



# November 2009

Monthly provisional values as of 09 March 2010

European Network of Transmission System Operators for Electricity

**Regional Group Continental Europe**

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

- Country code UCTE represents the ENTSOE Regional Continental Europe (former all countries of the Union for the Co-ordination of Transmission of Electricity)
- All values of production and consumption in chapter 1, 3&4, 5&6 and 12 are calculated to represent 100% of the national values.
- DK\_W Denmark West represents the Western part of Denmark synchronously interconnected with ENTSO-E Regional Continental Europe (Jutland and Funen).
- UA\_W Ukraine West represents the so-called Burshtyn Island synchronously interconnected with ENTSO-E Regional Continental Europe
- CET Central European Time
- The Bulgarian load values on the 3rd Wednesday are gross values

Countries	Net production 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	var. [%]	last 12 months	var. [%]
AT	0	2257	2176	0	0	745	5178	939	399	5718	-0,8	65580	-4,4
BA	0	611	485	0	0	0	1096	-135	0	961	-3,2	11033	-4,9
BE <sup>2</sup>	3235	3286	137	523	199	0	7181 <sup>1</sup>	169	148	7202	-2,3	82871	-8,1
BG	1383	1910	286	0	0	0	3579	-739	74	2766	-7,2	32700	-6,0
CH	2320	178	1976	107	2	0	4581 <sup>1</sup>	1082	151	5512	-2,3	62973	-2,3
CZ	2191	4196	230	36	32	0	6653 <sup>1</sup>	-1103	80	5470	-2,9	61431	-6,4
DE	11410	28565	1528	7915	5418	0	49418 <sup>1</sup>	-3366	598	45454	-2,1	526601	-5,7
DK_W	0	1240	2	815	674	0	2057 <sup>1</sup>	-251	0	1806	-4,5	20626	-5,2
ES	3973	10886	2266	5209	4662	36	22370	-898	390	21082	-5,9	259713	-4,3
FR	31459	6596	3777	1688	1295	0	43520	-1108	577	41835	-5,4	481976	-2,5
GR	0	3130	691	185	147	0	4006 <sup>1</sup>	203	17	4192	-2,8	53633	-5,1
HR	0	515	425	5	4	1	946 <sup>1</sup>	538	10	1474	-0,1	17498	-2,5
HU	1458	1963	0	0	0	0	3421 <sup>1</sup>	166	0	3587	4,0	41270	-0,6
IT	0	19788	2711	956	546	0	23455	3605	536	26524	-2,7	318009	-6,7
LU	0	242	67	16	10	0	325	309	85	549	11,1	6124	-9,9
ME <sup>3</sup>	0	114	159	0	0	0	273	102	0	375	n.a.	4449	n.a.
MK	0	460	116	0	0	0	576	126	0	702	-0,4	7809	-11,3
NL	349	8601	0	998	686	0	9948 <sup>1</sup>	-98	0	9850	-6,4	113617	-5,3
PL <sup>4</sup>	0	11908	290	174	154	0	12372 <sup>1</sup>	-244	95	12033	-0,3	136481	-5,0
PT	0	2022	701	1197	1028	0	3920 <sup>1</sup>	452	71	4301	-3,2	51414	-1,4
RO	942	2434	1250	0	0	0	4626	-137	25	4464	-3,5	50533	-9,2
RS	0	2702	926	0	0	0	3628	-23	66	3539	1,7	41837	7,3
SI	500	482	238	0	0	0	1220	-216	0	1004	-5,5	11323	-11,9
SK	1240	487	331	35	1	0	2093 <sup>1</sup>	186	32	2247	-4,3	25470	-8,6
UCTE	60460	114573	20768	19859	14858	782	216442 <sup>1</sup>	-441	3354	212647	-3,3	2484971	-4,8
UA_W	0	586	15	0	0	0	601	-230	0	371	-2,1	3953	-5,7

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

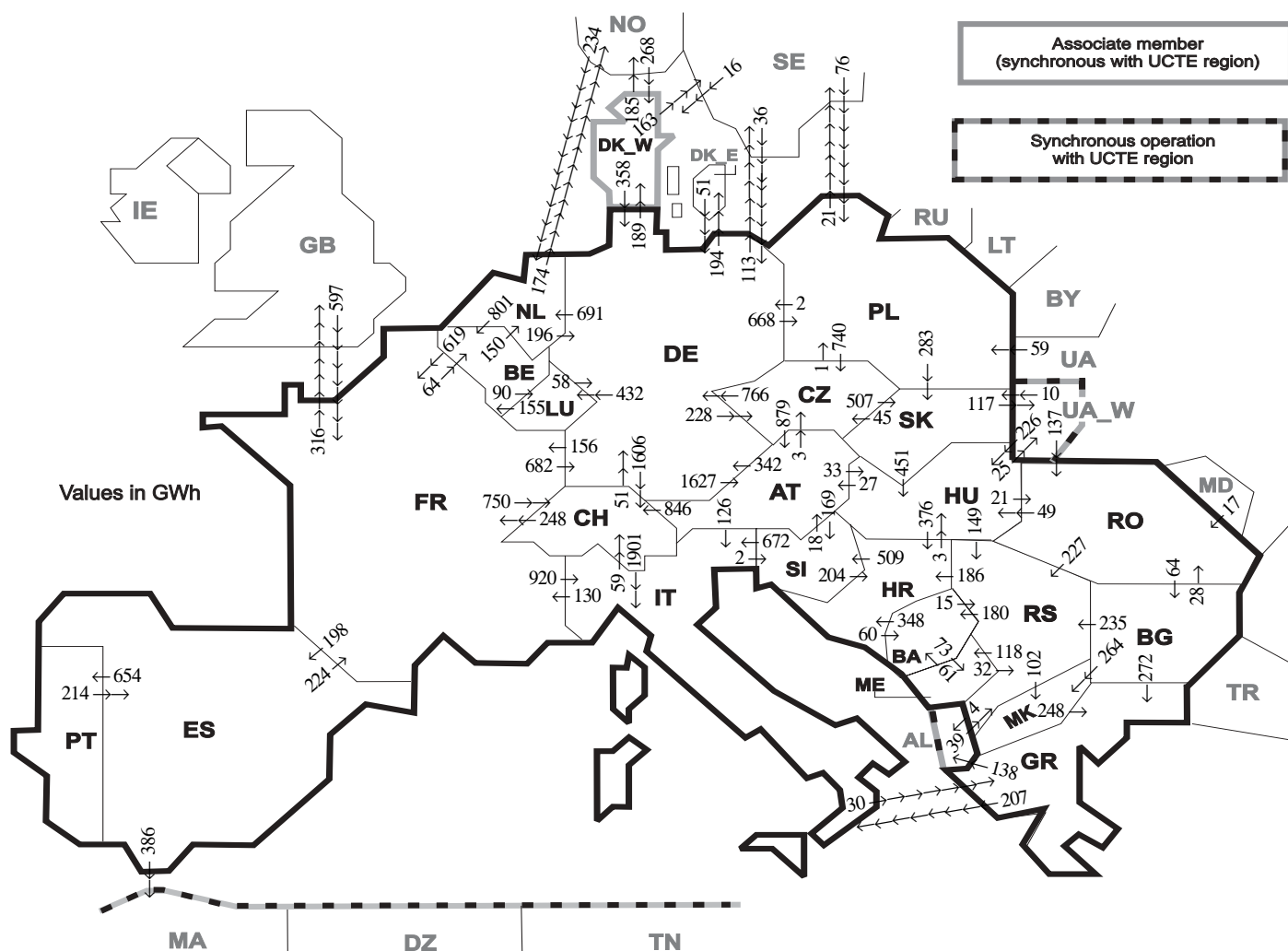
<sup>2</sup> The reported figures are best estimates based on actual measurements and extrapolations

<sup>3</sup> Monthly national values as of November 2008

<sup>4</sup> Operational data

All representativities of the national production and consumption values used to calculate values at a representativity of 100% as stated in the table above:

Countries	AT	BA	BE	BG	CH	CZ	DE	DK_W	ES	FR	GR	HR	HU	IT	LU	ME	MK	NL	PL	PT	RO	RS	SI	SK	UA_W
Production																									
Therm nuclear	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Fossil fuels	100	100	100	100	100	100	100	100	97	100	100	100	100	100	100	100	100	100	94	100	100	100	100	100	100
Hydro prod	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Other renew.	100	100	100	100	100	100	100	100	95	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Non identifiable	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Consumption	100	100	100	100	100	100	100	100	98	100	100	100	100	100	100	100	100	100	97	100	100	100	100	100	100



