

# Monthly report



## April 2012

Monthly provisional values as of 14 August 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 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	1330	3313	0	0	0	788	<b>5431</b>	503	490	5444	1,8
BA	0	582	587	0	0	0	0	<b>1169</b>	-212	0	957	2,0
BE <sup>2</sup>	3263	2220	140	623	228	121	0	<b>6246</b> <sup>1</sup>	812	143	6915	-0,3
BG	1143	1580	311	107	107	0	0	<b>3141</b>	-698	109	2334	-9,3
CH	2222	184	2445	113	6	0	0	<b>4964</b> <sup>1</sup>	316	174	5106	3,6
CY	0	291	0	12	12	0	0	<b>303</b>	0	0	303	-12,7
CZ	2403	4137	283	263	30	235	0	<b>7086</b> <sup>1</sup>	-1904	94	5088	2,3
DE <sup>3</sup>	5810	29770	1961	5813	1161	2535	0	<b>43354</b> <sup>1</sup>	-1438	573	41343	-4,8
DK	0	1289	1	936	725	0	0	<b>2226</b> <sup>1</sup>	468	0	2694	1,6
EE	0	636	5	126	35	0	0	<b>767</b>	-108	0	659	3,5
ES	5123	8527	1993	6668	5390	911	27	<b>22338</b>	-1212	566	20560	6,2
FI	1847	1479	1077	940	40	0	60	<b>5403</b> <sup>1</sup>	1480	0	6883	-0,7
FR	33104	3501	5300	2254	1565	289	0	<b>44159</b>	-3489	511	40159	13,6
GB	5807	18610	415	1663	898	0	0	<b>26495</b>	854	295	27054	7,7
GR	0	2753	352	0	325	68	0	<b>3105</b> <sup>1</sup>	77	17	3165	-18,1
HR	0	310	373	32	25	0	0	<b>715</b>	610	14	1311	0,2
HU	1095	1260	0	0	0	0	0	<b>2355</b>	950	0	3305	4,6
IE	0	1632	15	362	362	0	24	<b>2033</b> <sup>1</sup>	54	1	2086	1,8
IS	0	0	964	419	0	0	0	<b>1383</b>	0	0	1383	1,6
IT	0	14741	2961	3362	1357	1568	0	<b>21064</b>	3696	238	24522	-6,2
LT	0	124	84	56	42	0	0	<b>264</b> <sup>1</sup>	605	45	824	3,6
LU	0	244	94	13	6	3	0	<b>351</b>	291	128	514	-6,2
LV	0	46	740	31	11	0	0	<b>817</b>	-167	0	650	15,5
ME <sup>4</sup>	0	138	79	0	0	0	0	<b>217</b>	84	0	301	n.a.
MK	0	351	145	0	0	0	0	<b>496</b>	174	0	670	-5,2
NI	0	445	0	77	72	0	0	<b>522</b>	185	0	707	1,4
NL	62	6342	0	1407	407	n.a.	0	<b>7811</b>	1188	0	8999	1,7
NO	0	286	11711	85	85	0	0	<b>12082</b> <sup>1</sup>	-1556	69	10457	11,9
PL <sup>5</sup>	0	10694	280	892	329	0	0	<b>11866</b> <sup>1</sup>	-322	41	11503	-0,1
PT	0	1396	431	1339	1093	21	0	<b>3166</b> <sup>1</sup>	801	133	3834	-1,4
RO	911	1748	1405	239	224	n.a.	0	<b>4303</b>	-29	31	4243	-2,4
RS	0	2181	1164	0	0	0	0	<b>3345</b>	147	133	3359	-1,2
SE	5476	285	6407	1539	516	0	0	<b>13707</b> <sup>1</sup>	-2046	0	11661	7,3
SI	209	340	253	0	0	0	0	<b>802</b>	178	0	980	-1,4
SK	1104	461	449	120	0	56	75	<b>2209</b> <sup>1</sup>	-65	30	2114	0,1
<b>ENTSO-E</b>	<b>69579</b>	<b>119913</b>	<b>45738</b>	<b>29491</b>	<b>15051</b>	<b>5807</b>	<b>974</b>	<b>265695</b> <sup>1</sup>	<b>227</b>	<b>3835</b>	<b>262087</b>	<b>n.a.</b>

<sup>1</sup> Including deliveries from industry

<sup>2</sup> The reported figures are best estimates based on actual measurements and extrapolations.

