

# UCTE



August 2004

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 22 November 2004

Countries	Net production in GWh <sup>1</sup>				Exchange balance in GWh	Pump in GWh	Consumption in GWh <sup>1</sup>			last 12 months	Δ <sup>3</sup> [%]
	Hy	Tn	Tc	Total			monthly	Δ <sup>3</sup> [%]			
B	135	3595	2509	6239 <sup>2</sup>	504	155	6588	2,4	86031	1,2	
D	1905	11397	25331	38633 <sup>2</sup>	941	800	38774	0,3	509486	0,4	
E	2138	5319	12433	19890 <sup>2</sup>	-456	386	19048	2,3	229850	4,3	
F	4187	30449	2766	37402	-5298	471	31633	-1,5	467456	3,0	
GR <sup>4</sup>	380	0	3921	4301 <sup>2</sup>	479	69	4711	-2,6	50296	-2,5	
I	3835	0	18495	22330	2475	772	24033	-0,9	319073	0,1	
SLO	276	432	307	1015	-30	0	985	1,9	12562	2,2	
HR	339	0	617	956 <sup>2</sup>	308	15	1249	0,2	15793	4,0	
BiH	205	0	675	880	-78	0	802	4,2	12759	n.a.	
FYROM	74	0	338	412 <sup>2</sup>	88	0	500	-0,8	7307	n.a.	
SCG	608	0	1990	2598	146	63	2681	2,3	39669	n.a.	
L	68	0	238	306	209	83	432	1,9	6244	2,7	
NL	0	320	7388	7708 <sup>2</sup>	1129	0	8837	0,9	110124	0,5	
A	3190	0	1040	4230	219	271	4178	8,6	54824	6,0	
P	497	0	2384	2881 <sup>2</sup>	643	53	3471	0,2	44717	4,8	
CH	3753	1331	224	5308 <sup>2</sup>	-322	338	4648	4,8	61016	3,3	
CZ	155	2561	3384	6100 <sup>2</sup>	-1684	73	4343	3,2	61011	2,0	
H	21	977	1357	2355 <sup>2</sup>	659	0	3014	-3,4	38152	-0,2	
PL <sup>5</sup>	305	0	10505	10810 <sup>2</sup>	-681	207	9922	-4,0	133728	-3,3	
SK	272	1240	542	2054 <sup>2</sup>	-99	11	1944	0,8	26508	0,5	
RO	1312	425	2186	3923 <sup>2</sup>	-52	0	3871	5,0	49982	n.a.	
BG	247	1098	1764	3109 <sup>2</sup>	-566	16	2527	0,4	35677	n.a.	
UCTE	23902	59144	100394	183440 <sup>2</sup>	-1466	3783	178191	0,3	2372265	2,0	
West UA <sup>6</sup>	12	0	541	553 <sup>2</sup>	-294	0	259	-1,9	4312	n.a.	
DK West	1	0	1431	1432 <sup>2</sup>	267	0	1699	n.a.	n.a.	n.a.	

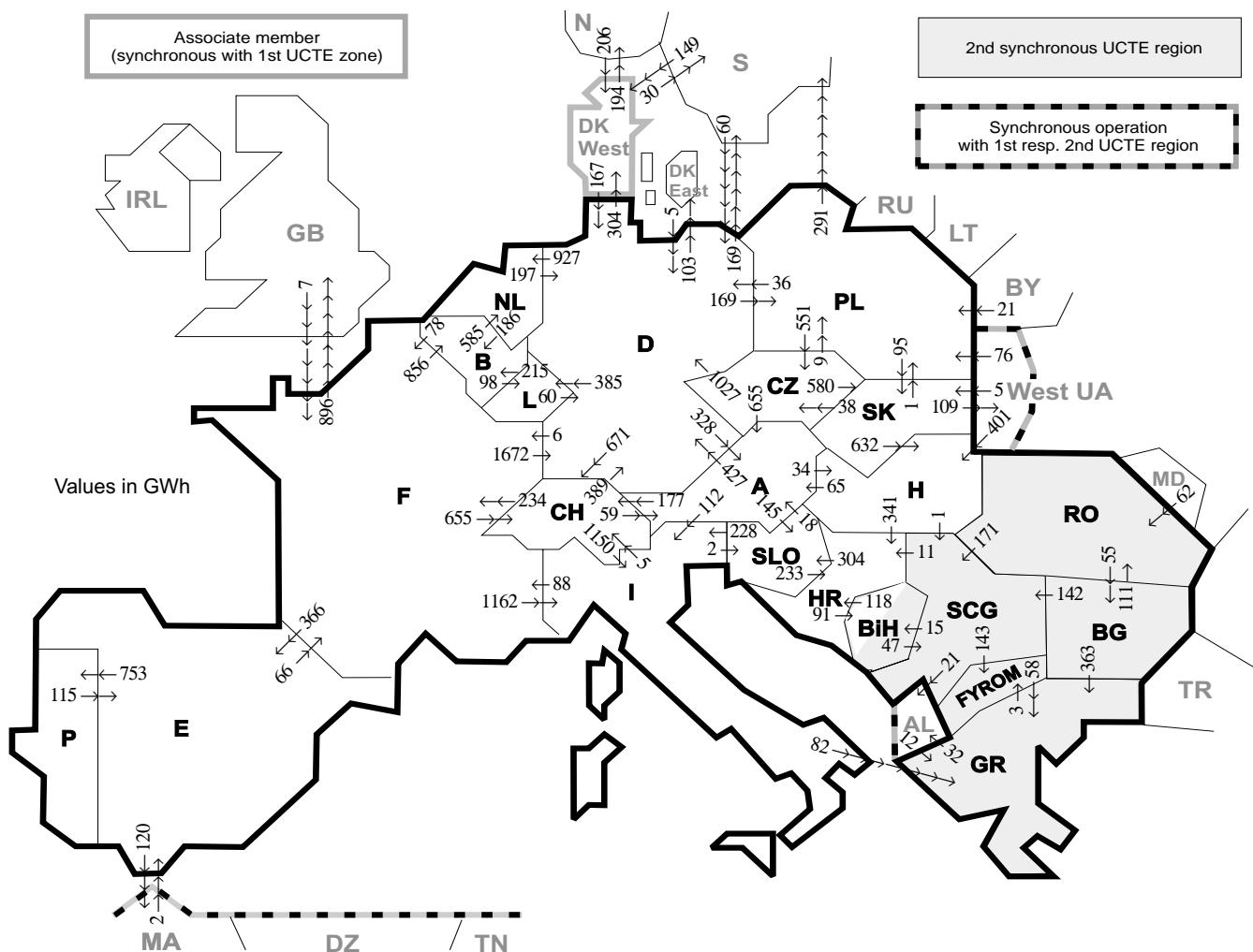
<sup>1</sup> Percentage as referred to total values in %

Countries	B	D	E	F	GR <sup>4</sup>	I	SLO	HR	BiH	FY ROM	SOG	L	NL	A	P	CH	CZ	H	PL	SK	RO	BG	West UA <sup>6</sup>	DK West
Production	99	94	94	100	99	100	95	100	99	100	96	98	100	84	94	100	100	100	100	100	100	100	100	99
Consumption	99	94	94	100	99	100	95	100	99	100	96	99	100	90	94	100	100	100	100	100	100	100	100	99

