

# UCTE



April 2005

Monthly provisional values  
union for the co-ordination of transmission of electricity

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<sup>1</sup> Monthly provisional values from the UCTE database as of 9 August 2005

All values are calculated to represent 100% of the national values

Countries	Net production in GWh							Exchange balance in GWh	Pump in GWh	Consumption in GWh			
	Therm. nuclear	Fossil fuel	Hydro prod	Other renew.	Of which wind	Not identify	Total			monthly	var. [%]	last 12 months	var. [%]
AT	0	1689	3304	0	0	520	5513 <sup>1</sup>	-99	234	5180	-4,3	64485	3,2
BA	0	248	796	0	0	0	1044	-162	0	882	6,3	10825	-7,7
BE	3645	2844	127	186	10	0	6802 <sup>1</sup>	551	131	7222	1,6	88607	1,8
BG	1664	1371	404	0	0	0	3439	-621	38	2780	4,4	35198	-0,6
CH	1480	179	2503	75	0	0	4237 <sup>1</sup>	986	150	5073	3,6	62268	3,6
CS	0	1944	1311	0	0	0	3255 <sup>1</sup>	114	142	3227	-0,1	41429	1,9
CZ	1141	4745	323	3	1	0	6212 <sup>1</sup>	-1130	71	5011	1,9	61987	2,9
DE	13244	29486	2203	2443	1732	0	47376 <sup>1</sup>	-1592	710	45074	2,7	551904	1,4
ES	3797	9310	2398	2194	1868	0	17699 <sup>1</sup>	63	407	17355	-10,6	243888	0,1
FR	33289	4006	5916	301	52	0	43512	4498	510	47500	23,2	502097	6,0
GR	0	3175	564	88	77	0	3827 <sup>1</sup>	210	50	3987	6,0	51749	-2,0
HR	0	258	687	2	1	0	947 <sup>1</sup>	330	10	1267	1,0	16078	2,4
HU	1025	1415	5	0	0	0	2445 <sup>1</sup>	632	0	3077	1,7	38193	-0,5
IT	0	17722	3322	592	180	0	21636 <sup>1</sup>	4673	753	25556	1,4	322744	0,2
LU	0	284	70	8	4	0	362	222	84	499	-3,1	6244	0,0
MK	0	406	167	0	0	0	573 <sup>1</sup>	38	0	611	10,1	7614	4,8
NL	325	6653	0	445	122	0	7423 <sup>1</sup>	1583	0	9006	0,8	111324	0,6
PL	0	11163	423	n.a.	n.a.	n.a.	11586 <sup>1</sup>	-1082	185	10319	-0,1	129729	-4,0
PT	0	2544	485	274	127	0	3303 <sup>1</sup>	504	38	3769	2,8	48424	3,0
RO	474	2249	1666	0	0	0	4389 <sup>1</sup>	-76	0	4313	9,2	52066	4,9
SI	441	376	276	0	0	0	1093	-64	0	1029	-4,4	13159	0,1
SK	1084	373	578	0	0	222	2257 <sup>1</sup>	-163	12	2082	1,4	26192	-0,6
<b>UCTE</b>	<b>61609</b>	<b>102440</b>	<b>27528</b>	<b>6611</b>	<b>4174</b>	<b>742</b>	<b>198930<sup>1</sup></b>	<b>9415</b>	<b>3525</b>	<b>204819</b>	<b>4,9</b>	<b>2486204</b>	<b>1,7</b>
DK_W	0	1121	2	482	377	0	1605 <sup>1</sup>	84	0	1689	2,6	21112	n.a.
UA_W <sup>2</sup>	0	625	19	0	0	0	644 <sup>1</sup>	-291	0	353	5,1	4445	7,1

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

<sup>2</sup> UA\_W represents the so-called Burshtyn Island synchronously interconnected with UCTE

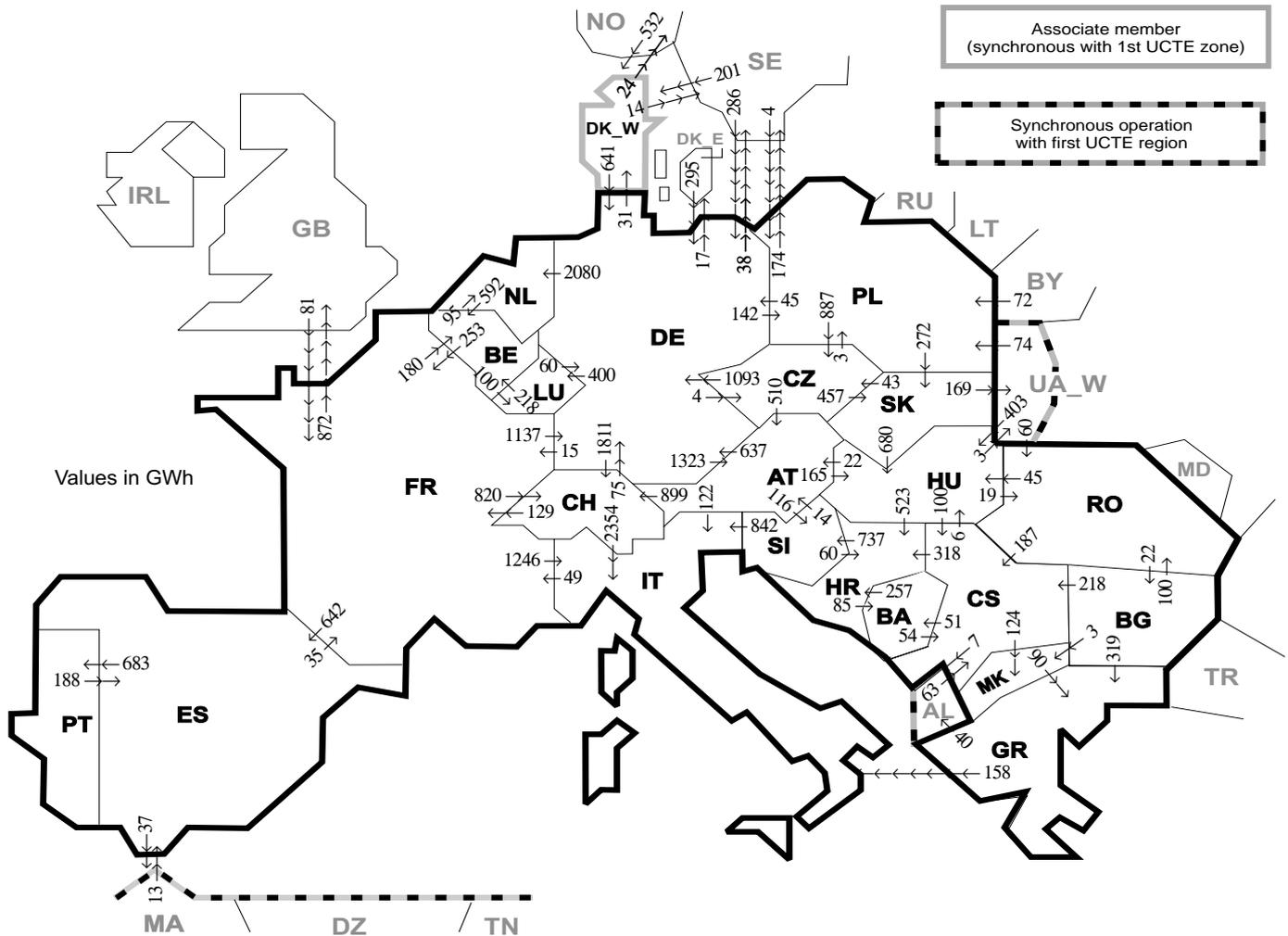
All representativities of the national production and consumption values used to calculate values at a representativity of 100% as stated in the table above

Countries	AT	BA	BE	BG	CH	CS	CZ	DE	ES	FR	GR	HR	HU	IT	LU	MK	NL	PL	PT	RO	SI	SK	DK_W	UA_W <sup>2</sup>
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
Fossil fuel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	98	100	100	100	96	100	100	100	100	100
Hydro prod	100	100	100	100	100	100	100	100	100	100	100	100	100	100	99	100	100	100	100	100	100	100	100	100
Other renew.	n.a.	100	100	100	100	100	100	100	100	100	100	100	n.a.	100	99	100	100	n.a.	100	100	100	100	100	100
Not identify	n.a.	100	100	100	100	100	100	100	100	100	100	100	n.a.	100	n.a.	100	100	n.a.	100	100	100	100	100	100
Consumption	100	100	100	100	100	100	100	100	98	100	100	100	100	100	99	100	100	100	97	100	95	100	100	100

