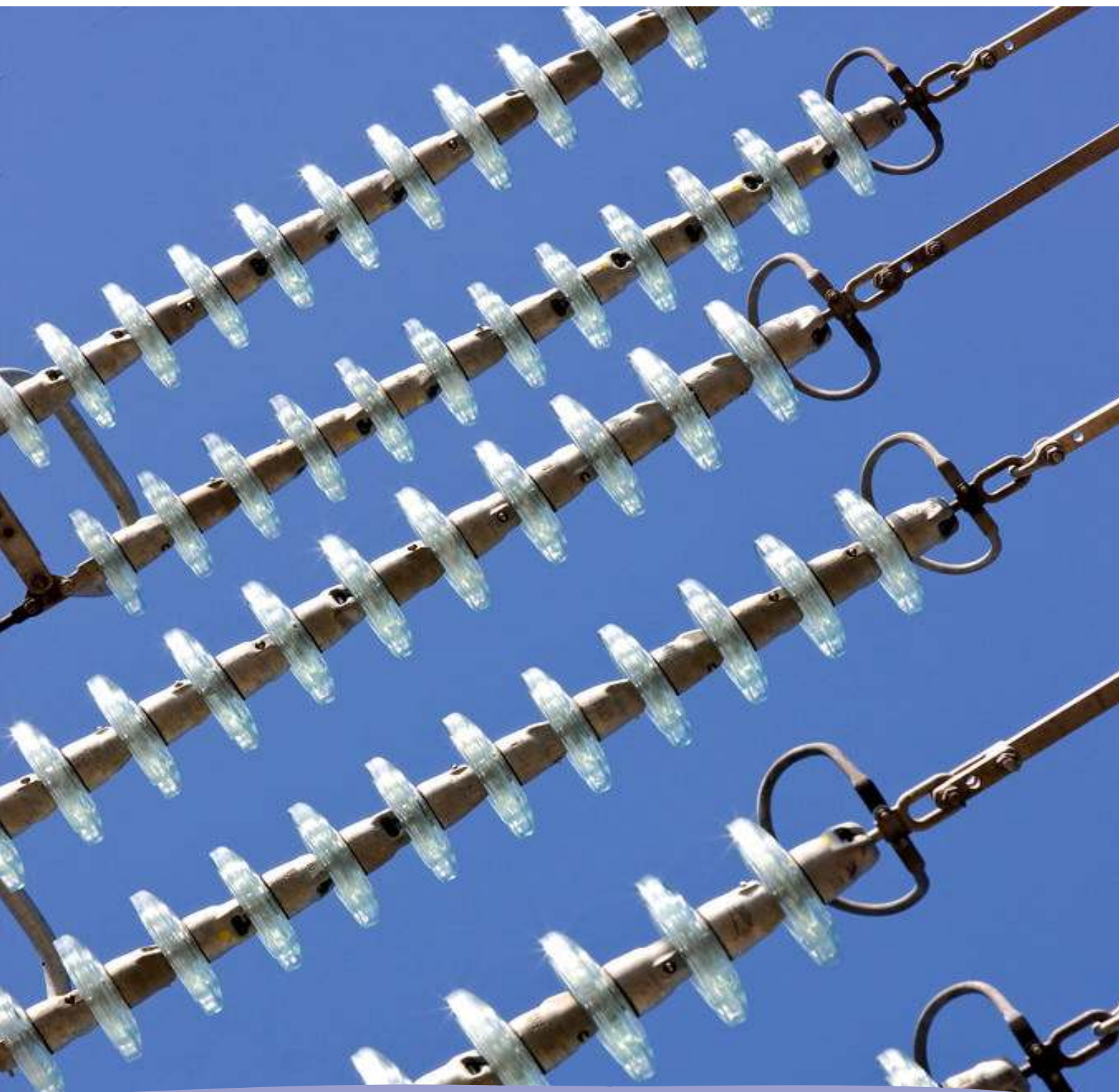


# Monthly statistics



## June 2013

Monthly provisional values as of 22 October 2013

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	398	4051	427	n.a.	n.a.	n.a.	850	5726	52	441	5337	0,3
BA	0	705	462	0	0	0	0	0	1167	-263	0	904	-1,0
BE <sup>2</sup>	3523	1722	157	791	265	329	197	0	6193 <sup>1</sup>	522	159	6556	0,2
BG	792	1028	470	225	79	144	n.a.	0	2515	-152	26	2337	2,3
CH	1555	173	3983	127	9	0	0	0	5838 <sup>1</sup>	-761	253	4824	0,6
CY	0	348	0	20	20	0	0	0	368	0	0	368	-11,8
CZ	2129	3103	387	298	34	264	96	0	5917 <sup>1</sup>	-1262	20	4635	-0,4
DE <sup>3</sup>	6596	20893	1904	7863	3479	3987	397	0	37256 <sup>1</sup>	-571	n.a.	36685	n.a.
DK	0	991	1	1036	864	0	172	0	2028 <sup>1</sup>	-305	0	1723	-32,9
EE	0	754	1	61	23	0	38	0	816	-273	0	543	1,7
ES	4276	7477	3387	6088	3941	1641	506	26	21254	-359	393	20502	-7,0
FI	1678	795	994	640	35	0	605	65	4172 <sup>1</sup>	1412	0	5584	-2,2
FR	28618	1225	7363	2191	1157	559	475	0	39397	-5752	611	33034	-0,5
GB	4583	16507	374	1601	1073	0	0	0	23065	1018	297	23786	-1,8
GR	0	3111	404	660	205	437	18	0	4175 <sup>1</sup>	110	0	4285	-5,7
HR	0	213	597	28	28	0	0	0	838	465	4	1299	-2,3
HU	1360	1024	0	0	0	0	0	0	2384	965	0	3349	6,5
IE	0	1405	46	259	247	0	0	11	1721 <sup>1</sup>	235	48	1908	-1,8
IS	0	0	1016	367	0	0	0	0	1383	0	0	1383	3,3
IT	0	12721	6242	4188	993	2765	0	0	23151	3212	226	26137	-6,6
LT	0	80	100	57	26	7	24	0	237 <sup>1</sup>	639	76	800	2,6
LU	0	20	109	18	7	7	4	0	147	469	143	473	-8,0
LV	0	63	258	40	6	0	12	0	361	161	0	522	-4,6
ME	0	139	327	0	0	0	0	0	466	-19	0	447	53,6
MK	0	334	112	0	0	0	0	0	446	113	0	559	-1,2
NI	0	430	1	72	65	0	5	0	503	152	0	655	-3,7
NL	346	5088	0	1059	452	n.a.	n.a.	0	6493	2396	0	8889	-2,3
NO	0	270	9270	94	94	0	0	0	9634 <sup>1</sup>	-1176	353	8105	-2,7
PL <sup>4</sup>	0	10293	283	698	295	0	403	0	11274 <sup>1</sup>	73	54	11293	2,0
PT	0	1568	845	1052	785	44	223	0	3465 <sup>1</sup>	440	122	3783	-1,8
RO	852	1266	1646	312	248	41	23	0	4076	-57	19	4000	-4,6
RS	0	2227	1115	0	0	0	0	0	3342	-512	112	2718	0,2
SE	4686	159	3622	1107	541	0	566	0	9574 <sup>1</sup>	-441	0	9133	-6,7
SI	496	303	488	0	0	0	0	0	1287	-298	0	989	-3,3
SK	1156	265	579	129	0	70	0	80	2209 <sup>1</sup>	-143	34	2032	-1,4
<b>ENTSO-E</b>	<b>62646</b>	<b>97098</b>	<b>50594</b>	<b>31508</b>	<b>14971</b>	<b>10295</b>	<b>3764</b>	<b>1032</b>	<b>242878<sup>1</sup></b>	<b>90</b>	<b>3391</b>	<b>239577</b>	<b>n.a.</b>

