Monthly statistics

April 2014

European Network of
Transmission System Operators
for Electricity

entsoe

Monthly provisional values as of 25 July 2014

Data Expert Group

Monthly statistics - April 2014

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Monthly provisional values from the ENTSO-E statistical database as of 25 July 2014.

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General remarks and abbreviations used in the tables

- Defintions of terms used in this report are available at https://emr.entsoe.eu/.
- All values of generation and consumption on page 4, 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.

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1. Electricity supply situation of the countries

All values in GWh	Net generation																	Exch. balance	Pumping	Consumption	
	Thermal nuclear	Fossil fuels	of which lignite	of which hard coal	of which gas	of which oil	of which mixed fuels	of which other fossil fuels	Hydro power	of which renew-able	of which other hydro	Renew-ables	of which wind	of which solar	of which biomass	of which other renew-ables	Not clearly identi-fiable	Total				var. [%] (Compared to 1 year before)
AT	0	692	0	151	299	46	0	196	3 316	3 022	294	453	220	0	0	233	764	**5 225** [1]	909	422	5 712	-12.7
BA	0	579	579	0	0	0	0	0	486	486	0	0	0	0	0	0	0	**1 065**	- 123	0	942	-15.2
BE [3]	2 482	1 761	0	191	1 570	0	0	0	104	11	93	822	239	342	241	0	0	**5 169** [4]	1 760	126	6 803	-15.4
BG [3]	1 127	1 452	1 191	131	130	0	0	0	443	386	57	208	94	106	8	0	0	**3 230**	- 632	80	2 549	-24.7
CH	2 257	170	0	0	0	0	0	170	2 934	0	2 934	151	11	0	0	140	0	**5 512** [4]	- 444	140	4 928	-21.4
CY	0	263	0	0	0	263	0	0	0	0	0	15	15	0	0	0	0	**278**	n.a.	0	278	-21.2
CZ	2 345	4 041	0	0	331	0	0	3 710	230	0	230	300	0	0	0	300	0	**6 916**	-1 659	111	5 146	-15.9
DE [6]	7 334	24 465	11 874	8 529	2 712	72	1 278	0	1 553	998	555	10 381	3 659	3 695	2 912	115	0	**43 733** [4]	-2 987	644	40 102	-17.5
DK	0	1 069	0	701	365	3	0	0	1	0	1	1 296	1 027	71	198	0	0	**2 366** [4]	282	0	2 648	-20.6
EE	698	698	0	0	0	0	0	698	3	3	0	106	44	0	62	0	0	**1 505**	- 156	0	1 349	56.9
ES	5 037	5 044	182	1 269	2 942	651	0	0	5 282	4 882	400	5 597	3 977	1 214	406	0	16	**20 976**	- 652	508	19 816	-16.8
FI	1 979	1 213	0	558	385	14	256	0	1 032	1 032	0	1 031	89	0	942	0	64	**5 319**	1 443	0	6 762	-22.1
FR	31 208	1 664	0	767	585	312	0	0	5 910	5 561	349	2 143	1 050	596	497	0	0	**40 925**	-4 014	499	36 412	-32.3
GB [3]	5 260	14 864	0	9 708	5 155	1	0	0	579	357	222	1 508	1 508	0	0	0	0	**22 211**	1 651	303	26 303	-18.5
GR	0	2 257	1 819	0	438	0	0	0	318	84	234	574	242	314	18	0	0	**3 149**	443	11	3 581	-23.3
HR	0	266	0	191	72	0	3	0	634	634	0	59	59	0	0	0	0	**959**	336	12	1 283	-18.1
HU	1 037	536	271	51	210	4	0	0	25	25	0	147	50	1	96	0	0	**1 745**	1 395	0	3 140	-11.2
IE	0	1 476	192	457	826	1	0	0	69	50	19	368	356	0	0	12	12	**1 925**	175	39	2 061	-14.5
IS	0	0	0	0	0	0	0	0	888	888	0	419	0	0	0	419	0	**1 307**	n.a.	0	1 307	-14.7
IT	0	11 436	0	2 633	6 652	990	847	314	5 350	5 056	294	4 564	1 468	2 215	431	450	0	**21 350**	2 850	249	23 951	-13.0
LT	0	81	0	0	33	0	34	14	78	42	36	72	40	10	22	0	0	**231**	671	53	849	-18.3
LU [2]	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
LV	0	151	0	0	103	0	48	0	331	331	0	58	9	0	21	28	0	**540**	30	0	570	-26.3
ME	0	136	136	0	0	0	0	0	276	138	138	0	0	0	0	0	0	**412**	0	0	412	1.0
MK	0	369	369	0	0	0	0	0	84	0	84	0	0	0	0	0	0	**453**	203	0	656	-22.2
NI	0	436	0	208	227	1	0	0	1	0	1	122	114	0	5	3	0	**559**	138	0	697	-17.8
NL	366	6 531	0	0	0	0	0	6 531	22	22	0	946	510	6	430	0	0	**7 865**	1 002	0	8 867	16.8
NO [2]	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
PL [7]	0	10 167	3 822	5 466	216	0	0	663	229	193	36	1 039	473	0	566	0	0	**11 435** [4]	284	52	11 667	-13.5
PT	0	861	0	432	398	12	0	19	2 051	1 975	76	983	715	43	225	0	0	**3 895** [4]	22	96	3 821	-14.7
RO	936	1 582	858	201	162	0	361	0	1 518	1 518	0	679	492	146	41	0	0	**4 715**	- 440	28	4 247	-15.0
RS	0	2 356	2 356	0	0	0	0	0	970	923	47	0	0	0	0	0	0	**3 326**	- 127	114	3 085	-25.2
SE	4 876	250	0	53	13	6	178	0	5 965	5 965	0	1 714	902	0	812	0	0	**12 805**	-1 897	0	10 908	-28.3
SI	500	242	207	29	0	0	0	6	528	505	23	0	0	0	0	0	0	**1 270**	- 276	30	964	-17.1
SK	958	308	130	72	106	0	0	0	284	269	15	98	0	51	41	6	133	**1 781** [4]	364	21	2 124	-14.6
ENTSO-E	**68 400**	**97 708**	**23 986**	**31 798**	**24 015**	**2 376**	**3 005**	**12 321**	**50 724**	**35 362**	**15 362**	**36 176**	**17 510**	**8 817**	**7 978**	**1 871**	**989**	**253 997**	**2 374**	**3 733**	**255 255**	-19.4

