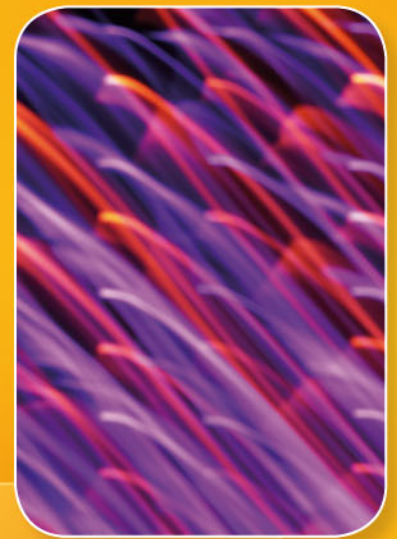


# UCTE



## December 2007

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 values of production and consumption are gross values.

Countries	Net production in GWh							Exchange balance in GWh	Pump in GWh	Consumption in GWh			
	Therm. nuclear	Therm. conv.	Hydro prod	Other renew.	Of which wind	Not identify	Total			monthly	var. [%]	last 12 months	var. [%]
AT	0	2531	2572	0	0	575	5678 <sup>1</sup>	900	286	6292	3,9	67439	1,4
BA	0	727	516	0	0	0	1243	-129	0	1114	4,2	11171	0,6
BE <sup>2</sup>	3713	3049	161	377	66	0	7300 <sup>1</sup>	1080	155	8225	1,8	89888	-0,5
BG	1429	2193	369	0	0	0	3991	-356	0	3635	8,5	33126	-7,1
CH	2418	185	2363	90	1	0	5056 <sup>1</sup>	1133	160	6029	3,9	63062	-0,3
CZ	2377	4814	329	29	15	0	7549 <sup>1</sup>	-1321	46	6182	6,2	64663	0,6
DE	12197	32831	2051	5794	4080	0	52873 <sup>1</sup>	-4934	874	47065	-2,0	555899	-0,6
ES	5066	16192	1567	2567	2206	0	25392 <sup>1</sup>	-730	467	24195	4,6	267989	3,2
FR	40008	8017	4552	946	556	0	53523 <sup>1</sup>	-1637	822	51064	5,2	480428	0,4
GR	0	4269	316	159	138	0	4744 <sup>1</sup>	228	90	4882	2,9	55688	3,1
HR	0	565	506	3	3	0	1074 <sup>1</sup>	679	21	1732	8,7	17380	3,4
HU <sup>3</sup>	1375	2118	18	143	9	0	3654 <sup>1</sup>	38	0	3692	3,0	41289	1,6
IT	0	22609	2426	836	391	0	25871 <sup>1</sup>	3450	748	28573	1,0	338444	0,2
LU	0	294	75	14	8	0	383	288	89	582	2,5	6777	2,4
ME	0	111	195	0	0	0	306	160	0	466	n.a.	4654	n.a.
MK	0	537	157	0	0	0	694 <sup>1</sup>	278	0	972	9,5	8566	2,3
NL	361	8454	0	720	337	0	9535 <sup>1</sup>	1119	0	10654	1,3	116955	0,7
PL <sup>4</sup>	0	13836	294	70	59	0	14200 <sup>1</sup>	-795	138	13267	5,5	142156	4,1
PT	0	3067	427	594	421	0	4088 <sup>1</sup>	781	43	4826	3,0	51597	1,8
RO	969	2987	1488	0	0	0	5444 <sup>1</sup>	-323	8	5113	5,0	54118	2,1
RS	0	3068	1135	0	0	0	4203	96	44	4255	n.a.	39907	n.a.
SI	516	485	176	0	0	0	1177	-5	0	1172	1,1	13448	0,9
SK	1351	683	433	30	0	0	2497 <sup>1</sup>	152	25	2624	4,9	27581	1,4
DK_W	0	1845	3	598	441	0	2446 <sup>1</sup>	-480	0	1966	1,9	21794	0,3
UCTE <sup>5</sup>	71780	135467	22129	12970	8731	575	242921 <sup>1</sup>	-328	4016	238559	3,6	2574001	1,7
UA_W	0	801	11	0	0	0	812 <sup>1</sup>	-353	0	459	9,5	4271	-1,3

<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> Data on hydro, other renewable, not clearly identifiable production are not yet available

<sup>4</sup> Operational data

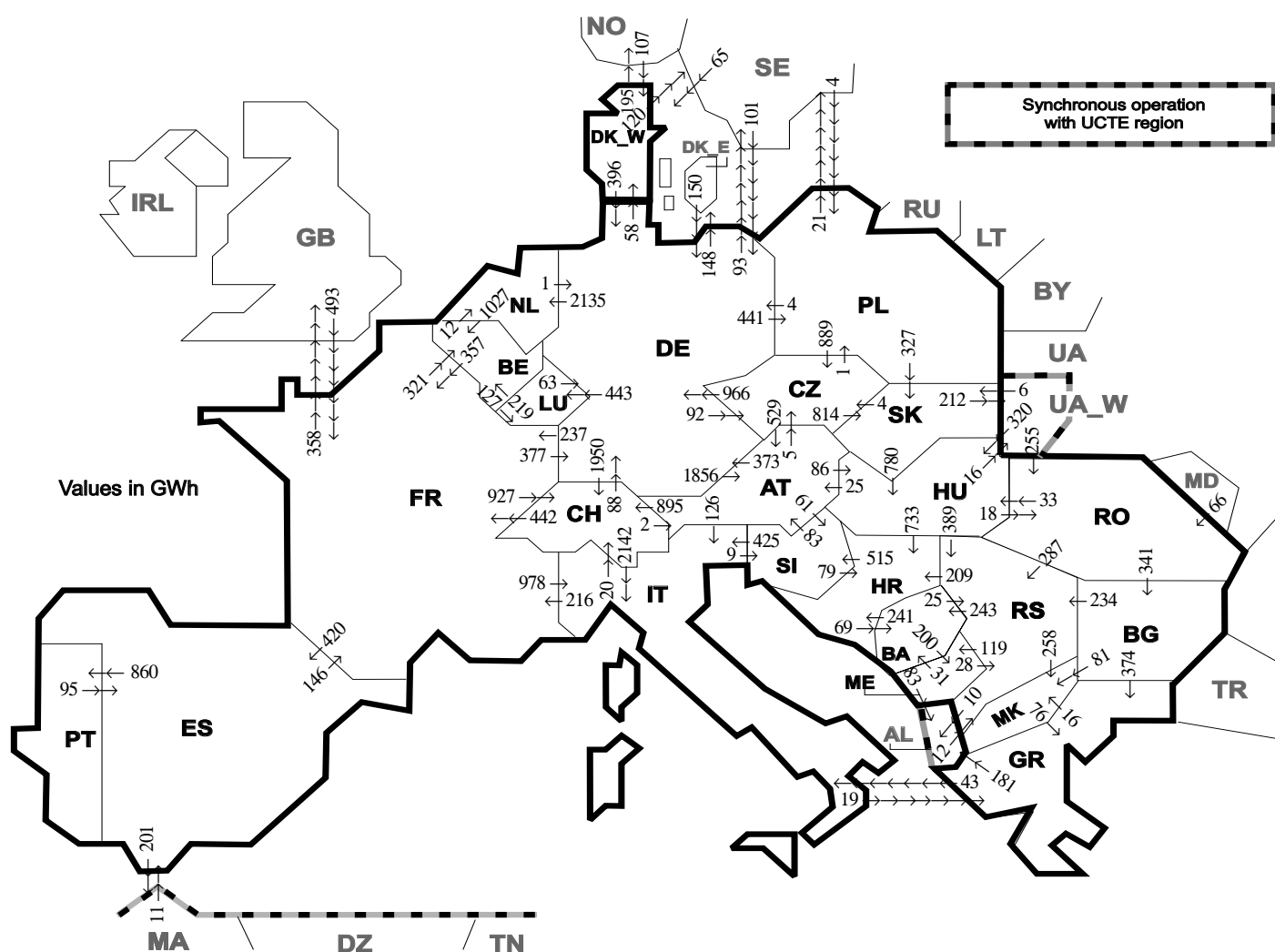
<sup>5</sup> From June 2007 on including DK\_W

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	ES	FR	GR	HR	HU	IT	LU	ME	MK	NL	PL	PT	RO	RS	SI	SK	DK_W	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
Thermal conv.	100	100	100	100	100	100	100	97	100	100	100	100	100	100	100	100	100	100	95	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	95	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Not identify	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	98	100	100	100	100	100	100	100	100	100	100	97	100	100	95	100	100	100