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

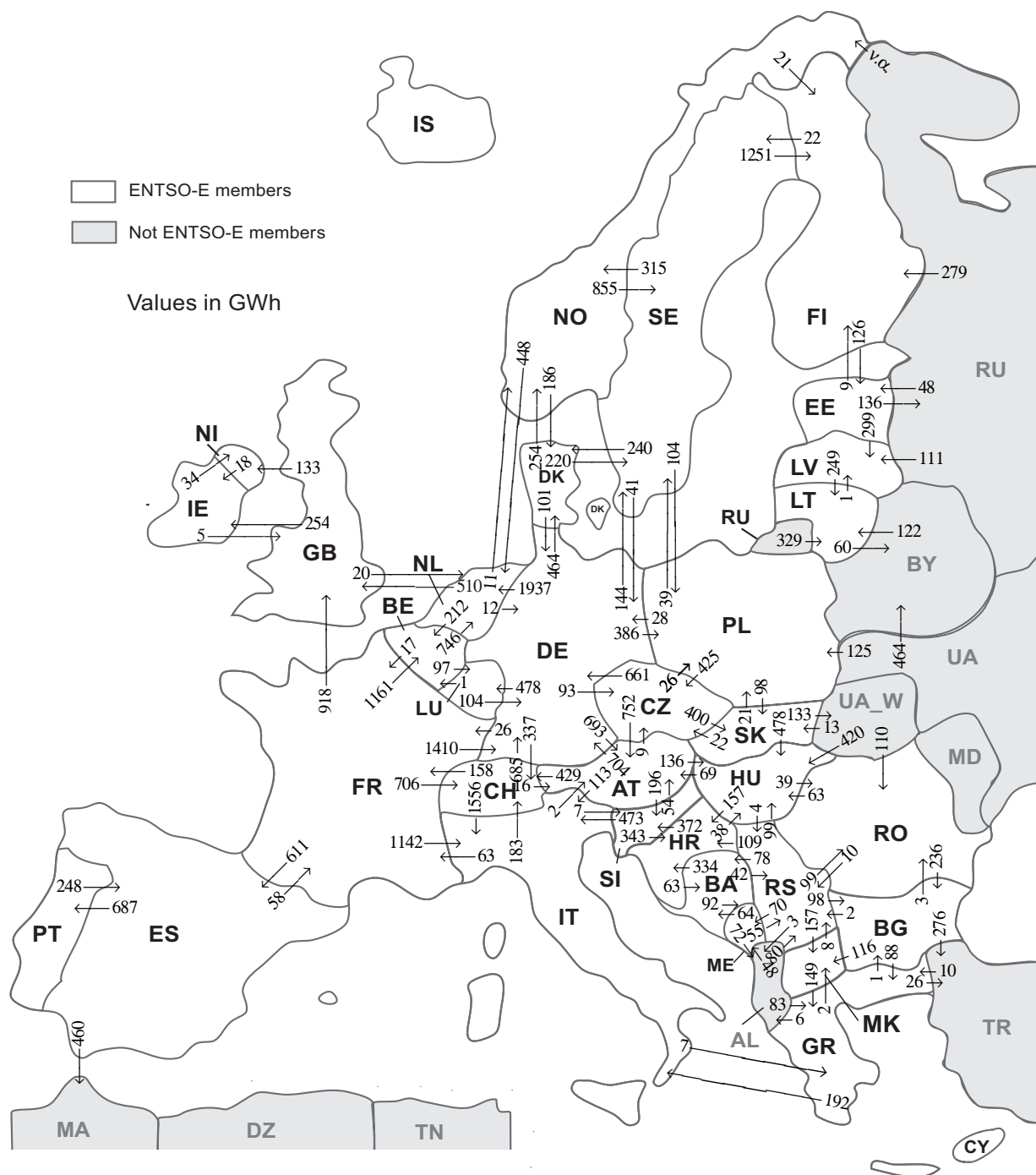
<sup>2</sup> The reported figures are best estimates based on actual measurements and extrapolations.

<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.

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: **29409 GWh<sup>1</sup>**

Total physical energy flows: **32359 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.