Exporting countries	AT	BA	BE	BG	CH	CZ	DE	DK_W	ES	FR	GR	HR	HU	IT	LU	ME	MK	NL	PL	PT	RO	RS	SI	SK	UA_W	Other III <sup>1</sup>	Sum export	
AT	-	-	-	-	846	3	342	-	-	-	-	-	33	126	-	-	-	-	-	-	-	-	169	-	-	-	1519	
BA	-	-	-	-	-	-	-	-	-	-	-	348	-	-	-	73	-	-	-	-	-	15	-	-	-	-	436	
BE	-	-	-	-	-	-	-	-	619	-	-	-	-	90	-	-	150	-	-	-	-	-	-	-	-	-	859	
BG	-	-	-	-	-	-	-	-	-	272	-	-	-	-	-	264	-	-	-	-	28	235	-	-	-	0	799	
CH	0	-	-	-	-	-	51	-	248	-	-	-	1901	-	-	-	-	-	-	-	-	-	-	-	-	-	2200	
CZ	879	-	-	-	-	-	766	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	507	-	-	2153	
DE	1627	-	-	-	1606	228	-	189	156	-	-	-	-	432	-	-	-	691	668	-	-	-	-	-	-	307	5904	
DK_W	-	-	-	-	-	-	358	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	348	706	
ES	-	-	-	-	-	-	-	-	224	-	-	-	-	-	-	-	-	-	-	654	-	-	-	-	-	-	386	1264
FR	-	-	64	-	750	-	682	-	198	-	-	-	-	920	-	-	-	-	-	-	-	-	-	-	-	-	316	2930
GR	-	-	-	0	-	-	-	-	-	-	-	-	-	207	-	-	0	-	-	-	-	-	-	-	-	-	138	345
HR	-	60	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	0	509	-	-	-	572	
HU	27	-	-	-	-	-	-	-	-	-	-	376	-	-	-	-	-	-	-	-	21	149	-	0	25	-	598	
IT	0	-	-	-	59	-	-	-	130	30	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	221	
LU	-	-	155	-	-	-	58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	213	
ME	-	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32	-	-	-	n.a.	93	
MK	-	-	-	0	-	-	-	-	-	-	248	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	248	
NL	-	-	801	-	-	-	196	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	174	1171
PL	-	-	-	-	-	740	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	283	-	21	-	1046	
PT	-	-	-	-	-	-	-	-	214	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	214	
RO	-	-	-	64	-	-	-	-	-	-	-	-	49	-	-	-	-	-	-	-	-	-	-	-	0	0	340	
RS	-	180	-	0	-	-	-	-	-	-	-	186	0	-	118	102	-	-	-	-	0	-	-	-	-	-	4	590
SI	18	-	-	-	-	-	-	-	-	-	-	204	672	-	-	-	-	-	-	-	-	-	-	-	-	-	894	
SK	-	-	-	-	-	45	-	-	-	-	-	-	451	-	-	-	-	-	0	-	-	-	-	-	117	-	613	
UA_W	-	-	-	-	-	-	-	-	-	-	-	-	226	-	-	-	-	-	-	-	137	-	-	10	-	-	373	
Other III <sup>1</sup>	-	-	-	0	-	-	87	284	0	597	0	-	-	-	-	n.a.	-	234	135	-	17	39	-	-	-	-	1393	
<b>Sum imp</b>	<b>2551</b>	<b>301</b>	<b>1020</b>	<b>64</b>	<b>3261</b>	<b>1016</b>	<b>2542</b>	<b>473</b>	<b>412</b>	<b>1974</b>	<b>550</b>	<b>1114</b>	<b>762</b>	<b>3826</b>	<b>522</b>	<b>191</b>	<b>366</b>	<b>1075</b>	<b>804</b>	<b>654</b>	<b>203</b>	<b>697</b>	<b>680</b>	<b>800</b>	<b>142</b>	<b>1694</b>	<b>27694</b>	

Sum of physical energy flows between UCTE countries = 24092GWh Total physical energy flows = 27694GWh

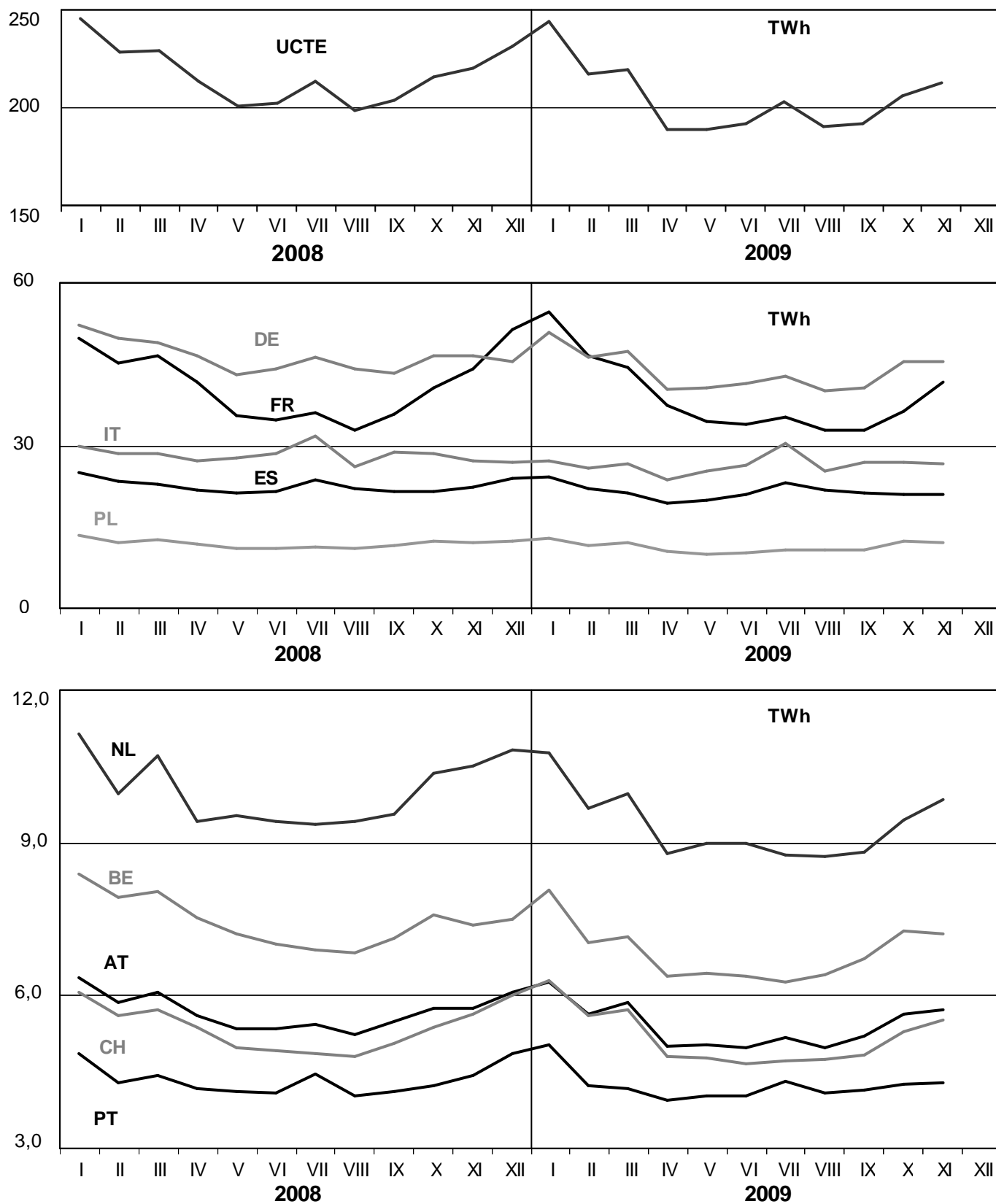
<sup>1</sup> Other III: Albania, Belarus, Denmark East, Great Britain, Morocco, Republic of Moldavia, Norway, Sweden, Republic of Turkey and Ukraine

These physical energy flows were measured on the cross-frontier transmission lines (≤ 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.

