



## June 2002

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# 1

## Electricity supply situation of the countries

June 2002

Countries	B	D	E	F	GR	I	SLO	HR	YU <sup>4</sup>	L	NL	A	P	CH	CZ	H	PL	SK	UCTE
<b>Net production in GWh<sup>1</sup></b>																			
Hy	109	1865	2234	5674	283	5425	308	330	866	87	0	3163	488	4240	147	20	305	414	25958
Tn	3638	12462	5056	31043	-	-	370	0	0	0	324	0	0	1658	1480	931	0	1044	58006
Tc	2304	22974	10419	2133	3619	18105	384	437	2114	275	6836	421	2688	200	3374	1549	10182	620	88634
Total	6051 <sup>2</sup>	37301 <sup>2</sup>	17709 <sup>2</sup>	38850	3902 <sup>2</sup>	23530	1062	767 <sup>2</sup>	2980	362	7160 <sup>2</sup>	3584	3176 <sup>2</sup>	6098 <sup>2</sup>	5001 <sup>2</sup>	2500 <sup>2</sup>	10487 <sup>2</sup>	2078	172598 <sup>2</sup>
<b>Exchange balance in GWh</b>																			
Imp. = +	535	1202	187	-6178	329	3912	-103	319	62	237	1486	236	84	-1345	-878	390	-446	-162	-133
Exp. = -																			
<b>Consumption of pumps in GWh</b>																			
	126	485	628	588	80	899	0	12	49	112	0	122	58	373	31	0	169	20	3752
<b>Consumption in GWh<sup>1</sup></b>																			
monthly	6460	38018	17268	32084	4151	26543	959	1074	2993	487	8646	3698	3202	4380	4092	2890	9872	1896	168713
$\Delta^3$ [%]	1,7	4,3	1,1	1,0	4,9	4,0	68,5	5,2	2,8	3,4	2,5	-8,0	1,3	2,2	-2,5	4,9	1,3	0,7	2,5
last 12 months	82956	496942	209334	438140	47192	308661	11238	14823	44909	6016	109028	51613	40405	58333	58257	36987	133287	25907	2174028
$\Delta^3$ [%]	-0,7	0,4	4,9	2,3	8,0	2,6	6,2	7,4	3,5	3,0	4,9	-1,5	4,2	2,4	0,8	2,5	-1,5	1,8	2,0
<b>Energy capability factor</b>																			
	-	0,95	-	-	0,39	0,96	1,02	0,84	0,73	-	-	-	0,58	1,15	-	-	-	1,00	1,0

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

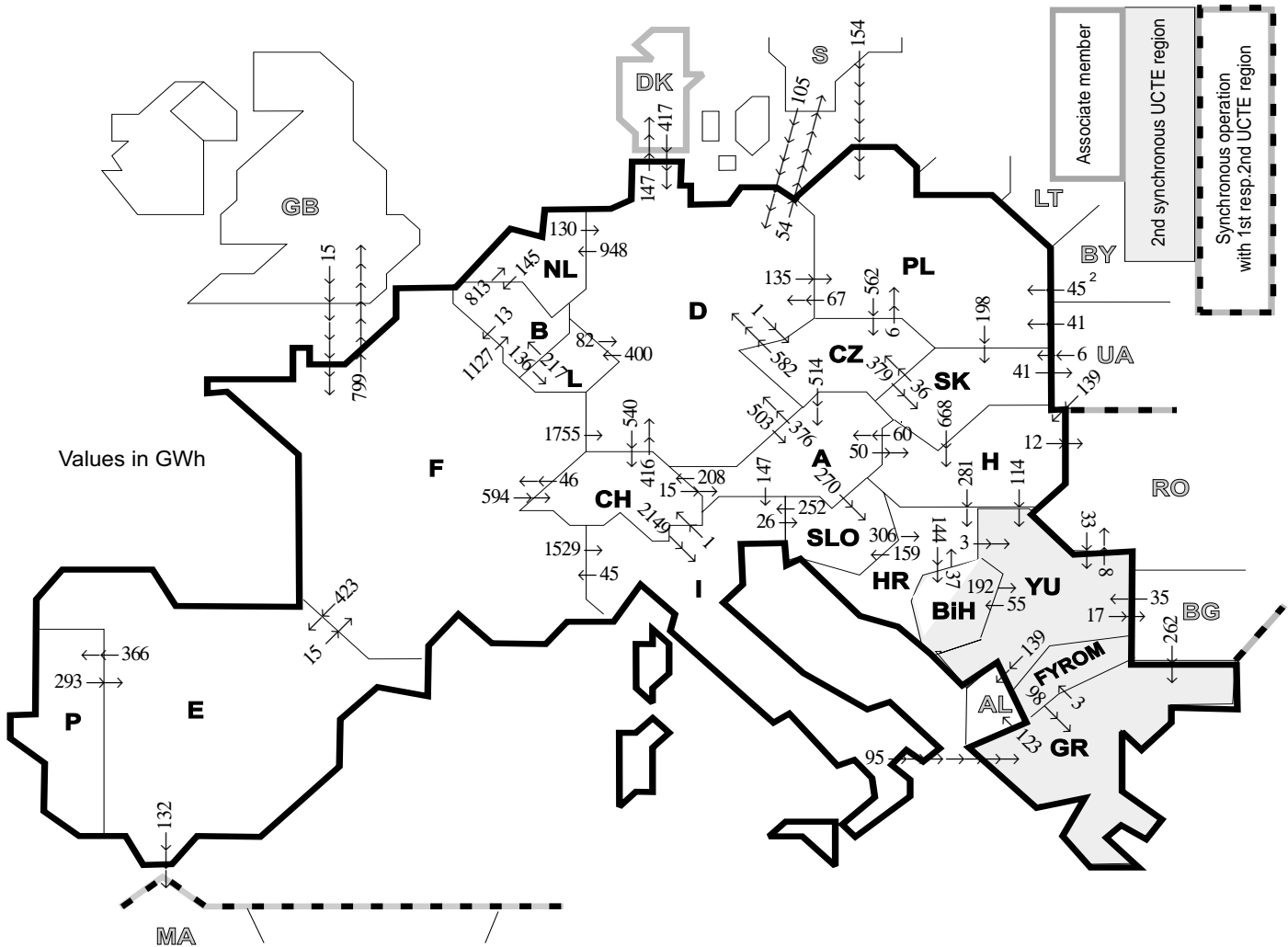
Countries	B	D	E	F	GR <sup>6</sup>	I	SLO	HR	YU	L	NL	A	P	CH	CZ	H	PL	SK
Production	100	93	94	97	91	100	95	100	96	98	100	84	91	100	100	100	100	100
Consumption	100	93	94	97	91	100	95	100	96	99	100	90	91	100	100	100	100	100

<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> YU = FRY + FYROM (Federal Republic of Yugoslavia and Former Yugoslav Republic of Macedonia)

<sup>5</sup> The representativity of data referring to the whole country including the isolated systems of the Greek island is 91%. The representativity of data referring to the mainland interconnected system is 98%.