# 2

## Physical energy flows

April 2005



Exporting countries	Importing countries																	Sum export								
	AT	BA	BE	BG	CH	CS	CZ	DE	ES	FR	GR	HR	HU	IT	LU	MK	NL		PL	PT	RO	SI	SK	DK_W	UA_W <sup>2</sup>	Other III <sup>1</sup>
AT	-	-	-	-	899	-	0	637	-	-	-	-	165	122	-	-	-	-	-	-	116	-	-	-	-	1939
BA	-	-	-	-	-	54	-	-	-	-	-	257	-	-	-	-	-	-	-	-	-	-	-	-	-	311
BE	-	-	-	-	-	-	-	-	-	253	-	-	-	-	100	-	95	-	-	-	-	-	-	-	-	448
BG	-	-	-	-	-	218	-	-	-	-	319	-	-	-	-	-	-	-	-	100	-	-	-	-	0	640
CH	0	-	-	-	-	-	-	75	-	129	-	-	2354	-	-	-	-	-	-	-	-	-	-	-	-	2558
CS	-	51	-	0	-	-	-	-	-	-	-	-	318	6	-	124	-	-	-	0	-	-	-	-	7	506
CZ	510	-	-	-	-	-	-	1093	-	-	-	-	-	-	-	-	3	-	-	-	457	-	-	-	-	2063
DE	1323	-	-	-	1811	-	4	-	-	15	-	-	400	-	2080	142	-	-	-	-	-	31	-	-	55	5861
ES	-	-	180	-	820	-	-	-	-	35	-	-	-	-	-	-	-	-	683	-	-	-	-	-	37	755
FR	-	-	-	-	-	-	-	1137	642	-	-	-	1246	-	-	-	-	-	-	-	-	-	-	-	872	4897
GR	-	-	-	0	-	-	-	-	-	-	-	-	158	-	0	-	-	-	-	-	-	-	-	-	-	198
HR	-	85	-	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	737	-	-	-	-	822
HU	22	-	-	-	100	-	-	-	-	-	-	-	523	-	-	-	-	-	-	19	0	-	3	-	-	667
IT	0	-	-	-	0	-	-	-	-	49	0	-	-	-	-	-	-	-	-	-	0	-	-	-	49	
LU	-	-	218	-	-	-	-	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	278
MK	-	-	-	0	0	-	-	-	-	-	90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90
NL	-	-	592	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	592
PL	-	-	-	-	-	-	-	887	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	174	1378
PT	-	-	-	-	-	-	-	-	188	-	-	-	-	-	-	-	-	-	-	-	272	-	-	-	-	188
RO	-	-	-	22	-	187	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	-	-	0	0	254
SI	14	-	-	-	-	-	-	-	-	-	60	842	-	-	-	-	-	-	-	-	-	-	-	-	-	916
SK	-	-	-	-	-	43	-	-	-	-	-	-	680	-	-	-	-	0	-	-	-	-	-	169	-	892
DK_W	-	-	-	-	-	-	-	641	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38	679
UA_W <sup>2</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	74	-	60	0	0	-	-	-	-	537
Other III <sup>1</sup>	-	-	0	63	-	-	581	13	81	0	-	-	-	-	-	-	76	-	0	-	-	733	-	-	1547	
<b>Sum imp</b>	<b>1869</b>	<b>136</b>	<b>990</b>	<b>22</b>	<b>3530</b>	<b>622</b>	<b>934</b>	<b>4269</b>	<b>843</b>	<b>562</b>	<b>409</b>	<b>1158</b>	<b>1299</b>	<b>4722</b>	<b>500</b>	<b>127</b>	<b>2175</b>	<b>295</b>	<b>683</b>	<b>179</b>	<b>853</b>	<b>729</b>	<b>764</b>	<b>172</b>	<b>1225</b>	<b>29065</b>

Sum of physical energy flows between UCTE countries = 24914GWh

Total physical energy flows = 29065GWh

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

<sup>2</sup> UA\_W represents the so-called Burshtyn Island synchronously interconnected with UCTE

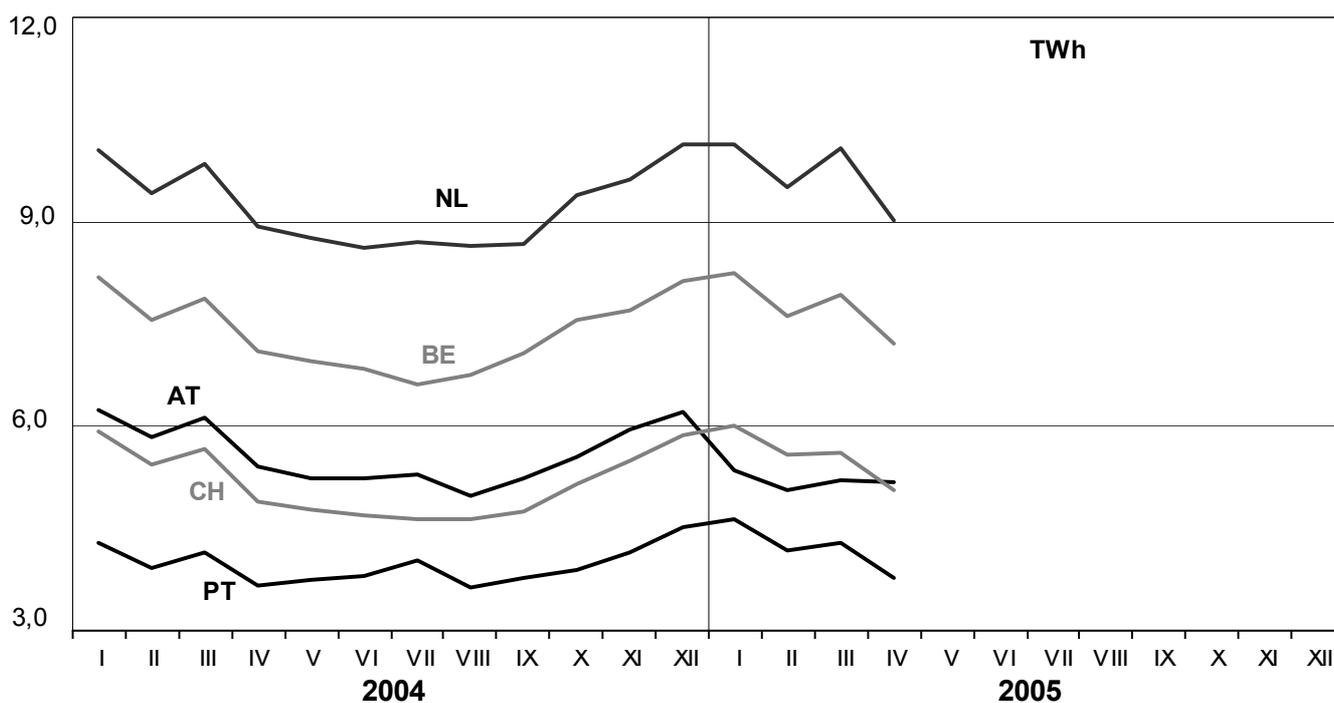
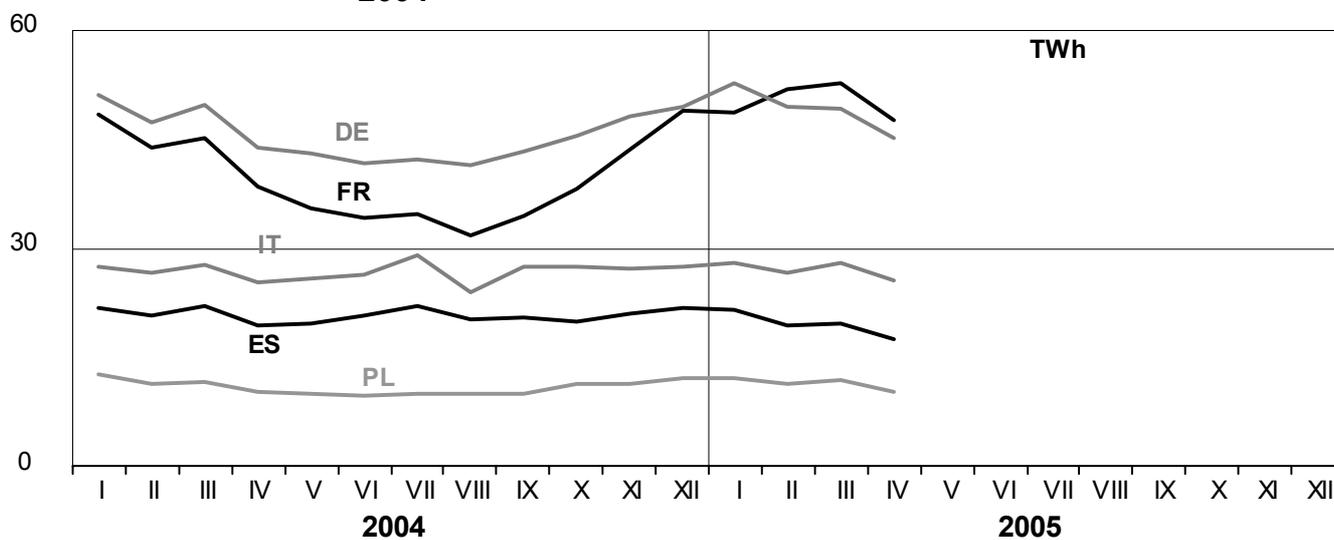
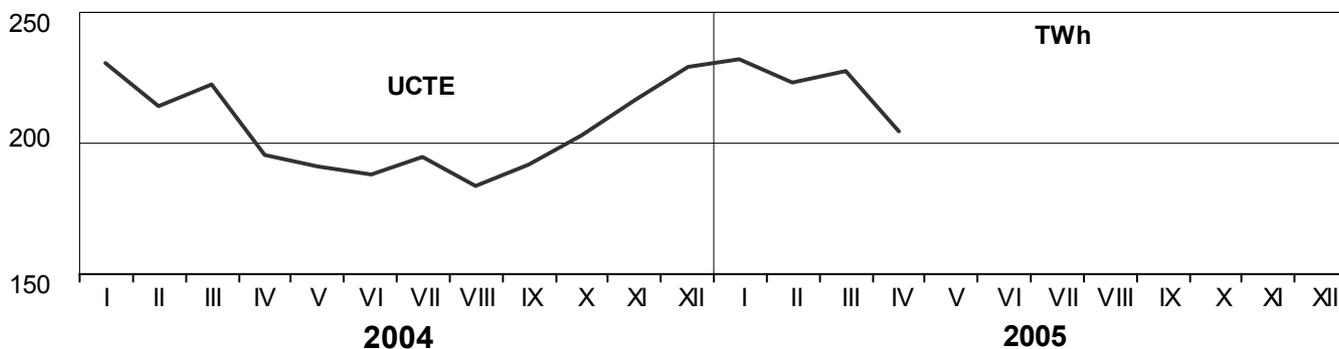
These physical energy flows were measured on the cross-frontier transmission lines ( $\leq 110$  kV) listed in table 9 of the Statistical Yearbook. These values may differ from the official statistics and the exchange balances in chapter 1.

