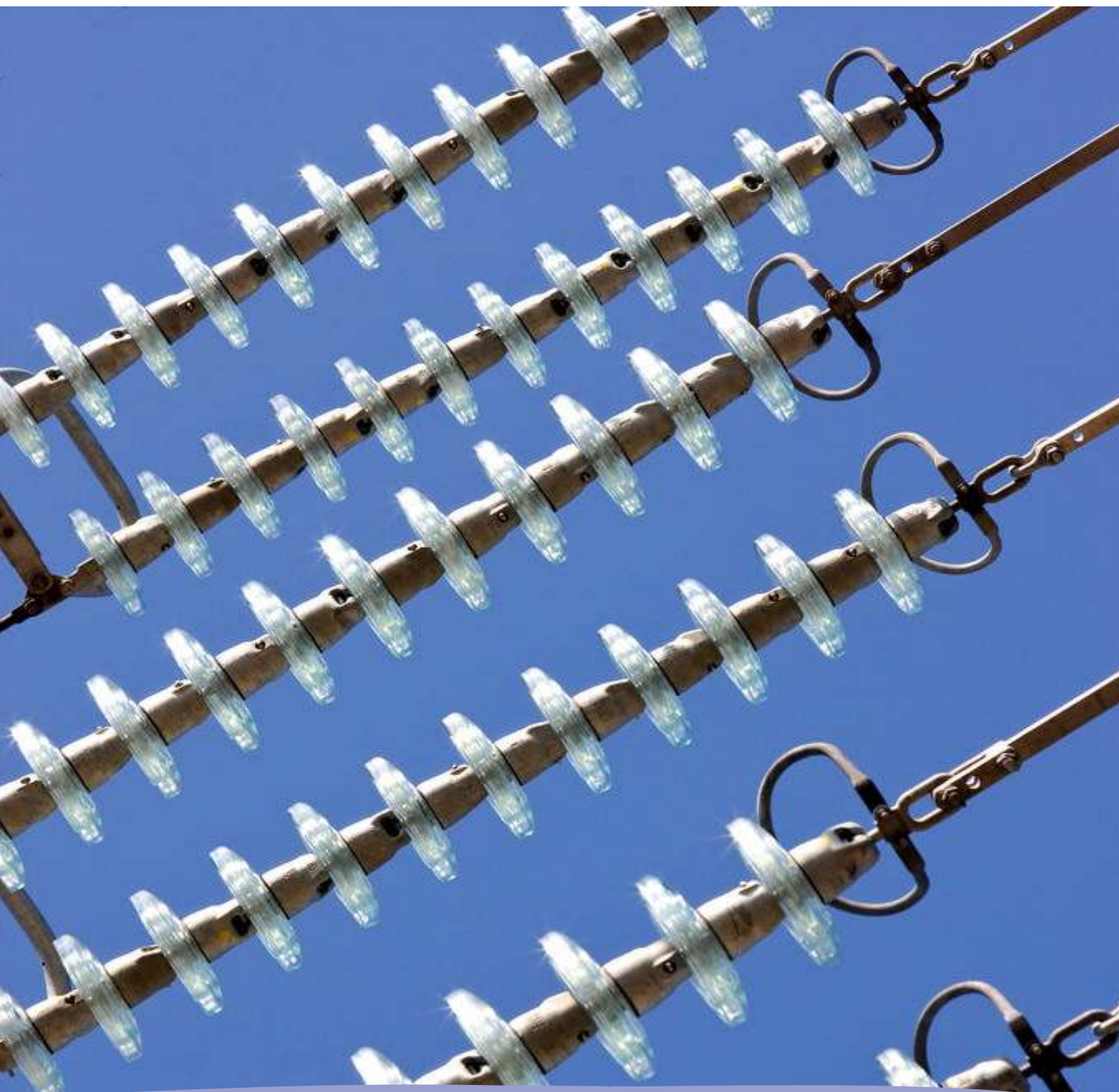


# Monthly statistics



## September 2013

Monthly provisional values as of 07 January 2014

European Network of  
Transmission System Operators  
for Electricity

entsoe

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#### **General remarks and abbreviations used in the tables**