Exporting countries	Importing countries																				Σ Export
	B	D	E	F	GR	I	SLO	HR	BiH	YU	L	NL	A	P	CH	CZ	H	PL	SK	III <sup>1</sup>	
B	-	-	-	13	-	-	-	-	-	-	136	813	-	-	-	-	-	-	-	-	962
D	-	-	-	0	-	-	-	-	-	-	400	948	503	-	540	1	-	135	-	201	2728
E	-	-	-	15	-	-	-	-	-	-	-	-	-	366	-	-	-	-	-	132	513
F	1127	1755	423	-	1529	-	-	-	-	-	-	-	-	-	594	-	-	-	-	-	799
GR	-	-	-	-	0	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	126
I	-	-	-	45	95	26	-	-	-	-	-	-	0	-	1	-	-	-	-	-	167
SLO	-	-	-	-	-	252	306	-	-	-	-	-	0	-	-	-	-	-	-	-	558
HR	-	-	-	-	-	-	159	144	3	-	-	-	-	-	-	-	0	-	-	-	306
BiH	-	-	-	-	-	-	37	192	-	-	-	-	-	-	-	-	-	-	-	-	229
YU	-	-	-	-	98	-	0	55	-	-	-	-	-	-	-	-	0	-	-	164	317
L	217	82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	299
NL	145	130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	275
A	-	376	-	-	-	147	270	-	-	-	-	-	-	-	208	0	50	-	-	-	1051
P	-	-	293	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	293
CH	-	416	-	46	-	2149	-	-	-	-	15	-	-	-	-	-	-	-	-	-	2626
CZ	-	582	-	-	-	-	-	-	-	-	-	514	-	-	-	-	-	6	379	-	1481
H	-	-	-	-	-	-	-	281	-	114	-	-	-	60	-	-	-	-	0	12	467
PL	-	67	-	-	-	-	-	-	-	-	-	-	-	-	-	562	-	-	198	0	827
SK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36	668	0	-	41	745
III <sup>1</sup>	-	522	0	15	262	-	-	-	-	68	-	-	-	-	-	-	139	240	6	-	1252
<b>Σ Import</b>	<b>1489</b>	<b>3930</b>	<b>716</b>	<b>134</b>	<b>455</b>	<b>4077</b>	<b>455</b>	<b>624</b>	<b>199</b>	<b>380</b>	<b>536</b>	<b>1761</b>	<b>1092</b>	<b>366</b>	<b>1343</b>	<b>599</b>	<b>857</b>	<b>381</b>	<b>583</b>	<b>1472</b>	<b>21449</b>

Sum of physical energy flows between UCTE countries = 18725 GWh

Total physical energy flows = 21449 GWh

<sup>1</sup> III = Third countries: Albania, Belarus, Bulgaria, Denmark, Great Britain, Morocco, Rumania, Sweden and Ukraine

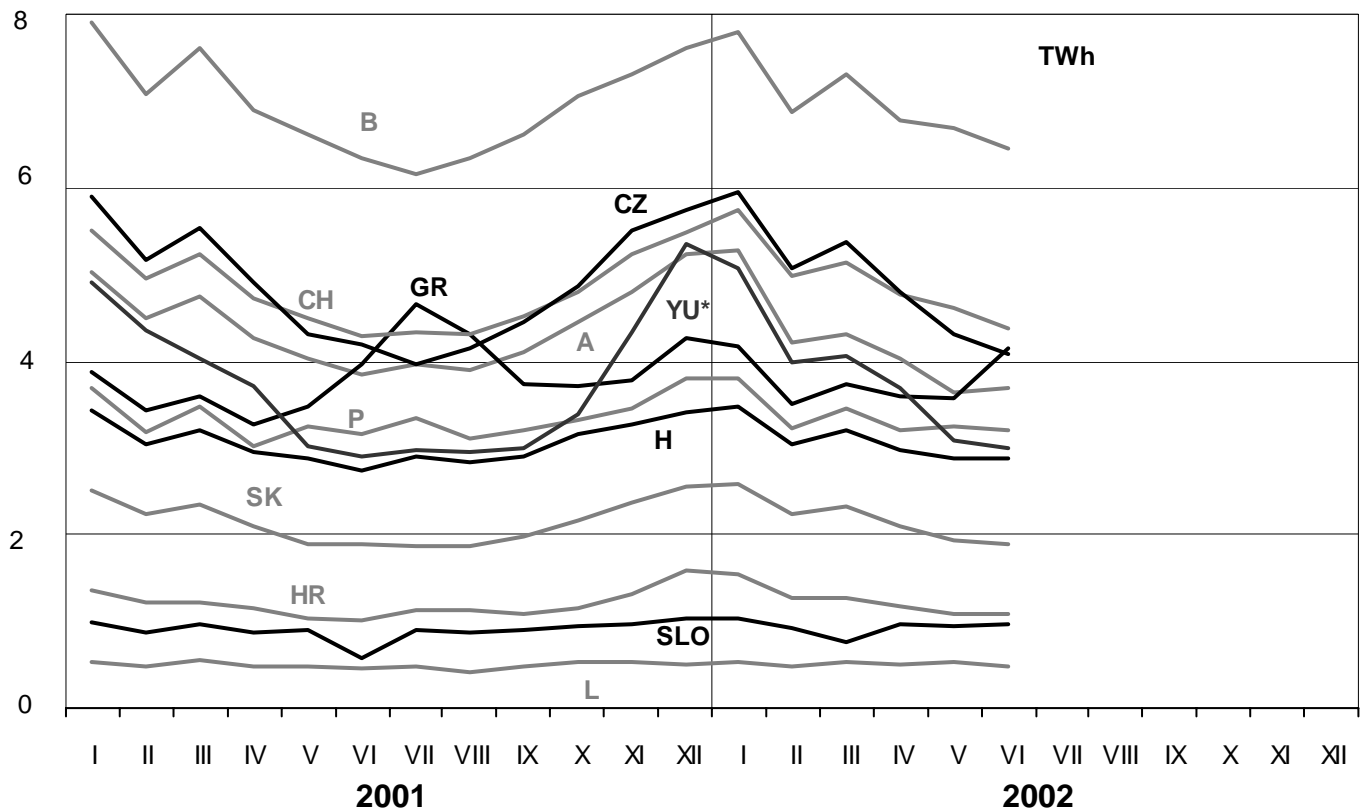
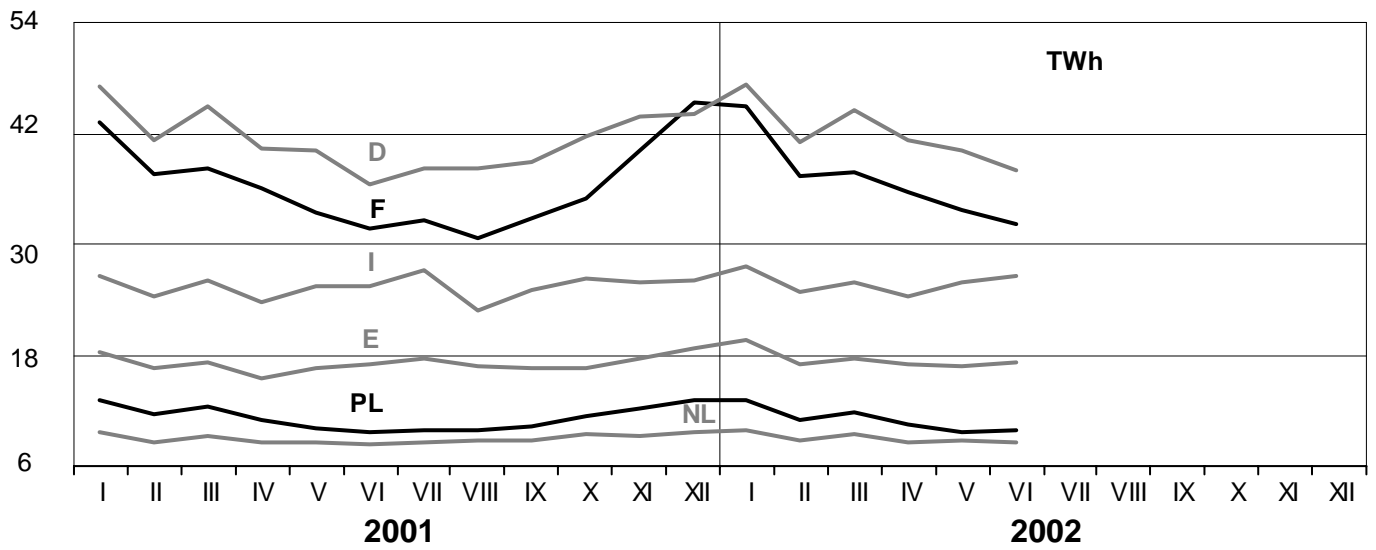
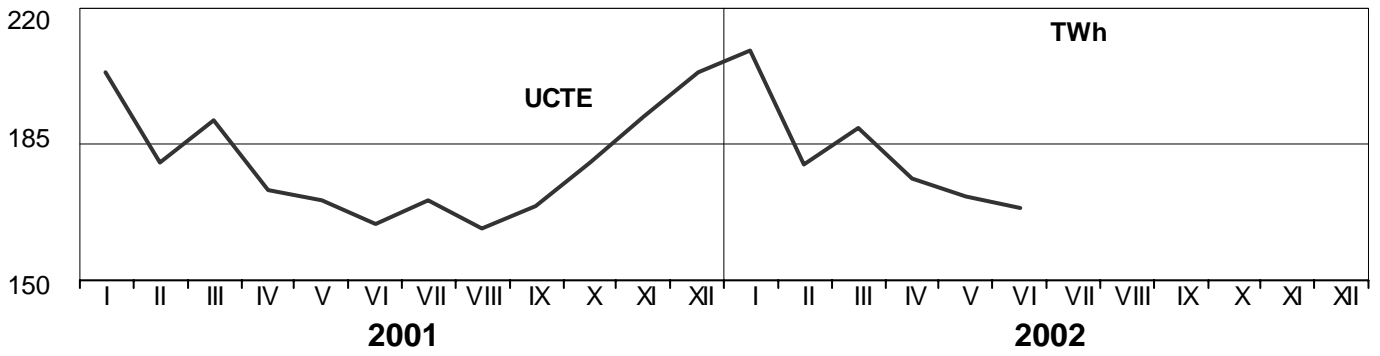
<sup>2</sup> Corresponds to the supply of a passive island in Poland with BY.

