

# UCTE



## December 2004

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

<b>Table of contents <sup>1</sup></b>		<b>Page</b>
1	Electricity supply situation of the countries	2
2	Physical energy flows	3
3	Monthly consumption	4
4	Monthly consumption variation	6
5	Consumption of the last 12 months	7
6	Variation of the last 12 months' consumption	8
7	Load flows (night)	9
8	Load flows (day)	10
9	Unavailability of international tie lines ( major events )	11
10	Network reliability ( major events )	13
11	Scheduled exchanges	14
12	Load on the 3 <sup>rd</sup> Wednesday	15

<sup>1</sup> Monthly provisional values from the UCTE database as of 31 March 2005

# 1

## Electricity supply situation of the countries

December 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	160	4254	3111	7525 <sup>2</sup>	696	164	8057	3,1	87472	2,1
D	1570	15137	32923	49630 <sup>2</sup>	-2444	798	46388	2,9	513015	0,5
E	1835	5151	13832	20818 <sup>2</sup>	188	484	20522	3,5	234462	4,4
F	4802	43542	6553	54897	-5538	616	48743	6,9	475966	2,4
GR <sup>4</sup>	328	0	4094	4422 <sup>2</sup>	246	96	4572	-3,2	51221	-4,6
I	3628	0	20387	24015	4273	894	27394	2,7	321547	0,3
SLO	230	476	431	1137	-10	0	1127	-1,7	12663	2,1
HR	768	0	385	1153 <sup>2</sup>	430	15	1568	3,7	15960	3,3
BIH	708	0	609	1317	-272	0	1045	-26,3	10516	-15,9
FYROM	139	0	499	638 <sup>2</sup>	183	0	821	2,6	7361	2,1
SCG	1530	0	2550	4080	225	74	4231	1,2	39880	1,9
L	88	0	224	312	322	101	533	2,7	6296	2,7
NL	0	337	8083	8420 <sup>2</sup>	1598	0	10018	1,6	110047	0,4
A	2147	0	2479	4626	990	281	5335	10,6	56565	9,4
P	780	0	3130	3910 <sup>2</sup>	426	29	4307	5,4	45504	4,1
CH	2462	2412	261	5135 <sup>2</sup>	887	168	5854	6,0	61865	4,2
CZ	211	2451	4643	7305 <sup>2</sup>	-1313	63	5929	3,6	61449	2,5
H	14	1088	1920	3022 <sup>2</sup>	408	0	3430	1,5	38221	-0,5
PL <sup>5</sup>	301	0	12509	12810 <sup>2</sup>	-413	192	12205	-6,3	130275	-6,2
SK	312	1620	839	2771 <sup>2</sup>	-251	17	2503	-1,3	26303	-0,3
RO	1625	488	2882	4995 <sup>2</sup>	-171	0	4824	8,1	50745	2,6
BG	273	2100	1859	4232 <sup>2</sup>	-624	44	3564	-9,0	35017	-4,6
<b>UCTE</b>	<b>23911</b>	<b>79056</b>	<b>124203</b>	<b>227170<sup>2</sup></b>	<b>-164</b>	<b>4036</b>	<b>222970</b>	<b>2,9</b>	<b>2392350</b>	<b>1,3</b>
DK West	3	0	2589	2592 <sup>2</sup>	-694	0	1898	n.a.	20889	n.a.
West UA <sup>6</sup>	16	0	750	766 <sup>2</sup>	-293	0	473	8,7	4426	7,1

<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	100	100	95	100	99	100	96	98	100	84	94	100	100	100	100	100	100	100	99	100
Consumption	99	94	94	100	100	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

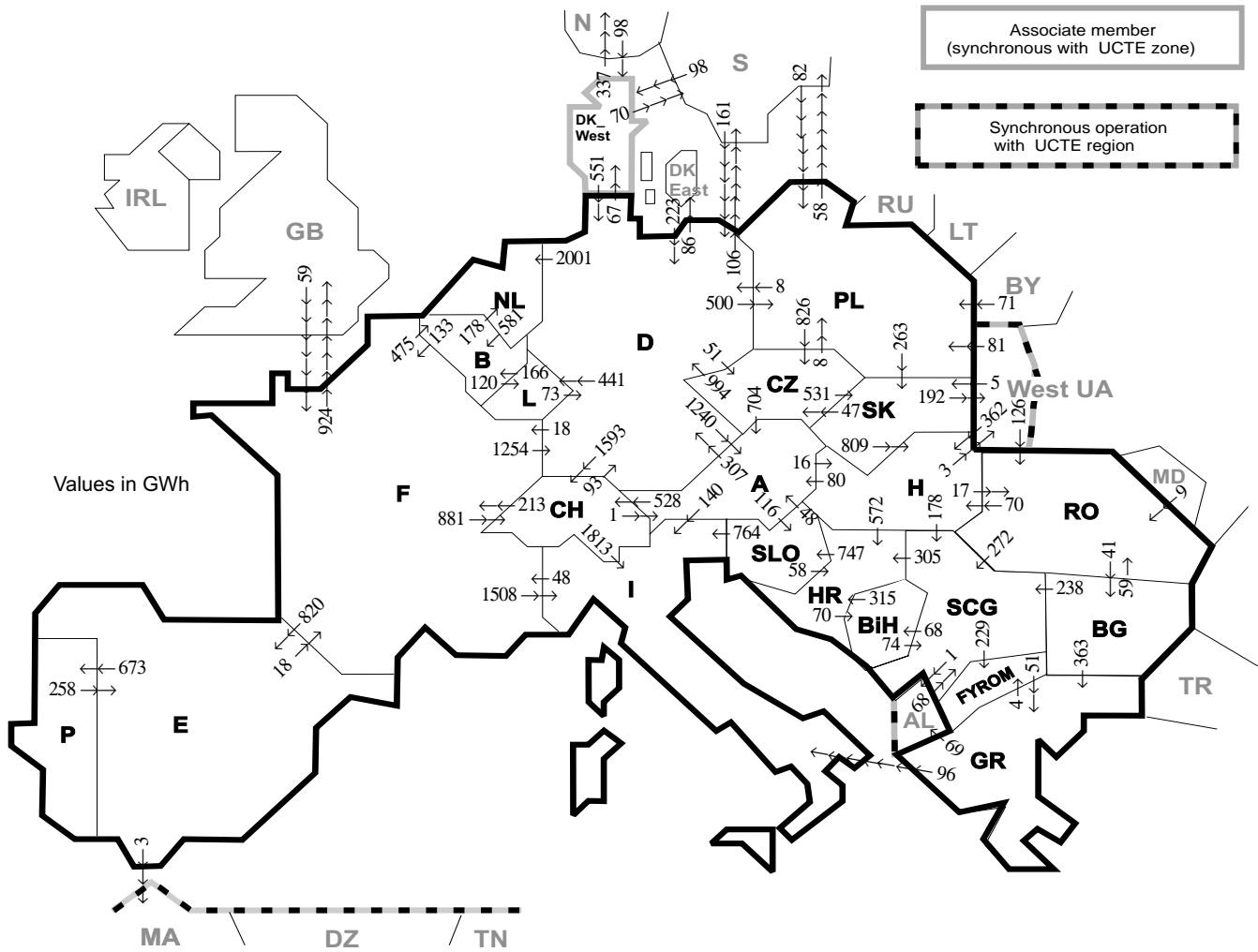
<sup>3</sup> Variation as compared to corresponding period of the previous year and representativity 100%

