

# UCTE



## April 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 26 July 2004

# 1

## Electricity supply situation of the countries

April 2004

Countries	Net production in GWh <sup>1</sup>				Exchange balance in GWh	Pump in GWh	Consumption in GWh <sup>1</sup>			
	Hy	Tn	Tc	Total			monthly	Δ <sup>3</sup> [%]	last 12 months	Δ <sup>3</sup> [%]
B	136	3493	2687	6316 <sup>2</sup>	759	142	6933	1,7	84865	0,7
D	2011	13808	27006	42825 <sup>2</sup>	-1573	676	40575	-0,4	506248	0,6
E	3244	5127	10446	18817 <sup>2</sup>	-635	314	17868	5,6	227508	5,7
F	5358	34000	4033	43391	-4595	547	38249	2,0	463345	3,5
GR <sup>4</sup>	357	0	3317	3674 <sup>2</sup>	122	65	3731	-5,8	50184	1,0
I	3651	0	18465	22116	3912	852	25176	1,0	321263	2,6
SLO	342	463	361	1166	-151	0	1015	1,7	12489	3,0
HR	877	0	206	1083 <sup>2</sup>	167	0	1250	3,3	15690	4,9
BiH	760	0	211	971	-151	0	820	-27,6	13133	n.a.
FYROM	142	0	380	522 <sup>2</sup>	1	0	523	-4,2	6188	n.a.
SCG	1518	0	1570	3088	135	122	3101	-3,0	39127	n.a.
L	76	0	261	337	260	89	508	-0,2	6166	1,6
NL	0	325	7282	7607 <sup>2</sup>	1493	0	9100	4,7	110272	0,7
A	2846	0	1784	4630	135	237	4528	28,2	53165	4,0
P	862	0	1940	2802 <sup>2</sup>	743	25	3520	6,5	43997	5,1
CH	2096	2316	232	4644 <sup>2</sup>	373	120	4897	1,2	61093	3,5
CZ	306	1775	4163	6244 <sup>2</sup>	-1265	60	4919	-0,2	60230	1,3
H	5	586	1736	2327 <sup>2</sup>	698	0	3025	-0,8	38403	2,0
PL	371	0	11117	11488 <sup>2</sup>	-969	185	10334	-7,0	135161	-0,9
SK	409	953	749	2111 <sup>2</sup>	-48	9	2054	-2,6	26361	-0,1
RO	1592	466	1868	3926 <sup>2</sup>	22	0	3948	-2,6	49624	n.a.
BG	270	1263	1497	3030 <sup>2</sup>	-351	17	2662	-11,3	35403	n.a.
<b>UCTE</b>	<b>27229</b>	<b>64575</b>	<b>101311</b>	<b>193115<sup>2</sup></b>	<b>-918</b>	<b>3460</b>	<b>188736</b>	<b>0,9</b>	<b>2359915</b>	<b>0,2</b>
West UA <sup>5</sup>	19	0	572	591 <sup>2</sup>	-255	0	336	-0,9	4152	n.a.

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

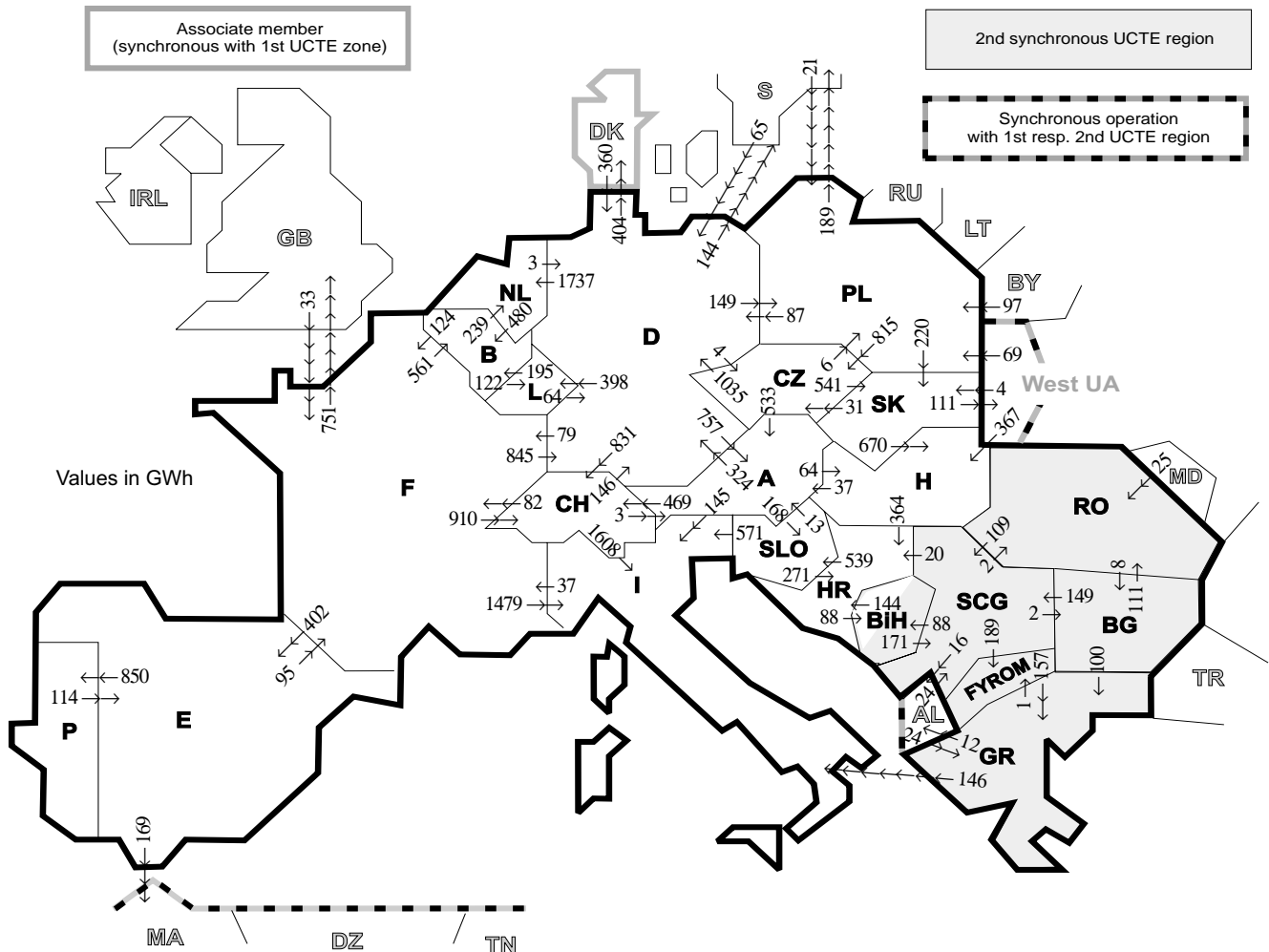
Countries	B	D	E	F	GR <sup>4</sup>	I	SLO	HR	BiH	FY ROM	SCG	L	NL	A	P	CH	CZ	H	PL	SK	RO	BG	West UA <sup>5</sup>
Production	99	94	94	100	99	100	95	100	99	100	96	98	100	84	93	100	100	100	100	100	100	100	100
Consumption	99	94	94	100	99	100	95	100	99	100	96	99	100	90	93	100	100	100	100	100	100	100	100