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.

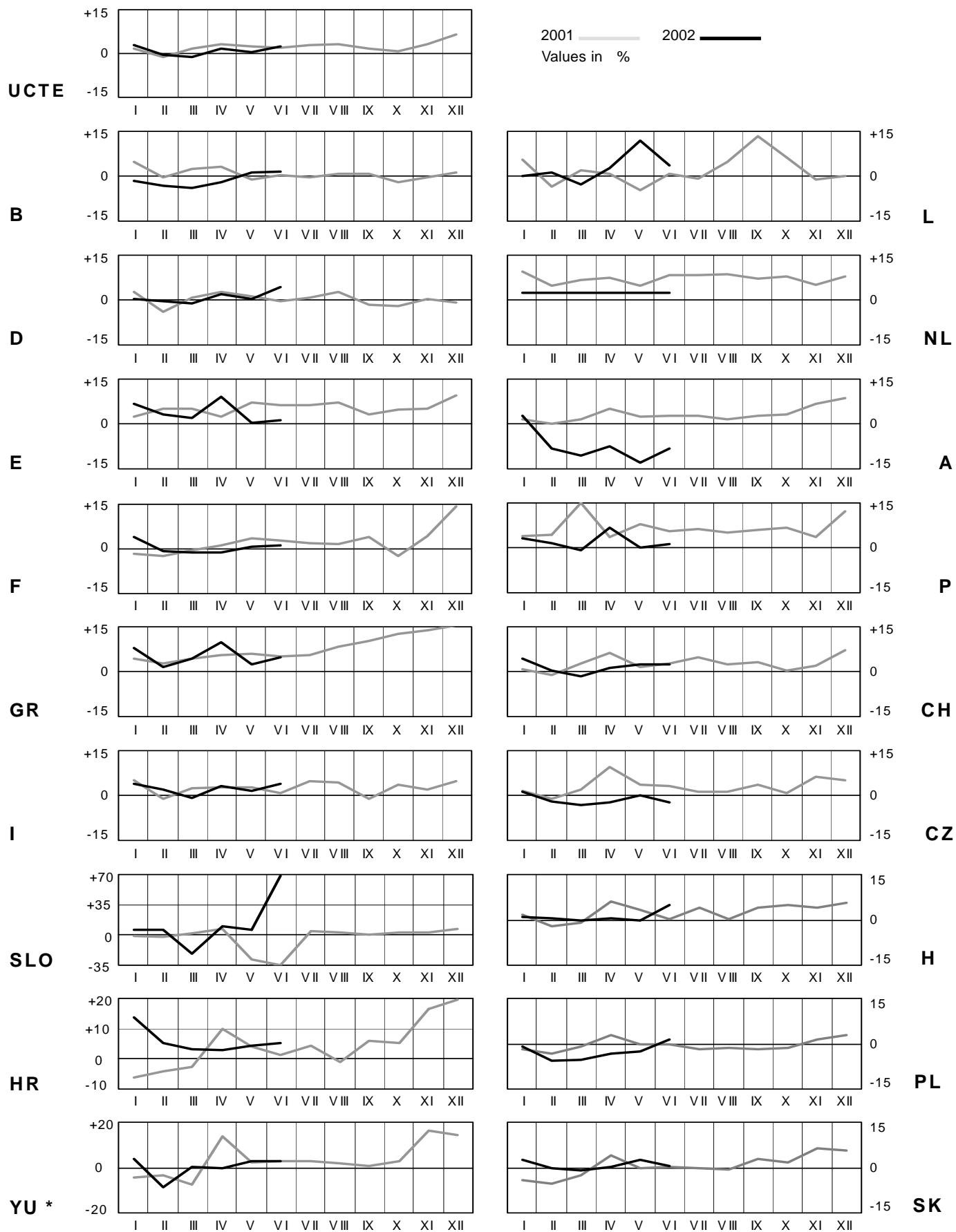
# 3

## Monthly consumption

June 2002



\* YU = FRY + FYROM (Federal Republic of Yugoslavia and Former Yugoslav Republic of Macedonia)