[1] Renewable hydro: Production run-of-river plus production of storage and pumped storage minus 70% of pumped energy.

[2] No data available for April 2014.

[3] The reported figures are best estimates based on actual measurements and extrapolations.

[4] Including deliveries from industry.

[5] Values estimated by CEPS.

[6] Wind, pv and biomass from TSO data, rest from official statistics.

[7] Operational data. Net generation of biomass includes energy from biogas and from biomass co-fired in conventional thermal units. Net generation of other fossil fuel represents industry generation

[8] ENTSO-E sum based on data from February 2013 for LU and SE.

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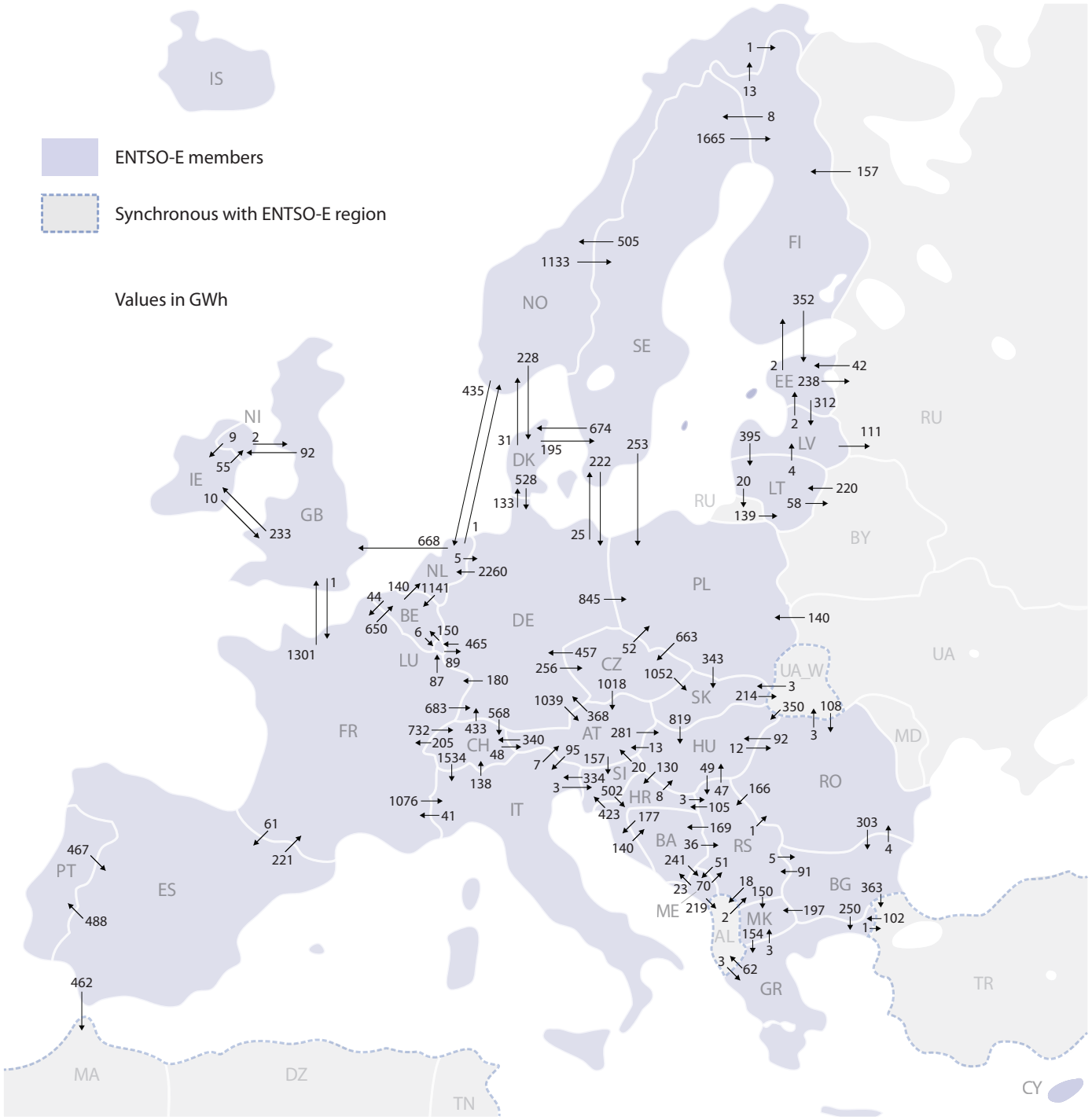
2. Physical energy flows



