

UCTE



September 2004

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

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¹ Monthly provisional values from the UCTE database as of 03 January 2005

1

Electricity supply situation of the countries

September 2004

Countries	Net production in GWh ¹				Exchange balance in GWh	Pump in GWh	Consumption in GWh ¹			
	Hy	Tn	Tc	Total			monthly	Δ% ³	last 12 months	Δ% ³
B	131	3380	2813	6324 ²	735	155	6904	1,9	86162	1,2
D	1697	11300	28326	41323 ²	-111	735	40477	0,9	509849	0,4
E	1943	4699	13096	19738 ²	-54	388	19296	7,5	231196	4,4
F	3822	33064	3102	39988	-5183	550	34255	1,1	468846	3,0
GR ⁴	342	0	3671	4013 ²	176	71	4118	-1,4	50490	-3,1
I	3260	0	21078	24338	3690	731	27297	3,6	320015	0,2
SLO	275	40	433	748	252	0	1000	9,6	12650	3,5
HR	408	0	623	1031 ²	183	6	1208	6,5	15867	4,2
BiH	195	0	740	935	-148	0	787	5,8	12802	n.a.
FYROM	64	0	361	425 ²	81	0	506	2,0	7317	n.a.
SCG	532	0	2075	2607	166	44	2729	4,5	39787	n.a.
L	76	0	278	354	252	91	515	4,0	6264	2,8
NL	0	300	7650	7950 ²	944	0	8894	0,7	110190	0,6
A	2893	0	1564	4457	158	219	4396	10,4	55237	6,7
P	679	0	2515	3194 ²	473	46	3621	1,1	44834	4,4
CH	3167	1652	235	5054 ²	-82	235	4737	4,0	61199	3,6
CZ	149	2146	3675	5970 ²	-1333	70	4567	3,7	61172	2,2
H	18	1228	1232	2478 ²	572	0	3050	1,3	38191	-0,1
PL ⁵	234	0	10708	10942 ²	-707	192	10043	-5,0	133196	-3,8
SK	251	1213	602	2066 ²	-56	17	1993	2,4	26555	0,9
RO	1070	0	2841	3911 ²	-71	0	3840	6,0	50207	n.a.
BG	186	1052	1846	3084 ²	-564	24	2496	-0,1	35674	n.a.
UCTE	21392	60074	109464	190930²	-627	3574	186729	2,3	2377700	2,0
DK West	2	0	1676	1678 ²	-10	0	1668	n.a.	n.a.	n.a.
West UA ⁶	4	0	597	601 ²	-282	0	319	12,7	4348	n.a.

¹ Percentage as referred to total values in %

Countries	B	D	E	F	GR ⁴	I	SLO	HR	BiH	FY ROM	SCG	L	NL	A	P	CH	CZ	H	PL	SK	RO	BG	DK West	West UA ⁶
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