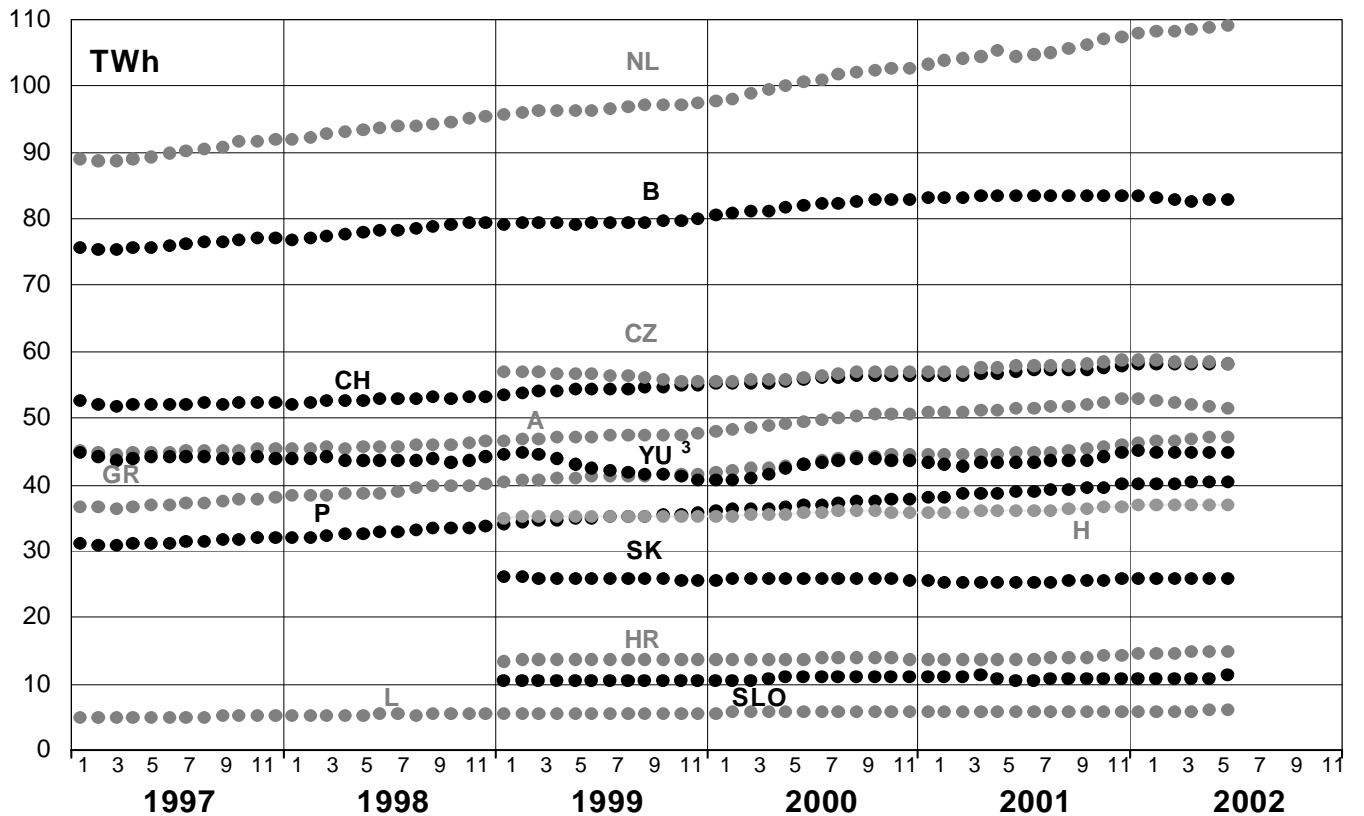
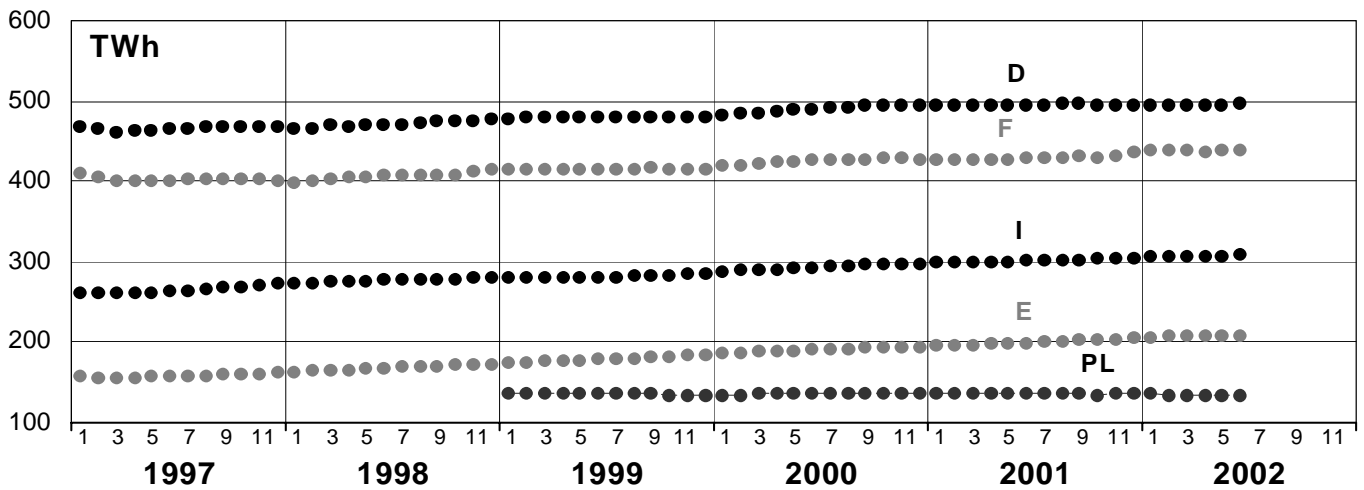
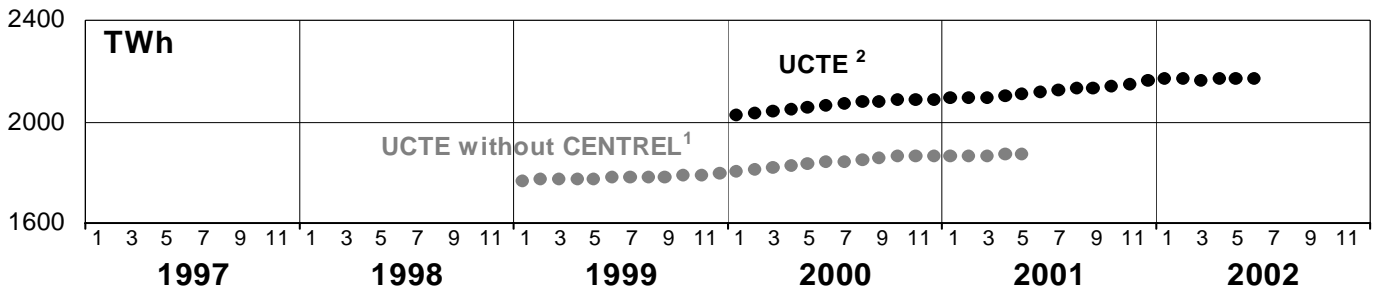


\* YU = FRY + FYROM (Federal Republic of Yugoslavia and Former Yugoslav Republic of Macedonia)