# 3

## Monthly consumption

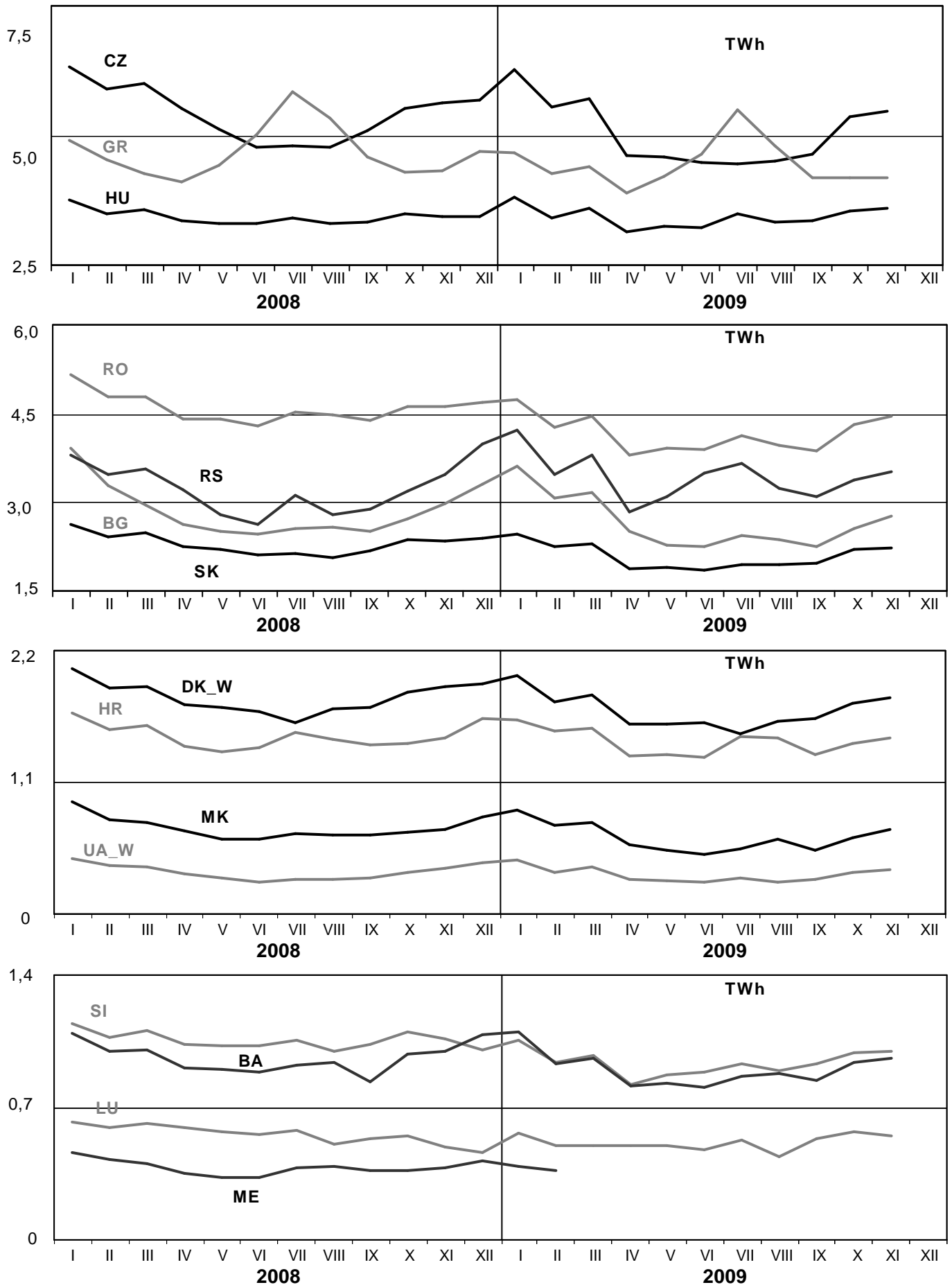
November 2009



# 3

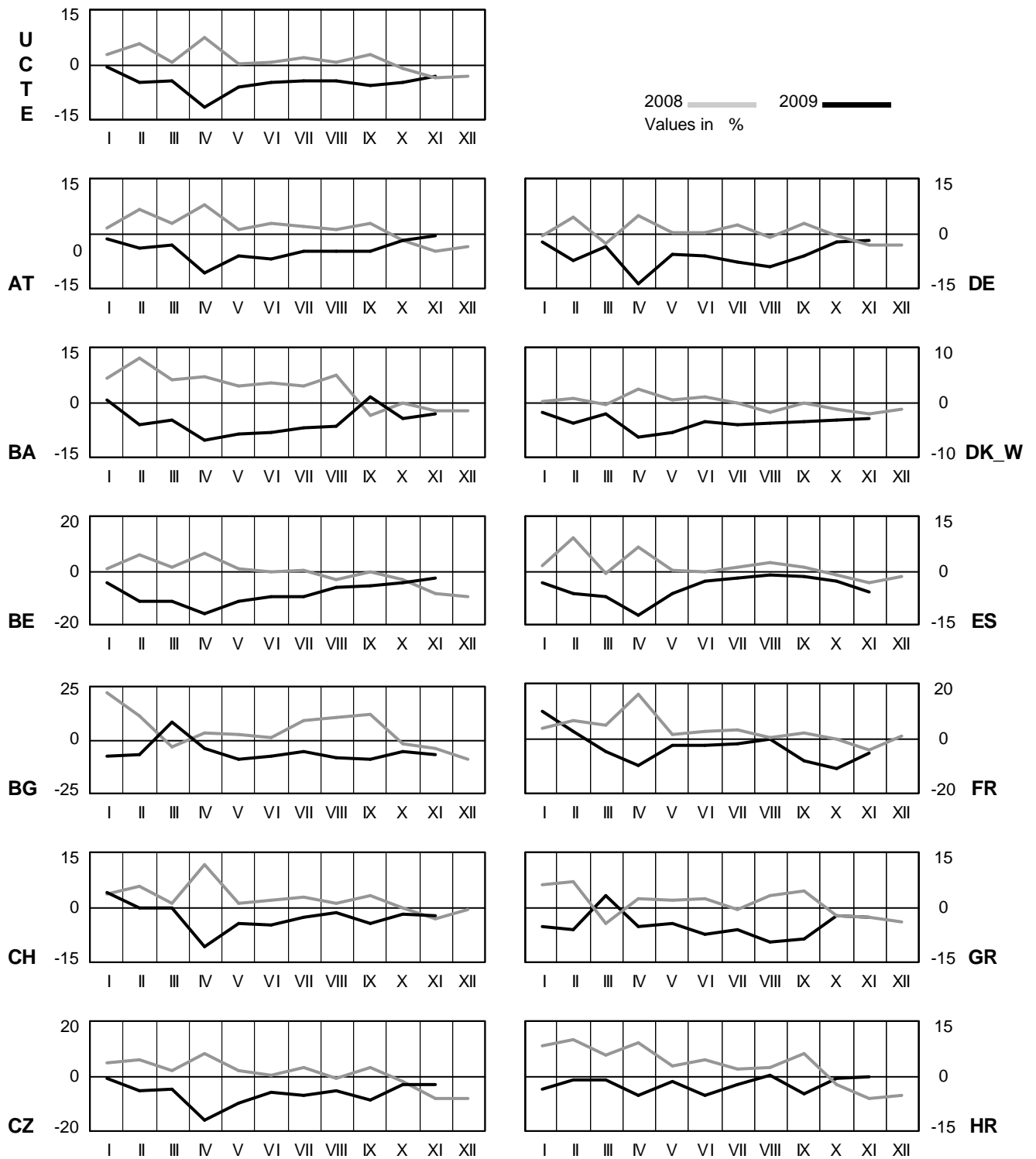
## Monthly consumption

November 2009



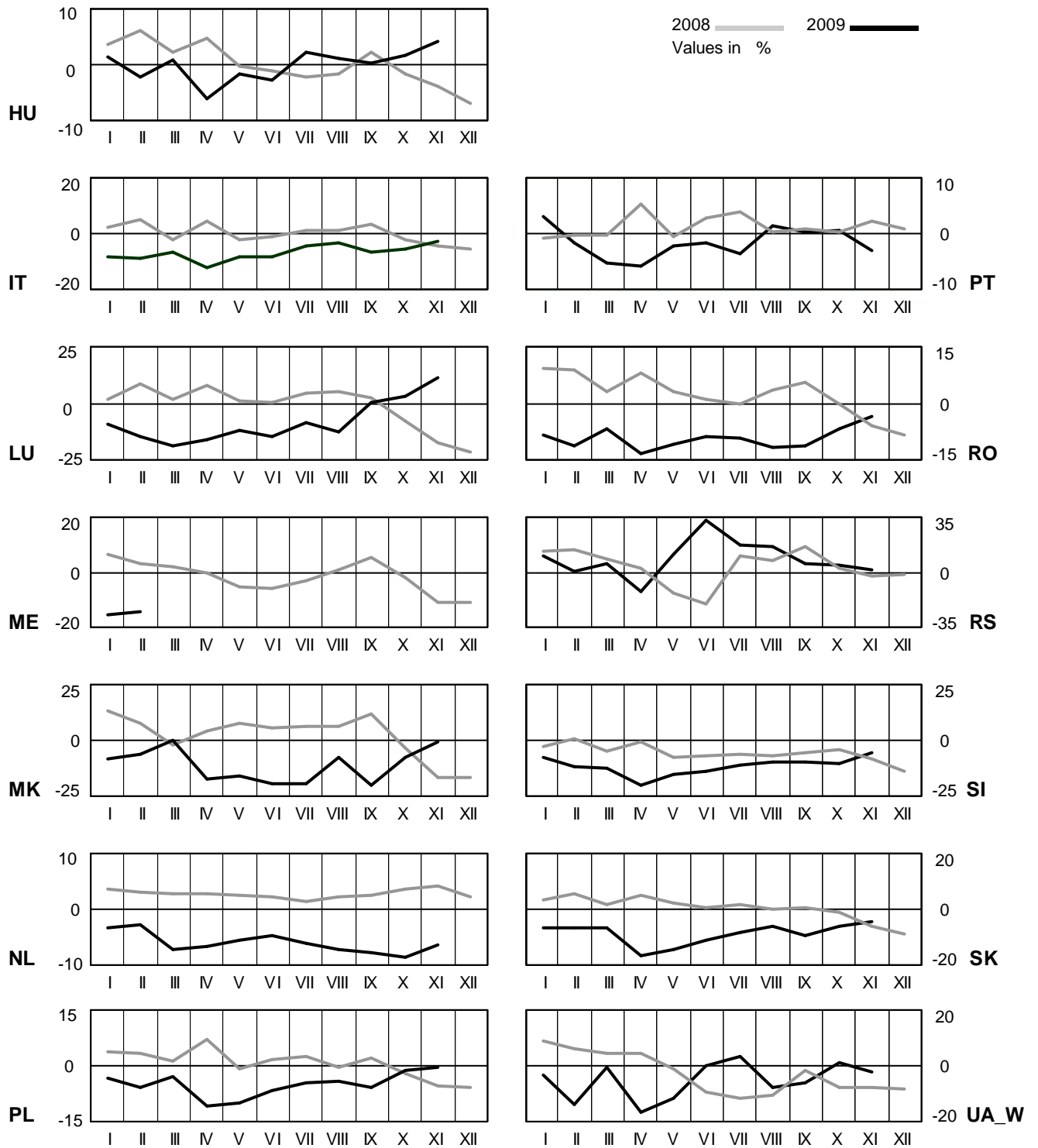
# 4 Monthly consumption variation

November 2009



# 4 Monthly consumption variation

November 2009