# 4

## Overview of the detailed physical energy flows in GWh

June 2013

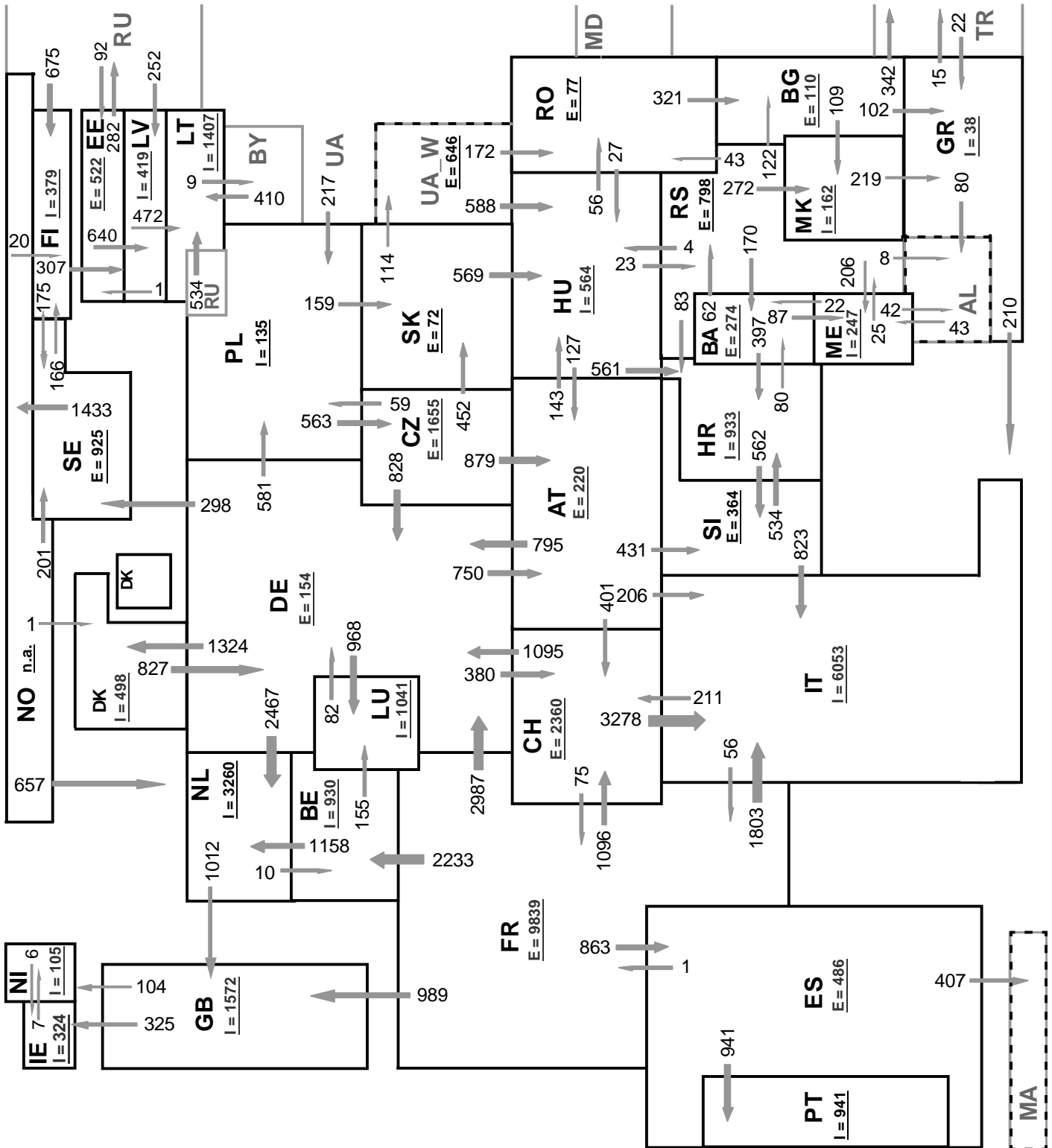
Outside flows countries	Inside flows of the countries																																			
	AT	BA	BE	BG	CH	CZ	DE	DK	EE	ES	FI	FR	GB	GR	HR	HU	IE	IT	LT	LU	LV	ME	MK	NI	NL	NO	PL	PT	RO	RS	SE	SI	SK	Other III <sup>1</sup>		
AT	-	-	-	-	429	9	704	-	-	-	-	-	-	-	-	136	-	113	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	196	-	
BA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	334	-	-	-	-	-	-	92	-	-	-	-	-	-	-	-	42	-	-	-		
BE	-	-	-	-	-	-	-	-	-	-	-	17	-	-	-	-	-	-	-	97	-	-	-	-	-	746	-	-	-	-	-	-	-	-		
BG	-	-	-	-	-	-	-	-	-	-	-	-	88	-	-	-	-	-	-	-	-	-	116	-	-	-	-	-	3	2	-	-	-	-	276	
CH	16	-	-	-	-	-	685	-	-	-	-	158	-	-	-	-	-	1556	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
CZ	752	-	-	-	-	-	661	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26	-	-	-	-	-	-	400	-	
DE	693	-	-	-	337	93	-	464	-	-	-	26	-	-	-	-	-	-	-	478	-	-	-	-	-	1937	386	-	-	-	144	-	-	-	-	
DK	-	-	-	-	-	-	101	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	254	-	-	-	-	-	220	-	-	-	
EE	-	-	-	-	-	-	-	-	-	-	9	-	-	-	-	-	-	-	-	-	299	-	-	-	-	-	-	-	-	-	-	-	-	-	136	
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GB	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	254	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GR	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	192	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	32
HR	-	63	-	-	-	-	-	-	-	-	-	-	-	-	-	38	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	372	-	-	-	
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IE	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	34	-	-	-	-	-	-	-	-	-	-	-
IT	2	-	-	-	183	-	-	-	-	-	-	63	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	-	-	
LT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60	
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ME	-	64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	55	-	72	
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NL	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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PL	-	-	-	-	425	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39	-	98	0	
PT	-	-	-	-	-	-	-	-	-	248	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RO	-	-	-	236	-	-	-	-	-	-	-	-	-	-	-	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	0
RS	-	78	-	98	-	-	-	-	-	-	-	-	-	109	99	-	-	-	-	-	-	70	157	-	-	-	-	-	-	-	-	99	-	-	-	3
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SI	54	-	-	-	-	-	-	-	-	-	-	-	-	343	-	-	-	473	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SK	-	-	-	-	22	-	-	-	-	-	-	-	-	-	-	478	-	-	-	-	-	-	-	-	-	-	-	21	-	-	-	-	-	-	-	133
Other III <sup>1</sup>	-	-	-	0	-	-	-	-	48	0	279	-	-	93	-	420	-	-	451	-	111	48	-	-	-	n.a.	125	-	110	80	-	-	-	-	13	-