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



Exporting countries	Importing countries																			Σ Export							
	B	D	E	F	GR	I	SLO	HR	BIH	FY- ROM	SCG	L	NL	A	P	CH	CZ	H	PL		SK	RO	BG	III¹	DK²	West UA³	
B	-	-	-	124	-	-	-	-	-	-	-	122	239	-	-	-	-	-	-	-	-	-	-	-	-	-	485
D	-	-	-	79	-	-	-	-	-	-	-	398	1737	757	-	831	4	-	149	-	-	-	-	548	404	-	4503
E	-	-	-	95	-	-	-	-	-	-	-	-	-	-	850	-	-	-	-	-	-	-	-	169	-	-	1114
F	561	845	402	-	-	1479	-	-	-	-	-	-	-	-	-	910	-	-	-	-	-	-	-	-	-	-	4948
GR	-	-	-	-	-	146	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	12	-	-	159
I	-	-	-	37	0	-	0	-	-	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	37
SLO	-	-	-	-	-	571	271	-	-	-	-	-	-	13	-	-	-	-	-	-	-	-	-	-	-	-	855
HR	-	-	-	-	-	-	539	88	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	627
BIH	-	-	-	-	-	-	144	88	-	-	171	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	315
FYROM	-	-	-	-	157	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	157
SCG	-	-	-	-	-	-	20	88	189	-	-	-	-	-	-	-	-	0	-	-	2	2	16	-	-	-	317
L	195	64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	16	-	259
NL	480	3	-	-	-	-	145	168	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	483
A	-	324	-	-	-	-	145	168	-	-	-	-	-	-	-	469	0	64	-	-	-	-	-	-	-	-	1170
P	-	-	114	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	114
CH	-	146	-	82	-	1608	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1839
CZ	-	1035	-	-	-	-	-	-	-	-	-	-	-	533	-	-	-	-	6	541	-	-	-	-	-	-	2115
H	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	401
PL	-	87	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	815	-	220	-	-	-	189	-	0	1311
SK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31	670	0	-	-	-	111	-	111	812
RO	-	-	-	-	-	-	-	-	-	-	109	-	-	-	-	-	-	0	-	-	-	8	0	0	0	0	117
BG	-	-	-	-	100	-	-	-	-	-	0	149	-	-	-	-	-	-	-	-	-	111	0	-	-	-	360
III¹	-	425	0	33	24	-	-	-	-	-	24	-	-	-	-	-	-	-	367	187	4	25	0	-	-	-	1089
DK²	-	360	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	360
West UA³	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	367	69	4	0	-	-	-	-	440
Σ Import	1236	2929	516	450	281	3949	707	799	176	190	453	520	1976	1343	850	2210	850	1101	342	765	138	10	1796	404	111	-	23587

Sum of physical energy flows between UCTE countries = 20702 GWh Total physical energy flows = 23587 GWh

<sup>1</sup> III = Third countries: Albania, Belarus, Denmark, Great Britain, Morocco, Republic of Moldavia, Sweden, Republic of Turkey and West Ukraine

<sup>2</sup> Denmark ( Jutland )

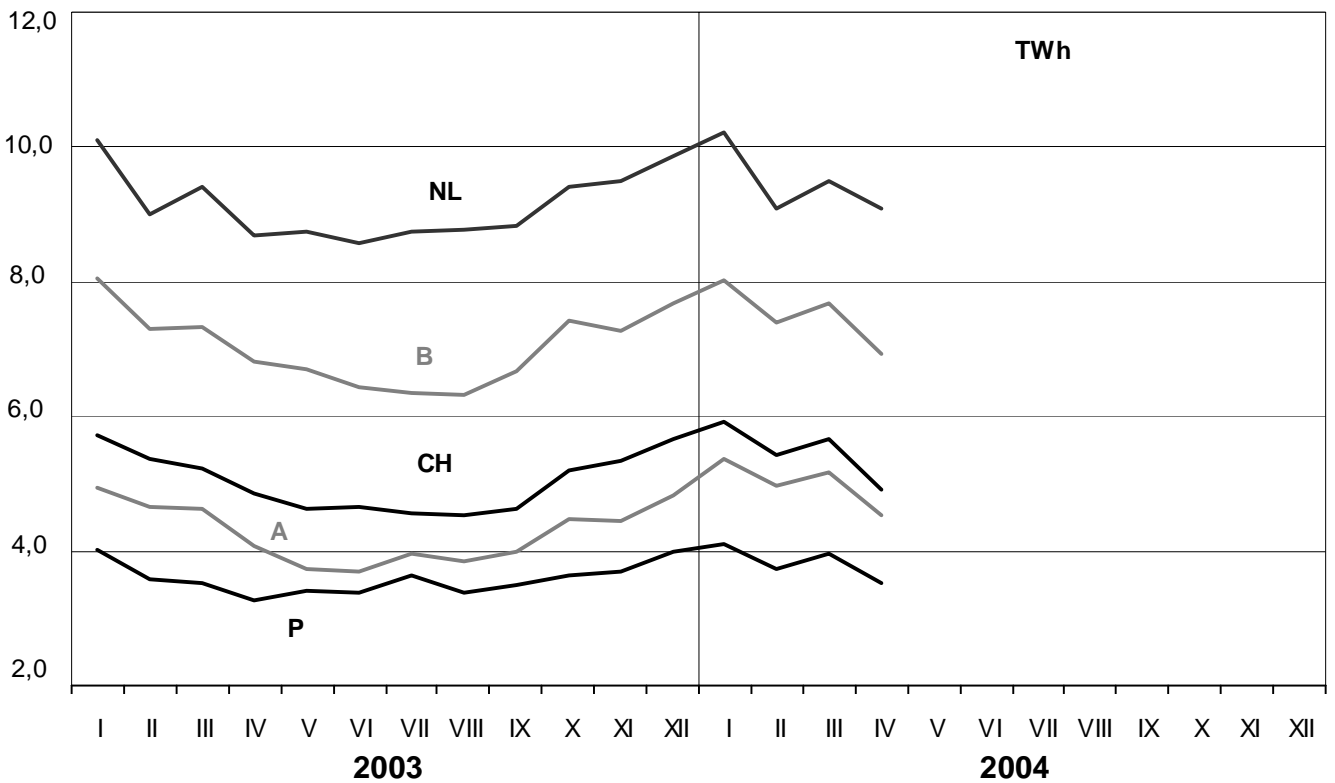
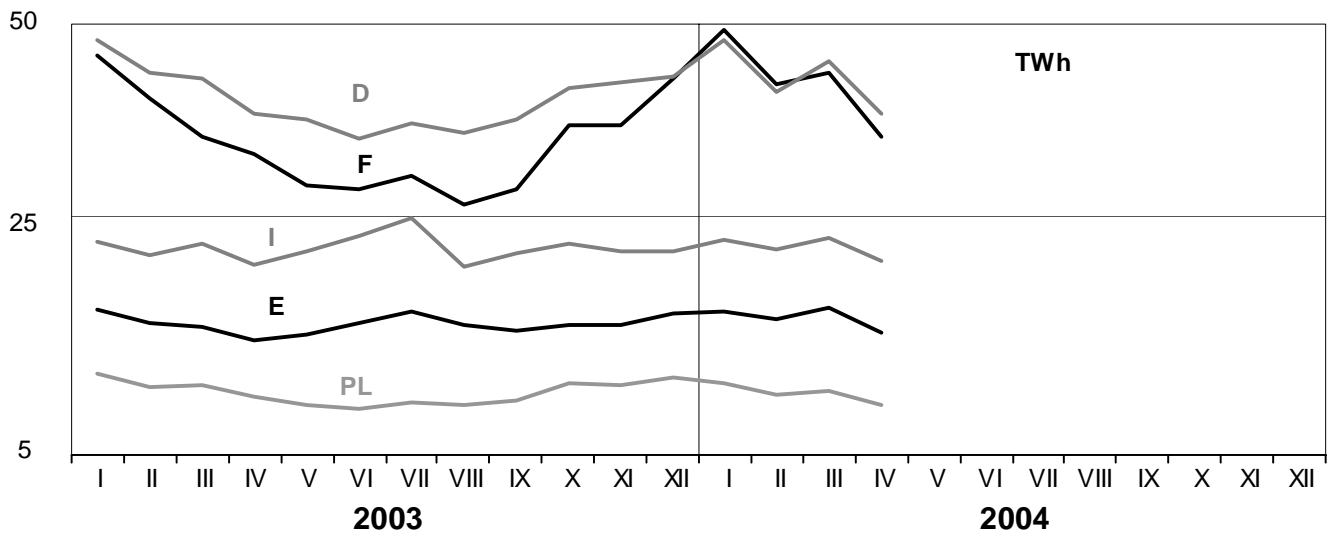
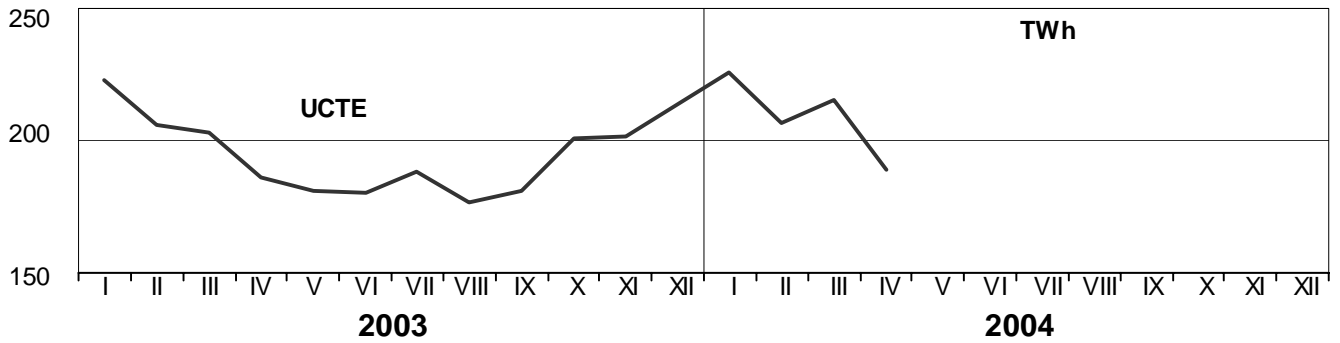
<sup>3</sup> West UA represents the so-called Burshtyn Island synchronously interconnected with UCTE

