

# Monthly report



## May 2010

Monthly provisional values as of 22 October 2010

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 in chapter 1, 9, 10 and 11 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 in GWh	
	Therm. nuclear	Fossil fuels	Hydro prod	Other renew.	of which wind	Non identifiable	Total			monthly	variation [%]
AT	0	1280	3599	0	0	1037	<b>5916</b>	-186	429	5301	5,5
BA	0	672	737	0	0	0	<b>1409</b>	-511	0	898	8,1
BE <sup>2</sup>	3969	3092	131	402	83	0	<b>7594</b>	-303	147	7144	8,7
BG	716	1417	551	15	15	0	<b>2699</b> <sup>1</sup>	-355	60	2284	-0,4
CH	2203	188	3384	118	2	0	<b>5893</b> <sup>1</sup>	-548	249	5096	6,9
CY	0	384	0	0	0	0	<b>384</b>	0	0	384	-1,5
CZ	1933	3438	283	80	30	0	<b>5734</b> <sup>1</sup>	-697	58	4979	8,3
DE	10667	25581	1787	6028	2564	0	<b>44063</b> <sup>1</sup>	-738	537	42788	5,4
DK	0	1767	2	801	607	0	<b>2570</b> <sup>1</sup>	172	0	2742	n.a.
EE	0	712	4	103	21	0	<b>819</b>	-266	0	553	n.a.
ES	4427	8390	4015	4955	3601	33	<b>21820</b>	-543	265	21011	5,2
FI	1346	1846	1483	820	16	58	<b>5553</b> <sup>1</sup>	965	0	6518	n.a.
FR	29372	2885	6426	1166	733	0	<b>39849</b>	-2133	433	37283	8,1
GB	4202	20991	429	329	158	0	<b>25951</b>	503	711	25743	n.a.
GR	0	3073	349	134	105	0	<b>3556</b> <sup>1</sup>	629	7	4178	-0,7
HR	0	252	770	12	10	0	<b>1034</b>	318	8	1344	0,8
HU	1131	1636	0	0	0	0	<b>2767</b>	606	0	3373	13,5
IE	0	1810	41	166	166	19	<b>2036</b> <sup>1</sup>	102	45	2093	n.a.
IS	0	1	997	364	0	0	<b>1362</b>	0	0	1362	n.a.
IT	0	16029	5573	1243	732	0	<b>22845</b>	3563	448	25960	-0,1
LT	0	179	98	18	12	0	<b>295</b> <sup>1</sup>	524	74	745	n.a.
LU	0	176	160	11	4	0	<b>347</b>	438	211	574	14,1
LV	0	52	523	7	3	0	<b>582</b>	-45	0	537	n.a.
ME <sup>3</sup>	0	67	102	0	0	0	<b>169</b>	-100	0	69	n.a.
MK	0	311	282	0	0	0	<b>593</b>	12	0	605	13,5
NI <sup>4</sup>	0	544	1	47	43	1	<b>593</b>	125	0	718	n.a.
NL	296	7357	0	609	297	0	<b>8262</b>	509	0	8771	-2,5
NO	0	459	6918	43	43	0	<b>7420</b> <sup>1</sup>	1791	155	9056	n.a.
PL <sup>5</sup>	0	10730	334	144	121	0	<b>11208</b> <sup>1</sup>	145	56	11297	13,8
PT	0	1741	1502	915	703	0	<b>4158</b> <sup>1</sup>	64	35	4187	4,1
RO	584	1688	1843	0	n.a.	0	<b>4115</b>	9	43	4081	4,2
RS	0	1985	1232	0	0	0	<b>3217</b>	227	141	3303	4,6
SE	5699	410	5597	1059	216	0	<b>12765</b> <sup>1</sup>	-2148	0	10617	n.a.
SI	515	321	448	0	0	0	<b>1284</b>	-292	0	992	13,8
SK	1045	451	563	38	0	0	<b>2097</b> <sup>1</sup>	27	38	2086	9,5
<b>ENTSO-E</b>	<b>68105</b>	<b>121915</b>	<b>50164</b>	<b>19627</b>	<b>10285</b>	<b>1148</b>	<b>260959</b> <sup>1</sup>	<b>1864</b>	<b>4150</b>	<b>258672</b>	<b>n.a.</b>
UA_W	0	275	16	0	0	0	<b>291</b>	-5	0	286	5,9

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

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

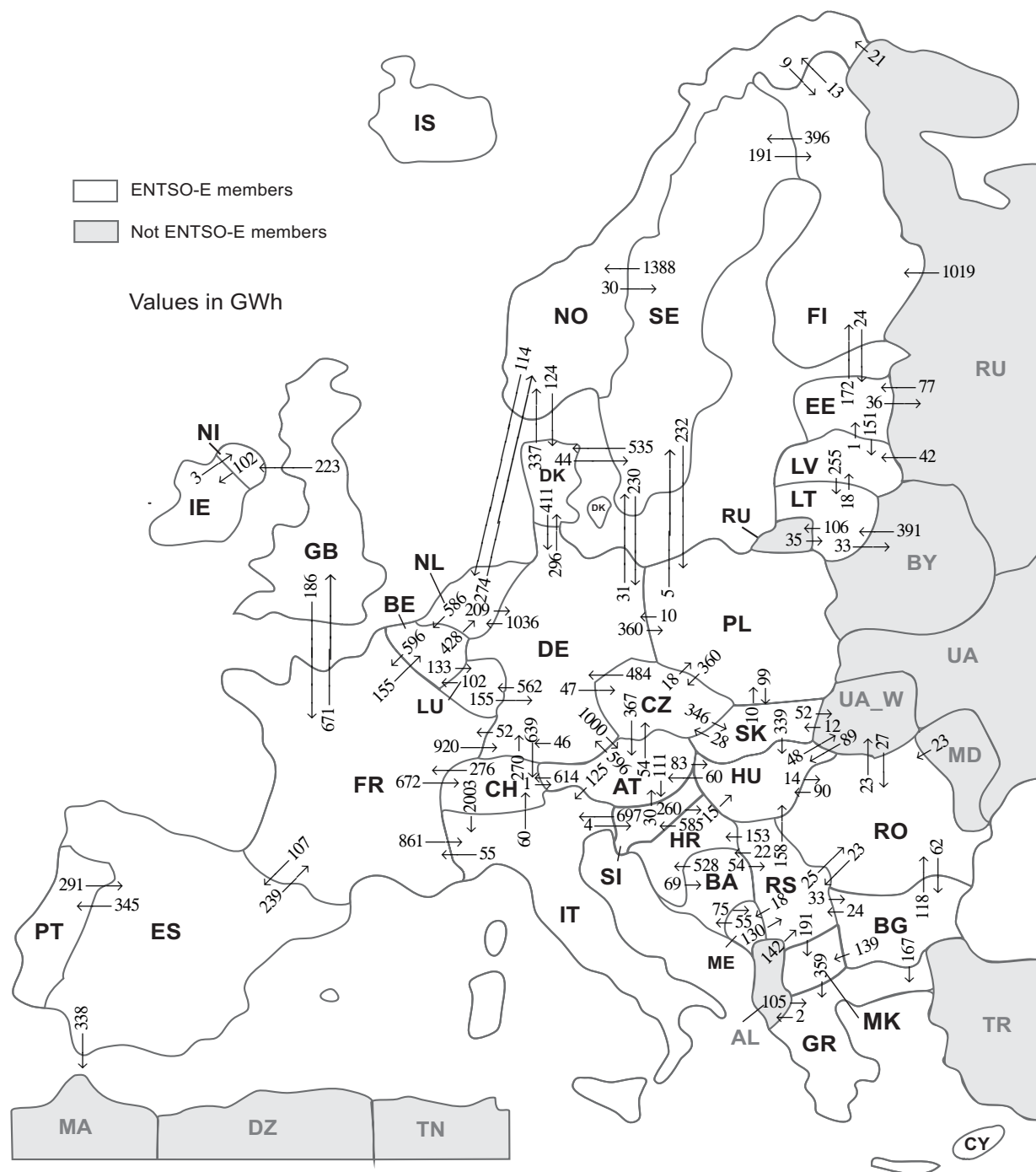
<sup>3</sup> National monthly values as of May 2009

<sup>4</sup> 9 Generating Units (1805MW) are capable of running on mixed fuels - The data has identified which fuel type these have been run on and been added into the appropriate fuel type

<sup>5</sup> 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	99	98	99	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	93	100	100	100	97
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: **26474GWh**

Total physical energy flows: **29095GWh**

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 9 of the Statistical Yearbook. These values may differ from the official statistics and the exchange balances in chapter 1.