Sum of physical energy flows between ENTSO-E countries: 33 164 GWh
Total physical energy flows: 36 199 GWh[1]

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 Yearly Statistic & Adequacy Retrospect. These values may differ from the official statistics and the exchange balances on page 3.

[1] Sum of physical energy flows without exchanges between NO-RU, AT-DE and RO-MD.

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3. Overview of the detailed physical energy flows in GWh

	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[1]	**Sum exp.**
AT					340		368									281		95														157			**1 241**
BA															177							241								36					**454**
BE												44								6					140										**190**
BG														250									197						4	91				363	**905**
CH	48						433					205						1 534																	**2 220**
CZ	1 018						457																				52						1 052		**2 579**
DE	1 039				568	256		133				180								465					2 260		845				25				**5 771**
DK							528																			31					195				**754**
EE											2										312													238	**552**
ES												221																488						462	**1 171**
FI									352																	13					8				**373**
FR			650		732		683			61			1 301					1 076		87															**4 590**
GB												1					233							92											**326**
GR																							3											63	**66**
HR		140														8														3		423			**574**
HU	13														130														12	49					**204**
IE													10											55											**65**
IT	7				138							41																			3				**189**
LT																					4													78	**82**
LU			150				89																												**239**
LV									2										395																**397**
ME		23																												70				219	**312**
MK														154																					**154**
NI													2				9																		**11**
NL			1 141				5						668												1										**1 815**
NO								228			1														435						1 133				**1 797**
PL						663																											343		**1 006**
PT										467																									**467**
RO				303												92														166				3	**564**
RS		169		5											105	47						51	150						1					18	**546**
SE							222	674			1 665															505	253								**3 319**
SI	20														502			334																	**856**
SK																819																		214	**1 033**
Other[1]									**42**		**157**			**105**		**350**			**359**		**111**					**140**		**108**	**2**			**3**		**1 377**
Sum imp.	**2 145**	**332**	**1 941**	**308**	**1 778**	**919**	**2 785**	**1 035**	**396**	**528**	**1 825**	**692**	**1 981**	**509**	**914**	**1 597**	**242**	**3 039**	**754**	**558**	**427**	**292**	**350**	**147**	**2 835**	**550**	**1 290**	**488**	**125**	**417**	**1 361**	**583**	**1 398**	**1 658**	

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

4. Load flows (night) on 16.04.2014 at 03:00 a.m. CET in MW

Import (I) and Export (E) balance

Country	Balance
AT	I = 531
BA	E = 87
BE	I = 2415
BG	E = 1076
CH	E = 239
CY[1]	-
CZ	E = 1706
DE	E = 4712
DK	I = 455

Country	Balance
EE	E = 690
ES	E = 33
FI	I = 1908
FR	E = 5636
GB	I = 2777
GR	I = 703
HR	I = 466
HU	I = 1143
IE	E = 124

Country	Balance
IS[1]	-
IT	I = 4427
LT	I = 607
LU	I = 1202
LV	I = 267
ME	I = 52
MK	I = 386
NI	I = 58
NL	I = 1375

Country	Balance
NO[2]	n.a.
PL	I = 151
PT	E = 367
RO	E = 303
RS	E = 184
SE	E = 2636
SI	E = 167
SK	I = 655

Sum of load flows (night) in MW: ENTSO-E: 42 543 Total: 47 046 [2,3]

[1] Cyprus and Iceland are isolated power systems and therefore are not connected to the ENTSO-E network.
[2] Without data between NO-RU, AT-DE and RO-MD.
[3] Including synchronous operation with ENTSO-E region.