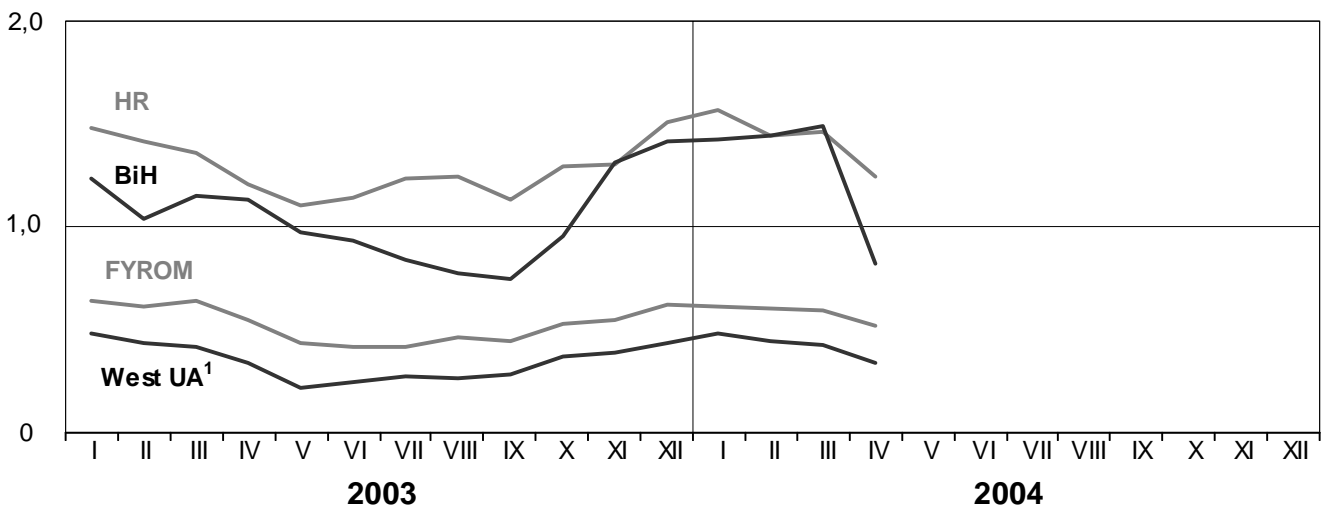
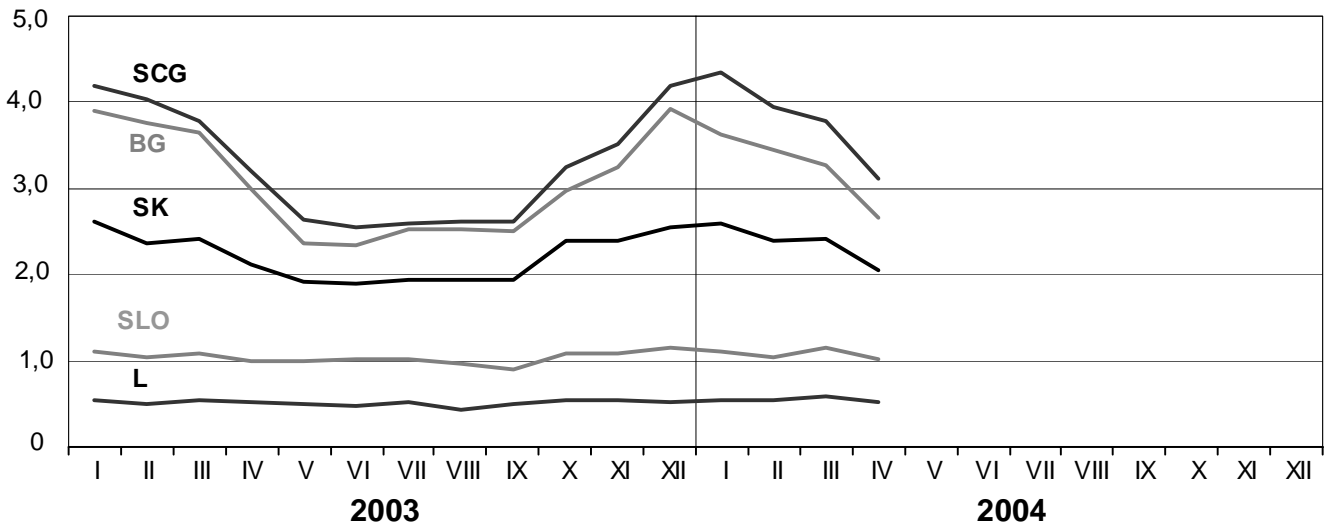
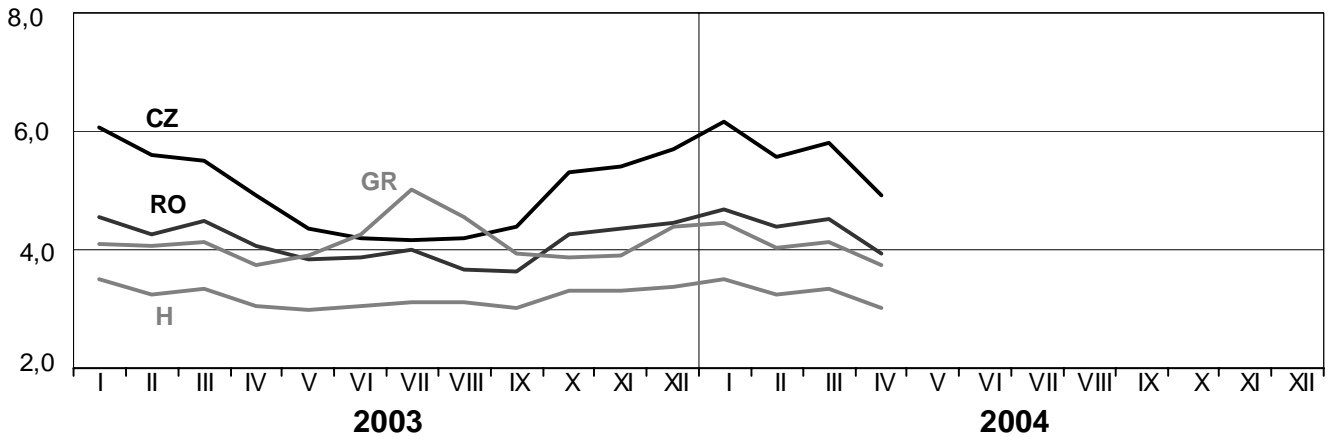
These physical energy flows were measured on the cross-frontier transmission lines (≥ 110 kV) listed in table 9 of the Statistical Yearbook. These values may differ from the official statistics and the exchange balances in chapter 1.