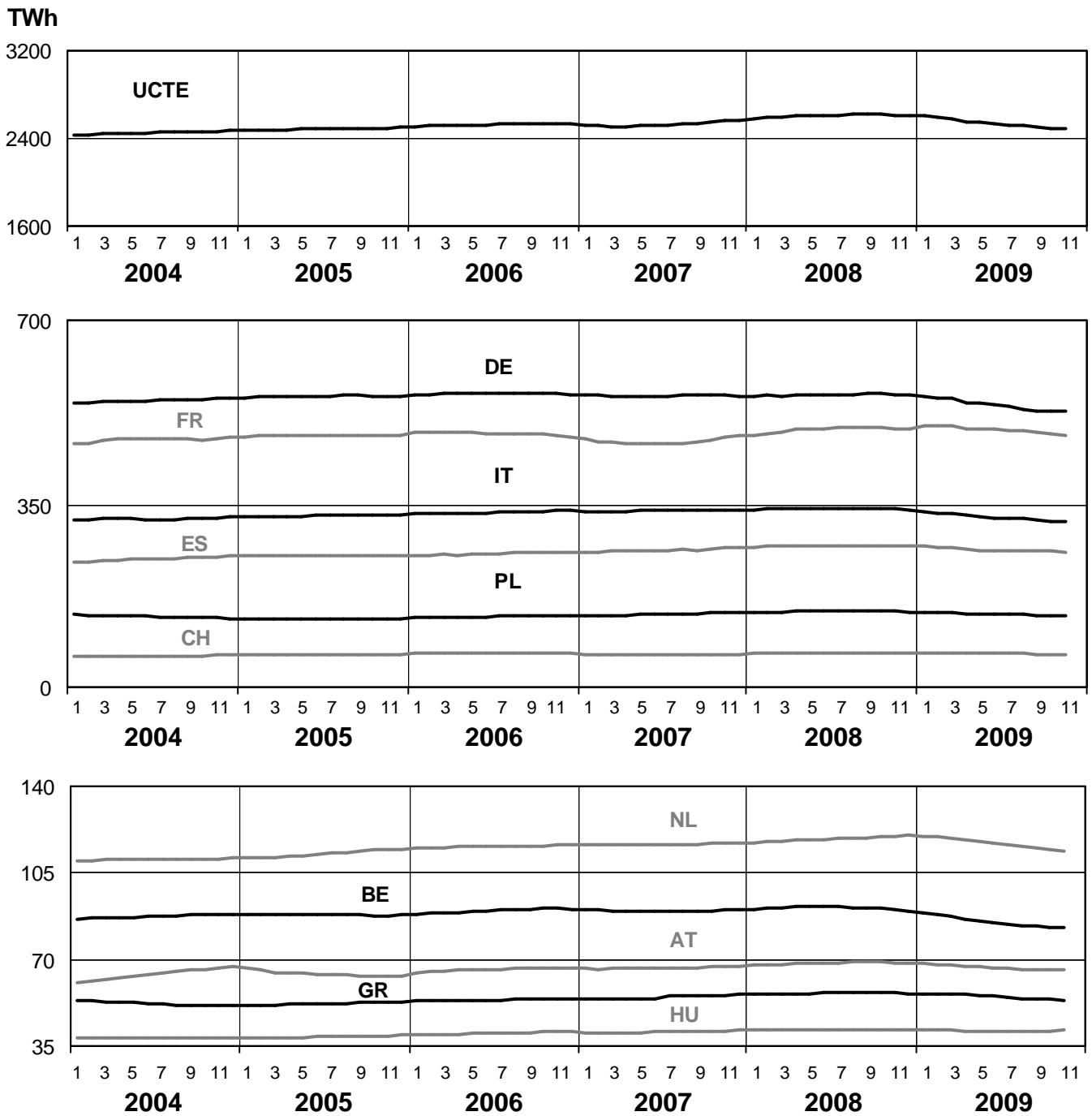




# 5

## Consumption of the last 12 months

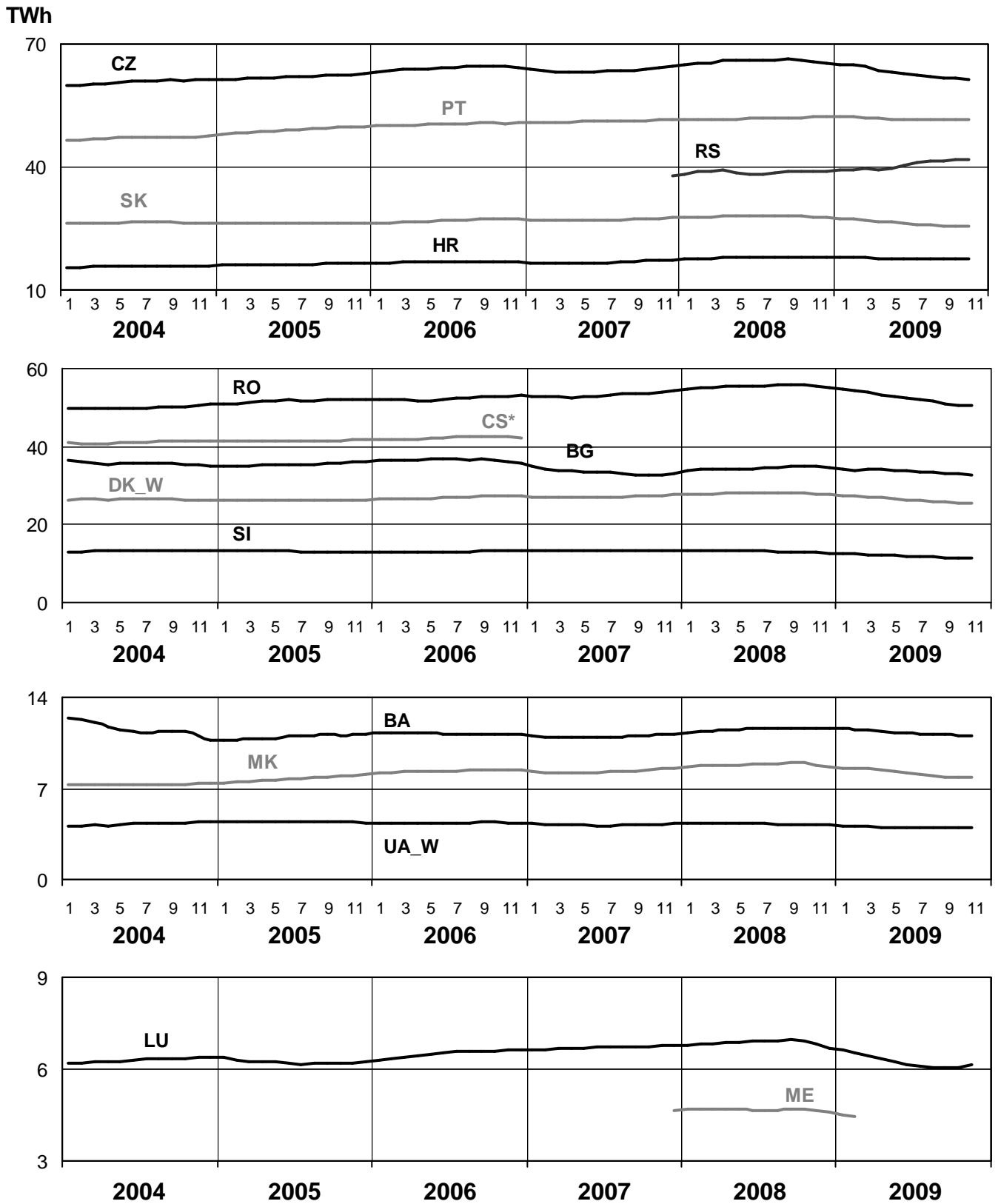
November 2009



# 5

## Consumption of the last 12 months

November 2009

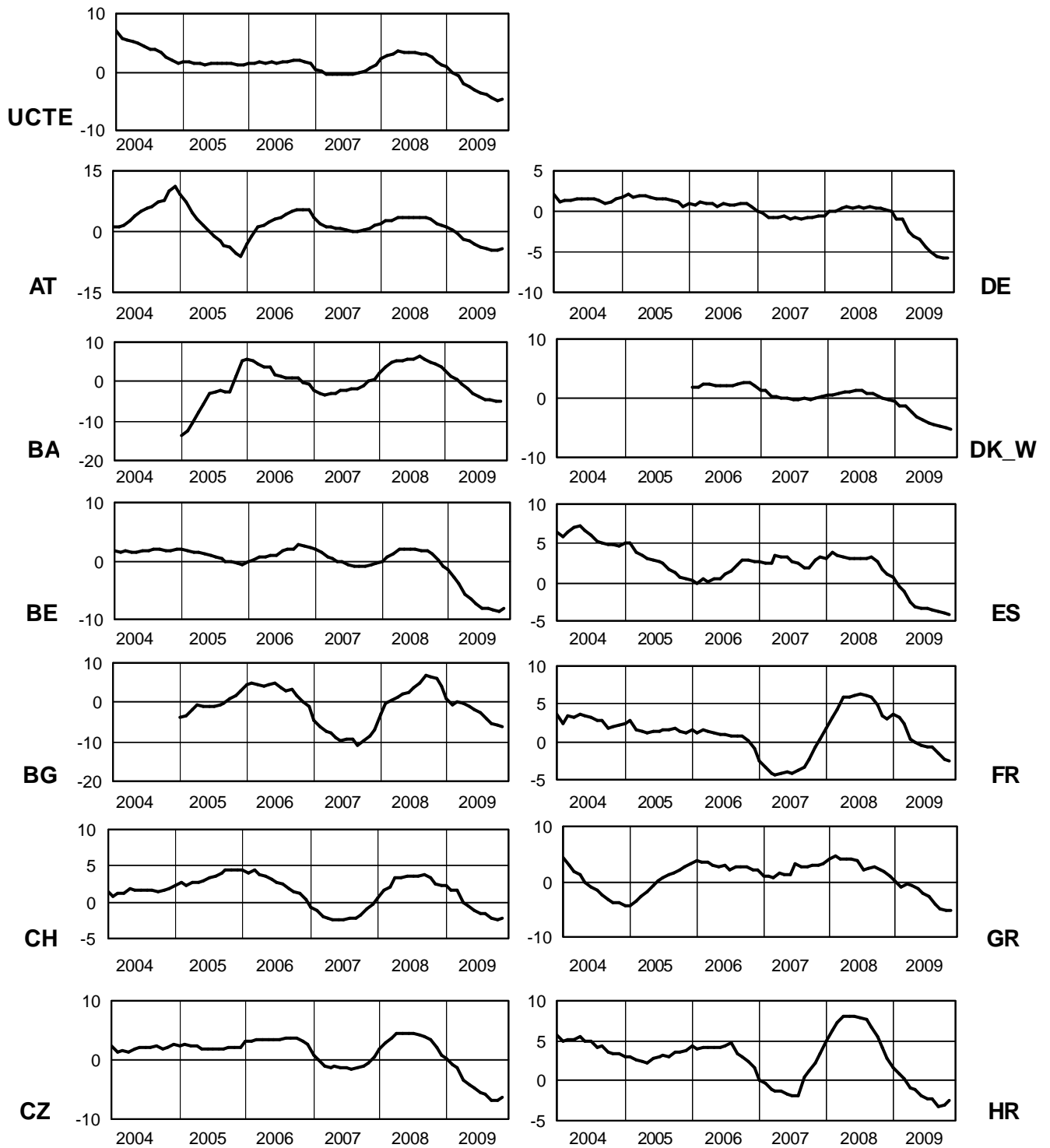


\* CS consumption values until December 2006; from 2007 on ME and RS as separate countries