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5. Load flows (day) on 16.04.2014 at 11:00 a.m. CET in MW

Import (I) and Export (E) balance

Country	Balance
AT	I = 1387
BA	E = 113
BE	I = 2250
BG	E = 1208
CH	E = 1362
CY[1]	-
CZ	E = 1943
DE	E = 8145
DK	I = 1346

Country	Balance
EE	E = 236
ES	E = 73
FI	I = 2223
FR	E = 3620
GB	I = 2298
GR	I = 452
HR	I = 333
HU	I = 2340
IE	I = 385

Country	Balance
IS[1]	-
IT	I = 5237
LT	I = 896
LU	I = 460
LV	E = 189
ME	I = 65
MK	I = 336
NI	I = 287
NL	I = 1562

Country	Balance
NO[2]	n.a.
PL	I = 816
PT	E = 941
RO	E = 129
RS	E = 23
SE	E = 3031
SI	E = 522
SK	I = 772

Sum of load flows (day) in MW: ENTSO-E: 49 387 Total: 53 852 [2,3]

[1] Cyprus and Iceland are isolated power systems and therefore are not connected to the ENTSO-E network.
[2] Without data between NO-RU, AT-DE and RO-MD.
[3] Including synchronous operation with ENTSO-E region.

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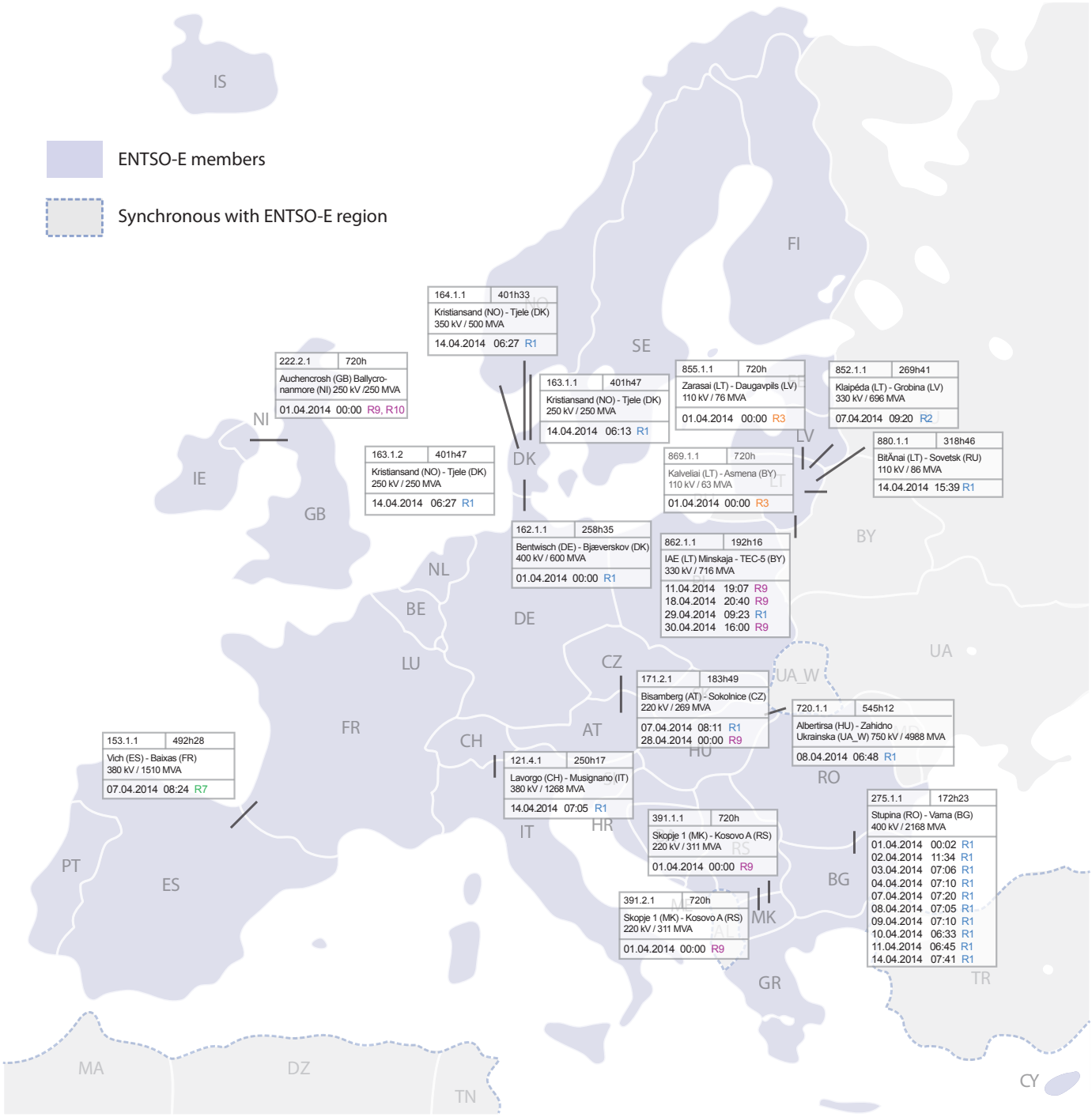
6. Unavailability of international tie lines

(major events with sum over 170 hours)