# 3

## Monthly consumption

April 2004



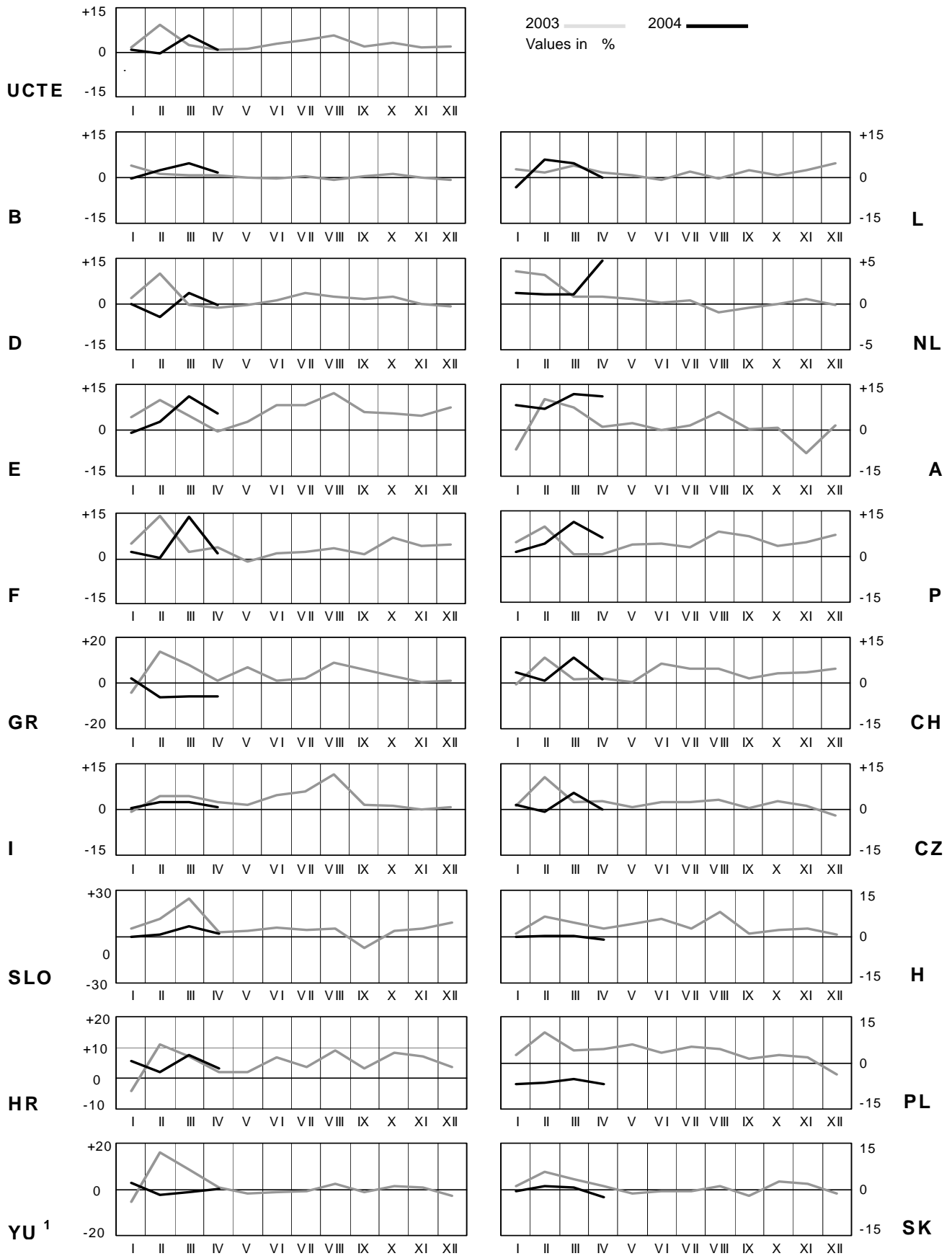


<sup>1</sup> West UA represents the so-called Burshtyn Island synchronously interconnected with UCTE