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	1586	1587
BA	205	468
BE	1374	860
BG	336	485
CH	1655	2415
CZ	549	1839
DE	3746	4558
DK	890	575
EE	174	444
ES	859	1205
FI	1560	148
FR	322	5948
GB	1433	407
GR	337	227
HR	943	473
HU	1234	269
IE	272	39

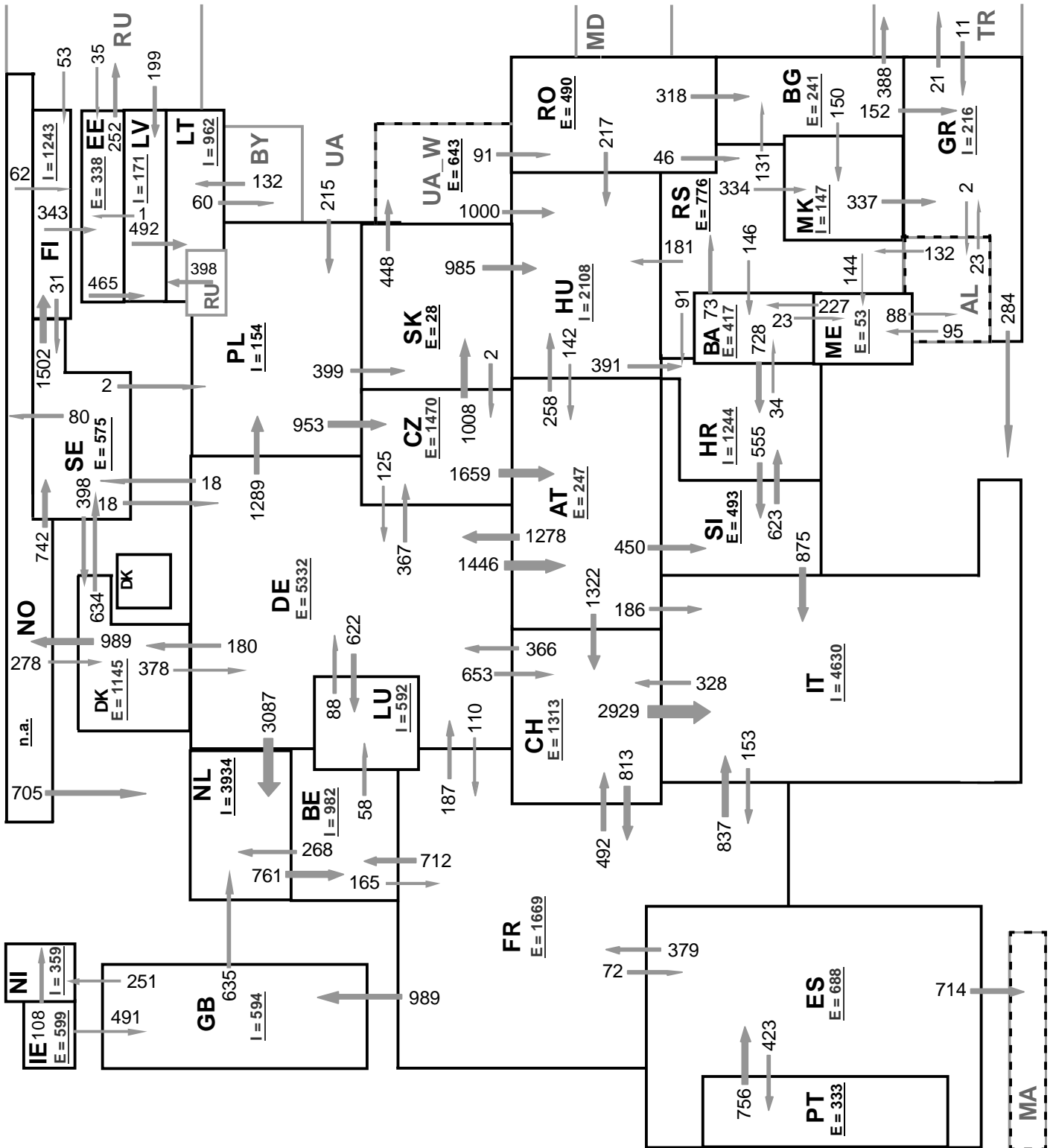
	flows inside	flows outside
IT	3476	262
LT	700	61
LU	575	105
LV	411	249
ME	210	191
MK	275	158
NI	167	18
NL	3151	745
NO	n.a.	n.a.
PL	662	590
PT	687	248
RO	251	309
RS	201	713
SE	1280	1951
SI	575	870
SK	511	654
ENTSO-E	n.a.	n.a.



