

# UCTE



## November 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 15 February 2005

# 1

## Electricity supply situation of the countries

November 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	143	3875	2972	6990 <sup>2</sup>	788	162	7616	2,7	87189	1,9
D	1735	14446	30836	47017 <sup>2</sup>	-1074	734	45209	1,9	511722	0,3
E	2776	5065	12377	20218 <sup>2</sup>	-46	359	19813	6,5	233765	4,7
F	4342	39282	5932	49556	-5632	655	43269	6,6	471453	2,1
GR <sup>4</sup>	430	0	3623	4053 <sup>2</sup>	137	71	4119	-0,5	50797	-3,8
I	4212	0	19469	23680	4375	901	27155	2,2	320817	0,2
SLO	340	482	385	1207	-103	0	1104	2,6	12683	3,0
HR	570	0	385	955 <sup>2</sup>	429	12	1372	5,1	15901	3,3
BIH	439	0	669	1108	-167	0	941	-28,4	12411	n.a.
FYROM	134	0	470	604 <sup>2</sup>	90	0	694	5,8	7340	n.a.
SCG	1093	0	2497	3590	116	48	3658	4,2	39830	n.a.
L	79	0	284	363	270	88	545	0,6	6282	2,8
NL	0	325	7827	8152 <sup>2</sup>	1427	0	9579	1,0	110406	0,7
A	2434	0	2356	4790	487	234	5043	13,3	56052	8,7
P	1045	0	2541	3586 <sup>2</sup>	383	2	3967	5,3	45198	4,2
CH	2751	2329	245	5325 <sup>2</sup>	326	158	5493	5,6	61534	3,9
CZ	183	2309	4516	7008 <sup>2</sup>	-1312	64	5632	3,9	61241	2,0
H	15	1171	1608	2794 <sup>2</sup>	548	0	3342	0,9	38171	-0,6
PL <sup>5</sup>	274	0	11971	12245 <sup>2</sup>	-635	197	11413	-7,2	131098	-5,9
SK	290	1424	821	2535 <sup>2</sup>	-193	17	2325	-2,2	26337	-0,3
RO	1601	471	2795	4867 <sup>2</sup>	-296	0	4571	4,7	50382	n.a.
BG	209	1420	2090	3719 <sup>2</sup>	-534	25	3160	-2,4	35370	n.a.
<b>UCTE</b>	<b>25095</b>	<b>72599</b>	<b>116668</b>	<b>214362<sup>2</sup></b>	<b>-615</b>	<b>3727</b>	<b>210020</b>	<b>3,0</b>	<b>2385979</b>	<b>1,8</b>
DK West	3	0	2419	2422 <sup>2</sup>	-558	0	1864	n.a.	n.a.	n.a.
West UA <sup>6</sup>	14	0	684	698 <sup>2</sup>	-281	0	417	8,9	4388	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

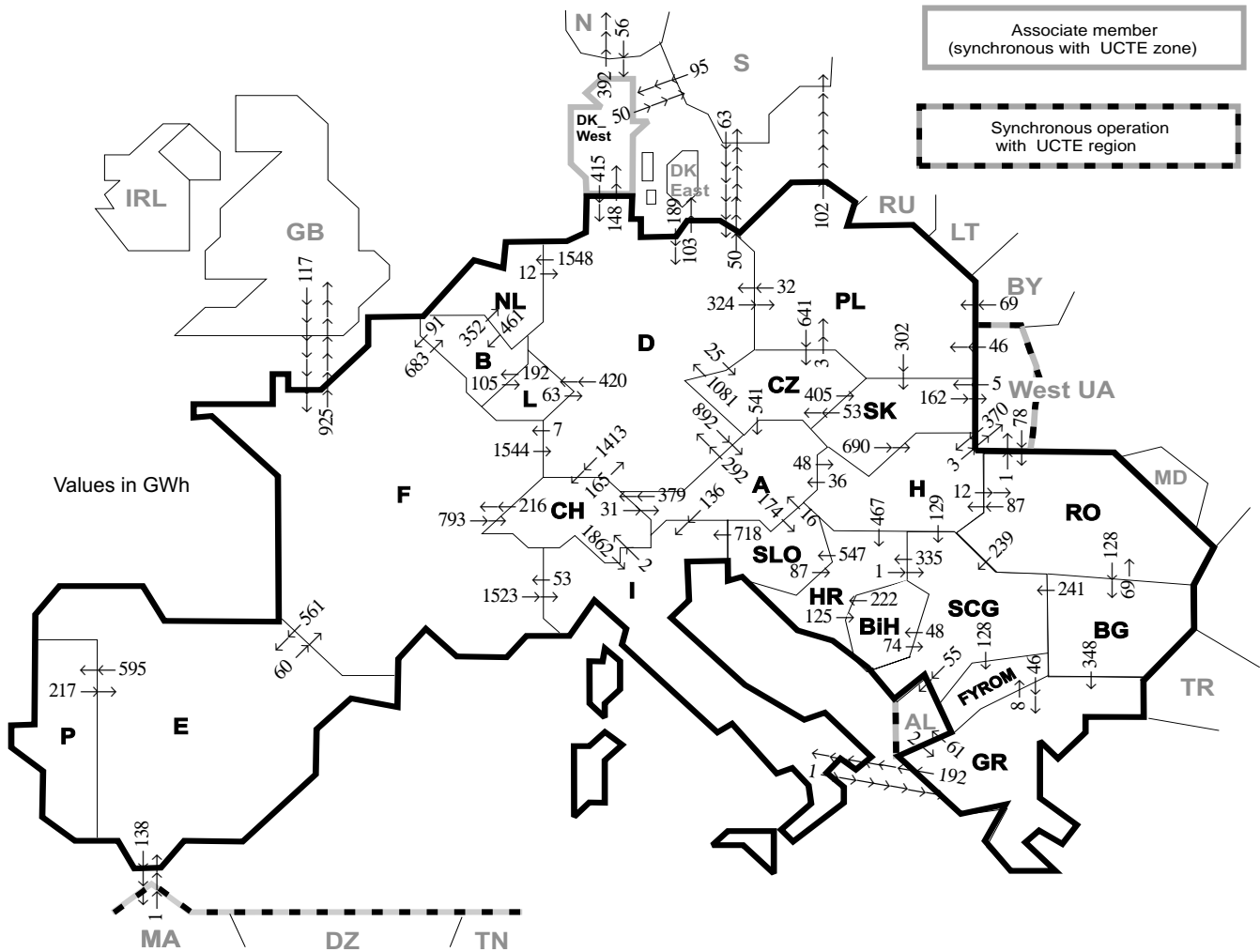
<sup>3</sup> Variation as compared to corresponding period of the previous year and representativity 100%