# 3

## Monthly consumption

April 2005

All values are calculated to represent 100% of the national values

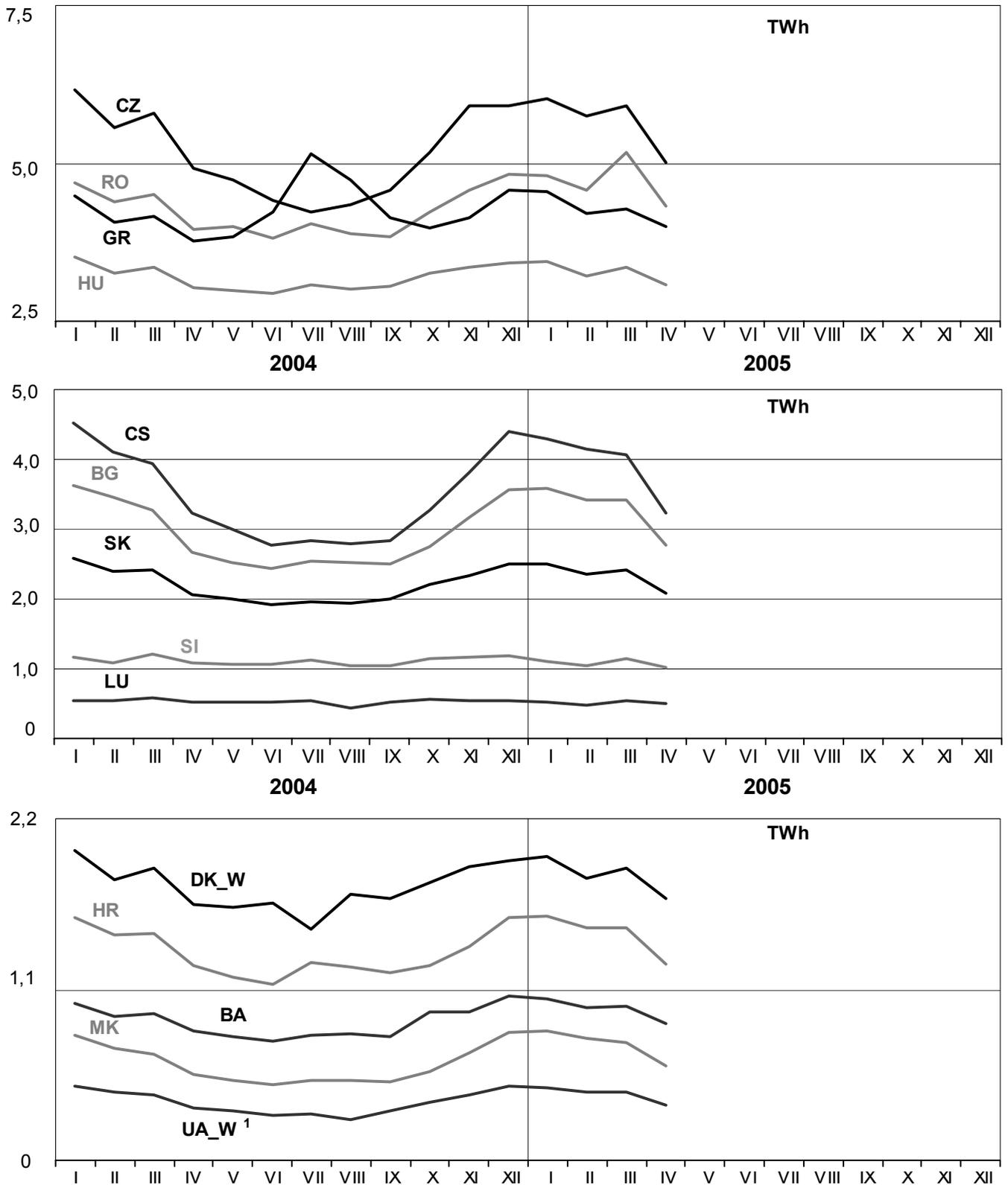


# 3

## Monthly consumption

April 2005

All values are calculated to represent 100% of the national values

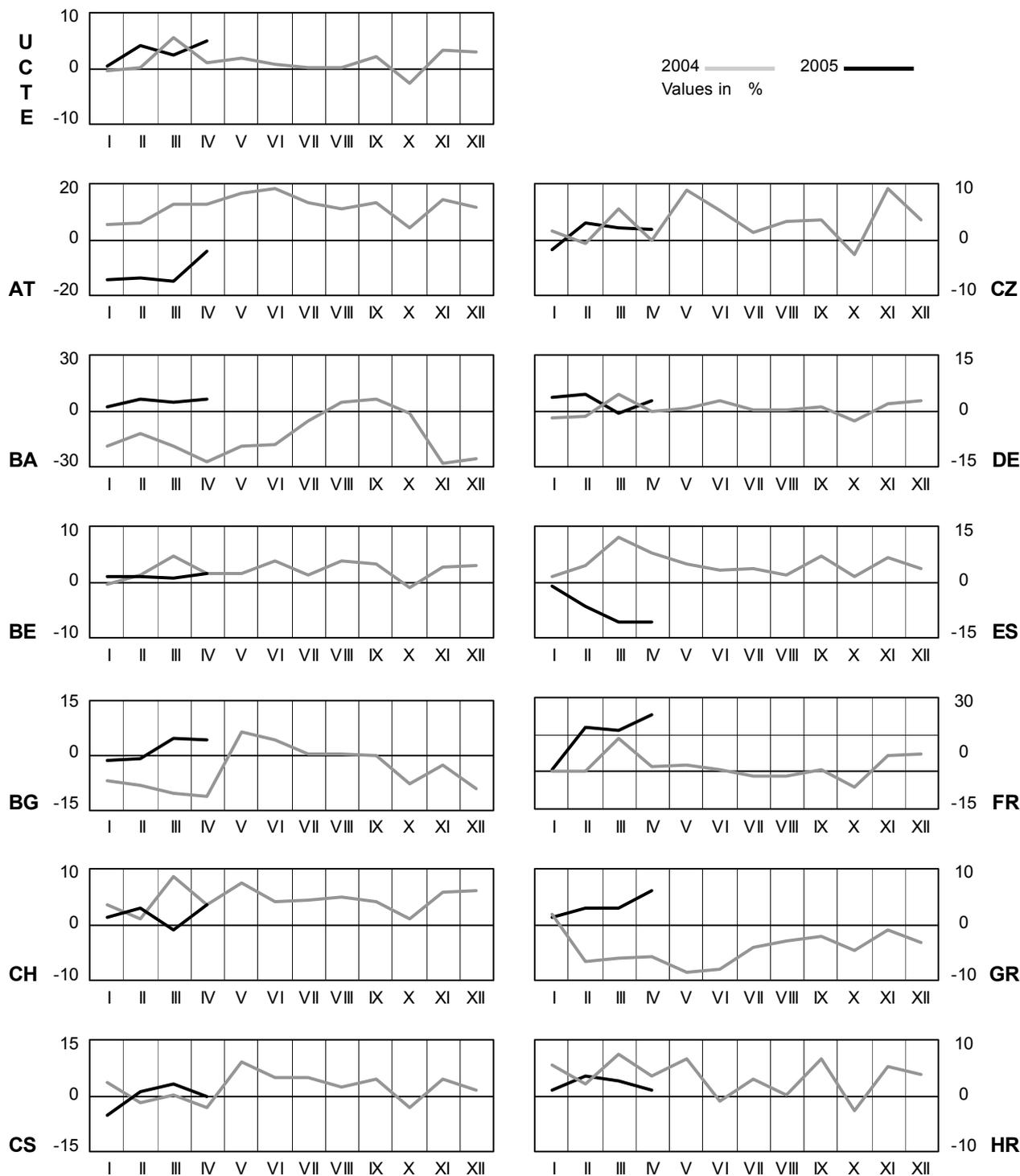


<sup>1</sup> UA\_W represents the so-called Burshtyn Island synchronously interconnected with UCTE

# 4 Monthly consumption variation

April 2005

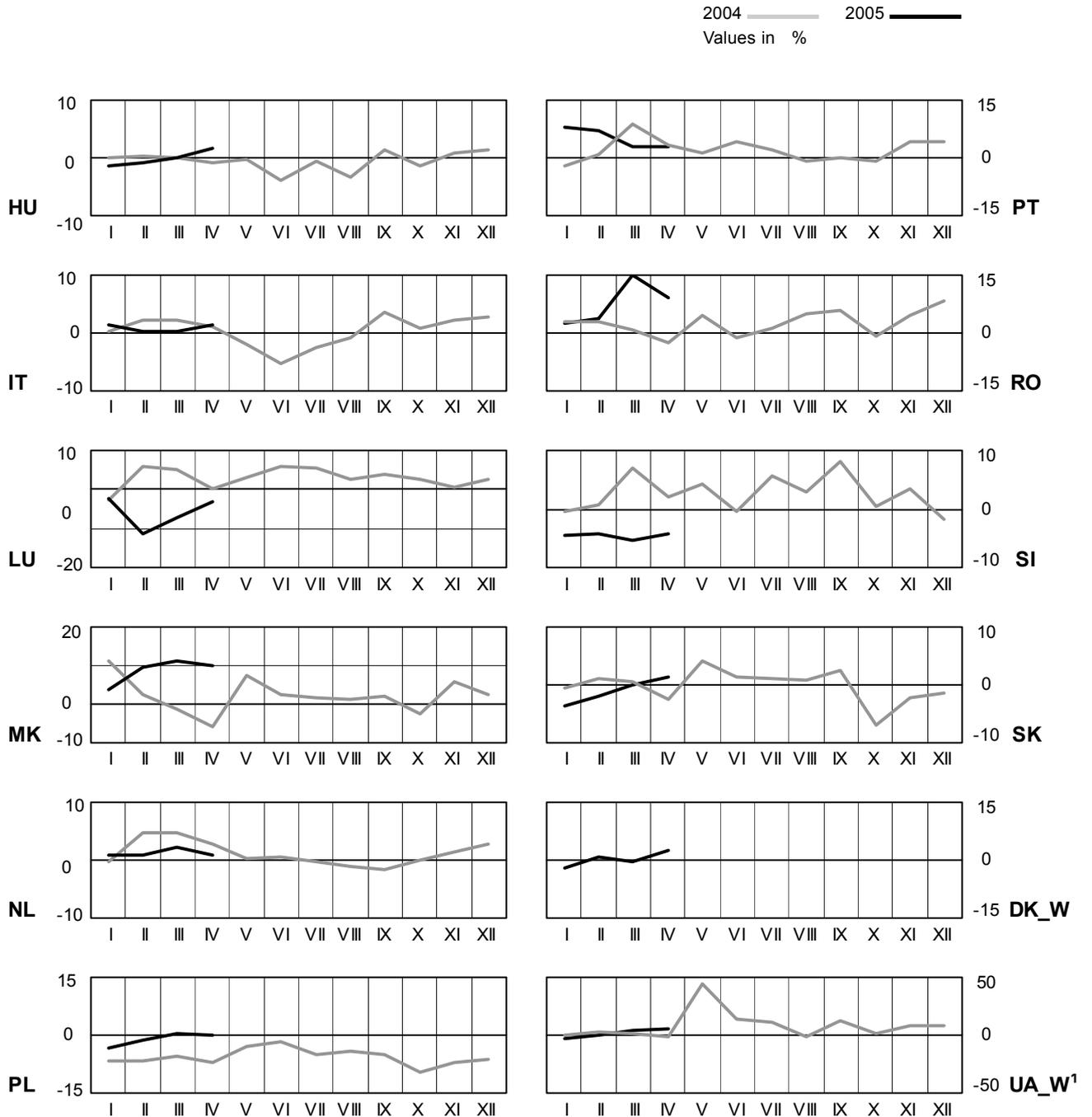
All values are calculated to represent 100% of the national values