<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	-	-	-	133	-	-	-	-	-	-	-	-	120	178	-	-	-	-	-	-	-	-	-	-	-	431
D	-	-	-	18	-	-	-	-	-	-	-	441	2001	1240	-	1593	51	-	500	-	-	-	67	-	192	6103
E	-	-	-	18	-	-	-	-	-	-	-	-	-	-	673	-	-	-	-	-	-	-	-	-	3	694
F	475	1254	820	-	-	1508	-	-	-	-	-	-	-	-	-	881	-	-	-	-	-	-	-	-	924	5862
GR	-	-	-	-	96	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	0	-	-	69	169
I	-	-	-	48	0	0	-	-	-	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	48
SLO	-	-	-	-	-	764	-	58	-	-	-	-	-	48	-	-	-	-	-	-	-	-	-	-	-	870
HR	-	-	-	-	-	747	-	70	0	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	817
BiH	-	-	-	-	-	-	-	315	-	74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	389
FYROM	-	-	-	-	51	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	51
SCG	-	-	-	-	-	-	-	305	68	229	-	-	-	-	-	-	-	0	-	-	0	0	-	-	1	603
L	166	73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	239
NL	581	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	581
A	-	307	-	-	-	140	116	-	-	-	-	-	-	-	-	528	0	16	-	-	-	-	-	-	-	1107
P	-	-	258	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	258
CH	-	93	-	213	-	1813	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	2120
CZ	-	994	-	-	-	-	-	-	-	-	-	704	-	-	-	-	-	-	8	531	-	-	-	-	-	2237
H	-	-	-	-	-	-	-	572	-	-	178	-	-	80	-	-	-	-	-	-	0	17	-	-	3	850
PL	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	263	-	-	0	58	1155
SK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	809	-	-	-	-	-	192	-	1048
RO	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	383
BG	-	-	-	-	363	-	-	-	-	0	238	-	-	-	-	-	-	-	-	-	-	59	-	-	0	660
DK West	-	551	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	407	958
West UA <sup>2</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	362	81	5	126	-	-	-	-	574
Other III <sup>1</sup>	-	384	0	59	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	0	196	-	-	869
<b>Sum imp</b>	<b>1222</b>	<b>3664</b>	<b>1078</b>	<b>489</b>	<b>414</b>	<b>4321</b>	<b>863</b>	<b>1250</b>	<b>138</b>	<b>233</b>	<b>830</b>	<b>561</b>	<b>2179</b>	<b>2073</b>	<b>673</b>	<b>3002</b>	<b>924</b>	<b>1257</b>	<b>742</b>	<b>799</b>	<b>211</b>	<b>41</b>	<b>263</b>	<b>195</b>	<b>1654</b>	<b>29076</b>

Sum of physical energy flows between UCTE countries = 25166GWh Total physical energy flows = 29076GWh

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

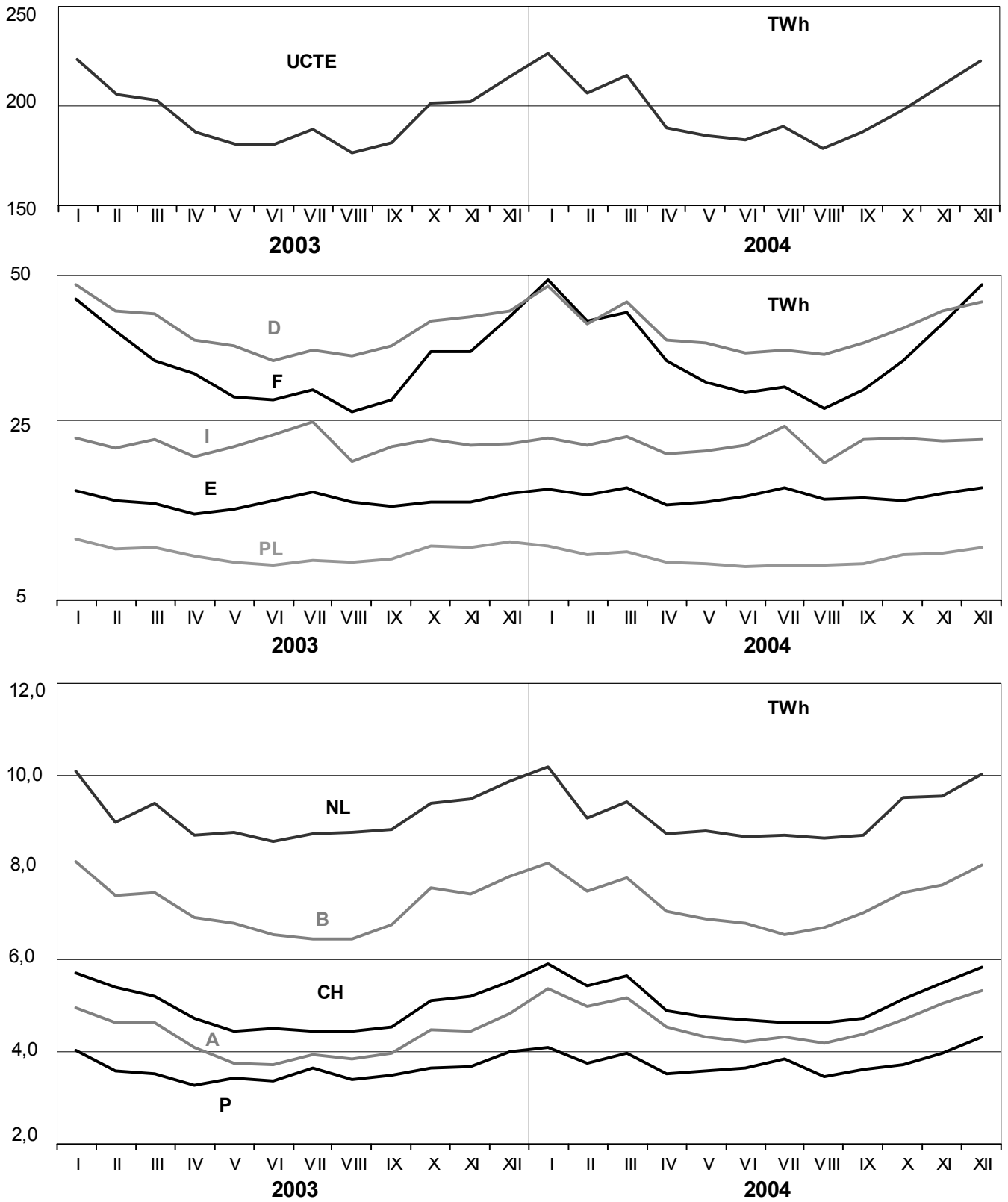
<sup>2</sup> West UA represents the so-called Burshtyn Island synchronously interconnected with UCTE

These physical energy flows were measured on the cross-frontier transmission lines ( $\leq 110$  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