<sup>2</sup> Including deliveries from industry<sup>3</sup> Variation as compared to corresponding period of the previous year and representativity 100%<sup>4</sup> The representativity of data referring to the interconnected system is 99%

The representativity of data referring to the whole country including the isolated systems of Greek island is 91%

<sup>5</sup> Values for 2003 are gross values, values for 2004 are net values.<sup>6</sup> West UA represents the so-called Burshtyn Island synchronously interconnected with UCTE



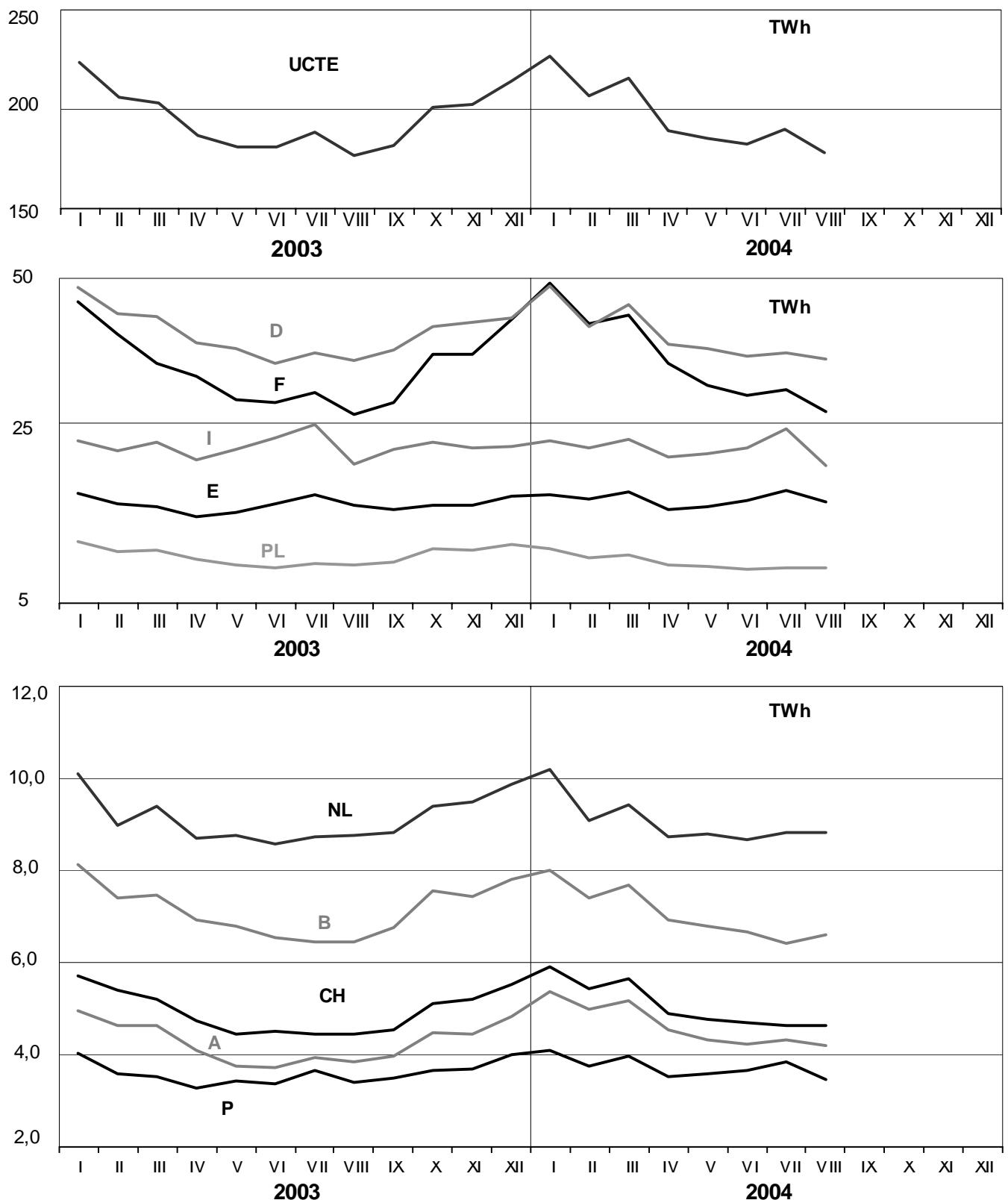
Exporting countries	Importing countries																				Sum export					
	B	D	E	F	GR	I	SLO	HR	BIH	FYROM	SCG	L	NL	A	P	CH	CZ	H	PL	SK	RO	BG	DK West	III <sup>1</sup>	West UA <sup>2</sup>	
B	-	-	-	78	-	-	-	-	-	-	-	98	585	-	-	-	-	-	-	-	-	-	-	761		
D	-	-	-	6	-	-	-	-	-	-	385	927	328	-	671	0	-	185	-	-	304	272	-	3078		
E	-	-	-	66	-	-	-	-	-	-	-	-	-	753	-	-	-	-	-	-	-	-	120	939		
F	856	1672	366	-	-	1162	-	-	-	-	-	-	-	-	655	-	-	-	-	-	-	-	896	5607		
GR	-	-	-	-	-	0	-	-	-	3	-	-	-	-	-	-	-	-	-	-	0	32	-	35		
I	-	-	-	88	82	-	2	-	-	-	-	-	0	5	-	-	-	-	-	-	-	-	-	177		
SLO	-	-	-	-	-	228	-	233	-	-	-	-	18	-	-	-	-	-	-	-	-	-	-	479		
HR	-	-	-	-	-	-	304	-	91	-	0	-	-	-	-	-	0	-	-	-	-	-	-	395		
BiH	-	-	-	-	-	-	-	118	-	-	47	-	-	-	-	-	-	-	-	-	-	-	-	165		
FYROM	-	-	-	-	58	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	0	-	-	58		
SCG	-	-	-	-	-	-	11	15	143	-	-	-	-	-	-	0	-	-	0	0	-	21	-	190		
L	215	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	275		
NL	186	197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	383		
A	-	427	-	-	-	112	145	-	-	-	-	-	177	0	34	-	-	-	-	-	-	-	-	895		
P	-	-	115	-	-	-	-	-	-	-	-	-	177	0	34	-	-	-	-	-	-	-	-	115		
CH	-	389	-	234	-	1150	-	-	-	-	59	-	-	-	-	-	-	-	-	-	-	-	-	1832		
CZ	-	1027	-	-	-	-	-	-	-	-	655	-	-	-	-	9	580	-	-	-	-	-	-	2271		
H	-	-	-	-	-	-	341	-	1	-	65	-	-	-	-	0	0	-	-	0	0	-	407			
PL	-	36	-	-	-	-	-	-	-	-	-	-	551	-	95	-	-	291	0	-	973	-	-	973		
SK	-	-	-	-	-	-	-	-	-	-	38	632	1	-	-	-	-	109	109	-	780	-	-	780		
RO	-	-	-	-	-	-	-	171	-	-	-	-	0	-	-	55	-	0	0	-	226	-	-	226		
BG	-	-	-	363	-	-	0	142	-	-	-	-	-	-	-	-	111	-	-	0	-	-	616			
DK West	-	167	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	224	-	-	391			
III <sup>1</sup>	-	65	2	7	12	-	-	-	-	-	-	-	401	97	5	62	0	355	-	-	-	-	-	427		
West UA <sup>2</sup>	-	-	-	-	-	-	-	-	-	-	401	76	5	0	-	-	-	-	-	-	-	-	-	482		
<b>Sum imp</b>	<b>1257</b>	<b>4040</b>	<b>483</b>	<b>479</b>	<b>515</b>	<b>2652</b>	<b>451</b>	<b>703</b>	<b>106</b>	<b>146</b>	<b>361</b>	<b>483</b>	<b>1512</b>	<b>1125</b>	<b>753</b>	<b>1508</b>	<b>589</b>	<b>1067</b>	<b>292</b>	<b>680</b>	<b>173</b>	<b>55</b>	<b>659</b>	<b>1741</b>	<b>109</b>	<b>21475</b>