# 4 Monthly consumption variation

April 2005

All values are calculated to represent 100% of the national values



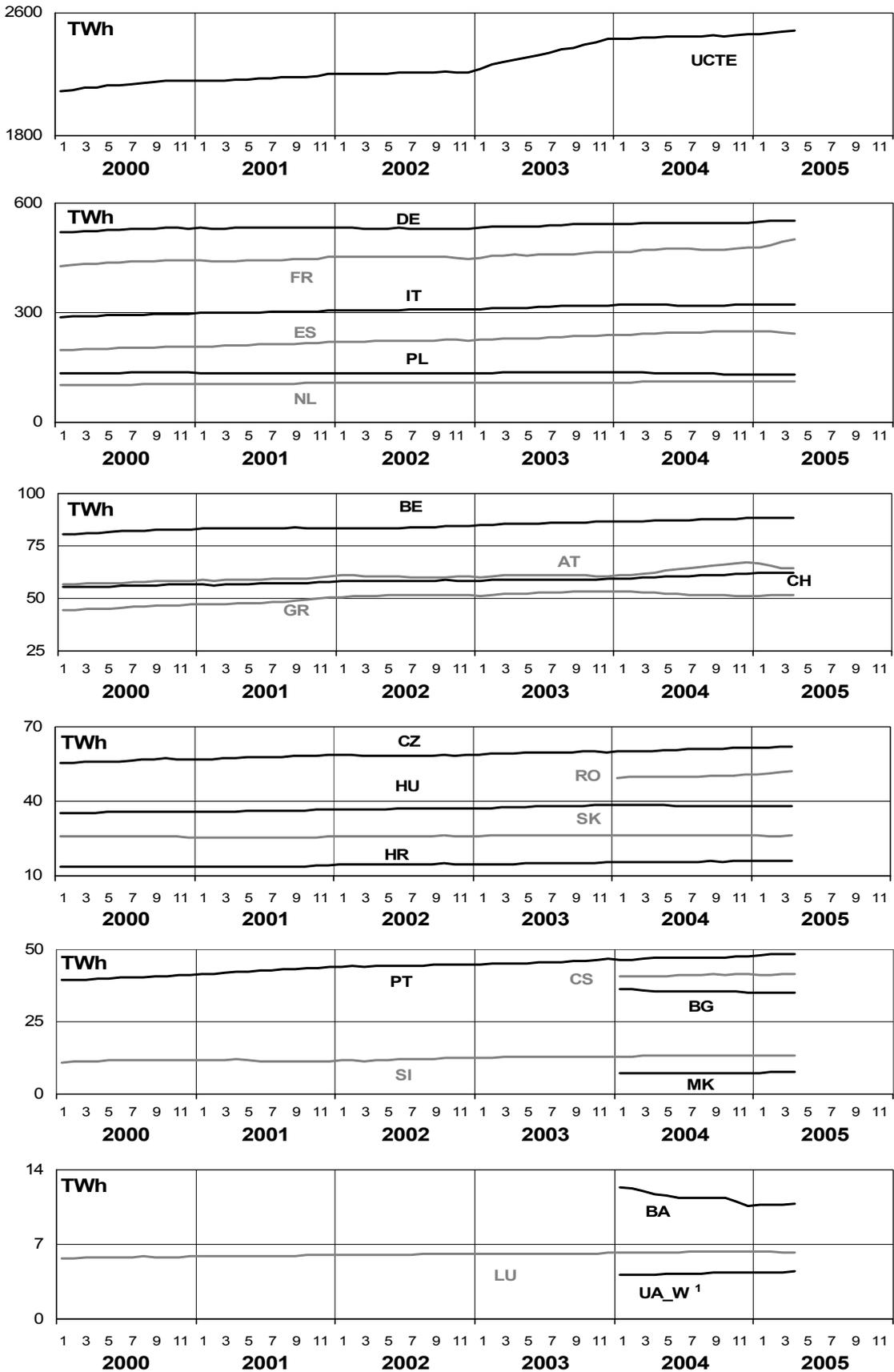
<sup>1</sup> UA\_W represents the so-called Burshtyn Island synchronously interconnected with UCTE

# 5

## Consumption of the last 12 months

April 2005