Sum of load flows in MW      ENTSO-E = 40887 MW      Total = 45191 MW  
 ( Calculated sum without data between NO - RU )

Synchronous operation with ENTSO-E region

**I** = Import balance  
**E** = Export balance



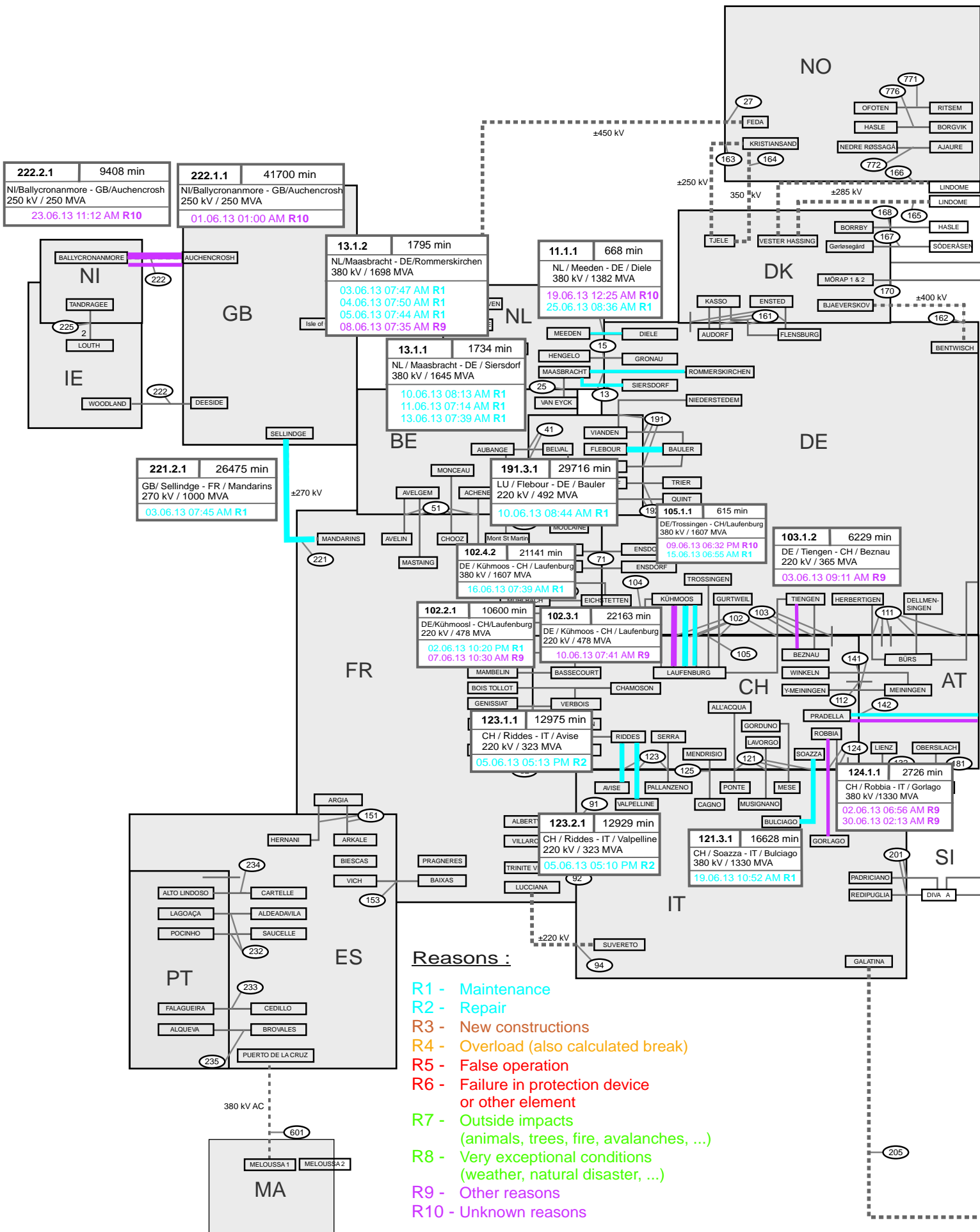
Sum of load flows in MW      ENTSO-E = 41980 MW  
 ( Calculated sum without data between NO - RU )