## Overview of the monthly imports and exports in GWh

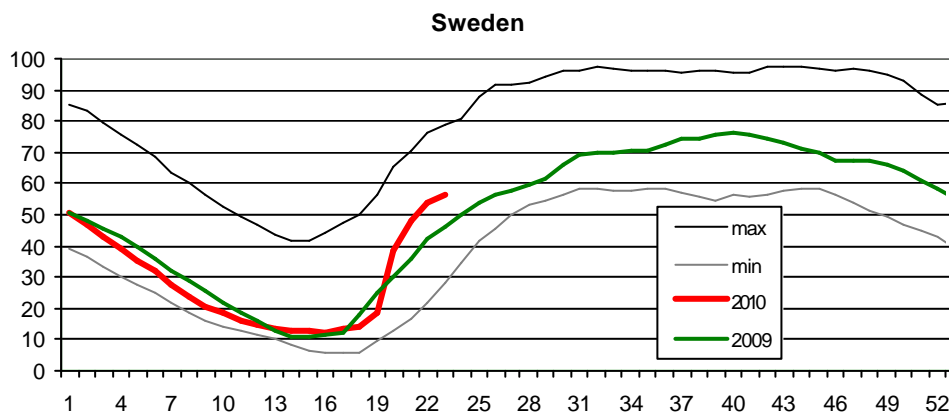
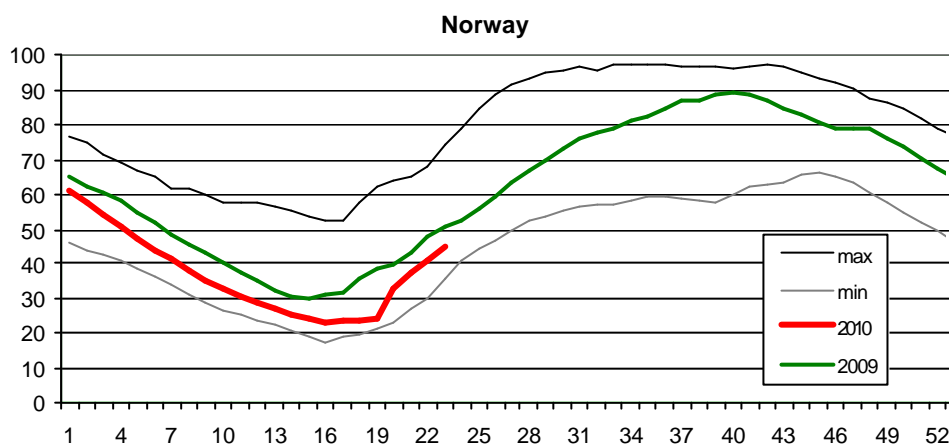
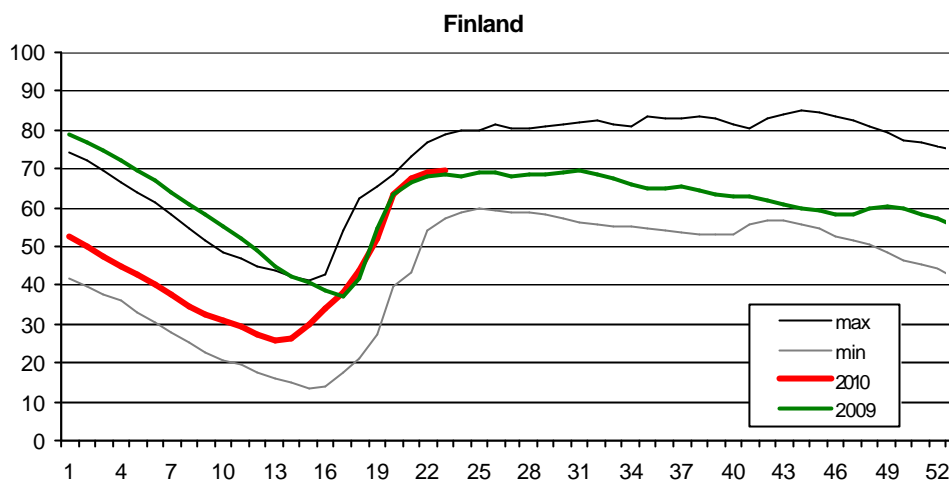
Exporting countries	Importing countries																																					
	AT	BA	BE	BG	CH	CZ	DE	DK	EE	ES	FI	FR	GB	GR	HR	HU	IE	IT	LT	LU	LV	ME	MK	NI	NL	NO	PL	PT	RO	RS	SE	SI	SK	UA_W	Other III <sup>1</sup>			
AT	-	-	-	-	614	54	596	-	-	-	-	-	-	-	-	83	-	125	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	111	-	-		
BA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	528	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	54	-	-	-	-			
BE	-	-	-	-	-	-	-	-	-	-	-	596	-	-	-	-	-	-	-	133	-	-	-	428	-	-	-	-	-	-	-	-	-	-	-			
BG	-	-	-	-	-	-	-	-	-	-	-	-	-	167	-	-	-	-	-	-	-	139	-	-	-	-	-	-	118	24	-	-	-	-	-	0		
CH	1	-	-	-	-	-	-	-	-	-	-	276	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
CZ	367	-	-	-	-	-	270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	346	-			
DE	1000	-	-	-	639	47	-	296	-	-	-	52	-	-	-	-	-	-	-	562	-	-	-	-	1036	360	-	-	-	-	31	-	-	-	-			
DK	-	-	-	-	-	-	411	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	44	-	-	-	-			
EE	-	-	-	-	-	-	-	-	-	-	172	-	-	-	-	-	-	-	-	-	-	151	-	-	-	-	-	-	-	-	-	-	-	-	-	36		
ES	-	-	-	-	-	-	-	-	-	-	-	239	-	-	-	-	-	-	-	-	-	-	-	-	-	-	345	-	-	-	-	-	-	-	338			
FI	-	-	-	-	-	-	-	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	-	-	-	-	396	-	-	-	-	0			
FR	-	-	155	-	672	-	920	-	107	-	-	671	-	-	-	-	-	861	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
GB	-	-	-	-	-	-	-	-	-	-	-	186	-	-	-	-	-	-	-	-	-	-	-	223	-	-	-	-	-	-	-	-	-	-	-	-		
GR	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	2			
HR	-	69	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	585	-	-	-			
HU	60	-	-	-	-	-	-	-	-	-	-	-	-	46	-	-	-	-	-	-	-	-	-	-	-	-	-	14	0	-	-	0	48	-	-			
IE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-		
IT	0	-	-	-	60	-	-	-	-	-	-	55	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-			
LT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	139		
LU	-	-	102	-	-	-	155	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
LV	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	255	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
ME	-	55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	130	-	n.a.		
MK	-	-	-	0	-	-	-	-	-	-	-	-	359	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-		
NI	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
NL	-	-	586	-	-	-	209	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	274	-	-	-	-	-	-	-	-	-	-		
NO	-	-	-	-	-	-	-	124	-	-	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	114	-	-	-	-	-	-	-	30	-	0		
PL	-	-	-	-	360	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	99	0	
PT	-	-	-	-	-	-	-	-	291	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
RO	-	-	-	62	-	-	-	-	-	-	-	-	-	-	-	90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23	0
RS	-	22	-	33	-	-	-	-	-	-	-	-	-	153	158	-	-	-	-	-	-	18	191	-	-	-	-	-	25	-	-	-	-	-	-	23	0	
SE	-	-	-	-	-	-	230	535	-	-	191	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SI	30	-	-	-	-	-	-	-	-	-	-	-	-	260	-	-	-	697	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SK	-	-	-	-	-	28	-	-	-	-	-	-	-	-	-	339	-	-	-	-	-	-	-	-	-	-	-	10	-	-	-	-	-	-	-	-	52	-
UA_W	-	-	-	-	-	-	-	-	-	-	-	-	-	89	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	
Other III <sup>1</sup>	-	-	-	0	-	-	-	-	77	0	1019	-	-	105	-	-	-	-	426	-	42	n.a.	-	-	-	21	0	-	23	142	-	-	-	-	-	-	-	

