



# December 2008

Monthly provisional values

union for the co-ordination of transmission of electricity



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

- 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 UCTE (Jutland and Funen).
- UA\_W Ukraine West represents the so-called Burshtyn Island synchronously interconnected with UCTE.
- CET Central European Time
- The Bulgarian load values on the 3rd Wednesday are gross values

## 1

## Electricity supply situation of the countries

December 2008

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	2264	2428	0	0	902	<b>5594</b>	874	402	6066	-3,6	68378	1,4
BA	0	686	695	0	0	0	<b>1381</b>	-294	0	1087	-2,4	11575	3,6
BE <sup>2</sup>	4359	2559	170	353	45	0	<b>7441</b> <sup>1</sup>	226	166	7501	-9,1	89462	-0,8
BG	1440	2239	175	0	0	0	<b>3854</b>	-464	86	3304	-9,1	34453	4,0
CH	2424	181	2456	99	2	0	<b>5160</b> <sup>1</sup>	1024	188	5996	-0,5	64432	2,2
CZ	2269	4341	168	31	30	0	<b>6809</b> <sup>1</sup>	-1063	58	5688	-8,0	65136	0,7
DE	12793	29328	1732	5315	3127	0	<b>49168</b> <sup>1</sup>	-2946	640	45582	-3,2	557162	0,2
DK_W	0	1910	2	502	331	0	<b>2414</b> <sup>1</sup>	-482	0	1932	-1,7	21712	-0,4
ES	4921	13285	2831	4198	3729	33	<b>25268</b>	-933	460	23874	-1,4	274056	2,3
FR	41308	7154	5589	950	613	0	<b>55001</b> <sup>1</sup>	-2849	724	51428	0,7	494499	3,0
GR	0	3841	264	230	212	0	<b>4335</b> <sup>1</sup>	466	110	4691	-3,9	56310	1,1
HR	0	360	857	6	5	0	<b>1223</b> <sup>1</sup>	418	0	1641	-5,3	17861	2,8
HU	1408	1537	16	154	29	172	<b>3287</b> <sup>1</sup>	-12	0	3275	-11,3	38935	-5,7
IT	0	18899	3682	948	536	0	<b>23529</b>	3657	556	26630	-6,5	336448	-1,0
LU	0	244	95	12	5	0	<b>351</b>	214	108	457	-21,5	6674	-1,5
ME	0	60	272	0	0	0	<b>332</b>	86	0	418	-10,3	4583	-1,5
MK	0	480	75	0	0	0	<b>555</b>	258	0	813	-16,4	8643	0,9
NL	363	8128	14	571	337	0	<b>9076</b> <sup>1</sup>	1437	0	10513	-0,6	119905	2,5
PL <sup>3</sup>	0	12539	227	94	80	0	<b>12860</b> <sup>1</sup>	-280	73	12507	-5,7	142852	0,5
PT	0	2483	713	904	756	0	<b>4100</b> <sup>1</sup>	820	61	4859	0,7	52191	1,2
RO	973	2856	1262	0	n.a.	0	<b>5091</b> <sup>1</sup>	-385	19	4687	-8,3	55206	2,0
RS	0	2735	1123	0	0	0	<b>3858</b>	215	79	3994	-0,5	38982	3,0
SI	516	351	388	0	0	0	<b>1255</b> <sup>1</sup>	-249	0	1006	-14,2	12686	-5,7
SK	1434	637	342	28	0	0	<b>2441</b> <sup>1</sup>	-23	30	2388	-9,0	27635	0,2
<b>UCTE</b>	<b>74208</b>	<b>119097</b>	<b>25576</b>	<b>14395</b>	<b>9837</b>	<b>1107</b>	<b>234383</b> <sup>1</sup>	<b>-285</b>	<b>3760</b>	<b>230337</b>	<b>-3,3</b>	<b>2599776</b>	<b>1,4</b>
UA_W	0	749	13	0	0	0	762	-342	0	420	-8,5	4155	-2,7

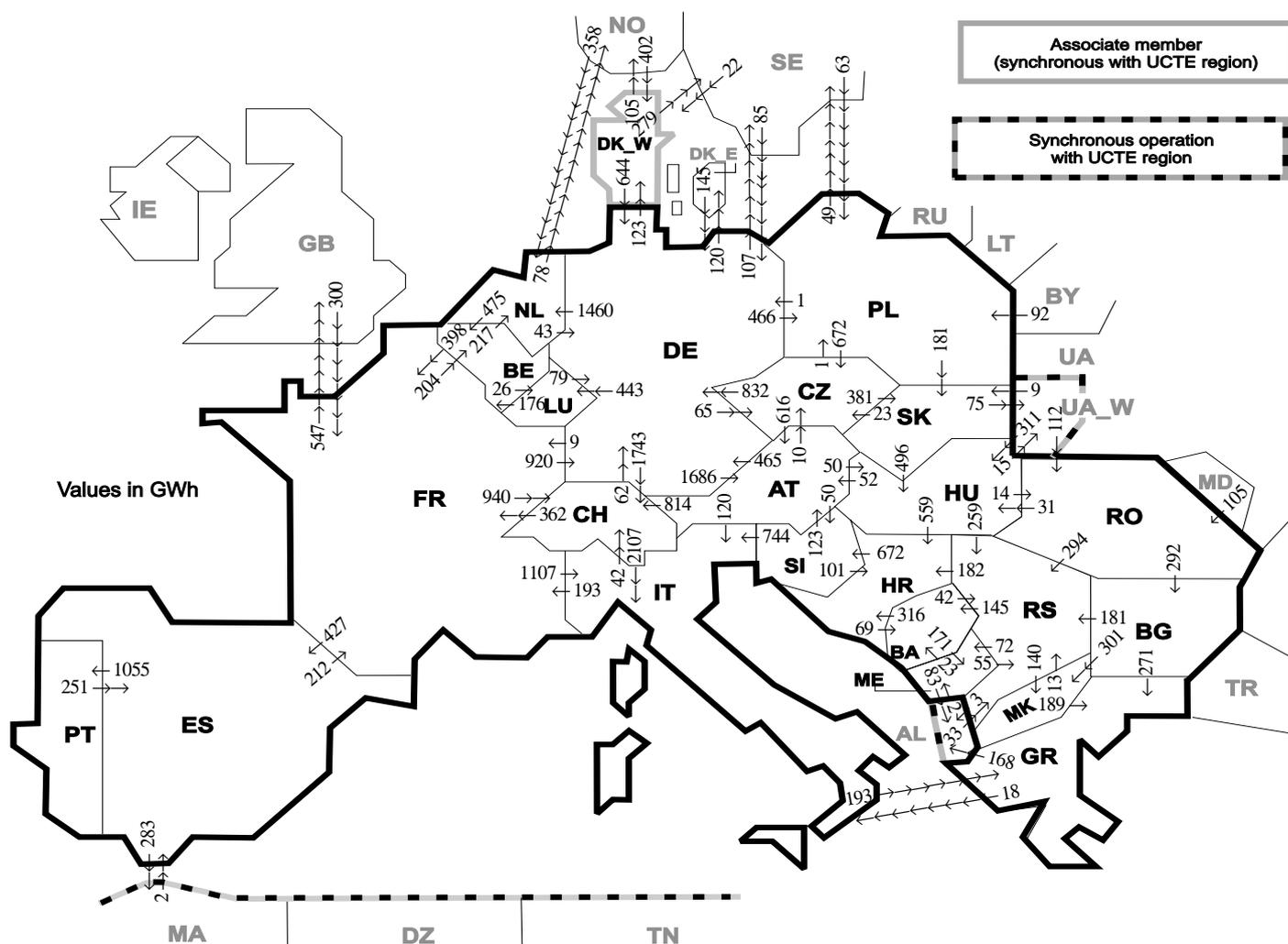
<sup>1</sup> Including deliveries from industry