# 2 Physical energy flows

December 2007



Exporting countries	AT	BA	BE	BG	CH	CZ	DE	ES	FR	GR	HR	HU	IT	LU	ME	MK	NL	PL	PT	RO	RS	SI	SK	DK_W	UA_W	Other III <sup>1</sup>	Sum export
AT	-	-	-	-	895	5	373	-	-	-	-	86	126	-	-	-	-	-	-	-	-	61	-	-	-	-	1546
BA	-	-	-	-	-	-	-	-	-	-	241	-	-	-	200	-	-	-	-	-	25	-	-	-	-	-	466
BE	-	-	-	-	-	-	-	357	-	-	-	-	-	127	-	-	12	-	-	-	-	-	-	-	-	-	496
BG	-	-	-	-	-	-	-	-	-	374	-	-	-	-	-	81	-	-	0	234	-	-	-	-	-	0	689
CH	2	-	-	-	-	-	88	-	442	-	-	-	2142	-	-	-	-	-	-	-	-	-	-	-	-	-	2674
CZ	529	-	-	-	-	-	966	-	-	-	-	-	-	-	-	-	-	1	-	-	-	814	-	-	-	-	2310
DE	1856	-	-	-	1950	92	-	-	237	-	-	-	443	-	-	-	2135	441	-	-	-	-	-	58	241	-	7453
ES	-	-	-	-	-	-	-	-	146	-	-	-	-	-	-	-	-	-	860	-	-	-	-	-	-	201	1207
FR	-	-	321	-	927	-	377	420	-	-	-	-	978	-	-	-	-	-	-	-	-	-	-	-	-	-	3381
GR	-	-	-	0	-	-	-	-	-	-	-	-	43	-	-	16	-	-	-	-	-	-	-	-	-	-	240
HR	-	69	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	515	-	-	-	-	-	584
HU	25	-	-	-	-	-	-	-	-	-	733	-	-	-	-	-	-	-	18	389	0	-	16	-	-	-	1181
IT	0	-	-	-	20	-	-	216	19	-	-	-	-	-	-	-	-	-	-	-	9	-	-	-	-	-	264
LU	-	-	219	-	-	-	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	282
ME	-	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	-	-	-	-	83	142
MK	-	-	-	0	-	-	-	-	-	76	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	76
NL	-	-	1027	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1028
PL	-	-	-	-	889	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	327	-	-	-	21	1241
PT	-	-	-	-	-	-	-	95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	95
RO	-	-	-	341	-	-	-	-	-	-	-	33	-	-	-	-	-	-	-	-	-	-	-	-	0	0	661
RS	-	243	-	0	-	-	-	-	-	-	209	0	-	119	258	-	-	-	0	-	-	-	-	-	-	10	839
SI	83	-	-	-	-	-	-	-	-	-	79	425	-	-	-	-	-	-	-	-	-	-	-	-	-	-	587
SK	-	-	-	-	-	-	-	-	-	-	-	780	-	-	-	-	-	-	0	-	-	-	-	-	212	-	996
DK_W	-	-	-	-	-	-	396	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	315	711
UA_W	-	-	-	-	-	-	-	-	-	-	-	320	-	-	-	-	-	-	-	255	-	6	-	-	-	-	581
Other III <sup>1</sup>	-	-	-	0	-	-	251	11	493	0	-	-	-	-	0	-	-	4	-	66	12	-	-	172	-	-	1009
<b>Sum imp</b>	<b>2495</b>	<b>343</b>	<b>1567</b>	<b>341</b>	<b>3792</b>	<b>990</b>	<b>2519</b>	<b>526</b>	<b>1891</b>	<b>469</b>	<b>1262</b>	<b>1219</b>	<b>3714</b>	<b>570</b>	<b>319</b>	<b>355</b>	<b>2147</b>	<b>446</b>	<b>860</b>	<b>339</b>	<b>975</b>	<b>585</b>	<b>1147</b>	<b>230</b>	<b>228</b>	<b>1410</b>	<b>30739</b>

Sum of physical energy flows between UCTE countries = 27511GWh Total physical energy flows = 30739GWh

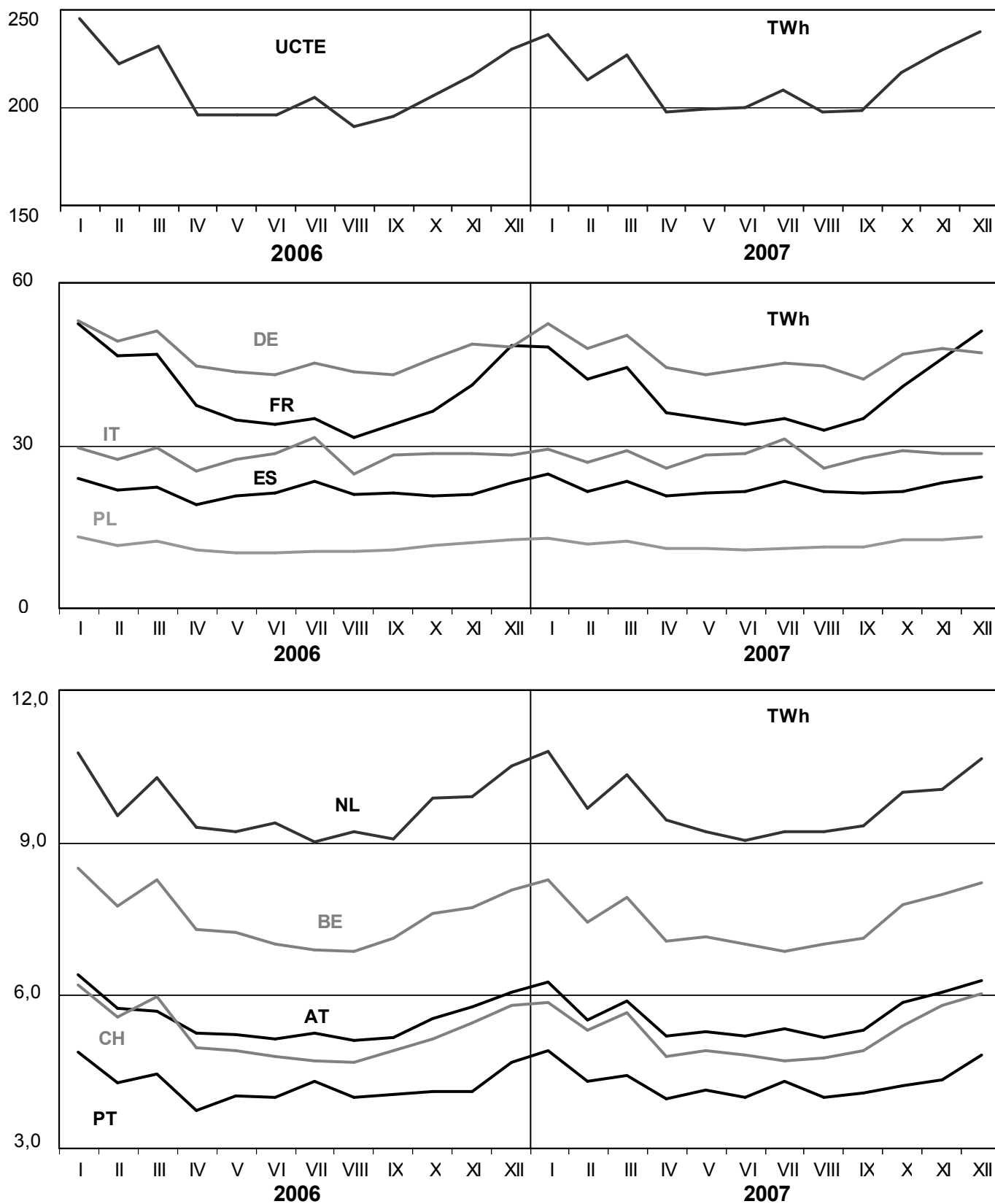
<sup>1</sup> Other III: Albania, Belarus, Denmark East, Great Britain, Morocco, Republic of Moldavia, Norway, Sweden, Republic of Turkey and Ukraine

These physical energy flows were measured on the cross-frontier transmission lines ( $\leq 110$  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