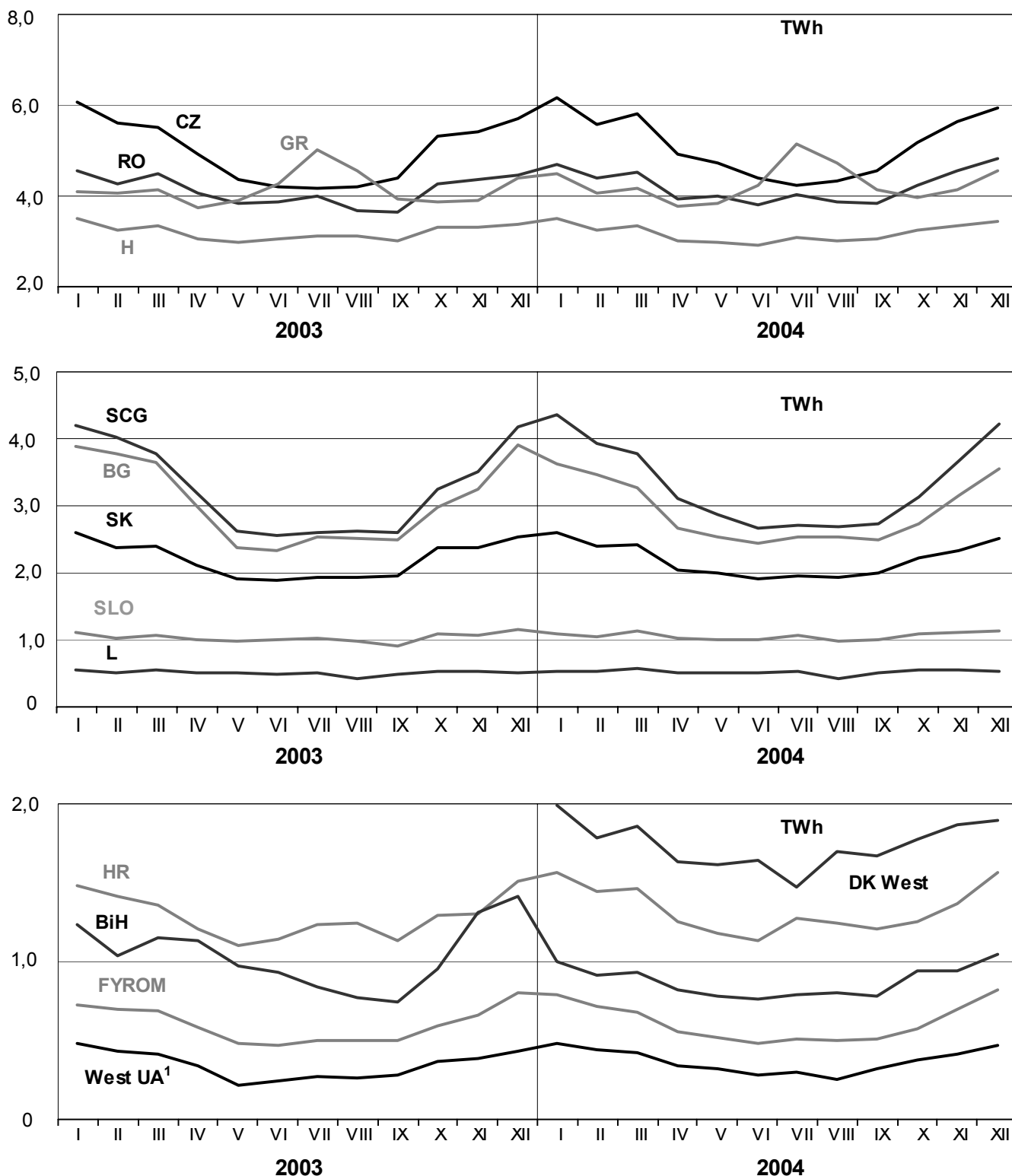
December 2004



# 3

## Monthly consumption

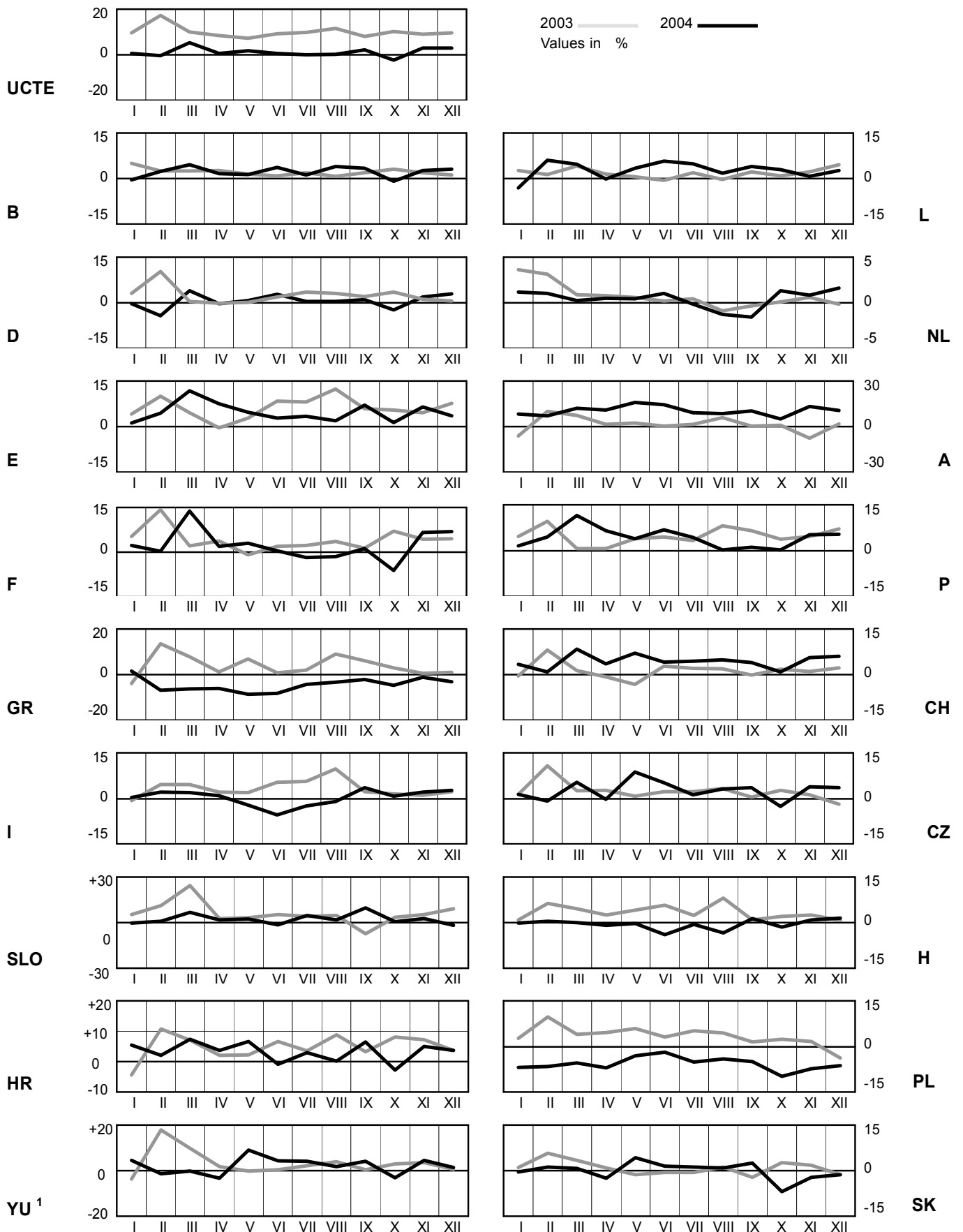
December 2004



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

# 4 Monthly consumption variation

December 2004

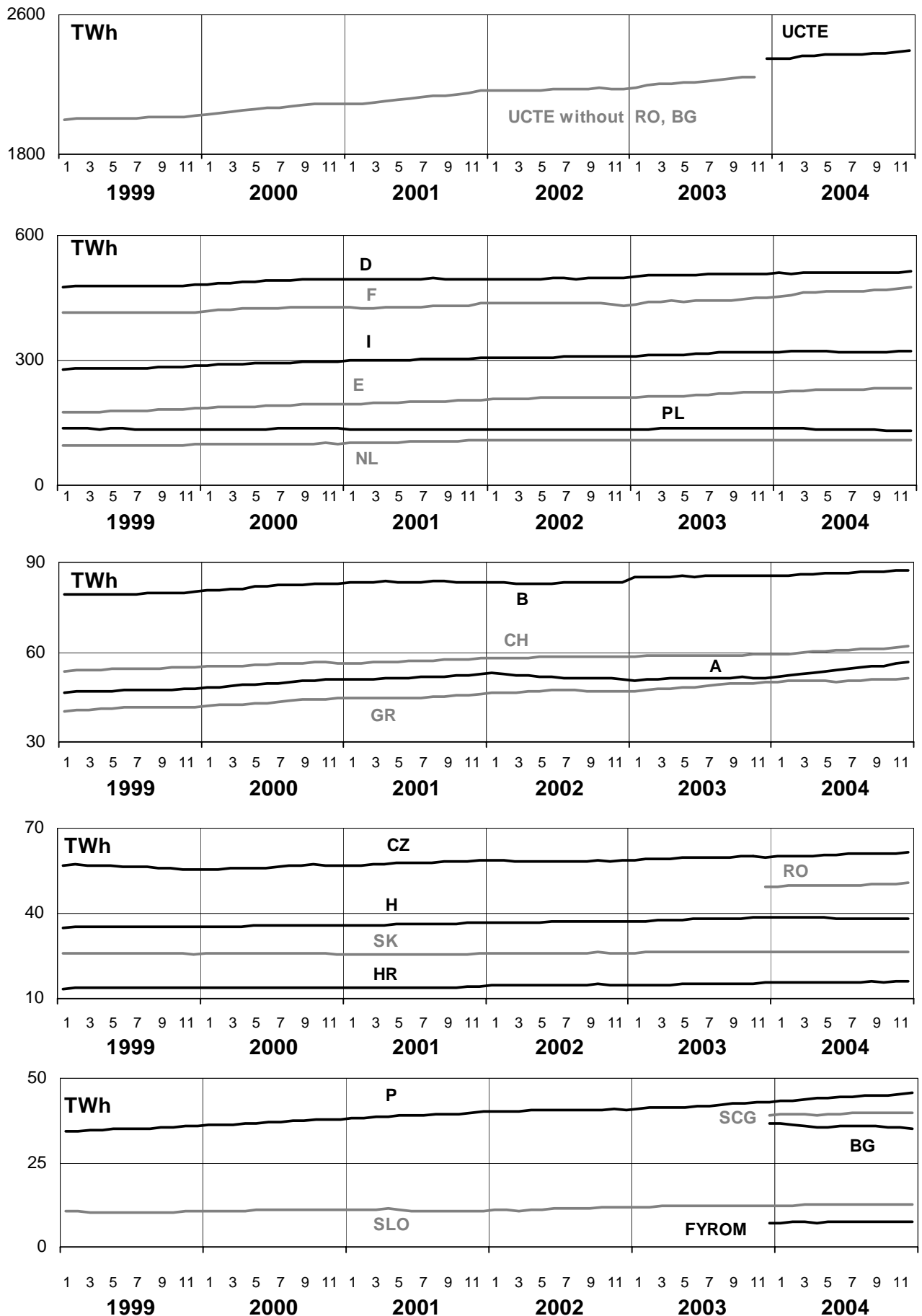


<sup>1</sup>YU = FRY + FYROM (Federal Republic of Yugoslavia and former Yugoslav Republic of Macedonia)