# 6

## Variation of the last 12 months' consumption in %

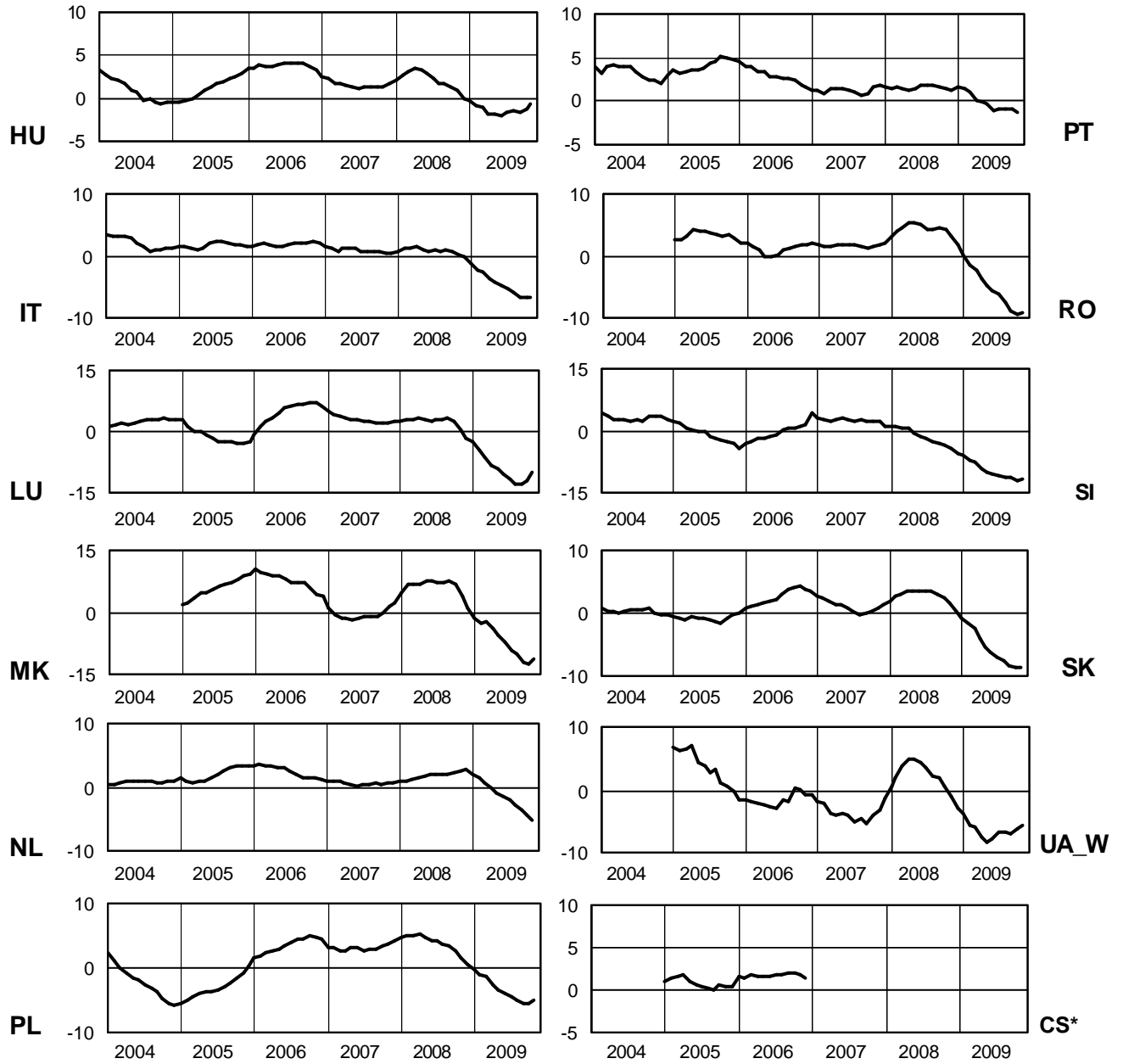
November 2009



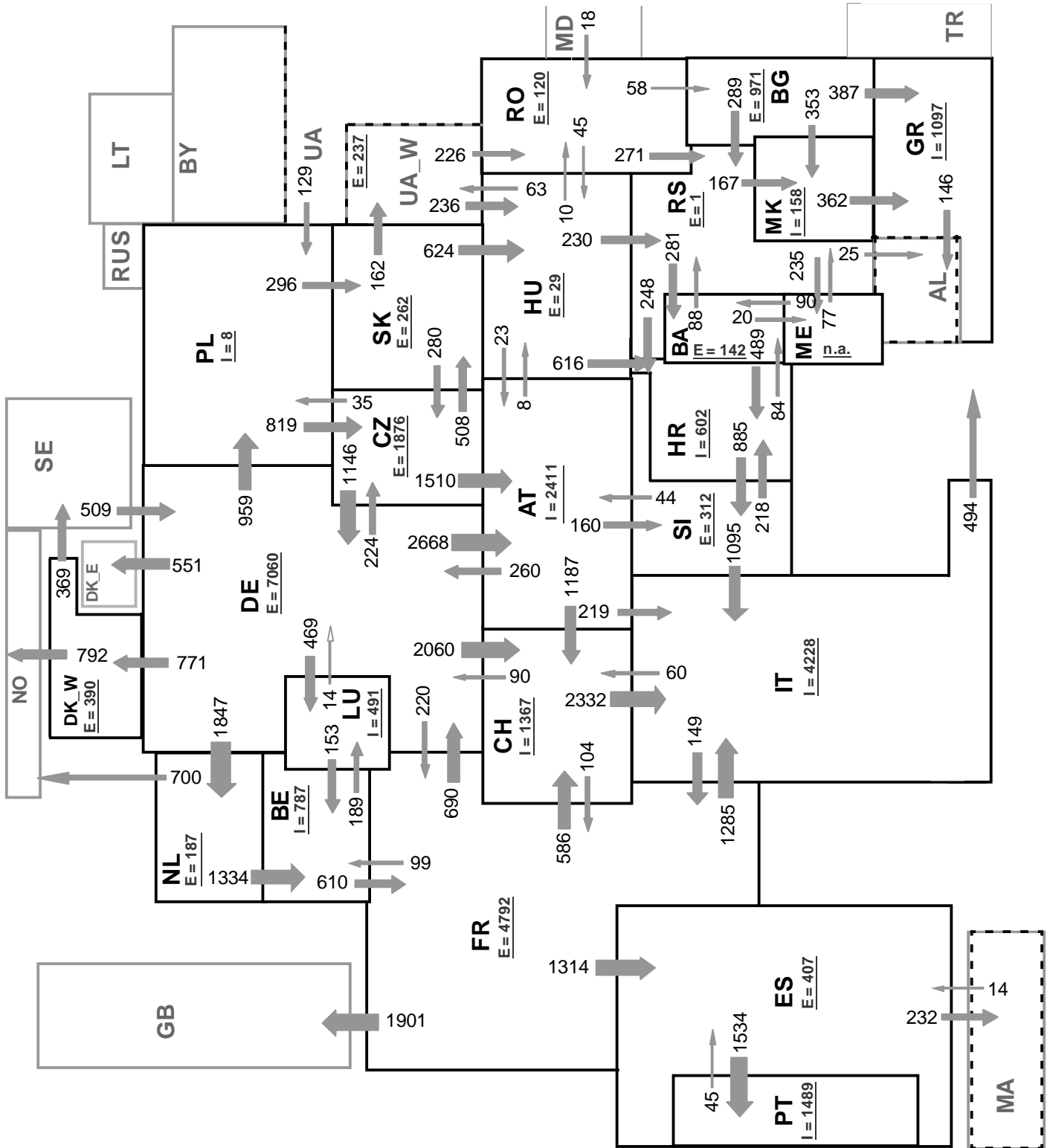
# 6

## Variation of the last 12 months' consumption in %

November 2009



\* CS consumption values of the last 12 months until December 2006; variation ME and RS will be published from the third quarter 2009 on