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

<sup>3</sup> 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	100	94	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	100	97	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	-	-	-	-	814	10	465	-	-	-	-	-	50	120	-	-	-	-	-	-	-	50	-	-	-	1509	
BA	-	-	-	-	-	-	-	-	-	-	-	316	-	-	-	171	-	-	-	-	-	42	-	-	-	529	
BE	-	-	-	-	-	-	-	-	398	-	-	-	-	26	-	-	217	-	-	-	-	-	-	-	-	641	
BG	-	-	-	-	-	-	-	-	-	-	271	-	-	-	-	-	301	-	-	-	0	181	-	-	-	753	
CH	0	-	-	-	-	-	62	-	362	-	-	-	2107	-	-	-	-	-	-	-	-	181	-	-	-	2531	
CZ	616	-	-	-	-	-	832	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	381	-	-	1830	
DE	1686	-	-	-	1743	65	-	123	9	-	-	-	-	443	-	-	1460	466	-	-	-	-	-	-	-	6222	
DK_W	-	-	-	-	-	-	-	644	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1028	
ES	-	-	-	-	-	-	-	-	212	-	-	-	-	-	-	-	-	-	1055	-	-	-	-	-	-	1550	
FR	-	-	204	-	940	-	920	-	427	-	-	-	-	1107	-	-	-	-	-	-	-	-	-	-	-	4145	
GR	-	-	-	0	-	-	-	-	-	-	-	-	-	18	-	-	0	-	-	-	-	-	-	-	-	186	
HR	-	69	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	0	672	-	-	741	
HU	52	-	-	-	-	-	-	-	-	-	-	559	-	-	-	-	-	-	-	-	14	259	-	0	15	899	
IT	0	-	-	-	42	-	-	-	193	193	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	428	
LU	-	-	176	-	-	-	79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	255	
ME	-	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	55	-	-	-	161	
MK	-	-	-	0	-	-	-	-	-	-	189	-	-	-	-	-	-	-	-	-	-	-	13	-	-	202	
NL	-	-	475	-	-	-	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	596	
PL	-	-	-	-	672	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	181	-	49	903	
PT	-	-	-	-	-	-	-	-	251	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	251	
RO	-	-	-	292	-	-	-	-	-	-	-	-	31	-	-	-	-	-	-	-	-	294	-	0	0	617	
RS	-	145	-	0	-	-	-	-	-	-	-	182	0	-	72	140	-	-	-	0	-	-	-	-	-	542	
SI	123	-	-	-	-	-	-	-	-	-	101	744	-	-	-	-	-	-	-	-	-	-	-	-	-	968	
SK	-	-	-	-	23	-	-	-	-	-	-	496	-	-	-	-	-	-	-	-	-	-	-	75	-	594	
UA_W	-	-	-	-	-	-	-	-	-	-	-	-	311	-	-	-	-	-	-	-	112	-	9	-	-	432	
Other III <sup>1</sup>	-	-	-	0	-	-	230	424	2	300	0	-	-	-	2	-	358	155	-	105	33	-	-	-	-	1609	
<b>Sum imp</b>	<b>2477</b>	<b>237</b>	<b>855</b>	<b>292</b>	<b>3539</b>	<b>770</b>	<b>3276</b>	<b>547</b>	<b>680</b>	<b>1474</b>	<b>653</b>	<b>1158</b>	<b>888</b>	<b>4096</b>	<b>469</b>	<b>245</b>	<b>441</b>	<b>2035</b>	<b>622</b>	<b>1055</b>	<b>231</b>	<b>877</b>	<b>722</b>	<b>571</b>	<b>90</b>	<b>1822</b>	<b>30122</b>

Sum of physical energy flows between UCTE countries = 26169GWh Total physical energy flows = 30122GWh

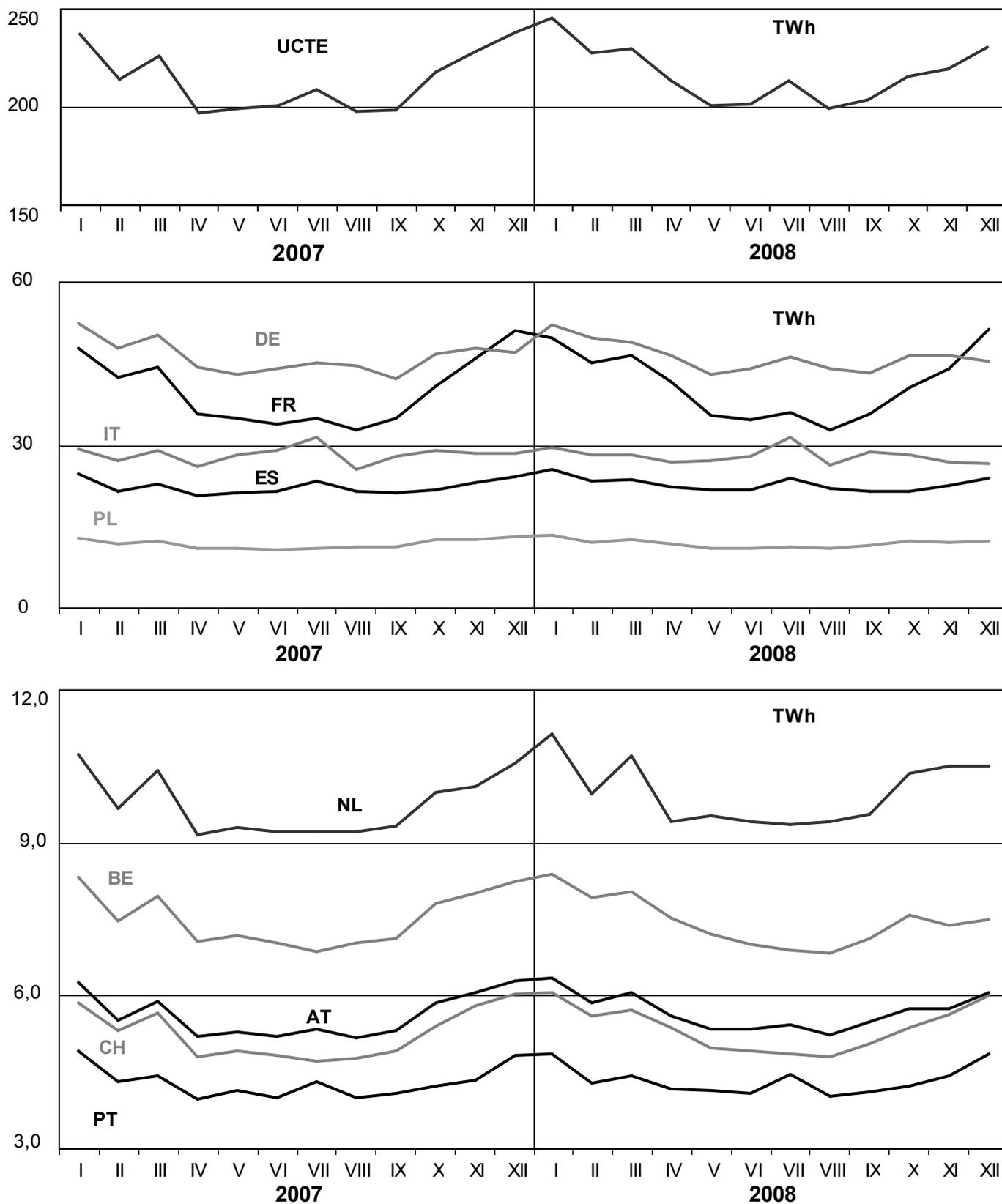
<sup>1</sup> Other III: Albania, Belarus, Denmark East, Great Britain, Morocco, Republic of Moldavia, Norway, Sweden, Republic of Turkey and Ukraine