Other III<sup>1</sup>: Albania, Belarus, Morocco, Republic of Moldavia, Republic of Turkey, Russia and Ukraine

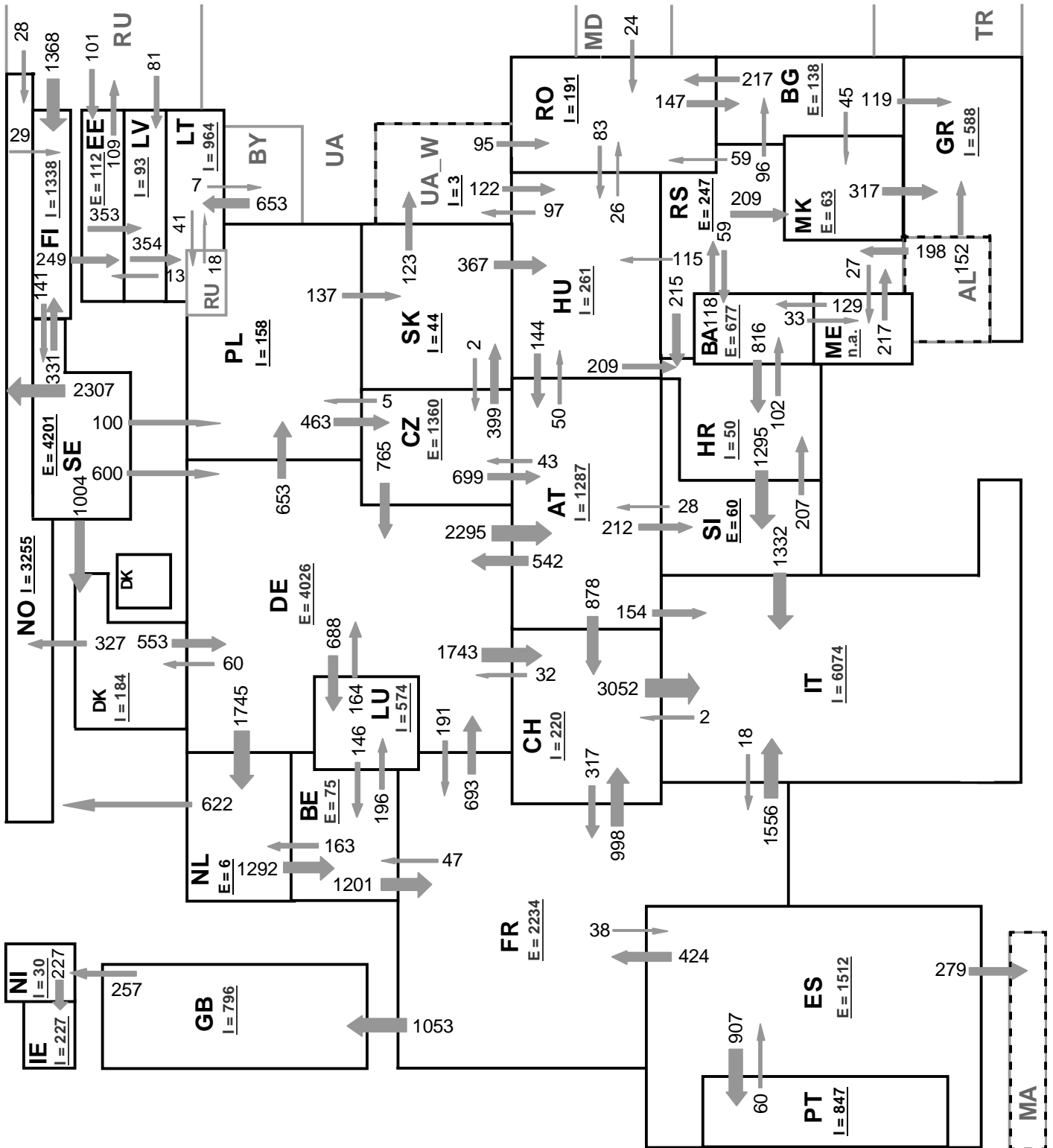
## Sum of the monthly imports and exports in GWh

	import	export
AT	1458	1583
BA	146	657
BE	843	1157
BG	95	448
CH	1985	2550
CZ	489	1215
DE	3285	4023
DK	955	792
EE	102	359
ES	398	922
FI	1391	433
FR	1404	3386
GB	671	409
GR	631	2
HR	987	669
HU	774	168
IE	102	3

	import	export
IT	3686	119
LT	681	157
LU	695	257
LV	211	256
ME	n.a.	n.a.
MK	146	359
NI	226	102
NL	1578	1069
NO	2033	277
PL	620	474
PT	345	291
RO	207	198
RS	373	600
SE	506	2576
SI	700	987
SK	457	429
UA_W	123	128