All values are calculated to represent 100% of the national values



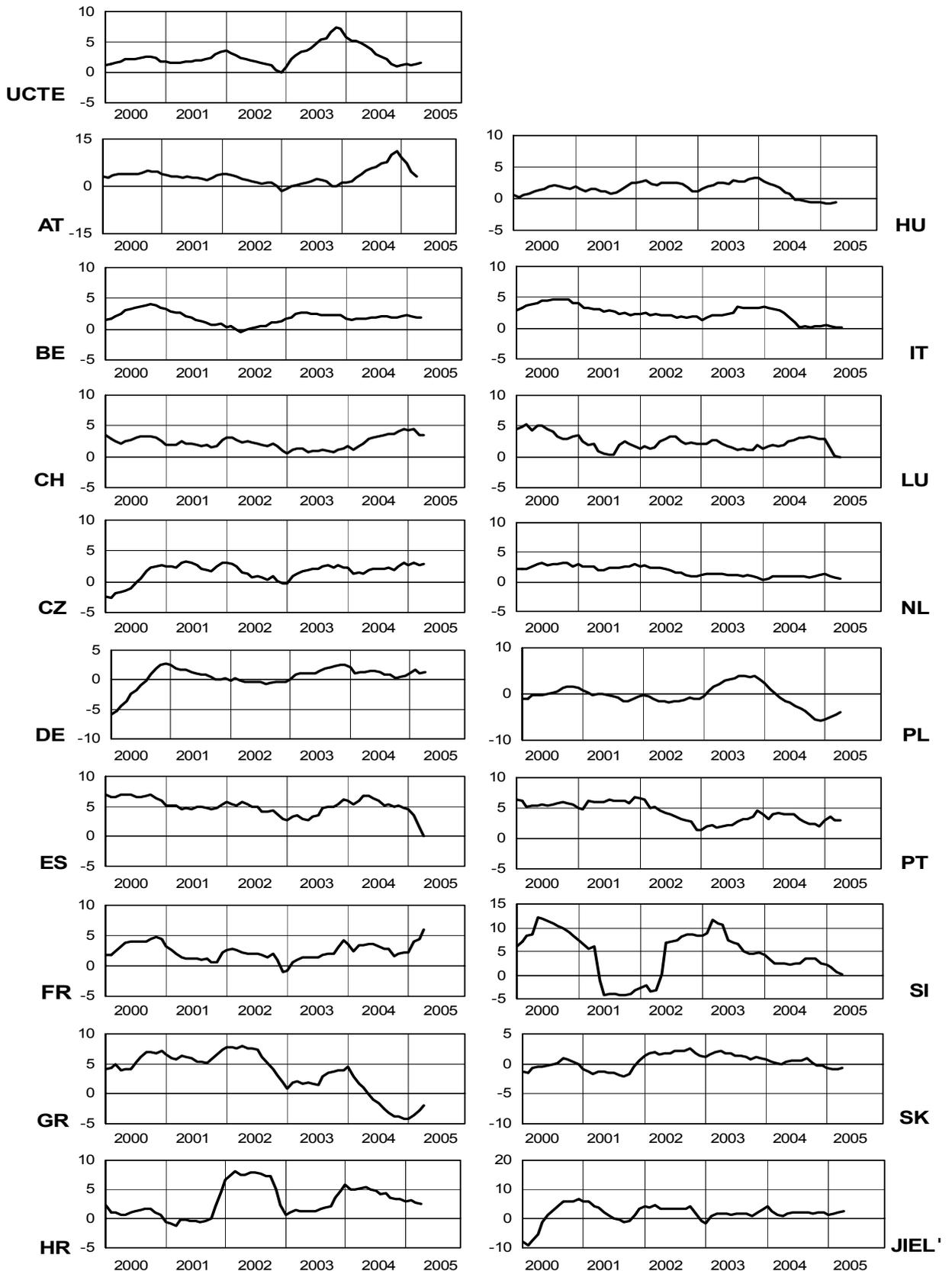
<sup>1</sup> UA\_W represents the so-called Burshtyn Island synchronously interconnected with UCTE

# 6

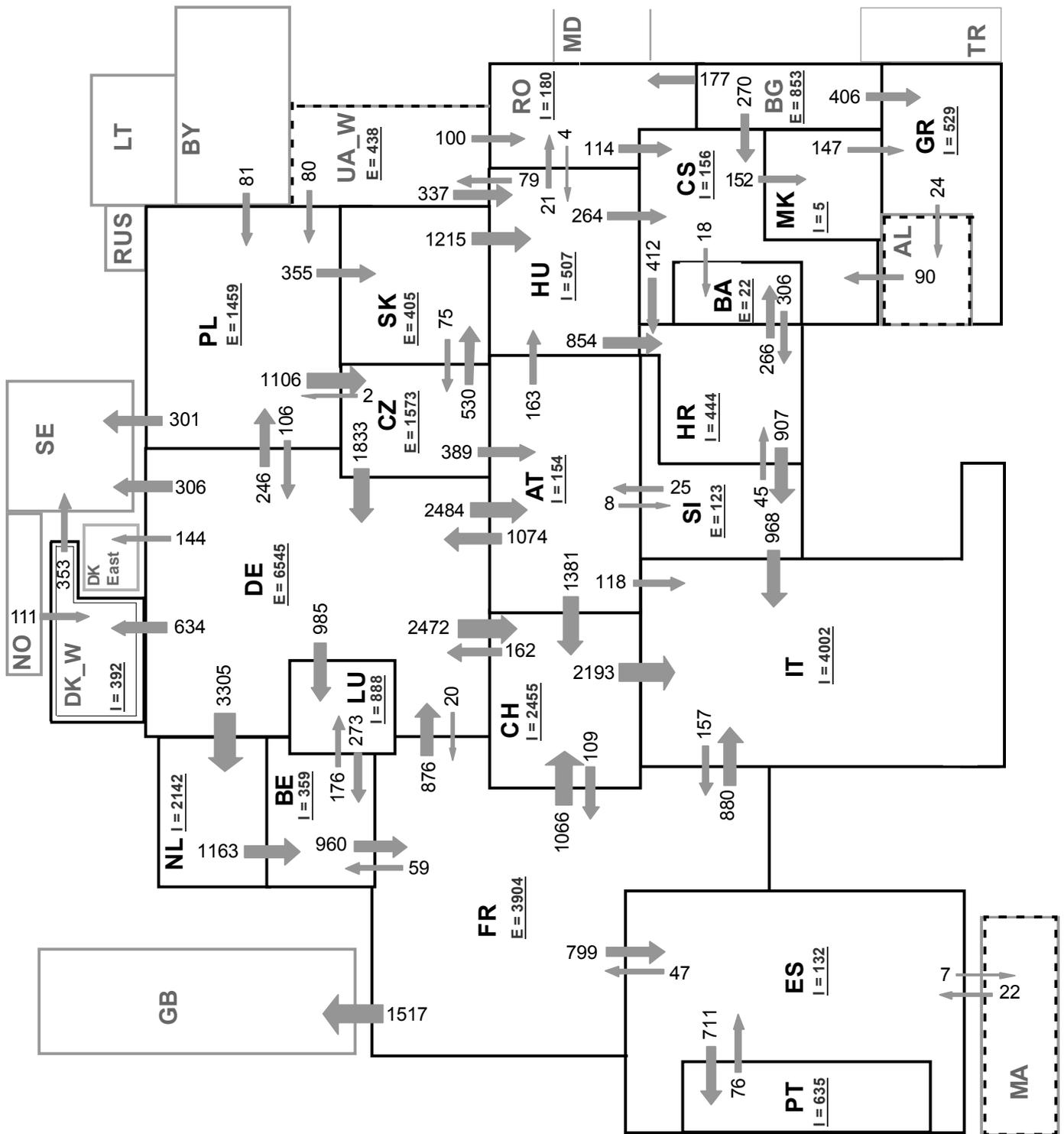
## Variation of the last 12 months' consumption in %