- All values of generation 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	of which bio-mass	Non identifiable	Total			monthly [GWh]	var. [%]
AT	0	920	3228	389	n.a.	n.a.	n.a.	647	5184	686	433	5437	1,1
BA	0	666	286	0	0	0	0	0	952	-31	0	921	0,0
BE <sup>2</sup>	3440	1828	111	693	219	236	238	0	6072 <sup>1</sup>	807	133	6746	3,4
BG	1048	1731	230	242	107	133	0	0	3251	-860	87	2305	5,7
CH	1328	162	3097	118	9	0	0	0	4705 <sup>1</sup>	385	245	4845	-0,8
CY	0	361	0	15	15	0	0	0	376	0	0	376	-11,7
CZ	2171	3176	223	239	43	196	142	0	5809 <sup>1</sup>	-893	101	4815	2,2
DE <sup>3</sup>	7729	24302	1736	6298	3365	2524	409	0	40065	-3591	617	35857	-13,5
DK	0	901	1	873	733	0	141	0	1775 <sup>1</sup>	519	0	2294	-14,1
EE	0	910	1	77	30	0	47	0	988	-415	0	573	-1,9
ES	4739	10235	1957	5094	3285	1315	493	23	22048	-822	212	21014	-0,3
FI	1516	1499	722	861	60	0	801	68	4666 <sup>1</sup>	1570	0	6236	-0,4
FR	29755	2815	4143	1886	942	446	498	0	38599	-4885	532	33182	-0,2
GB	5206	15996	482	1894	1269	0	0	0	23578	1330	332	24575	-2,6
GR	0	3040	292	500	165	319	17	0	3832 <sup>1</sup>	129	0	3961	-0,9
HR	0	327	373	32	32	0	0	0	732	584	19	1297	-1,5
HU	1402	1073	0	0	0	0	0	0	2475	879	0	3354	8,6
IE	0	1509	38	324	312	0	0	8	1879 <sup>1</sup>	167	49	1997	0,8
IS	0	0	1026	403	0	0	0	0	1429	0	0	1429	3,0
IT	0	16416	3277	3642	982	2224	0	0	23335	2860	123	26072	-2,6
LT	0	299	78	67	39	6	22	0	444 <sup>1</sup>	442	68	818	-1,3
LU	0	17	93	22	5	7	3	0	132	436	121	447	-10,6
LV	0	241	73	48	7	0	16	0	362	193	0	555	-5,0
ME	0	118	48	0	0	0	0	0	166	82	0	248	-9,5
MK	0	243	61	0	0	0	0	0	304	251	0	555	-4,5
NI	0	532	1	106	98	0	5	0	639	42	0	681	-0,6
NL	152	5996	0	954	347	n.a.	n.a.	0	7102	1773	0	8875	0,1
NO	0	302	9469	114	114	0	0	0	9885 <sup>1</sup>	-1014	60	8811	-2,3
PL <sup>4</sup>	0	11094	170	949	443	0	505	0	12213 <sup>1</sup>	-561	76	11576	2,2
PT	0	1646	737	999	730	38	230	0	3382 <sup>1</sup>	707	133	3956	0,7
RO	929	1930	849	436	356	58	22	0	4144	-229	10	3905	-3,6
RS	0	2727	515	0	0	0	0	0	3242	-372	82	2788	5,8
SE <sup>5</sup>	4749	179	5374	1410	727	0	683	0	11712 <sup>1</sup>	-1537	0	10175	n.a.
SI	493	400	262	0	0	0	0	0	1155	-126	0	1029	1,1
SK	1277	303	329	114	0	61	34	78	2101 <sup>1</sup>	33	39	2095	1,6
<b>ENTSO-E</b>	<b>65934</b>	<b>113894</b>	<b>39282</b>	<b>28799</b>	<b>14434</b>	<b>7563</b>	<b>4306</b>	<b>824</b>	<b>248733<sup>1</sup></b>	<b>-1461</b>	<b>3472</b>	<b>243800</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.

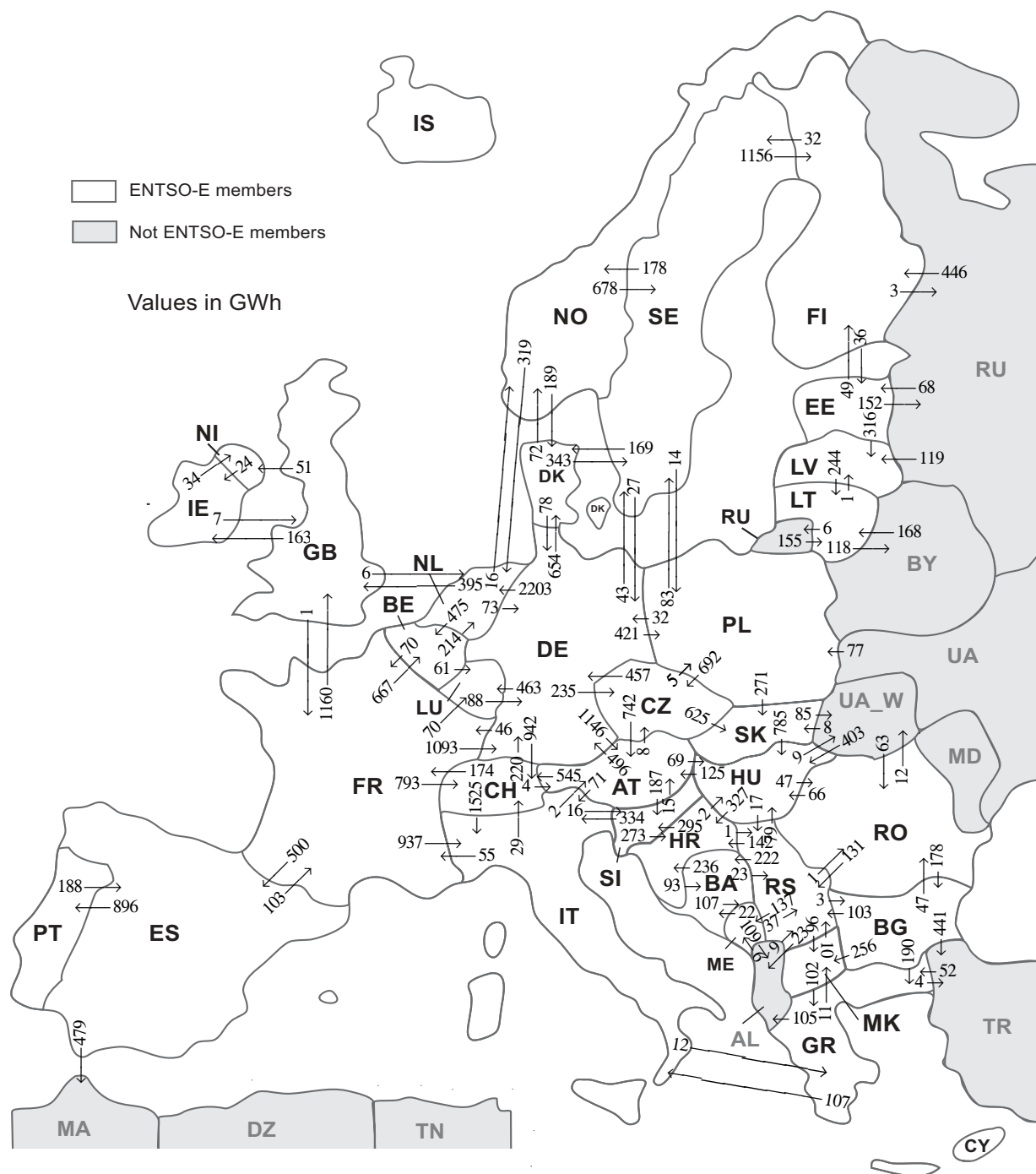
<sup>3</sup> Wind and PV from TSO data, rest from official statistics.