<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	-	-	-	91	-	-	-	-	-	-	-	105	352	-	-	-	-	-	-	-	-	-	-	-	-	548
D	-	-	-	7	-	-	-	-	-	-	-	420	1548	892	-	1413	25	-	324	-	-	-	148	-	153	4930
E	-	-	-	60	-	-	-	-	-	-	-	-	-	595	-	-	-	-	-	-	-	-	-	-	138	793
F	683	1544	561	-	-	1523	-	-	-	-	-	-	-	-	-	793	-	-	-	-	-	-	-	-	925	6029
GR	-	-	-	-	-	192	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	0	-	-	61	261
I	-	-	-	53	1	0	-	-	-	-	-	-	-	0	-	2	-	-	-	-	-	-	-	-	-	56
SLO	-	-	-	-	-	718	-	87	-	-	-	-	-	16	-	-	-	-	-	-	-	-	-	-	-	821
HR	-	-	-	-	-	-	547	125	-	1	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	673
BiH	-	-	-	-	-	-	222	-	-	74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	296
FYROM	-	-	-	46	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	46
SCG	-	-	-	-	-	-	-	335	48	128	-	-	-	-	-	-	0	-	-	-	0	0	-	-	55	566
L	192	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	255
NL	461	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	473
A	-	292	-	-	-	136	174	-	-	-	-	-	-	-	-	379	0	48	-	-	-	-	-	-	-	1029
P	-	-	217	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	217
CH	-	165	-	216	-	1862	-	-	-	-	-	-	-	31	-	-	-	-	-	-	-	-	-	-	-	2274
CZ	-	1081	-	-	-	-	-	-	-	-	-	-	-	541	-	-	-	-	3	405	-	-	-	-	-	2030
H	-	-	-	-	-	-	-	467	-	-	129	-	-	36	-	-	-	-	-	-	0	12	-	-	3	647
PL	-	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	641	-	-	-	302	-	-	0	102	1077
SK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	690	0	-	-	-	-	-	162	-	905
RO	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	87	-	-	-	128	-	1	0	455
BG	-	-	-	-	348	-	-	-	-	0	241	-	-	-	-	-	-	-	-	-	-	69	-	-	0	658
DK West	-	415	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	442	857
West UA <sup>2</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	370	46	5	78	-	-	-	-	499
Other III <sup>1</sup>	-	252	1	117	2	-	-	-	-	-	-	-	-	-	-	-	-	-	69	-	0	0	151	-	-	592
<b>Sum imp</b>	<b>1336</b>	<b>3856</b>	<b>779</b>	<b>544</b>	<b>397</b>	<b>4431</b>	<b>721</b>	<b>1111</b>	<b>173</b>	<b>136</b>	<b>684</b>	<b>525</b>	<b>1900</b>	<b>1516</b>	<b>595</b>	<b>2587</b>	<b>719</b>	<b>1195</b>	<b>442</b>	<b>712</b>	<b>159</b>	<b>128</b>	<b>299</b>	<b>166</b>	<b>1876</b>	<b>26987</b>

Sum of physical energy flows between UCTE countries = 23291GWh Total physical energy flows = 26987GWh

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

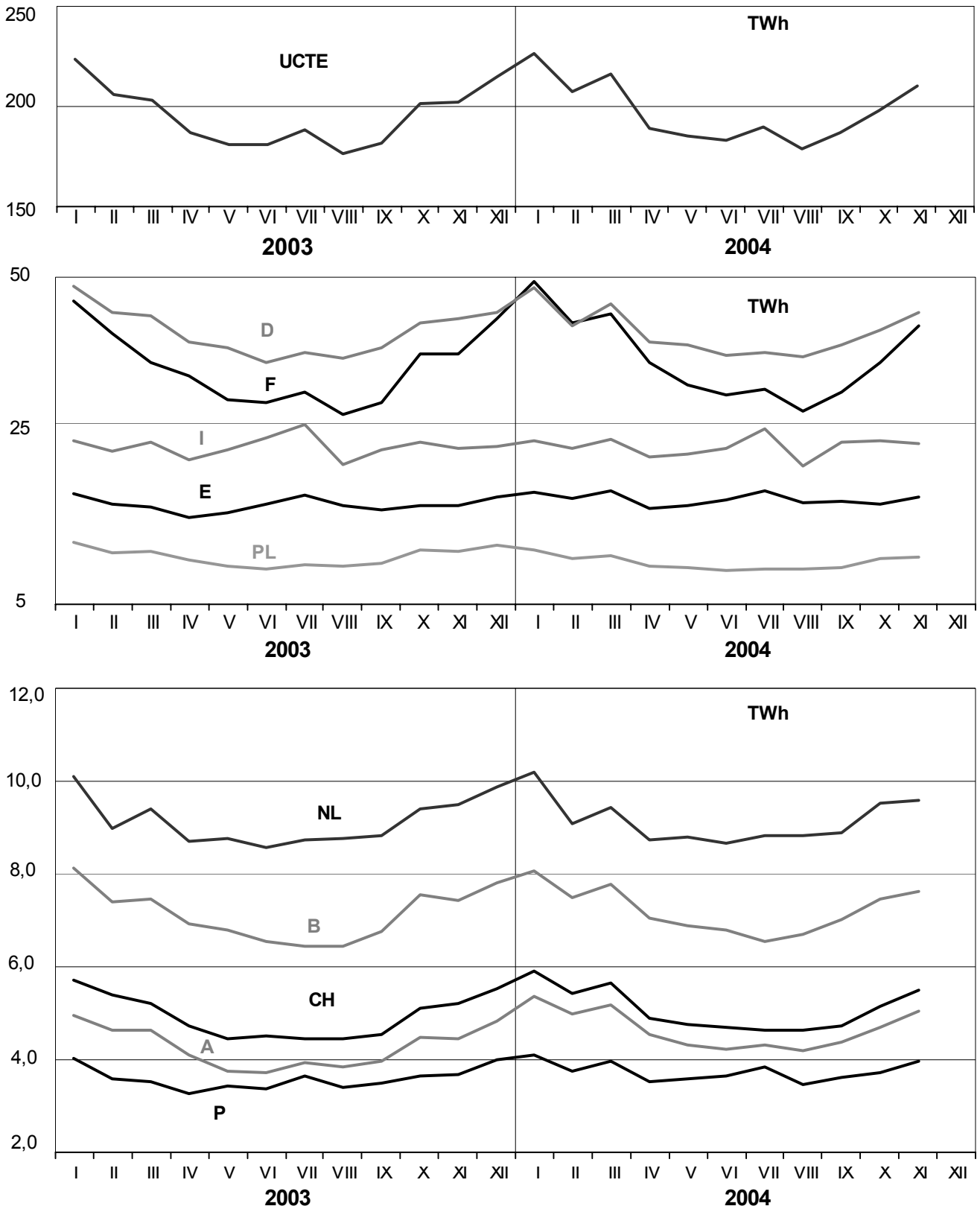
<sup>2</sup> West UA represents the so-called Burshtyn Island synchronously interconnected with UCTE

