

# UCTE



## October 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 25 January 2005

# 1

## Electricity supply situation of the countries

October 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	variation [%] <sup>3</sup>	last 12 months	var. [%] <sup>3</sup>
B	129	3452	2953	6534 <sup>2</sup>	959	152	7341	-2,7	85961	0,7
D	1828	13590	28593	44011 <sup>2</sup>	-611	679	42721	-1,5	509171	0,1
E	2121	4457	12819	19397 <sup>2</sup>	-328	411	18658	0,7	231318	4,1
F	4221	37583	3475	45279	-6265	820	38194	-6,1	467569	1,9
GR <sup>4</sup>	315	0	3556	3871 <sup>2</sup>	136	56	3951	-4,2	50567	-3,7
I	3283	0	21029	24312	3902	782	27432	0,8	320245	0,1
SLO	304	422	415	1141	-56	0	1085	0,5	12655	3,2
HR	407	0	427	834 <sup>2</sup>	445	21	1258	-2,6	15834	3,4
BIH	404	0	688	1092	-152	0	940	-1,8	12785	n.a.
FYROM	77	0	431	508 <sup>2</sup>	67	0	575	-2,5	7302	n.a.
SCG	775	0	2320	3095	114	65	3144	-3,3	39681	n.a.
L	78	0	285	363	286	90	559	2,8	6279	2,9
NL	0	45	8152	8197 <sup>2</sup>	1401	0	9598	2,0	110377	0,8
A	2529	0	1853	4382	592	270	4704	5,0	55460	7,0
P	829	0	2380	3209 <sup>2</sup>	542	28	3723	0,2	44919	4,1
CH	2619	2311	245	5175 <sup>2</sup>	189	216	5148	0,8	61241	3,5
CZ	158	2249	4116	6523 <sup>2</sup>	-1275	69	5179	-2,7	61031	1,8
H	22	982	1634	2638 <sup>2</sup>	615	0	3253	-1,5	38141	-0,4
PL <sup>5</sup>	244	0	11954	12198 <sup>2</sup>	-773	201	11224	-9,8	131983	-5,0
SK	260	1370	754	2384 <sup>2</sup>	-154	14	2216	-7,0	26389	0,0
RO	1311	474	2578	4363 <sup>2</sup>	-130	0	4233	-0,7	50176	n.a.
BG	156	1377	1739	3272 <sup>2</sup>	-495	34	2743	-7,6	35449	n.a.
<b>UCTE</b>	<b>22070</b>	<b>68312</b>	<b>112396</b>	<b>202778<sup>2</sup></b>	<b>-991</b>	<b>3908</b>	<b>197879</b>	<b>-2,3</b>	<b>2374533</b>	<b>2,2</b>
DK West	2	0	2032	2034 <sup>2</sup>	-264	0	1770	n.a.	n.a.	n.a.
West UA <sup>6</sup>	14	0	659	673 <sup>2</sup>	-298	0	375	1,6	17127	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	DK West	West UA <sup>6</sup>
Production	99	94	94	100	99	100	95	100	99	100	96	98	100	84	94	100	100	100	100	100	100	100	99	100
Consumption	99	94	94	100	99	100	95	100	99	100	96	99	100	90	94	100	100	100	100	100	100	100	99	100

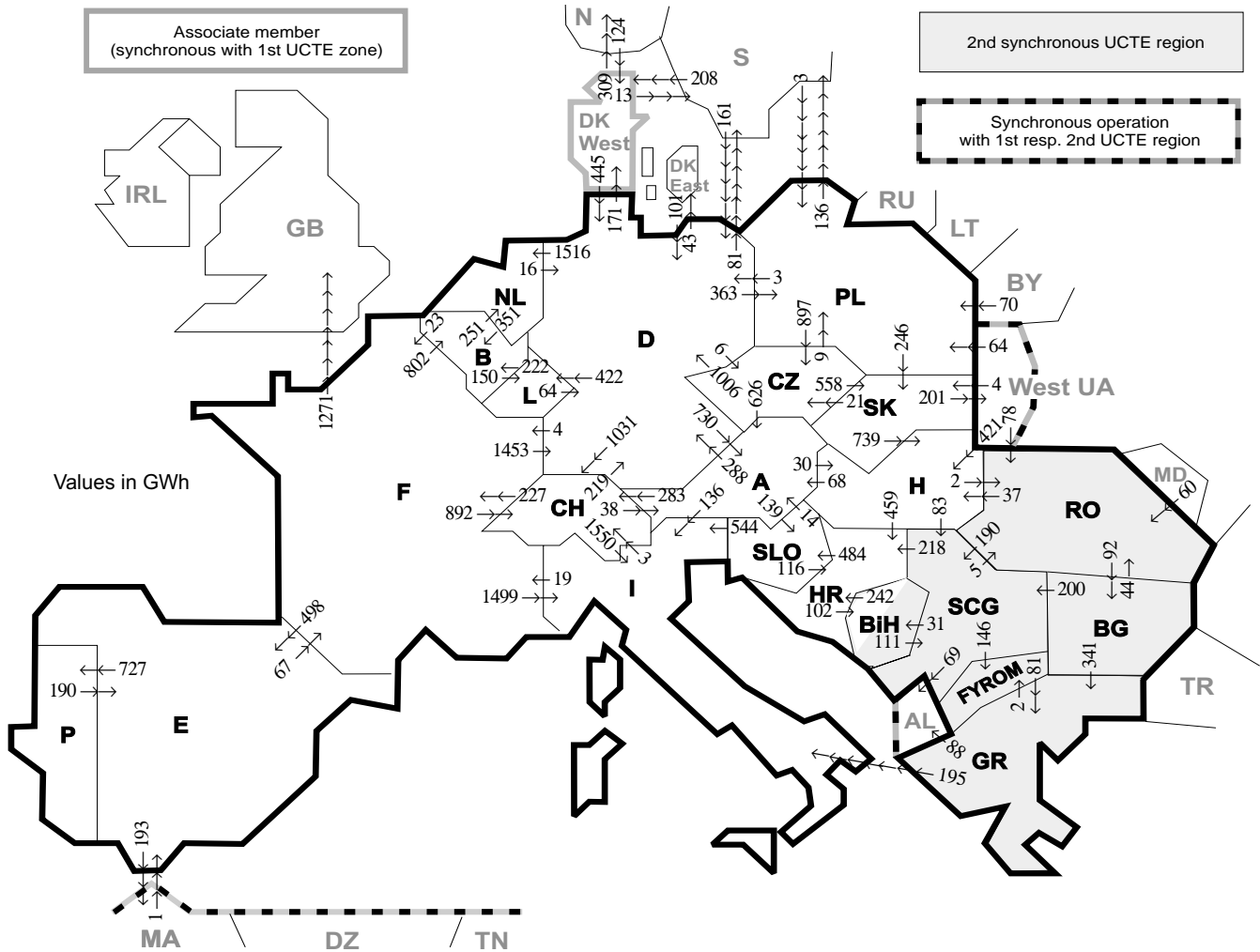
<sup>2</sup> Including deliveries from industry