# 5

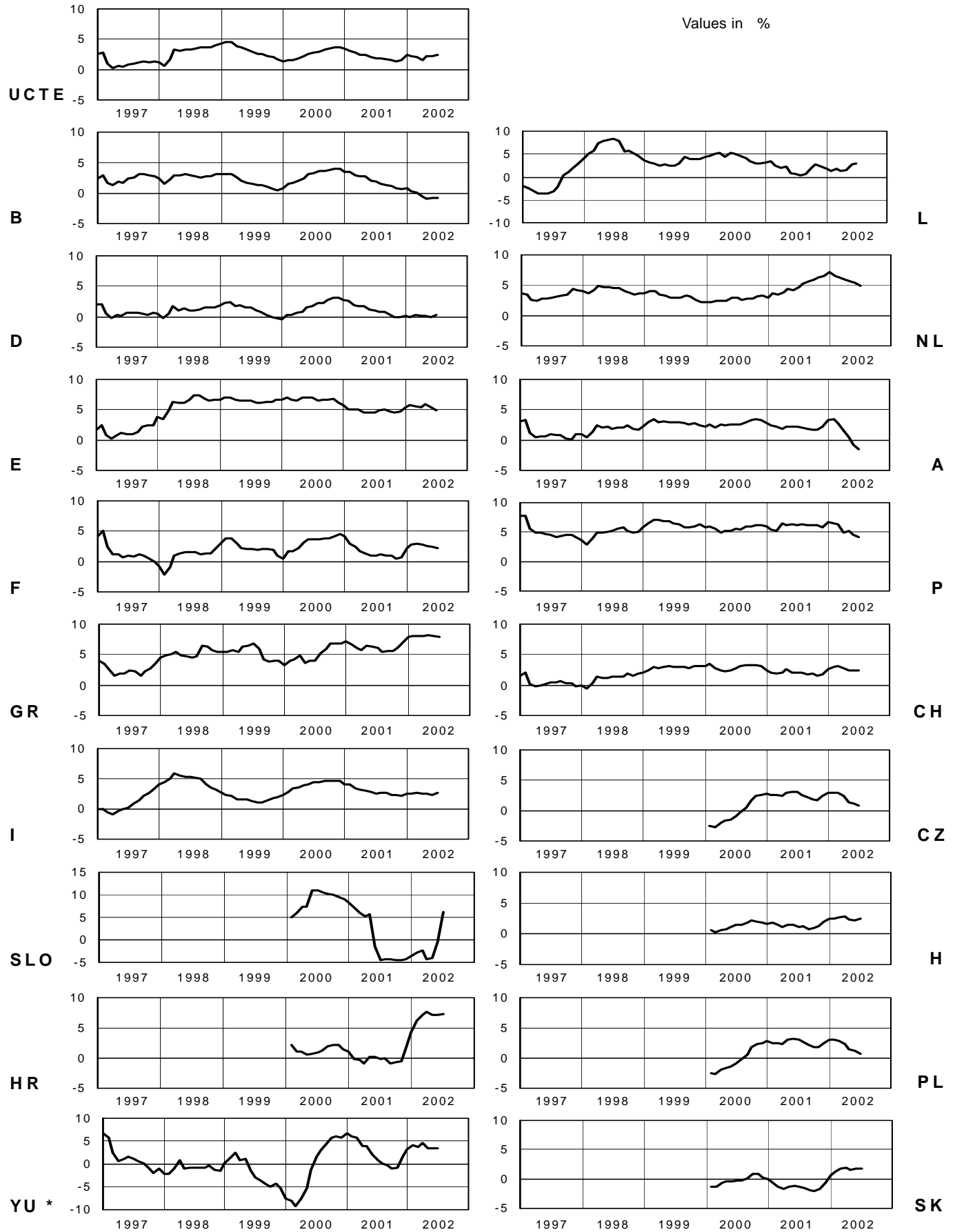
## Consumption of last 12 months

June 2002



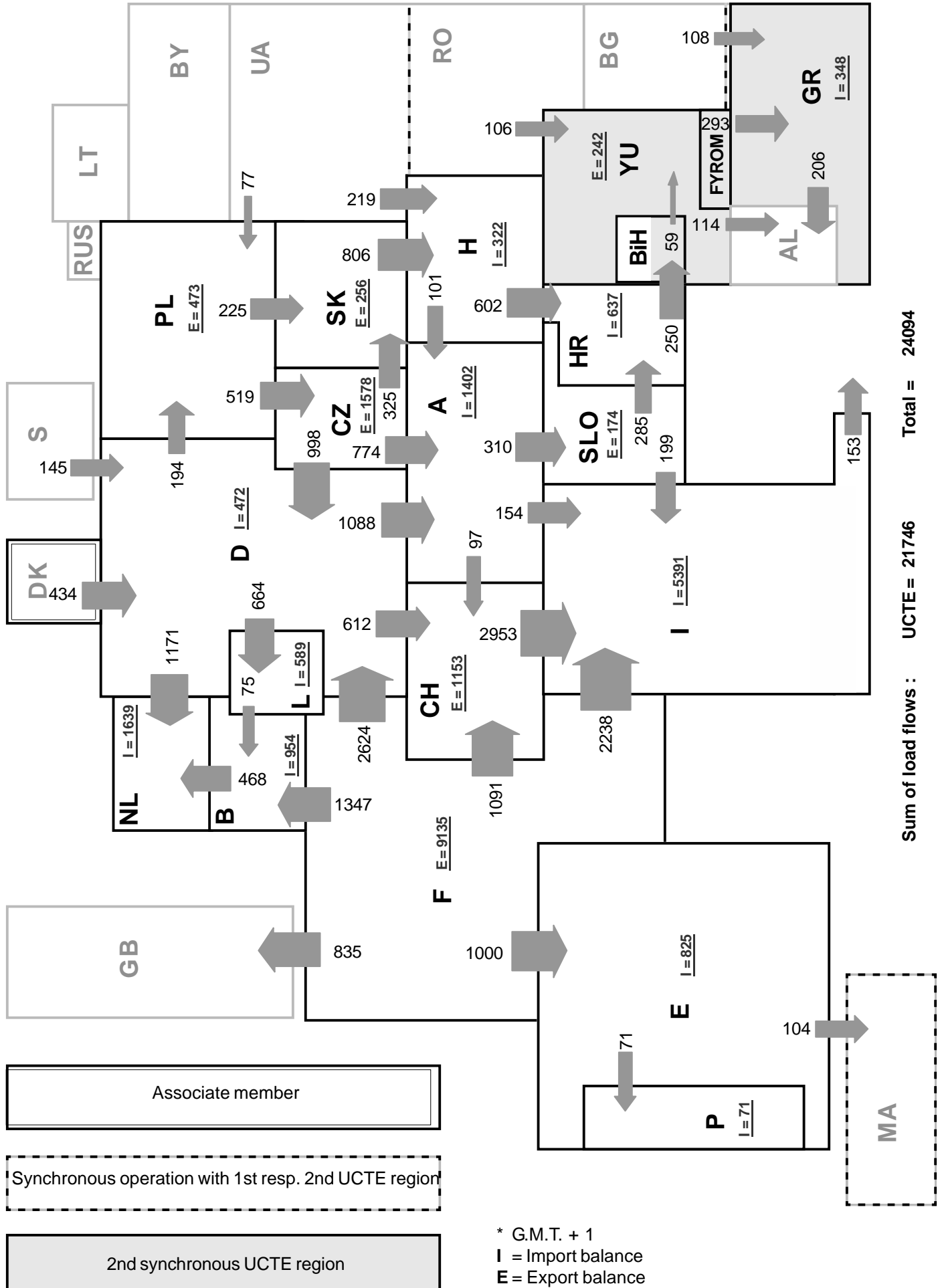
<sup>1</sup> CENTREL countries CZ, H, PL, SK member of UCTE from May 2001