<sup>4</sup> Operational data. Other renewable includes energy from biomass co-firing in conventional thermal units.

<sup>5</sup> Reported data of September 2012

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 except hydro	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	99	99	100	99
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	87	67	17	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: **29079 GWh<sup>1</sup>**

Total physical energy flows: **32199 GWh<sup>1</sup>**

<sup>1</sup> Sum of physical energy flows without exchanges between NO-RU.

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.

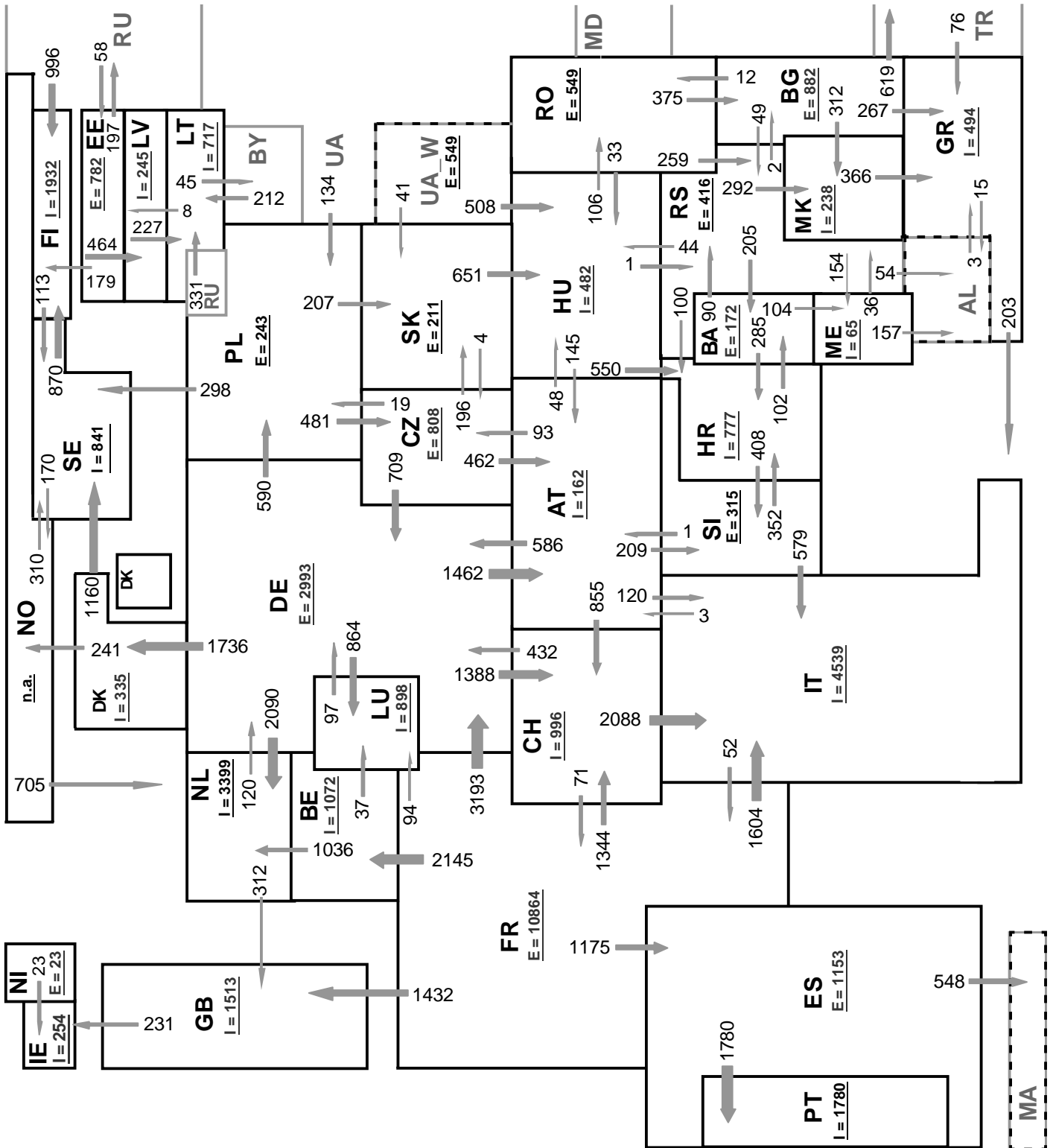
Outside flows countries	Inside flows of the countries																																		
	AT	BA	BE	BG	CH	CZ	DE	DK	EE	ES	FI	FR	GB	GR	HR	HU	IE	IT	LT	LU	LV	ME	MK	NI	NL	NO	PL	PT	RO	RS	SE	SI	SK	Other III <sup>1</sup>	
AT	-	-	-	-	545	8	496	-	-	-	-	-	-	-	69	-	71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	187	-
BA	-	-	-	-	-	-	-	-	-	-	-	-	-	236	-	-	-	-	-	-	107	-	-	-	-	-	-	-	-	23	-	-	-	-	
BE	-	-	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	61	-	-	-	-	214	-	-	-	-	-	-	-	-	-	-	
BG	-	-	-	-	-	-	-	-	-	-	-	-	190	-	-	-	-	-	-	-	-	256	-	-	-	-	-	47	103	-	-	-	-	-	
CH	4	-	-	-	-	220	-	-	-	-	174	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
CZ	742	-	-	-	-	457	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	625	-	
DE	1146	-	-	-	942	235	-	654	-	-	46	-	-	-	-	-	-	-	463	-	-	-	-	2203	-	421	-	-	-	43	-	-	-	-	
DK	-	-	-	-	-	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	72	-	-	-	-	343	-	-	-	-	
EE	-	-	-	-	-	-	-	-	-	49	-	-	-	-	-	-	-	-	-	-	316	-	-	-	-	-	-	-	-	-	-	-	-	152	
ES	-	-	-	-	-	-	-	-	-	103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	896	-	-	-	-	-	-	-	479	
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GR	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	107	-	-	-	-	11	-	-	-	-	-	-	-	-	-	-	109	
HR	-	93	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	1	-	295	-	-	-	-	
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LT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	124	
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ME	-	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37	-	-	-	109	
MK	-	-	-	0	-	-	-	-	-	-	-	-	102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	-	-	-	
NI	-	-	-	-	-	-	-	-	-	-	-	0	-	-	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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RO	-	-	-	178	-	-	-	-	-	-	-	-	-	-	66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	
RS	-	222	-	3	-	-	-	-	-	-	-	-	-	142	79	-	-	-	-	-	137	96	-	-	-	-	-	1	-	-	-	-	-	23	
SE	-	-	-	-	-	27	169	-	-	1156	-	-	-	-	-	-	-	-	-	-	-	-	-	-	178	14	-	-	-	-	-	-	-	-	
SI	15	-	-	-	-	-	-	-	-	-	-	-	273	-	-	-	-	334	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SK	-	-	-	-	0	-	-	-	-	-	-	-	-	-	785	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	85
Other III <sup>1</sup>	-	-	-	0	-	-	-	68	0	446	-	-	52	-	403	-	-	323	-	119	6	-	-	-	n.a.	77	-	63	9	-	-	-	8	-	