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

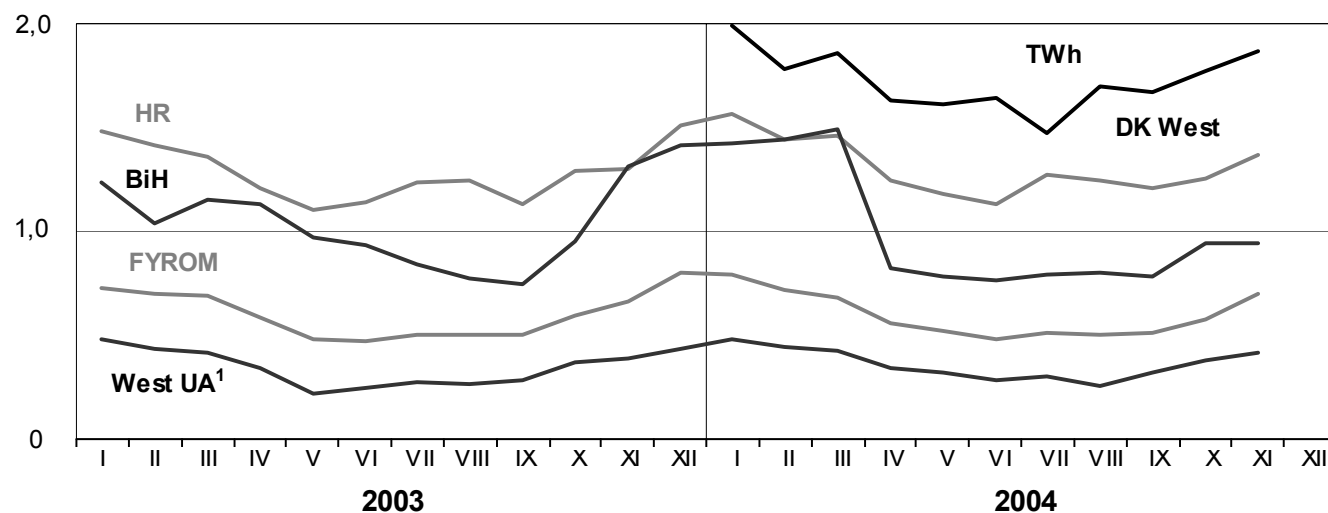
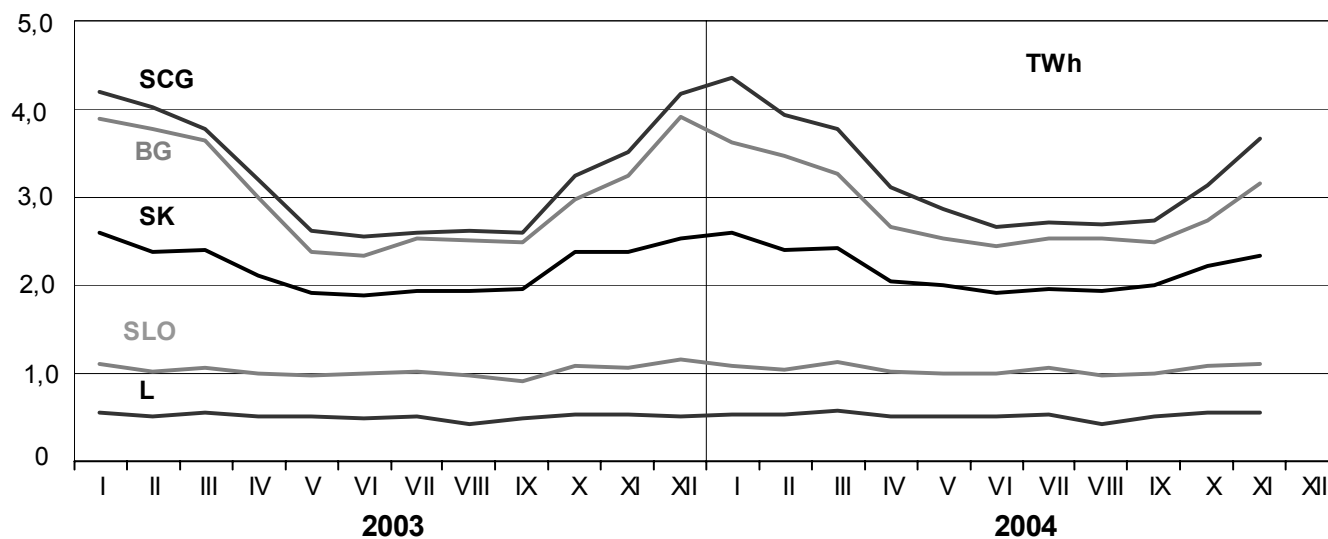
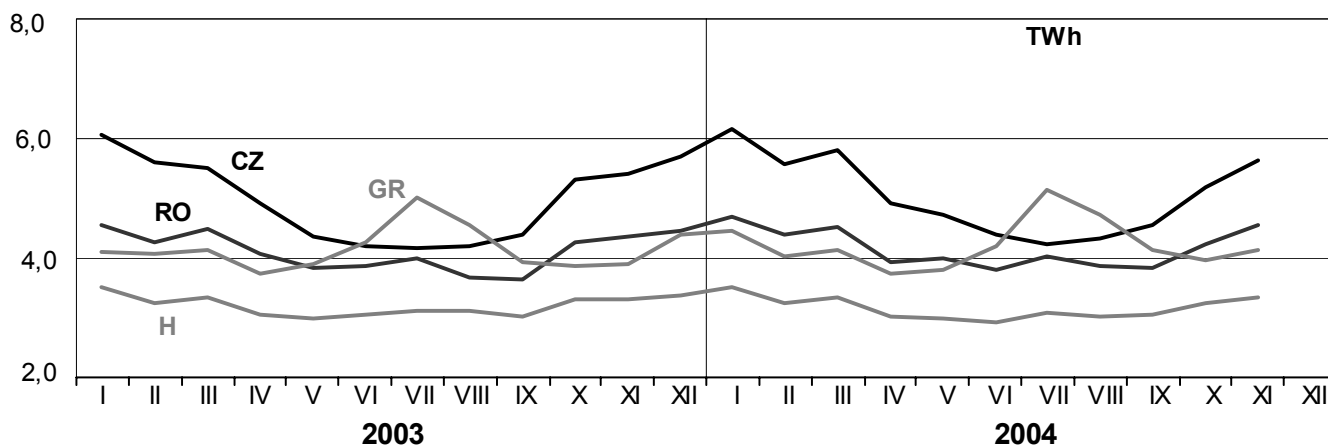
November 2004