<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> 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	B	D	E	F	GR	I	SLO	HR	BIH	FY- ROM	SCG	L	NL	A	P	CH	CZ	H	PL	SK	RO	BG	DK West	West UA <sup>2</sup>	Other III <sup>1</sup>	Sum export
B	-	-	-	23	-	-	-	-	-	-	-	150	251	-	-	-	-	-	-	-	-	-	-	-	-	424
D	-	-	-	4	-	-	-	-	-	-	-	422	1516	730	-	-	-	-	-	-	-	-	171	-	-	4367
E	-	-	-	67	-	-	-	-	-	-	-	-	-	727	-	-	-	-	-	-	-	-	-	-	-	987
F	802	1453	498	-	-	1499	-	-	-	-	-	-	-	-	-	892	-	-	-	-	-	-	-	-	1271	6415
GR	-	-	-	-	195	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	0	-	-	88	285
I	-	-	-	19	0	0	-	-	-	-	-	-	-	0	-	3	-	-	-	-	-	-	-	-	-	22
SLO	-	-	-	-	-	544	-	-	-	-	-	-	-	14	-	-	-	-	-	-	-	-	-	-	-	674
HR	-	-	-	-	-	-	484	102	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	586
BIH	-	-	-	-	-	-	-	242	-	111	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	353
FYROM	-	-	-	-	81	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	81
SCG	-	-	-	-	-	-	-	218	31	146	-	-	-	-	-	-	-	0	-	-	5	0	-	-	69	469
L	222	64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	286
NL	351	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	367
A	-	288	-	-	-	136	139	-	-	-	-	-	-	-	-	283	0	30	-	-	-	-	-	-	-	876
P	-	-	190	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	190
CH	-	219	-	227	-	1550	-	-	-	-	-	-	-	38	-	-	-	-	-	-	-	-	-	-	-	2034
CZ	-	1006	-	-	-	-	-	-	-	-	-	-	-	626	-	-	-	-	9	558	-	-	-	-	-	2199
H	-	-	-	-	-	-	-	459	-	-	83	-	-	68	-	-	-	-	-	0	2	-	-	0	-	612
PL	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	246	-	-	0	136	1282
SK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21	739	0	-	-	201	-	-	961
RO	-	-	-	-	-	-	-	-	-	-	190	-	-	-	-	-	-	-	-	-	-	92	-	0	0	319
BG	-	-	-	-	341	-	-	-	-	0	200	-	-	-	-	-	-	-	-	-	-	44	-	-	0	585
DK West	-	445	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	322	767
West UA <sup>2</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	421	64	4	78	-	-	-	-	567
Other III <sup>1</sup>	-	262	1	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	73	-	60	0	332	-	-	728
<b>Sum imp</b>	<b>1375</b>	<b>3756</b>	<b>689</b>	<b>340</b>	<b>422</b>	<b>3924</b>	<b>623</b>	<b>1035</b>	<b>133</b>	<b>148</b>	<b>584</b>	<b>572</b>	<b>1767</b>	<b>1476</b>	<b>727</b>	<b>2209</b>	<b>924</b>	<b>1227</b>	<b>509</b>	<b>808</b>	<b>189</b>	<b>92</b>	<b>503</b>	<b>201</b>	<b>1838</b>	<b>26436</b>

Sum of physical energy flows between UCTE countries = 22121GWh Total physical energy flows = 26436GWh

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

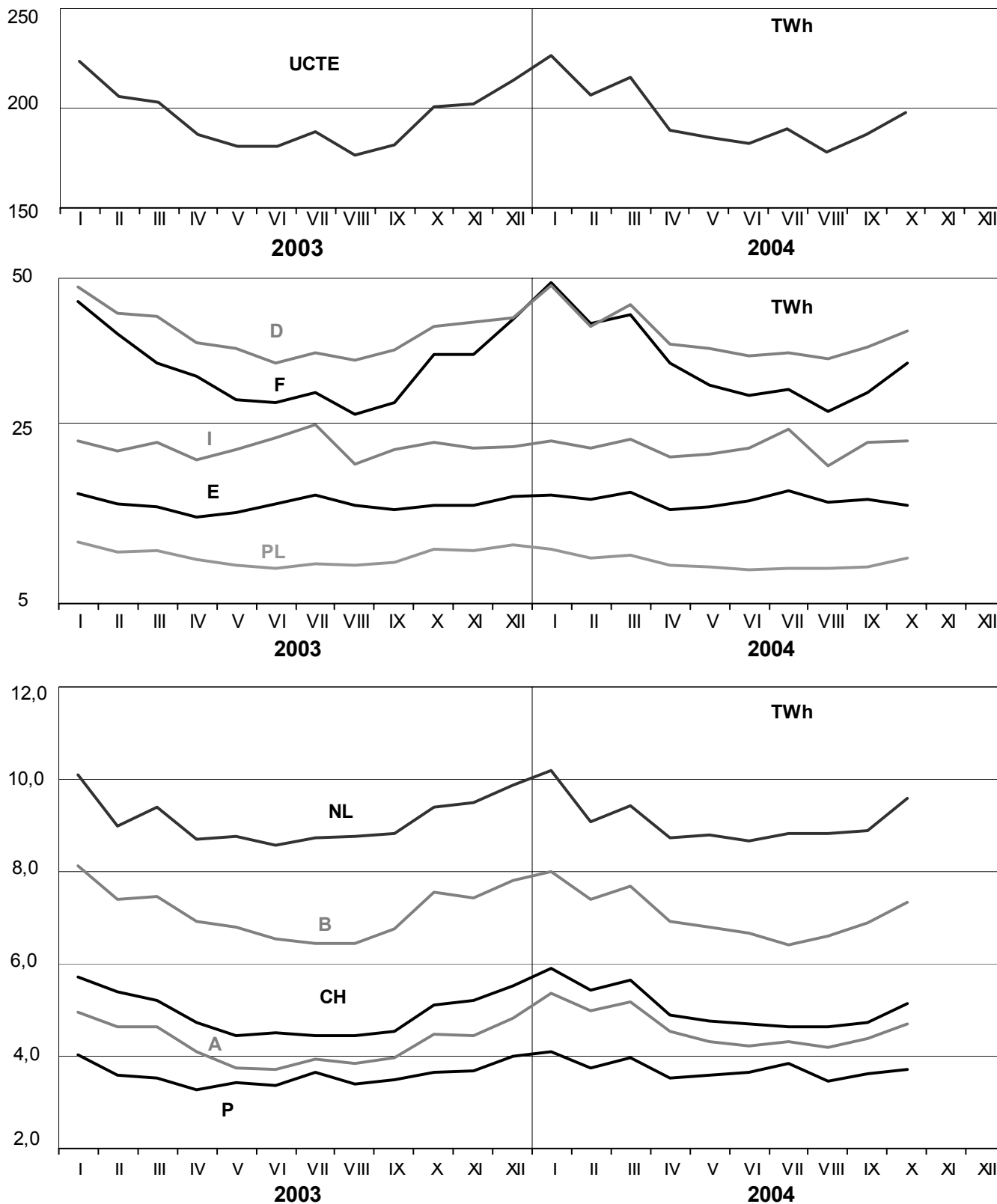
<sup>2</sup> West UA represents the so-called Burshtyn Island synchronously interconnected with UCTE