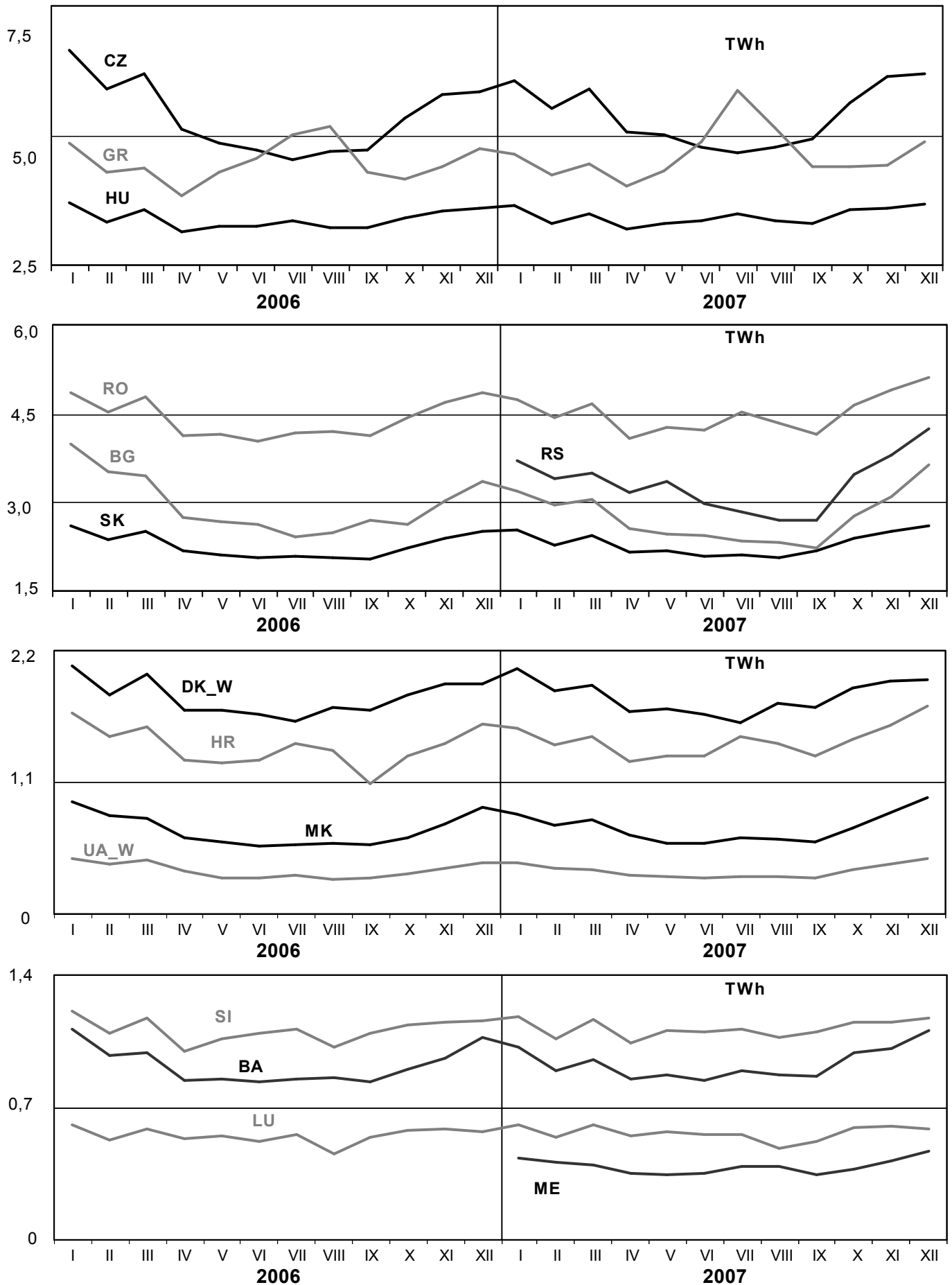
December 2007



# 3

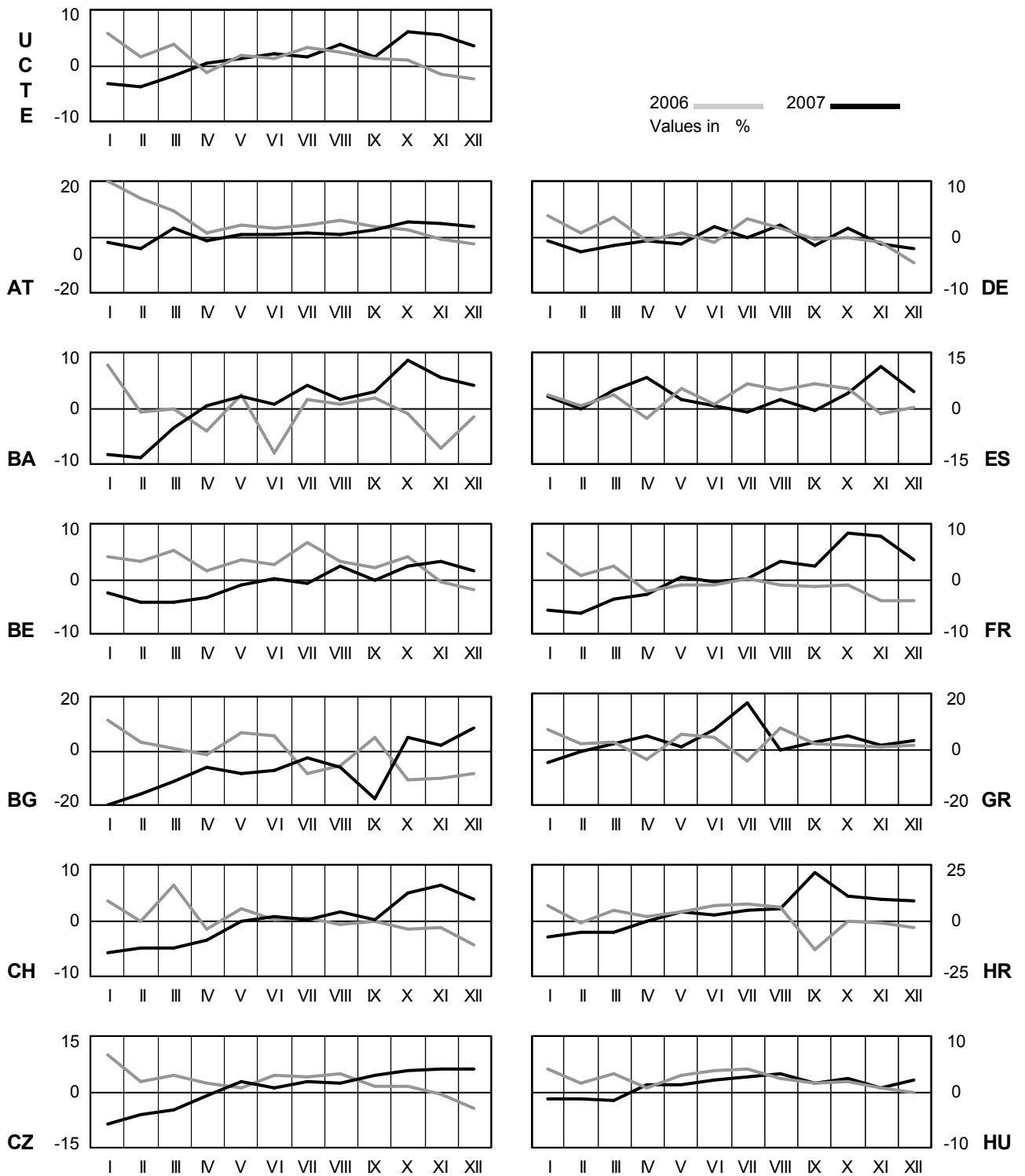
## Monthly consumption

December 2007



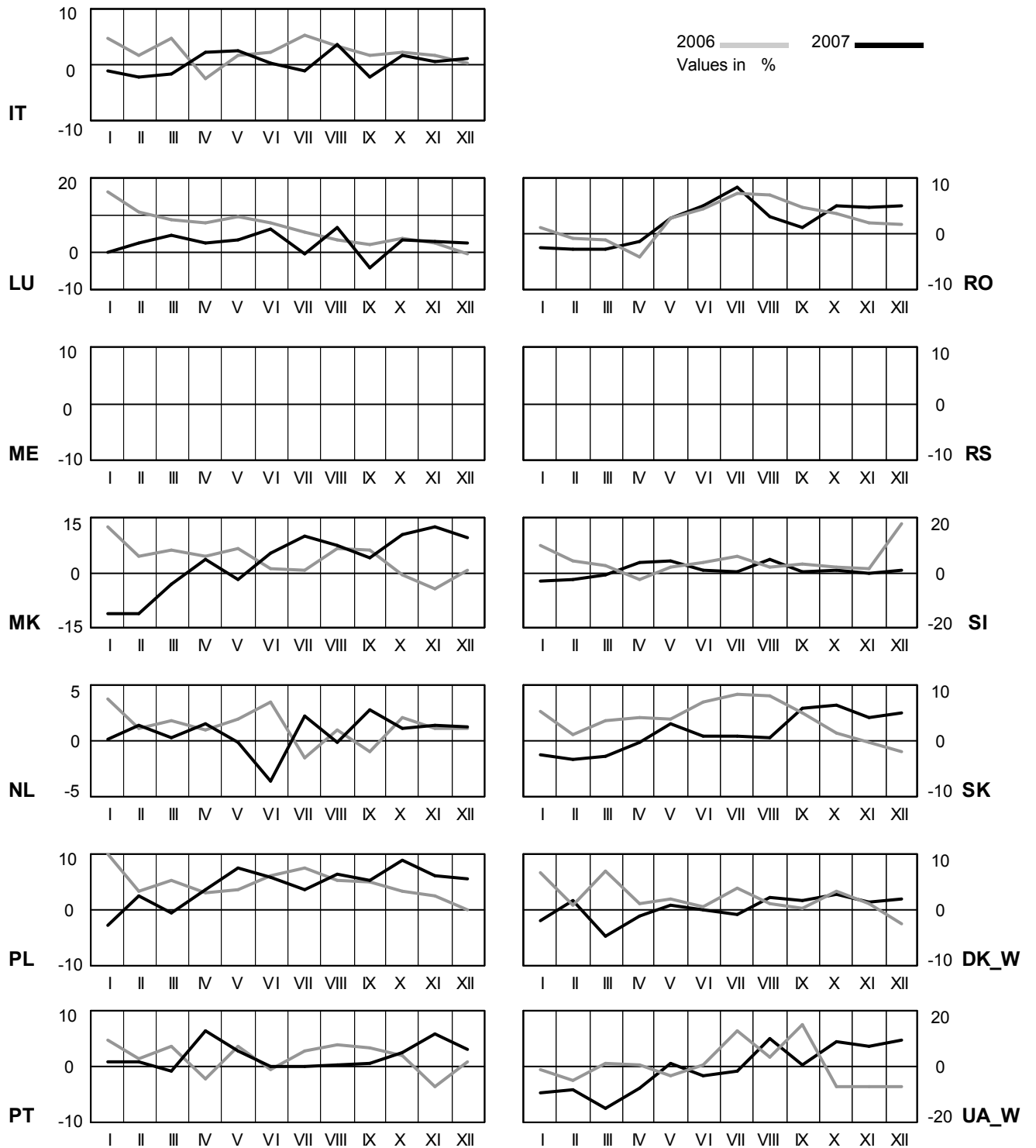