# 5

## Consumption of the last 12 months

December 2004

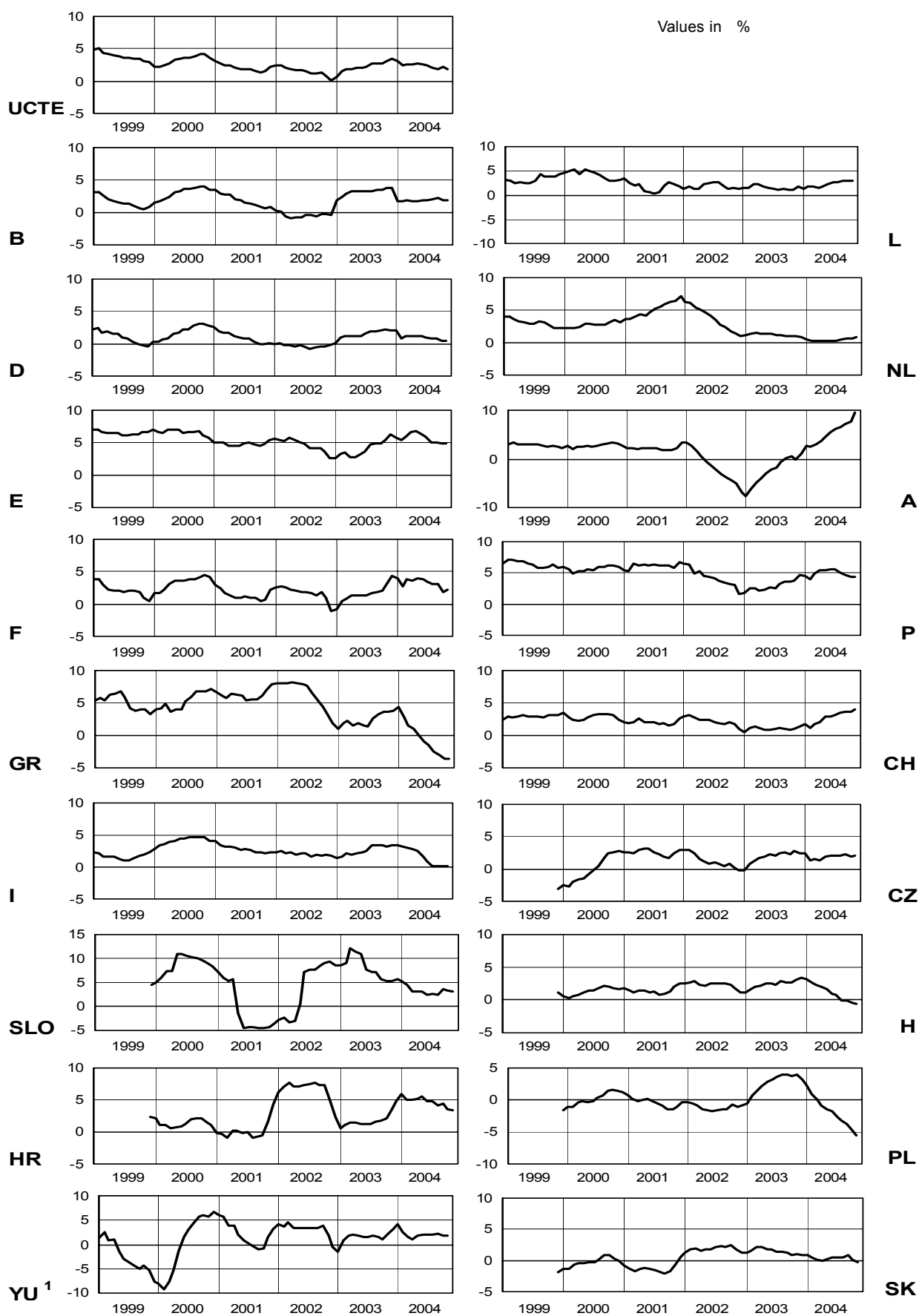




# 6

## Variation of the last 12 months' consumption

December 2004

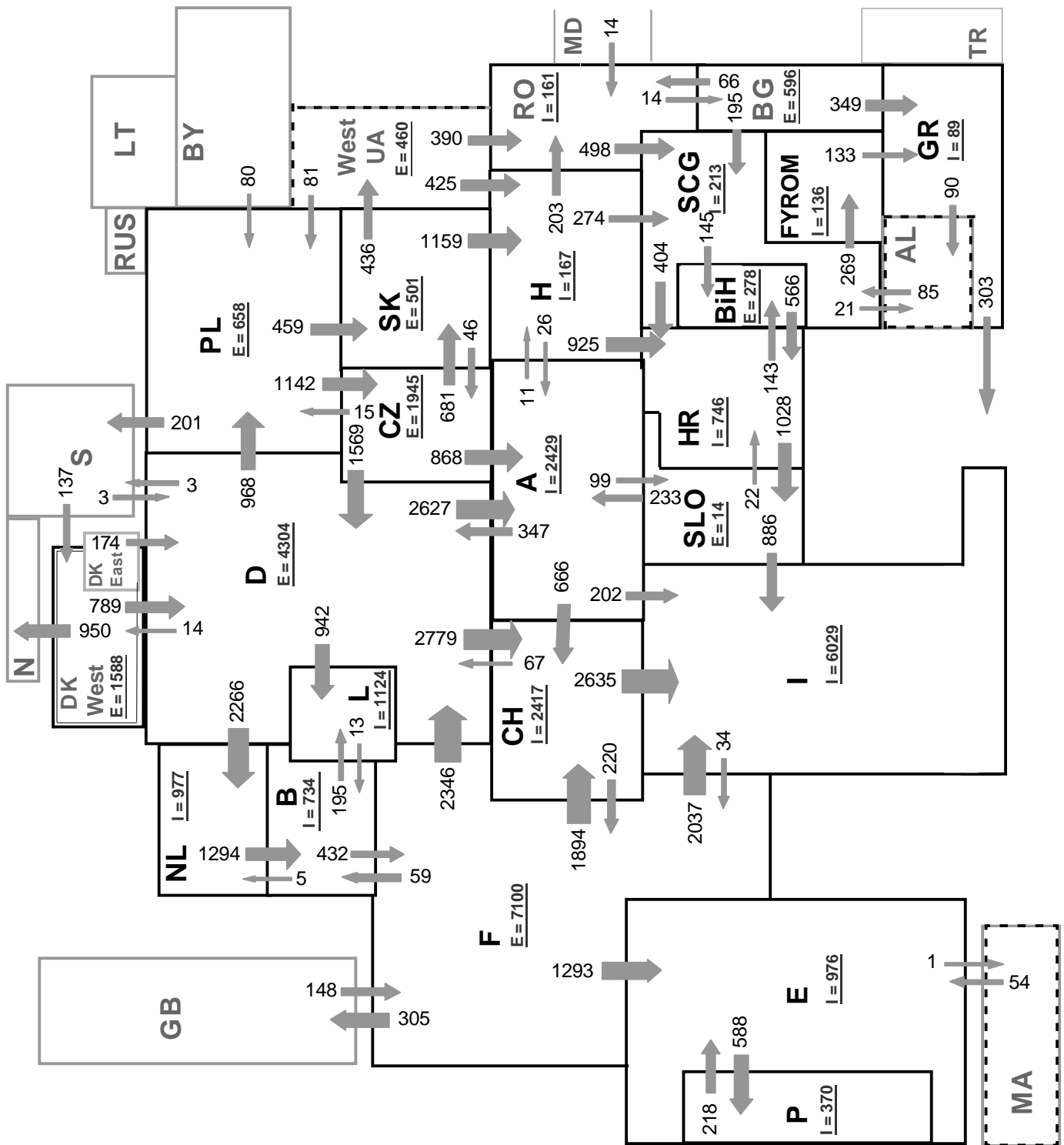


<sup>1</sup> YU = FRY + FYROM (Federal Republic of Yugoslavia and former Yugoslav Republic of Macedonia)