- 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



Sum of load flows in MW

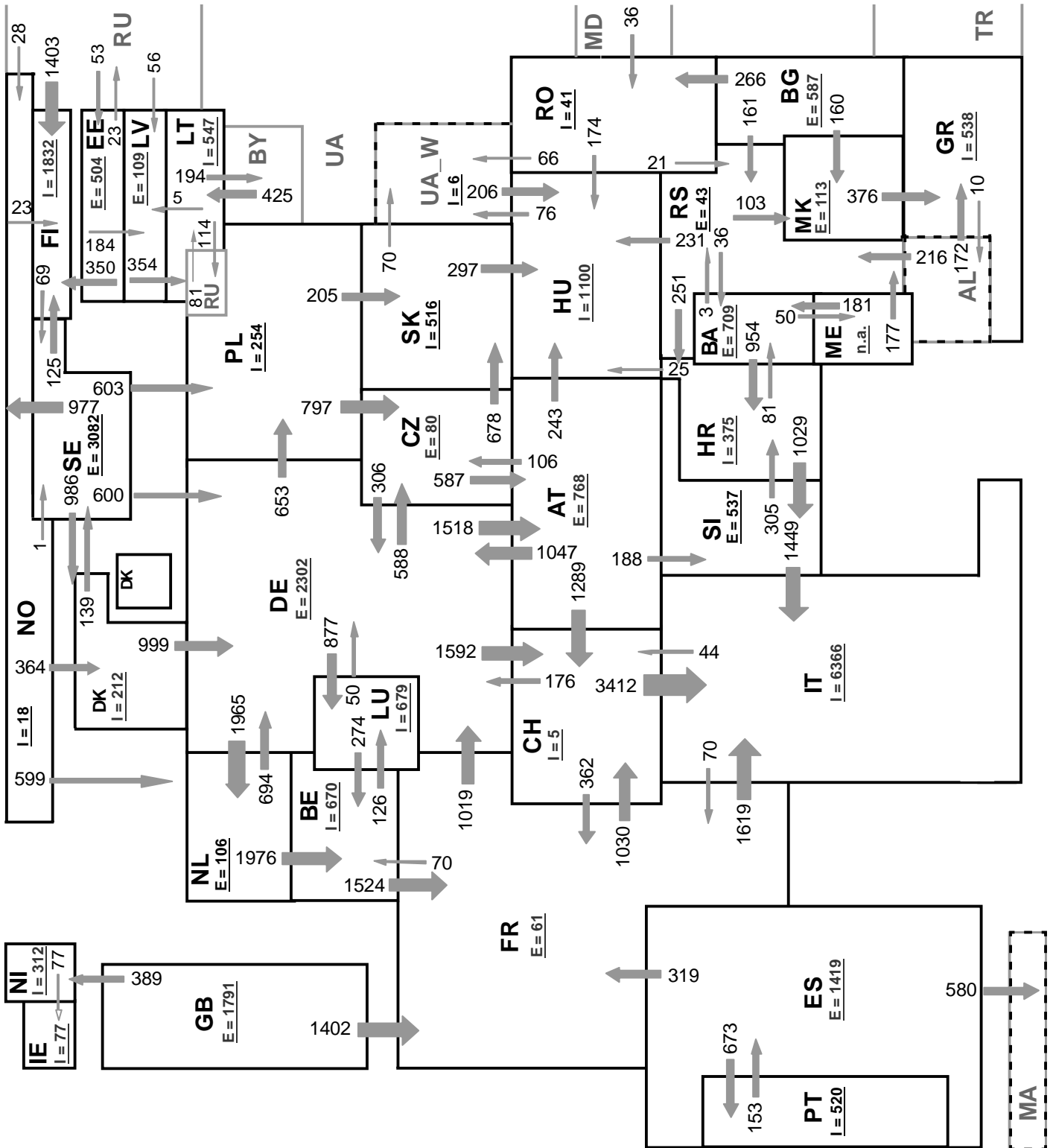
ENTSO-E = 37928 MW

Total = 41777 MW

Synchronous operation with ENTSO-E region

I = Import balance  
E = Export balance





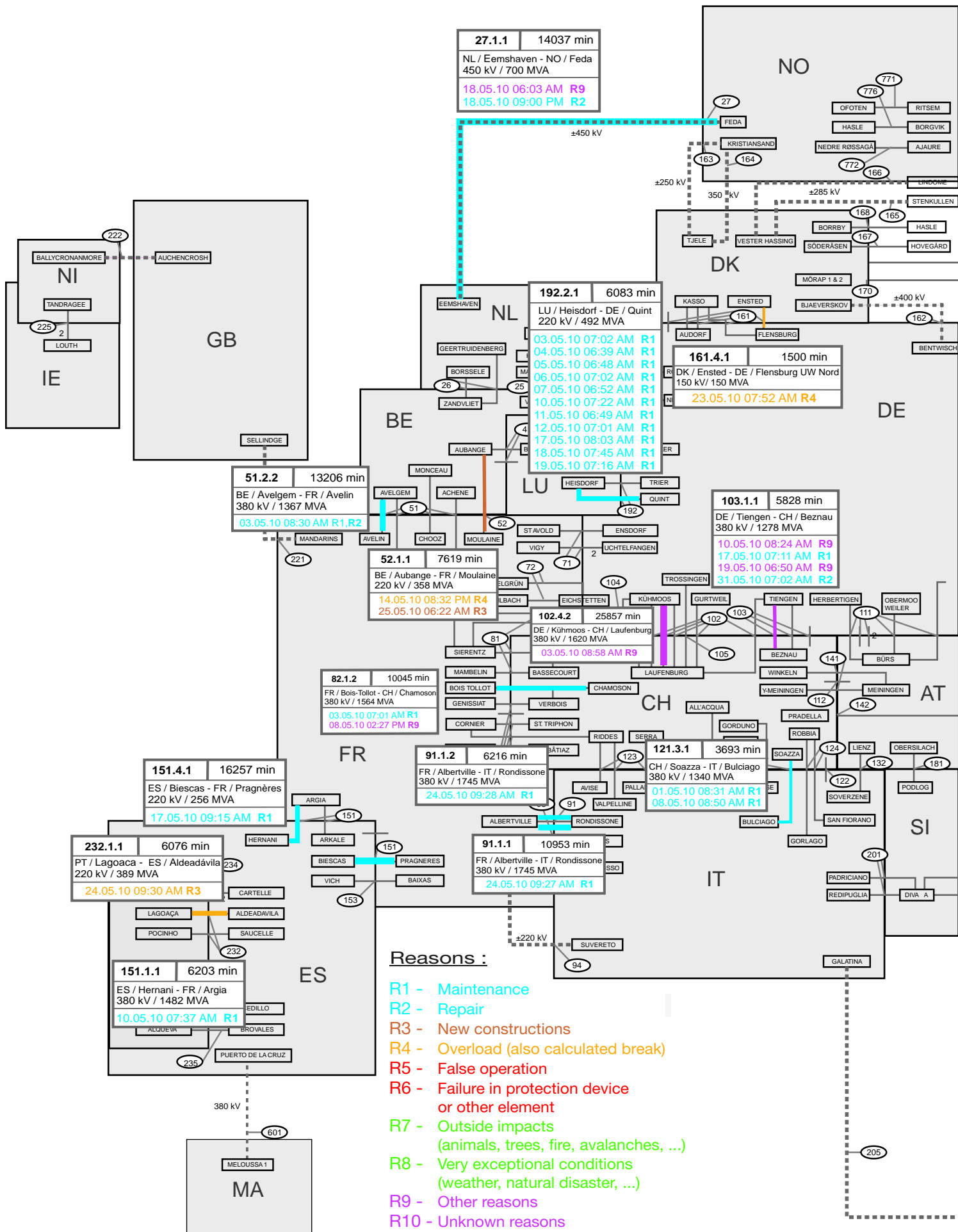
Sum of load flows in MW

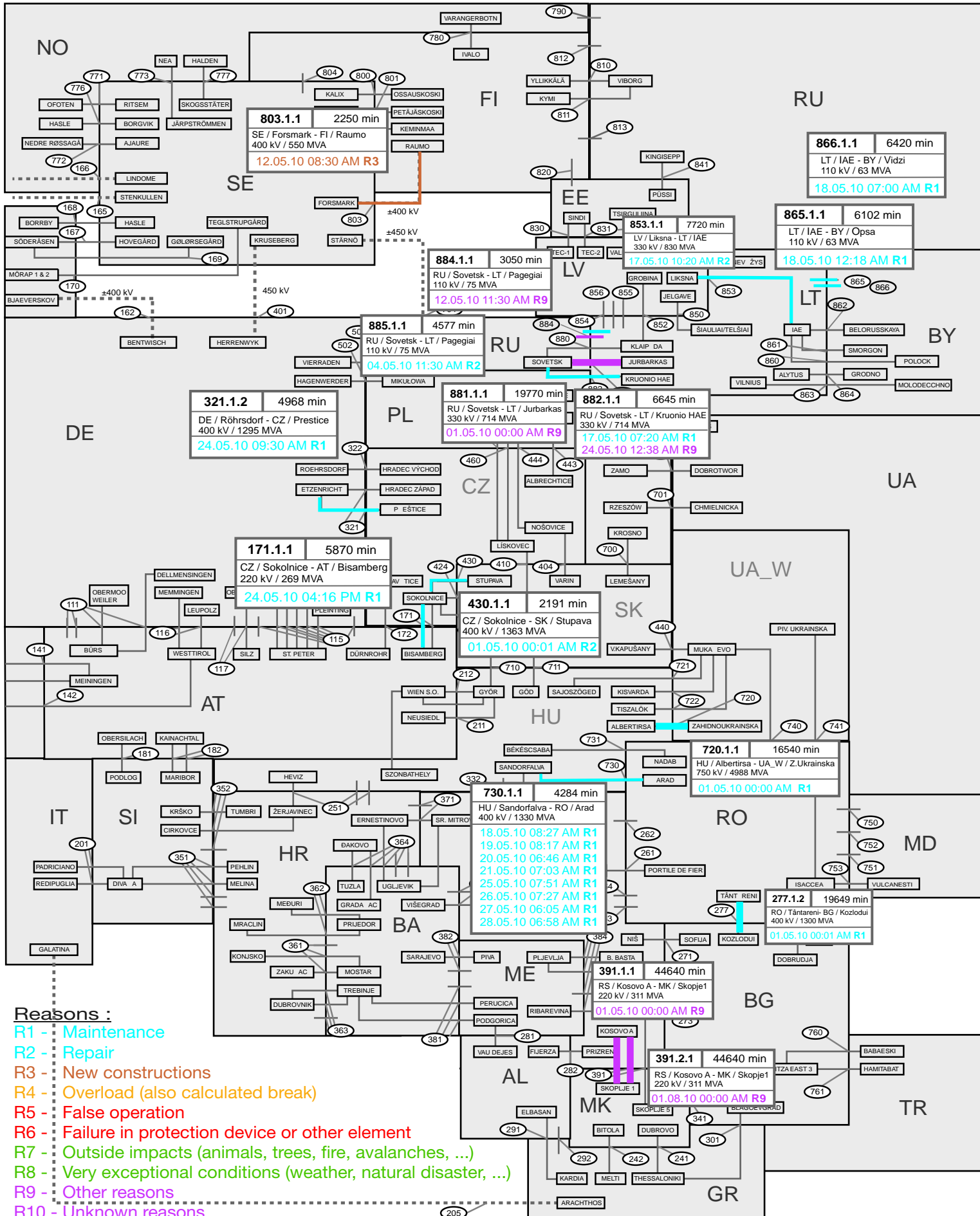
ENTSO-E = 40268 MW

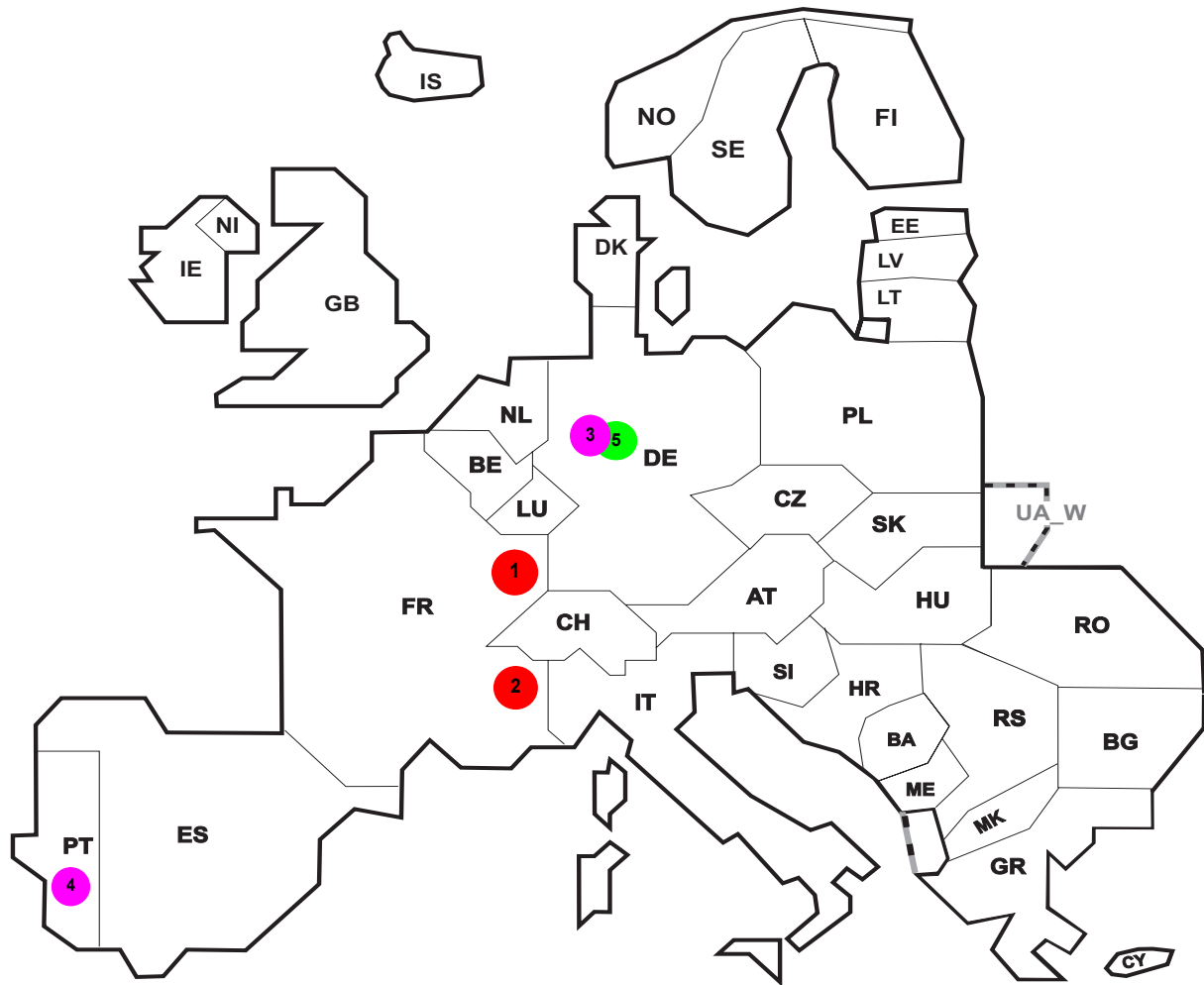
Total = 44615 MW

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	Lutterbach	R5	146	171	51	0,154
2	FR	La Bathie	R5	21	64	20	0,022
3	DE	Welper	R9	4	3	73	0,004
4	PT	Neves Corvo	R10	0,3	0	1	0,003
5	DE	Welper	R7	3	13	14	0,003

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 19.05.2010 CET of each country

	Highest		Lowest		Load representativity %
	load MW	variation % <sup>1</sup>	load MW	variation % <sup>1</sup>	
AT	8014	4,3	4994	13,9	100
BA	1606	7,7	945	8,9	100
BE <sup>2</sup>	11639	6,2	8430	11,4	100
BG	4350	3,9	2868	-1,9	100