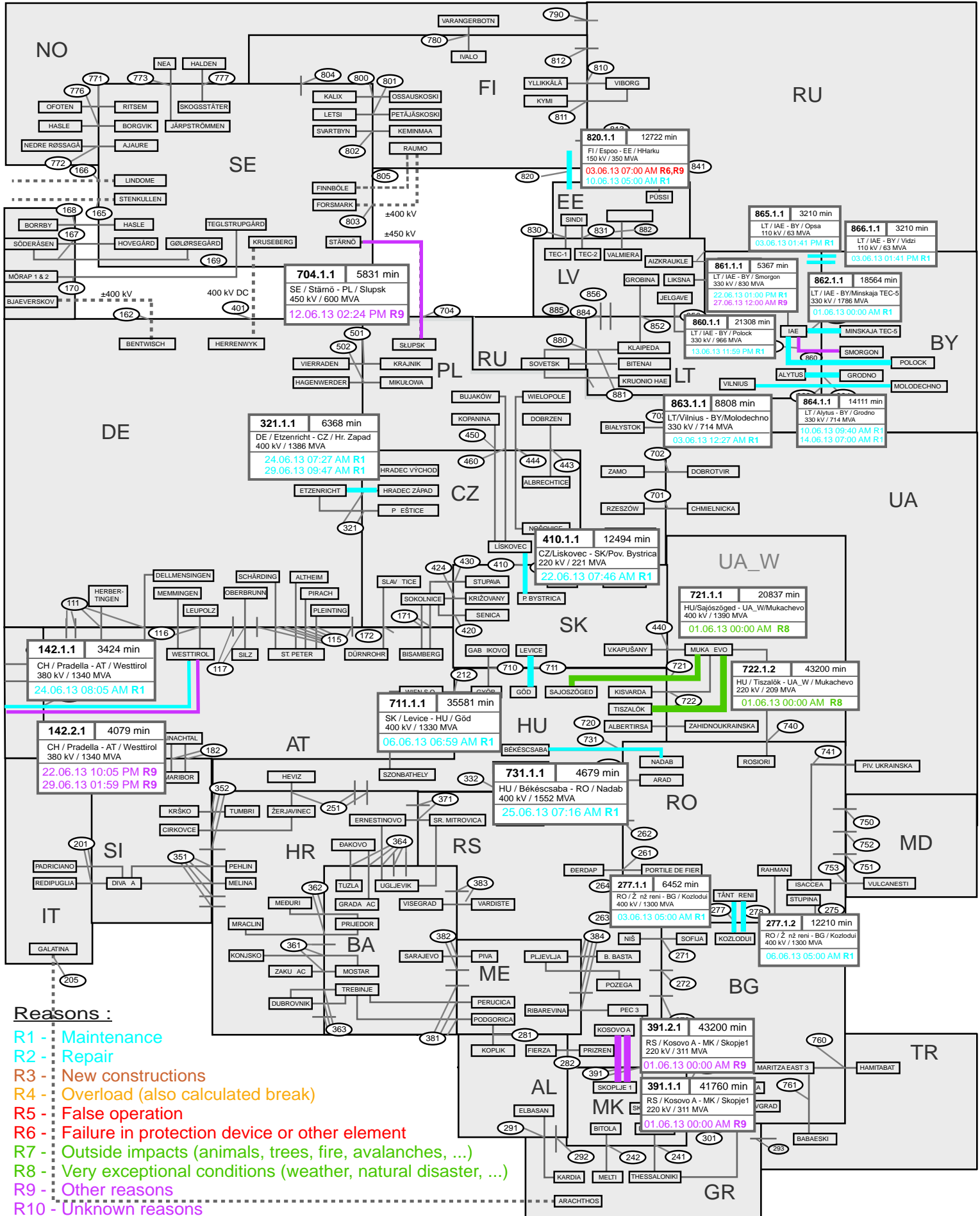
Total = 46337 MW

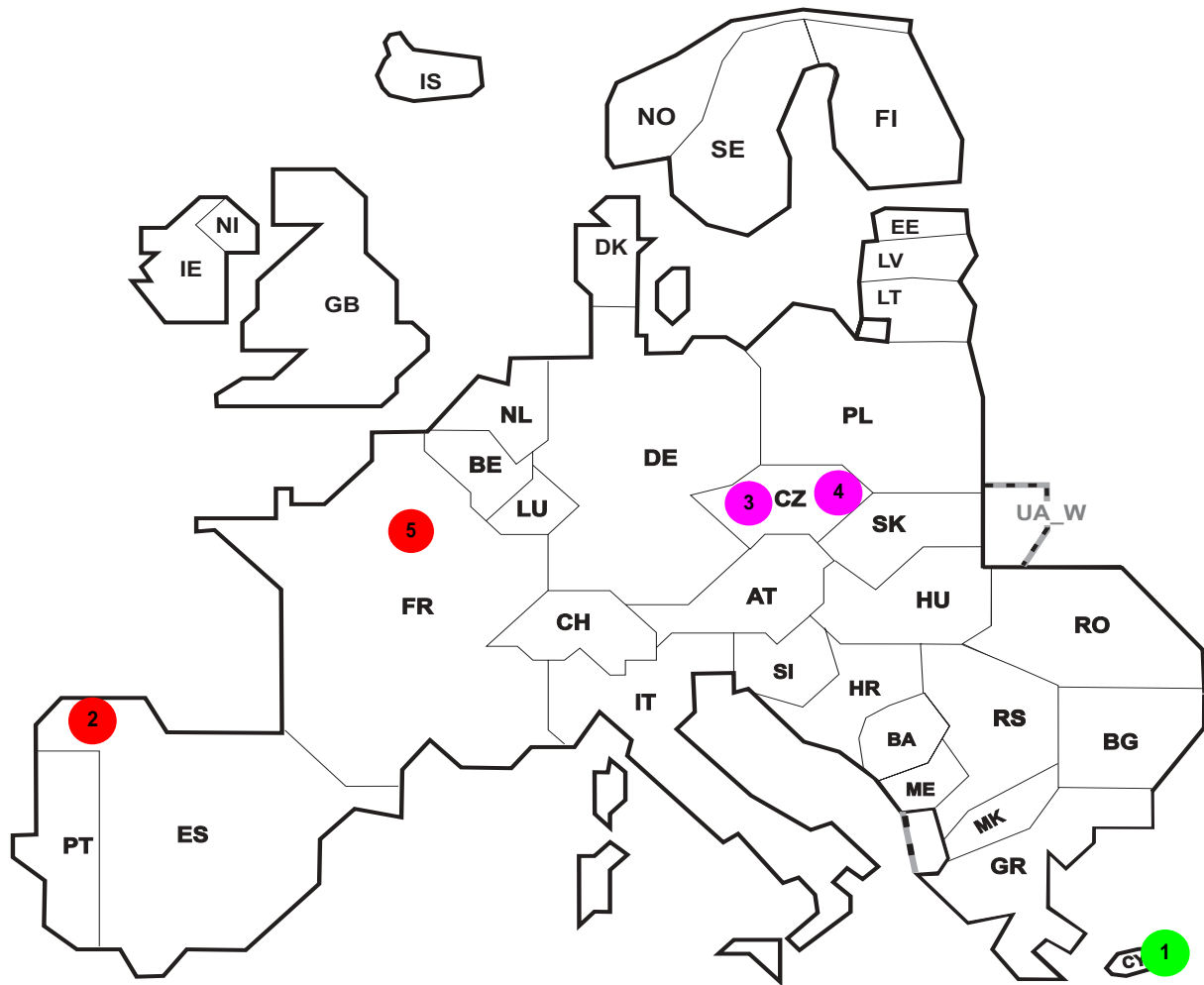
Synchronous operation with ENTSO-E region

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	CY	New Mari	R7	15	57	20	1,795
2	ES	Meson do Vento	R6	408	0	233	0,819
3	CZ	Chodov	R10	78	131	93	0,653
4	CZ	Liskovec	R9	21	95	16	0,176
5	FR	Malecot	R6	40	34	70	0,042

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 19.06.2013 CET of each country