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

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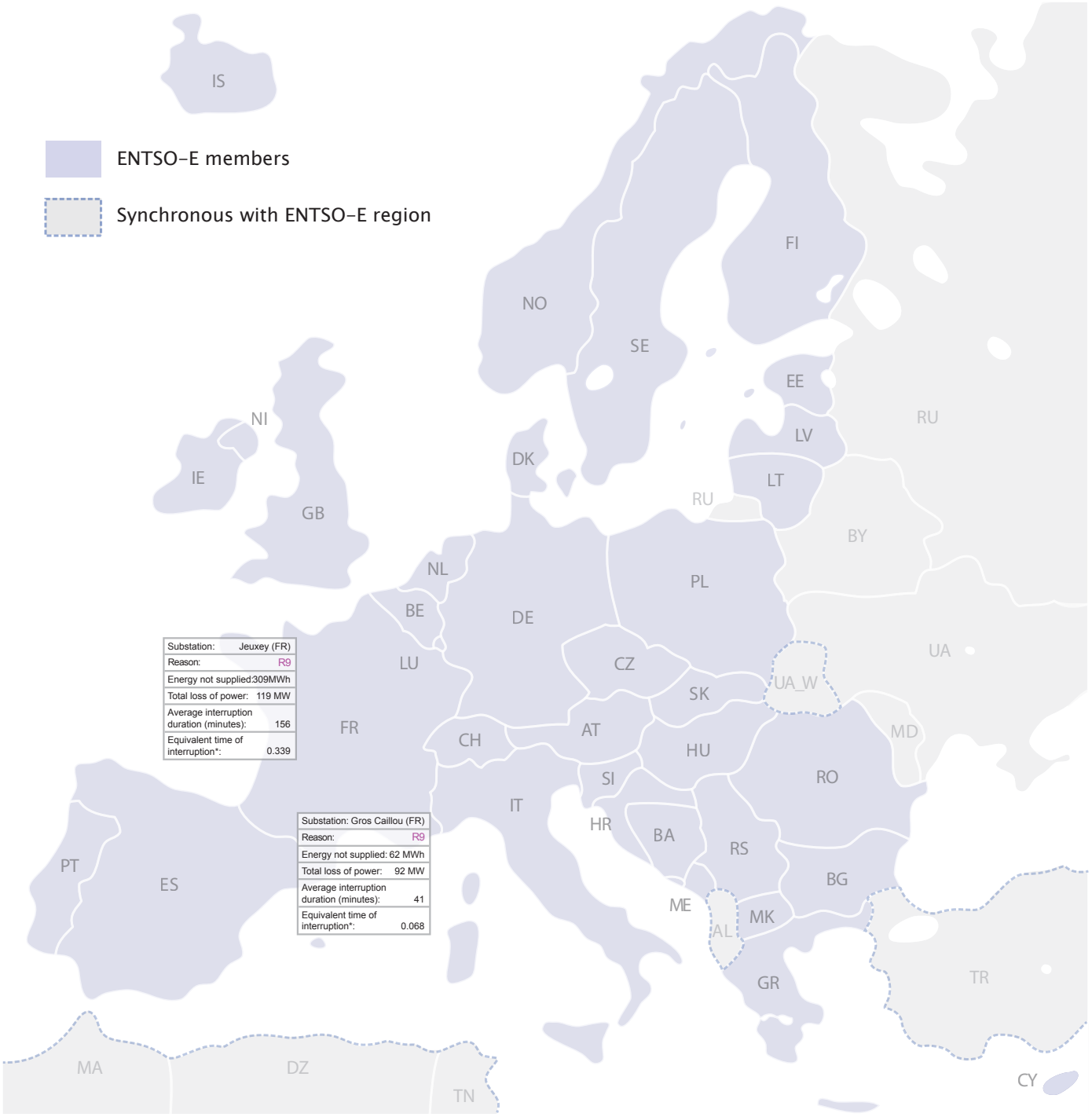
7. Supply interruption

(major reported events)



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

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

* Equivalent time of interruption: (year [in min] * energy not supplied) / consumption last 12 months.

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8. Highest and lowest load values of the month

The following table shows the highest and lowest load values[1] for the current month compared to the last 12 months.