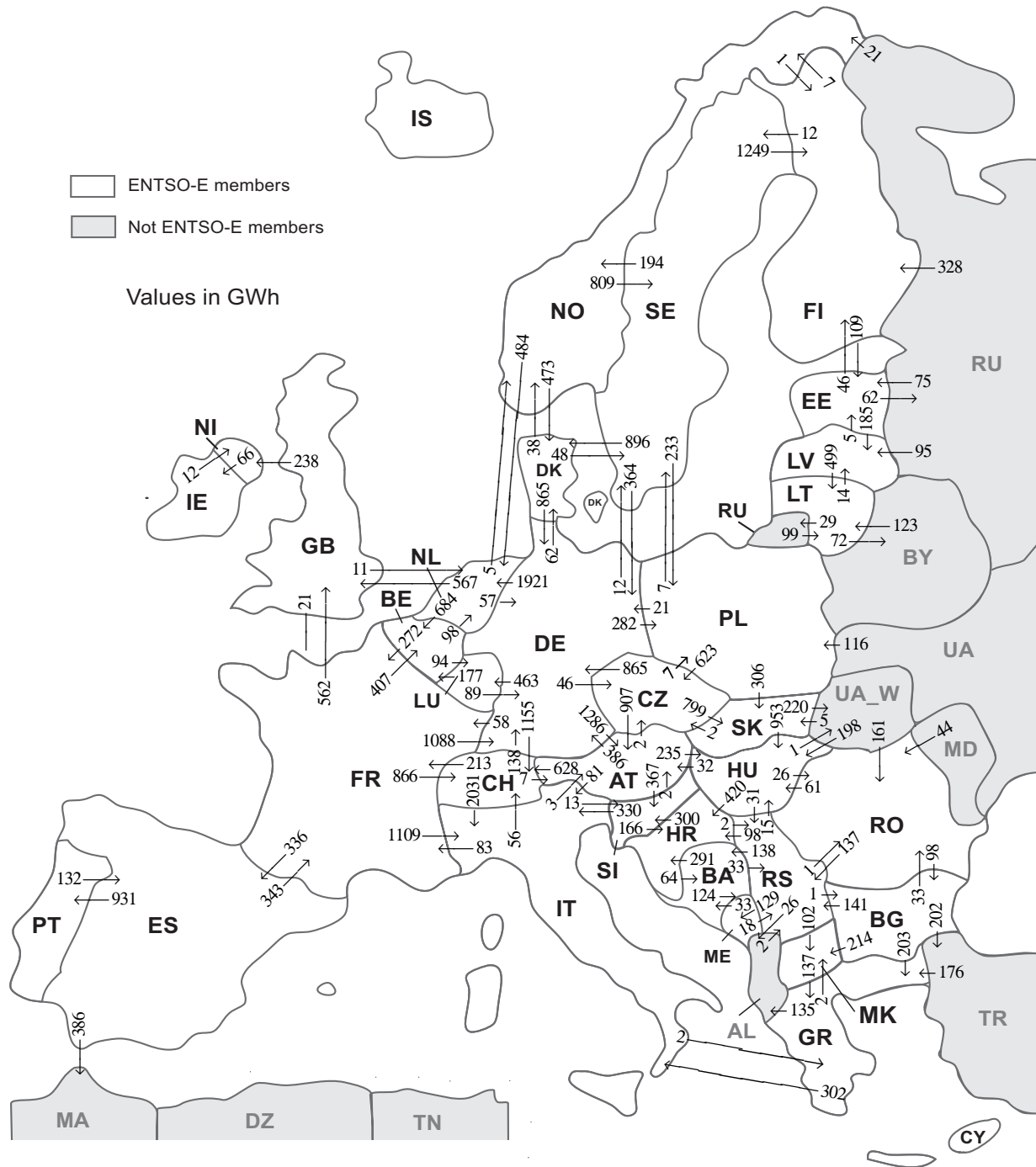
<sup>3</sup> The reported figures are best estimates based on actual inquiries, measurements and extrapolations.

<sup>4</sup> National monthly values as of April 2011

<sup>5</sup> 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: **32400GWh<sup>1</sup>**

Total physical energy flows: **34976GWh<sup>1</sup>**

<sup>1</sup> 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 ( $\leq 110$  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.