# 4

## Monthly consumption variation

April 2004

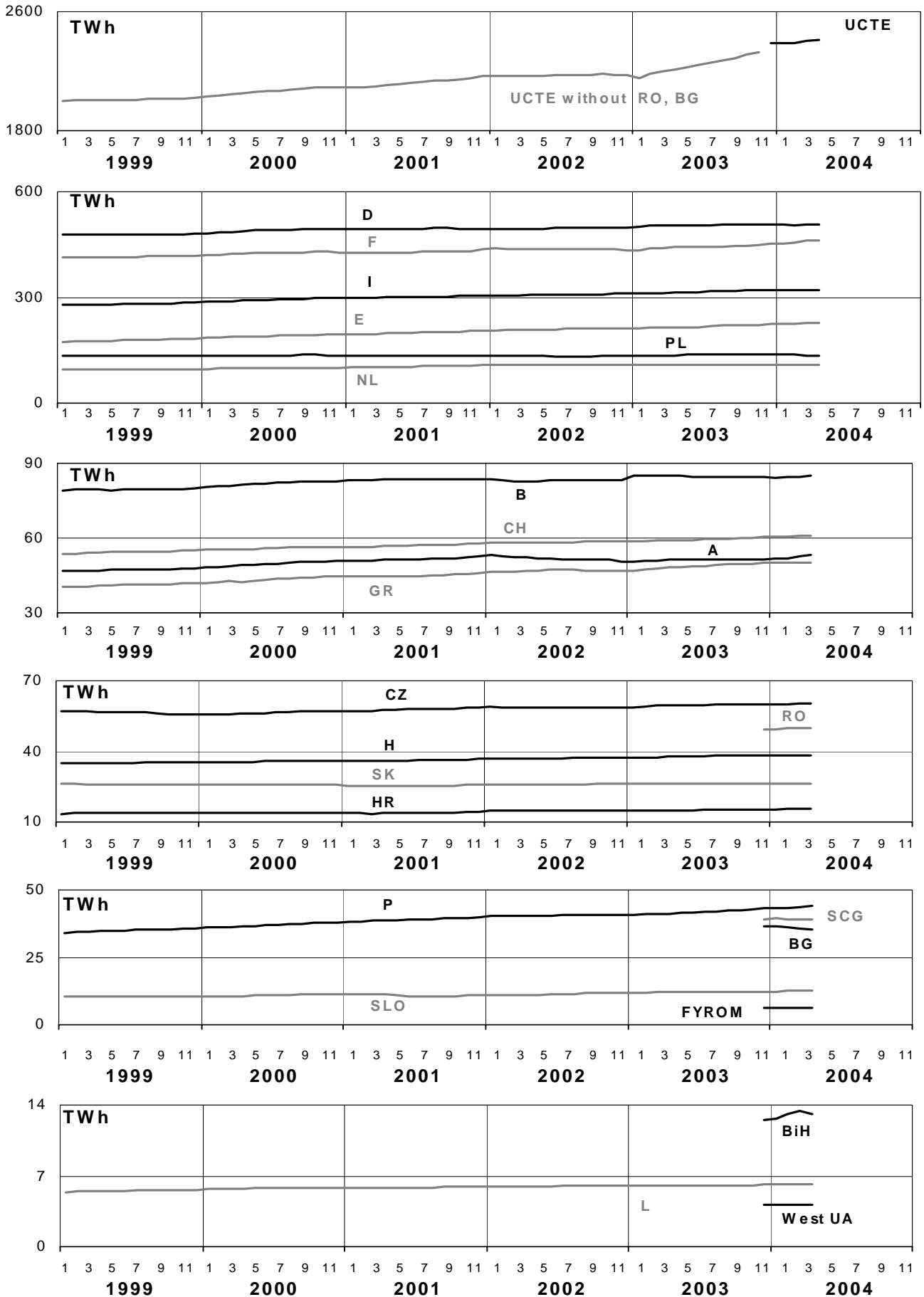


<sup>1</sup>YU = FRY + FYROM (Federal Republic of Yugoslavia and former Yugoslav Republic of Macedonia)