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

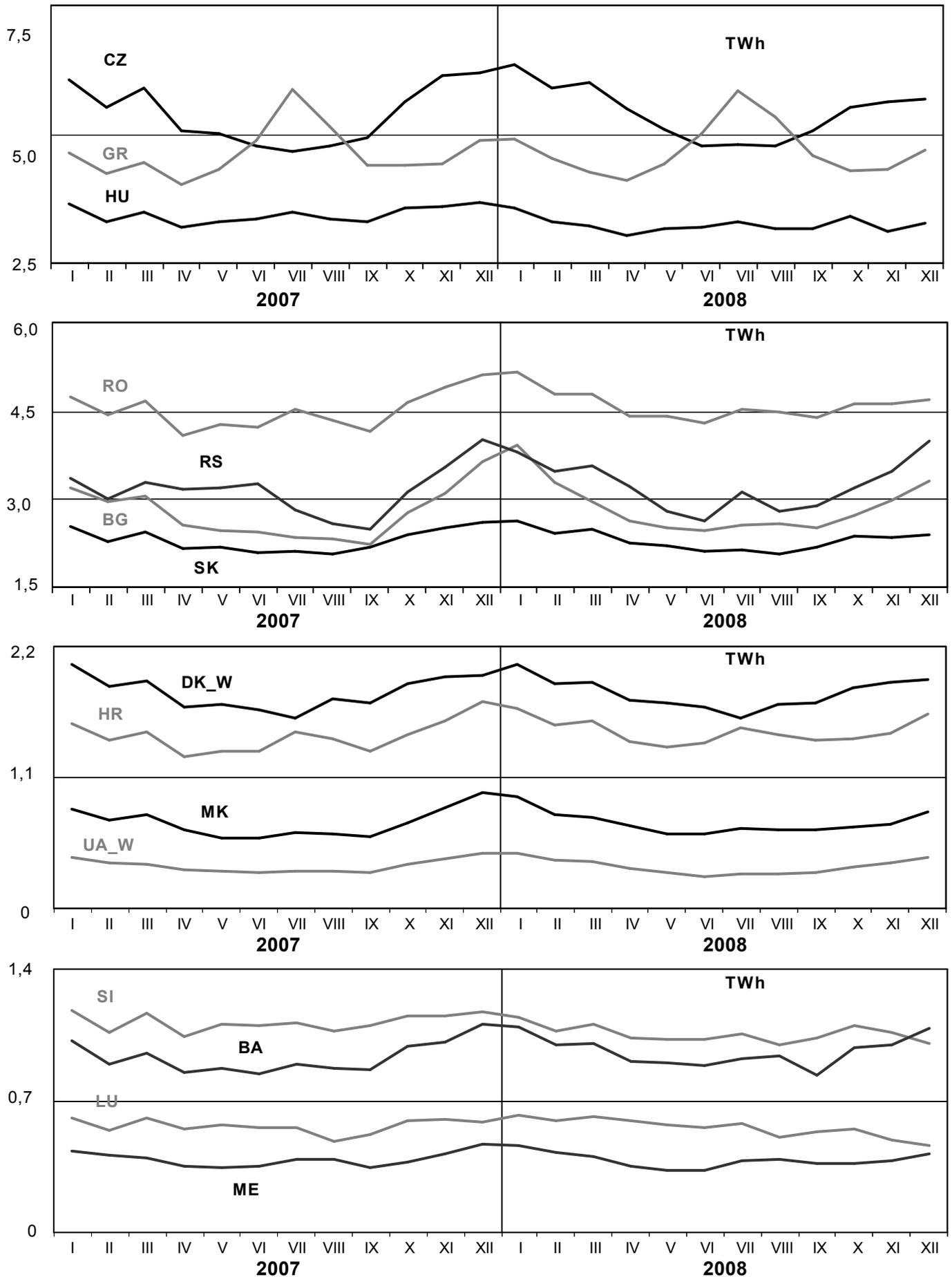
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# 3