# 3

## Monthly consumption

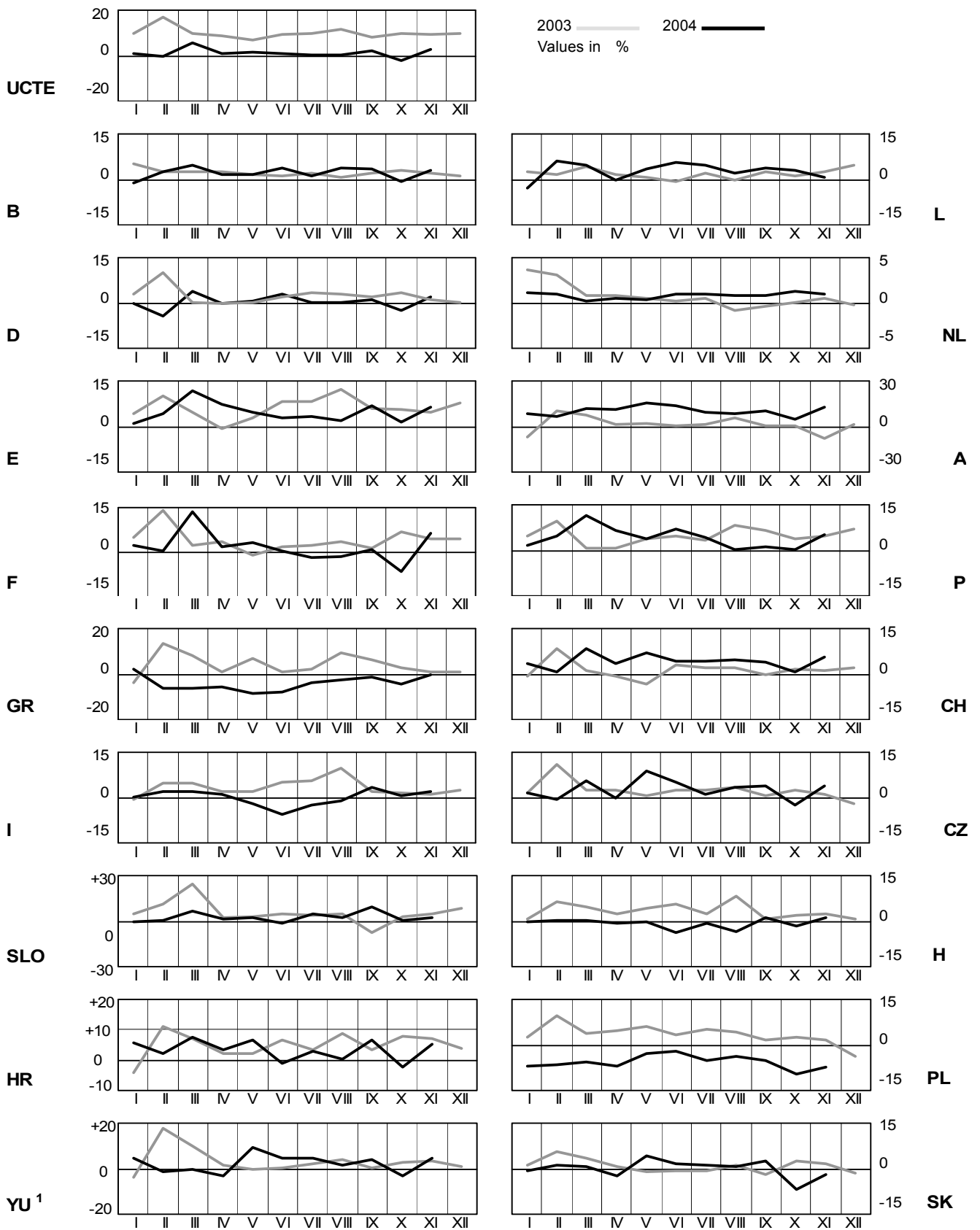
November 2004



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

# 4 Monthly consumption variation

November 2004

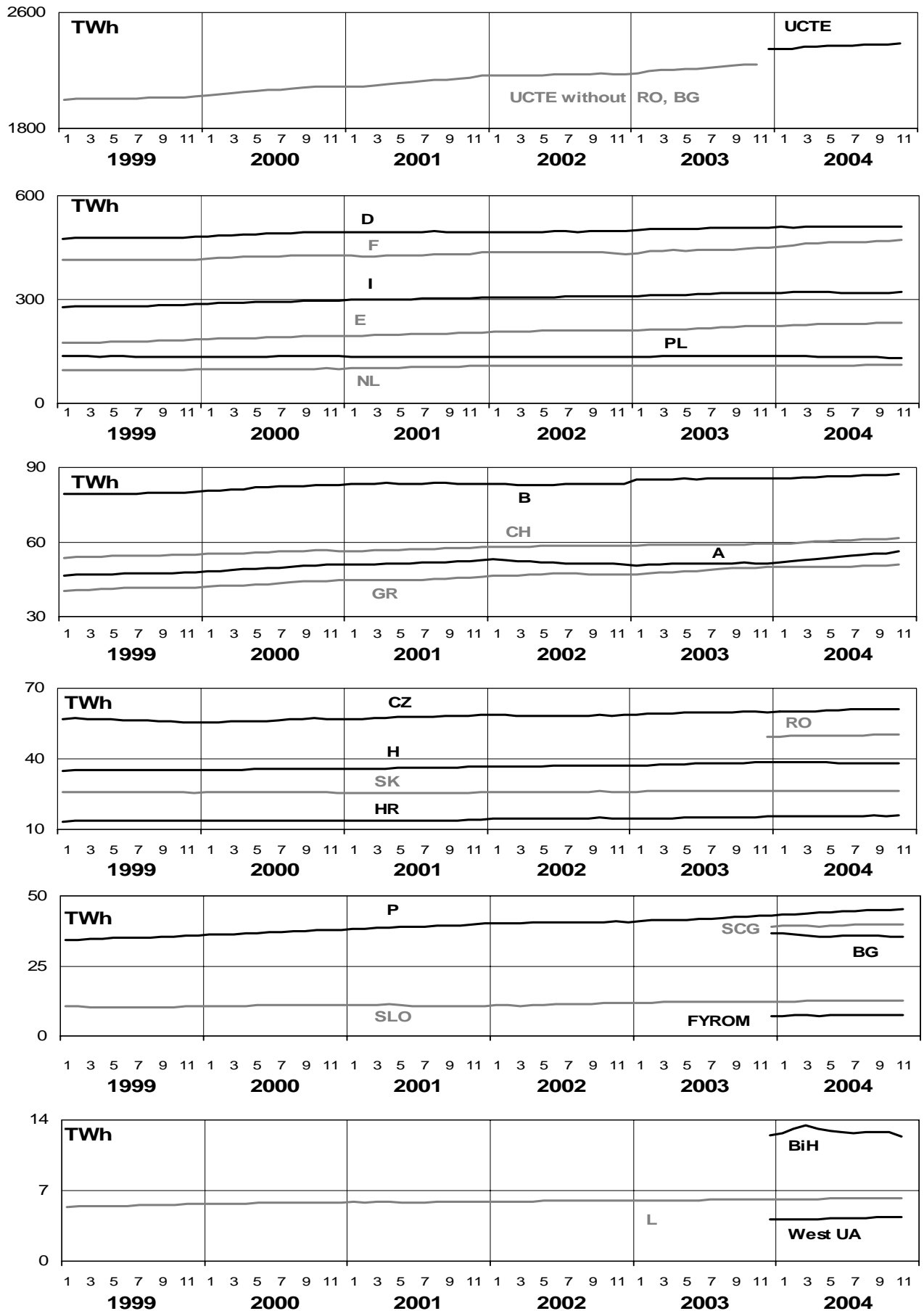


<sup>1</sup>YU = FRY + FYROM (Federal Republic of Yugoslavia and former Yugoslav Republic of Macedonia)