Sum of physical energy flows between UCTE countries = 18612 GWh

Total physical energy flows = 21475 GWh

<sup>1</sup> III = Third countries: Albania, Belarus, Denmark East, Great Britain, Morocco, Norway, Republic of Moldavia, Sweden, Republic of Turkey and West Ukraine<sup>2</sup> West UA represents the so-called Burshtyn Island synchronously interconnected with UCTE

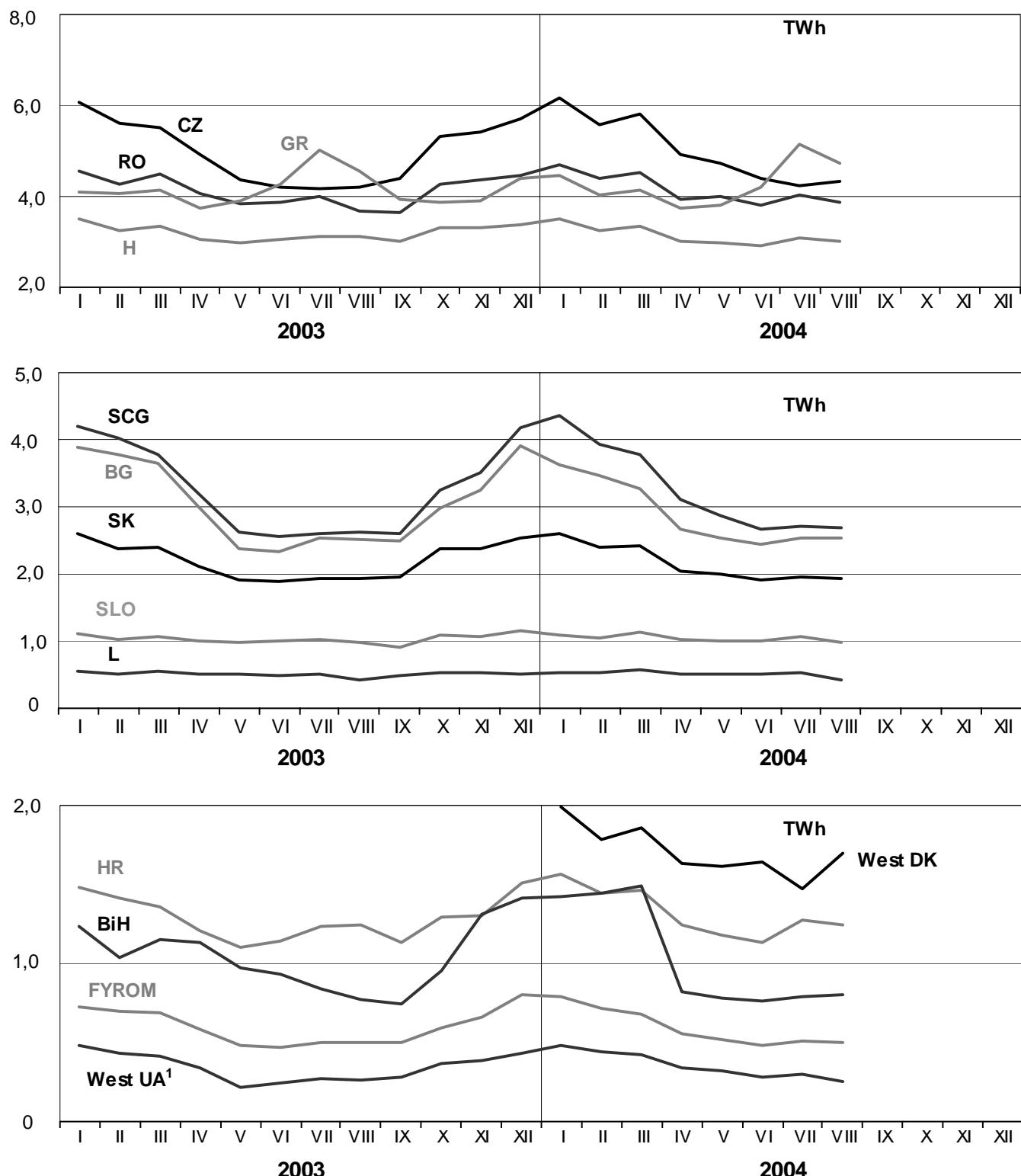
These physical energy flows were measured on the cross-frontier transmission lines (< 110 kV) listed in table 9 of the Statistical Yearbook. These values may differ from the official statistics and the exchange balances in chapter 1.