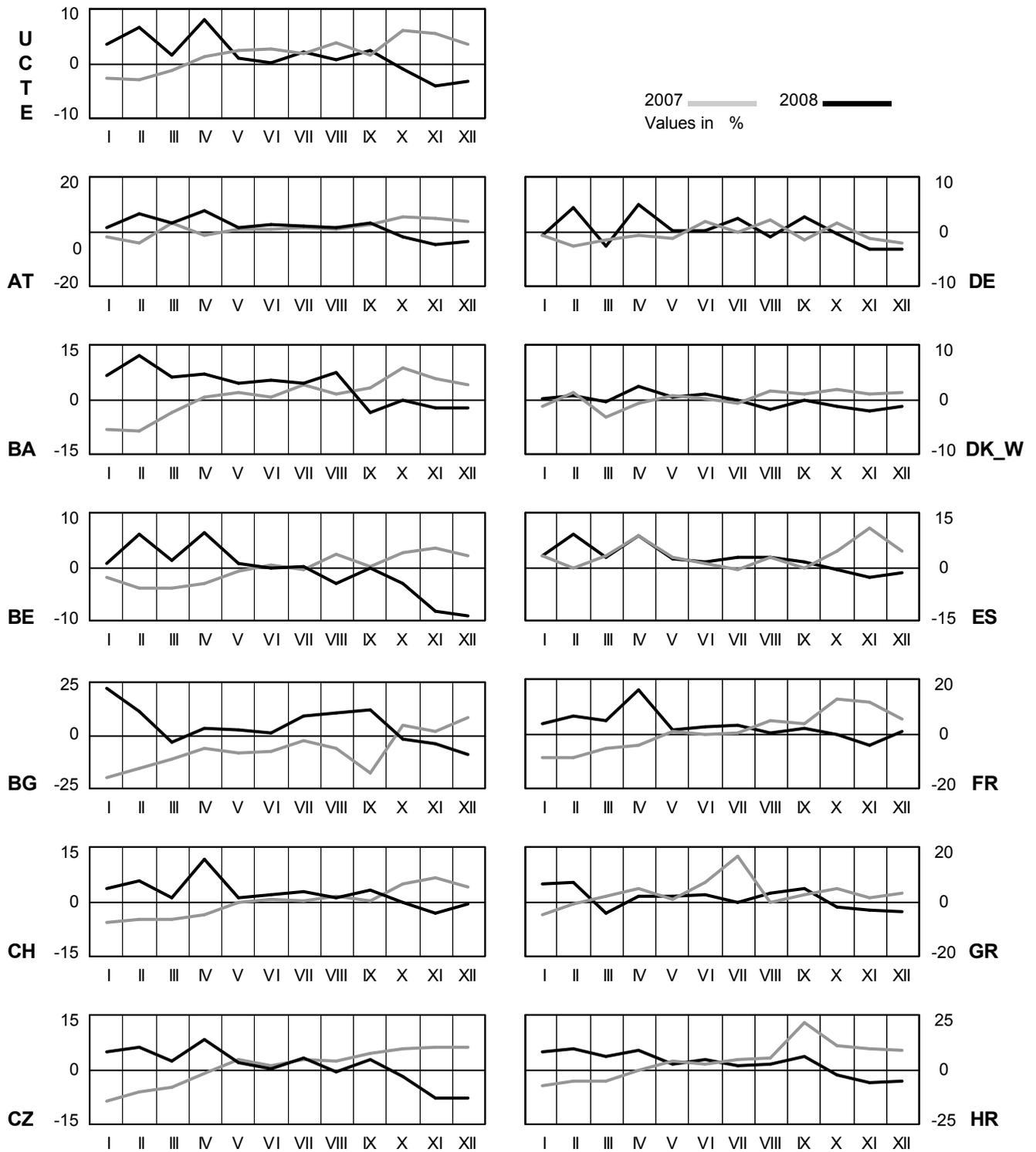
## Monthly consumption

December 2008



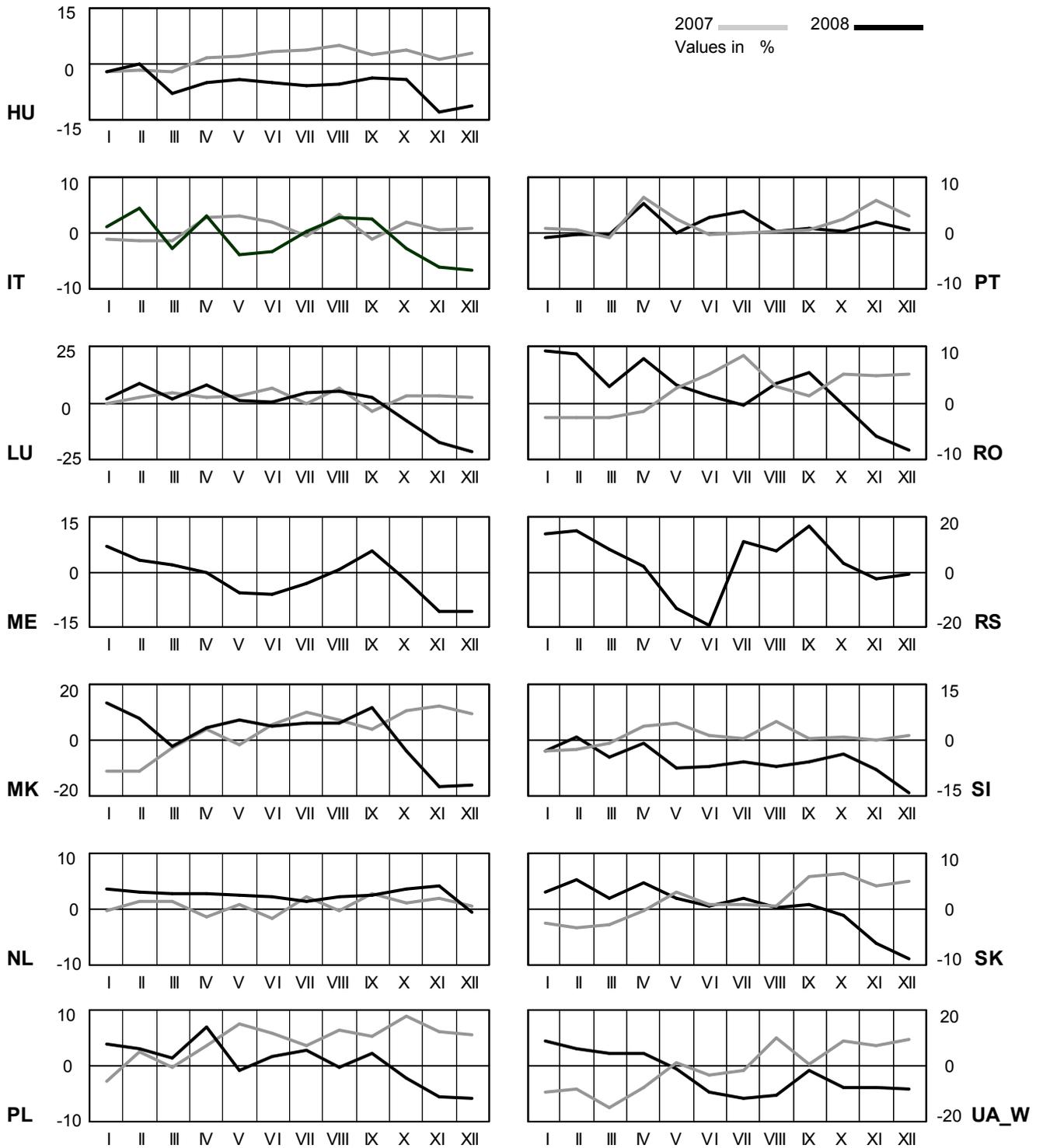
# 4 Monthly consumption variation

December 2008



# 4 Monthly consumption variation

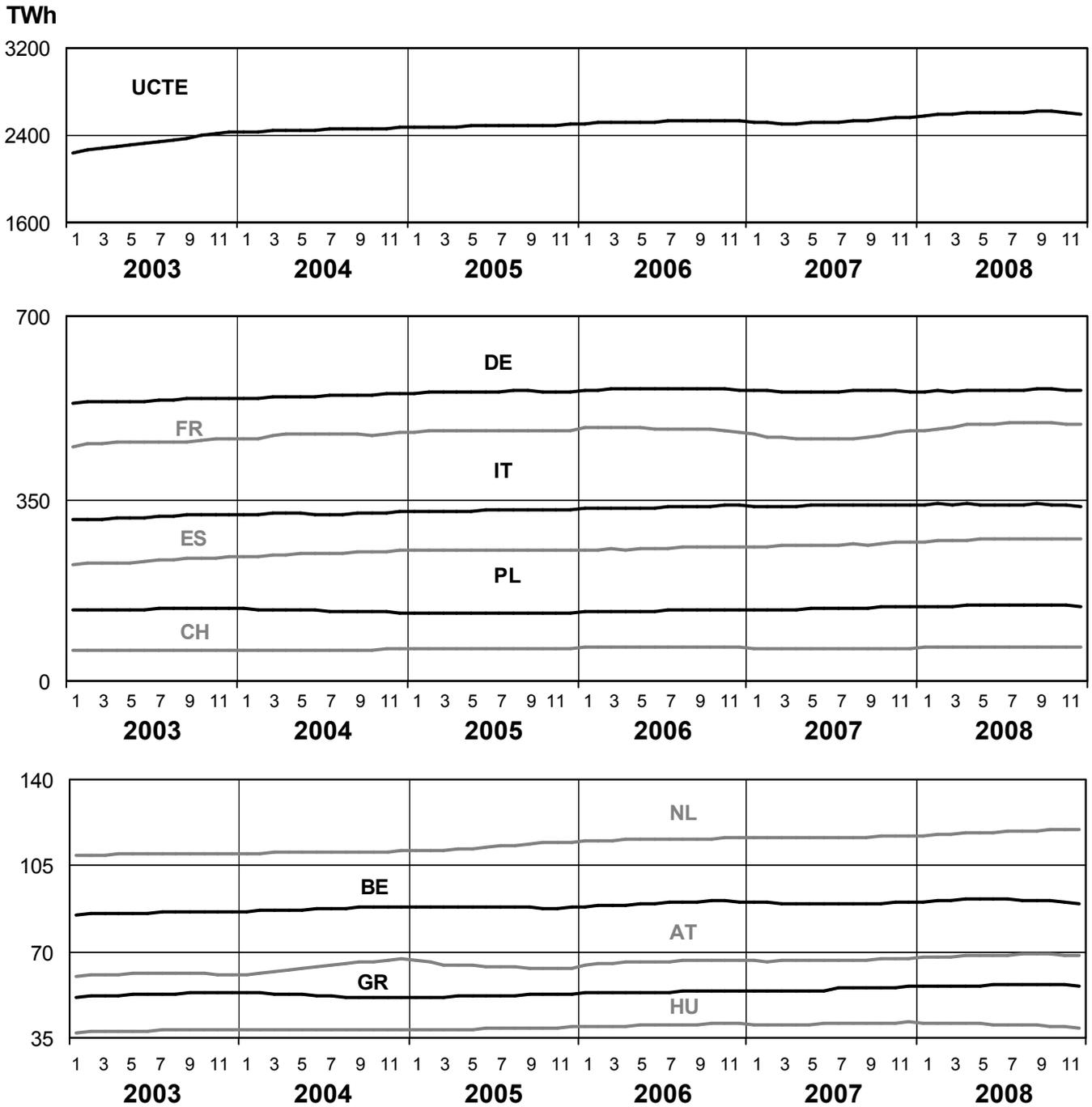
December 2008