# 5

## Consumption of the last 12 months

November 2004

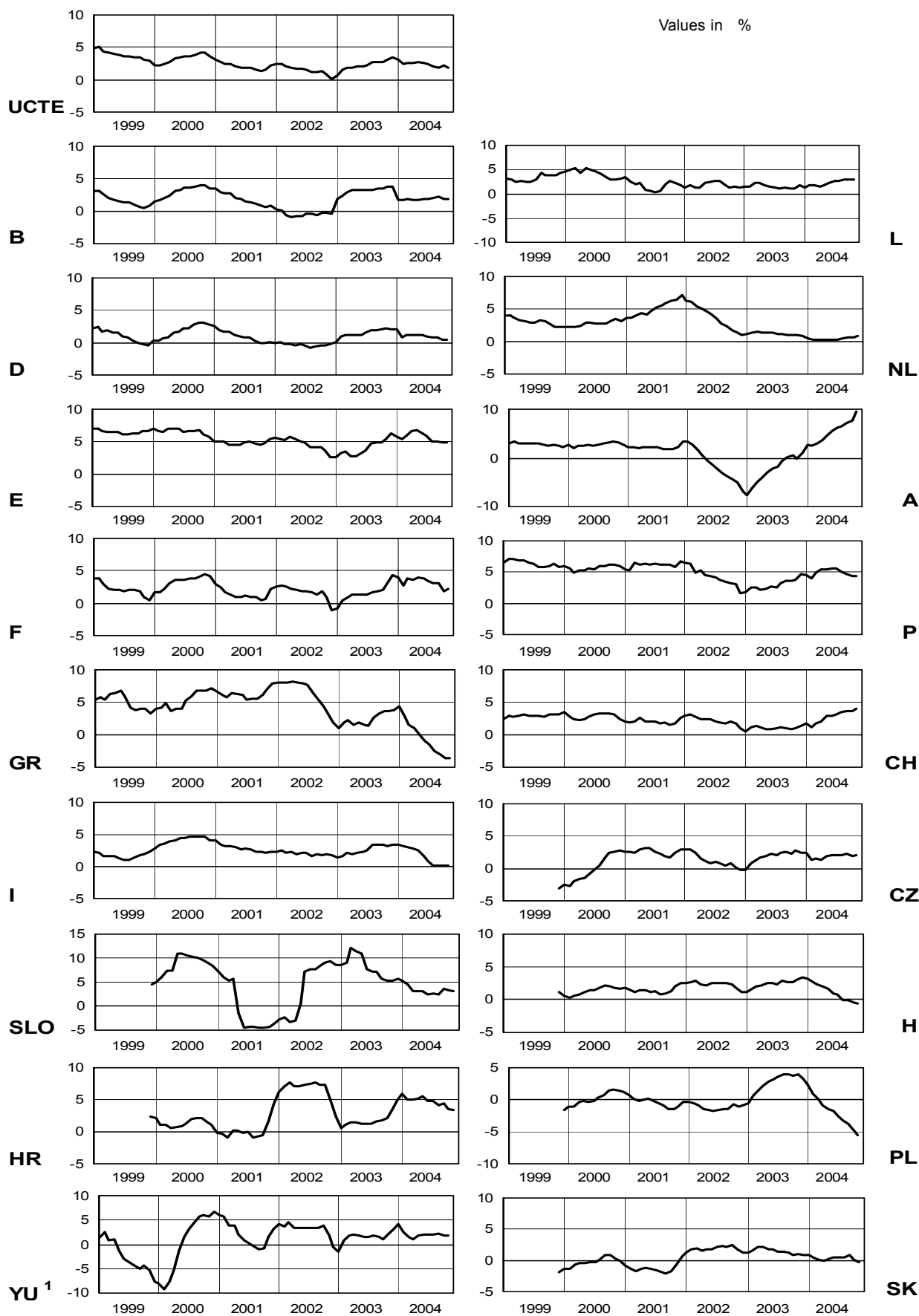




# 6

## Variation of the last 12 months' consumption

November 2004

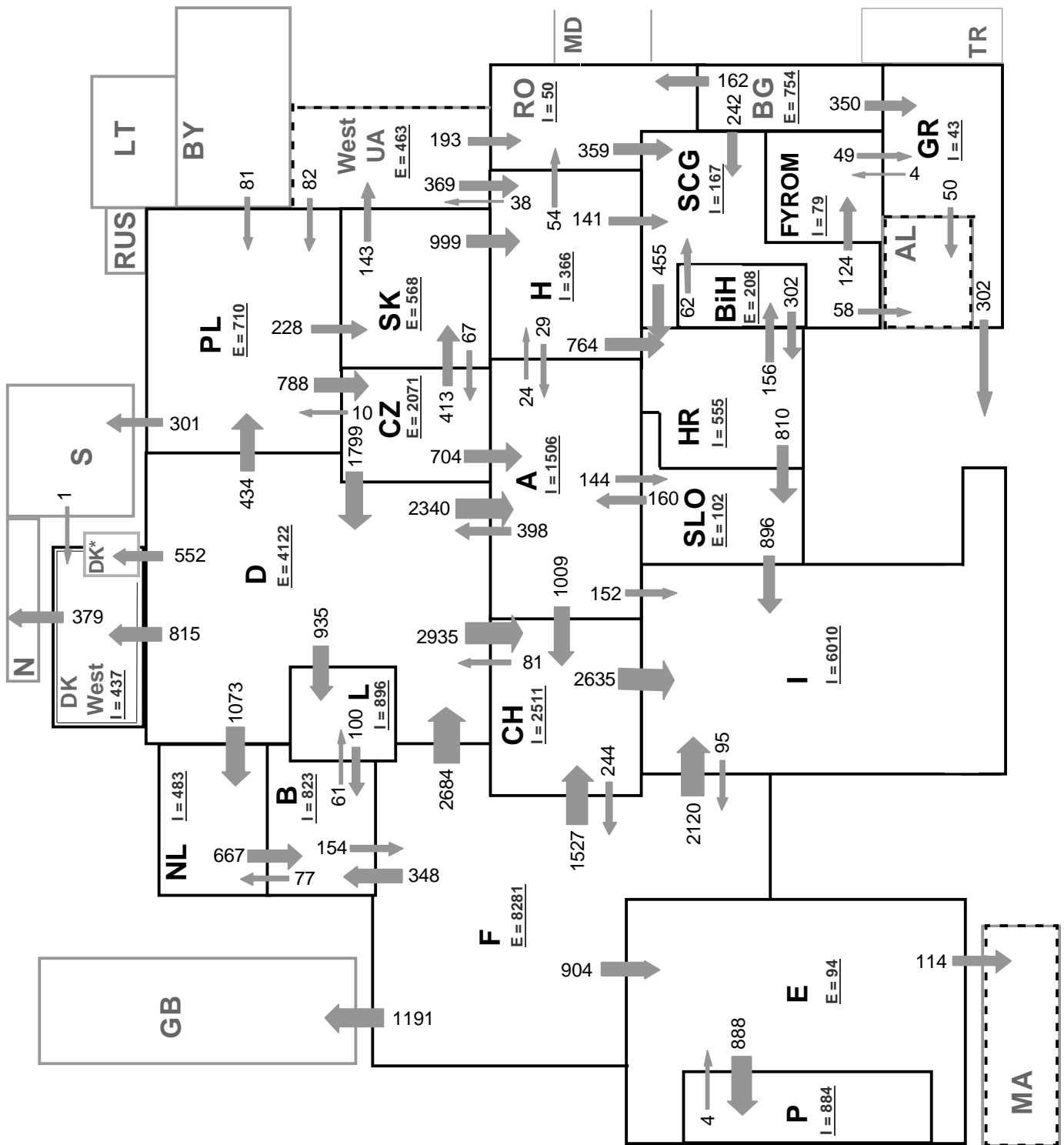


<sup>1</sup> YU = FRY + FYROM (Federal Republic of Yugoslavia and former Yugoslav Republic of Macedonia)