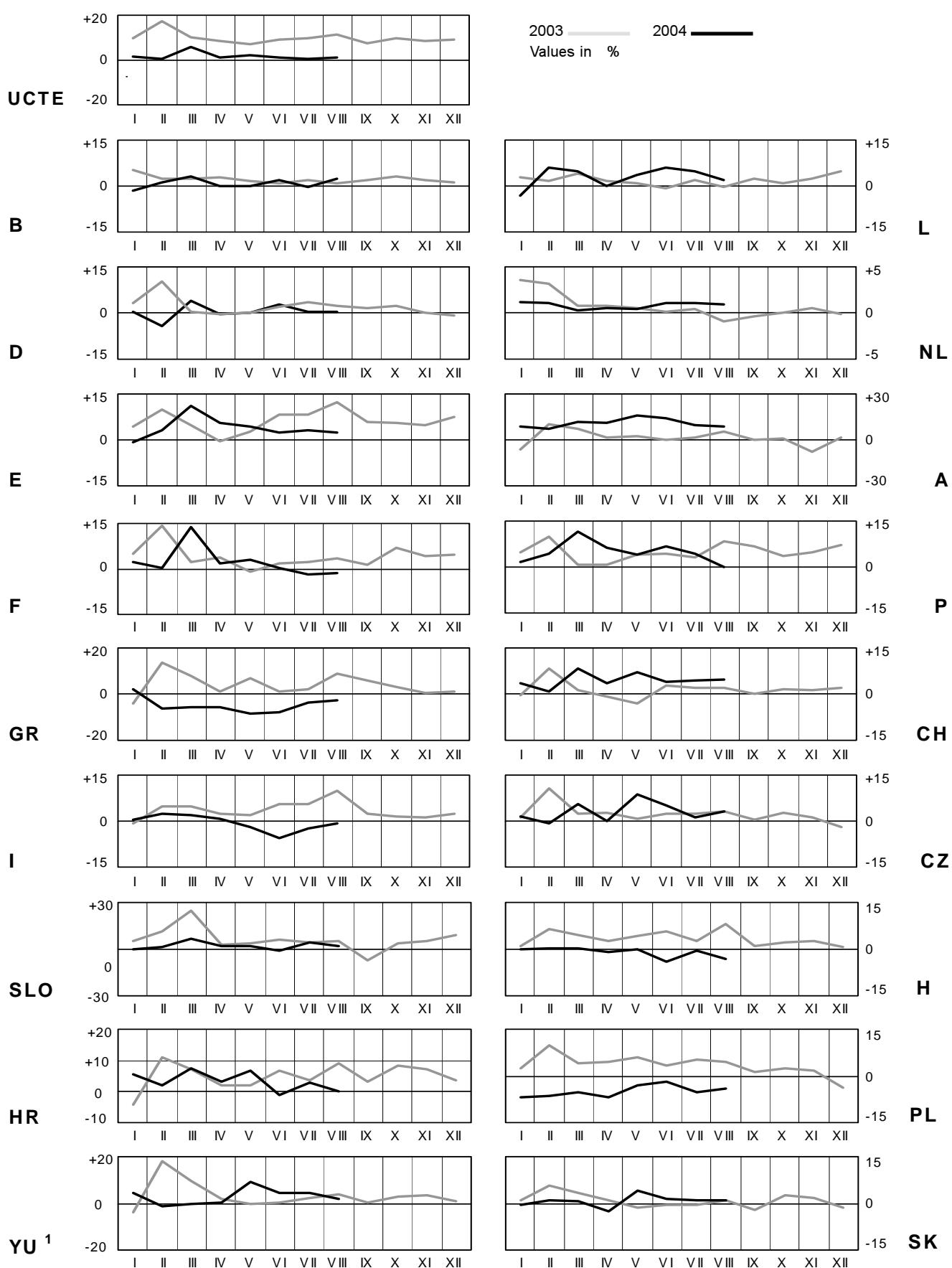
# 3

## Monthly consumption

August 2004



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

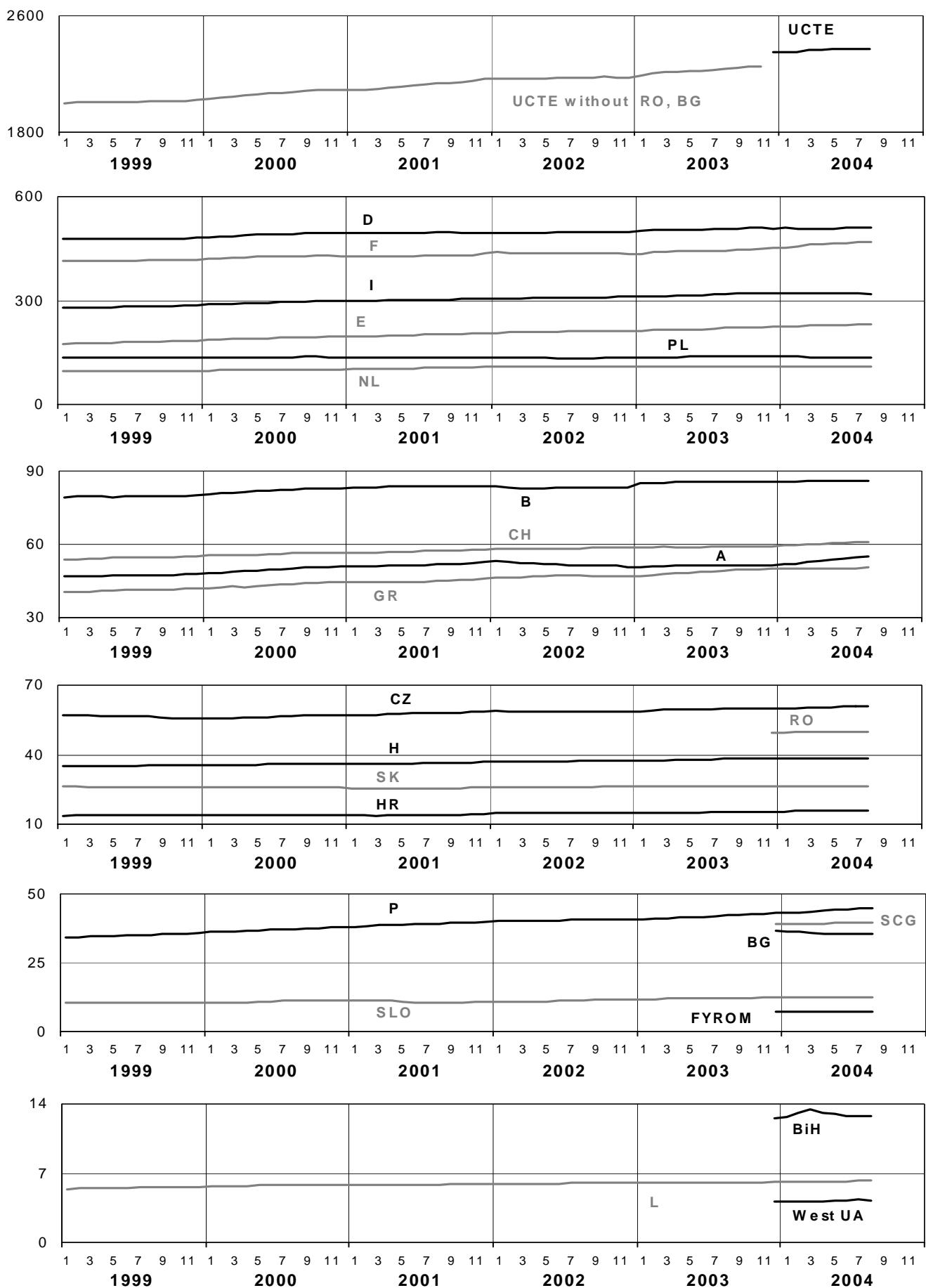


<sup>1</sup>YU = FRY + FYROM (Federal Republic of Yugoslavia and former Yugoslav Republic of Macedonia)