	Highest load values in MW						**Lowest** load values in MW					
	Last 12 months	Date	Time	Apr-14	Date	Time	Last 12 months	Date	Time	Apr-14	Date	Time
AT	11 441	27/11/2013	18:00	10 059	10/04/2014	12:00	4 607	20/05/2013	04:00	4 924	21/04/2014	04:00
BA	2 074	24/12/2013	18:00	1 793	17/04/2014	21:00	866	02/05/2013	06:00	917	28/04/2014	04:00
BE [3]	13 294	12/12/2013	18:00	11 597	08/04/2014	12:00	6 136	28/07/2013	07:00	6 759	21/04/2014	05:00
BG	6 985	31/01/2014	19:00	5 247	16/04/2014	21:00	2 432	12/05/2013	05:00	2 753	21/04/2014	05:00
CH	7 792	18/12/2013	09:00	6 624	08/04/2014	12:00	2 453	01/08/2013	08:00	3 614	18/04/2014	08:00
CY	815	30/08/2013	15:00	550	15/04/2014	21:00	254	01/12/2013	05:00	263	14/04/2014	04:00
CZ [4]	10 093	28/11/2013	17:00	8 920	15/04/2014	10:00	3 952	07/07/2013	06:00	5 046	27/04/2014	06:00
DE	83 521	05/02/2014	19:00	81 077	08/04/2014	12:00	32 473	02/06/2013	07:00	40 616	21/04/2014	04:00
DK	6 002	30/01/2014	18:00	4 880	01/04/2014	11:00	1 088	10/05/2013	21:00	2 356	30/04/2014	03:00
EE	1 490	30/01/2014	17:00	1 168	03/04/2014	10:00	486	07/07/2013	04:00	599	20/04/2014	05:00
ES	39 411	28/11/2013	19:00	33 921	02/04/2014	12:00	17 599	08/06/2013	04:00	18 176	20/04/2014	05:00
FI	14 321	20/01/2014	08:00	11 190	04/04/2014	08:00	5 237	23/06/2013	05:00	7 749	27/04/2014	05:00
FR	85 125	28/11/2013	19:00	60 947	09/04/2014	10:00	29 869	11/08/2013	07:00	37 674	13/04/2014	05:00
GB [2]	57 364	06/02/2014	19:00	47 640	03/04/2014	19:00	20 207	23/06/2013	07:00	24 595	20/04/2014	07:00
GR	8 525	12/12/2013	18:00	6 612	19/04/2014	21:00	2 224	05/05/2013	14:00	2 343	20/04/2014	14:00
HR	2 812	29/07/2013	14:00	2 418	17/04/2014	21:00	1 114	09/06/2013	06:00	1 197	28/04/2014	04:00
HU	5 863	12/12/2013	17:00	5 305	17/04/2014	13:00	2 661	20/05/2013	06:00	2 892	21/04/2014	04:00
IE	4 491	17/12/2013	19:00	3 764	02/04/2014	19:00	1 722	04/08/2013	08:00	1 871	21/04/2014	06:00
IS	2 207	09/12/2013	18:00	1 982	29/04/2014	12:00	1 388	08/02/2014	07:00	1 537	30/04/2014	13:00
IT	53 976	26/07/2013	12:00	44 746	17/04/2014	11:00	19 124	27/10/2013	04:00	19 643	21/04/2014	05:00
LT	1 834	23/01/2014	10:00	1 522	10/04/2014	10:00	745	21/07/2013	05:00	764	21/04/2014	03:00
LU [2]	994	13/12/2013	18:00	902	26/04/2014	12:00	382	02/06/2013	07:00	456	22/04/2014	01:00
LV [2]	1 331	30/01/2014	17:00	1 076	07/04/2014	10:00	436	22/07/2013	04:00	478	22/04/2014	01:00
ME	570	26/01/2014	20:00	483	16/04/2014	21:00	196	30/09/2013	05:00	243	28/04/2014	04:00
MK [2]	1 527	22/12/2013	18:00	1 245	07/04/2014	21:00	520	03/06/2013	06:00	576	30/04/2014	05:00
NI	1 675	14/01/2014	19:00	1 374	02/04/2014	19:00	503	14/07/2013	07:00	578	21/04/2014	05:00
NL	18 409	11/12/2013	18:00	15 584	04/04/2014	12:00	8 257	16/06/2013	06:00	8 584	27/04/2014	07:00
NO [2]	22 957	13/01/2014	09:00	18 877	04/04/2014	09:00	8 558	04/08/2013	06:00	12 442	18/04/2014	04:00
PL	23 715	29/01/2014	18:00	20 596	15/04/2014	21:00	9 761	21/04/2014	06:00	9 761	21/04/2014	06:00
PT	8 322	09/12/2013	21:00	7 460	01/04/2014	22:00	3 316	20/04/2014	08:00	3 316	20/04/2014	08:00
RO	8 114	10/12/2013	18:00	7 150	16/04/2014	20:00	3 456	06/05/2013	06:00	3 704	21/04/2014	14:00
RS	6 930	18/12/2013	18:00	5 834	16/04/2014	21:00	2 352	06/05/2013	04:00	2 875	28/04/2014	04:00
SE [2]	24 735	13/01/2014	17:00	19 510	04/04/2014	08:00	8 696	27/07/2013	06:00	11 512	21/04/2014	03:00
SI	1 966	18/12/2013	18:00	1 764	17/04/2014	19:00	775	31/08/2013	07:00	865	21/04/2014	03:00
SK	4 126	17/12/2013	17:00	3 641	16/04/2014	21:00	2 219	21/04/2014	06:00	2 219	21/04/2014	06:00
ENTSO-E	514 247	29/01/2014	19:00	436 301	04/04/2014	10:00	230 929	09/06/2013	0.25	253 270	21/04/2014	05:00

[1] All values are calculated to represent 100% of the national values.
[2] Values from 2013
[3] The reported figures are best estimates based on actual measurements and extrapolations.
[4] Values estimated by CEPS.