# 5

## Consumption of the last 12 months

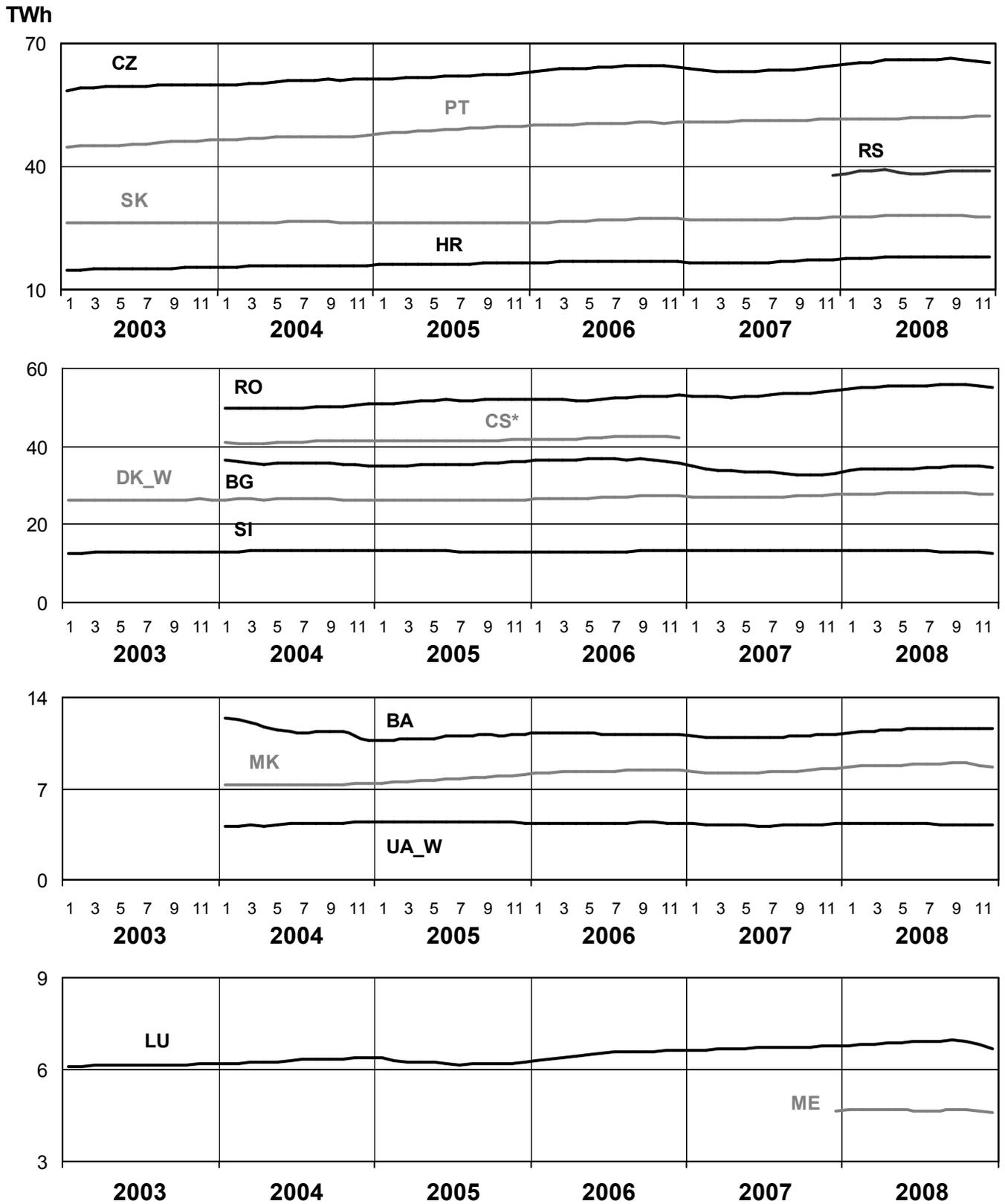
December 2008



# 5

## Consumption of the last 12 months

December 2008

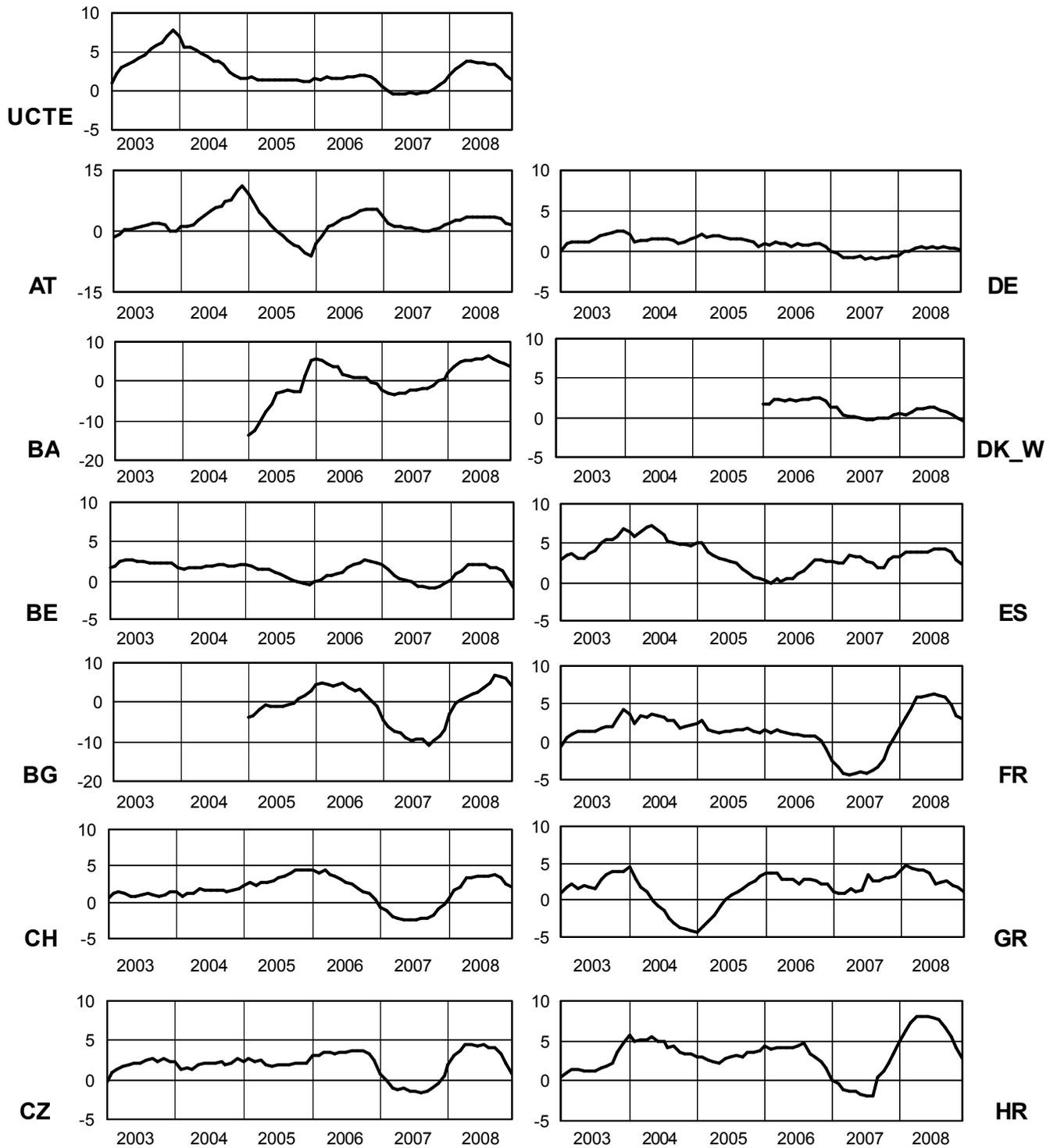


\* CS consumption values until December 2006; from 2007 on ME and RS as separate countries