# 5

## Consumption of the last 12 months

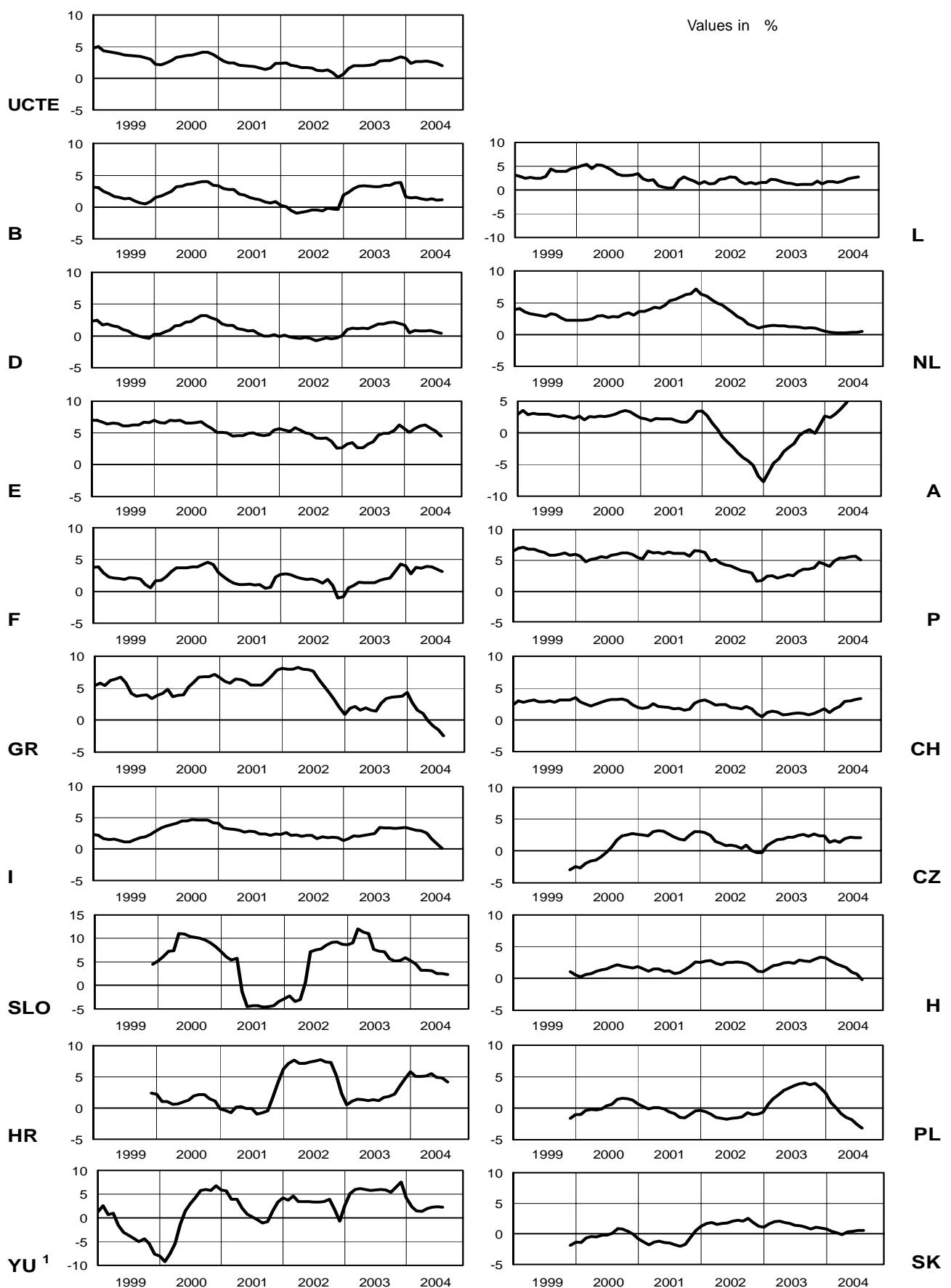
August 2004



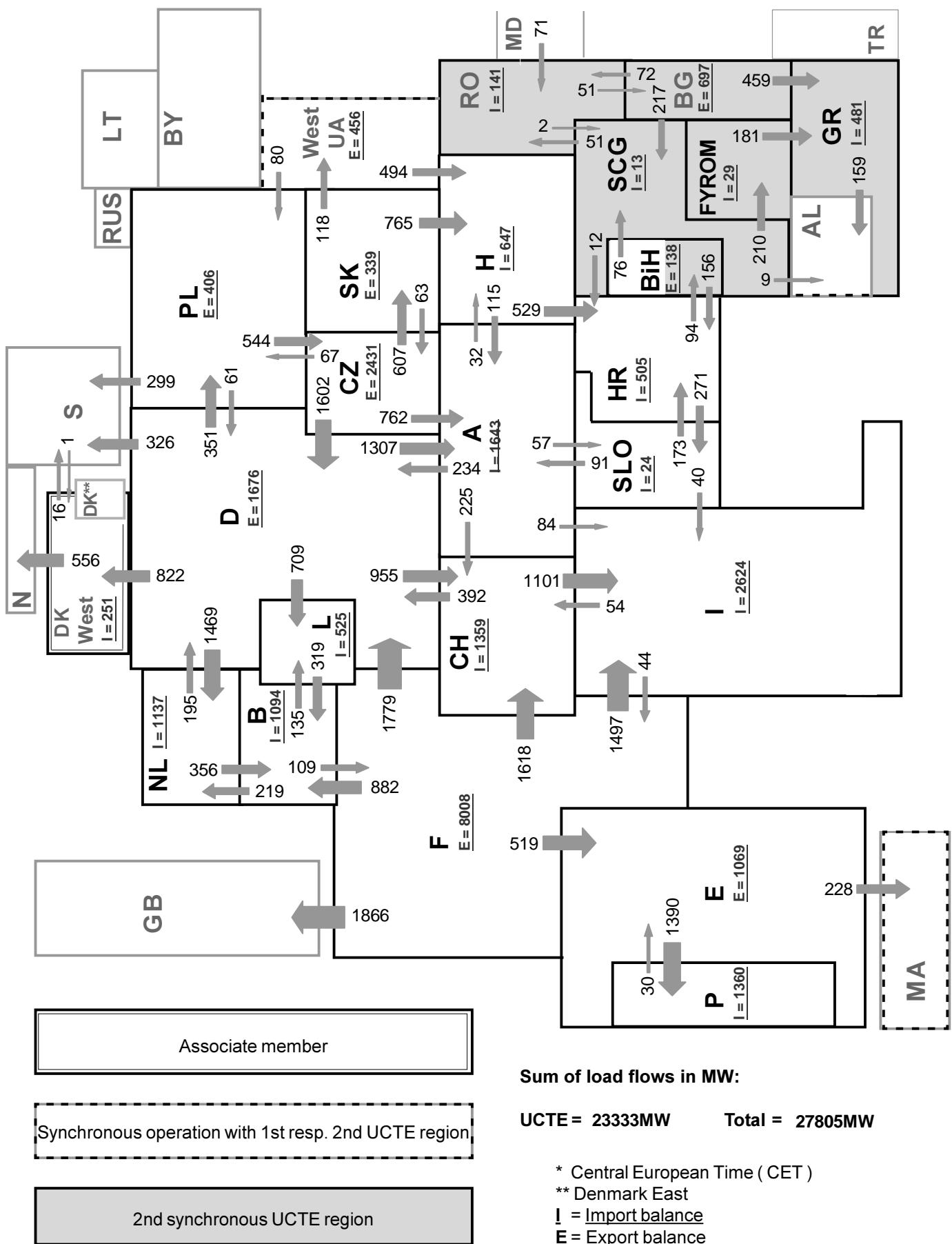
# 6

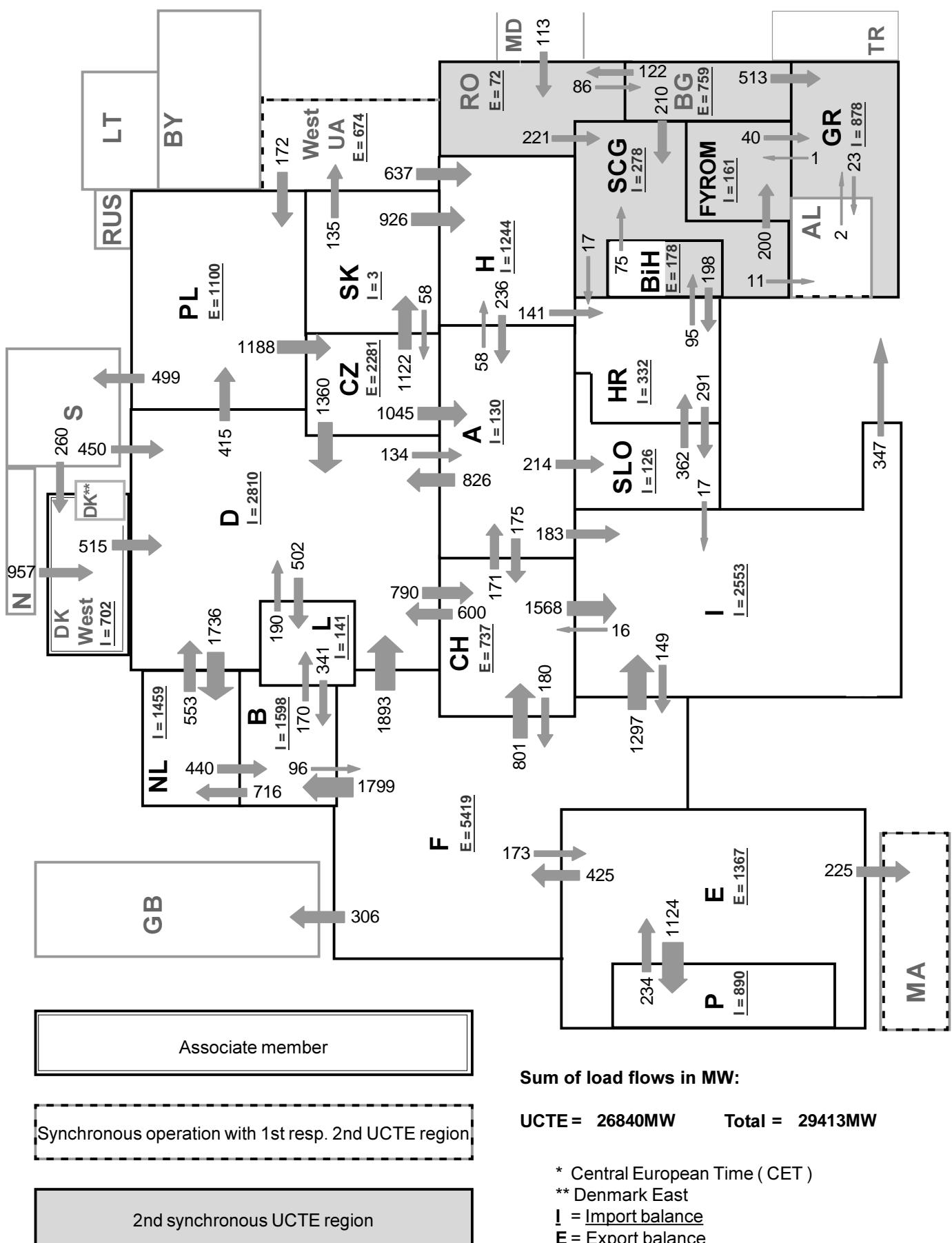
## Variation of the last 12 months' consumption