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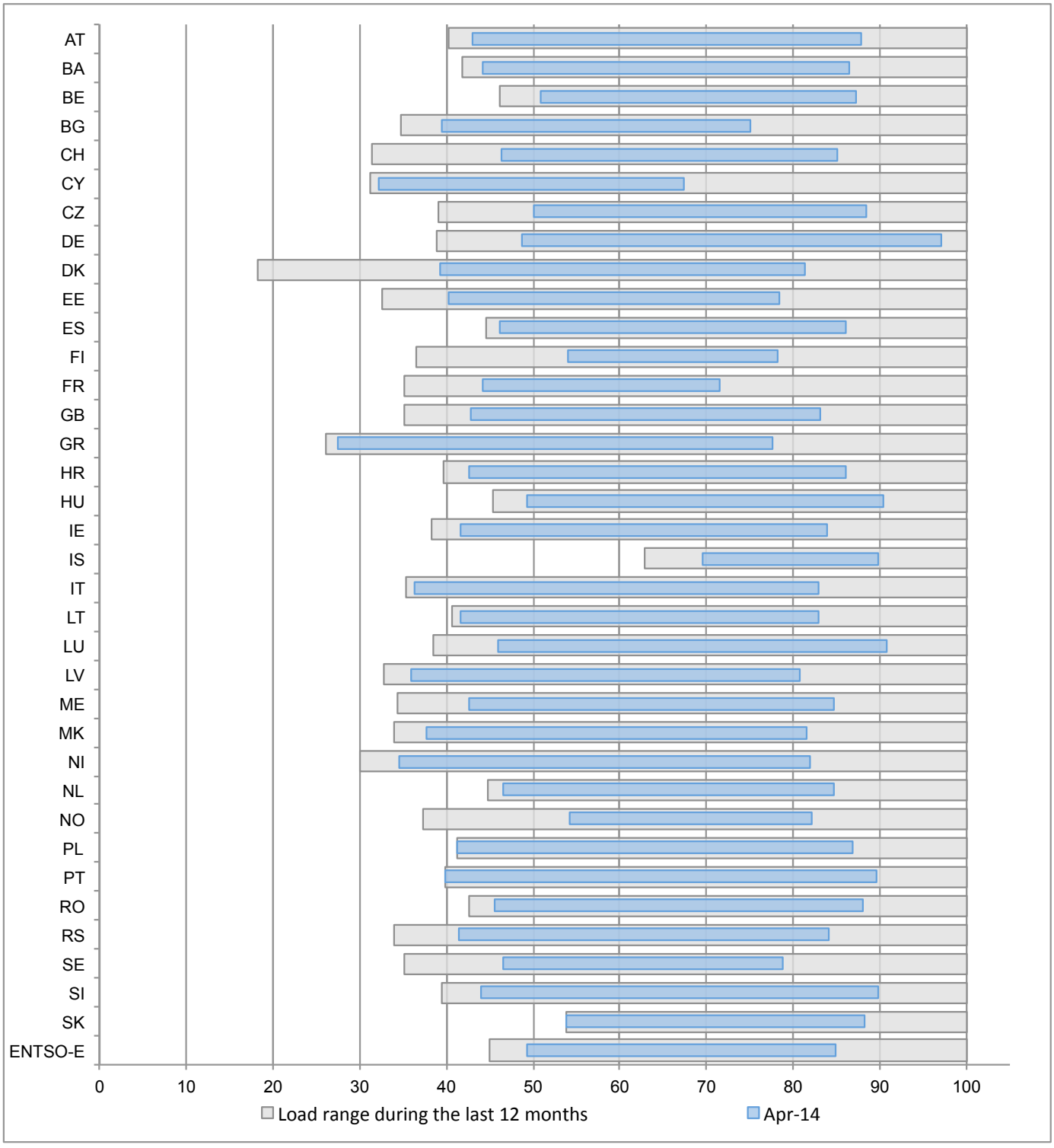
The following diagram shows the percentual load range for the current month compared to the percentual load range of the last 12 months, the reference values beeing the highest load value of the last 12 months.



