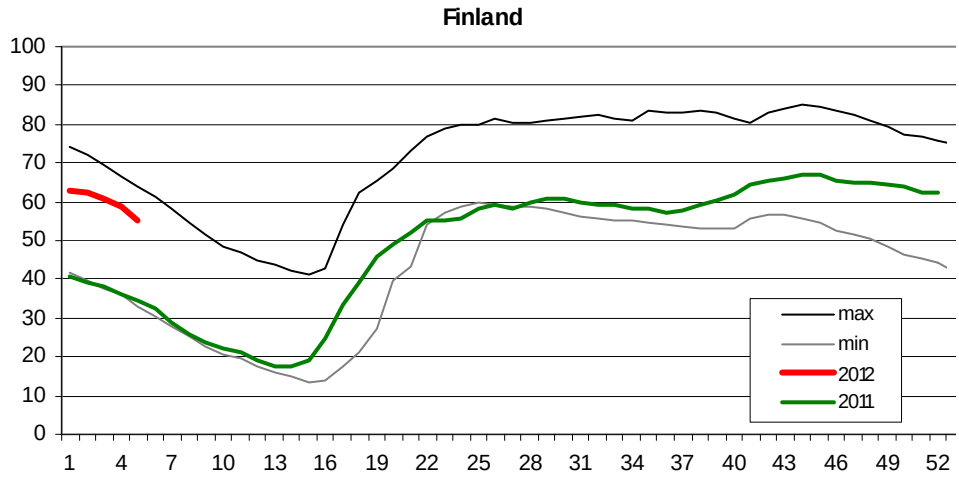


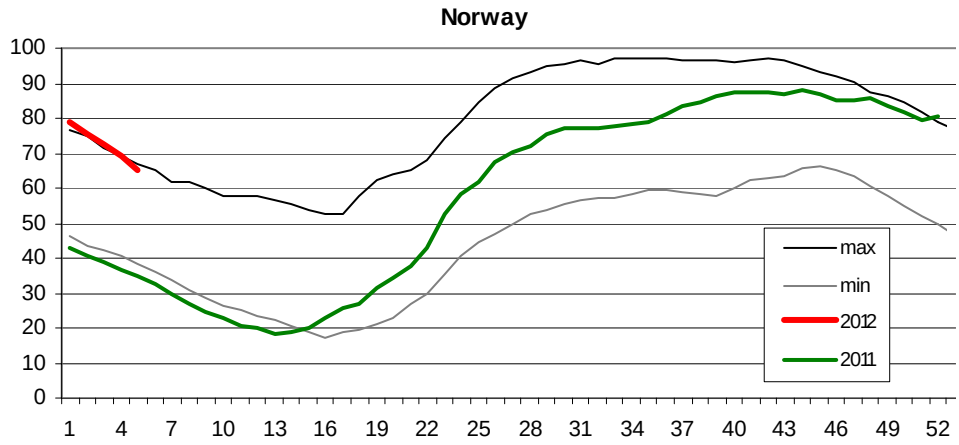


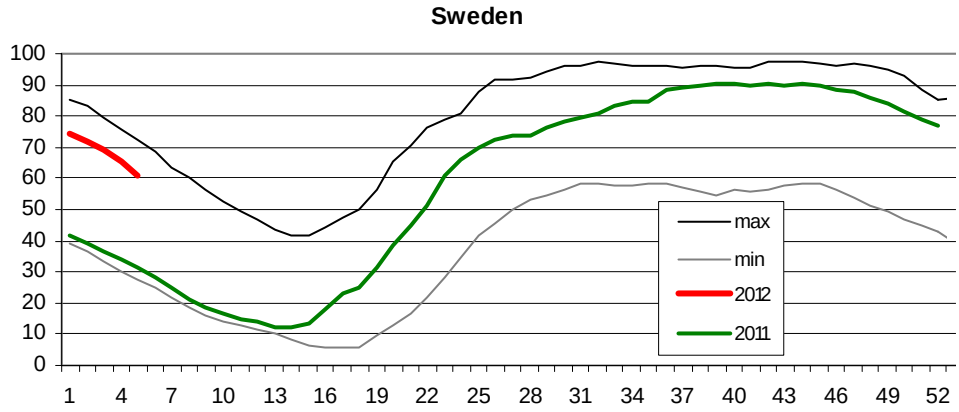












Finland: Reservoir capacity: 5.530 GWh
Minimum and maximum limits are based on values for the years 1990-2002

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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