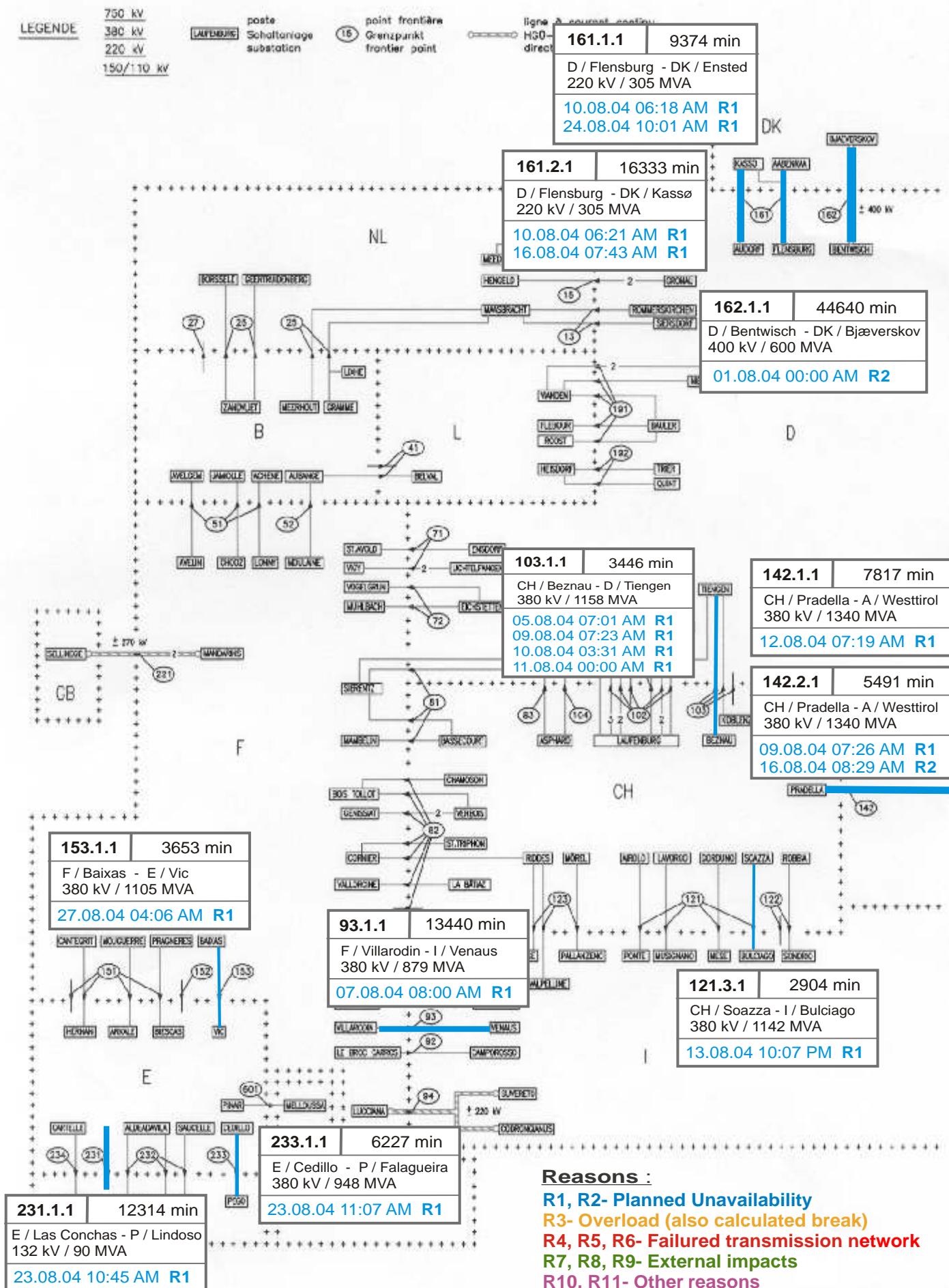
August 2004



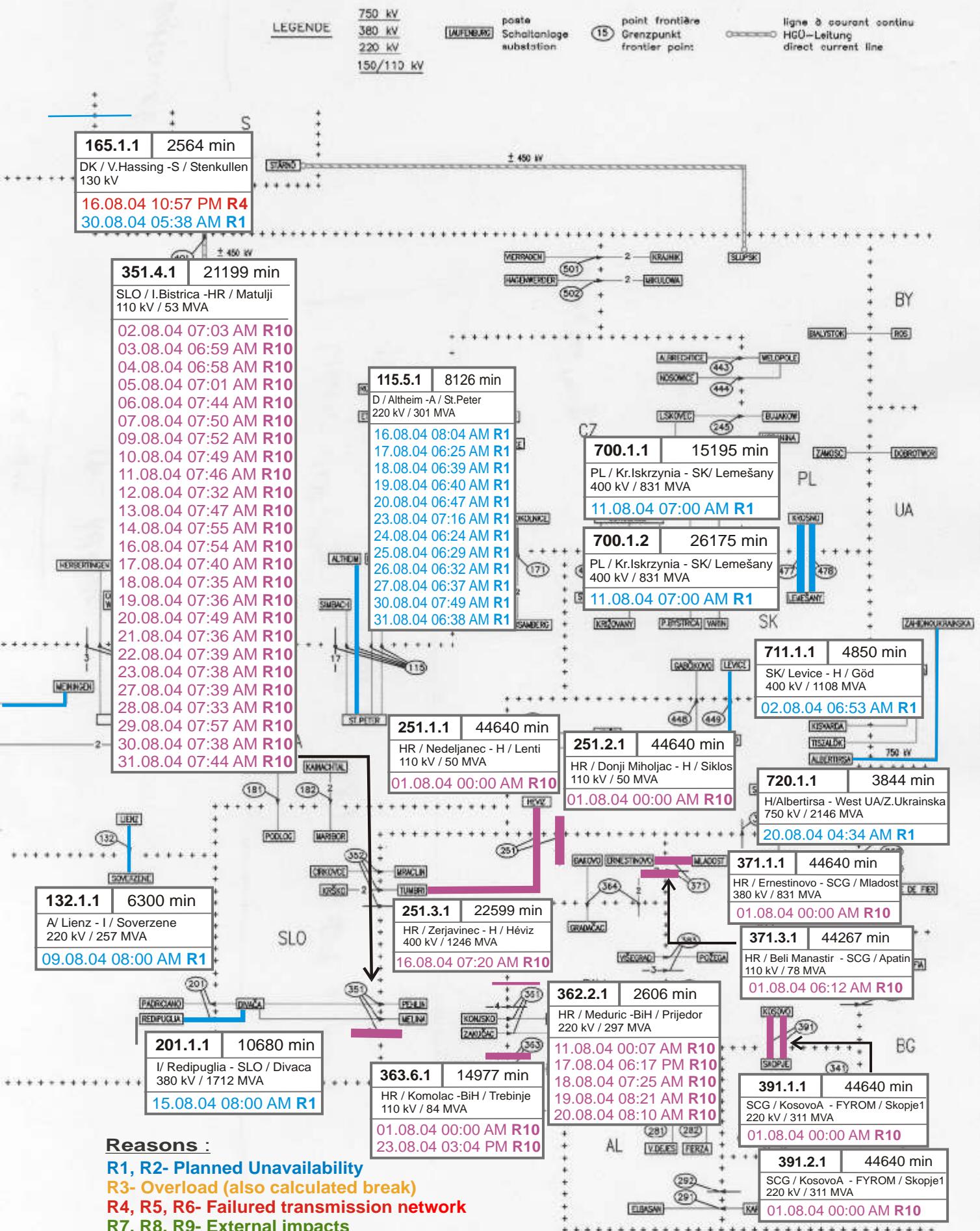
<sup>1</sup> YU = FRY + FYROM (Federal Republic of Yugoslavia and former Yugoslav Republic of Macedonia)





**Reasons :**

- R1, R2- Planned Unavailability**
- R3- Overload (also calculated break)**
- R4, R5, R6- Failed transmission network**
- R7, R8, R9- External impacts**
- R10, R11- Other reasons**



### Reasons:

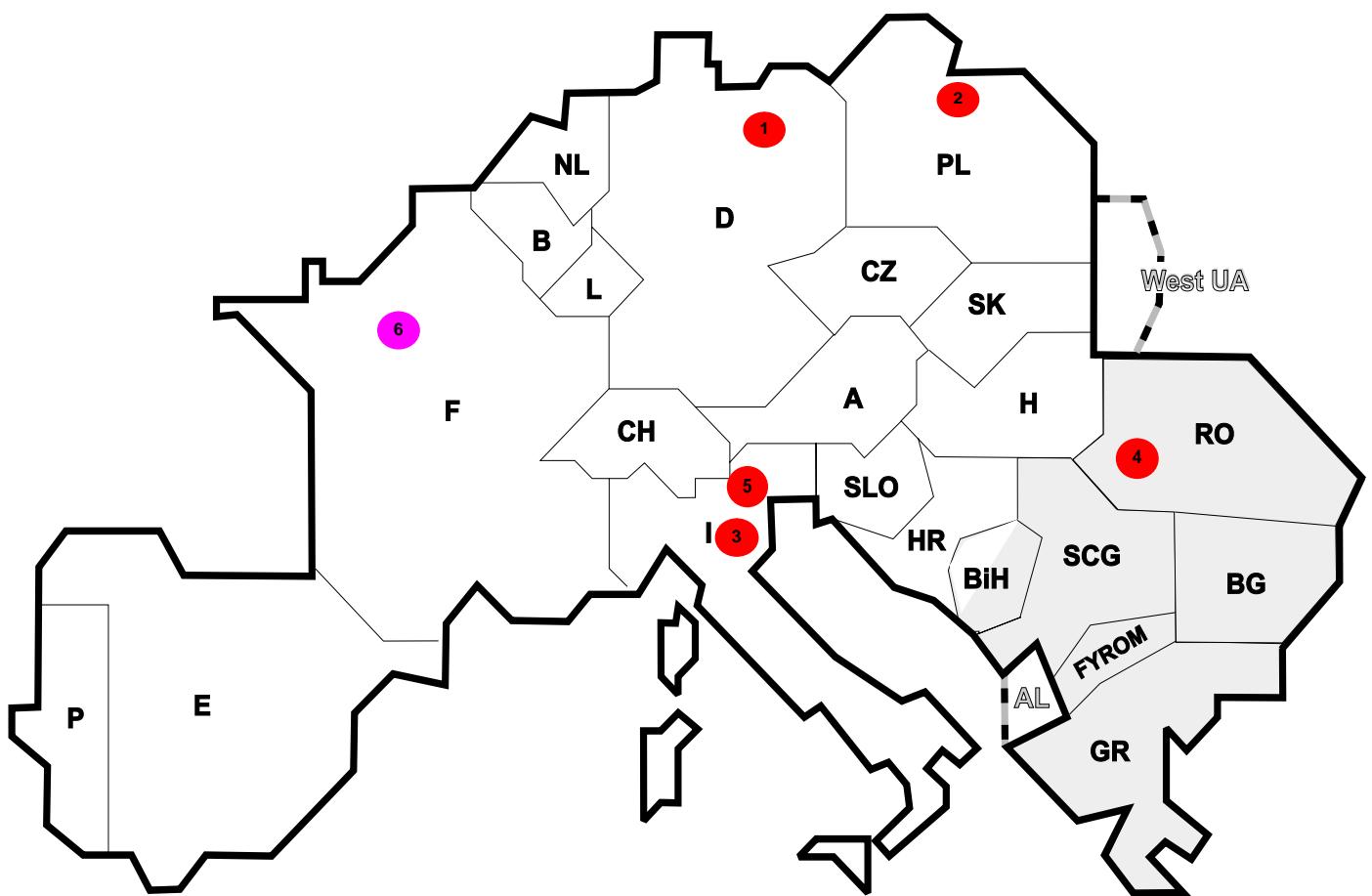
### **R1 R2- Planned Unavailability**

### R1, R2- Planned Unavailability R3- Overload (also calculated break)

**R3- Overload (also calculated break)**  
**R4 R5 R6- Failed transmission network**

**R4, R5, R6- Fanned transmis  
R7 R8 R9- External impacts**

R7, R8, R9- External limb  
R10, R11- Other reasons



## Reasons:

- R4 Overload (also calculated brake)  
 R5 False operation  
 R6 Failure in protection device or other element  
 R7 Outside impacts (animals, 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	D	Reuter	R6	24824	187	7965	24,37
2	PL	Slupsk	R6	425	500	51	1,67
3	I	Ponte Resia	R6	66	367	11	0,11
4	RO	Tulcea Vest	R5	16	188	5	0,17
5	I	Roma Ovest	R5	11	135	5	0,02
6	F	Gambetta	R9	3	50	5	0,00