# 5

## Consumption of the last 12 months

April 2004

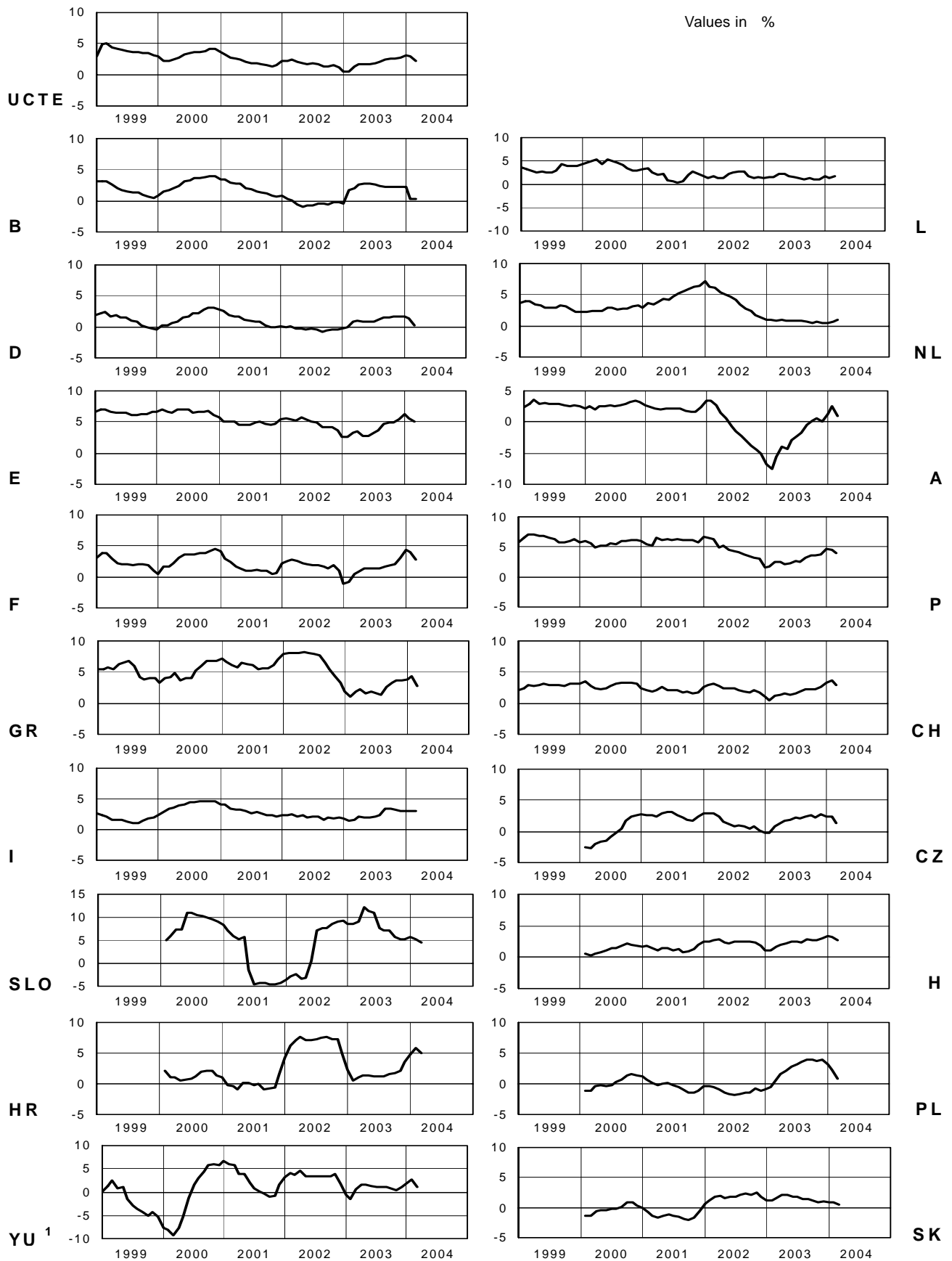




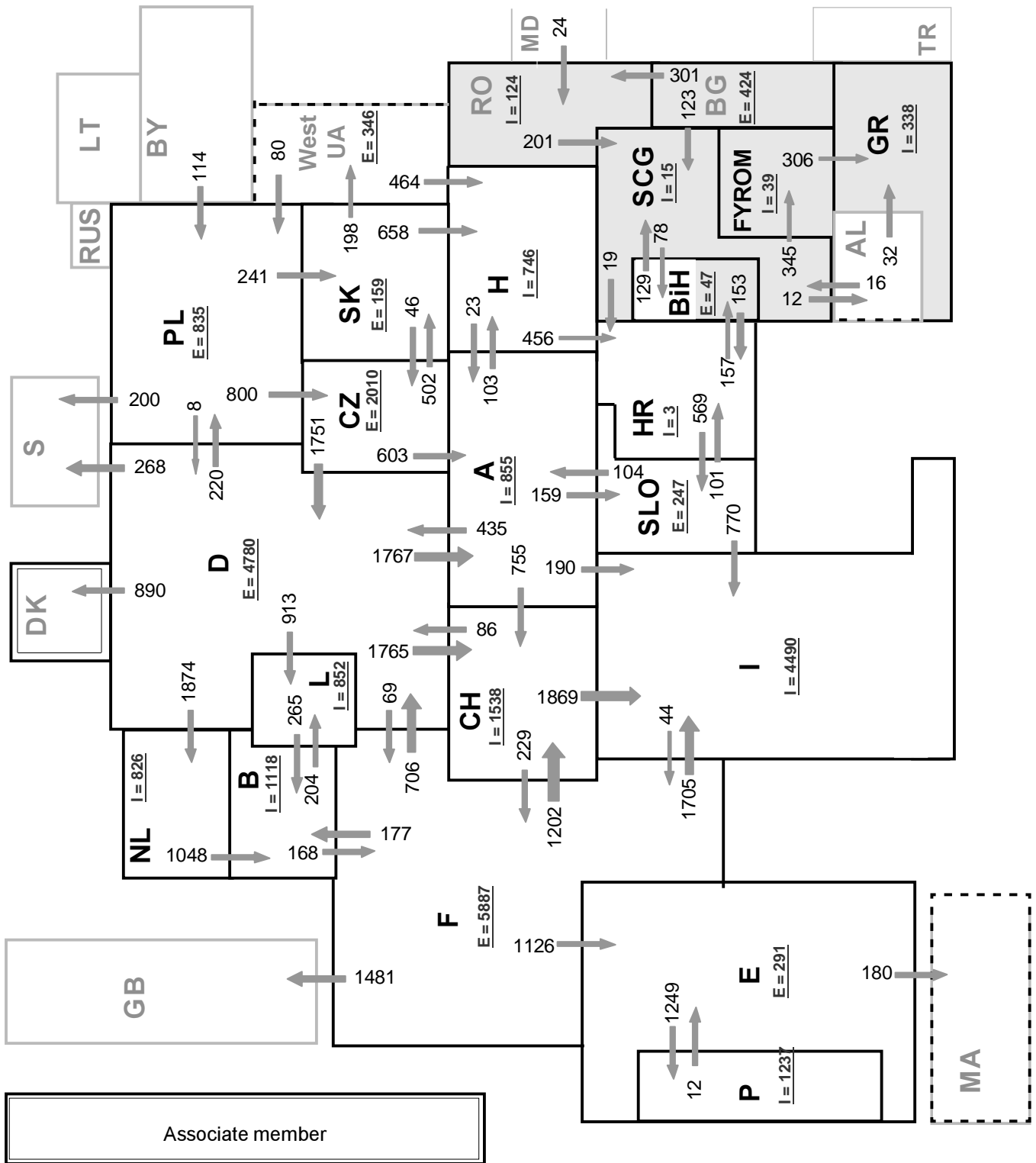
# 6

## Variation of the last 12 months' consumption

April 2004



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



**Sum of load flows in MW:**

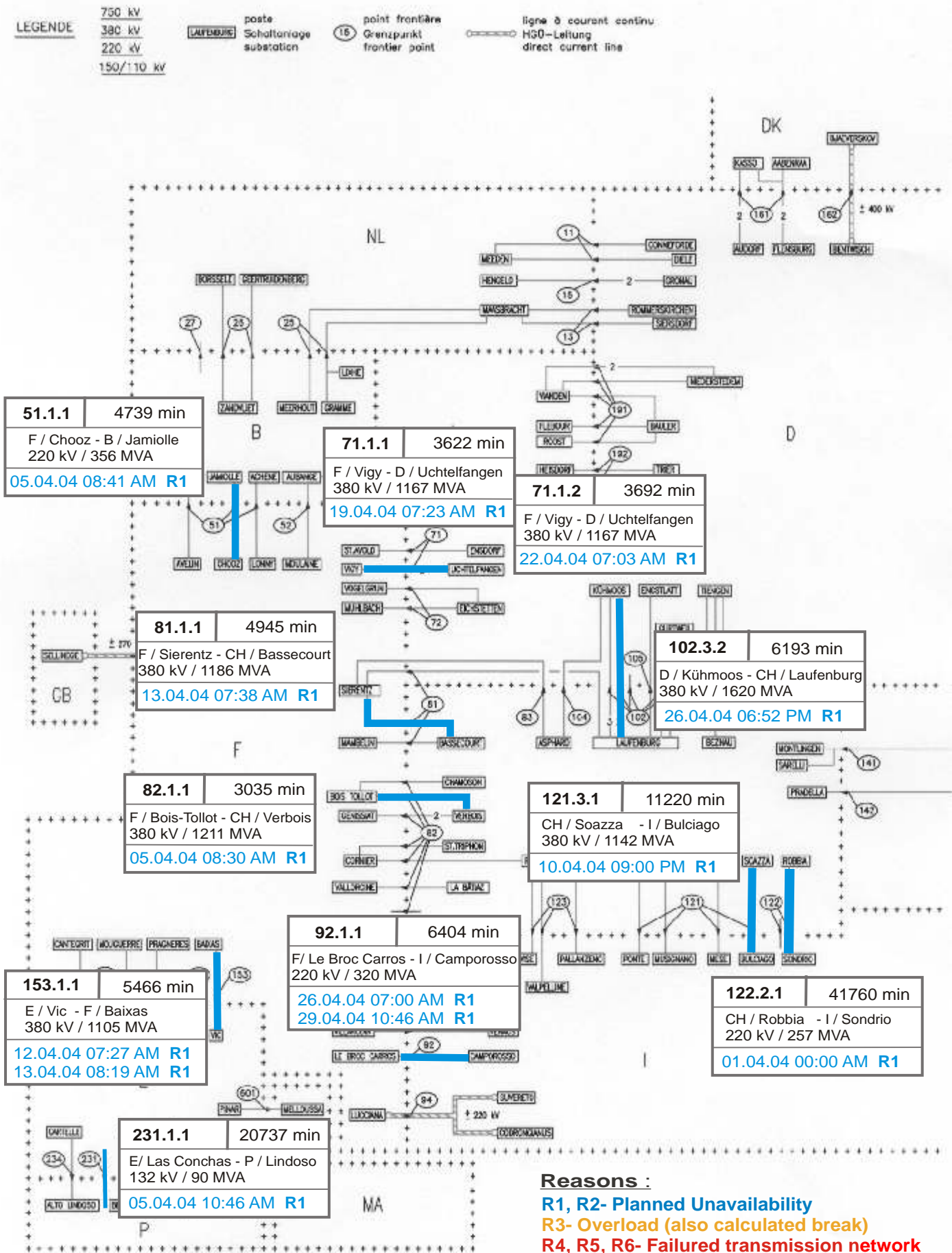
**UCTE = 26784MW      Total = 30743MW**

\* Central European Time ( CET )