# 4 Monthly consumption variation

December 2007



# 4 Monthly consumption variation

December 2007

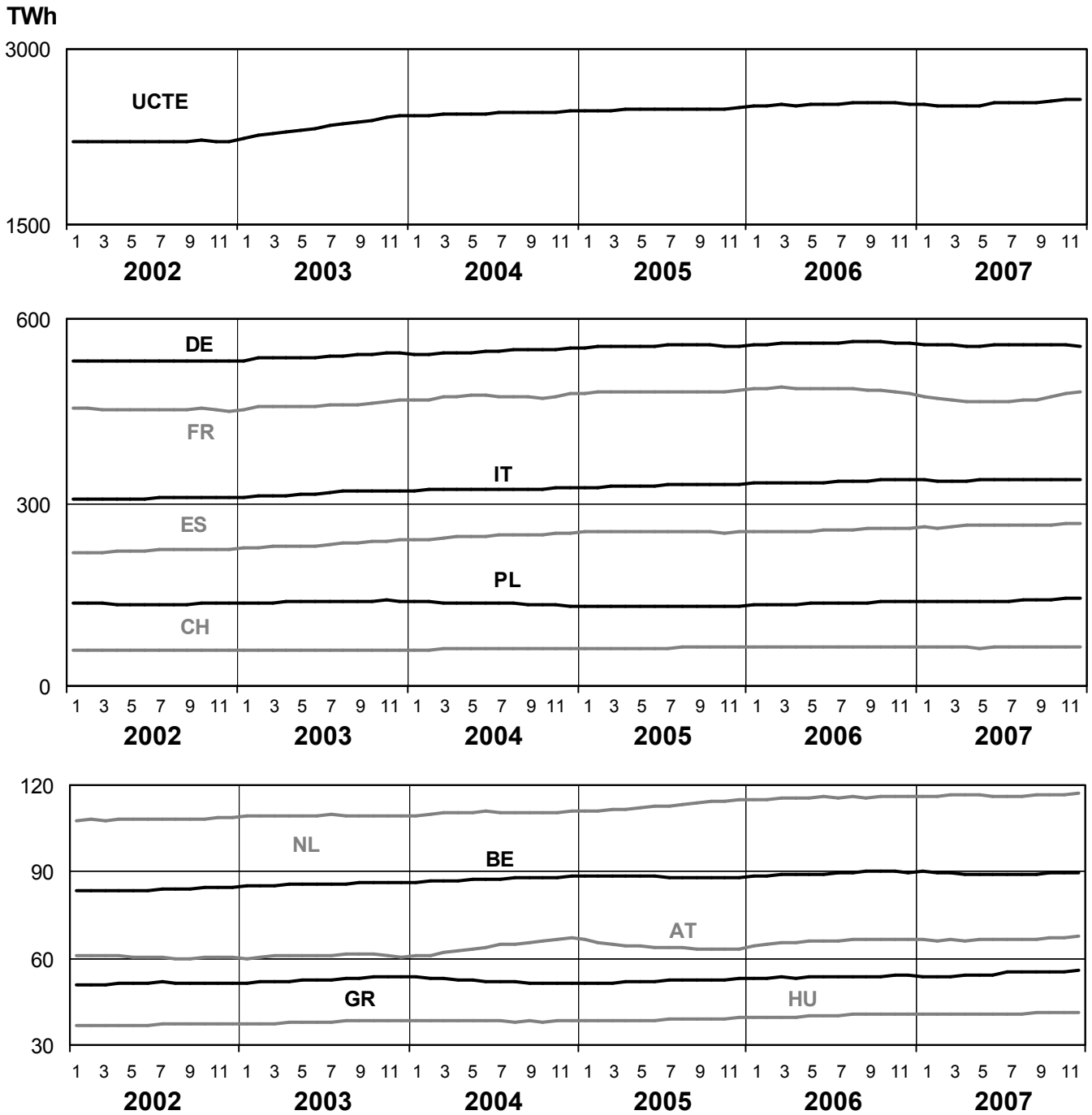




# 5

## Consumption of the last 12 months

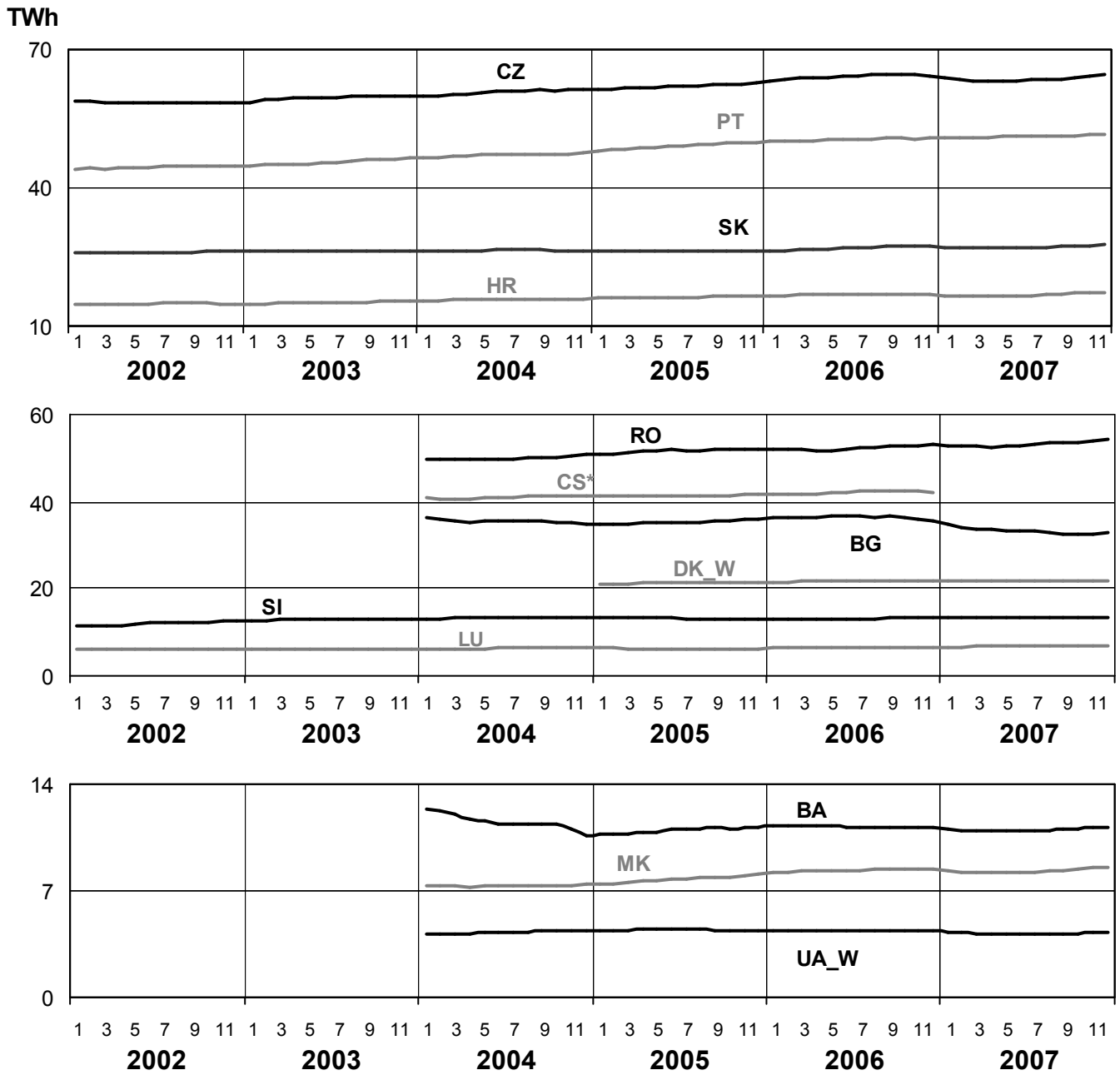