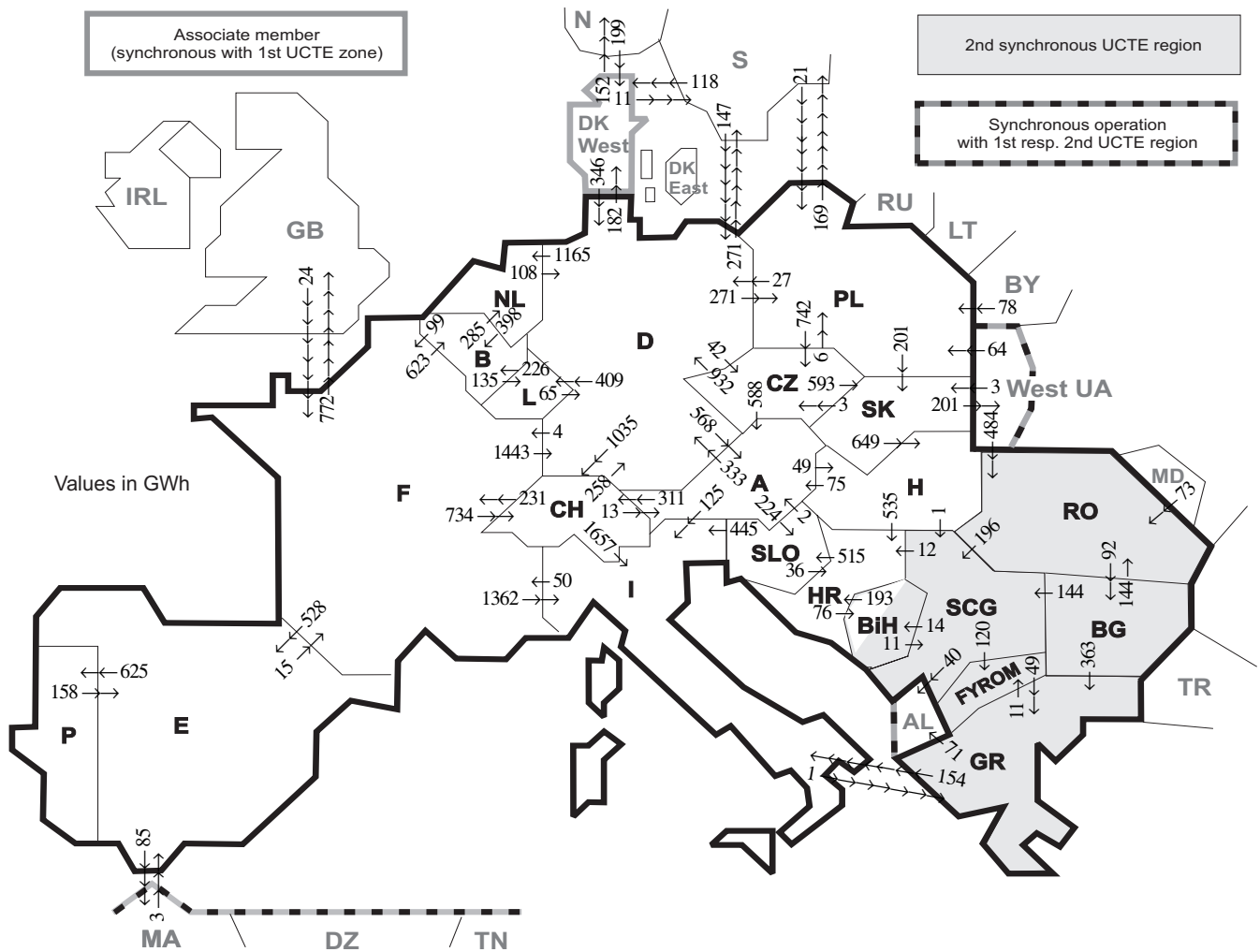
² Including deliveries from industry

³ Variation as compared to corresponding period of the previous year and representativity 100%

⁴ 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%

⁵ Values for 2003 are gross values, values for 2004 are net values.

⁶ West UA represents the so-called Burshtyn Island synchronously interconnected with UCTE



Exporting countries	Importing countries																				Sum export						
	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 ²	Other III ¹	
B	-	-	-	99	-	-	-	-	-	-	-	135	285	-	-	-	-	-	-	-	-	-	-	-	-	519	
D	-	-	-	4	-	-	-	-	-	-	-	409	1165	568	-	1035	42	-	271	-	-	-	182	-	-	94	3770
E	-	-	-	15	-	-	-	-	-	-	-	-	-	-	625	-	-	-	-	-	-	-	-	-	-	85	725
F	623	1443	528	-	-	1362	-	-	-	-	-	-	-	-	-	734	-	-	-	-	-	-	-	-	-	772	5462
GR	-	-	-	-	154	-	-	-	-	11	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	71	236
I	-	-	-	50	1	0	-	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	51
SLO	-	-	-	-	-	445	36	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	483
HR	-	-	-	-	-	-	515	76	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	591
BiH	-	-	-	-	-	-	-	193	-	-	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	204
FYROM	-	-	-	-	49	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	49
SCG	-	-	-	-	-	-	-	12	14	120	-	-	-	-	-	-	-	0	-	-	0	0	-	-	-	40	186
L	226	65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	291
NL	398	108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	506
A	-	333	-	-	-	125	224	-	-	-	-	-	-	-	-	311	0	49	-	-	-	-	-	-	-	-	1042
P	-	-	158	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	158
CH	-	258	-	231	-	1657	-	-	-	-	-	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2159
CZ	-	932	-	-	-	-	-	-	-	-	-	-	-	588	-	-	-	-	6	593	-	-	-	-	-	-	2119
H	-	-	-	-	-	-	-	535	-	-	1	-	75	-	-	-	-	-	-	0	0	-	-	-	-	-	611
PL	-	27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	742	-	-	201	-	-	-	0	169	-	1139
SK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	649	0	-	-	-	201	-	-	853
RO	-	-	-	-	-	-	-	-	-	-	196	-	-	-	-	-	-	0	-	-	-	92	-	-	0	0	288
BG	-	-	-	-	363	-	-	-	-	-	0	144	-	-	-	-	-	-	-	-	-	144	-	-	-	0	651
DK West	-	346	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	509
West UA ²	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	484	64	3	0	-	-	-	-	-	551
Other III ¹	-	-	147	3	24	0	-	-	-	-	-	-	-	-	-	-	-	-	99	-	73	0	317	-	-	-	663
Sum imp	1247	3659	689	423	413	3743	739	776	90	131	352	544	1450	1246	625	2080	787	1182	440	797	217	92	499	201	201	23816	