**I** = Import balance

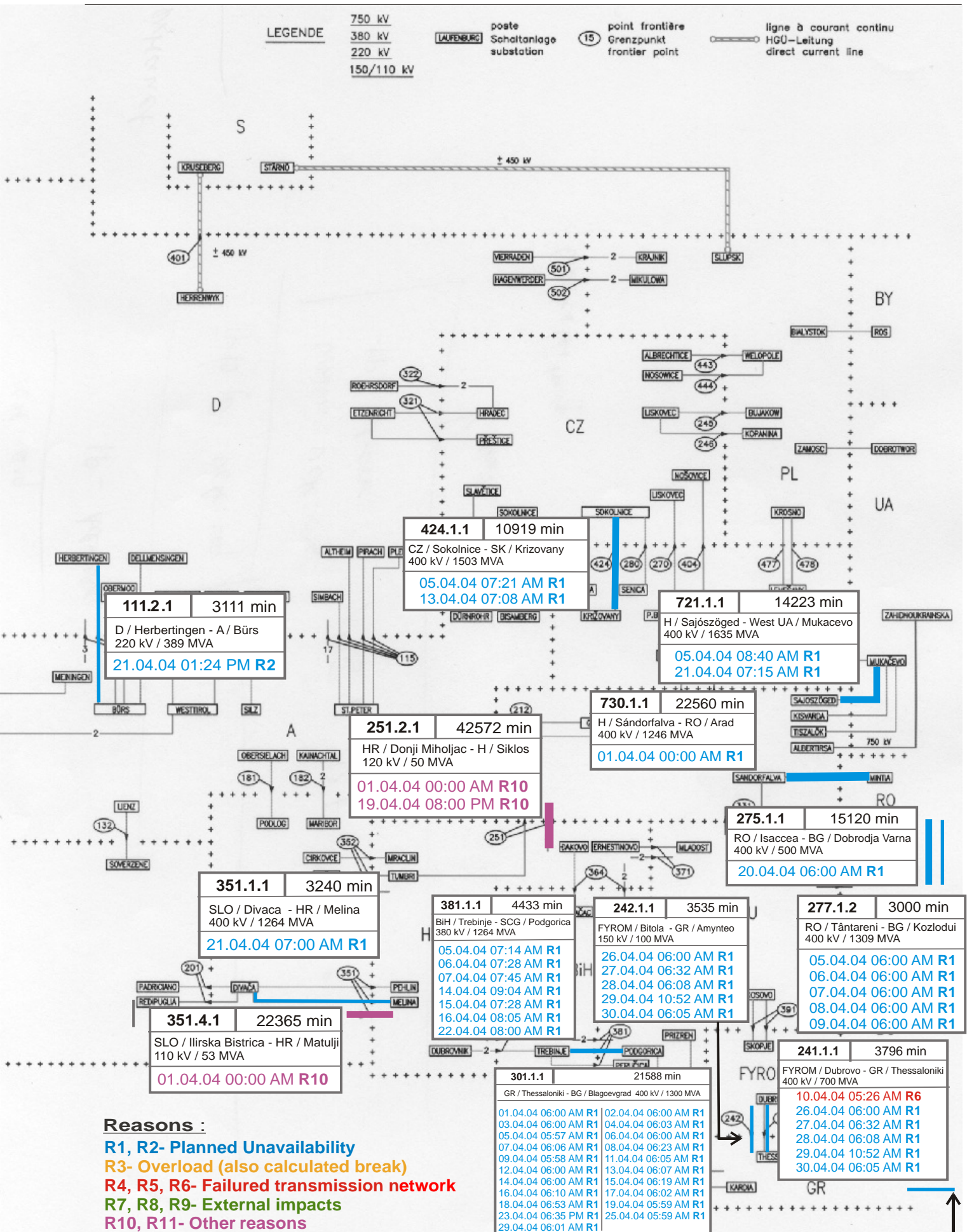
**E** = Export balance





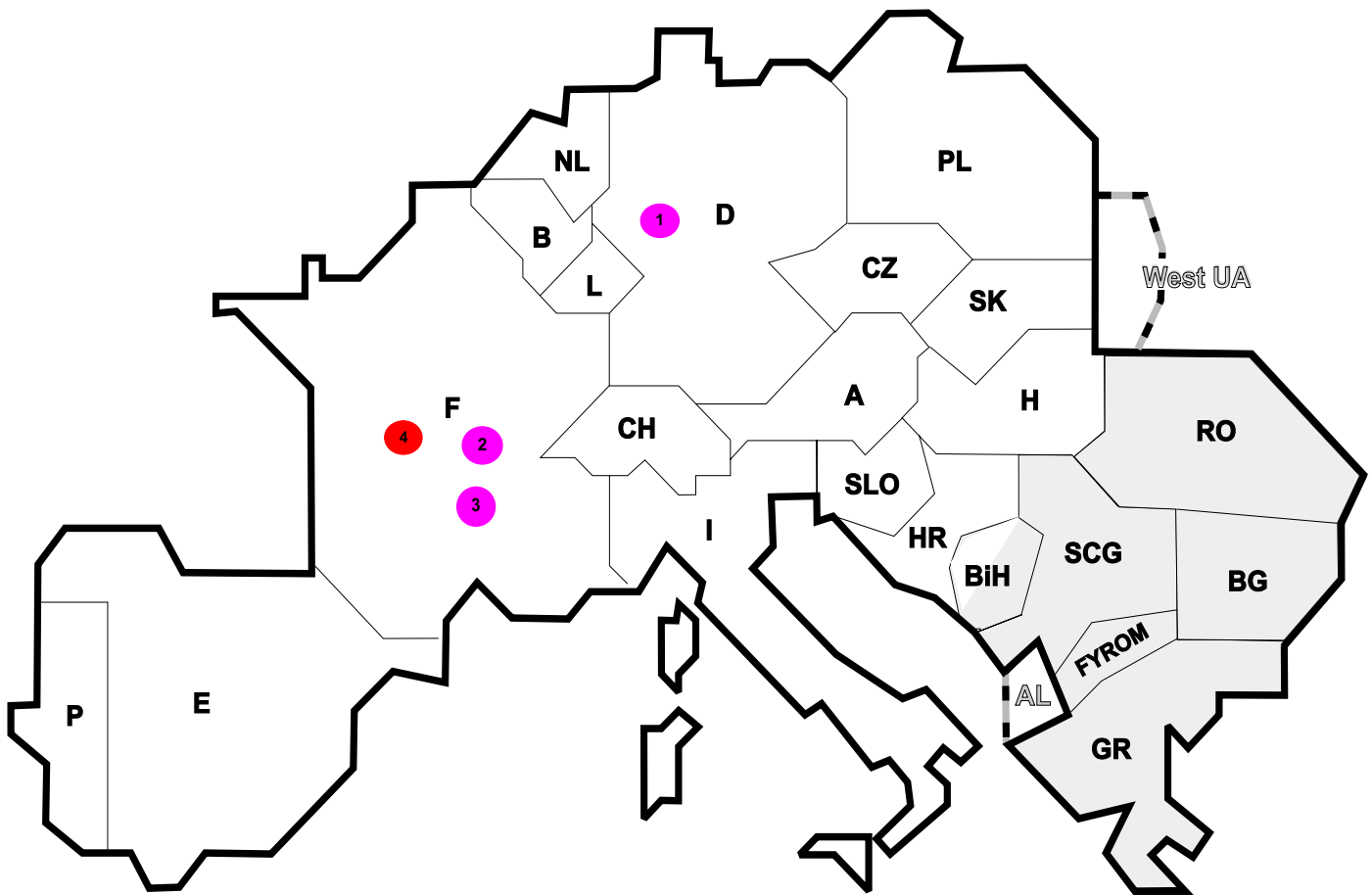
**Reasons :**

- 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
- R3- Overload (also calculated break)
- R4, R5, R6- Failed transmission network
- R7, R8, R9- External impacts
- 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	Herne	R9	871	260	201	0,88
2	F	Hotel DIEU	R9	64	92	42	0,07
3	F	Nanterre	R9	19	32	37	0,02
4	F	Argenteuil	R5	9	40	33	0,01