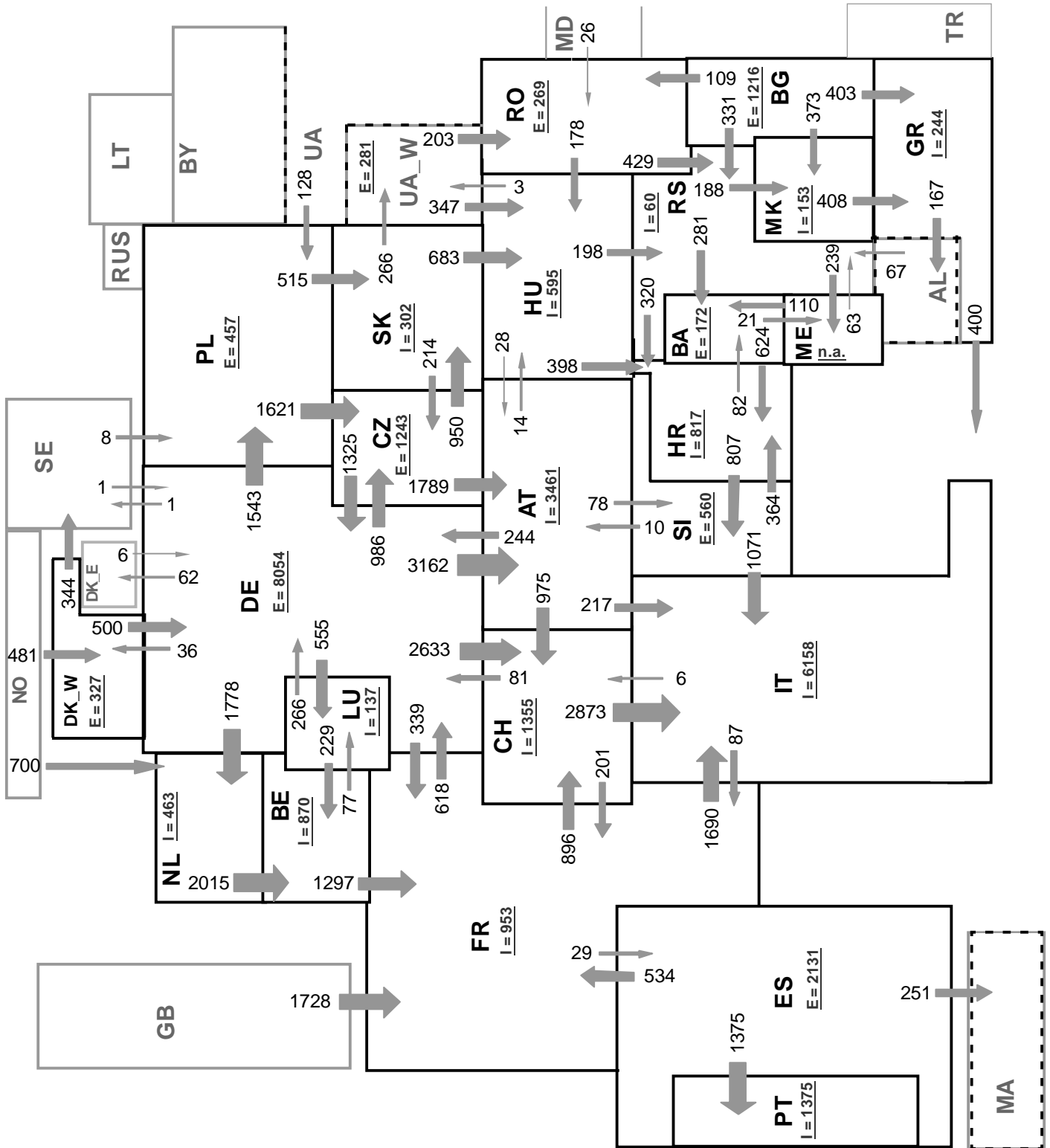
Sum of load flows in MW

UCTE = 34017 MW

Total = 40076 MW

Synchronous operation with UCTE region

I = Import balance  
E = Export balance



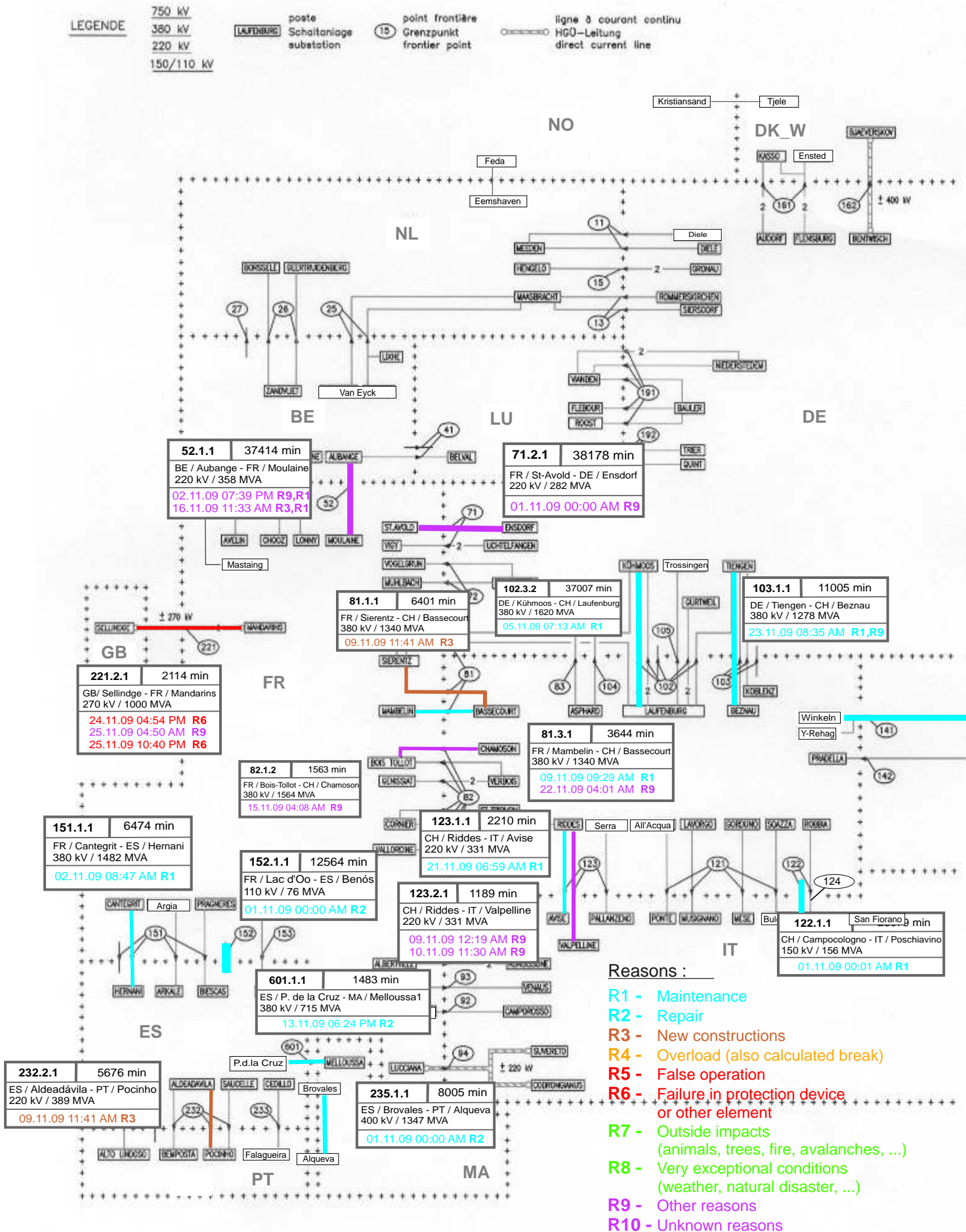
Sum of load flows in MW

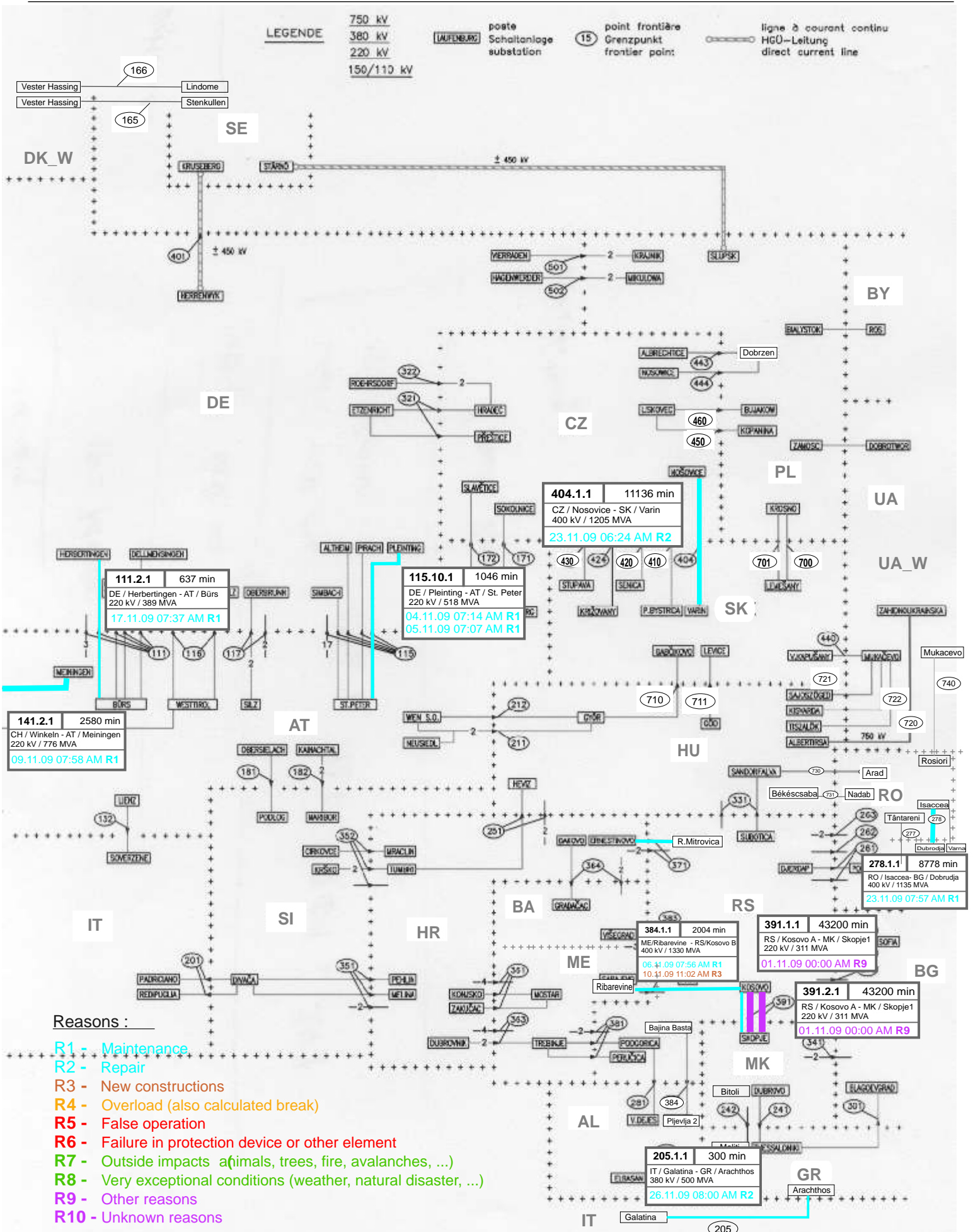
UCTE = 39866 MW

Total = 44655 MW

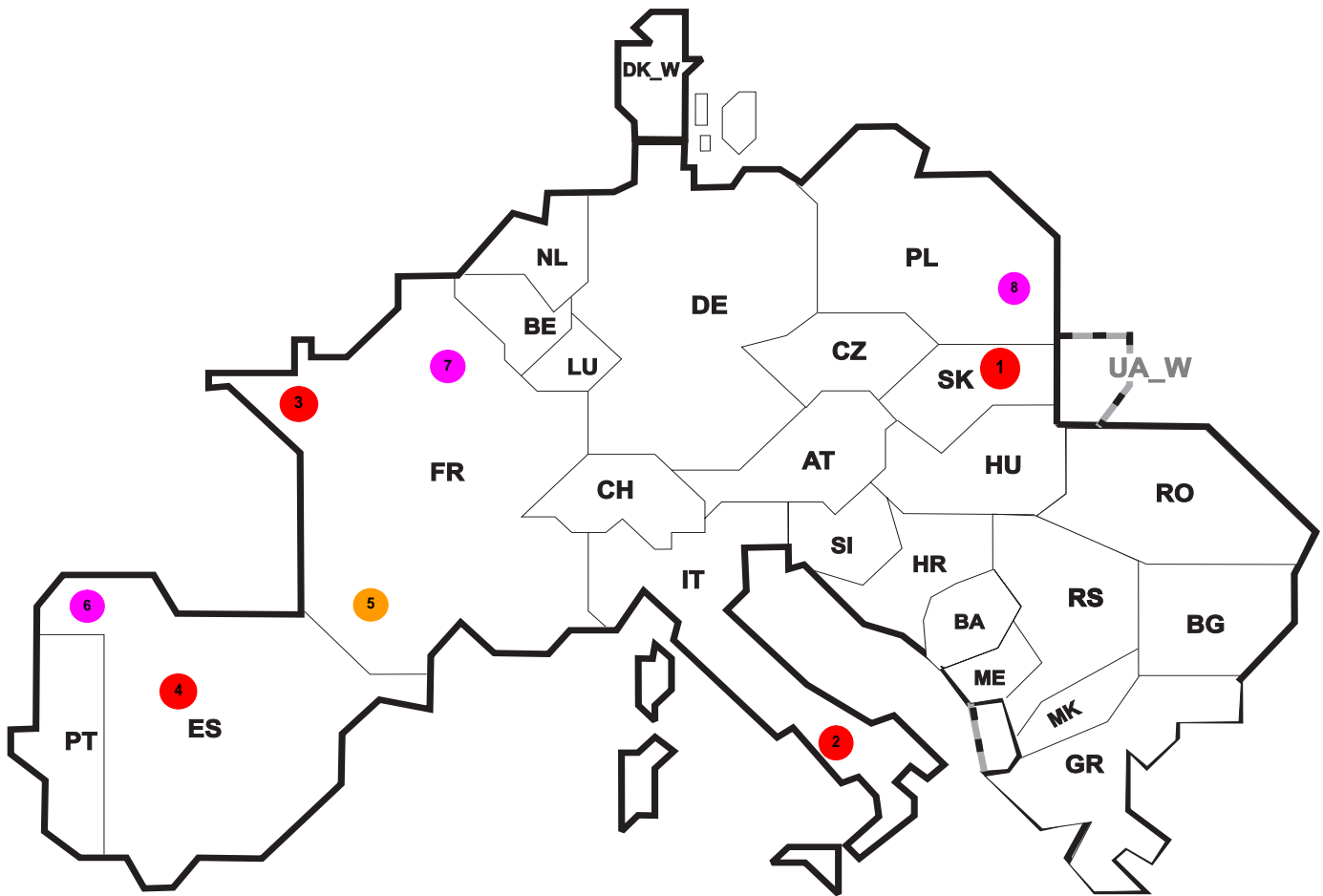
Synchronous operation with UCTE region

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 ]	Restoration time [ min ]	Equivalent time of interruption <sup>1</sup>
1	SK	Medzibrod	R5	4	118	9	0,091
2	IT	Napoli	R6	10	45	14	0,017
3	FR	Loscoat	R6	4	13	19	0,004
4	ES	Sanchinarro	R6	2	28	58	0,003
5	FR	Hourat	R4	2	11	12	0,002
6	ES	Mazaricos	R10	1	1	376	0,001
7	FR	Aulnoye	R9	0	1	21	0
8	PL	Zomość	R10	0	130	160	0

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

Control area	Export Programs	Import Programs	Export Programs at 03:00	Import Programs at 03:00	Export Programs at 11:00	Import Programs at 11:00
AT	469353	2101356	2438	420	3155	486
BA	458934	272793	95	100	95	100
BE	529251	634691	140	969	707	1414
BG	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
CH	1536376	2620432	1680	3080	2517	3901
CZ	1936967	773042	2901	989	2278	1018
DE	3663338	1198198	6533	1420	7300	1055