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

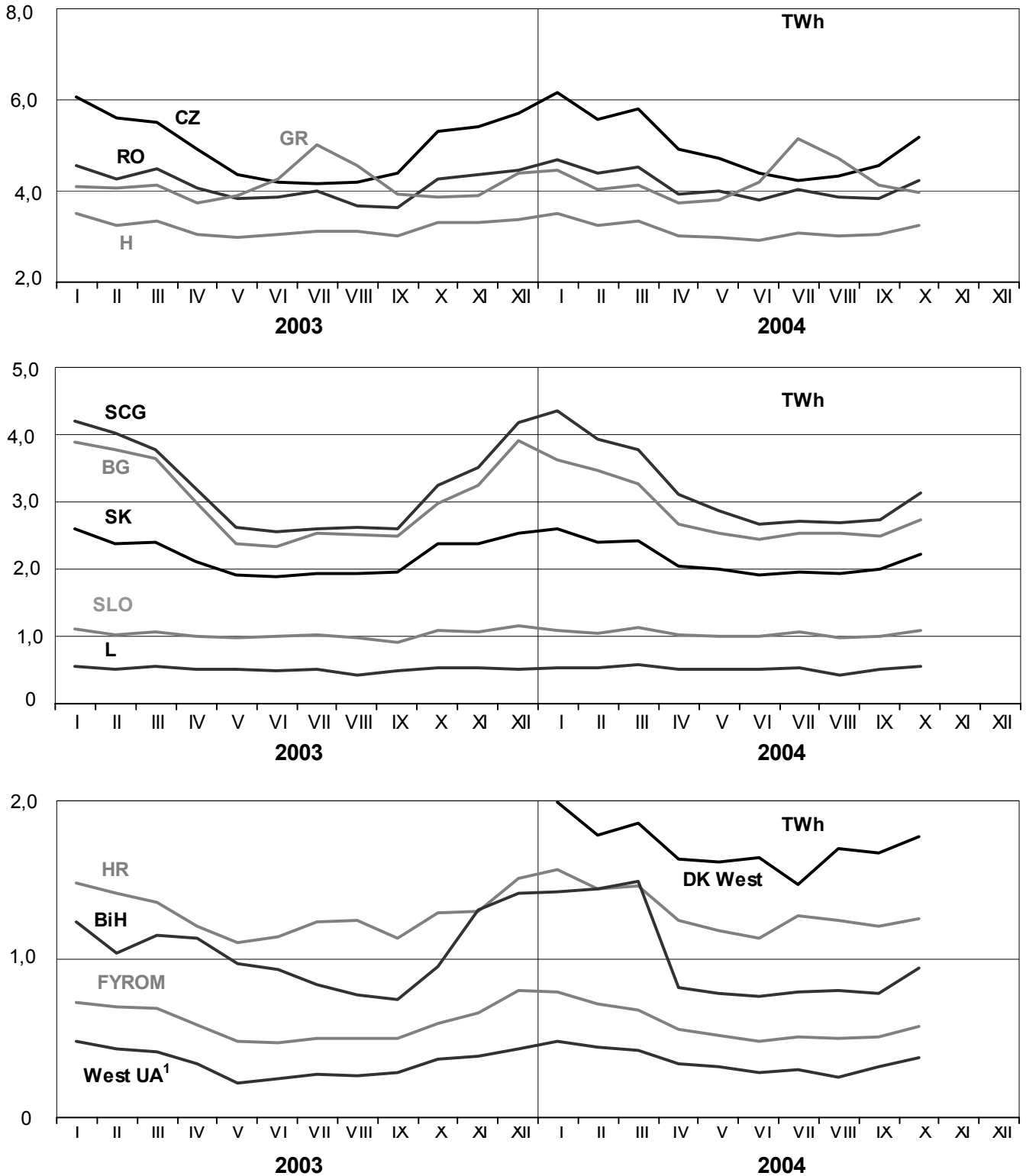
October 2004



# 3

## Monthly consumption

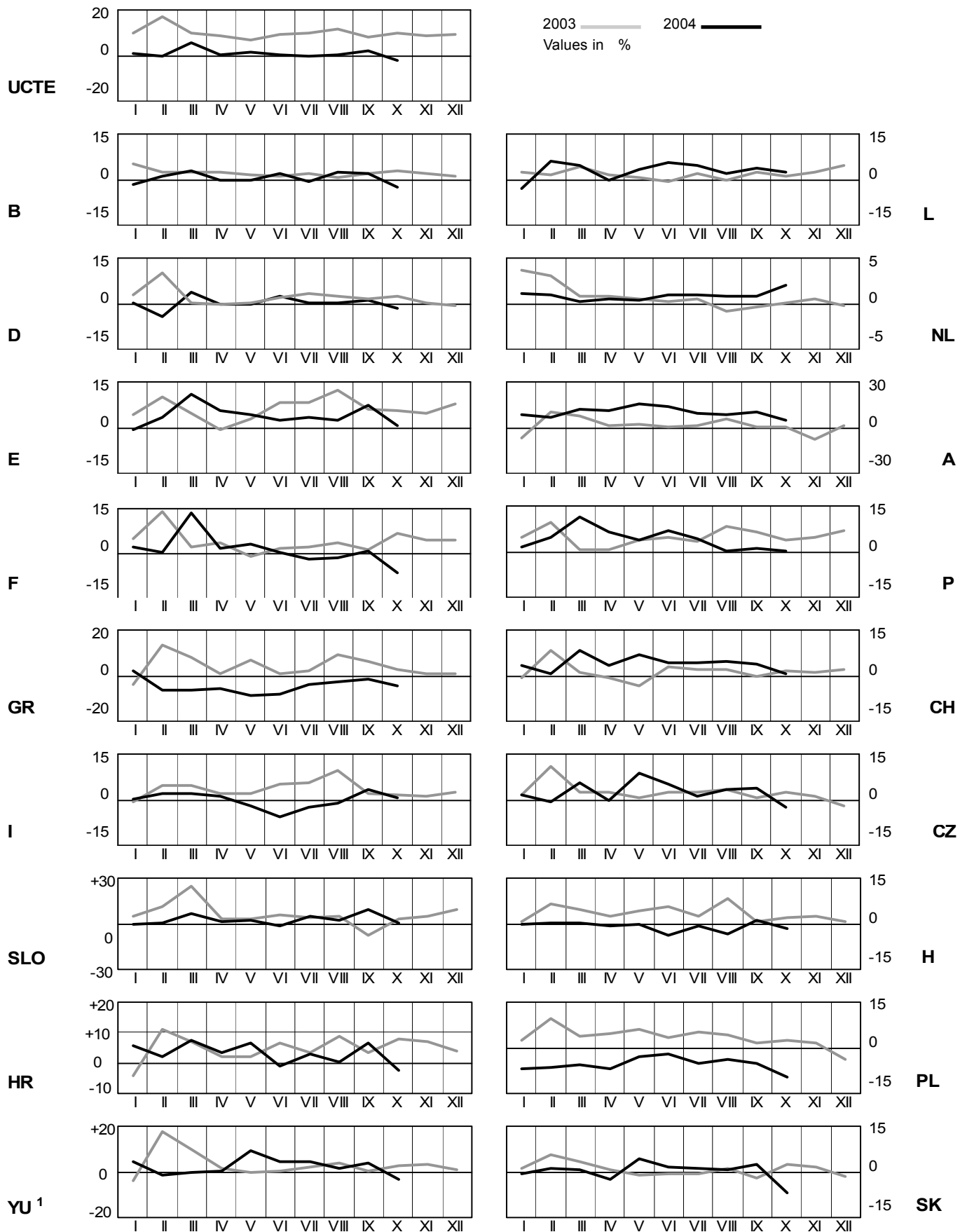
October 2004



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

# 4 Monthly consumption variation

October 2004

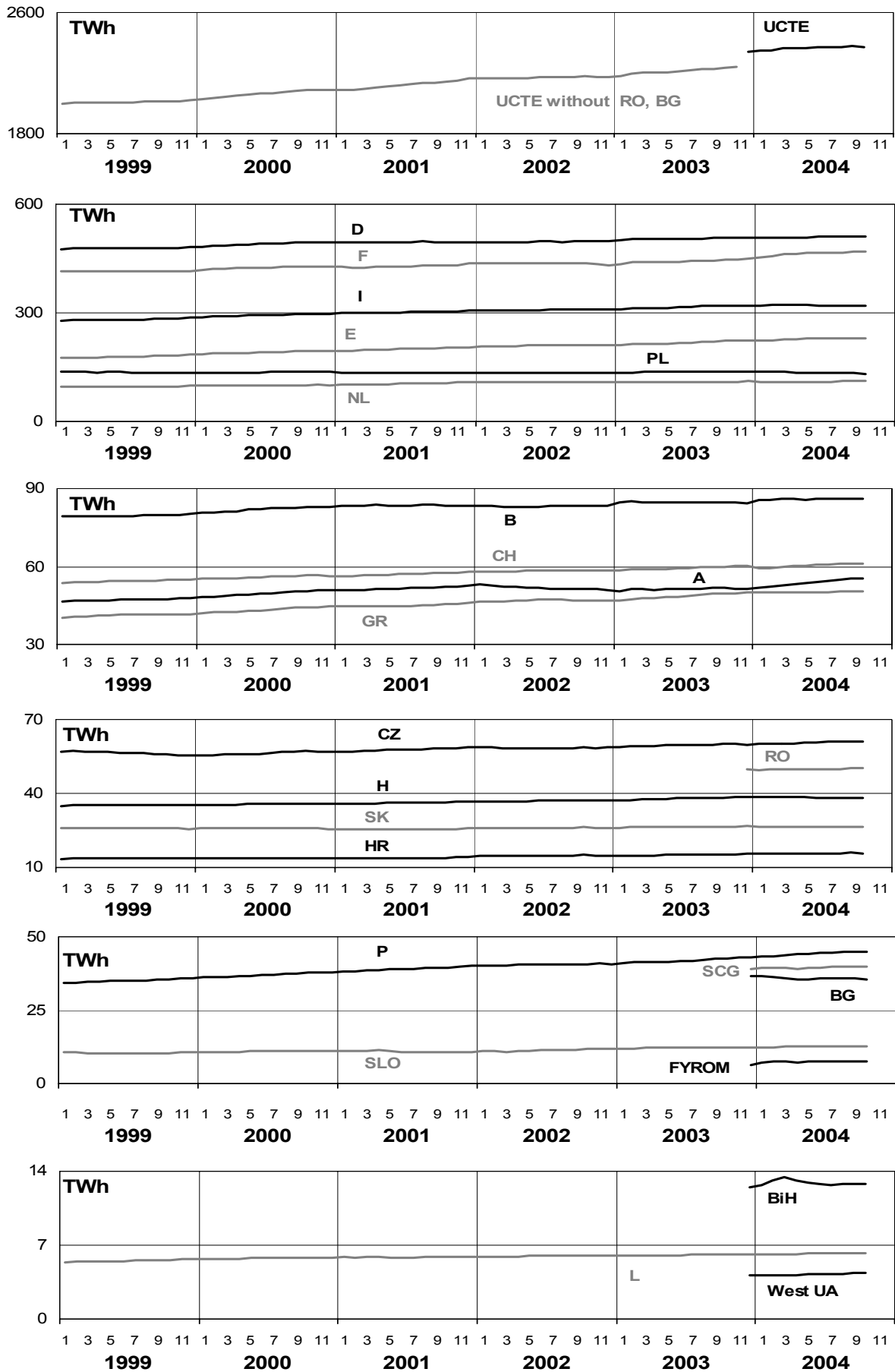


<sup>1</sup>YU = FRY + FYROM (Federal Republic of Yugoslavia and former Yugoslav Republic of Macedonia)