CH	8900	9,5	5945	18,8	100
CY <sup>3</sup>	637	n.a.	347	n.a.	100
CZ	8392	13,1	5939	9,8	100
DE	75557	15,5	57892	24,4	91
DK	4839	n.a.	2811	n.a.	100
EE	949	n.a.	561	n.a.	100
ES	34094	4,0	23267	2,7	98
FI	9477	n.a.	7238	n.a.	100
FR	59022	6,1	43323	9,3	100
GB	40803	n.a.	24549	n.a.	100
GR	6872	-3,9	4160	1,3	100
HR	2219	-2,8	1289	-1,8	100
HU	5016	-4,5	3540	-1,6	100
IE	3497	n.a.	2055	n.a.	100
IS	1970	n.a.	1816	n.a.	100
IT	44094	0,4	27962	3,9	100
LT	1242	n.a.	744	n.a.	100
LU	892	10,1	675	18,0	100
LV	895	n.a.	485	n.a.	100
ME <sup>4</sup>	419	n.a.	267	n.a.	100
MK	1001	16,4	622	28,2	100
NI	1314	n.a.	675	n.a.	100
NL	14765	8,1	9146	0,8	100
NO	13869	n.a.	10568	n.a.	100
PL <sup>5</sup>	18984	10,3	13078	11,5	100
PT	7155	7,3	4756	4,9	97
RO	6822	7,2	4924	6,4	100
RS	5489	22,0	3236	28,8	100
SE	15913	n.a.	11374	n.a.	100
SI	1576	1,5	1093	21,2	100
SK	3511	11,1	2664	13,5	100
<b>ENTSO-E</b>	<b>422704</b>	<b>n.a.</b>	<b>290587</b>	<b>n.a.</b>	
UA_W	635	3,4	370	6,9	100