# 7

## Load flows (night) on 17.11.04 at 03:00\* in MW

November 2004



Associate member

Synchronous operation with UCTE region

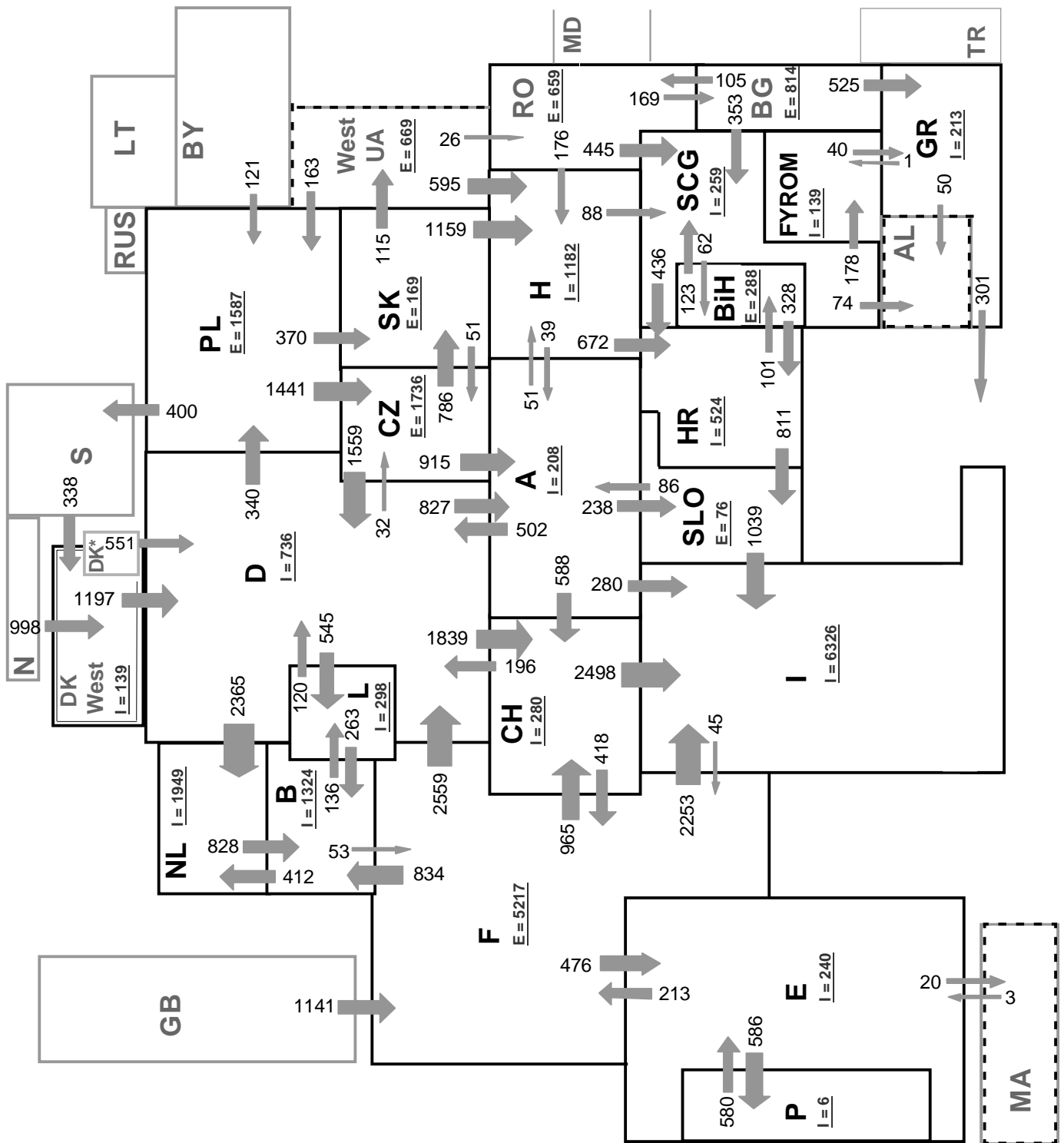
Sum of load flows in MW:

UCTE = 32462MW      Total = 36829MW

\* Central European Time ( CET )