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	2034	1376
BA	337	366
BE	1142	345
BG	181	1037
CH	2309	1923
CZ	935	1829
DE	2564	6153
DK	1012	493
EE	104	517
ES	688	1478
FI	1651	71
FR	449	5220
GB	1562	221
GR	356	227
HR	978	391
HU	1404	524
IE	187	41

	flows inside	flows outside
IT	2974	114
LT	567	125
LU	594	88
LV	436	244
ME	250	168
MK	363	112
NI	85	24
NL	2742	959
NO	n.a.	n.a.
PL	517	1078
PT	896	188
RO	157	387
RS	331	703
SE	1179	1544
SI	498	622
SK	904	870
ENTSO-E	n.a.	n.a.

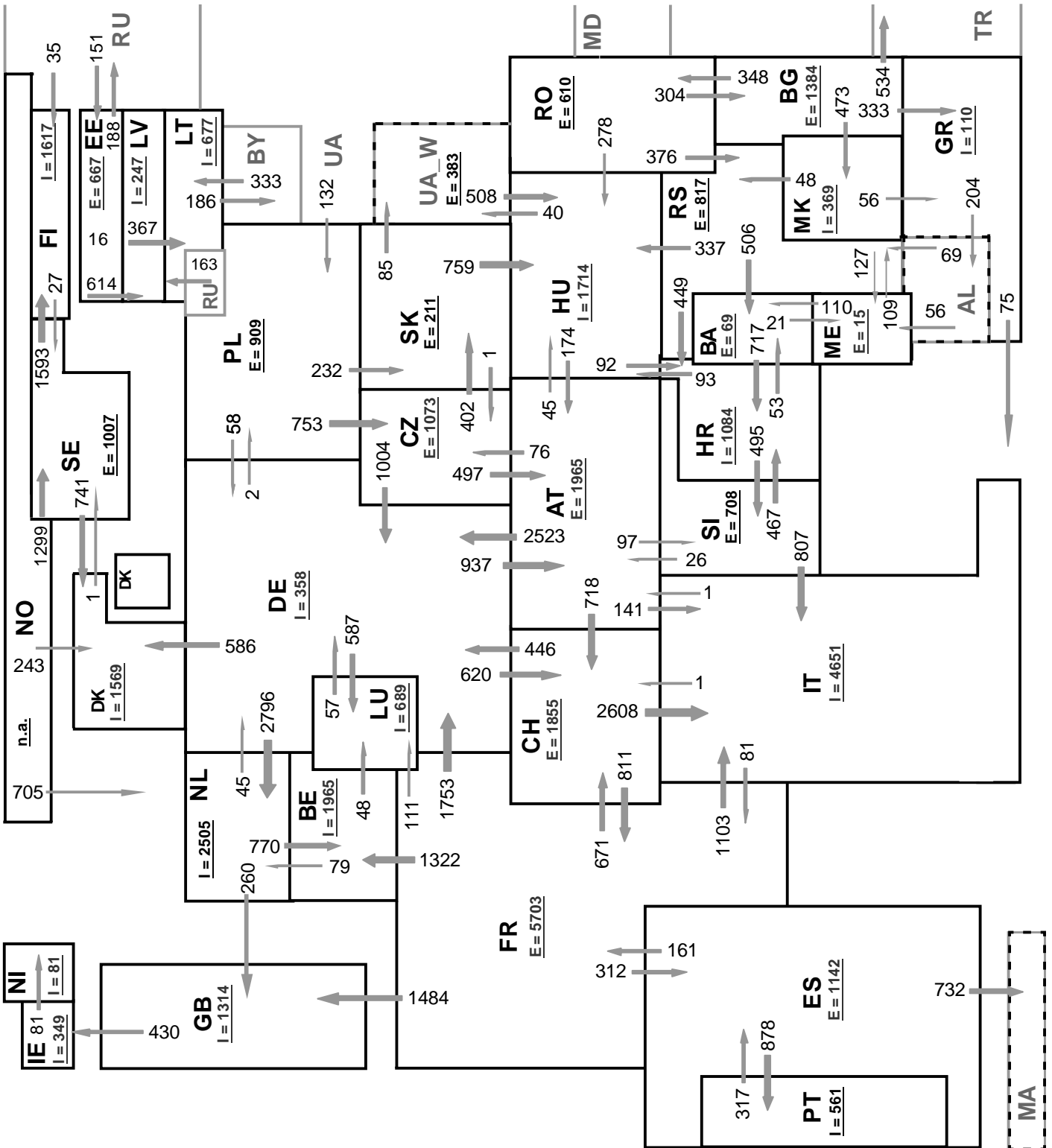


Sum of load flows in MW      ENTSO-E = 40216 MW  
 ( Calculated sum without data between NO - RU )