<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

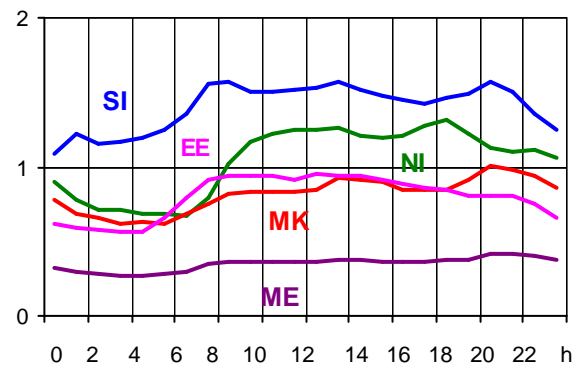
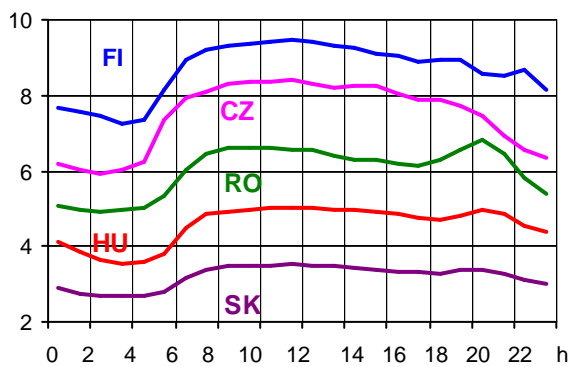
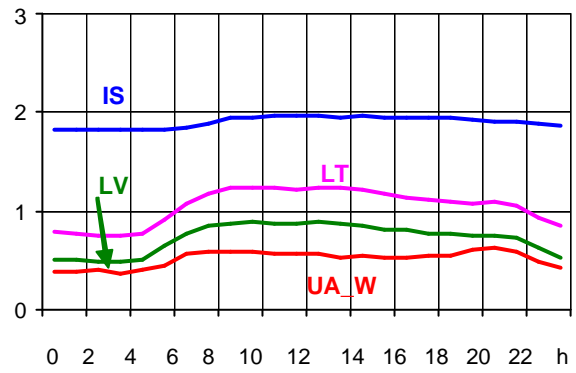
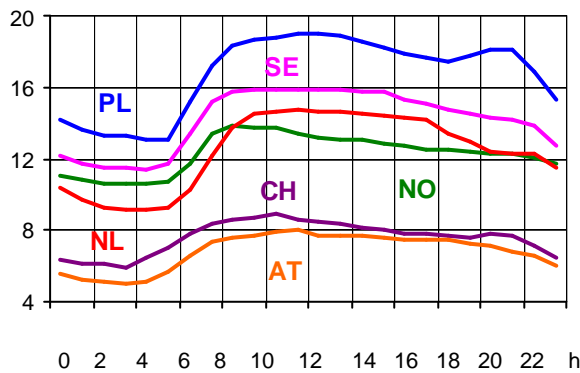
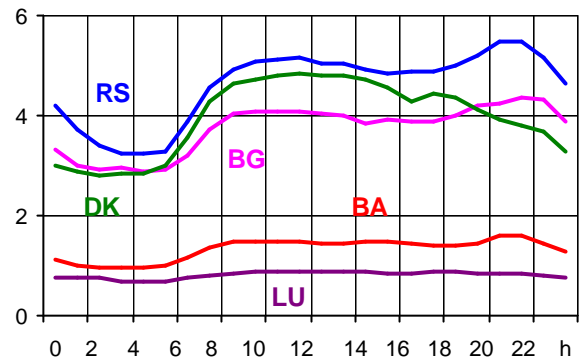
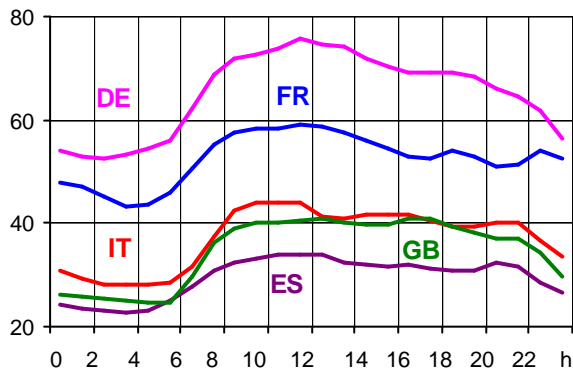
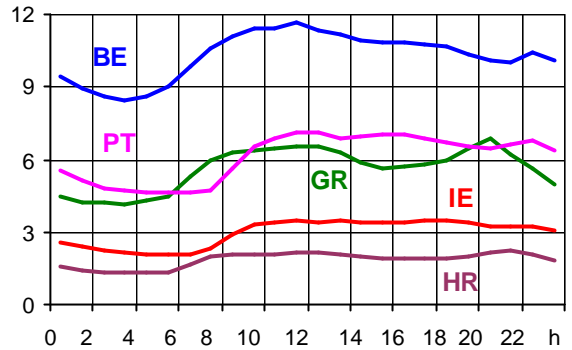
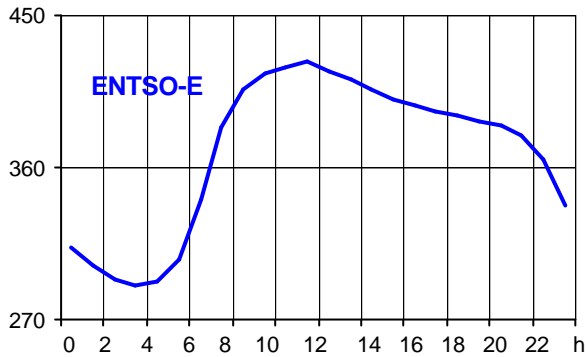
<sup>3</sup> Only highest and lowest load value available