December 2007



# 5

## Consumption of the last 12 months

December 2007

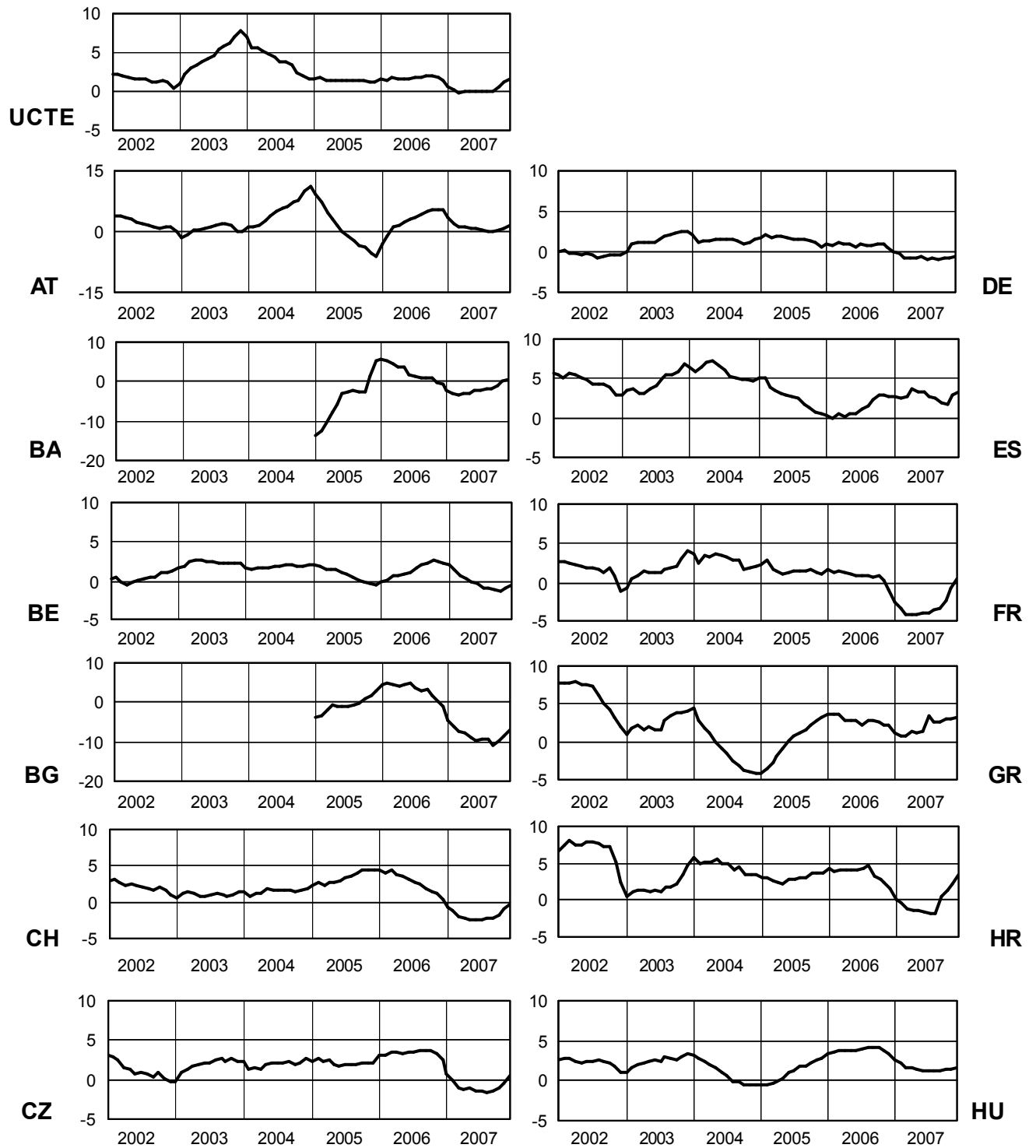


\* CS consumption values until December 2006; from 2007 on ME and RS as separate countries