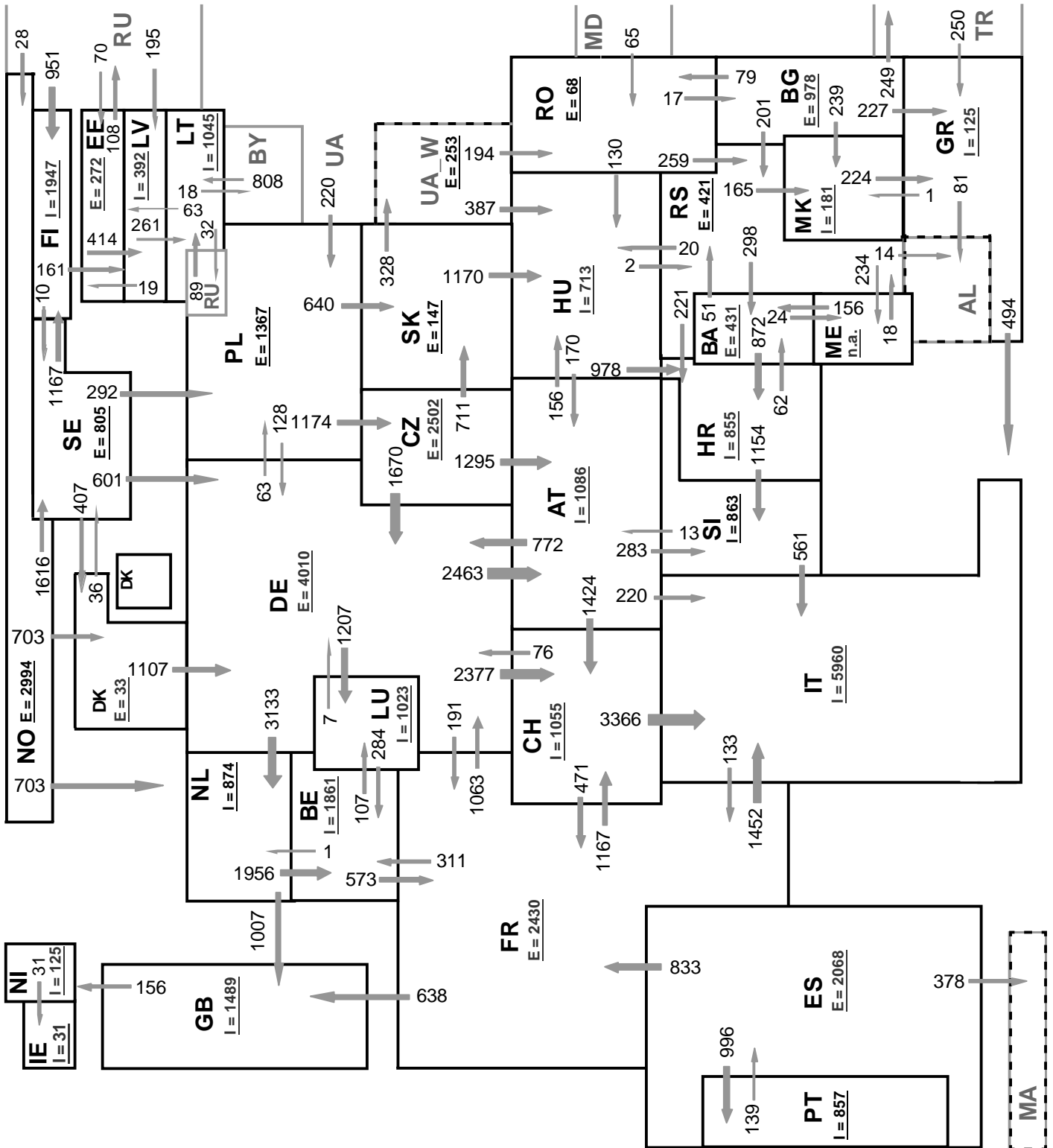
Outside flows	Inside flows of the countries																																			
	AT	BA	BE	BG	CH	CZ	DE	DK	EE	ES	FI	FR	GB	GR	HR	HU	IE	IT	LT	LU	LV	ME	MK	NI	NL	NO	PL	PT	RO	RS	SE	SI	SK	Other III <sup>1</sup>		
AT	-	-	-	-	628	2	386	-	-	-	-	-	-	-	235	-	81	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	367	-		
BA	-	-	-	-	-	-	-	-	-	-	-	-	-	291	-	-	-	-	-	-	124	-	-	-	-	-	-	-	-	33	-	-	-	-		
BE	-	-	-	-	-	-	-	-	-	-	-	272	-	-	-	-	-	-	94	-	-	-	-	98	-	-	-	-	-	-	-	-	-	-		
BG	-	-	-	-	-	-	-	-	-	-	-	-	203	-	-	-	-	-	-	-	-	214	-	-	-	-	-	33	141	-	-	-	-	202		
CH	7	-	-	-	-	138	-	-	-	-	213	-	-	-	-	-	2031	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
CZ	907	-	-	-	-	865	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	-	-	-	-	-	-	799	-		
DE	1286	-	-	-	1155	46	-	62	-	-	58	-	-	-	-	-	-	-	463	-	-	-	-	-	1921	282	-	-	-	12	-	-	-	-		
DK	-	-	-	-	-	865	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38	-	-	-	-	48	-	-	-	-		
EE	-	-	-	-	-	-	-	-	-	-	46	-	-	-	-	-	-	-	-	-	185	-	-	-	-	-	-	-	-	-	-	-	-	62		
ES	-	-	-	-	-	-	-	-	-	-	343	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	931	-	-	-	-	-	-	386		
FI	-	-	-	-	-	-	-	109	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	-	-	-	12	-	-	-	-	0		
FR	-	-	407	-	866	-	1088	-	-	336	-	-	562	-	-	-	-	1109	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
GB	-	-	-	-	-	-	-	-	-	-	21	-	-	-	-	-	-	-	-	-	-	-	-	238	11	-	-	-	-	-	-	-	-	-		
GR	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	302	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	135		
HR	-	64	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	2	-	300	-	-	-	-		
HU	32	-	-	-	-	-	-	-	-	-	-	-	420	-	-	-	-	-	-	-	-	-	-	-	-	-	26	31	-	-	-	0	1	-		
IE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	-	-	-	-	-	-	-	-		
IT	3	-	-	-	56	-	-	-	-	-	83	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	-	-		
LT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	-	-	-	-	-	-	-	-	-	-	-	-	-	101	
LU	-	-	177	-	-	-	89	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
LV	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	499	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
ME	-	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.a.		
MK	-	-	-	0	-	-	-	-	-	-	-	-	137	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
NI	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
NL	-	-	684	-	-	-	57	-	-	-	-	567	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
NO	-	-	-	-	-	-	473	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	484	-	-	5	-	-	-	-	-	-	809	0	
PL	-	-	-	-	623	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	306	0	
PT	-	-	-	-	-	-	-	-	-	132	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
RO	-	-	-	98	-	-	-	-	-	-	-	-	-	-	-	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	137	-	0
RS	-	138	-	1	-	-	-	-	-	-	-	-	-	98	15	-	-	-	-	-	129	102	-	-	-	-	-	-	1	-	-	-	-	-	26	
SE	-	-	-	-	-	364	896	-	-	1249	-	-	-	-	-	-	-	-	-	-	-	-	-	-	194	233	-	-	-	-	-	-	-	-	-	
SI	2	-	-	-	-	-	-	-	-	-	-	-	166	-	-	-	-	330	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SK	-	-	-	-	2	-	-	-	-	-	-	-	-	-	953	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	220	
Other III <sup>1</sup>	-	-	-	0	-	-	-	-	75	0	328	-	176	-	198	-	-	222	-	95	n.a.	-	-	-	21	116	-	205	2	-	-	-	5	-		

Other III<sup>1</sup>: 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	2237	1699
BA	235	448
BE	1268	464
BG	99	793
CH	2705	2389
CZ	673	2578
DE	3873	5285
DK	1431	951
EE	189	293
ES	468	1660
FI	1624	128
FR	990	4368
GB	1129	270
GR	518	439
HR	975	366
HU	1462	510
IE	66	12