# 7

## Load flows (night) on 15.12.04 at 03:00\* in MW

December 2004



Associate member

Synchronous operation with UCTE region

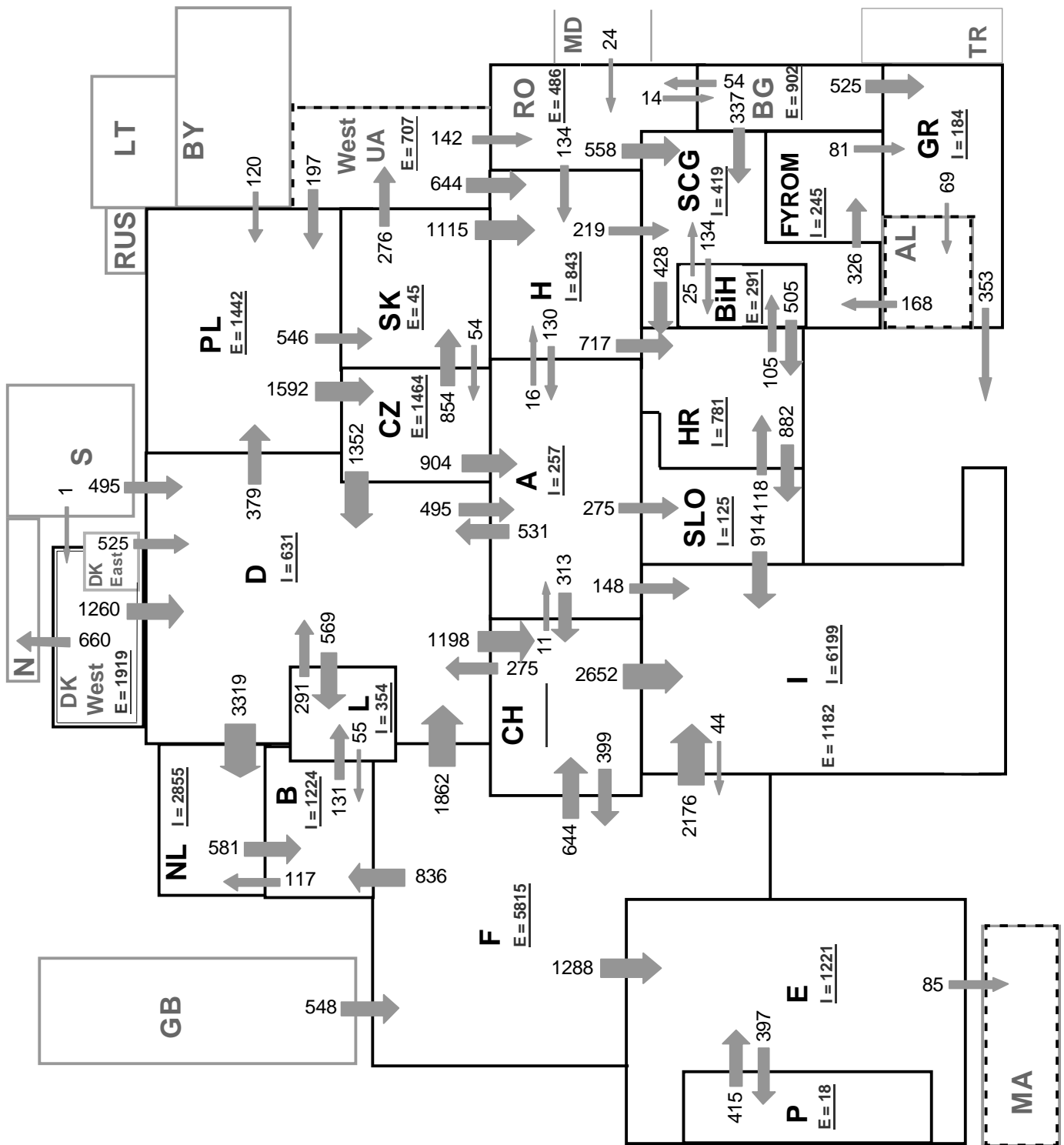
Sum of load flows in MW:

UCTE = 36858MW Total = 41259MW

\* Central European Time ( CET )

I = Import balance

E = Export balance



Associate member

Synchronous operation with UCTE region

Sum of load flows in MW:

UCTE = 32393MW      Total = 37607MW

\* Central European Time ( CET )