Total = 44210 MW

Synchronous operation with ENTSO-E region

I = Import balance  
 E = Export balance

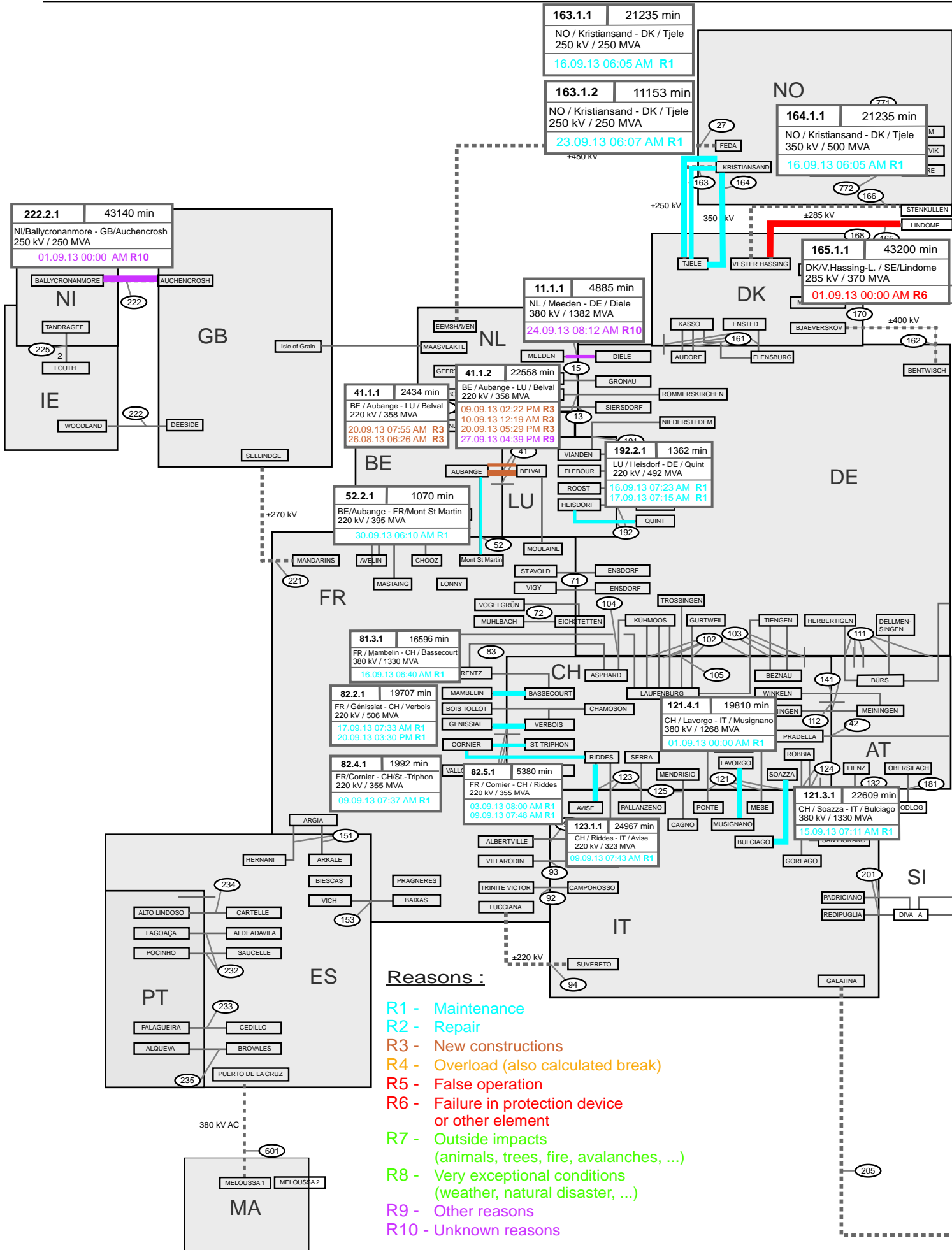


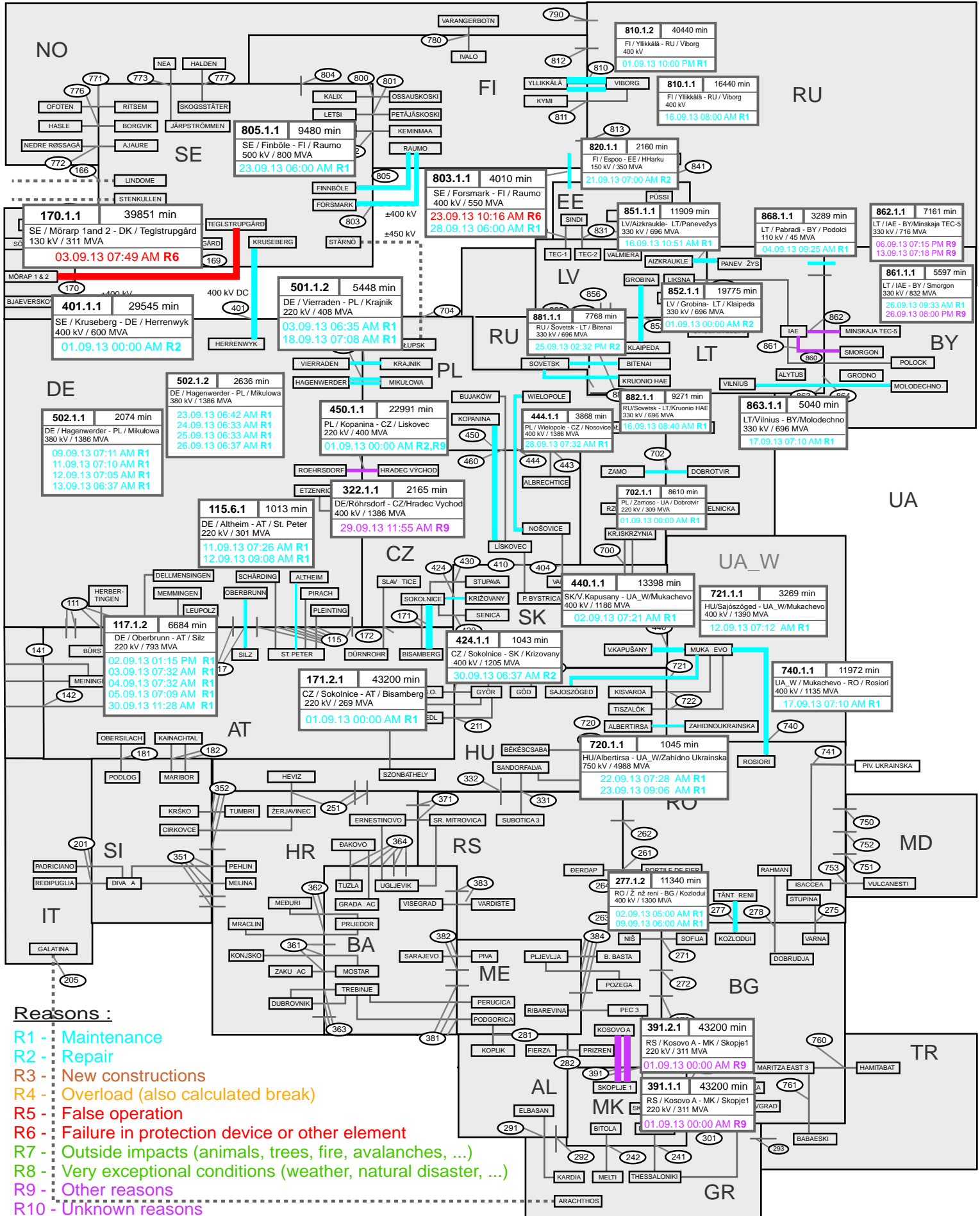
Sum of load flows in MW      ENTSO-E = 39144 MW      Total = 42560 MW  
 ( Calculated sum without data between NO - RU )