I = Import balance

E = Export balance



Associate member

Synchronous operation with UCTE region

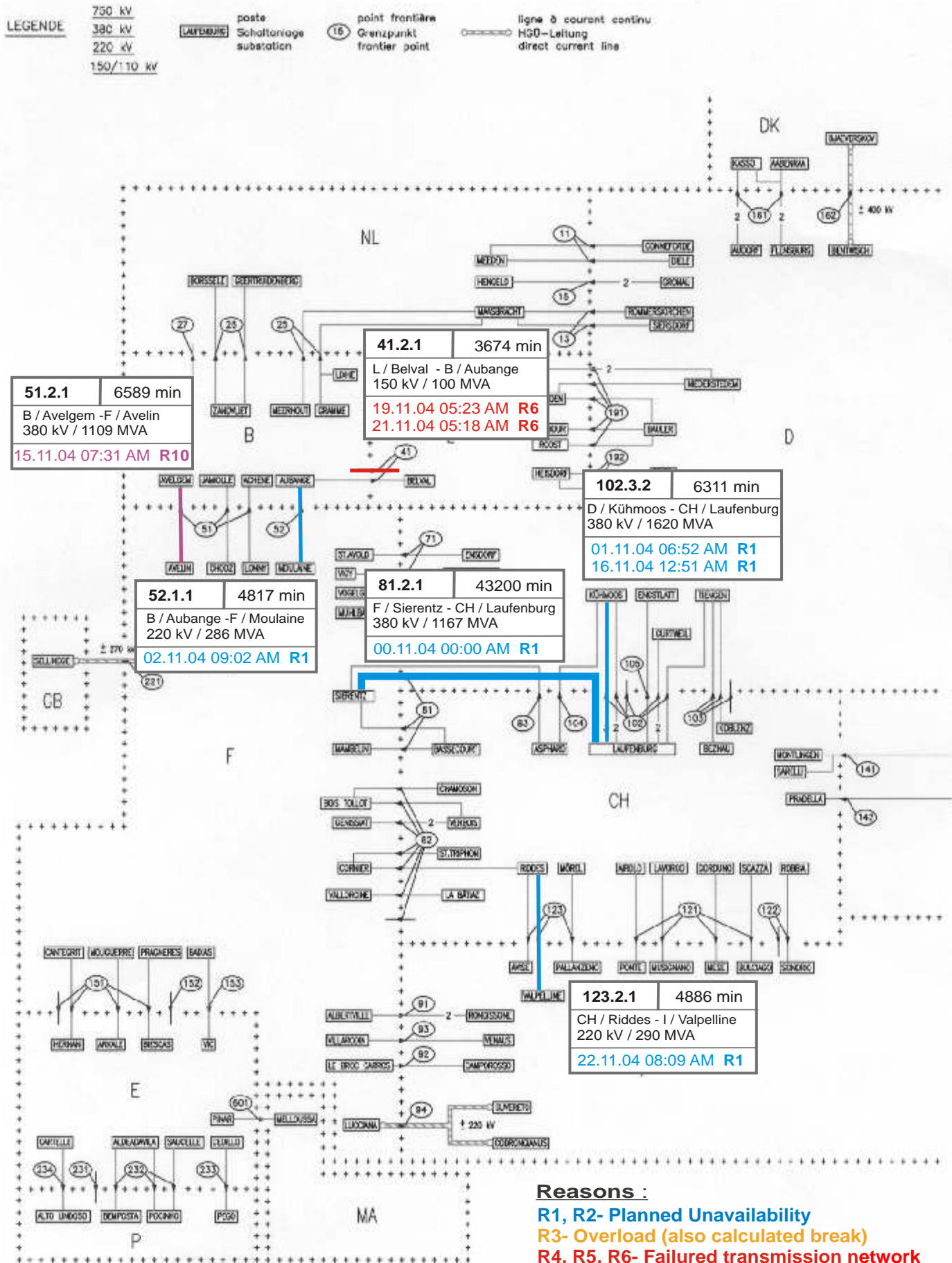
Sum of load flows in MW:

UCTE = 33401MW      Total = 39193MW

\* Central European Time ( CET )

I = Import balance

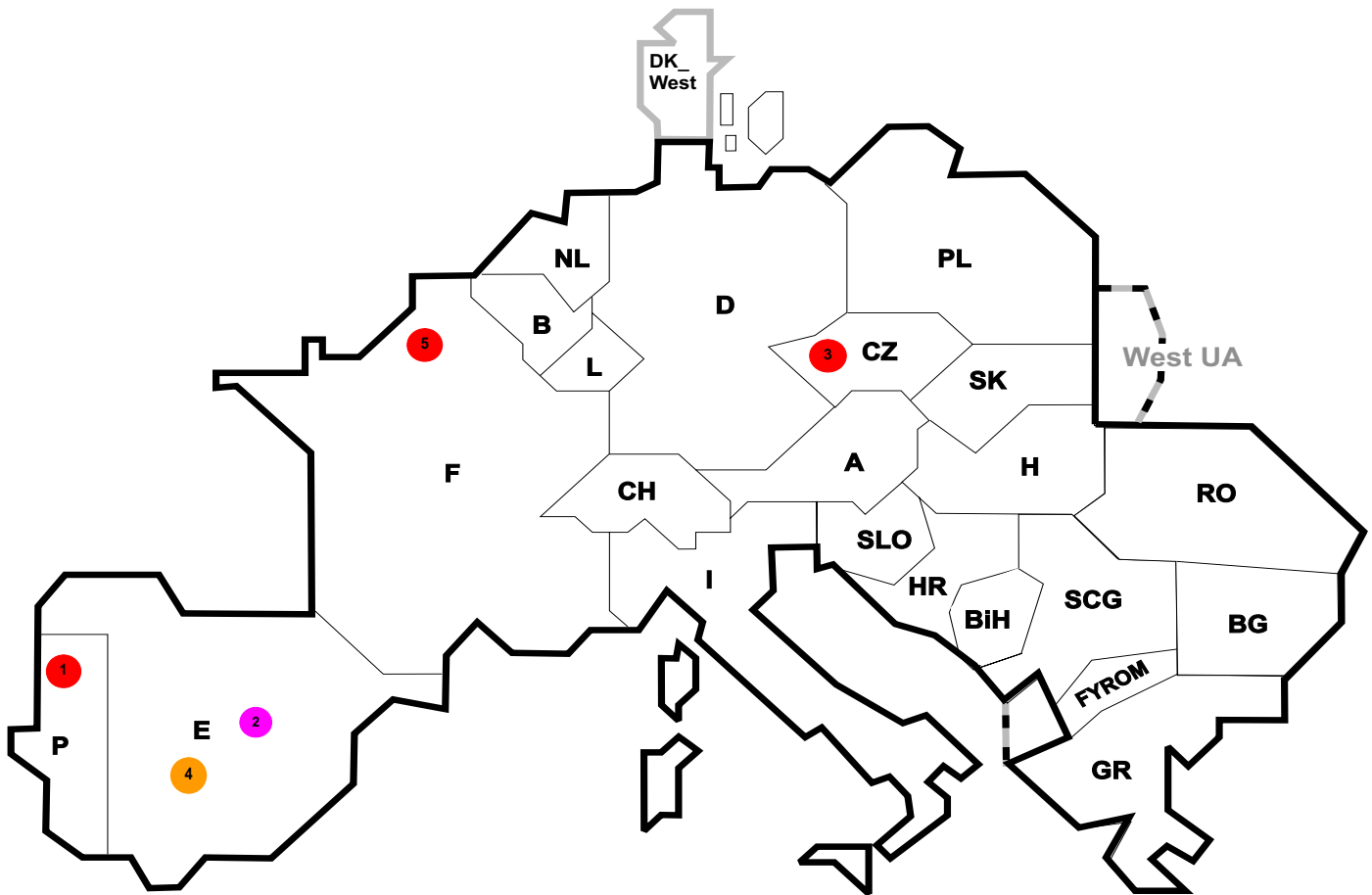
E = Export balance



**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:

**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	P	Seixal	R6	452	0	341	5,27
2	E	Norte	R10	103	0	34	0,23
3	CZ	Otrokovice	R5	11	0	6	0,09
4	E	Sanguesa	R4	4	0	14	0,01
5	F	Haut Vinage	R6	2	19	7	0,00