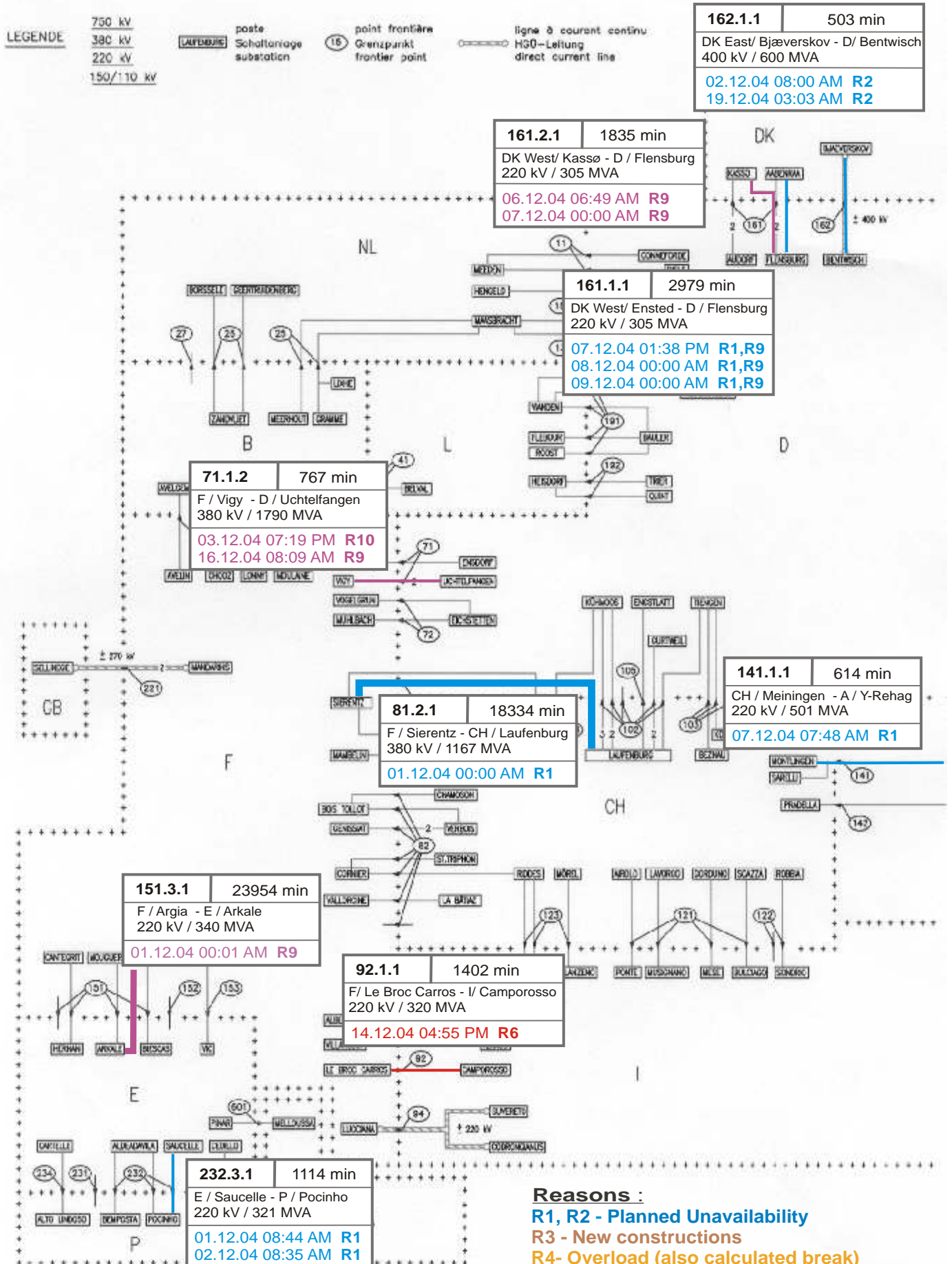
I = Import balance

E = Export balance

# 9

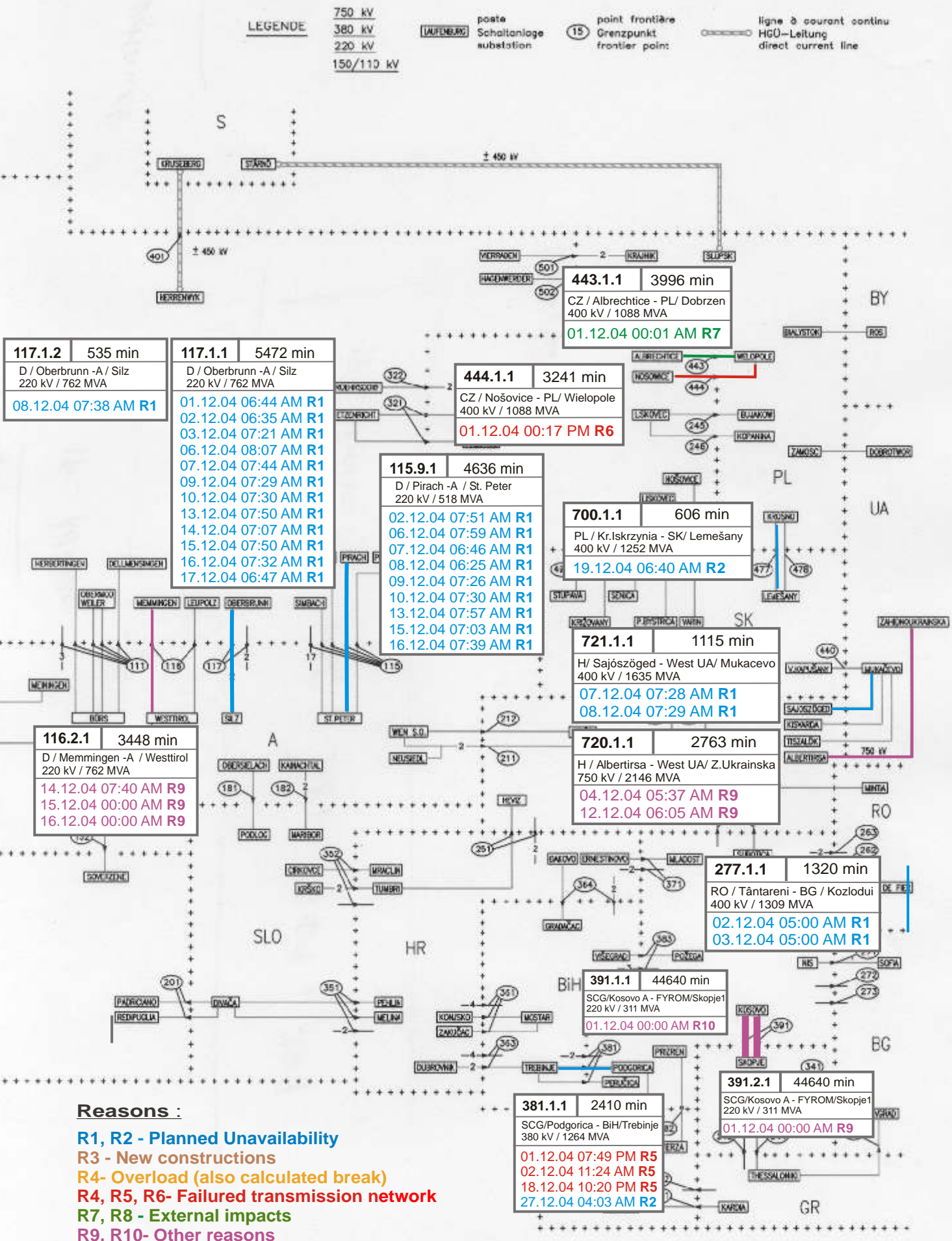
## Unavailability of international tie lines (major events with sum over 500 minutes)

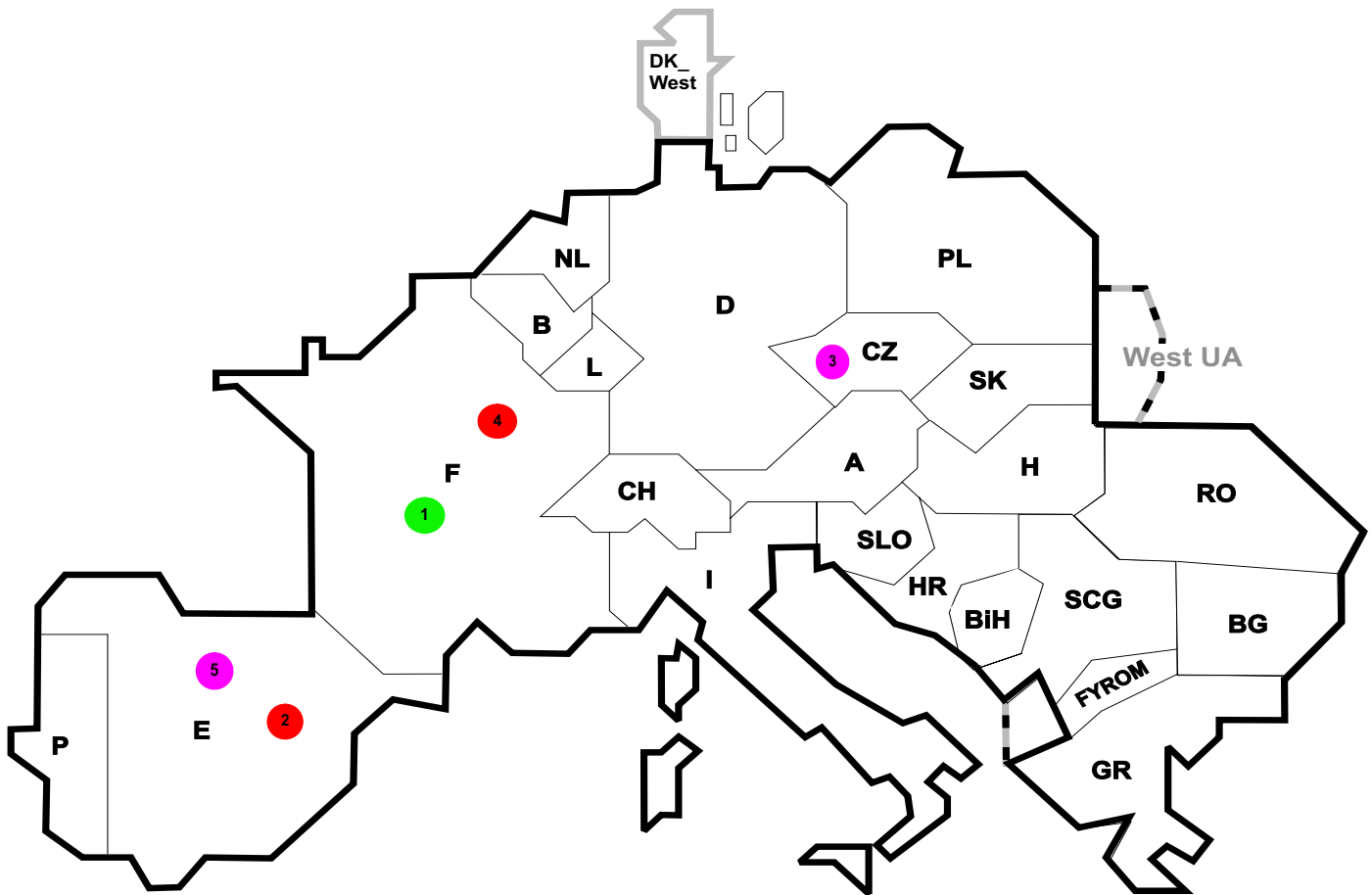
December 2004



### Reasons :

- R1, R2 - Planned Unavailability
- R3 - New constructions
- R4- Overload (also calculated break)
- R4, R5, R6- Failed transmission network
- R7, R8 - External impacts
- R9, R10- 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	F	Amargues	R8	76	45	204	0,08
2	E	Guillena	R6	53	0	29	0,12
3	CZ	Horni Zivotice	R10	11	0	5	0,09
4	F	Ampère	R6	5	36	9	0,01
5	E	Eriste	R10	1	0	41	0,00