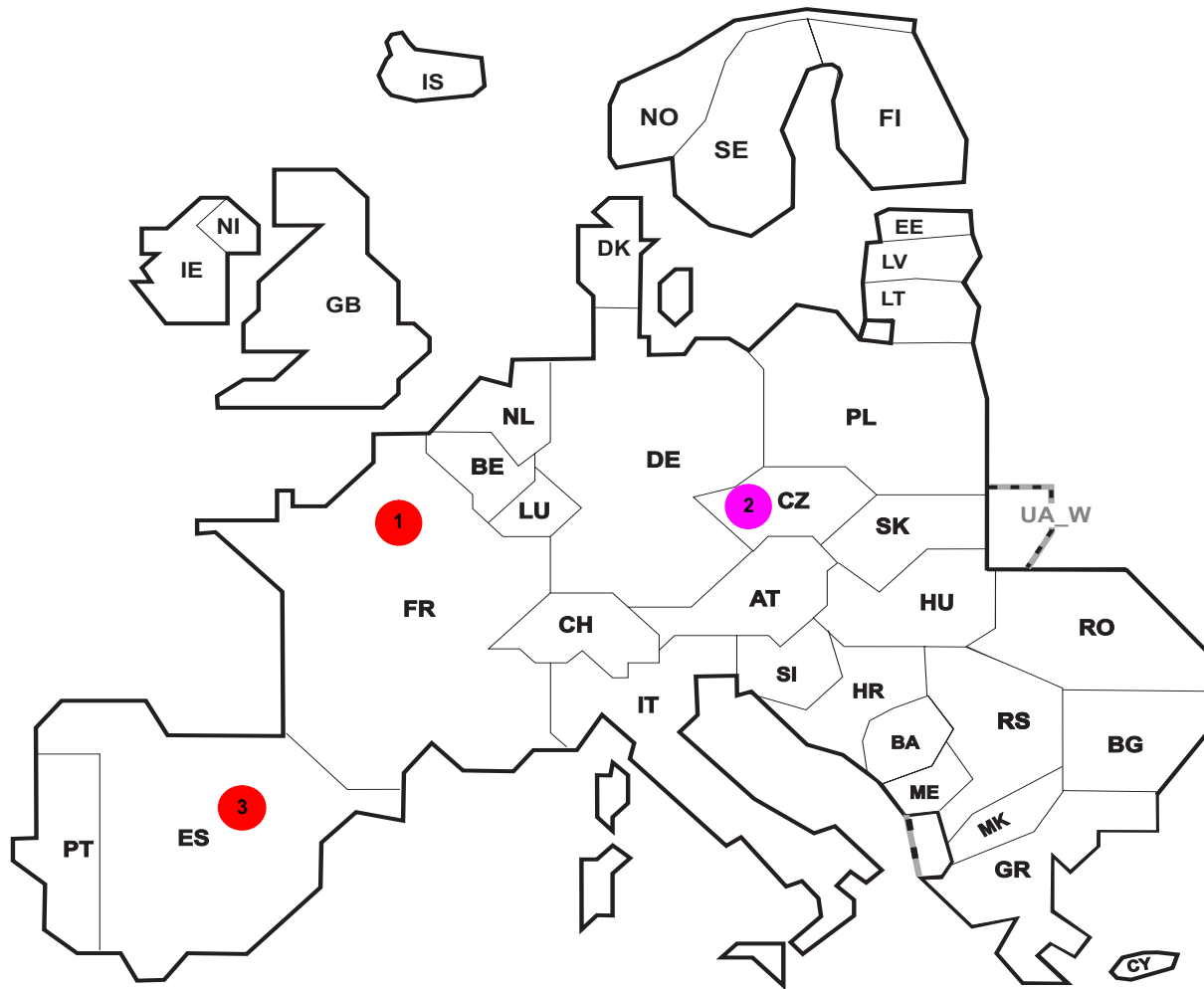
Synchronous operation with ENTSO-E region

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	VILLEJUST	R6	64	112	34	0,068
2	CZ	Bezdecin	R10	5	73	4	0,042
3	ES	TRES CANTOS GIS	R5	2	0	9	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 18.09.2013 CET of each country