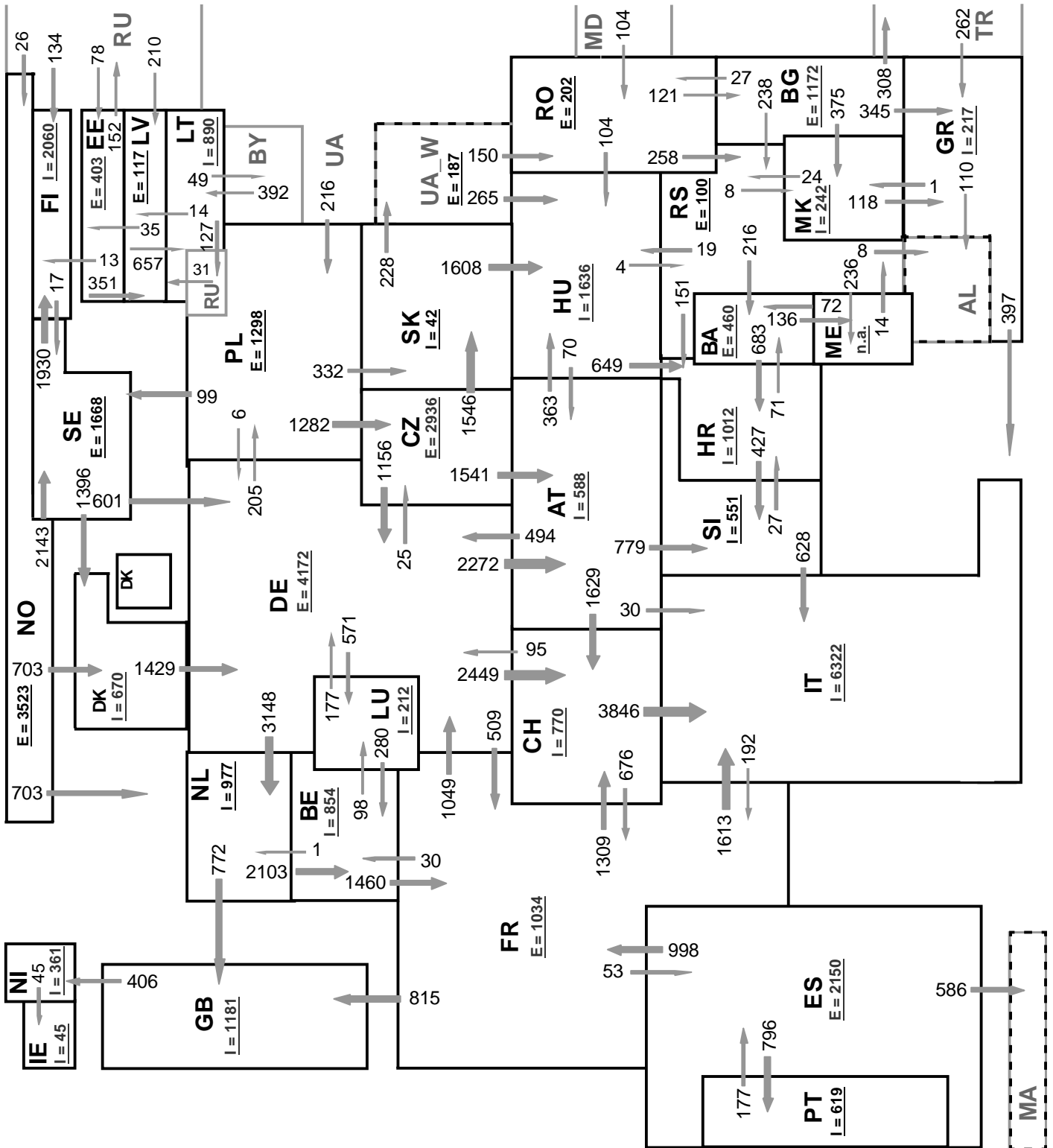
	flows inside	flows outside
IT	3853	157
LT	721	115
LU	557	266
LV	294	504
ME	n.a.	n.a.
MK	318	137
NI	250	66
NL	2514	1313
NO	265	1767
PL	638	957
PT	931	132
RO	265	296
RS	364	510
SE	888	2936
SI	680	498
SK	1110	1175
ENTSO-E	33843	33533



Sum of load flows in MW      ENTSO-E = 48274 MW      Total = 52739 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 (Calculated sum without data between ME - AL)