	Highest		Low est		Load representativity %
	load MW	variation % <sup>1</sup>	load MW	variation % <sup>1</sup>	
AT	9536	-0,1	6162	0,2	100
BA	1676	1,5	989	-1,0	100
BE <sup>2</sup>	11622	9,8	7638	1,1	100
BG <sup>3</sup>	4369	-2,6	2955	-3,3	99
CH	8765	-0,4	5369	2,2	100
CY	685	-15,7	391	-16,6	100
CZ	8532	6,5	5690	2,9	100
DE <sup>4</sup>	67237	-11,4	41152	-9,3	91
DK	4314	-4,2	2431	-7,1	100
EE	955	1,5	575	2,0	100
ES	31937	-7,8	22035	-5,6	100
FI	8158	-2,6	6003	-2,8	100
FR	56701	1,0	38159	-0,2	100
GB	41229	0,1	24519	0,3	100
GR	7141	-7,7	4829	-4,8	100
HR	2558	0,5	1426	-7,9	100
HU	5667	0,4	3634	-0,9	100
IE	3322	-0,7	1907	1,9	100
IS	2016	2,1	1850	1,9	100
IT	51596	-0,5	31458	-2,0	100
LT	1414	3,4	825	3,4	100
LU	780	-5,6	582	1,7	100
LV	932	-2,0	521	-0,8	100
ME	492	-4,1	268	-14,9	100
MK	998	2,1	607	7,2	100
NI	1185	-1,0	630	1,0	100
NL	14412	-2,5	8950	-2,0	100
NO	12646	-1,6	9599	-4,7	100
PL <sup>5</sup>	19573	2,6	12989	1,0	100
PT	6247	-5,5	4194	-4,3	100
RO	6739	-5,9	4792	-4,1	100
RS	5016	4,8	2841	1,3	100
SE	15412	-5,0	10831	-7,4	100
SI	1745	-1,5	1336	-0,7	100
SK	3620	1,7	2624	-0,6	100
<b>ENTSO-E</b>	<b>274774</b>	<b>-2,8</b>	<b>415867</b>	<b>-2,5</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> The inadequate generation data is reflected on the load data as well.

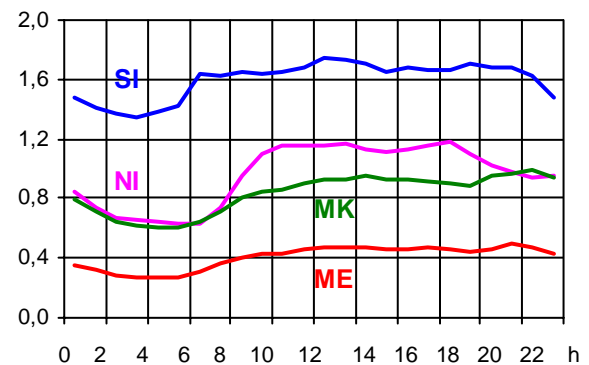
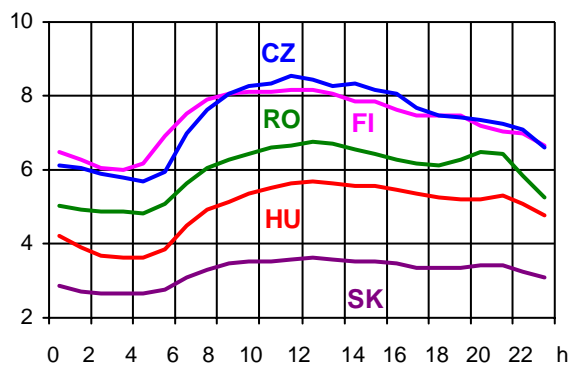
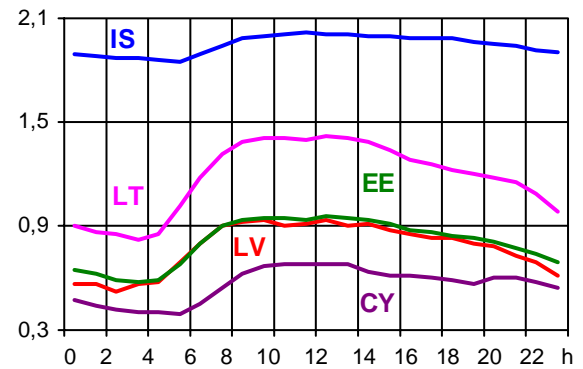
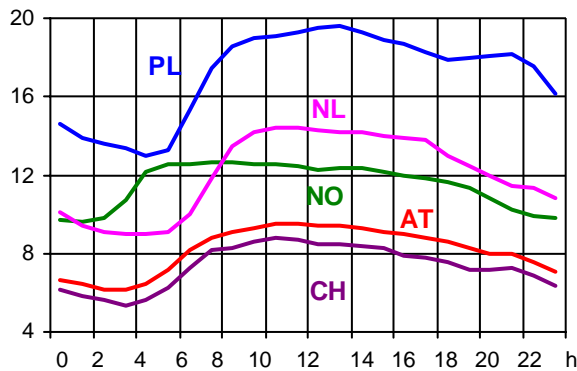
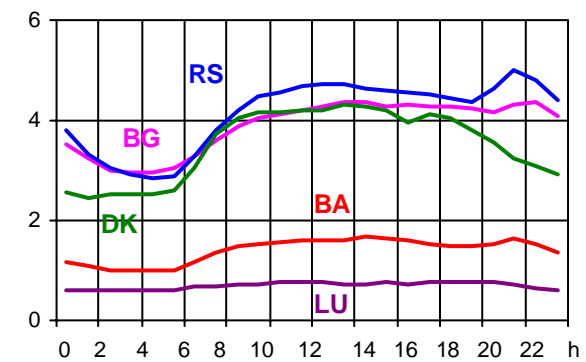
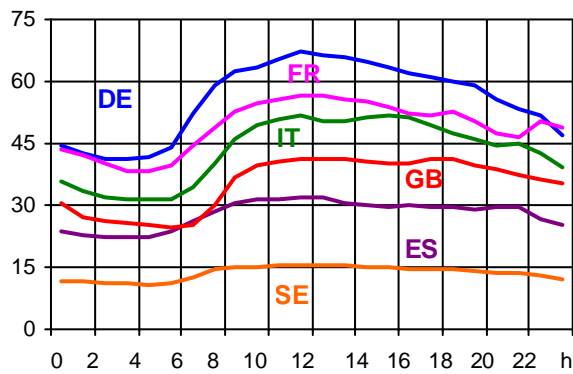
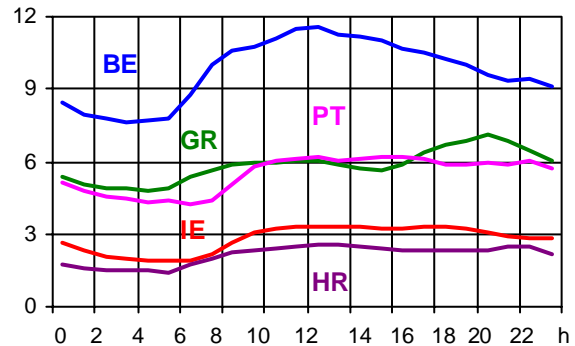
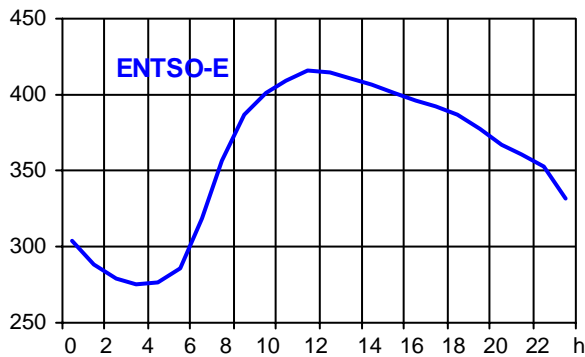
<sup>4</sup> A comparison with previous figures may be limited for statistical reasons related to renewable energies feed-in like direct marketing.