April 2005

All values are calculated to represent 100% of the national values



<sup>1</sup> JIEL = FRY + FYROM (Federal Republic of Yugoslavia and former Yugoslav Republic of Macedonia)



Associate member

Synchronous operation with first region

Sum of load flows in MW:

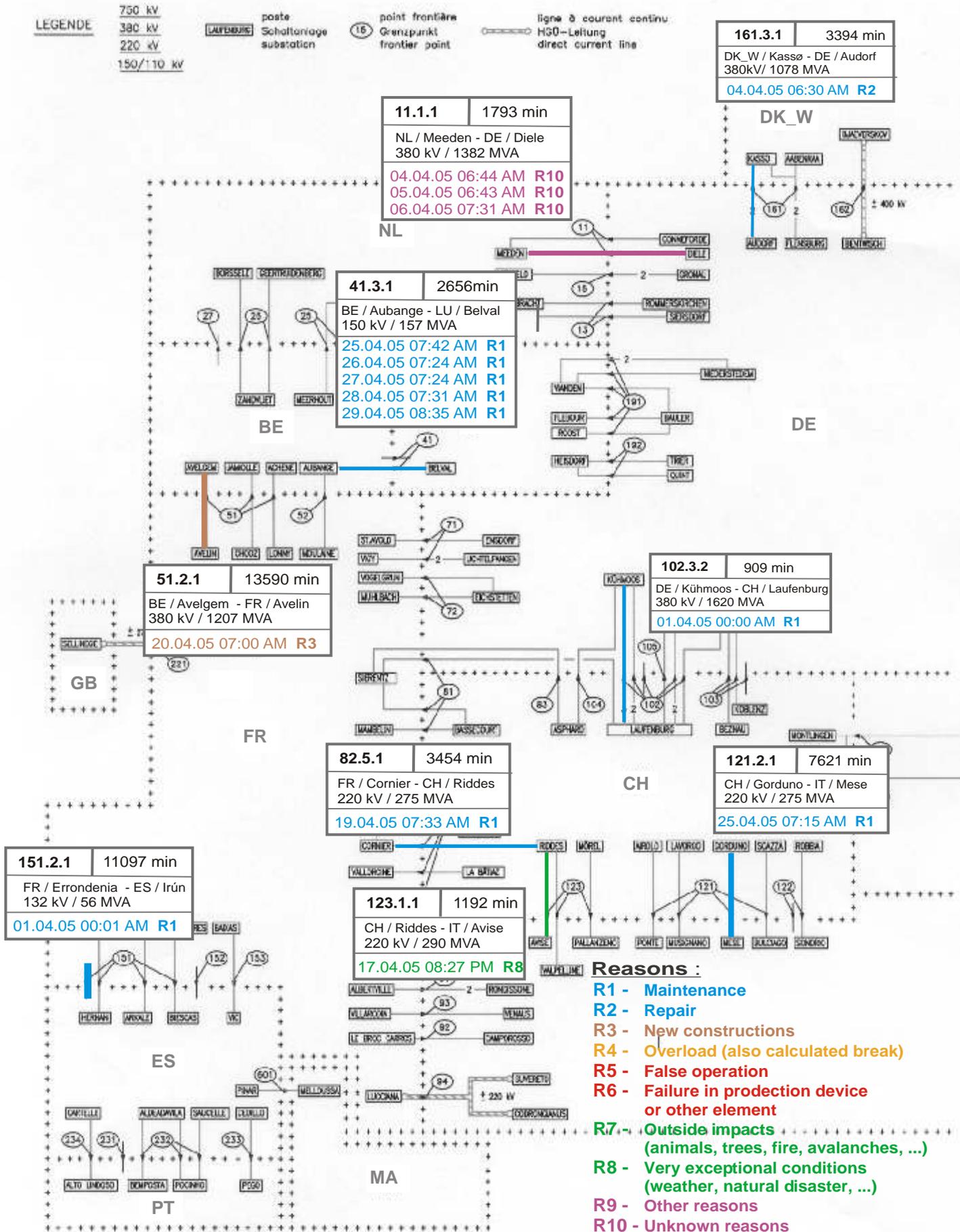
UCTE = 32930 MW      Total = 37116 MW

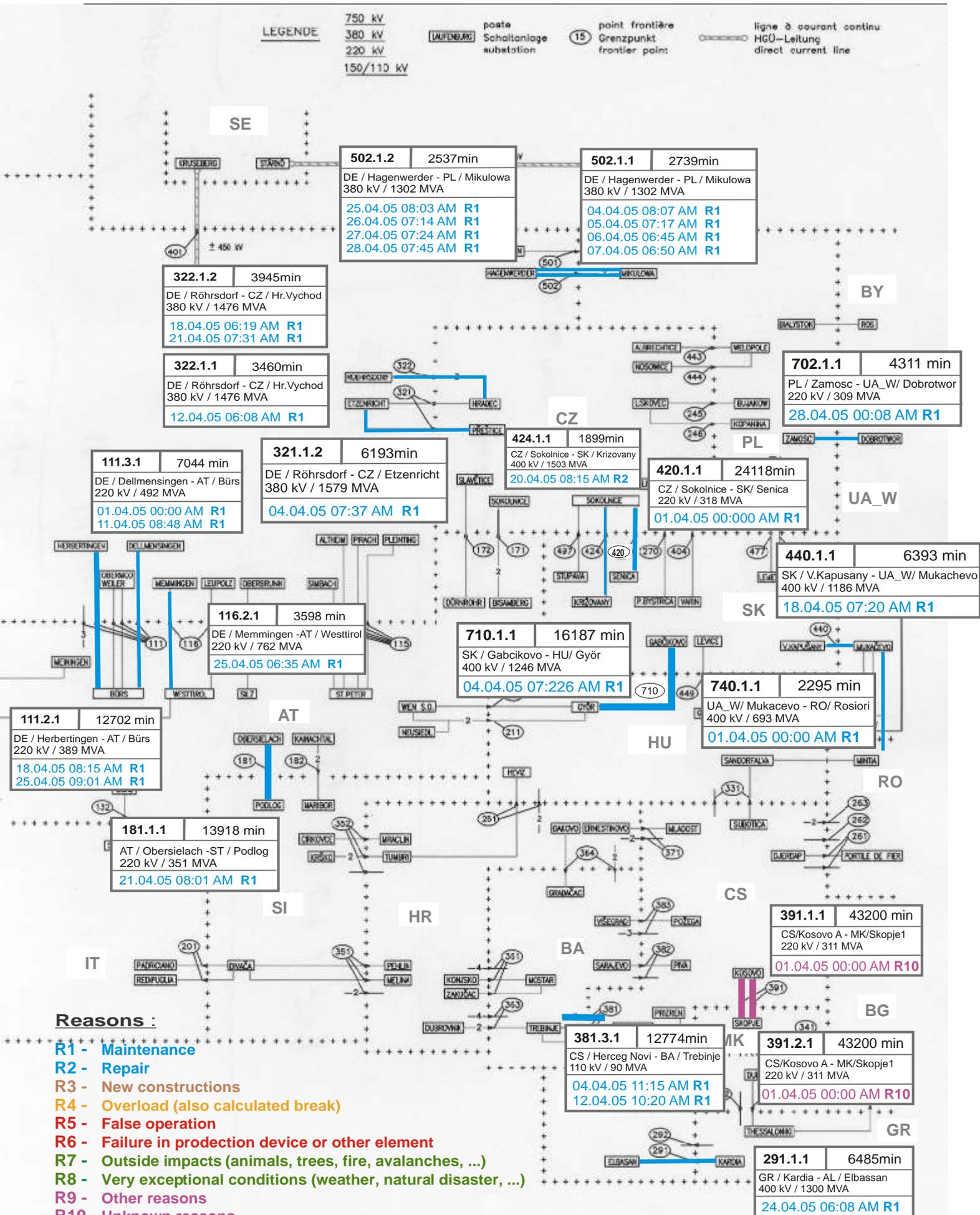
\* Central European Time ( CET )