# 5

## Consumption of the last 12 months

October 2004

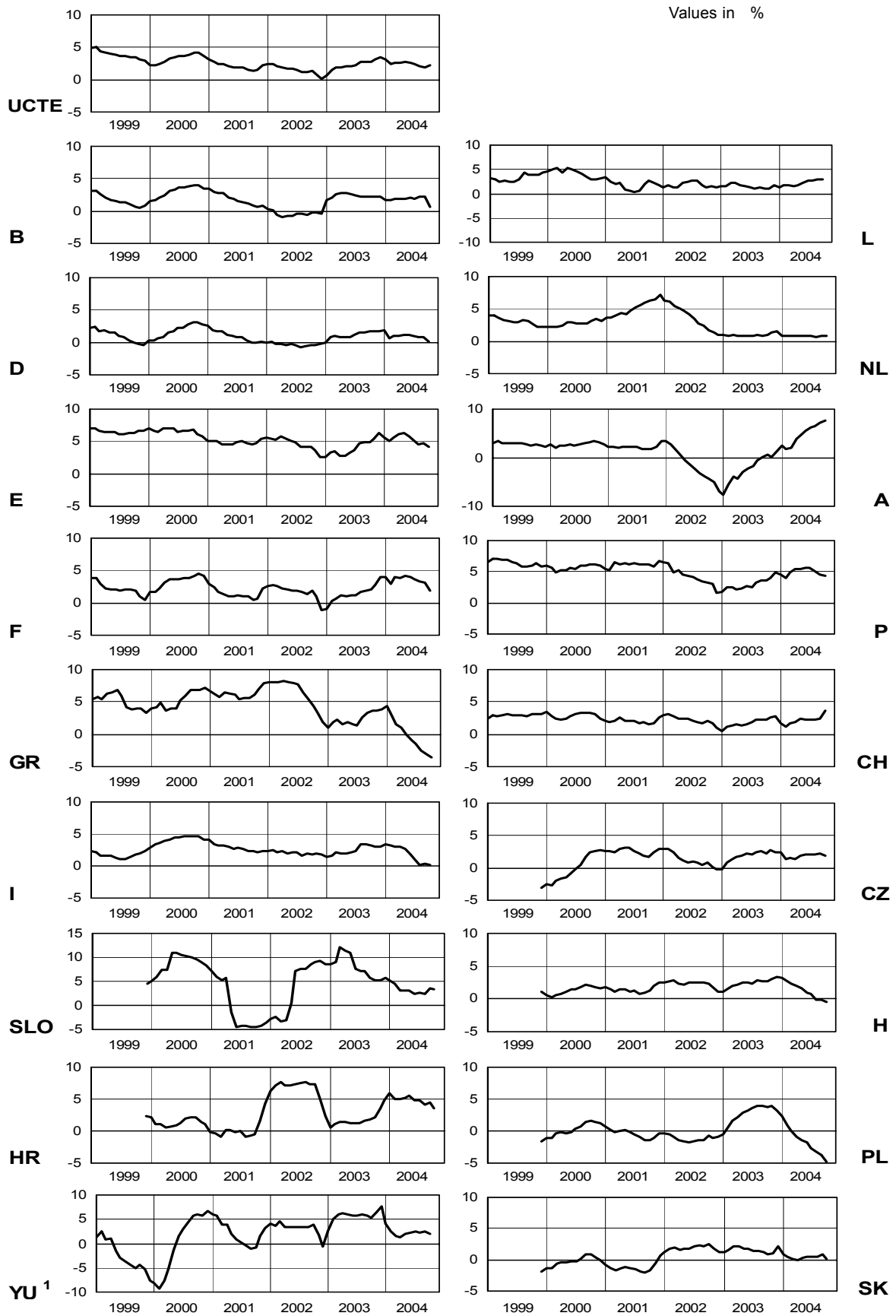




# 6

## Variation of the last 12 months' consumption

October 2004

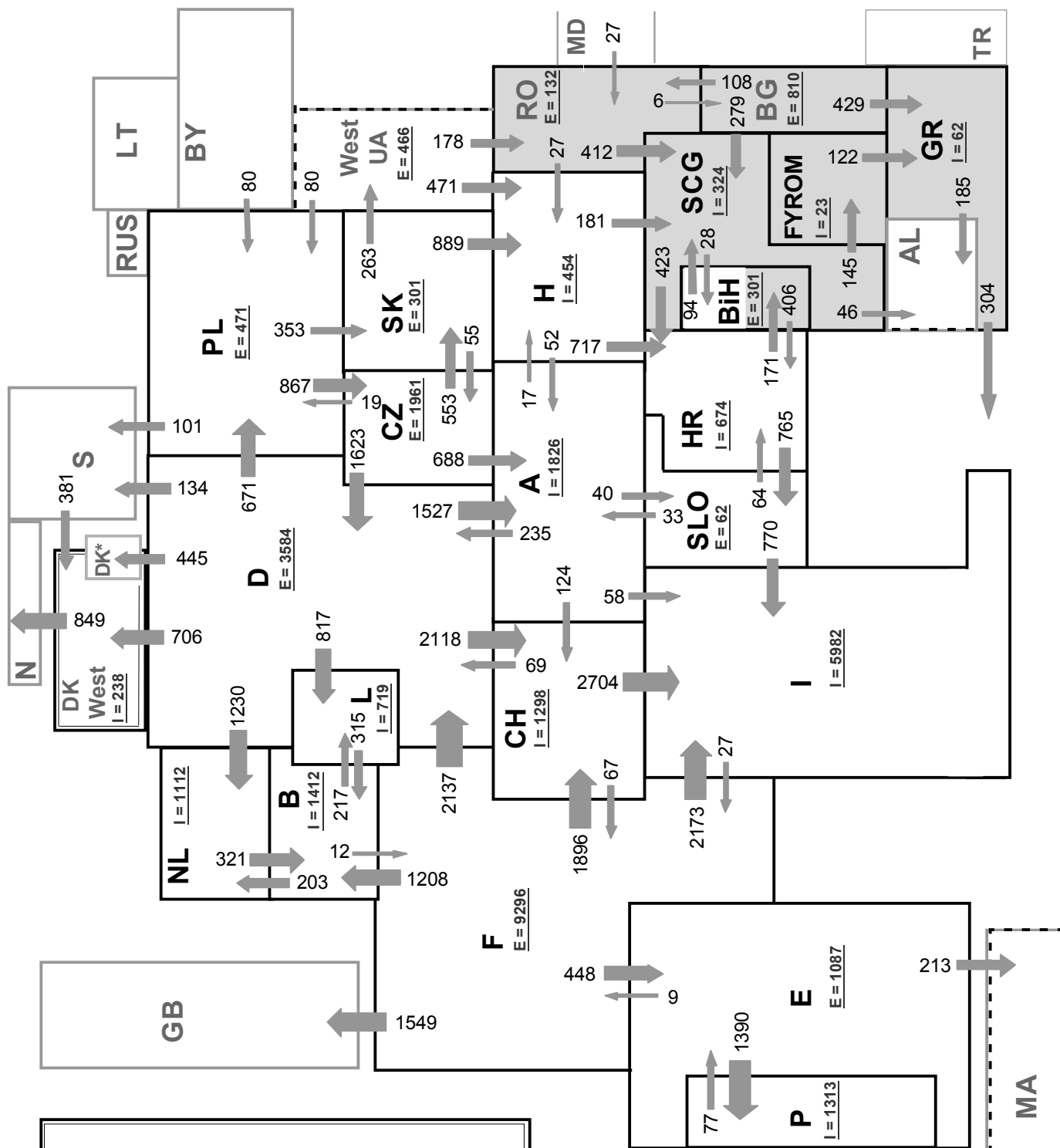


<sup>1</sup> YU = FRY + FYROM (Federal Republic of Yugoslavia and former Yugoslav Republic of Macedonia)