	Highest		Low est		Load representativity %
	load MW	variation % <sup>1</sup>	load MW	variation % <sup>1</sup>	
AT	9449	-0,2	6048	2,2	100
BA	1691	5,9	962	0,5	100
BE <sup>2</sup>	11555	9,7	7767	1,8	100
BG	4544	-0,8	3004	2,0	99
CH	8892	0,0	5415	0,0	100
CY	639	-8,6	377	-10,2	100
CZ	8518	3,8	6059	7,3	100
DE	74467	2,5	46982	3,0	91
DK	3339	-28,0	2472	-8,2	100
EE	952	-6,2	557	-7,5	100
ES	33445	-3,2	22815	-1,7	100
FI	9502	-3,5	7156	-1,8	100
FR	56775	3,2	38920	3,4	100
GB	40068	-8,6	22670	-7,9	100
GR	6599	0,3	4256	2,7	100
HR	2328	-1,1	1417	-2,1	100
HU	5208	0,1	3416	0,4	100
IE	3547	-0,7	2023	4,2	100
IS	2094	4,4	1935	3,0	100
IT	45187	-1,7	27441	-5,2	100
LT	1412	-0,9	852	0,6	100
LU	738	-16,4	470	-22,3	100
LV	971	3,3	534	-2,9	100
ME	419	-6,3	247	-13,3	100
MK	969	-1,1	574	-6,8	100
NI	1241	-1,9	642	-1,2	100
NL	13587	-6,1	8419	-5,3	100
NO	13953	-1,4	10806	2,1	100
PL <sup>3</sup>	20142	2,6	13322	1,4	100
PT	6713	-1,7	4588	2,3	100
RO	6585	-3,7	4434	-5,2	100
RS	5001	6,6	2820	8,9	100
SE	16563	-0,7	11733	-1,2	100
SI	1730	-3,8	1096	-15,2	100
SK	3577	0,7	2632	4,8	100
<b>ENTSO-E</b>	<b>411846</b>	<b>-1,0</b>	<b>276152</b>	<b>-0,4</b>	

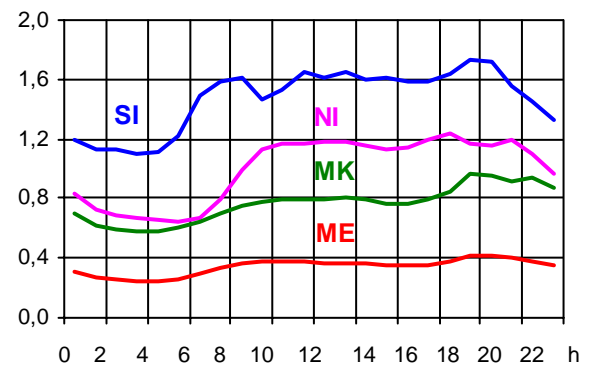
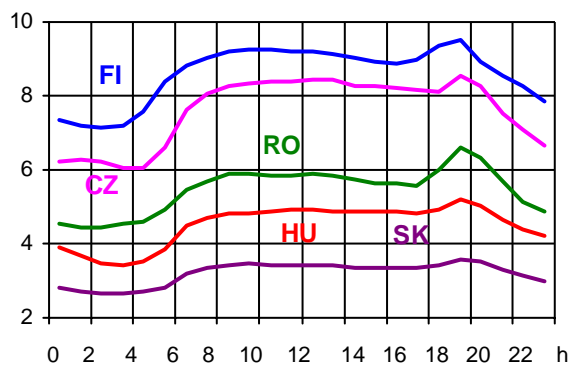
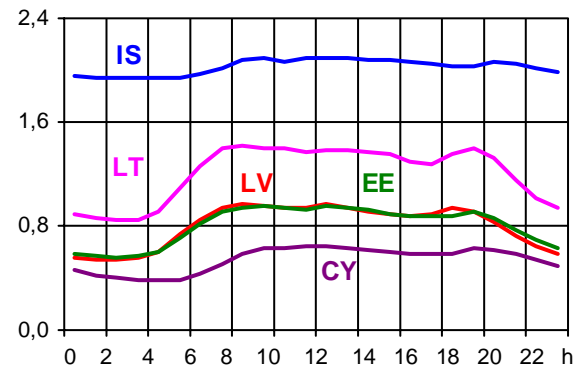
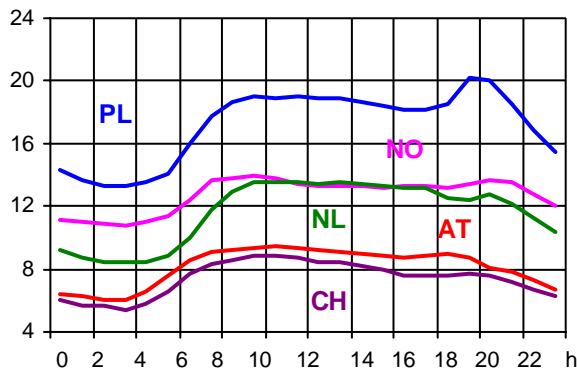
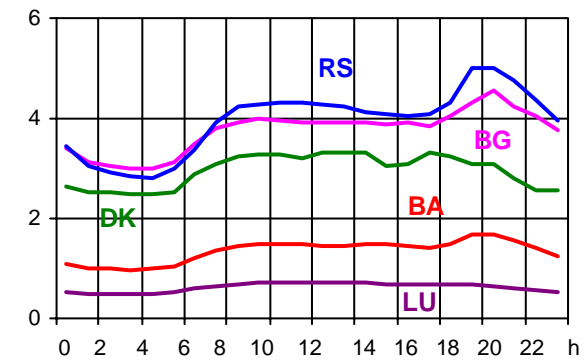
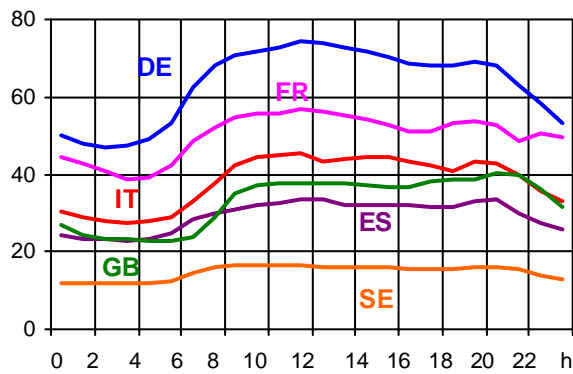
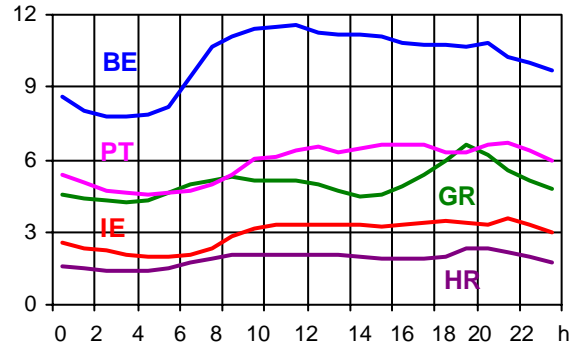
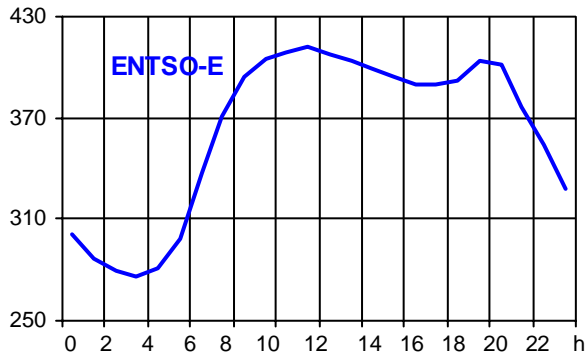
<sup>1</sup> Variation as compared to corresponding month of the previous year