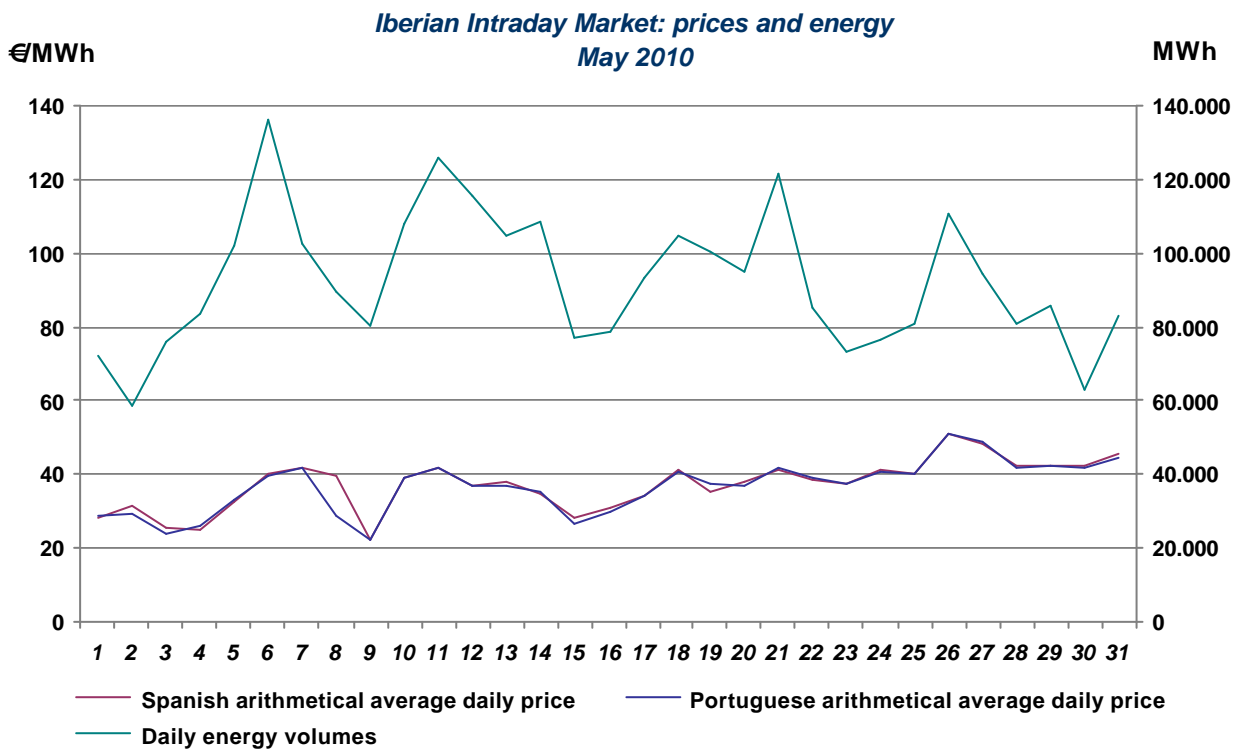
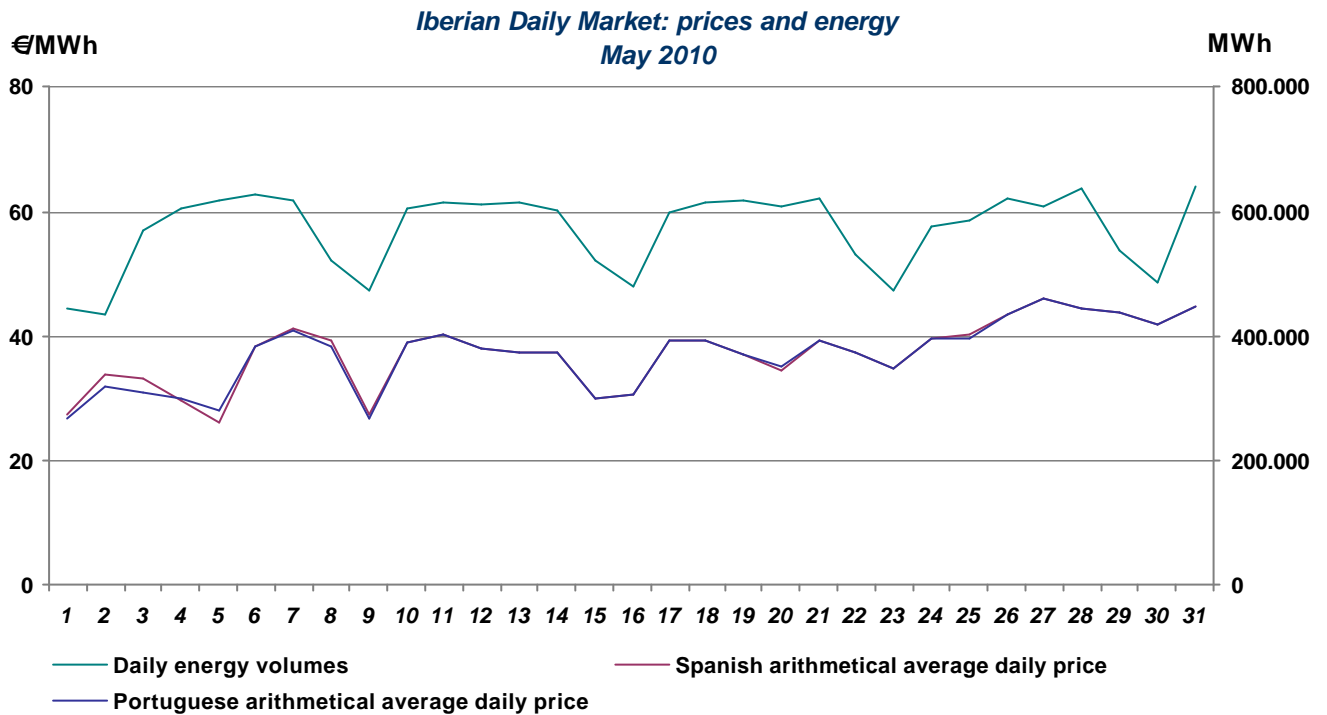
<sup>4</sup> Highest and lowest load values as of May 2009