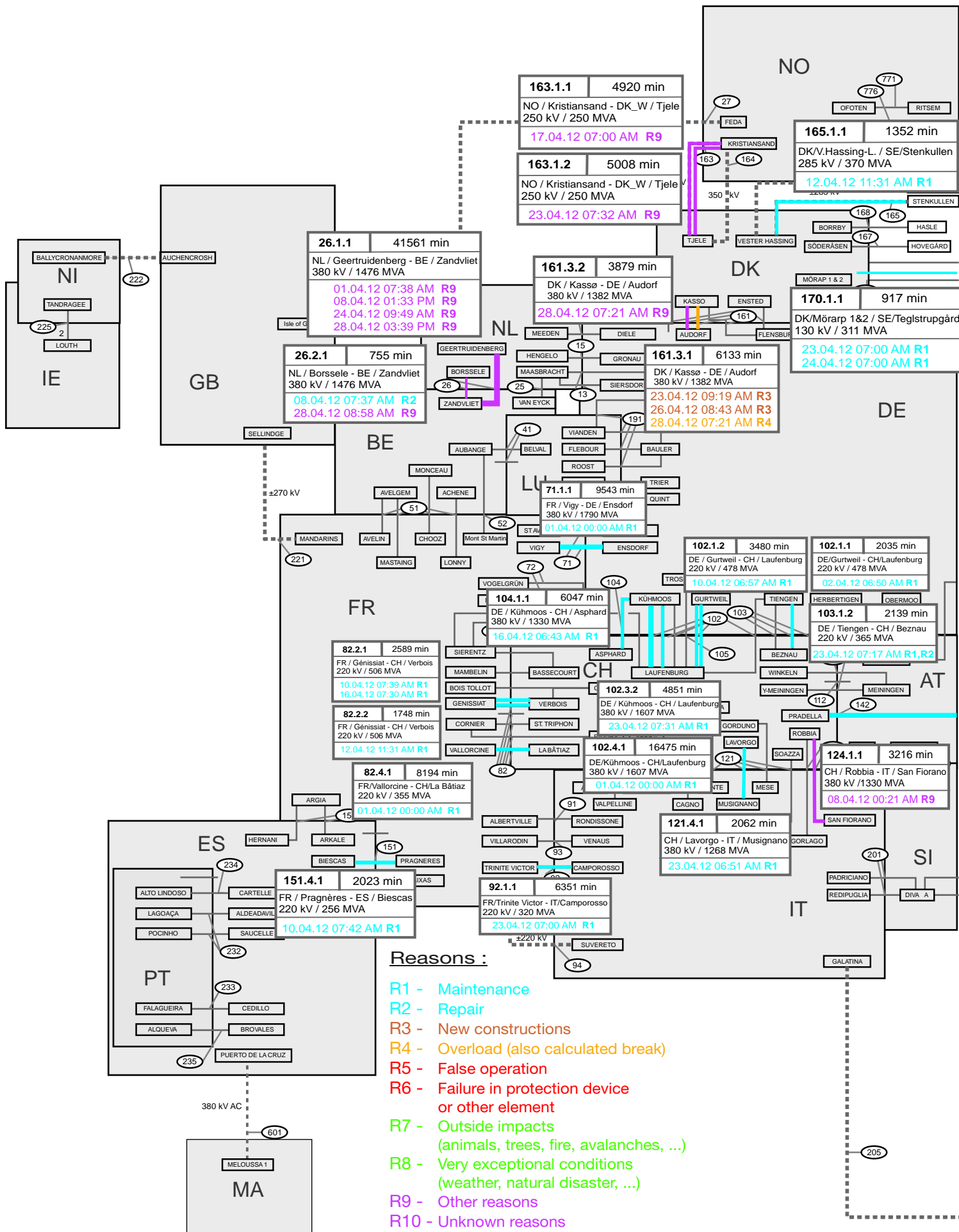
ENTSO-E = 52095 MW

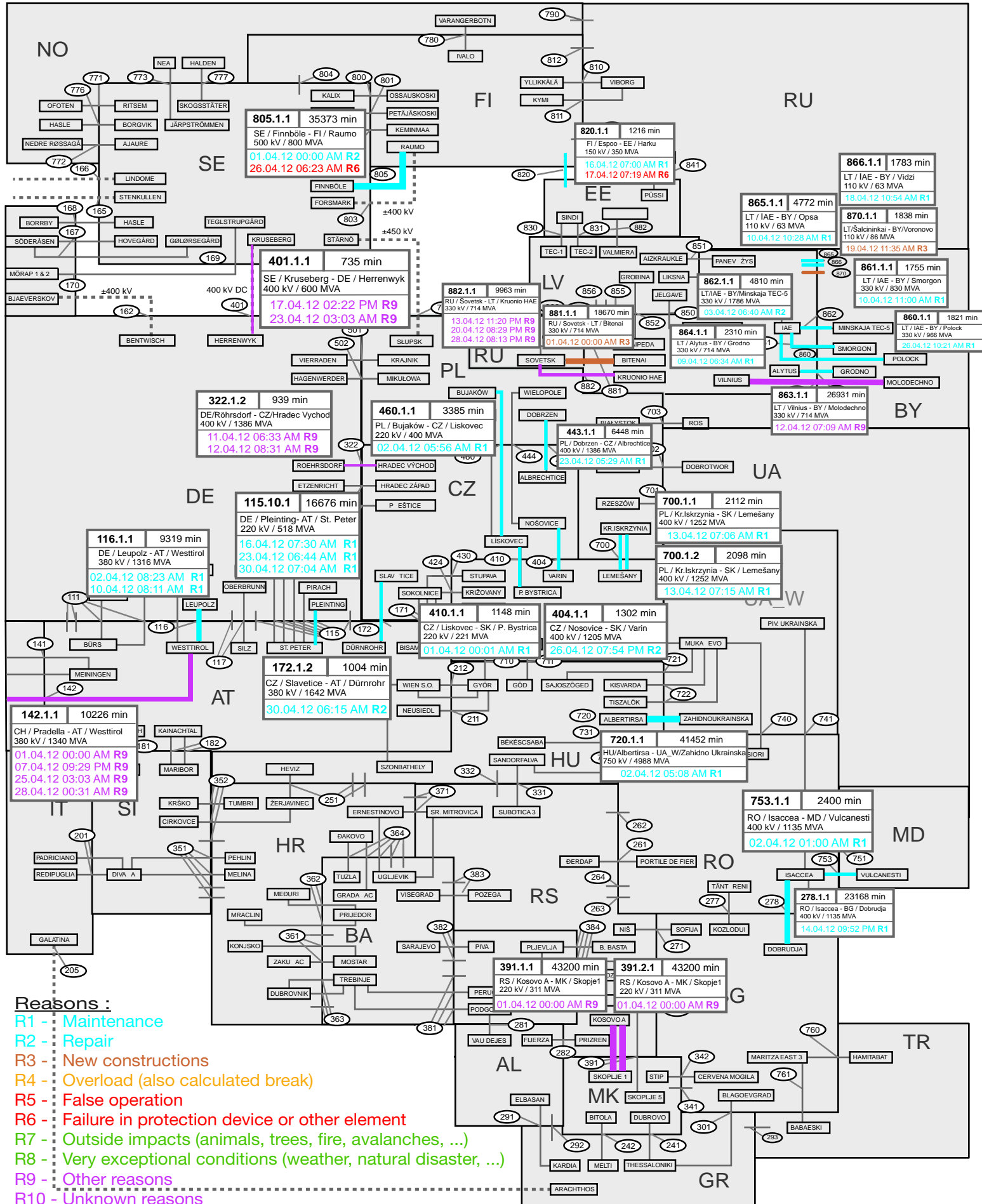
Total = 55882 MW

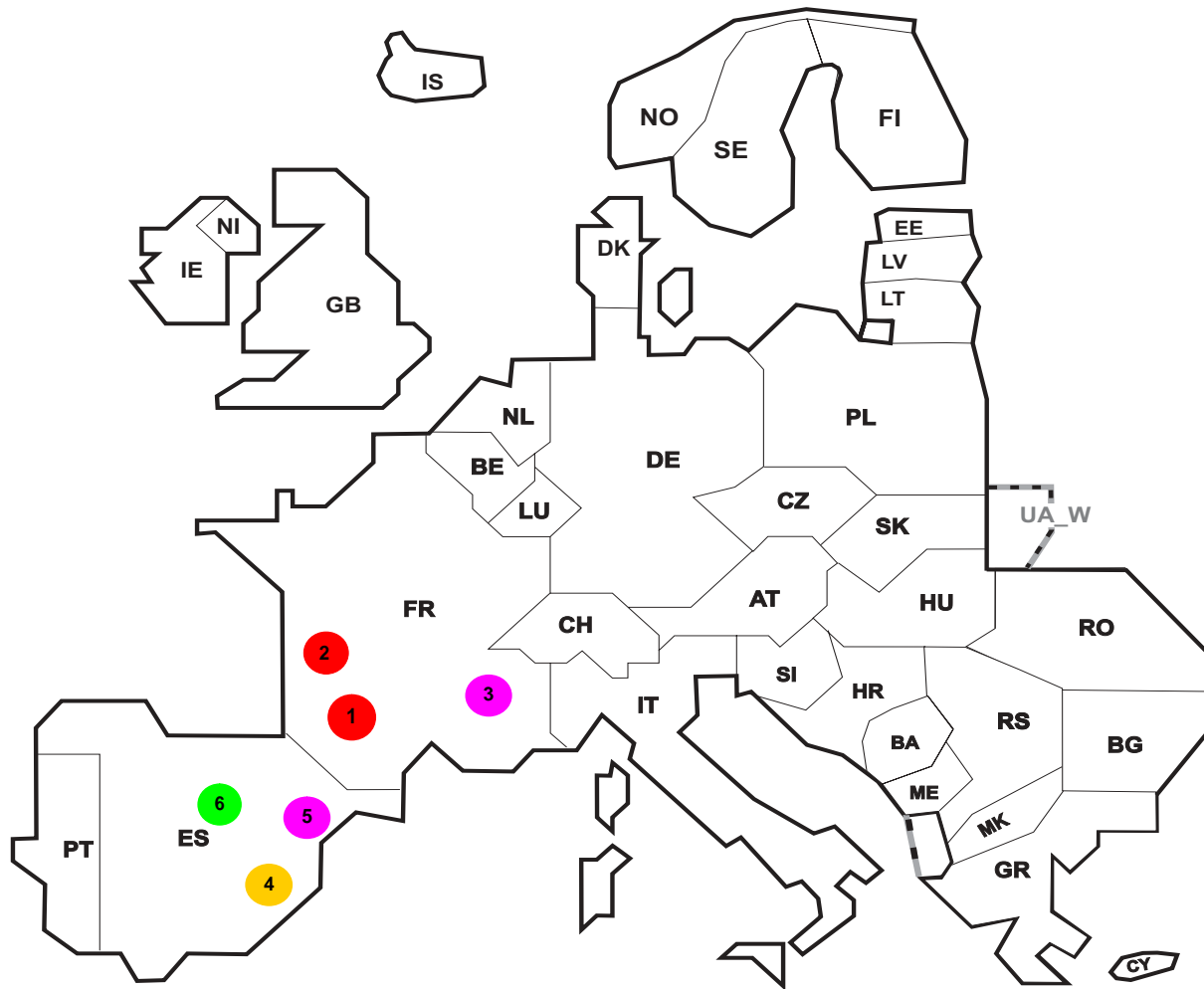
Synchronous operation with ENTSO-E region

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 <sup>1</sup>
1	FR	Ginestous	R5	200	207	58	0,217
2	FR	Tulieres	R6	122	156	47	0,132
3	FR	La Saussaz	R9	58	24	146	0,063
4	ES	Pinto	R4	4	7	6	0,008
5	ES	Tarragona	R10	2	2	11	0,003
6	ES	Escalona	R8	0	2	2	0,001

Information about incidents in other countries are not shown with energy not supply equal zero or unavailable in the database.

<sup>1</sup> ( year [in min] \* energy not supplied ) / consumption last 12 months