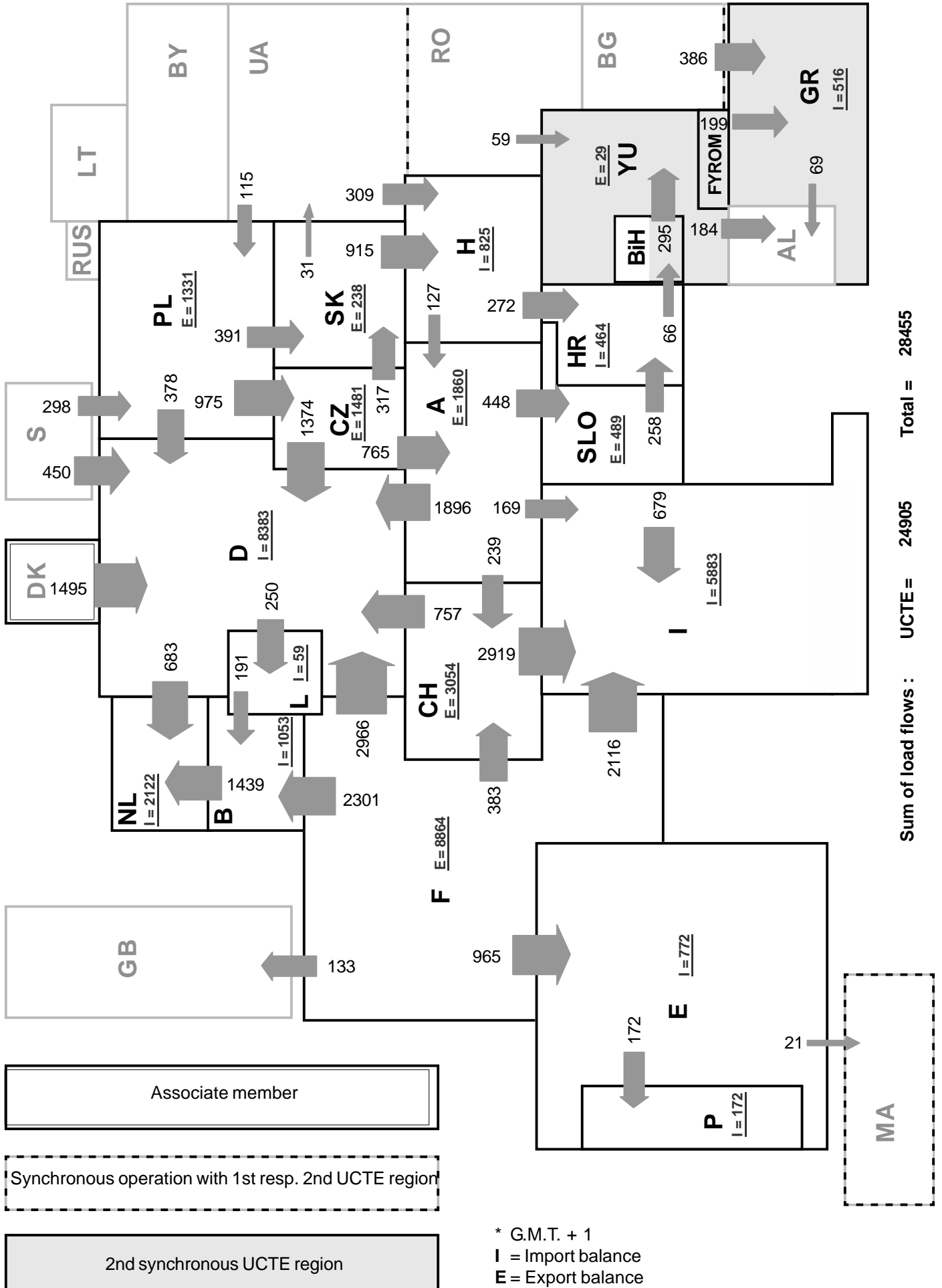
<sup>2</sup> YU = FRY + FYROM (Federal Republic of Yugoslavia and Former Yugoslav Republic of Macedonia)

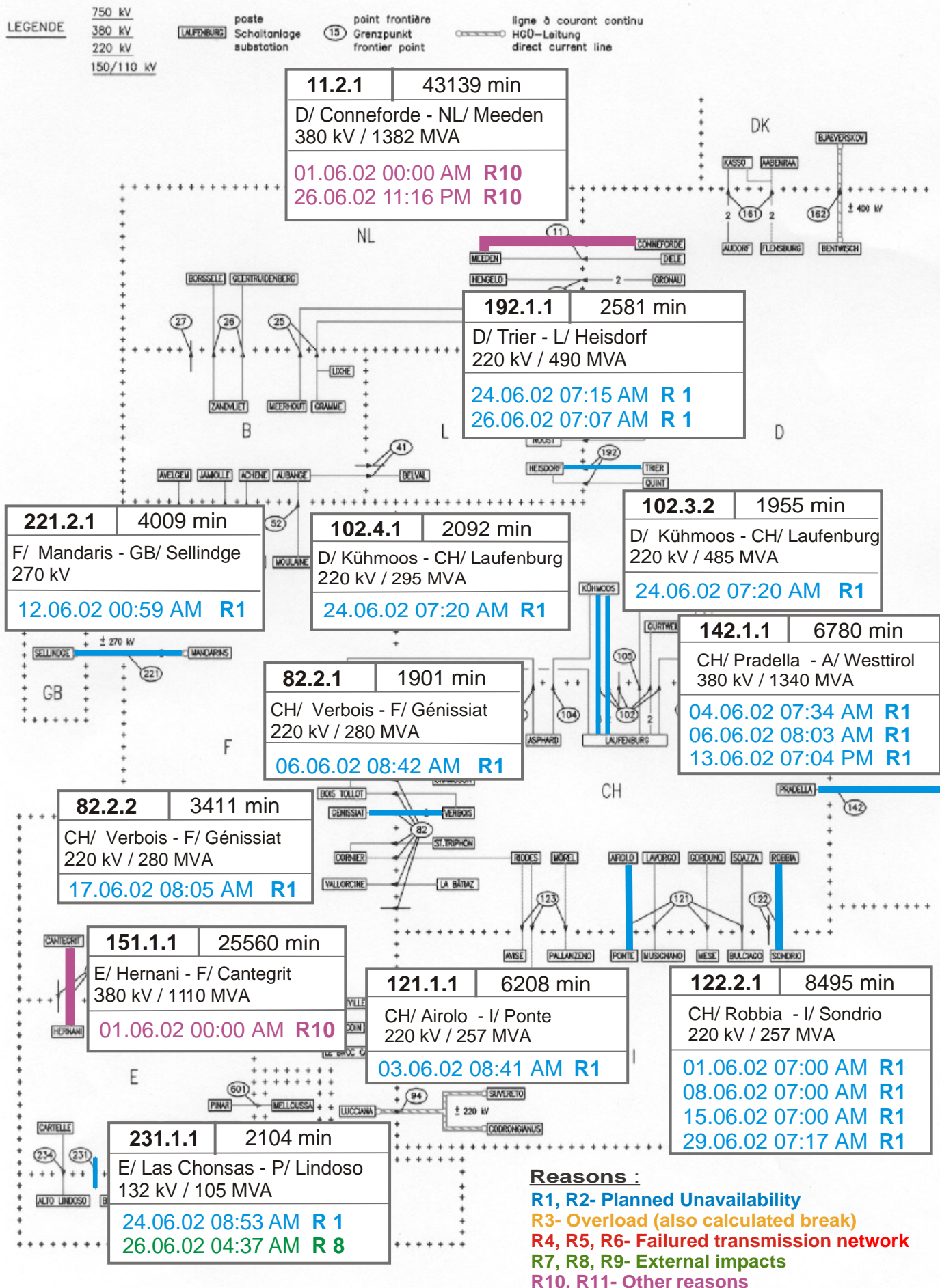


\* YU = FRY + FYROM (Federal Republic of Yugoslavia and Former Yugoslav Republic of Macedonia)