# 7

## Load flows (night) on 20.10.04 at 03:00\* in MW

October 2004



Associate member

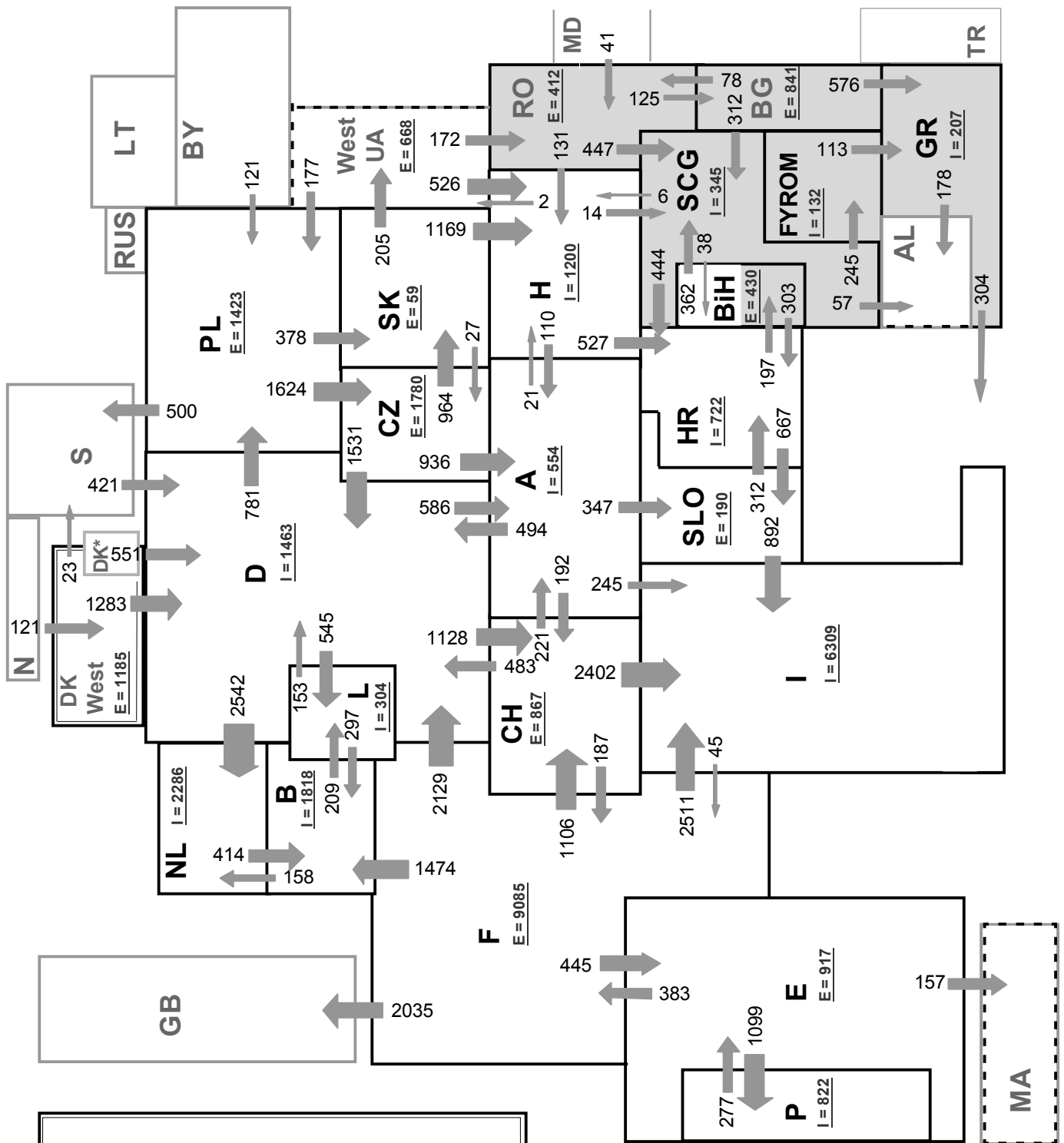
Synchronous operation with 1st resp. 2nd UCTE region

2nd synchronous UCTE region

Sum of load flows in MW:

UCTE = 30693MW      Total = 36401MW

\* Central European Time ( CET )  
 I = Import balance  
 E = Export balance



Associate member

Synchronous operation with 1st resp. 2nd UCTE region

2nd synchronous UCTE region

Sum of load flows in MW:

UCTE = 33706MW      Total = 40276MW

\* Central European Time ( CET )