## Highest and lowest load on the 18.04.2012 CET of each country

	Highest		Low est		Load representativity %
	load MW	variation % <sup>1</sup>	load MW	variation % <sup>1</sup>	
AT	8129	1,7	5257	7,2	100
BA	1723	1,1	1033	3,3	100
BE <sup>2</sup>	9828	-12,9	8116	-0,8	100
BG	4777	-7,7	3055	-11,0	99
CH	9208	8,3	6298	10,7	100
CY <sup>3</sup>	575	-8,4	295	-14,0	100
CZ	8271	2,7	6310	0,8	100
DE <sup>4</sup>	77270	0,8	50580	2,1	91
DK	4901	5,5	2904	4,2	100
EE	1115	1,1	743	0,8	100
ES	35057	11,3	23084	4,7	98
FI	10803	1,6	8950	-0,1	100
FR	68696	21,8	52713	26,1	100
GB	46511	10,2	29351	12,4	92
GR	6137	-10,2	3529	-19,1	100
HR	2381	0,4	1602	7,2	100
HU	5092	2,1	3501	1,2	100
IE	3529	1,9	2186	7,9	100
IS	2016	1,1	1884	1,8	100
IT	45528	5,5	27479	-2,7	100
LT	1425	4,5	878	2,5	100
LU <sup>5</sup>	932	n.a.	673	n.a.	100
LV	966	2,8	535	-0,7	100
ME <sup>5</sup>	494	n.a.	334	n.a.	100
MK	1248	5,4	763	-4,7	100
NI	1262	2,9	697	2,3	100
NL	15032	-1,3	9196	-1,2	100
NO	17442	27,4	13542	18,9	100
PL <sup>6</sup>	19862	2,0	14075	2,3	100
PT	7018	3,0	4416	1,7	100
RO	7307	-1,7	4981	-8,2	100
RS	5792	7,7	3441	3,5	100
SE	19186	11,4	14867	14,4	100
SI	1753	3,0	1156	-3,2	100
SK	3566	-1,6	2672	-1,4	100
<b>ENTSO-E</b>	<b>314336</b>	<b>n.a.</b>	<b>449531</b>	<b>n.a.</b>	

<sup>1</sup> Variation as compared to corresponding month of the previous year

<sup>2</sup> The reported figures are best estimates based on actual measurements and extrapolations.

<sup>3</sup> Only highest and lowest load value available.

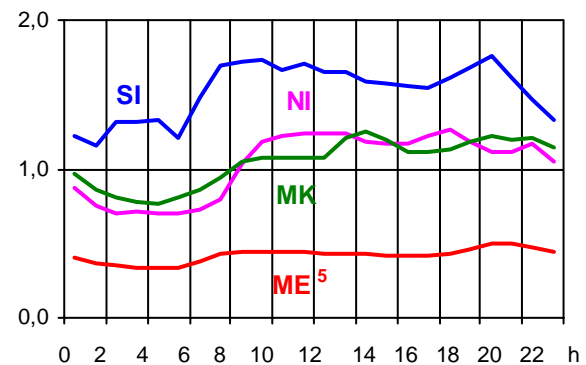
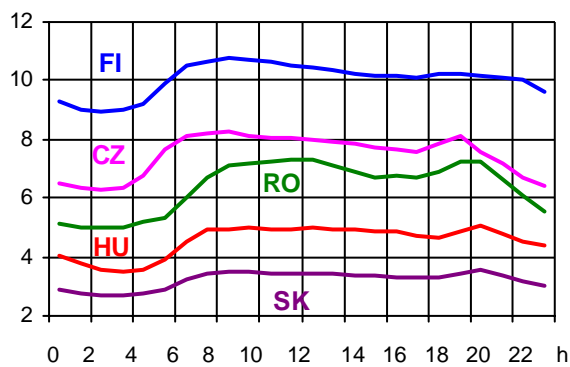
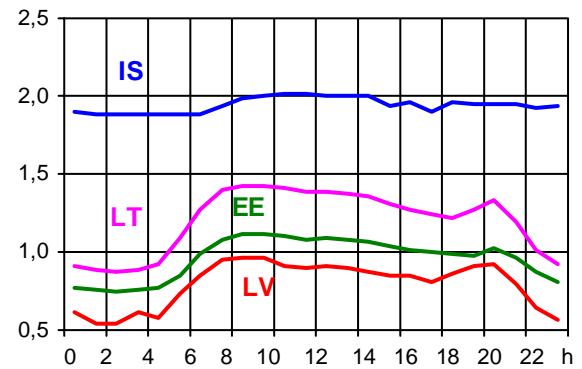
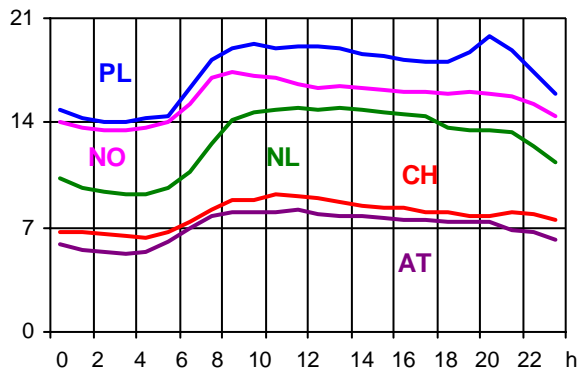
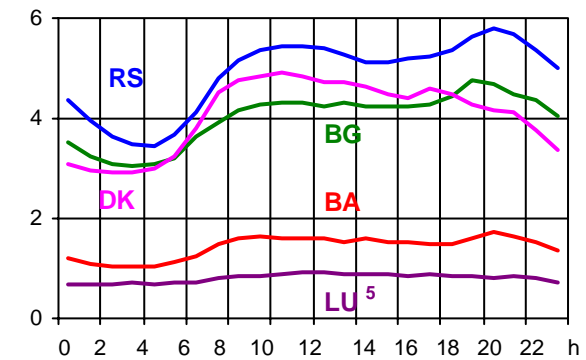
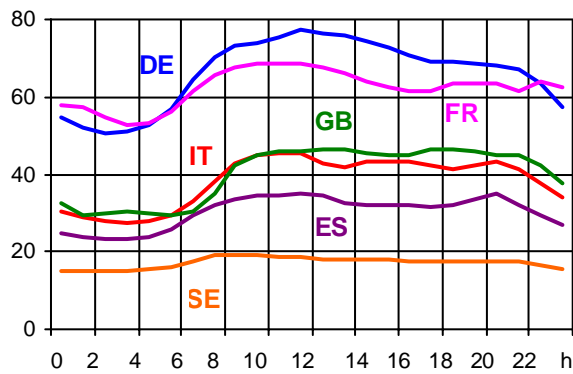
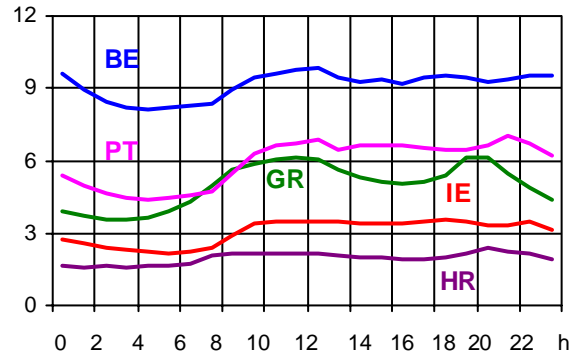
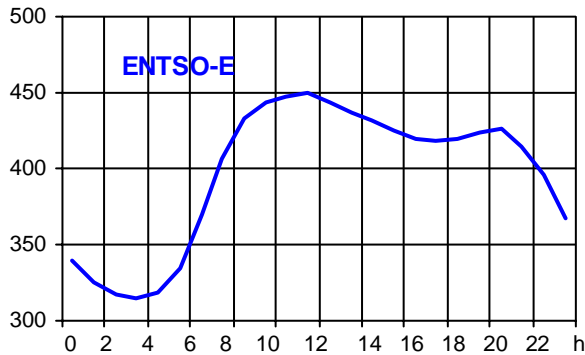
<sup>4</sup> The reported figures are best estimates based on actual inquiries, measurements and extrapolations.