<sup>5</sup> Operational data

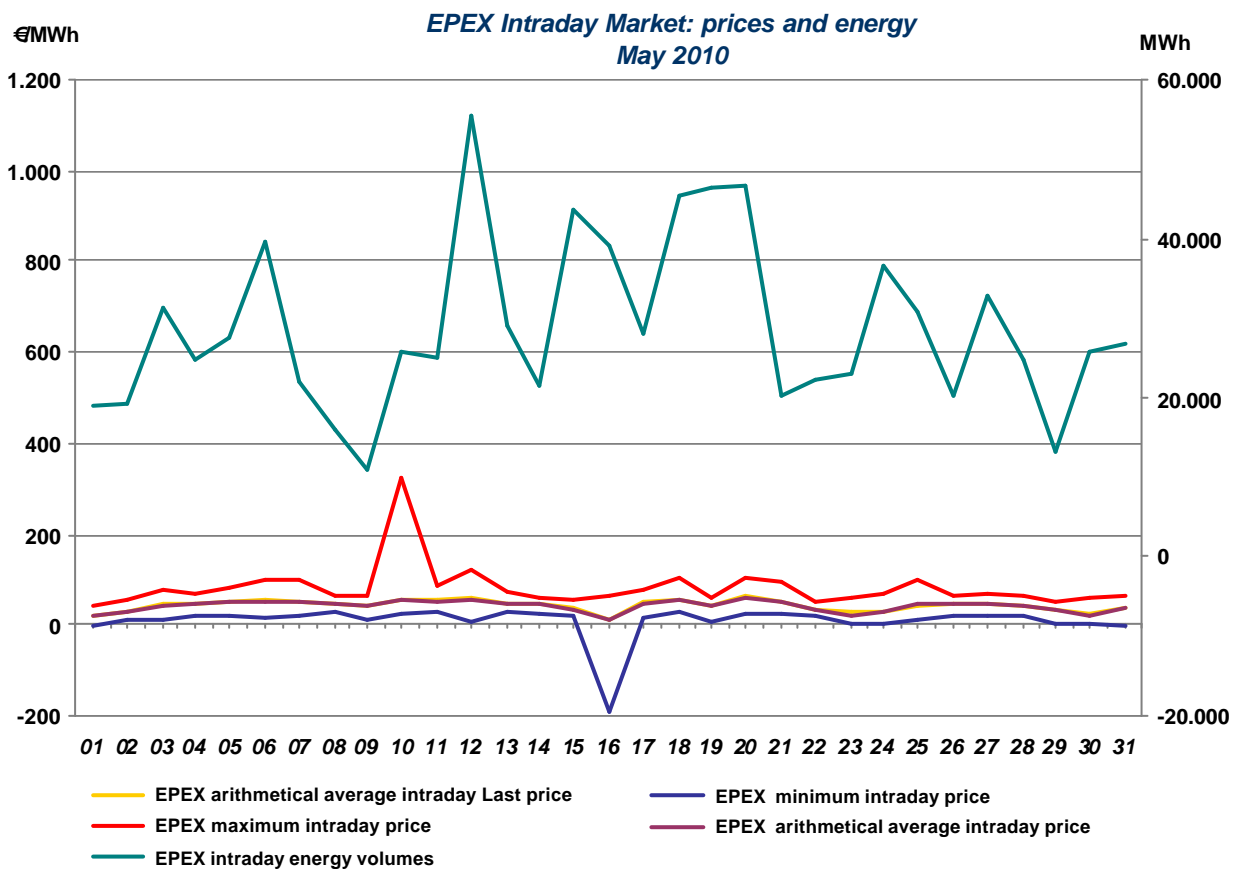
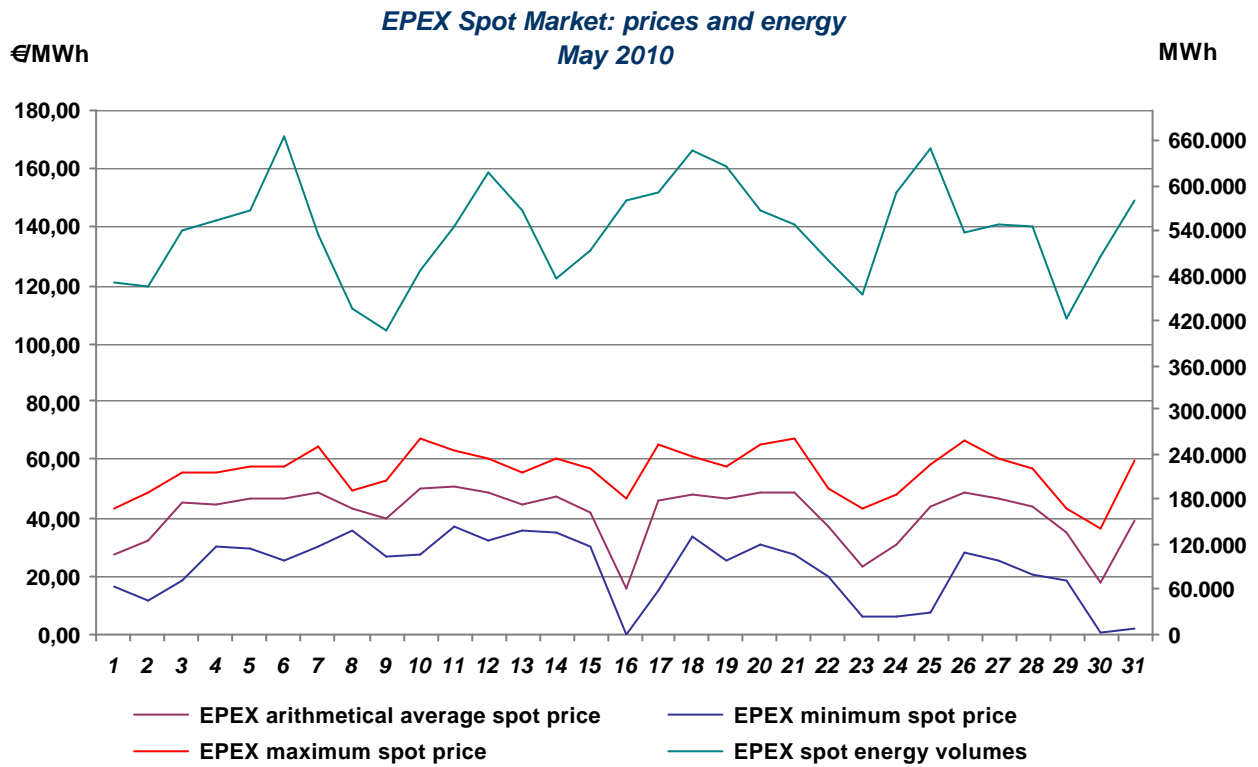
Consumption hourly load curves on 19.05.2010 CET

Values in GW



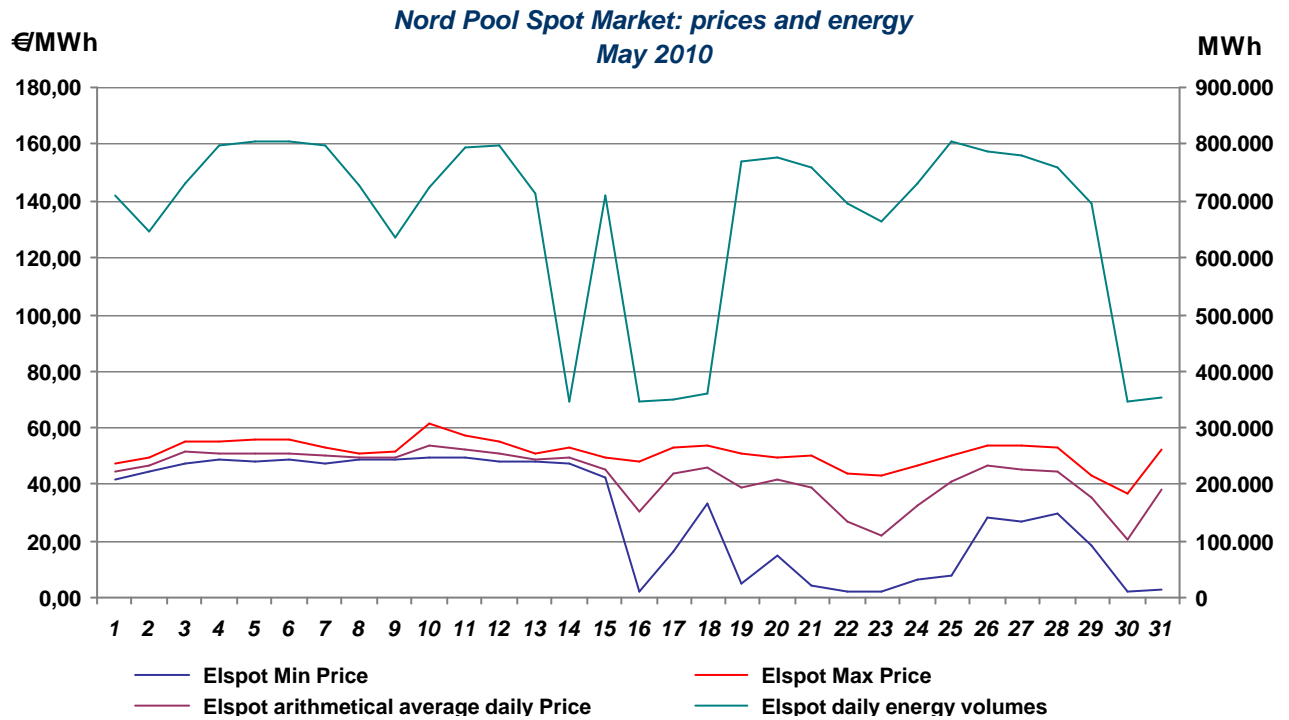


Source of the Iberian Market data: [www.omel.es](http://www.omel.es)



Source of the EPEX Market data: [www.eex.com](http://www.eex.com)





Source of Nord Pool Market data: [www.nordpoolspot.com](http://www.nordpoolspot.com)

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