# 6

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

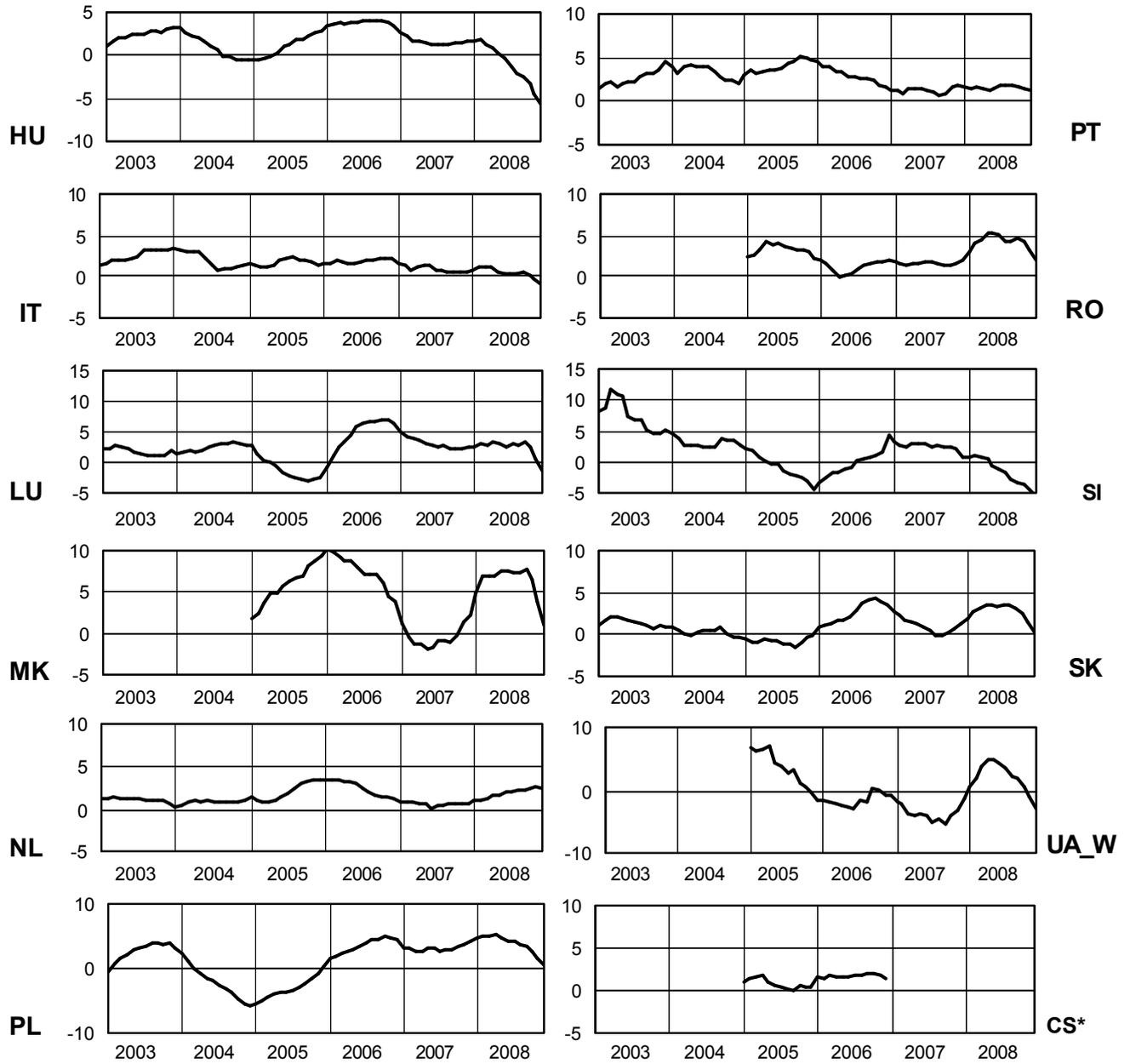
December 2008



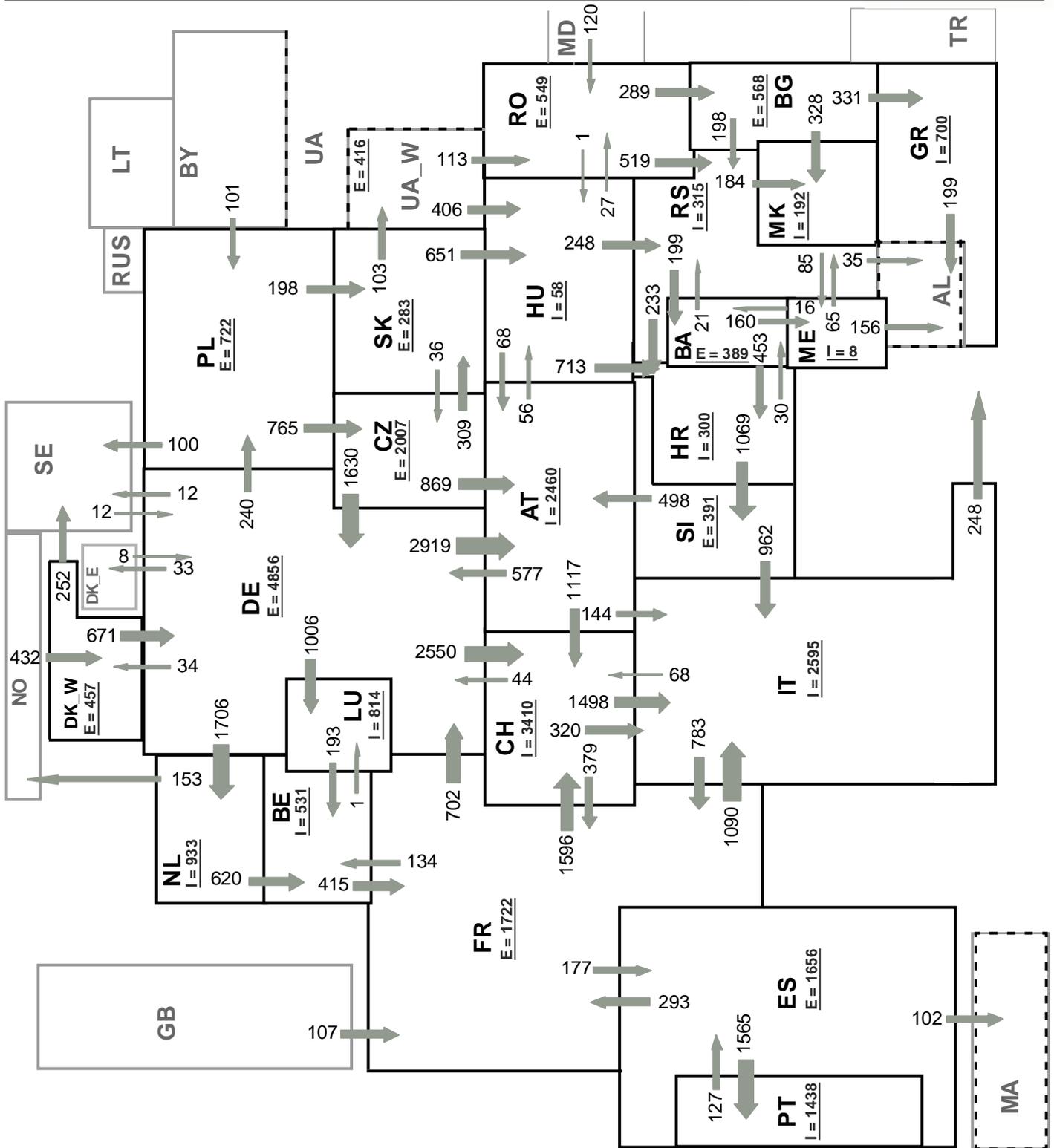
# 6

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

December 2008



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



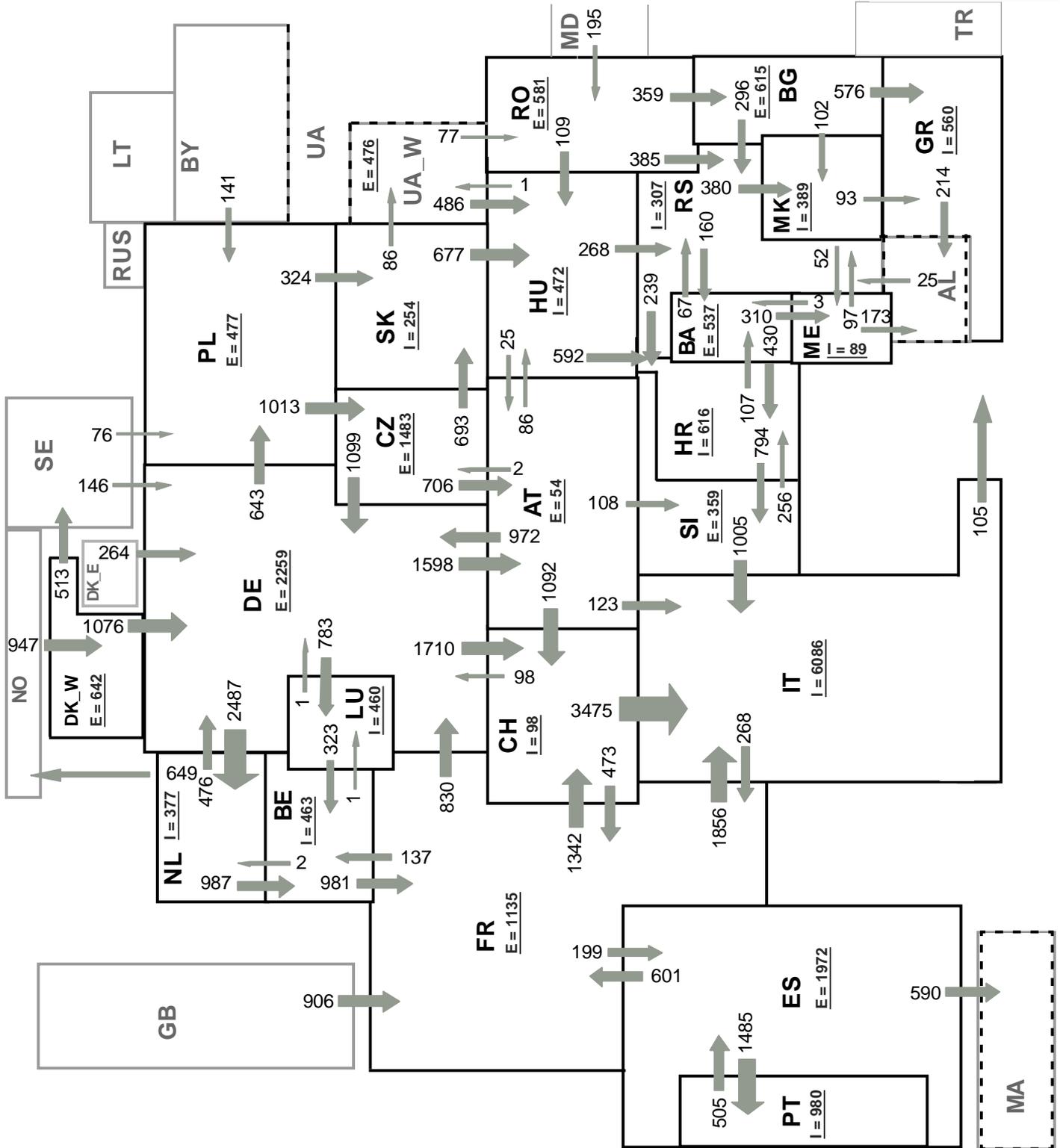
Sum of load flows in MW

UCTE = 32428 MW

Total = 34872 MW

Synchronous operation with UCTE region

I = Import balance  
E = Export balance



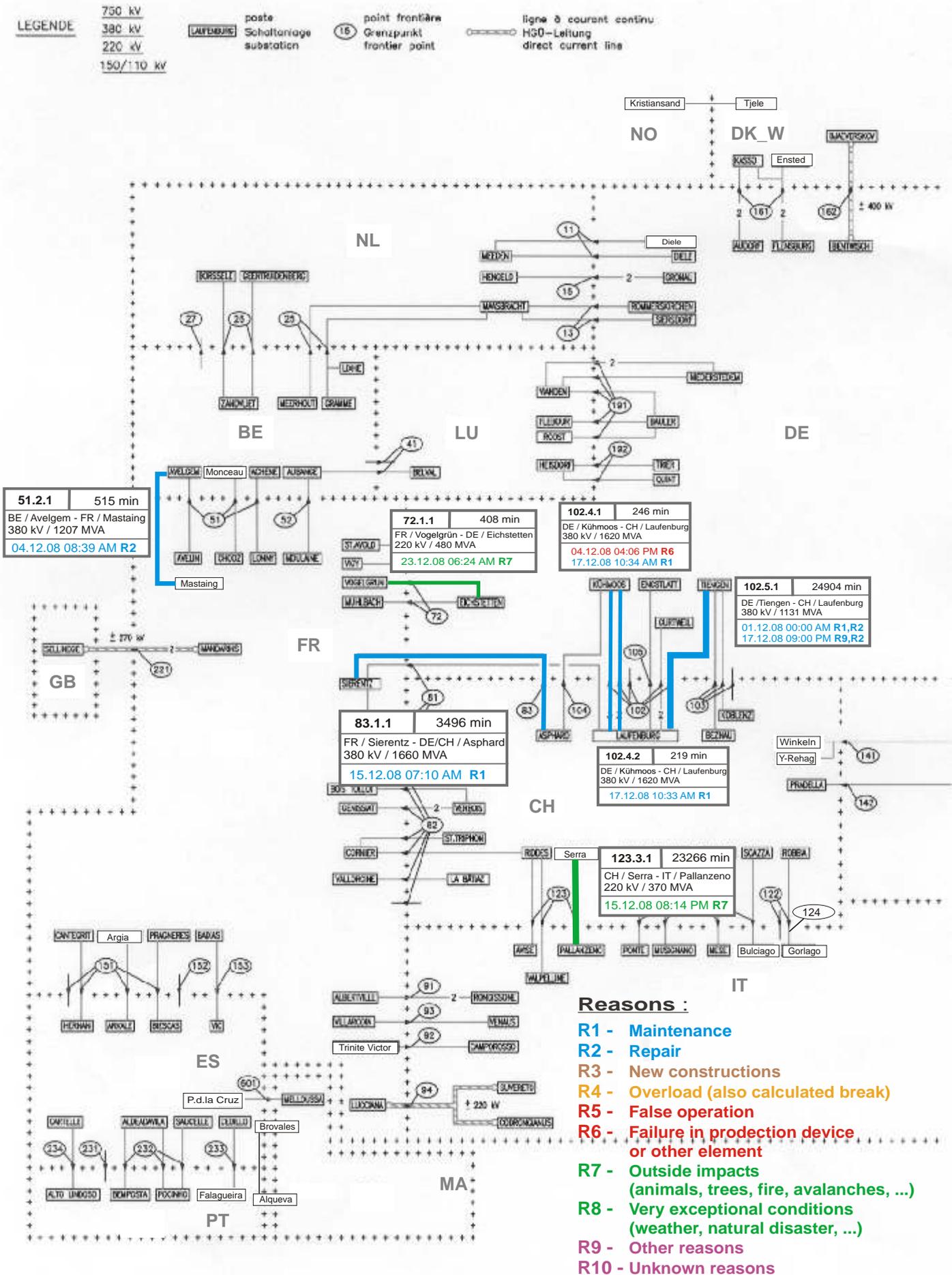
Sum of load flows in MW

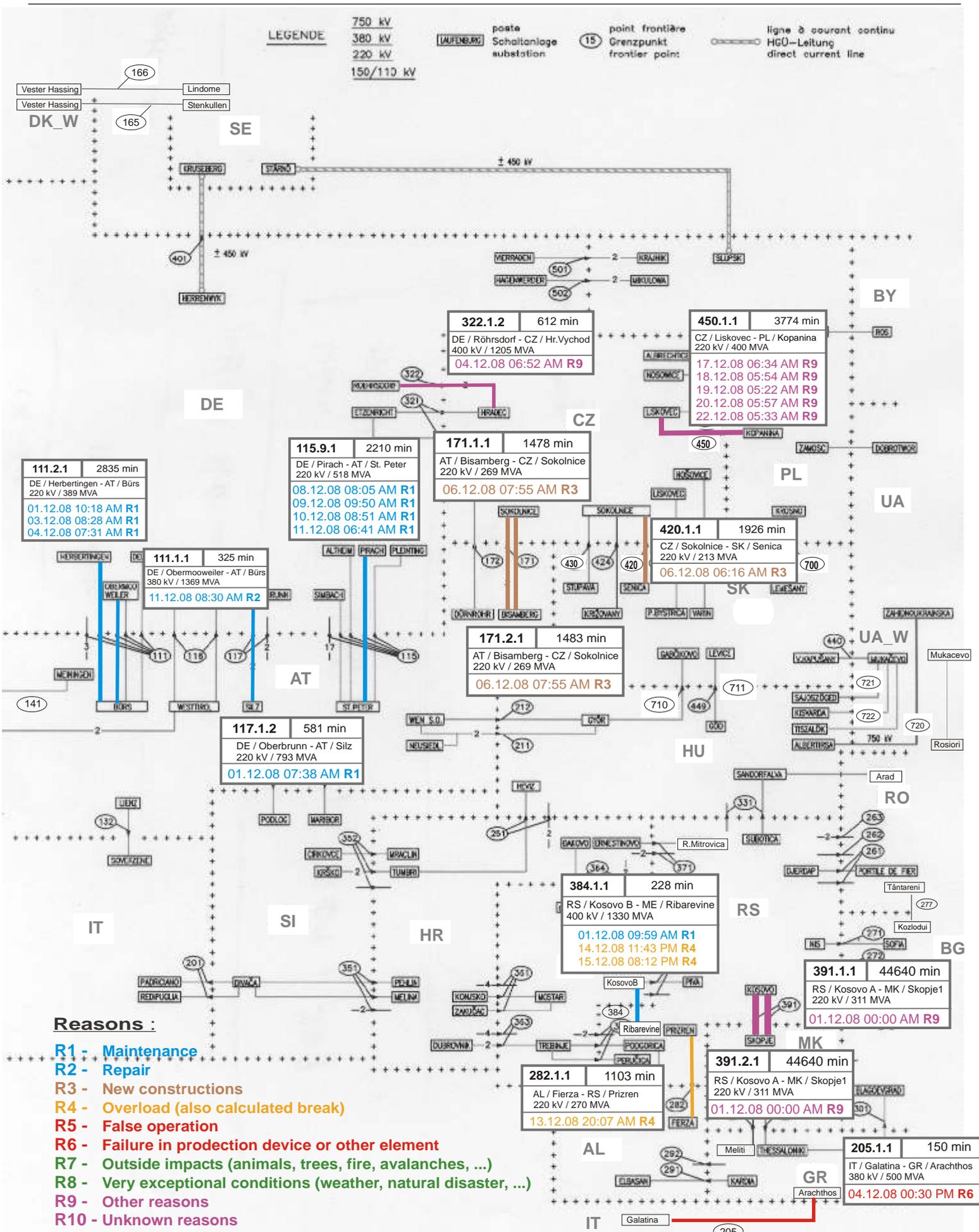
UCTE = 36042 MW

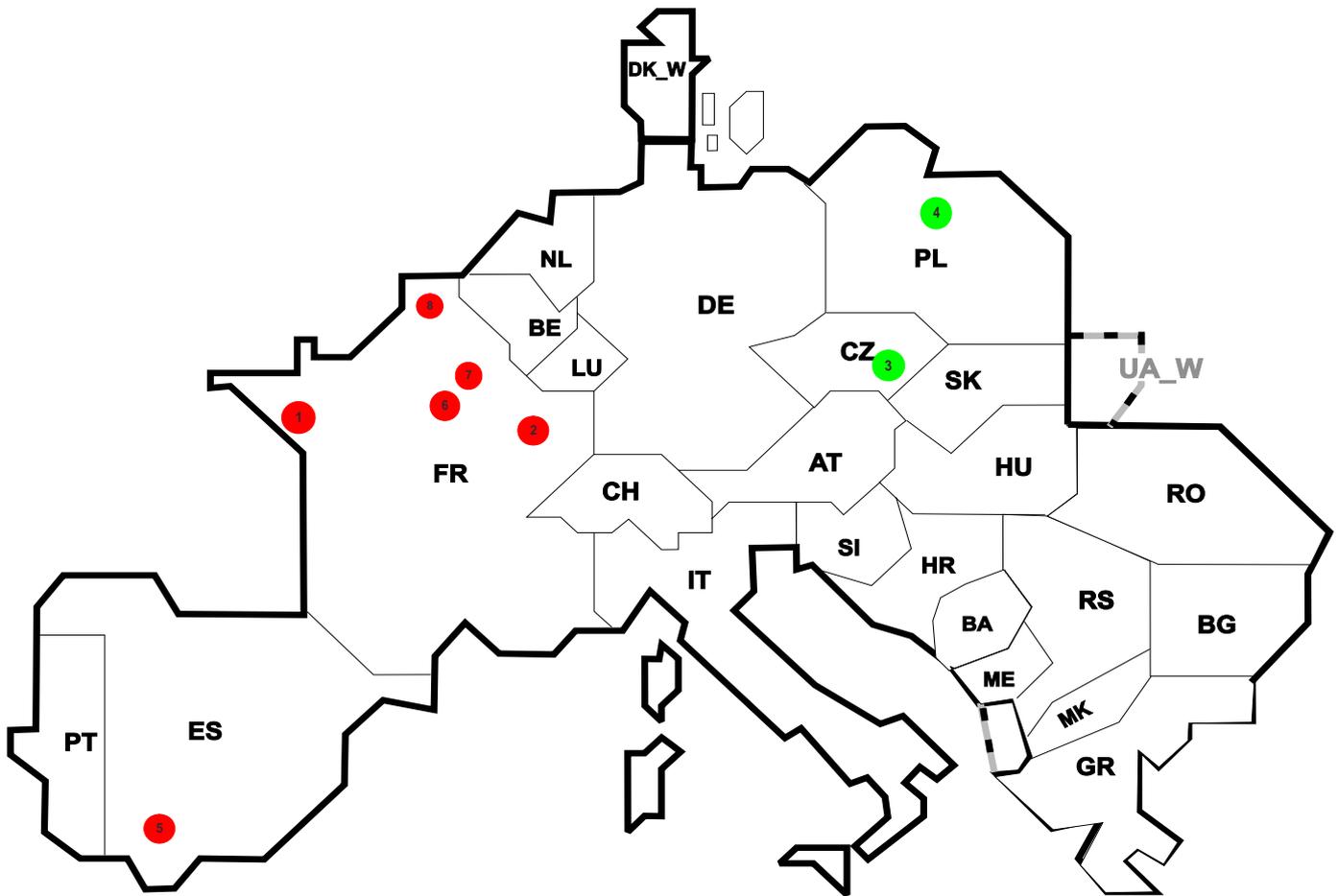
Total = 41531 MW

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, ...)  
(animals, trees, fire, avalanches, ...)

**R8** Very exceptional conditions  
(weather, natural disaster, ...)

**R9** Other reasons

**R10** Unknown reasons

No	Country	Substation	Reason	Energy not supplied <sup>2</sup> [ MWh ]	Total loss of power [ MW ]	Restoration time [ min ]	Equivalent time of interruption <sup>1</sup>
1	FR	Orangerie	R6	89	97	55	0,095
2	FR	St Hubert	R6	74	174	26	0,079
3	CZ	T402 Sokolnice	R7	8	125	4	0,065