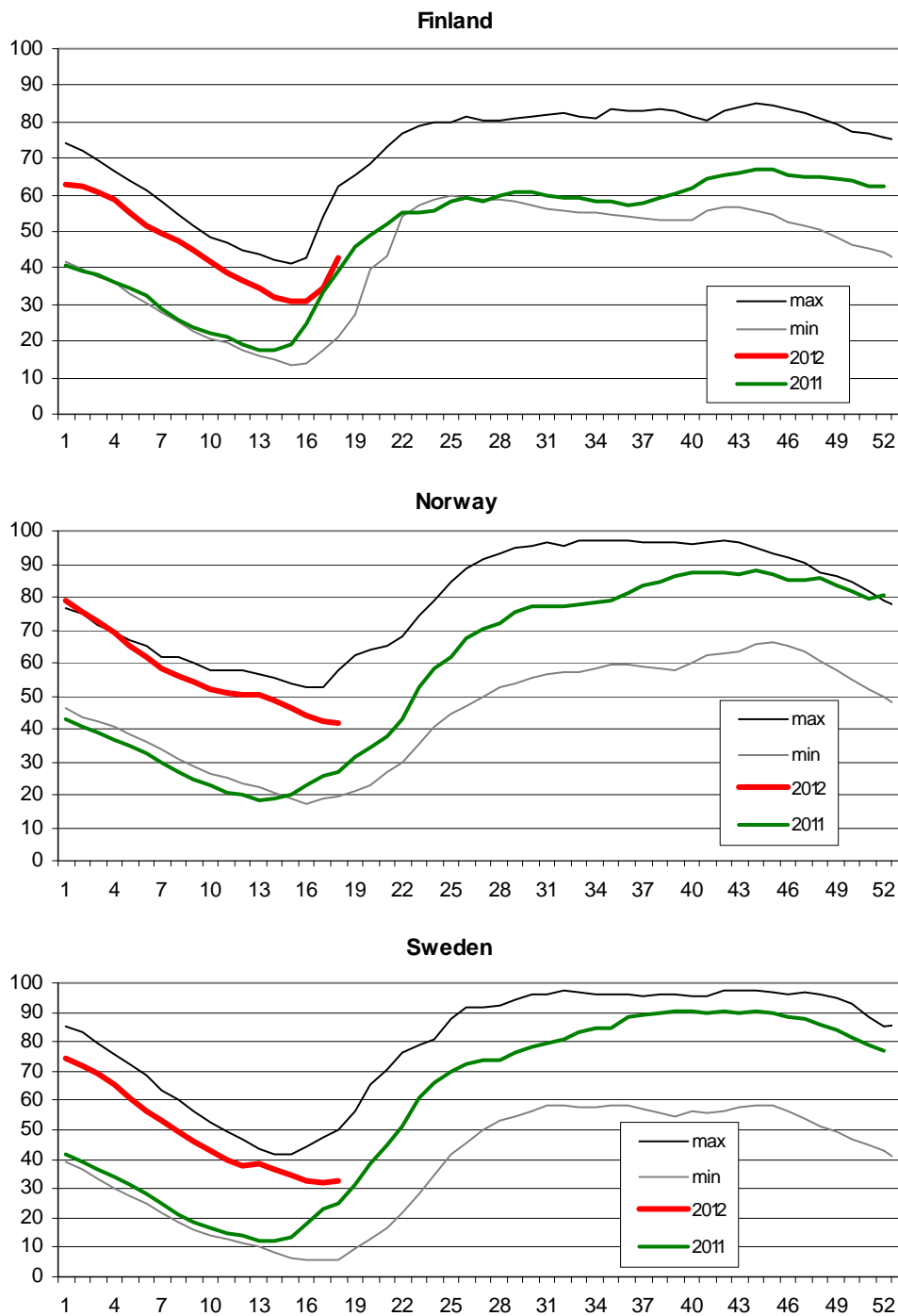
<sup>5</sup> Monthly load values as of 20 April 2011

<sup>6</sup> Operational data

Consumption hourly load curves on 18.04.2012 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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