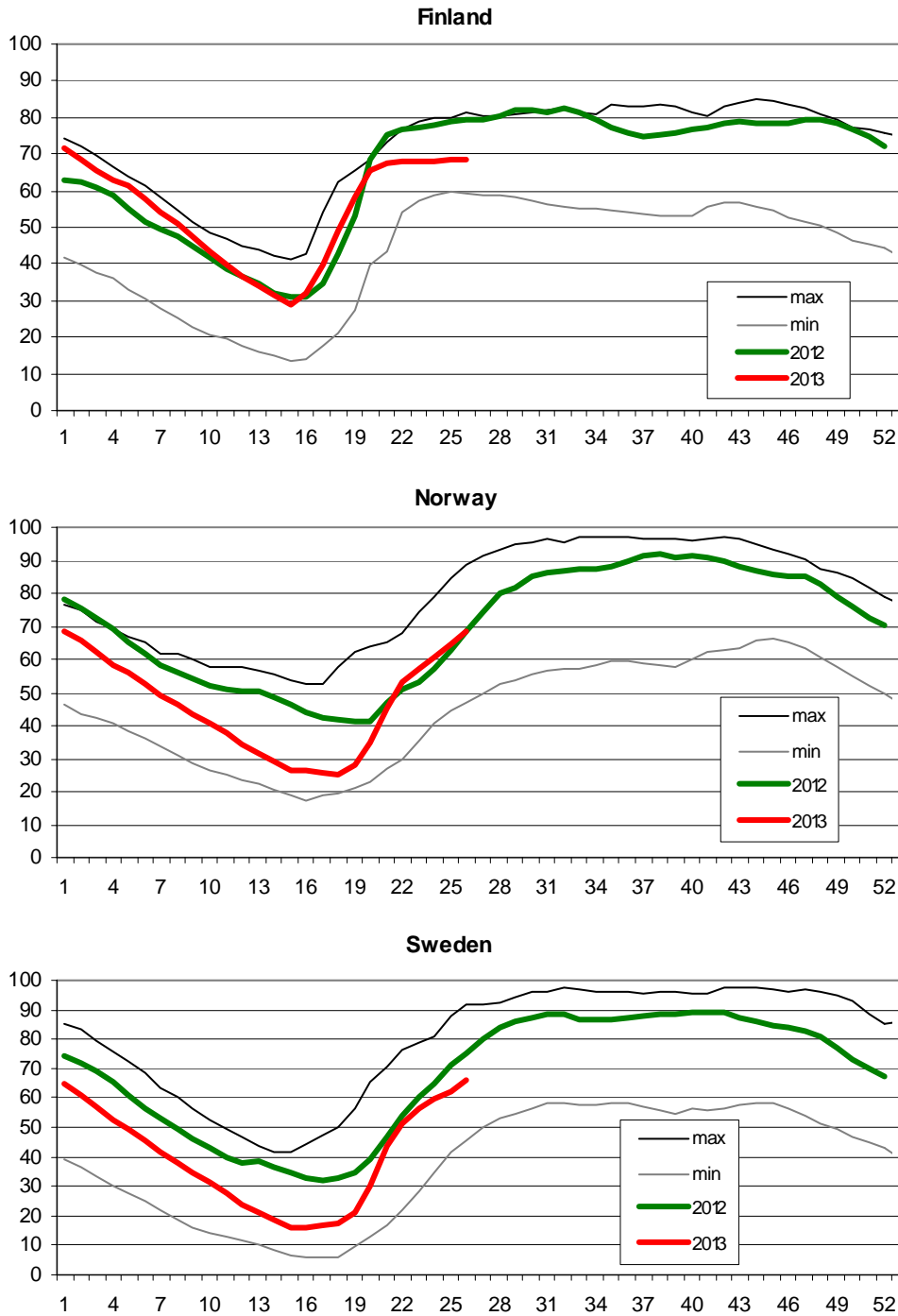
German TSOs are working on a modified system concerning gathering of data of voltage levels downstream the transmission grid. There may be remarkable deviations in future and current data might no longer be directly comparable with historical data. Also already available data for past periods may be changed retroactively and significantly in future.

<sup>5</sup> Operational data

Consumption hourly load curves on 19.06.2013 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

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