4	PL	Konin	R7	4	18	11	0,015
5	ES	Dos Hermanas	R6	3	0	9	0,005
6	FR	Nanterre	R6	3	44	5	0,004
7	FR	Buttes Chaumont	R6	3	45	4	0,003
8	FR	Douvain	R5	1	9	5	0,001

<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	411217	1507840	3324	395	2647	465
BA	585407	298666	438	100	563	100
BE	483299	570157	433	839	856	1002
BG	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
CH	1699110	2723710	0	3427	2969	3206
CZ	1887149	771883	2985	883	2531	968
DE	4069745	1587807	6174	3147	4908	2286
DK_W	716344	561728	412	617	1039	89
ES	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
FR	5853886	3105884	5713	3802	6180	4952
GR	31651	504249	20	660	0	490
HR	105028	522501	347	647	165	789
HU	854451	843778	1130	1172	959	1423
IT	431432	4082924	1156	3668	360	6450
ME	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
MK	400	258300	50	293	50	449
NL	628383	2067869	1213	2134	1049	2723
PL	319485	68130	600	0	500	78
PT	6807	827996	0	1500	0	1000
RO	528488	140622	709	144	836	236
RS	372200	625669	337	660	463	735
SI	766077	522570	1109	711	1123	777
SK	455914	363327	653	304	706	878
UA_W	334489	0	414	0	469	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.

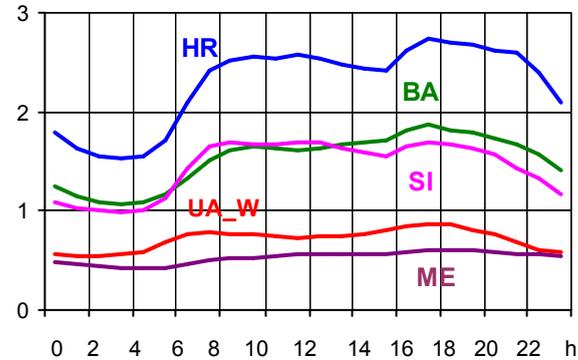