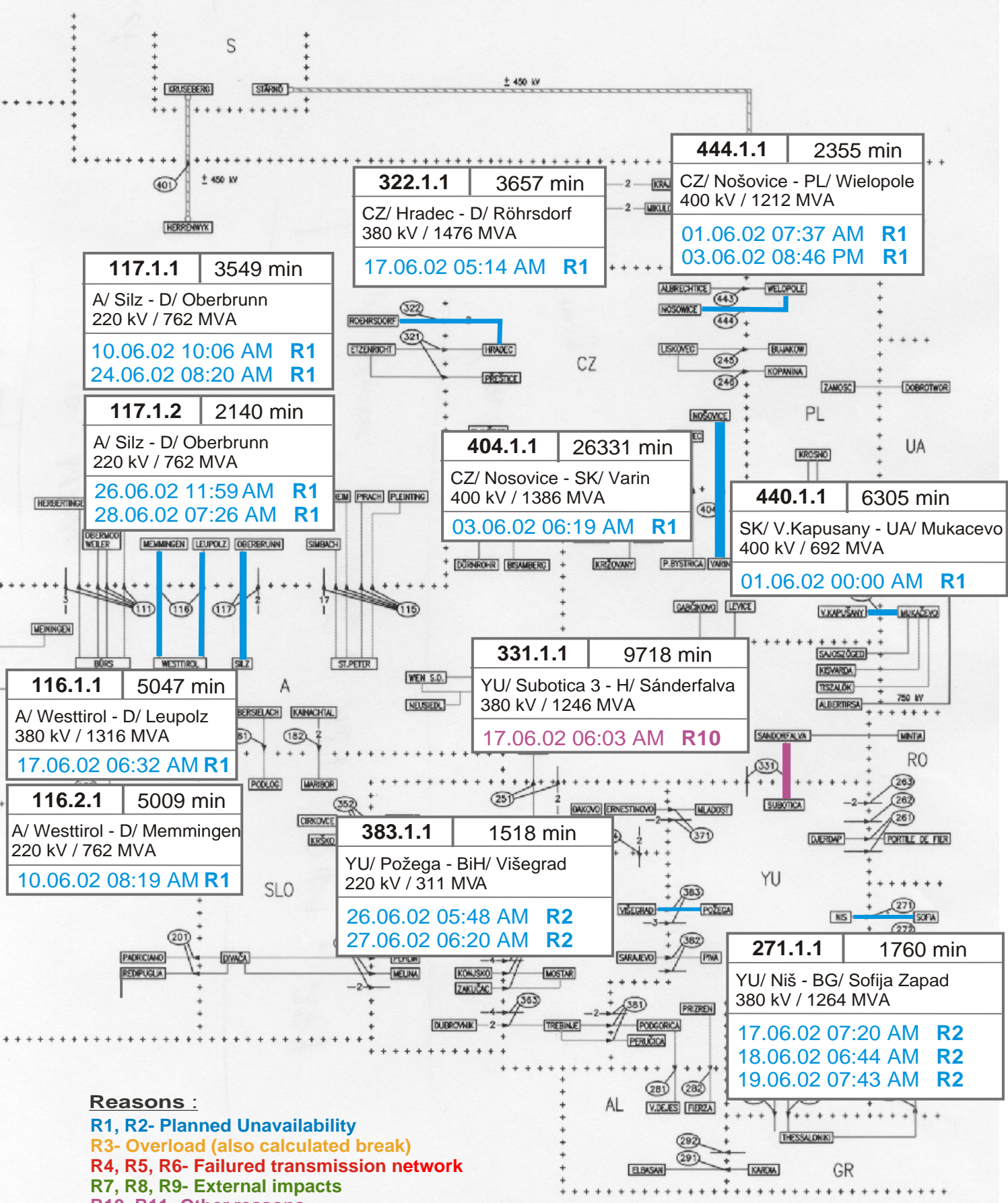
LEGENDE

750 kV  
380 kV  
220 kV  
150/110 kV

LAUFENBURG  
poste  
Schaltanlage  
substation

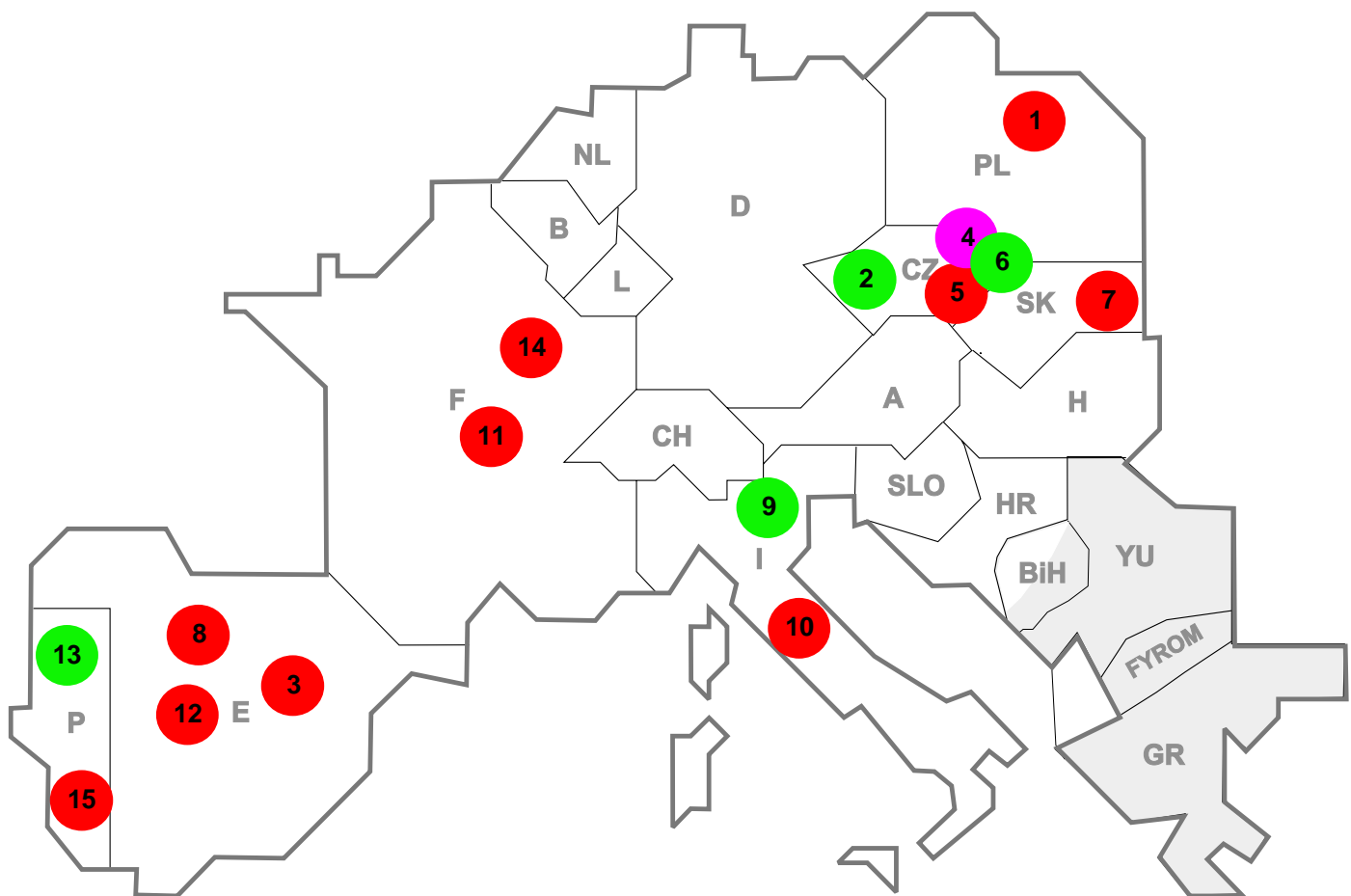
point frontière  
Grenzpunkt  
frontier point

ligne à courant continu  
HGÜ-Leitung  
direct current line



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:

**R3**      **Overload**

**R7, R8, R9**      **External impacts (animals...)**

**R4, R5, R6**      **Failure in the transmission network**

**R10, R11**      **Other reasons**

nbr	Country	Substation	Reason	Energie not supplied [ MWh ]	Total loss of power [ MW ]	Restoration time [ min ]	Equivalent time of interruption <sup>1</sup>
1	PL	Slupsk	R6	130	600	26	2,37
2	CZ	Hradec	R8	85	294	93	2,65
3	E	Loeches	R6	58	0	19	0,00
4	CZ	Cechy Stred	R10	51	167	24	1,51
5	CZ	Mirovka	R6	37	0	20	0,00
6	CZ	Tynec	R8	36	0	19	0,00
7	SK	Sucany	R6	34	218	44	4,42
8	E	Tordesillas	R6	29	0	20	0,00
9	I	Sorgente	R8	15	358	5	0,61
10	I	S.Giacomo	R6	8	124	4	0,21
11	F	Saint Ouen	R4	7	37	16	0,04
12	E	Morata	R6	5	0	10	0,00
13	P	Lavos	R7	3	0	9	0,00
14	F	Buttes Chaumont	R6	2	43	5	0,05
15	P	Santarem	R5	1	0	2	0,00