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

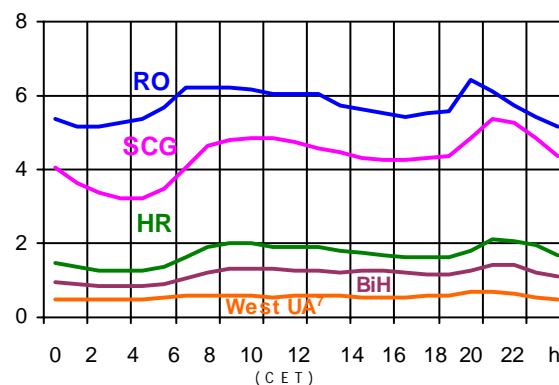
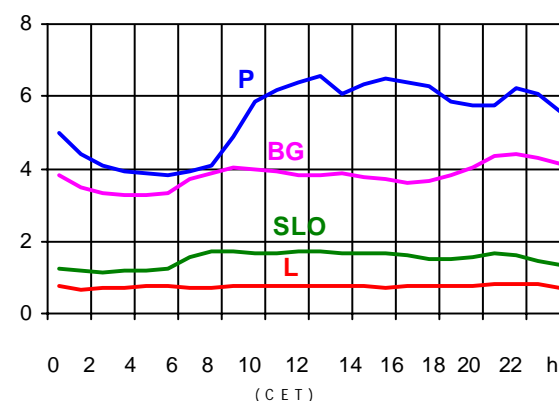
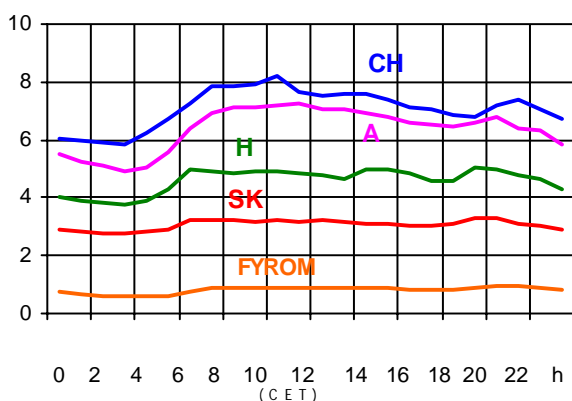
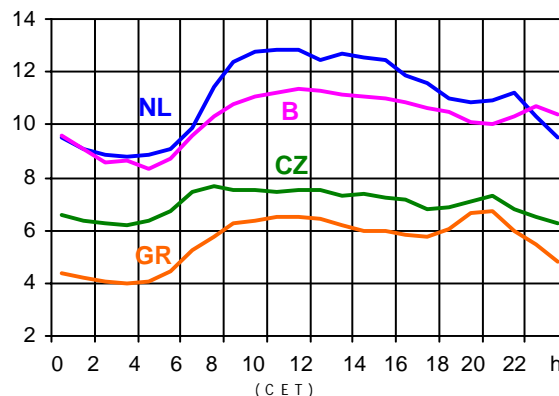
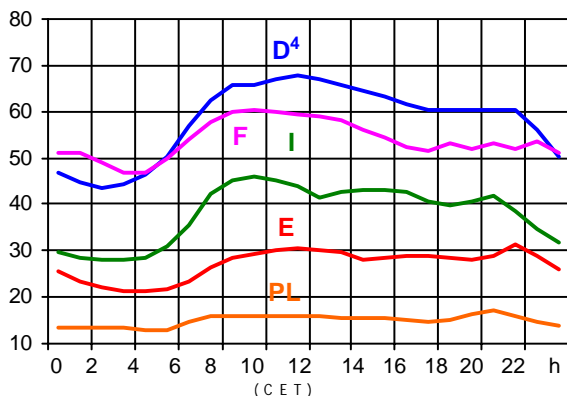
Control area	Prog_exp	Prog_imp	Prog_exp3	Prog_imp3	Prog_exp11	Prog_imp11
B	624838	1301144	592	1625	503	1766
D	3432825	2445949	5386	3560	3110	4235
E	1235086	579461	1488	1125	2694	823
F	7243462	2719022	10396	4458	9094	2512
GR	144900	269326	0	322	0	387
I	37150	3949531	44	4534	43	5913
SLO	721832	566543	1182	916	1065	624
HR	347769	526426	724	394	279	315
BiH	98400	214000	238	100	197	100
FYROM	500	35500	322	337	387	427
SCG	279245	403150	355	413	452	815
NL	346923	1838743	1176	1971	324	2681
A	345186	428882	387	265	829	583
P	40901	784308	0	1249	251	1191
CH	1628950	1994751	1603	3196	3602	2824
CZ	1836092	563367	2503	471	2763	1068
H	202053	899987	275	1035	257	1383
PL	1114381	90121	957	80	1847	200
SK	644685	532387	778	539	969	967
RO	0	0	0	0	0	0
BG	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
West UA <sup>1</sup>	254492	0	275	0	405	0

- 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.
- Prog\_exp: Sum of all positive values of every hour of every border
- Prog\_imp: Sum of all negative values of every hour of every border
- Prog\_exp3: Sum of all positive values the third Wednesday from 02:00 to 03:00 a.m.
- Prog\_imp3: Sum of all negative values the third Wednesday from 02:00 to 03:00 a.m.
- Prog\_exp11: Sum of all positive values the third Wednesday from 10:00 to 11:00 a.m.
- Prog\_imp11: 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<sup>1</sup> on 21.04.04

Values in GW



	Peak load MW	$\Delta$ % <sup>2</sup>	Load representativity <sup>1</sup> %	Parallel power <sup>3</sup> MW
B	11366	4,3	100	9955
D	67800	1,3	91	73500
E	31178	13,0	94	31178
F	60334	3,4	100	66502
GR <sup>6</sup>	6696	-2,1	99	6044
I	45896	-0,8	100	39025
SLO	1727	2,1	95	2103
HR	2104	2,7	100	1890
BiH	1447	4,7	99	1416
FYROM	951	0,1	100	839
SCG	5391	5,2	96	4635
L	823	-0,8	99	762
NL	12835	0,3	90	10011
A	7263	-0,5	82	7556
P	6528	9,4	93	4933
CH	8159	-0,4	100	9128
CZ	7634	-0,7	100	10029
H	5003	-2,3	100	3759
PL	17183	-7,2	100	17667
SK	3305	-4,4	100	3111
RO	6411	7,1	100	5487
BG	4378	-7,2	100	4261
<b>UCTE</b>	<b>306971</b>	<b>1,4</b>		<b>313791</b>
DK <sup>5</sup>				2170
West UA <sup>7</sup>	702	-4,0	100	977

<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> Denmark (Jutland)

<sup>6</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>7</sup> West UA represents the so-called Burshtyn Island synchronously with the UCTE





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