<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
B	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
D	2012870	3348840	3131	3544	3102	4442
E	1053698	576302	1645	1044	1942	550
F	7002752	1861052	9634	1570	8320	2894
GR	0	480979	0	492	0	897
I	177548	2652595	98	2722	512	3065
SLO	460344	430232	585	596	729	766
HR	227497	540409	332	497	375	349
BiH	160523	123827	216	120	181	100
FYROM	8300	97200	231	256	235	386
SCG	442082	569847	558	583	503	750
NL	678407	1805108	1112	2215	971	2432
A	470029	307387	401	525	571	608
P	40122	682665	0	1350	0	899
CH	2215386	1892722	917	2452	3547	2826
CZ	2069743	370604	2962	486	2918	642
H	207204	866231	374	1022	142	1383
PL	793259	167776	603	310	1160	180
SK	572131	410047	663	244	850	734
RO	513360	368096	690	468	690	518
BG	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
West UA <sup>1</sup>	294067	0	382	0	500	0
DK West	373278	662527	523	800	466	1260

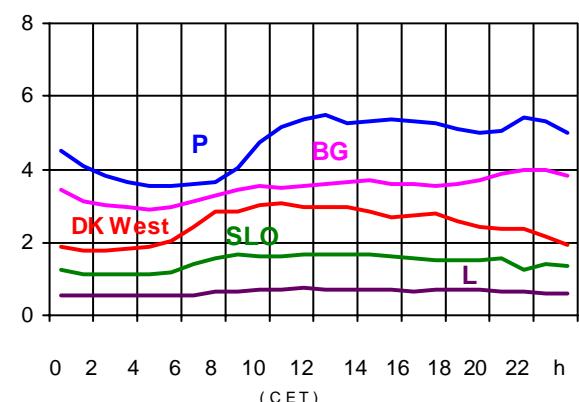
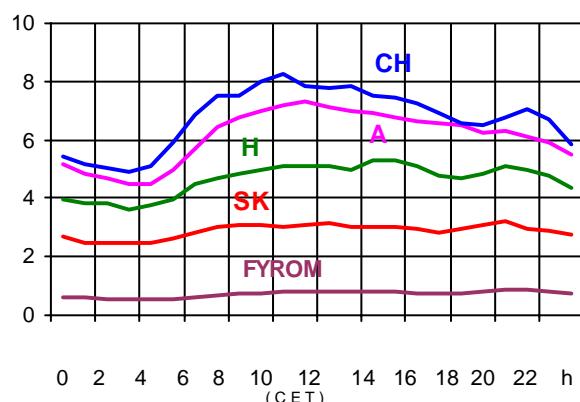
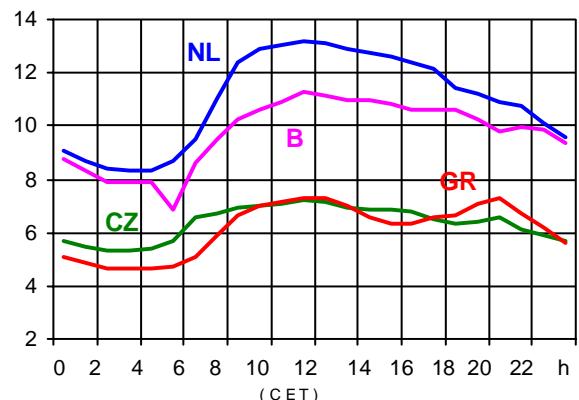
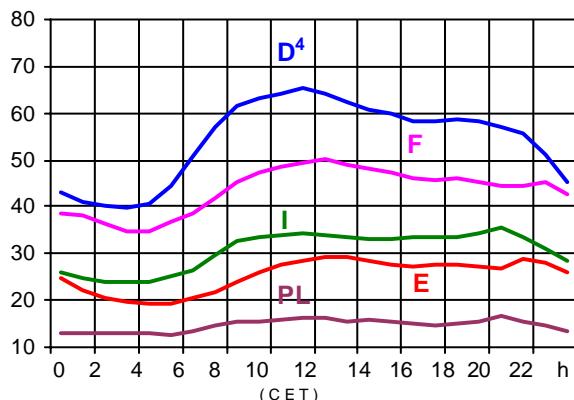
- Control areas can differ from national borders ( i.e. German block which includes parts of A, L and DK ).
- Values are calculated on an hourly base ( MWh ).
- This values are not the provisional values entered in the VULCANUS system, but the definitive values after an eventual correction during the 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> West UA represents the so-called Burshtyn Island synchronously interconnected with UCTE

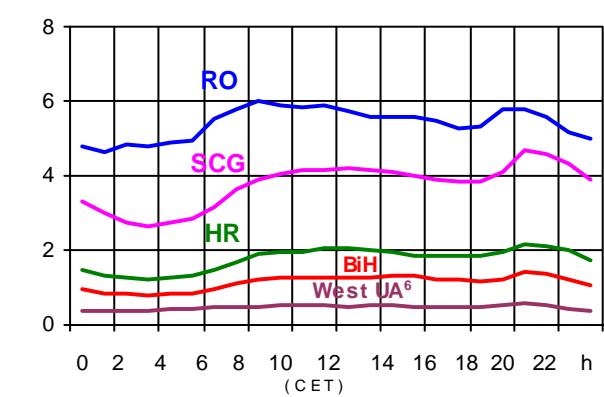
## Consumption hourly load curves' on

18.08.04

Values in GW



	Peak load MW	$\Delta\%$ <sup>2</sup>	Load representativity <sup>1</sup> %	Parallel power <sup>3</sup> MW
B	11270	5,1	100	9509
D	65200	-0,8	91	70500
E	29414	-2,5	94	29414
F	50121	0,4	100	54262
GR <sup>5</sup>	7313	-15,7	99	6312
I	35567	-5,1	100	31680
SLO	1675	-0,7	95	1508
HR	2176	1,2	100	1943
BiH	1406	15,2	99	1438
FYROM	891	6,2	100	614
SCG	4681	4,1	96	3885
L	726	9,7	99	720
NL	13177	3,1	90	13062
A	7324	3,6	82	6598
P	5481	1,5	94	3859
CH	8276	3,5	100	10173
CZ	7200	1,9	100	9546
H	5294	22,0	100	3873
PL	16546	-1,5	100	16585
SK	3196	1,8	100	3068
RO	6019	5,7	100	5830
BG	3981	1,0	100	4324
UCTE	<b>281678</b>	<b>-0,9</b>		<b>288703</b>
West UA <sup>6</sup>	575	n.a.	100	1017
DK West	3041	n.a.	99	2360

<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> The representativity of data referring to the interconnected system is 99%  
The representativity of data referring to the whole country including the isolated systems of the Greek island is 91%<sup>6</sup> West UA represents the so-called Burshtyn Island synchronously with the UCTE



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