Sum of physical energy flows between UCTE countries = 20479GWh Total physical energy flows = 23816GWh

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

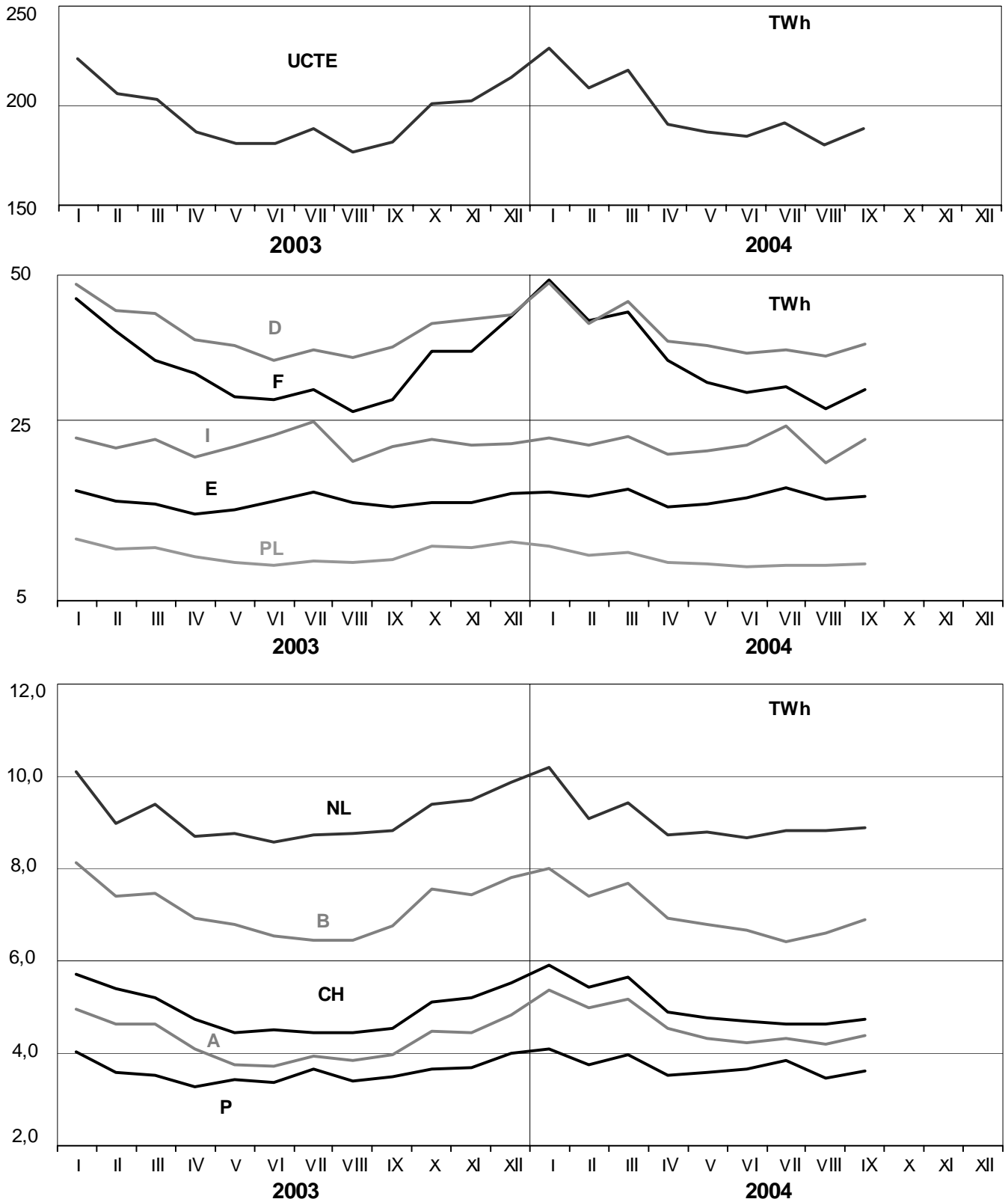
² West UA represents the so-called Burshtyn Island synchronously interconnected with UCTE