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

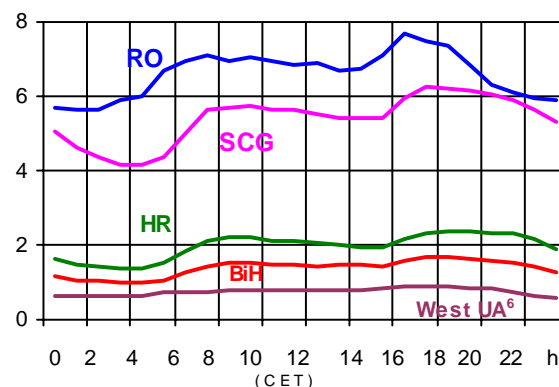
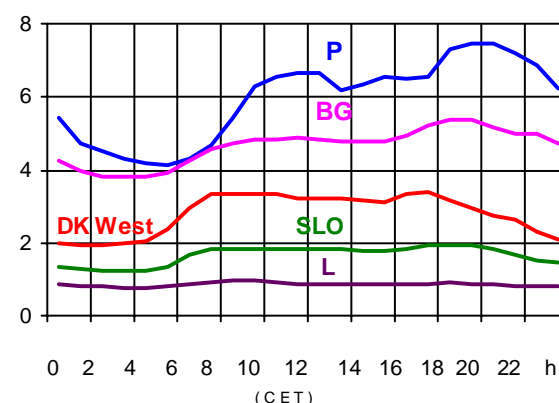
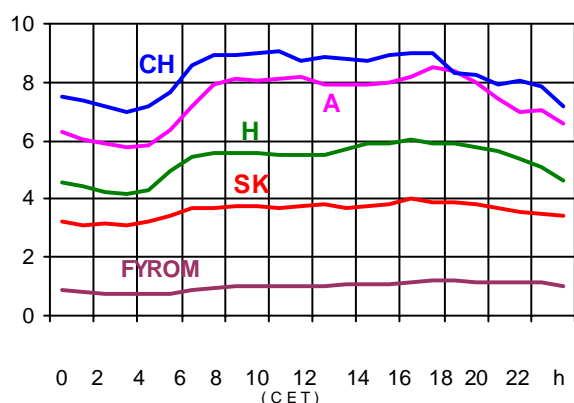
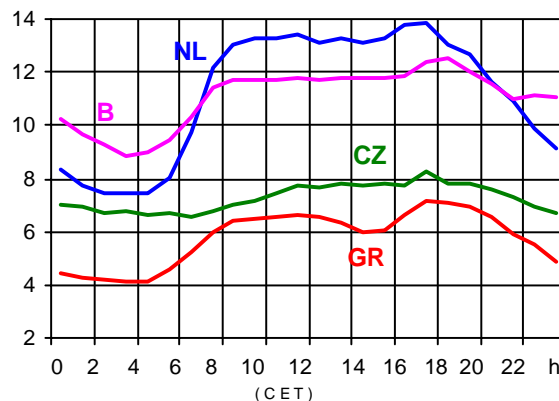
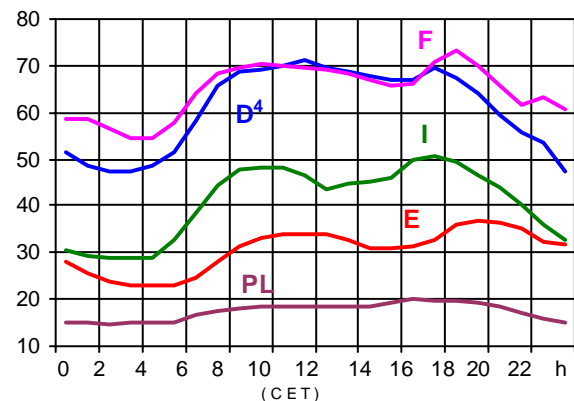
Control area	Export Programs	Import Programs	Export Programs at 03:00	Import Programs at 03:00	Export Programs at 11:00	Import Programs at 11:00
B	419136	1120609	370	1131	0	1202
D	3598614	2577069	4163	2818	4081	3568
E	821896	675023	1051	900	1023	1147
F	7802030	2316078	9939	1532	9068	3848
GR	189600	330589	300	360	300	521
I	56476	4431501	95	6105	45	6371
SLO	676082	576805	1034	933	900	775
HR	335258	772496	620	845	326	556
BiH	218148	91074	276	65	276	0
FYROM	45900	137900	107	184	189	343
SCG	482273	591275	506	656	841	1013
NL	476153	1902604	1263	1757	722	2677
A	349587	629903	806	249	946	640
P	164097	546549	0	896	897	913
CH	2245314	2575847	2701	5271	2858	3158
CZ	2005187	673604	3049	940	2944	1208
H	393530	942056	746	1138	463	1647
PL	842037	213656	1243	540	2035	275
SK	547829	294401	801	169	762	506
RO	471008	174510	360	405	826	170
BG	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
DK West	822645	297349	334	800	1142	1460
West UA <sup>1</sup>	281461	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 17.11.04

Values in GW



	Peak load MW	% <sup>2</sup>	Load representativity <sup>1</sup> %	Parallel power <sup>3</sup> MW
B	12505	1,2	100	10355
D	71100	-2,1	91	77000
E	36690	10,8	94	36690
F	73166	6,4	100	75295
GR <sup>5</sup>	7171	-1,4	99	6363
I	50513	1,6	100	43487
SLO	1947	7,6	95	1898
HR	2363	1,7	100	1929
BiH	1700	9,6	99	1778
FYROM	1212	7,1	100	869
SCG	6274	7,5	96	5373
L	952	10,6	99	903
NL	13831	1,8	90	11347
A	8528	6,2	82	8717
P	7489	7,7	94	6297
CH	9088	3,2	100	9088
CZ	9745	5,4	100	9920
H	6060	2,9	100	4340
PL	19920	-6,5	100	19762
SK	4004	1,3	100	3624
RO	7668	7,9	100	6944
BG	5390	2,0	100	5733
<b>UCTE</b>	<b>346952</b>	<b>1,3</b>		<b>347712</b>
DK West	3371	n.a.	99	3211
West UA <sup>6</sup>	918	12,9	100	1280

<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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