DK_W	463392	622793	481	1370	770	715
ES	1286776	416526	1810	1475	2363	300
FR	5210713	4224499	9844	4879	6184	7097
GR	243747	449461	40	1127	395	639
HR	73412	618781	188	788	50	875
HU	1044457	1210578	1513	1483	1245	1836
IT	221437	3826468	703	4931	93	6251
ME	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
MK	9600	125700	99	274	99	289
NL	1369903	1279855	1825	1700	1741	2189
PL	355649	202820	29	155	516	190
PT	28560	482187	0	1500	0	1372
RO	300703	164999	374	254	472	205
RS	788785	796418	1285	1270	1232	1261
SI	824982	615145	1068	777	1393	819
SK	439163	567127	505	194	768	988
UA_W	224610	120	236	0	281	0

- Control areas can differ from national borders ( i.e. German block which includes parts of AT, LU and DK ).

- Values are calculated on an hourly base ( MWh ).

- This values are not the provisional values entered in the VULCANUS system, but the definitive values after an eventual correction during the actual date.

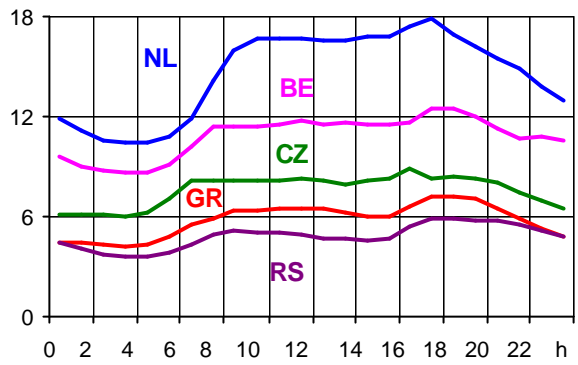
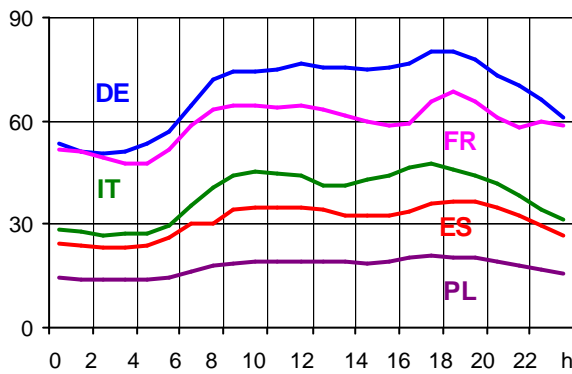
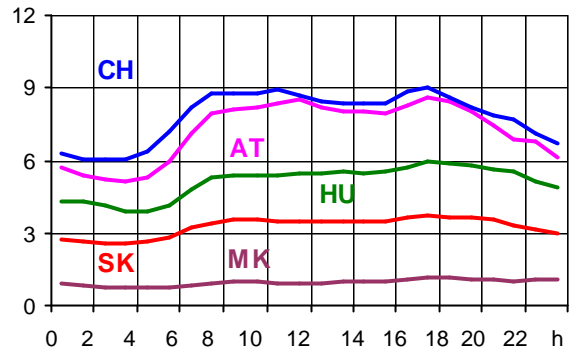
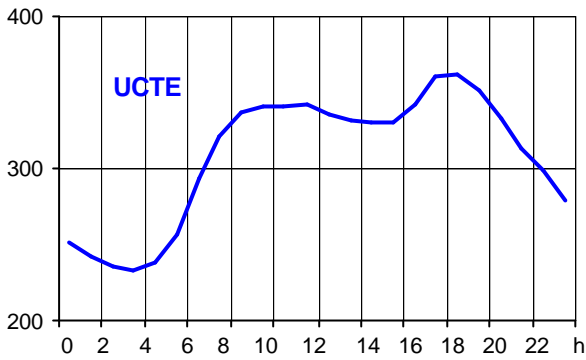
- Export Programs: Sum of all positive values of every hour of every border  
 - Import Programs: Sum of all negative values of every hour of every border