# 6

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

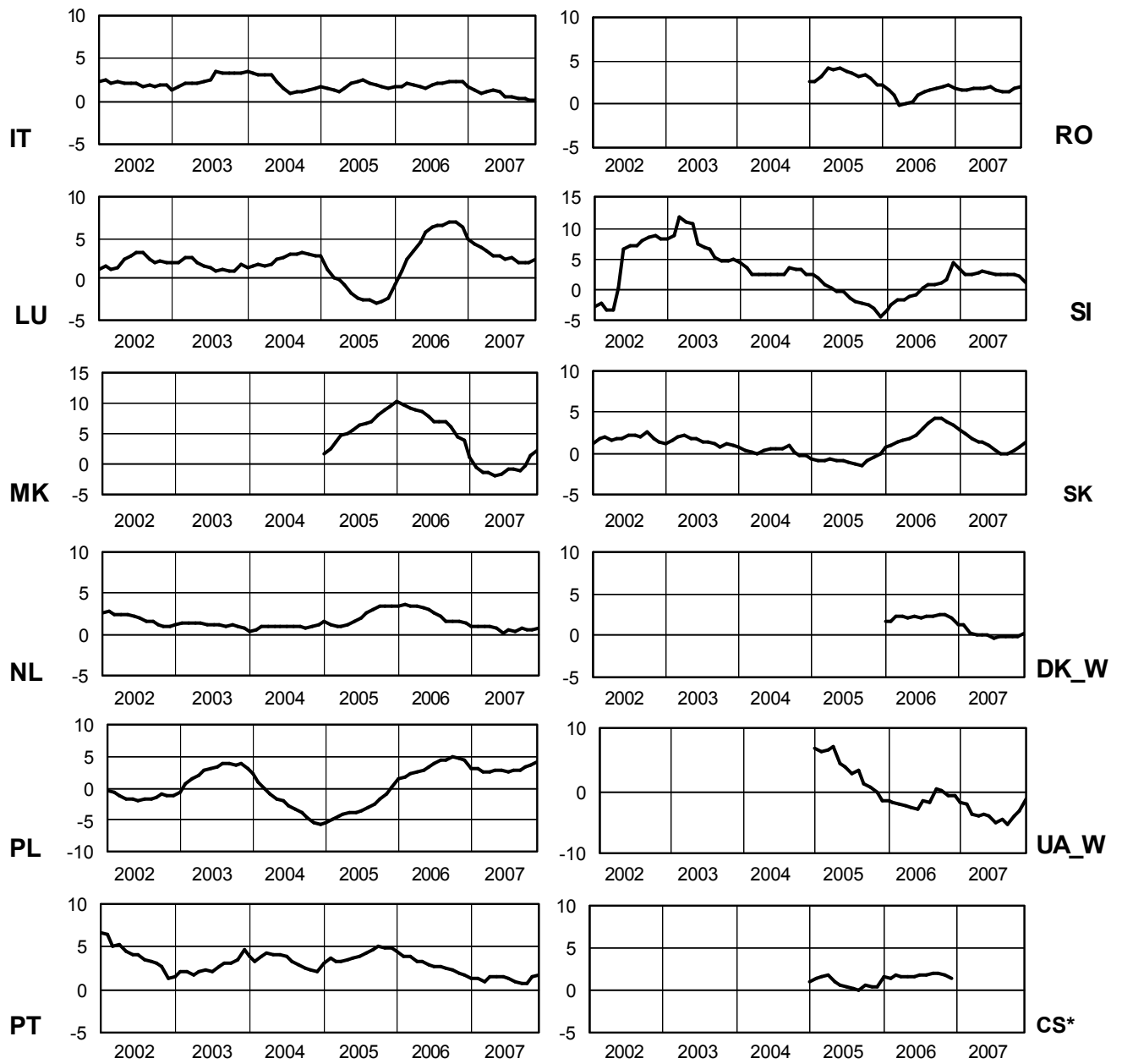
December 2007



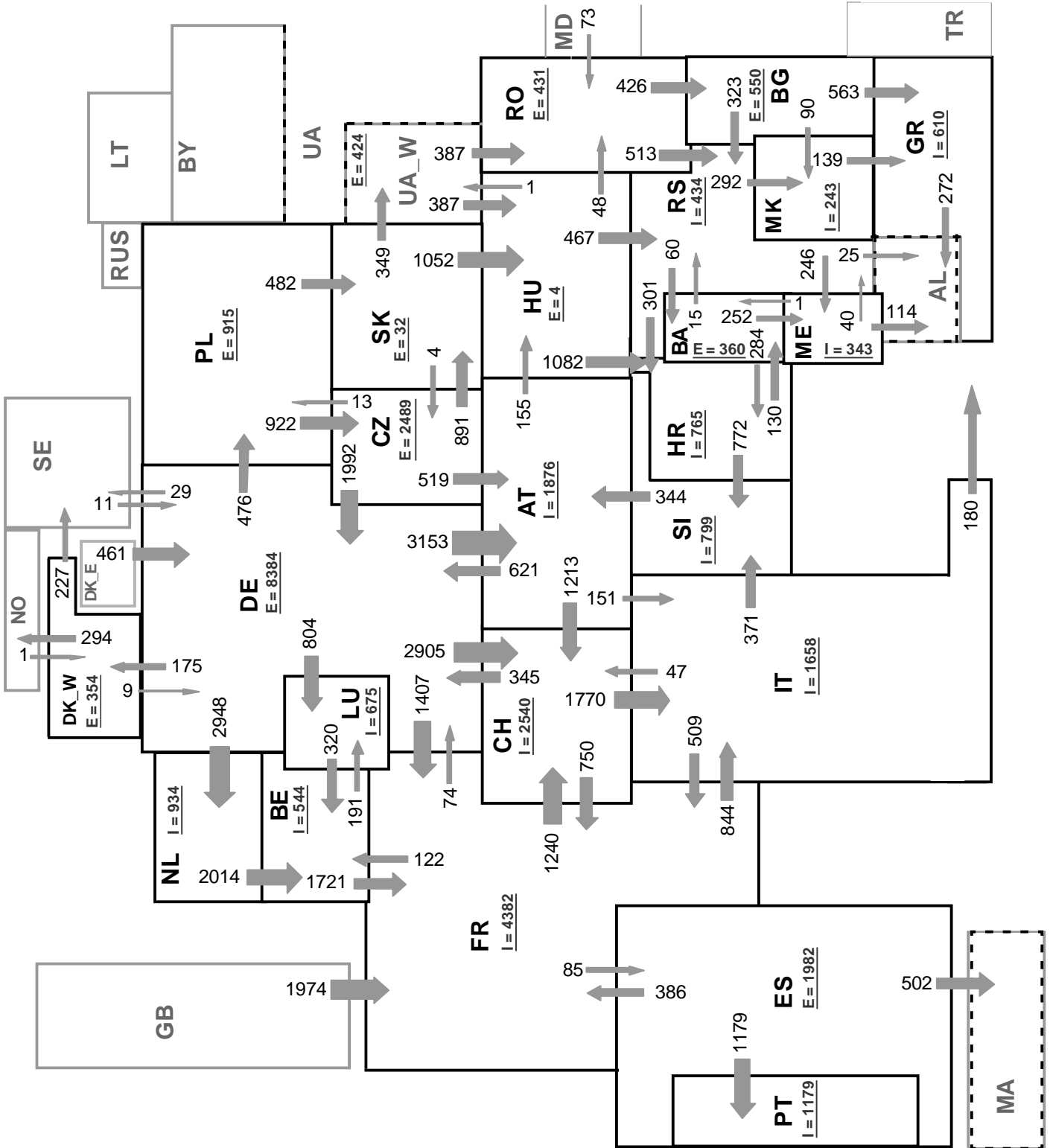
# 6

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

December 2007



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



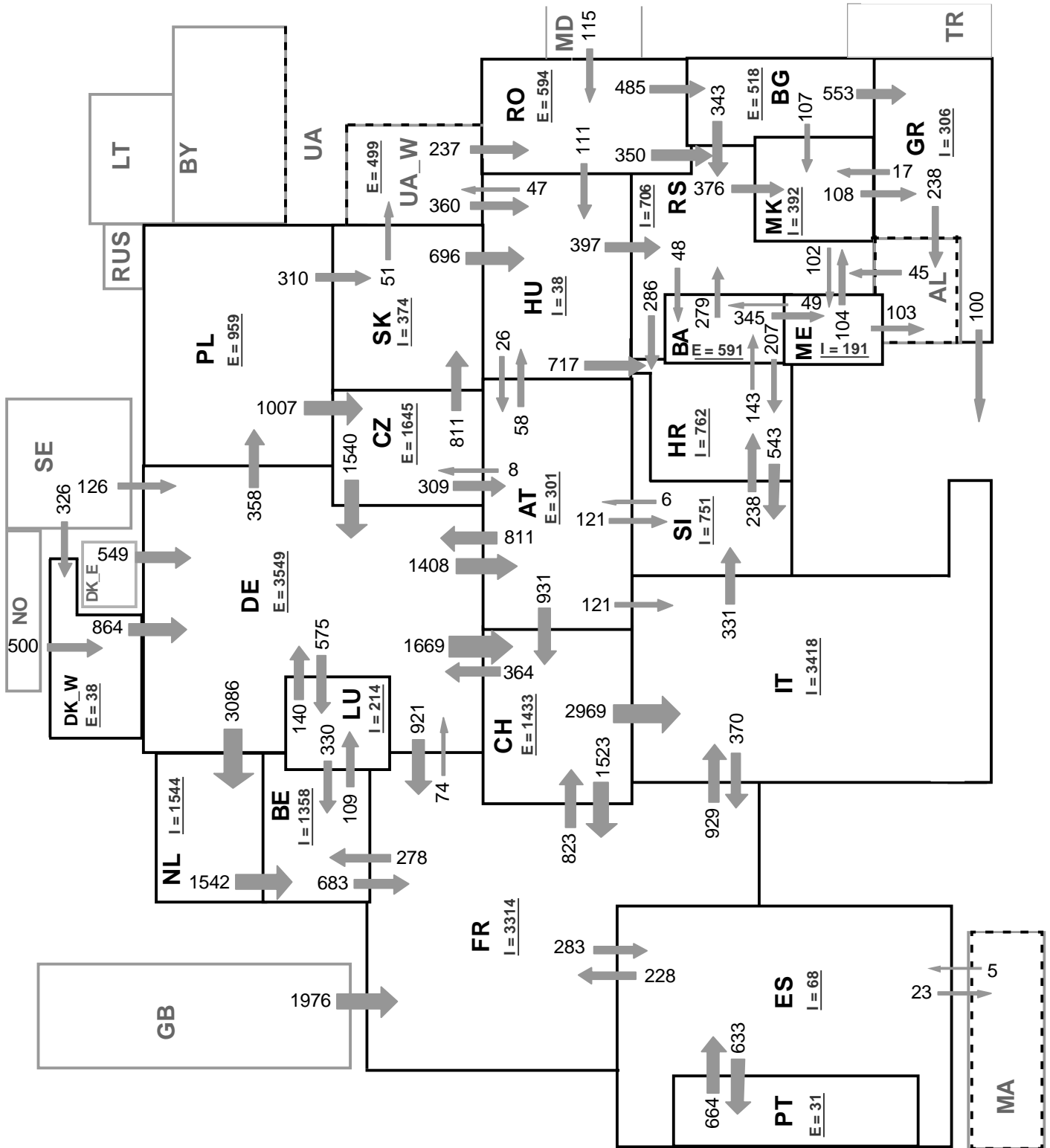
Sum of load flows in MW

UCTE = 38428 MW

Total = 43535 MW

Synchronous operation with UCTE region

I = Import balance  
E = Export balance



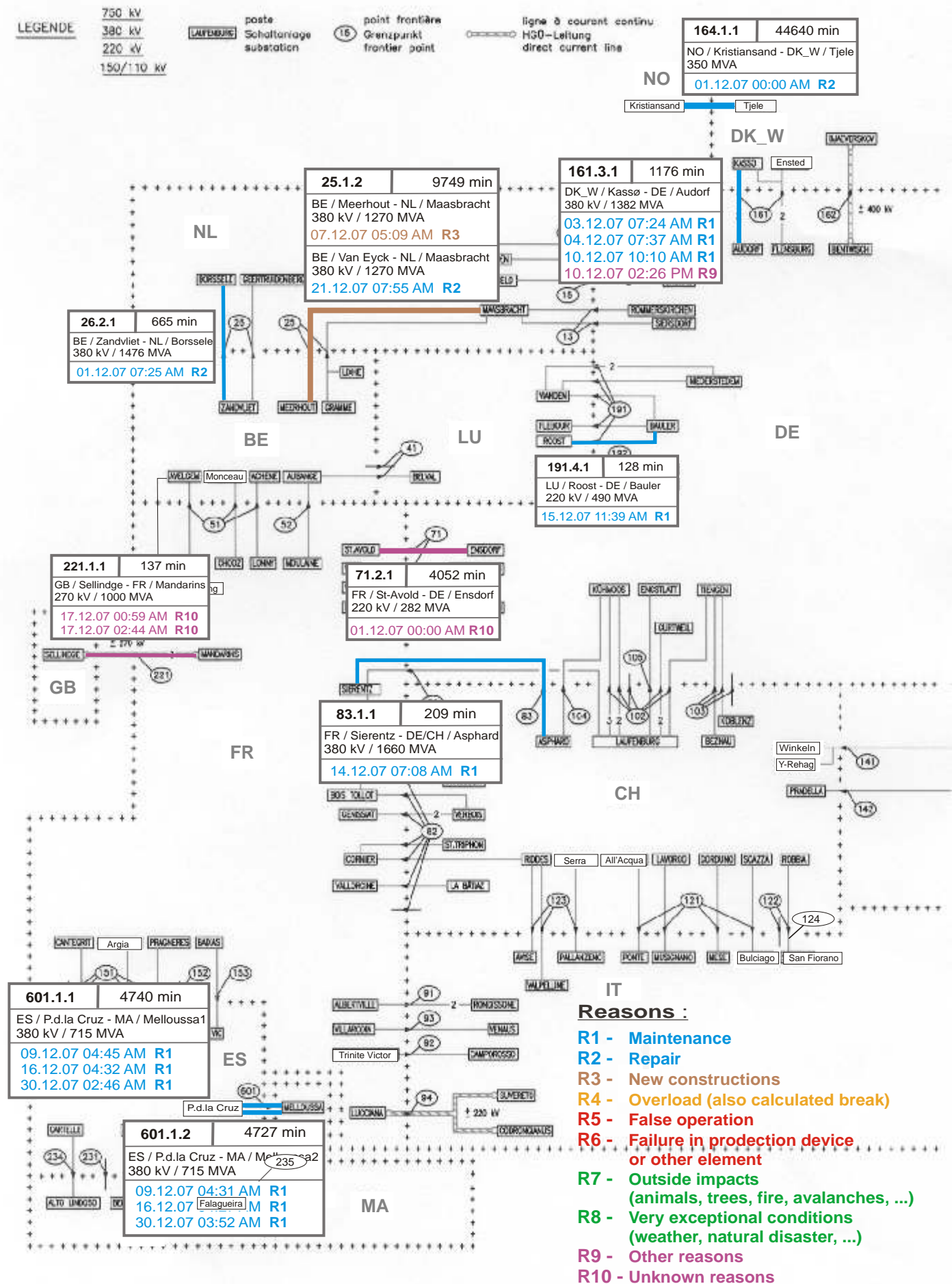
Sum of load flows in MW

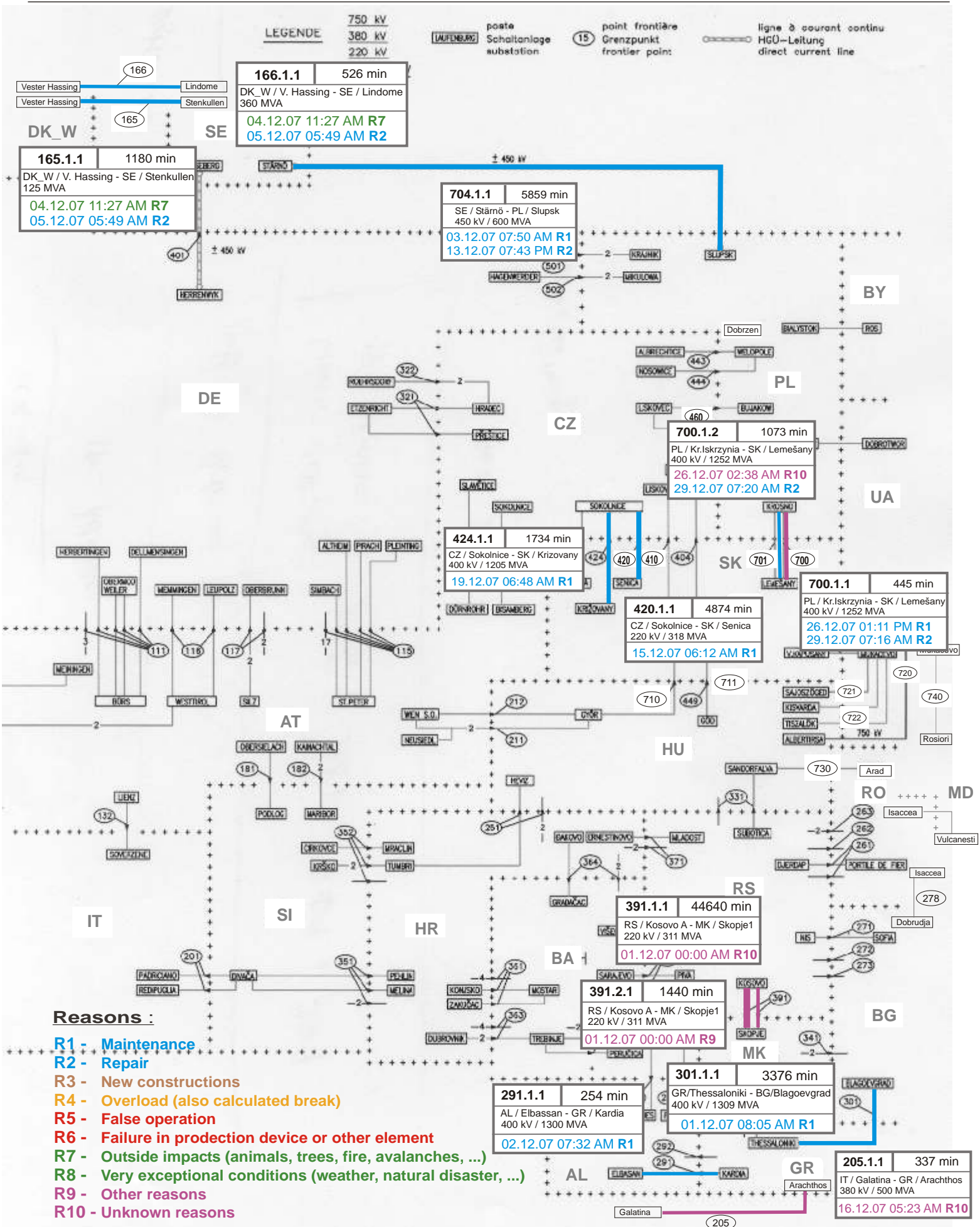
UCTE = 33917 MW

Total = 38618 MW

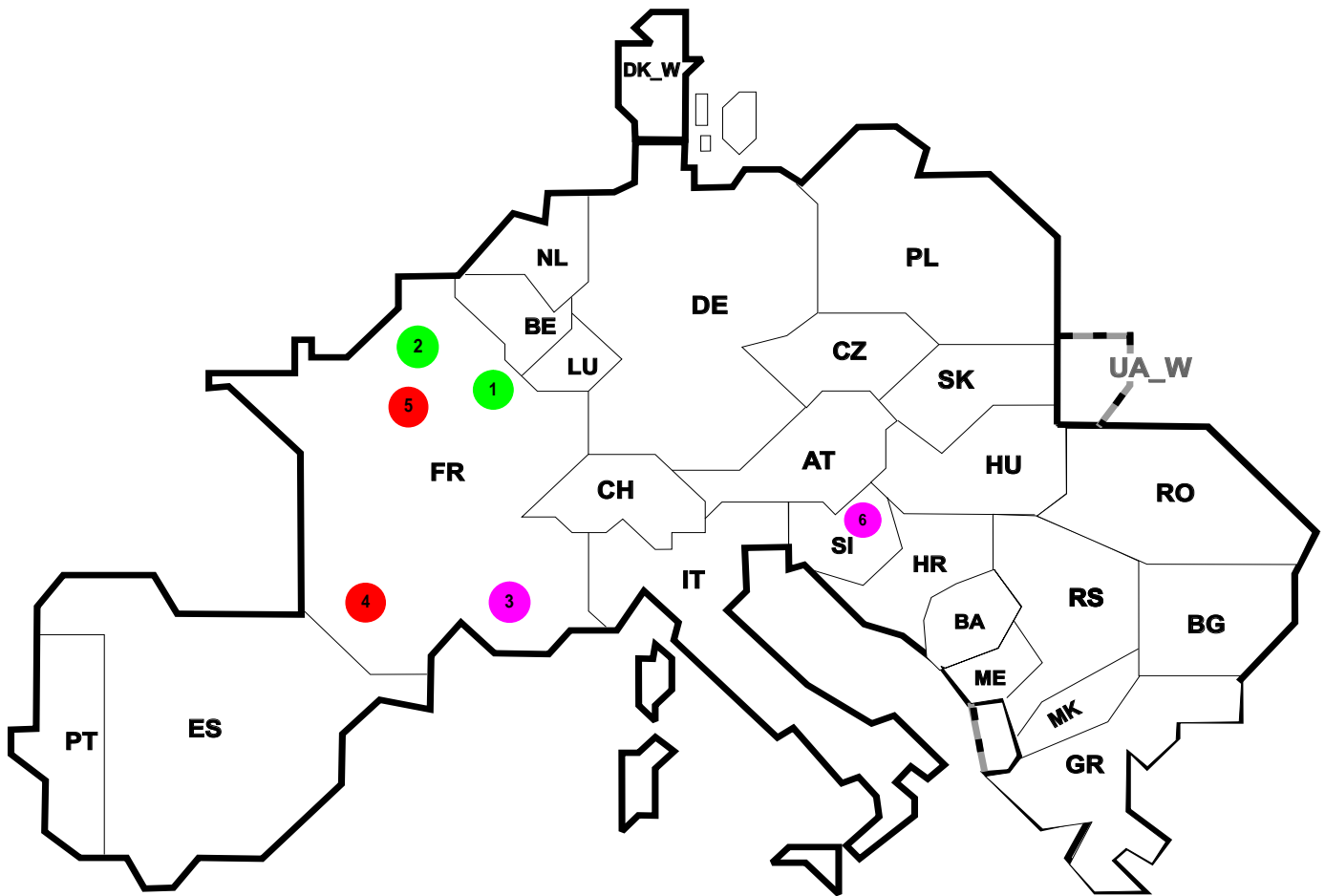
Synchronous operation with UCTE region

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 <sup>2</sup> [ MWh ]	Total loss of power [ MW ]	Restoration time [ min ]	Equivalent time of interruption <sup>1</sup>
1	FR	Mambelin	R8	26	3	516	0,028
2	FR	Bonnieres	R7	13	59	13	0,014
3	FR	Aubette	R9	11	36	19	0,012
4	FR	Verlhaguet	R6	3	7	30	0,003
5	FR	Cergy	R6	65	46	3	0,002
6	SI	Bericevo	R10	0	0	241	0,000