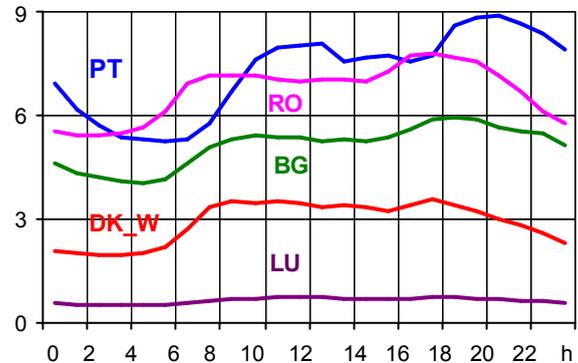
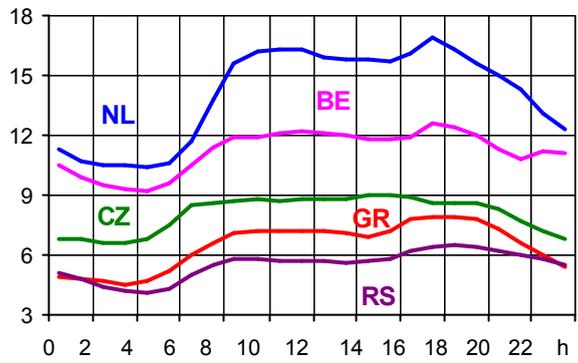
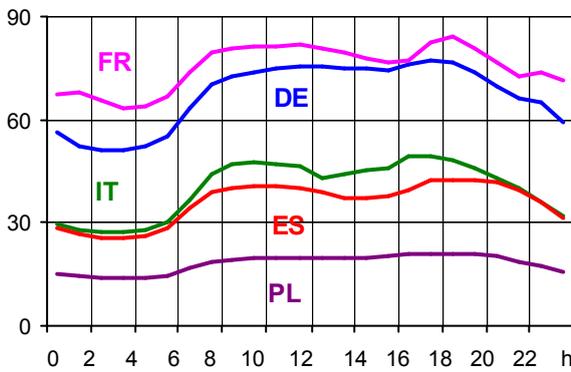
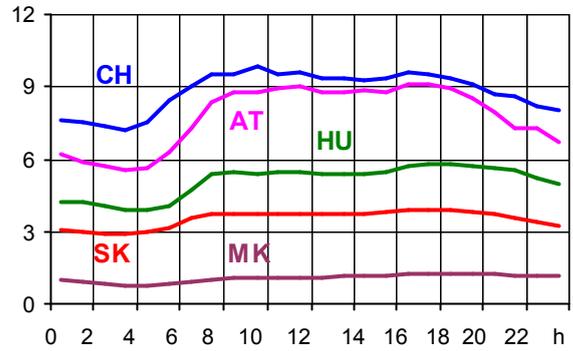
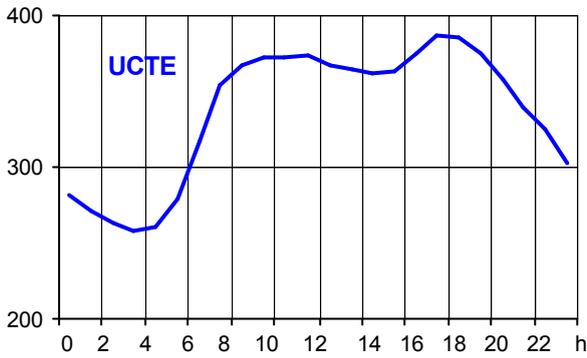
- Export Programs: Sum of all positive values of every hour of every border  
 - Import Programs: Sum of all negative values of every hour of every border

- 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 17.12.2008 CET

Values in GW



	Highest load MW	var.% <sup>1</sup>	Load representativity %
AT	9143	-1,3	100
BA	1865	-5,5	100
BE <sup>2</sup>	12561	-9,1	100
BG	5971	-12,7	100
CH	9854	-1,0	100
CZ	9005	-10,2	100
DE	77473	-4,1	91
DK_W	3571	-3,8	100
ES	42589	-1,8	98
FR	84239	-4,2	100
GR	7899	-11,8	100
HR	2741	-9,7	100
HU	5830	-10,9	100
IT	49642	-10,1	100
LU	743	-15,4	100
ME	606	-12,8	100
MK	1241	-20,2	100
NL	16915	1,8	100
PL <sup>3</sup>	21190	-6,2	100
PT	8861	-3,0	97
RO	7810	-10,0	100
RS	6476	-0,9	100
SI	1698	-21,7	100
SK	3920	-11,3	100
<b>UCTE</b>	<b>387320</b>	<b>-5,8</b>	
UA_W	865	-2,8	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> Operational data

## Contact

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