- Export Programs at 03:00: Sum of all positive values the third Wednesday from 02:00 to 03:00 a.m.  
 - Import Programs at 03:00: Sum of all negative values the third Wednesday from 02:00 to 03:00 a.m.

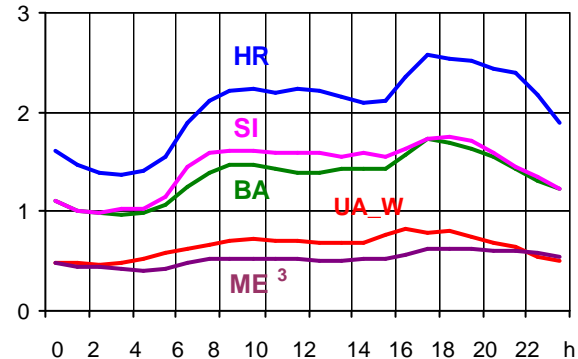
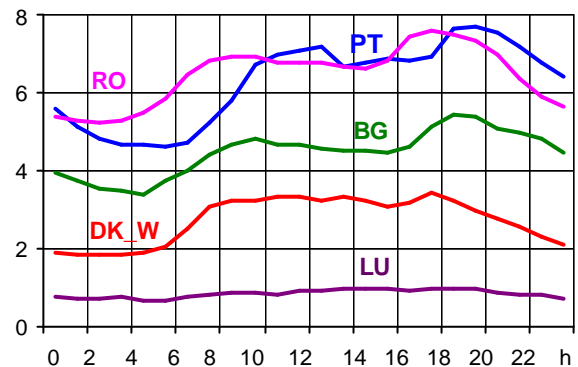
- Export Programs at 11:00: Sum of all positive values the third Wednesday from 10:00 to 11:00 a.m.  
 - Import Programs at 11:00: Sum of all negative values the third Wednesday from 10:00 to 11:00 a.m.

Consumption hourly load curves on 18.11.2009 CET

Values in GW



	Highest load MW	var.% <sup>1</sup>	Load representativity %
AT	8641	-4,0	100
BA	1727	-8,8	100
BE <sup>2</sup>	12481	2,7	100
BG	5386	-10,4	100
CH	9042	-2,5	100
CZ	8891	-6,1	100
DE	80102	-2,6	91
DK_W	3439	-3,9	100
ES	36707	-7,2	98
FR	68605	-6,0	100
GR	7180	-7,2	100
HR	2574	-6,0	100
HU	5992	-3,1	100
IT	47340	-4,9	100
LU	998	28,8	100
ME <sup>3</sup>	620	n.a.	100
MK	1127	-11,8	100
NL	17840	0,7	100
PL <sup>4</sup>	20616	-3,6	100
PT	7673	-3,7	97
RO	7614	-3,3	100
RS	5872	-5,2	100
SI	1751	-8,2	100
SK	3742	-10,1	100
<b>UCTE</b>	<b>361437</b>	<b>-4,4</b>	
UA_W	821	-12,1	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> Highest load value as of November 2008

<sup>4</sup> Operational data

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