<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	658301	1097653	3255	808	2244	878
BA	484660	355710	205	190	334	190
BE	141336	1116617	647	1023	0	1089
BG	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
CH	1527175	2662817	649	3176	2004	565
CZ	2227030	862469	3610	1013	3218	1513
DE	5736040	1504546	9325	2780	6494	2168
ES	1216122	514610	2326	324	300	300
FR	5903523	4345209	4897	9236	6039	9028
GR	66105	295673	0	575	100	400
HR	151944	824518	377	1140	335	1098
HU	1143659	1181774	1759	1745	1759	1783
IT	264314	3714402	736	3136	370	4450
ME	261182	421683	200	521	140	536
MK	7600	298200	0	266	0	404
NL	497610	1619341	1091	2016	555	2090
PL	698017	25644	800	95	800	0
PT	1819	781043	0	1221	0	0
RO	459614	125935	618	163	799	168
RS	572194	627504	833	901	856	890
SI	606606	605567	751	815	982	1082
SK	630166	697548	1172	1054	637	873
DK_W	214038	685742	135	395	1016	489
UA_W	348470	1475	427	5	497	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.

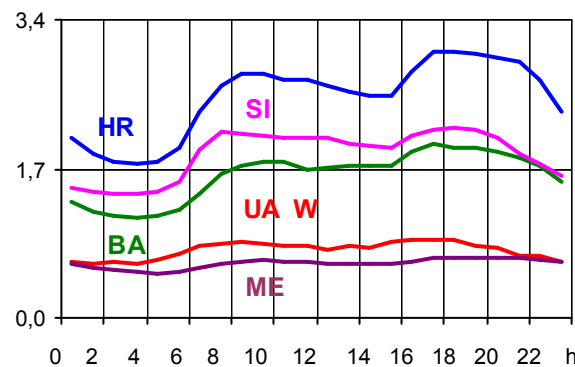
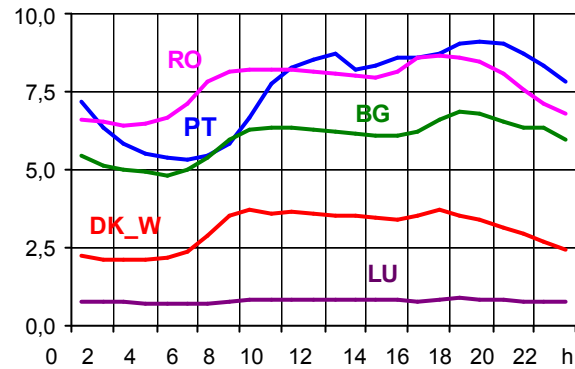
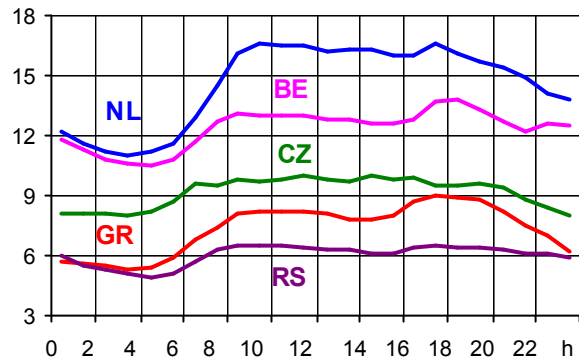