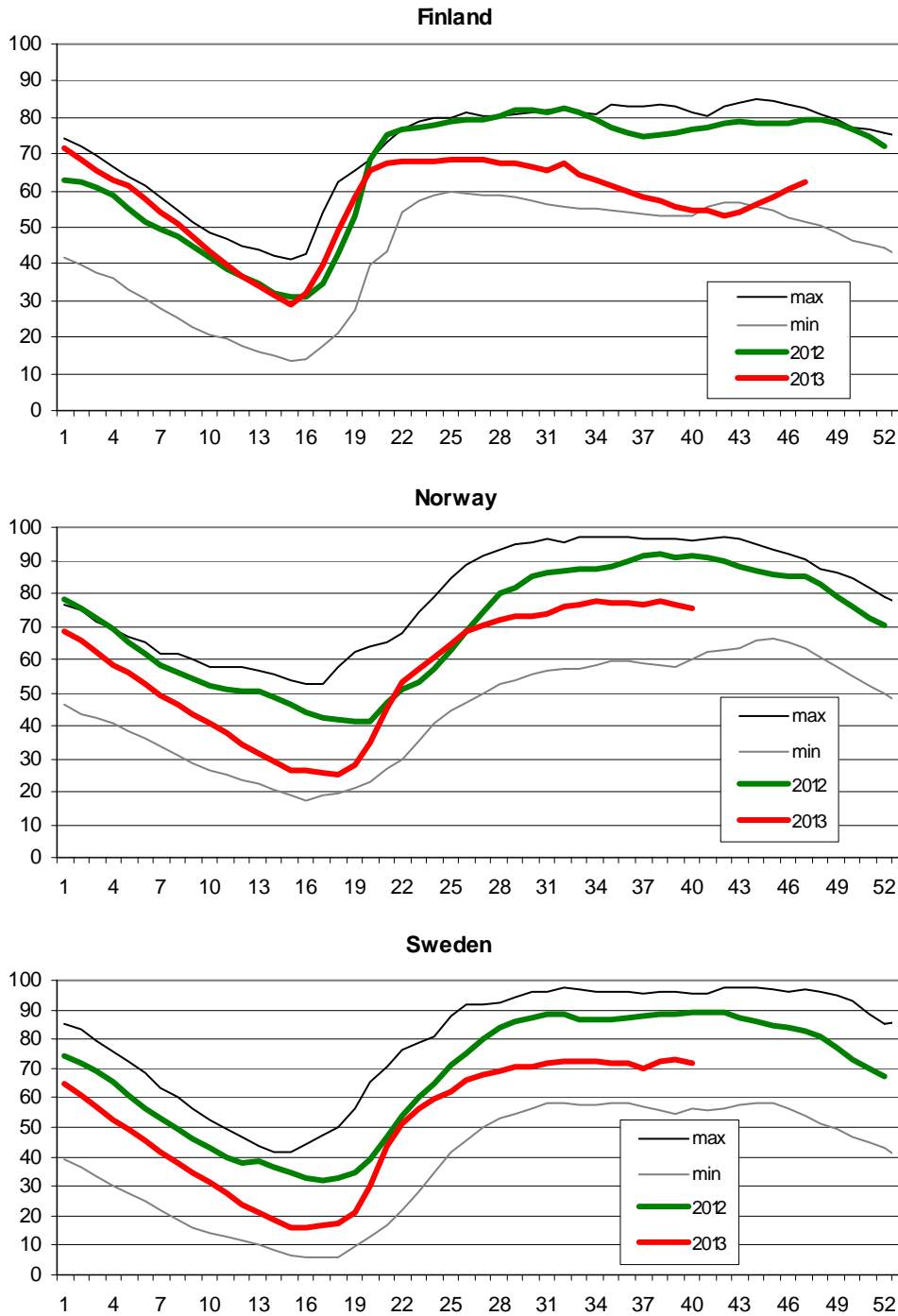
<sup>2</sup> The reported figures are best estimates based on actual measurements and extrapolations.

<sup>3</sup> Operational data

Consumption hourly load curves on 18.09.2013 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

## Contact

Avenue de Cortenbergh, 100  
B-1000 Brussels – Belgium  
Tel + 32 2 741 0950  
Fax + 32 2 741 0951

[info@entsoe.eu](mailto:info@entsoe.eu)  
[www.entsoe.eu](http://www.entsoe.eu)