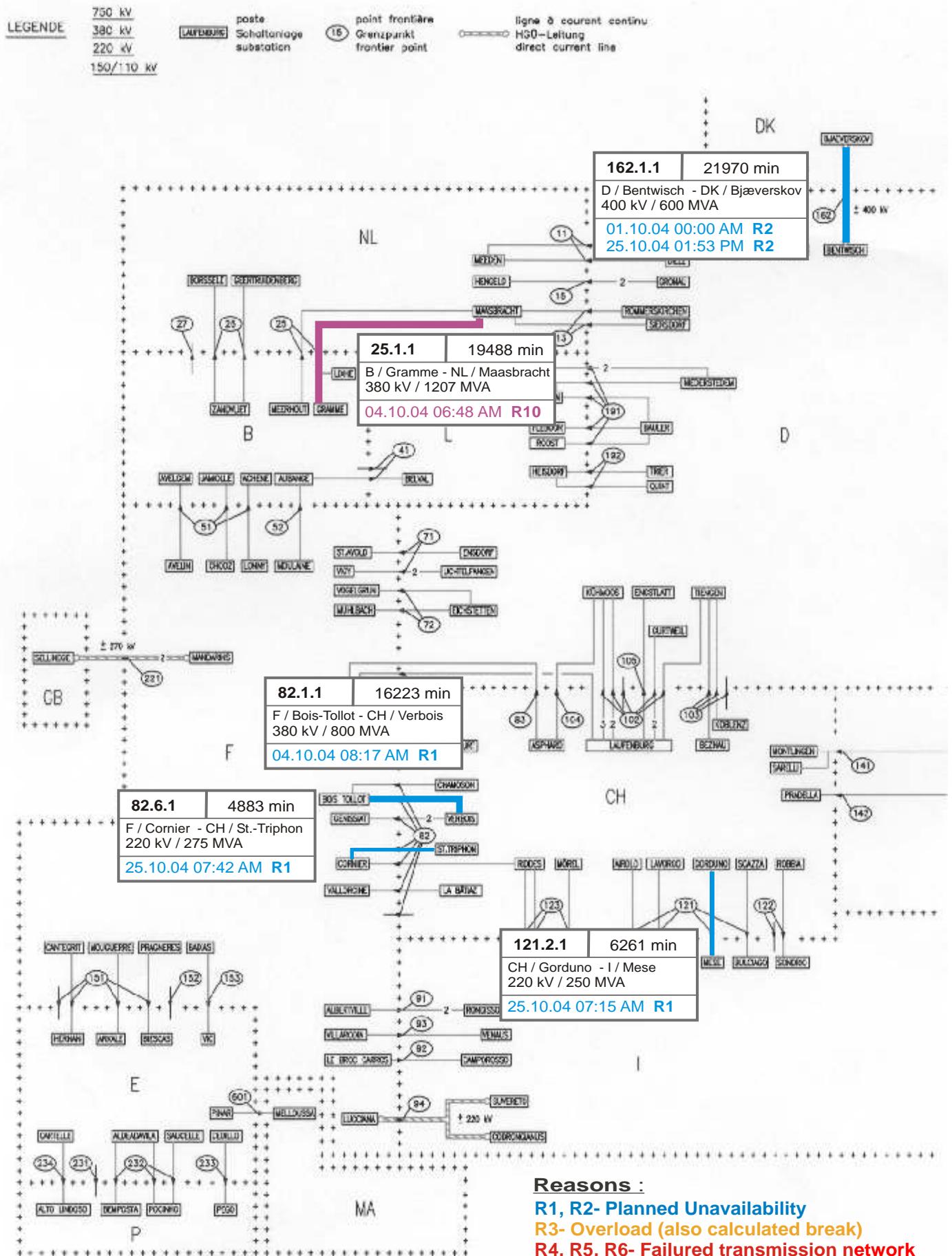
I = Import balance

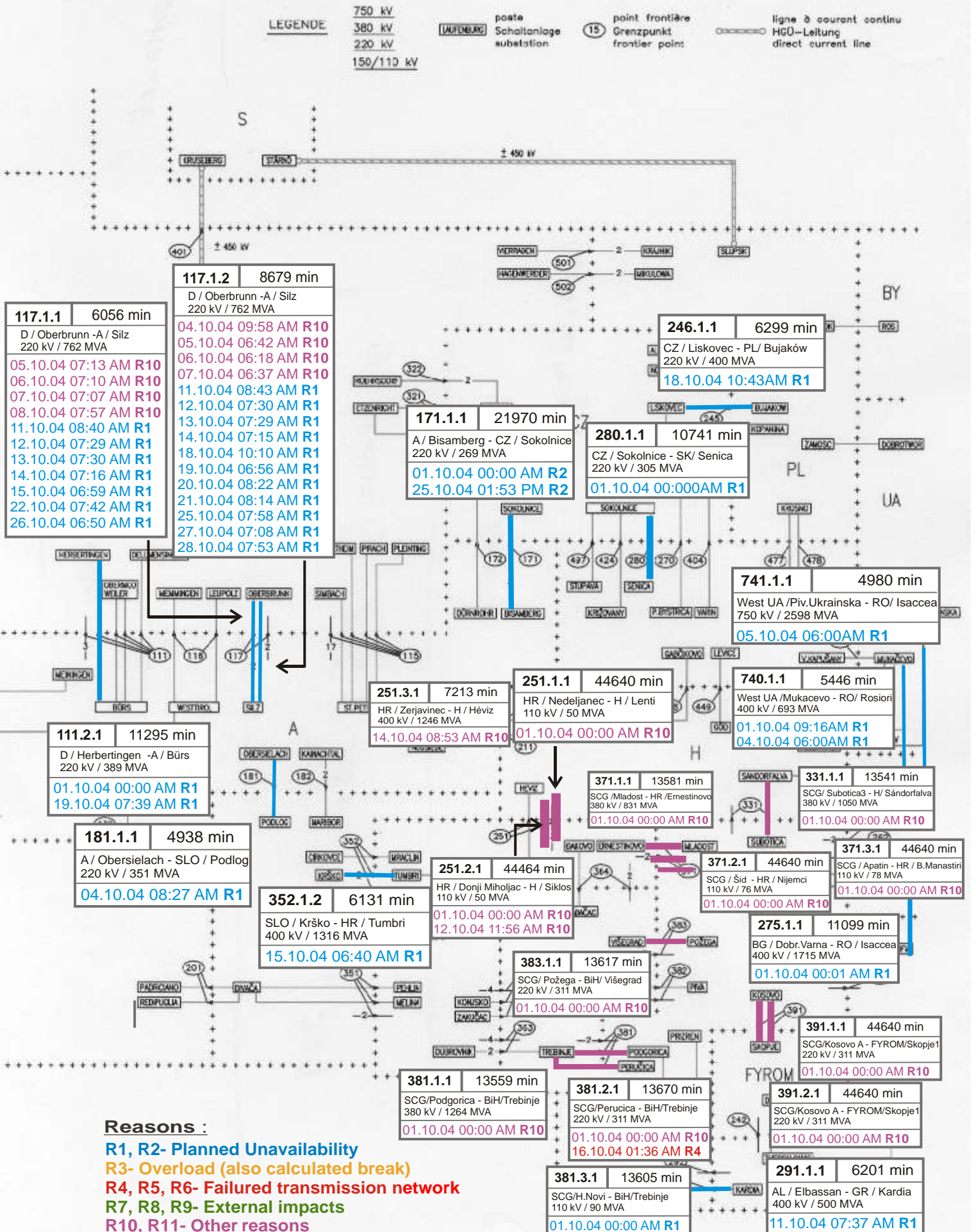
E = Export balance

# 9

## Unavailability of international tie lines (major events with sum over 4800 minutes)

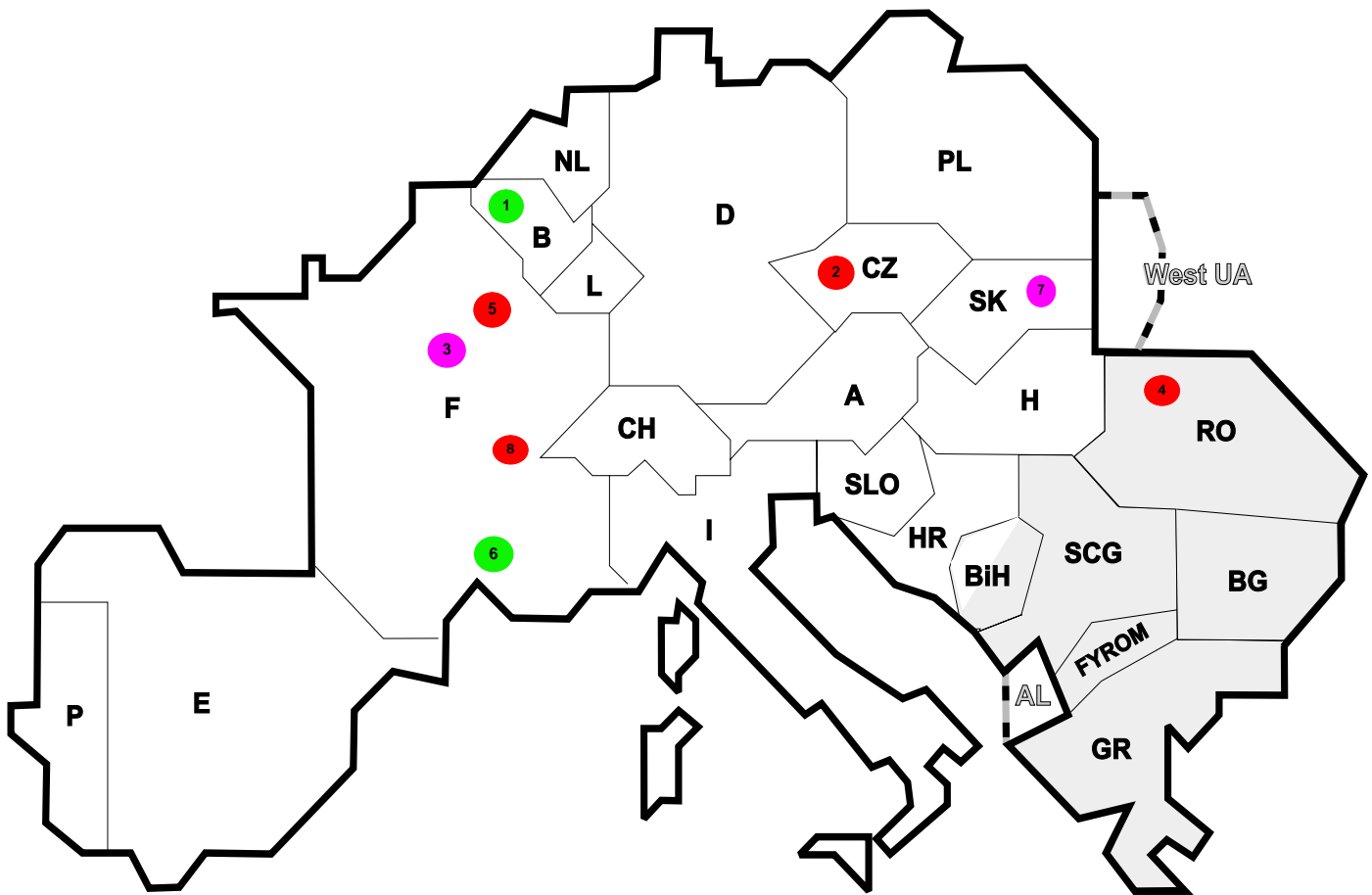
October 2004





**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	B	Aubange	R8	1091	15	4	6,61
2	CZ	Prosenice	R6	217	66	53	1,87
3	F	Versailles	R10	66	121	144	0,07
4	RO	Gheorgheni	R6	26	40	39	0,27
5	F	Les Crechets	R6	8	18	43	0,01
6	F	Montpellier	R8	7	55	8	0,01
7	SK	Levice	R9	7	55	5	0,14
8	F	Pariset	R6	6	52	8	0,01