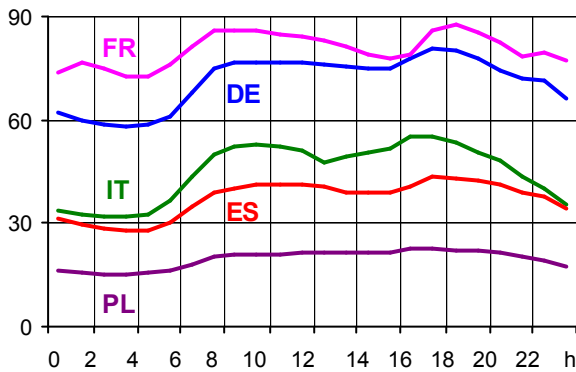
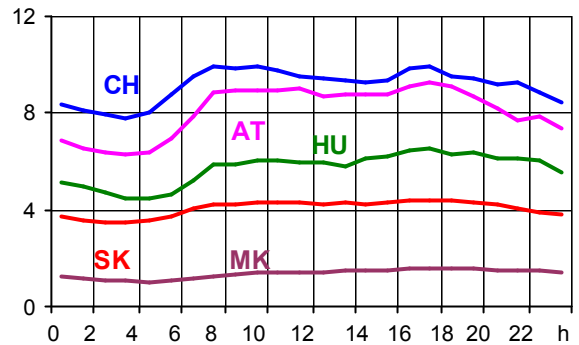
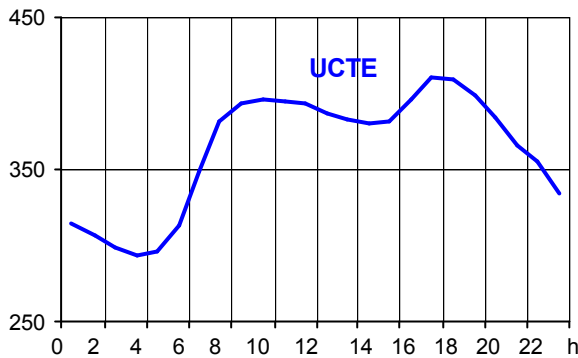
- Export Programs: Sum of all positive values of every hour of every border  
 - Import Programs: Sum of all negative values of every hour of every border

- 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 19.12.2007 CET

Values in GW



	Highest load		Load representativity %
	MW	var.% <sup>1</sup>	
AT	9265	0,5	100
BA	1974	8,1	100
BE <sup>2</sup>	13789	3,0	100
BG	6839	13,4	100
CH	9953	5,4	100
CZ	10031	4,9	100
DE	80820	0,7	91
ES	43352	1,4	98
FR	87897	8,6	100
GR	8951	10,5	100
HR	3036	7,8	100
HU	6540	5,8	100
IT	55196	2,9	100
LU	878	-4,7	100
ME	695	-	100
MK	1556	12,3	100
NL	16614	-7,0	100
PL <sup>3</sup>	22601	2,7	100
PT	9131	0,9	97
RO	8681	8,9	100
RS	6534	-	100
SI	2168	0,1	95
SK	4416	3,8	100
DK_W	3713	5,8	100
<b>UCTE<sup>4</sup></b>	<b>411011</b>	<b>4,9</b>	
UA_W	890	-3,6	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

<sup>4</sup> From June 2007 on including DK\_W



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