I = Import balance

E = Export balance

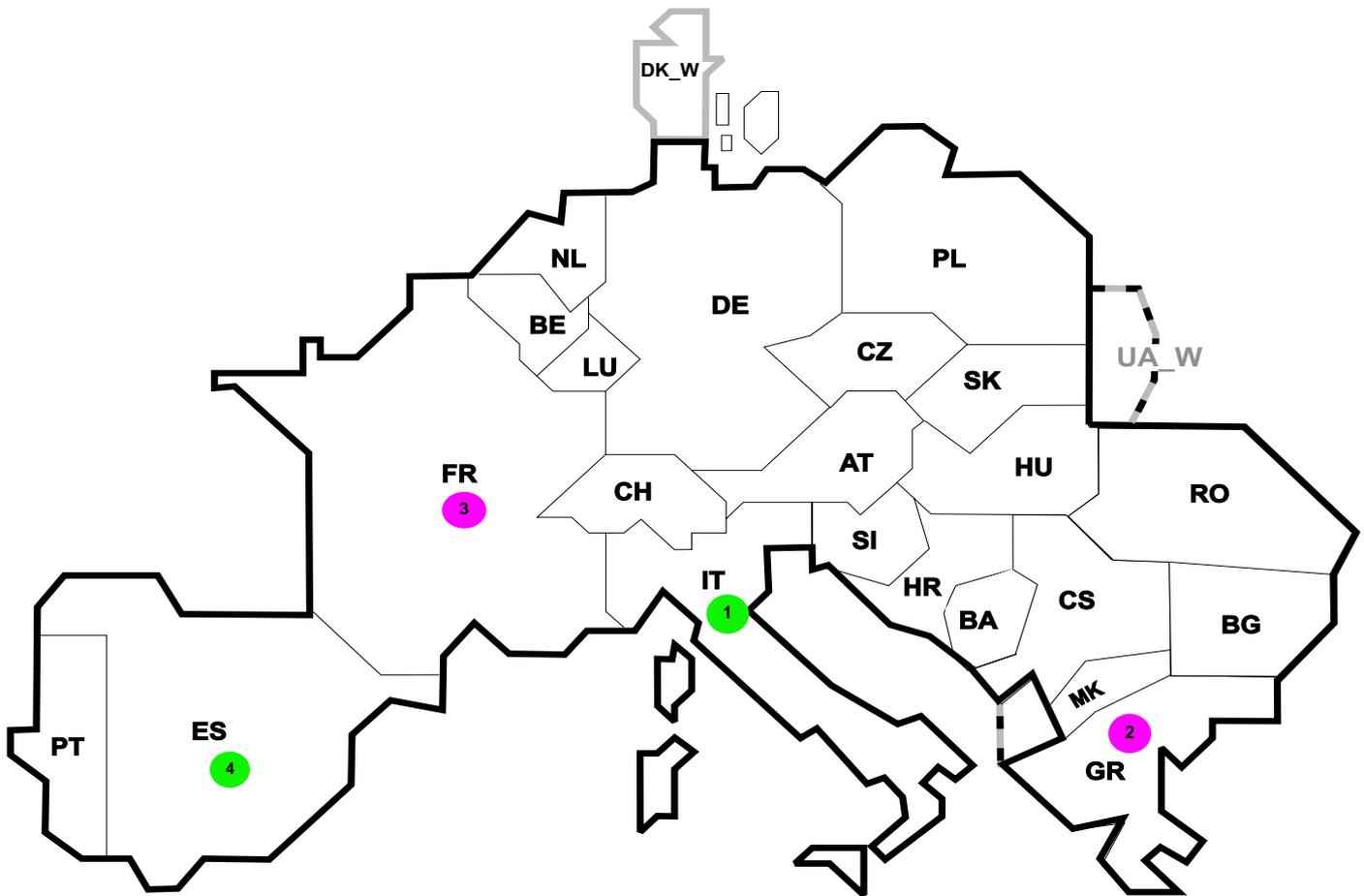






**Reasons :**

- R1 - Maintenance
- R2 - Repair
- R3 - New constructions
- R4 - Overload (also calculated break)
- R5 - False operation
- R6 - Failure in production device or other element
- R7 - Outside impacts (animals, trees, fire, avalanches, ...)
- R8 - Very exceptional conditions (weather, natural disaster, ...)
- R9 - Other reasons
- R10 - Unknown reasons



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

Nbr	Country	Substation	Reason	Energy not supplied [ MWh ]	Total loss of power [ MW ]	Restoration time [ min ]	Equivalent time of interruption <sup>1</sup>
1	IT	Roma Nord	R8	50	250	52	0,08
2	GR	Pallini	R10	38	450	5	0,39
3	FR	Chevilly	R9	26	60	125	0,03
4	ES	Compostilla	R7	2	0	9	0,03

<sup>1</sup> ( year [in min] \* energy not supply ) / 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	846780	564043	548	1038	910	955
BA	220850	42340	163	134	180	94
BE	513494	938249	722	977	1148	1324
BG	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
CH	2409698	3394584	1824	4311	3854	4106
CS	343989	457930	296	407	369	551
CZ	1883953	687537	2697	1033	2913	1278
DE	4714601	2319541	7083	3049	7669	2812
ES	684831	744195	637	770	1072	590
FR	7337605	2993277	9357	5392	8909	5371
GR	162100	366906	0	535	0	553
HR	87789	434257	0	421	66	552
HU	321751	953982	568	1054	357	1661
IT	49664	4722461	157	4159	49	7123
MK	0	38000	142	155	47	97
NL	344170	1923015	274	2411	21	3298
PL	1153749	107395	1518	144	2253	215
PT	64140	567704	0	627	15	914
RO	344240	270884	370	551	670	276
SI	593590	530179	734	597	802	578
SK	506307	302317	696	242	678	588
DK_W	632239	763801	156	635	892	1340
UA_W <sup>1</sup>	291143	0	348	0	475	0