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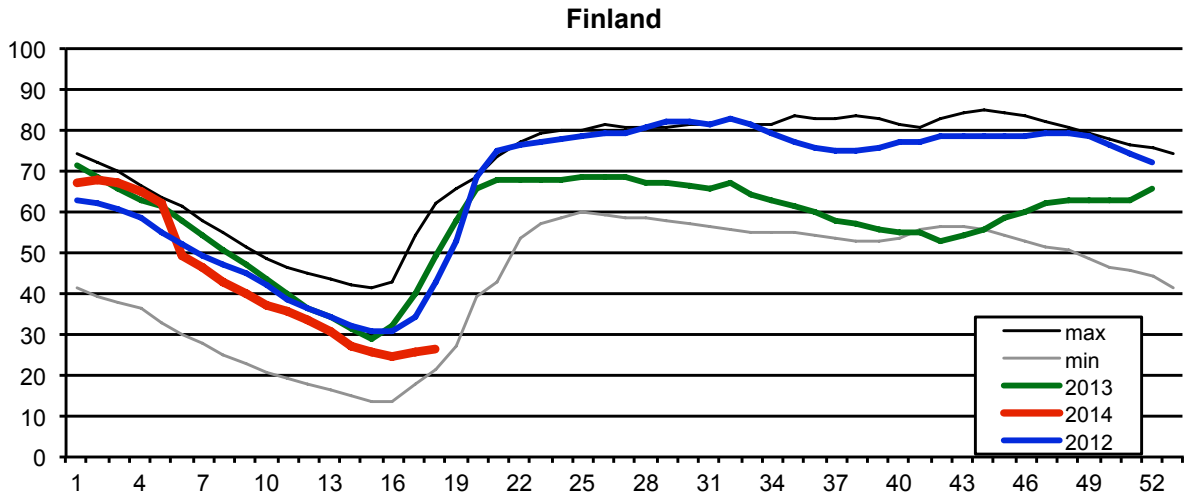
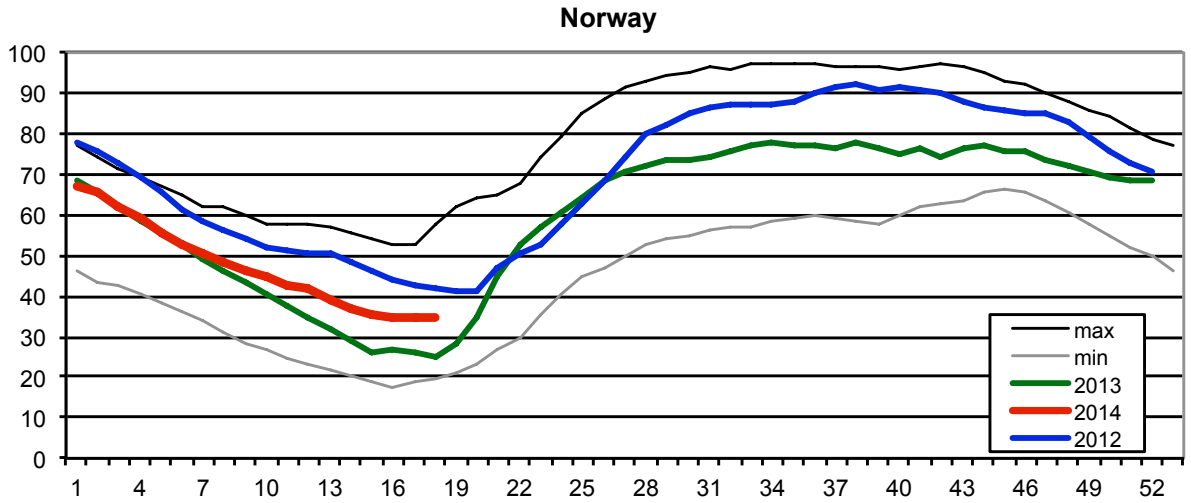
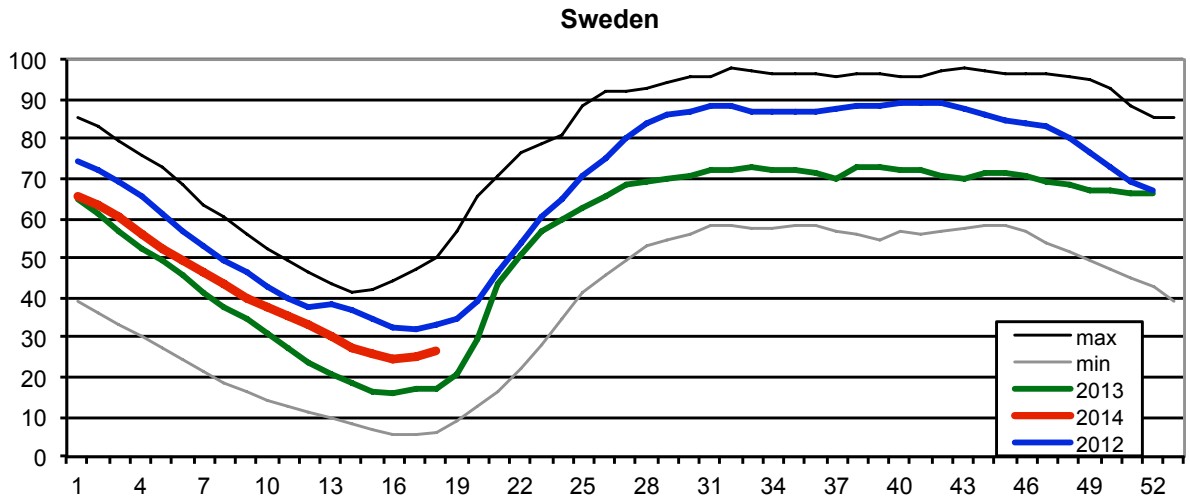
9. Water reservoirs Nordic







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.

10. Appendix: Data sources and references

ENTSO-E data portal: https://www.entsoe.eu/data/data-portal/
Nord Pool Spot: http://www.nordpoolspot.com/

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Publisher: Secretariat of ENTSO-E
Avenue de Cortenbergh 100, 1000 Brussels, Belgium

Internet: www.entsoe.eu

Executive Editor: Secretariat of ENTSO-E

Managing Editor: Philippe Lagarrigue

Production Editor: Secretariat of ENTSO-E

Photo cover: ELES, d.o.o.

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