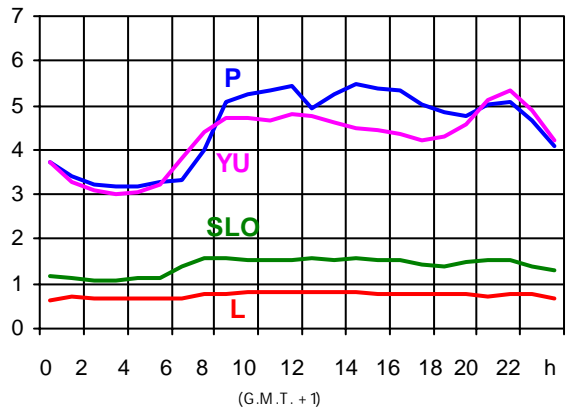
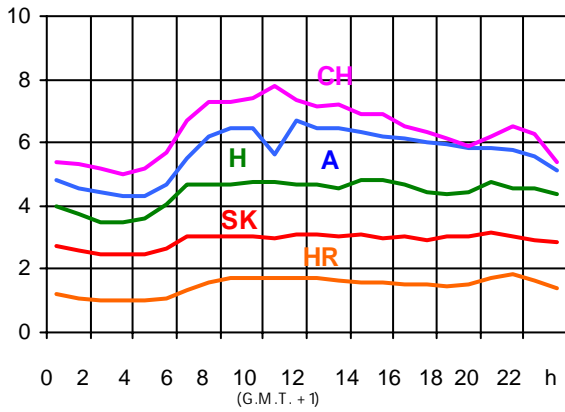
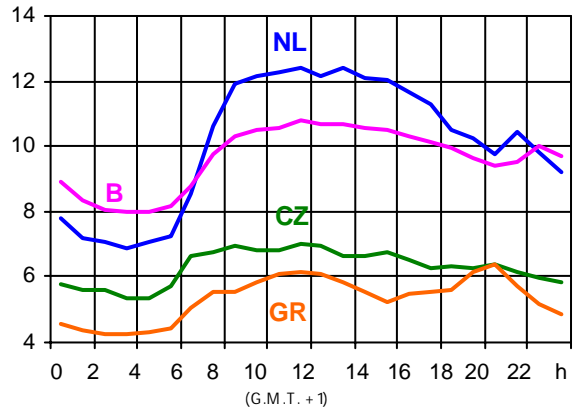
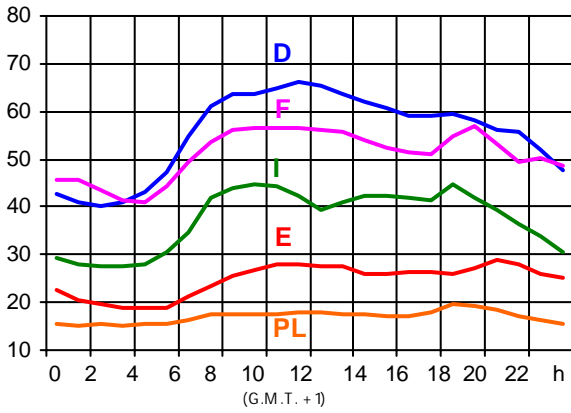
<sup>1</sup> ( year [in min] \* power loss ) / consumption last 12 months

Control area	Prog_exp	Prog_imp	Prog_exp3	Prog_imp3	Prog_exp11	Prog_imp11
B	206390	751938	17	1036	55	753
D	2076678	2989287	2973	4021	2665	7726
E	252064	426211	156	1000	248	1000
F	7110239	981431	10558	1534	9900	1094
GR	59900	372487	50	436	0	430
I	165434	4077201	215	5606	0	5883
SLO	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
HR	112515	433904	255	835	94	687
YU	353392	413711	576	266	521	471
NL	587688	2076235	1192	2841	912	3044
A	700254	935280	1307	683	923	1497
P	41695	125816	0	556	0	149
CH	3030898	1756423	3472	2310	5808	2756
CZ	1176746	237904	1819	268	1749	228
H	500213	897853	646	1071	795	1675
PL	602743	194926	520	77	1639	413
SK	531720	344140	680	402	840	592

- 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.
- YU = FRY + FYROM (Federal Republic of Yugoslavia and Former Yugoslav Republic of Macedonia)

### Consumption hourly load curves<sup>1</sup> on 15.05.02

Values in GW



#### Peak load on 3<sup>rd</sup> Wednesday<sup>1</sup>

15.05.02	B	D	E	F	GR	I	SLO	HR	YU <sup>5</sup>	L	NL	A	P	CH	CZ	H	PL	SK	UCTE
MW	10905	66000	26710	54183	6658	44359	1587	1833	5342	812	12443	6987	5472	7942	6987	4819	16030	3139	277437
Δ % <sup>2</sup>	-2,3	1,1	-1,5	1,0	12,5	0,6	6,7	6,1	2,0	8,1	2,9	6,4	1,9	-3,1	2,0	1,0	-2,1	1,8	0,7

#### Power produced in parallel operation<sup>3</sup>

15.05.02	B	D	E	F	GR	I	SLO	HR	YU <sup>5</sup>	L	NL	A	P	CH	CZ	H	PL	SK	Others <sup>4</sup>	UCTE
MW	10148	71400	25667	65545	5568	37785	1249	1689	4117	801	9305	6831	5047	11135	8834	4034	16857	3431	1270	289443

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

B	D	E	F	GR <sup>6</sup>	I	SLO	HR	YU <sup>5</sup>	L	NL	A	P	CH	CZ	H	PL	SK
100	91	94	97	91	100	95	100	96	99	90	82	87	100	100	100	100	100

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

<sup>3</sup> Including autoproduction

<sup>4</sup> Denmark (Jutland)

<sup>5</sup> YU = FRY + FYROM (Federal Republic of Yugoslavia and Former Yugoslav Republic of Macedonia)

<sup>6</sup> The representativity of data referring to the whole country including the isolated systems of the Greek island is 91%.

The representativity of data referring to the mainland interconnected system is 98%.

## Existing lines with towers for lines with 2 circuits mounted

	B	D	E	F	GR	I	SLO	HR	JEL	L	NL	A	P	CH	CZ	H	PL	SK	CY22	
2011	8940	52	3880	-67511	228	4845	1757	-258	-548	1231	325	1728	140	180	-694	828	3125	-7384	-3851	-3273
2008	4203	108	4787	-42843	180	4428	1345	807	-105	3115	3677	1819	-175	822	-5722	-10316	438	-811	-3271	-8528

	F	I	SLO	HR	JIEL	L	NL	A	P	CH	CZ	H	PL	SK
B	2/2					2/-	-/4							
D	2/4					8/-	-/8	9/3		5/7	-/4			
E	2/2								3/2					
	F	3/3								5/5				
	GR	-/1			-/1									
		I	1/1					1/-		6/2				
			SLO	2/3				1/2						
				HR	7/3									
									JIEL					
									A	1/2	2/1	2/1		
													CZ	2/2
													H	-/2
													PL	-/2



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