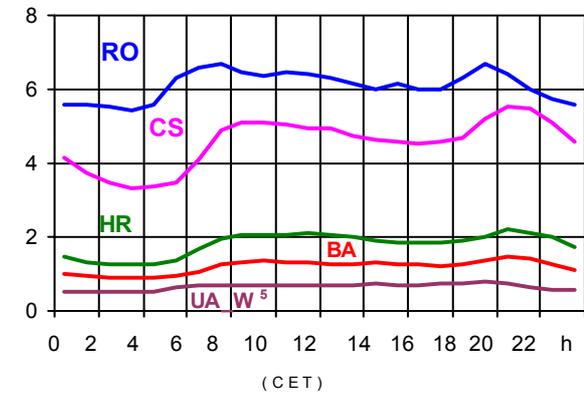
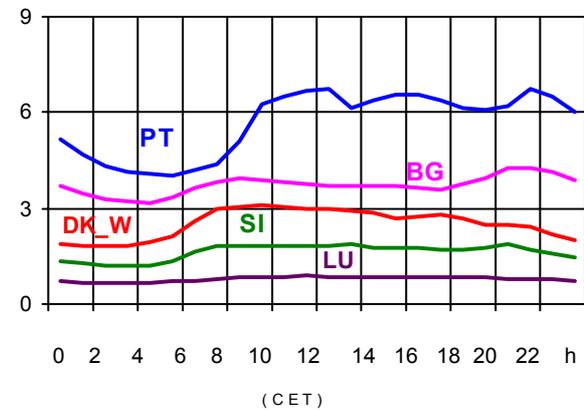
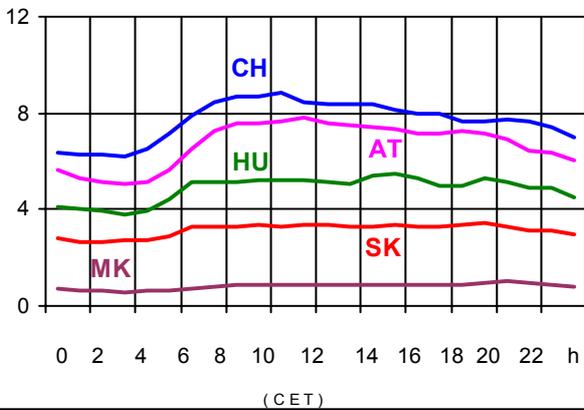
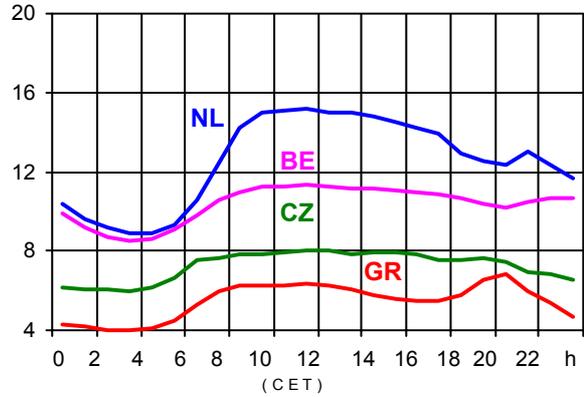
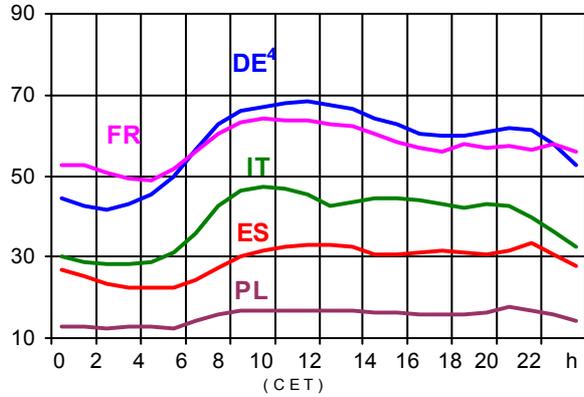
- Control areas can differ from national borders ( i.e. German block which includes parts of AT, LU and DK ).
- Values are calculated on an hourly base ( MWh ).
- This values are not the provisional values entered in the VULCANUS system, but the definitive values after an eventual correction during the 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.

<sup>1</sup> UA\_W represents the so-called Burshtyn Island synchronously interconnected with UCTE

All values are calculated to represent 100% of the national values

Consumption hourly load curves<sup>1</sup> on 20.04.2005

Values in GW



	Peak load MW	var.% <sup>2</sup>	Load representativity <sup>1</sup> %	Parallel power <sup>3</sup> MW
AT	7777	-12,2	100	7688
BA	1496	2,3	100	1593
BE	11346	-0,2	100	10933
BG	4239	-3,2	100	4767
CH	8878	8,8	100	8882
CS	5541	-1,3	100	4732
CZ	8000	4,8	100	9863
DE <sup>4</sup>	68600	-9,1	100	74600
ES	33512	1,0	98	32224
FR	64139	6,3	100	67421
GR	6805	1,6	100	5779
HR	2197	4,4	100	1561
HU	5500	9,9	100	3888
IT	47183	2,8	100	39063
LU	888	6,9	99	861
MK	1028	8,1	100	837
NL	15229	6,8	100	11812
PL	17787	3,5	100	19262
PT	6728	-1,9	97	5456
RO	6689	4,3	100	6459
SI	1871	2,9	95	1965
SK	3450	4,4	100	3373
<b>UCTE</b>	<b>321998</b>	<b>0,5</b>		<b>323019</b>
DK_W	3078	0,3	100	3154
UA_W <sup>5</sup>	785	11,8	100	1183

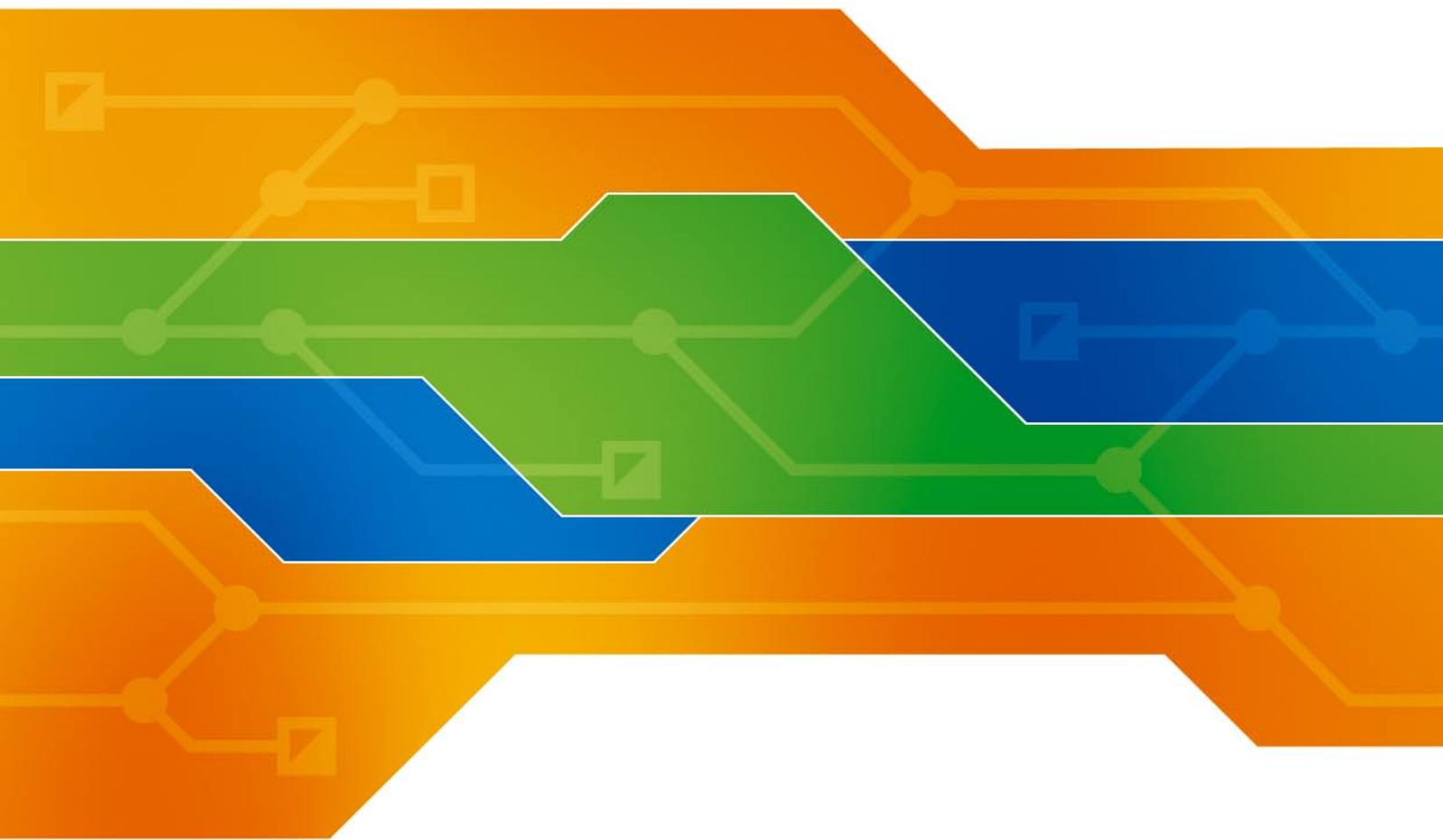
<sup>1</sup> Percentage as referred to total values in %

<sup>2</sup> Variation as compared to corresponding month of the previous year

<sup>3</sup> Power produced in parallel operation (including autoproduction)

<sup>4</sup> Values estimated on the basis of the vertical load. The vertical load is the total amount of the power flows out of the transmission network into distribution and large consumer networks.

<sup>5</sup> UA\_W represents the so-called Burshtyn Island synchronously interconnected with UCTE



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