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

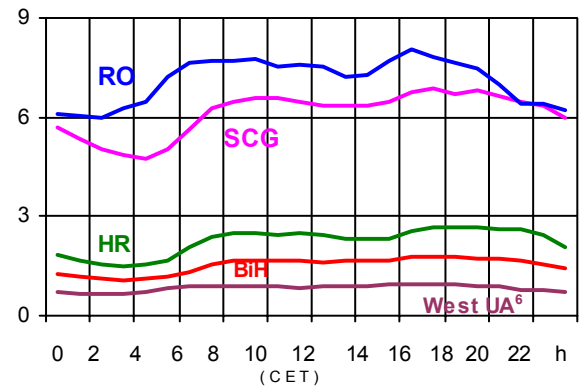
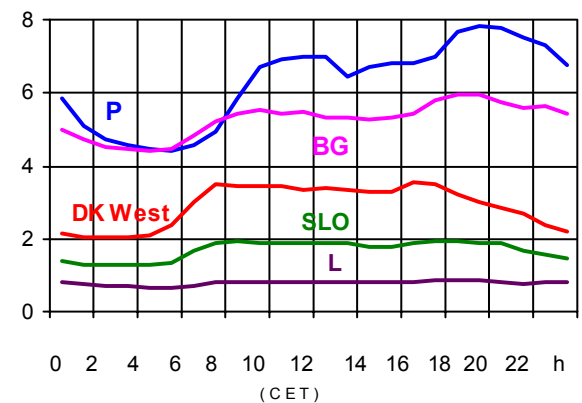
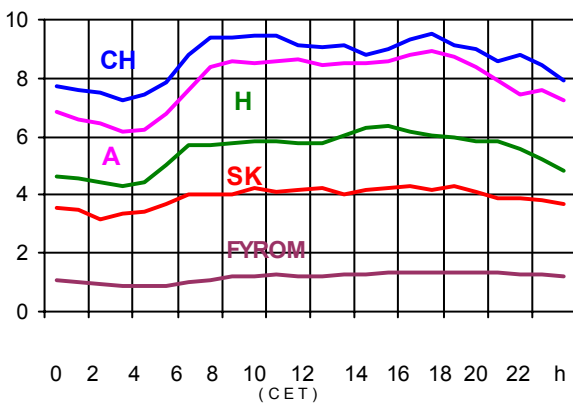
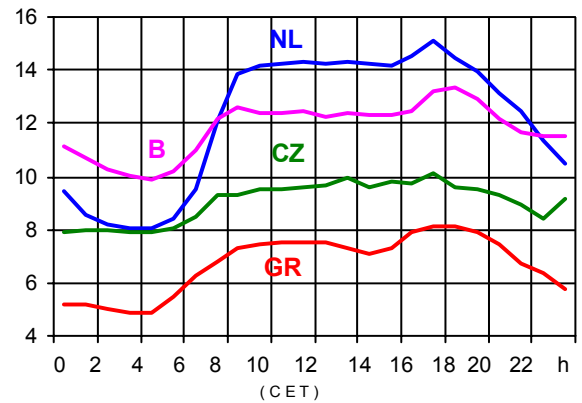
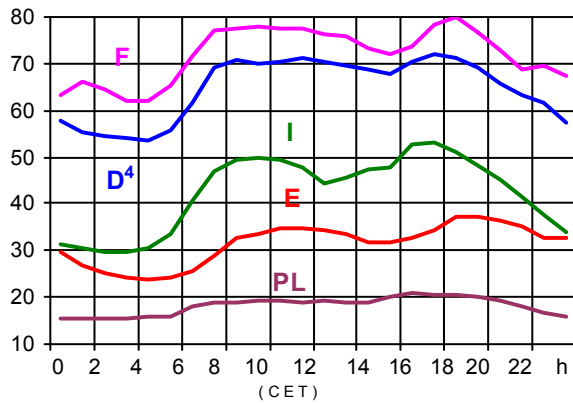
Control area	Export Programs	Import Programs	Export Programs at 03:00	Import Programs at 03:00	Export Programs at 11:00	Import Programs at 11:00
B	652883	1394168	742	1667	861	2019
D	4856437	2297330	5977	2607	5505	4058
E	794067	967873	400	1320	1042	2156
F	8484646	3102923	9215	2113	10563	4696
GR	96426	343997	300	372	350	520
I	48604	4321480	34	6063	44	6243
SLO	738240	728730	945	953	851	934
HR	460854	894403	618	1058	369	859
BiH	290985	37867	401	65	301	15
FYROM	50500	233800	30	165	80	326
SCG	371765	599932	360	576	516	1066
NL	481399	2074878	1015	1984	204	3045
A	318219	604434	573	396	1358	798
P	124011	548730	0	358	870	869
CH	2001346	2889548	2645	5112	2891	1735
CZ	1900045	584528	2817	860	2832	1371
H	483360	891280	906	1081	600	1437
PL	716642	29789	1060	540	1674	200
SK	562724	245465	758	185	810	652
RO	482866	310963	180	349	667	186
BG	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
DK West	927053	251006	1725	224	1858	0
West UA <sup>1</sup>	292116	0	382	0	497	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 15.12.04

Values in GW



	Peak load MW	% <sup>2</sup>	Load representativity <sup>1</sup> %	Parallel power <sup>3</sup> MW
B	13325	4,3	100	11314
D	72000	-2,0	91	77100
E	37196	4,3	94	33455
F	79981	4,7	100	83264
GR <sup>5</sup>	8122	-6,6	100	7342
I	53093	3,4	100	46138
SLO	1930	0,5	95	1747
HR	2692	3,5	100	2024
BiH	1803	7,2	99	1935
FYROM	1358	5,8	100	998
SCG	6867	2,5	96	6181
L	877	-0,3	99	830
NL	15128	8,5	90	11410
A	8894	4,1	82	8934
P	7840	1,8	94	6737
CH	9547	4,0	100	10688
CZ	10097	5,4	100	11781
HU	6357	8,4	100	4974
PL	20937	-5,4	100	20675
SK	4323	3,1	100	4172
RO	8028	6,4	100	7548
BG	5949	-0,8	100	6371
<b>UCTE</b>	<b>370176</b>	<b>2,0</b>		<b>365618</b>
DK West	3517	n.a.	99	5411
West UA <sup>6</sup>	975	14,6	100	1375

<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





## Contact

Boulevard Saint-Michel, 15  
B-1040 Brussels - Belgium  
Tel +3227416940 - Fax +3227416949

[info@ucte.org](mailto:info@ucte.org)  
[www.ucte.org](http://www.ucte.org)