<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	332139	1211228	266	1581	0	2102
D	3579167	2839612	3969	2995	4542	3895
E	990342	643092	1816	675	1549	545
F	8436999	2402029	9849	1816	10815	3080
GR	194964	325012	300	355	300	508
I	21685	3924459	27	6009	45	6354
SLO	558833	504475	869	800	804	580
HR	260455	707556	406	776	185	595
BiH	287670	45023	351	0	361	0
FYROM	83500	147900	113	136	204	335
SCG	332438	467112	566	661	701	973
NL	510666	1909209	994	2112	723	3008
A	435879	516079	866	437	1102	572
P	87922	630703	0	1299	0	826
CH	1913337	2101684	2869	4157	3469	2594
CZ	1936361	615867	2656	635	2746	946
H	260107	874974	580	1036	191	1394
PL	906246	162812	793	355	1602	180
SK	575256	357003	750	389	849	711
RO	513760	366634	690	481	690	516
BG	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
DK West	725658	488580	950	1071	1216	0
West UA <sup>1</sup>	298259	0	378	0	493	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.
- 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.

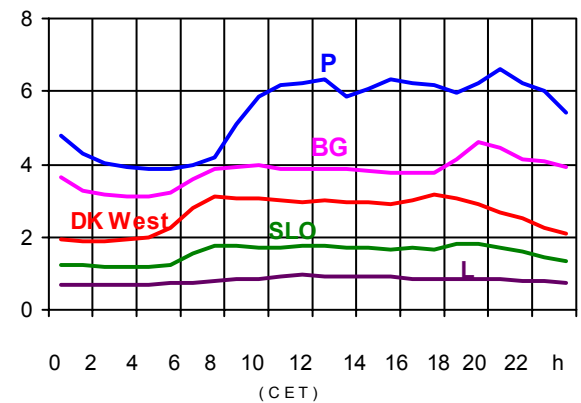
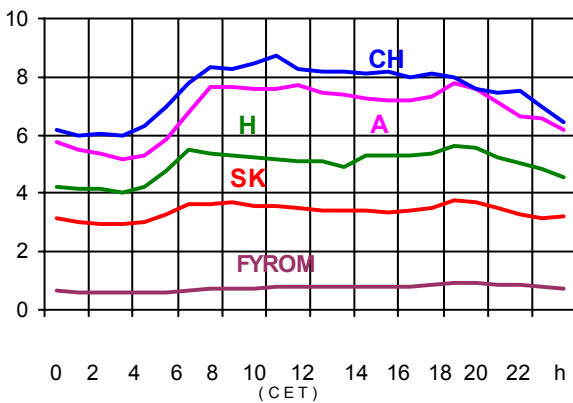
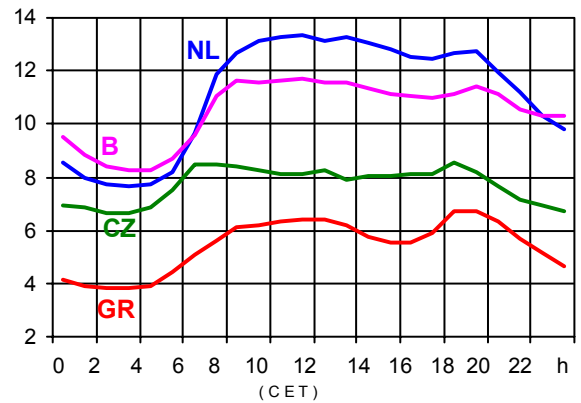
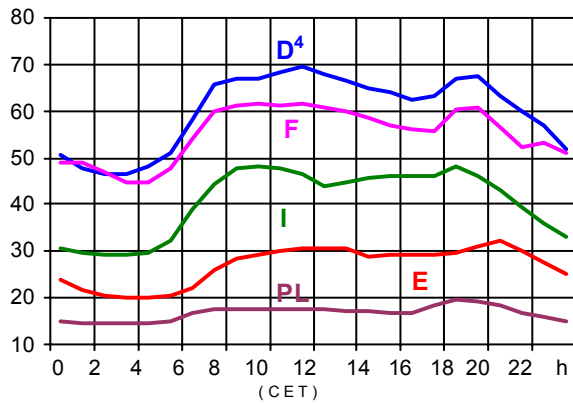
<sup>1</sup> West UA represents the so-called Burshtyn Island synchronously interconnected with UCTE



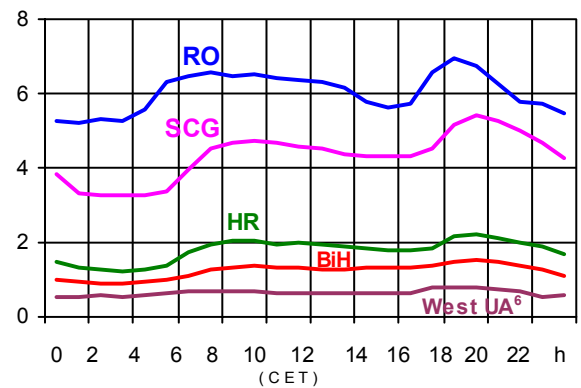
#### Consumption hourly load curves<sup>1</sup> on

20.10.04

Values in GW



	Peak load MW	$\Delta$ % <sup>2</sup>	Load representativity <sup>1</sup> %	Parallel power <sup>3</sup> MW
B	11687	2,0	100	9872
D	69400	0,1	91	74800
E	32022	3,2	94	32022
F	61597	1,5	100	70740
GR <sup>5</sup>	6698	-5,1	99	6130
I	48196	3,6	100	41038
SLO	1846	5,5	95	1928
HR	2224	0,5	100	1589
BIH	1528	4,5	99	1738
FYROM	949	-6,4	100	649
SCG	5402	-2,6	96	4361
L	950	6,3	99	900
NL	13373	8,0	90	10987
A	7798	4,9	82	7490
P	6622	3,6	94	5025
CH	8700	4,9	100	9369
CZ	8578	2,7	100	10493
H	5668	1,3	100	3997
PL	19535	-3,1	100	18741
SK	3775	-1,5	100	3623
RO	6965	1,5	100	6424
BG	4615	-6,7	100	4697
<b>UCTE</b>	<b>318219</b>	<b>1,3</b>		<b>326613</b>
DK West	3155	n.a.	99	4318
West UA <sup>6</sup>	807	n.a.	100	1136



<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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