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

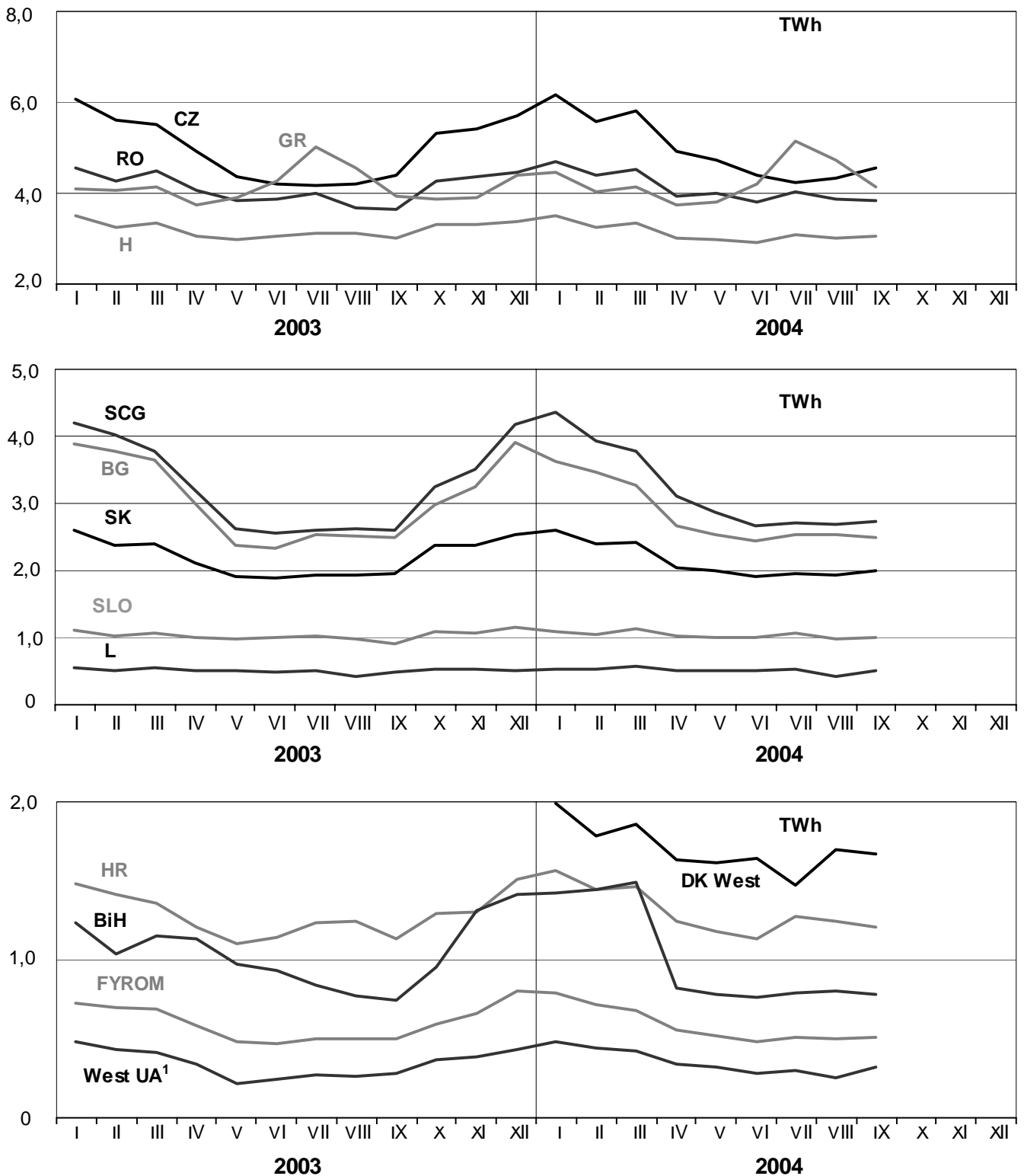
September 2004



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Monthly consumption

September 2004

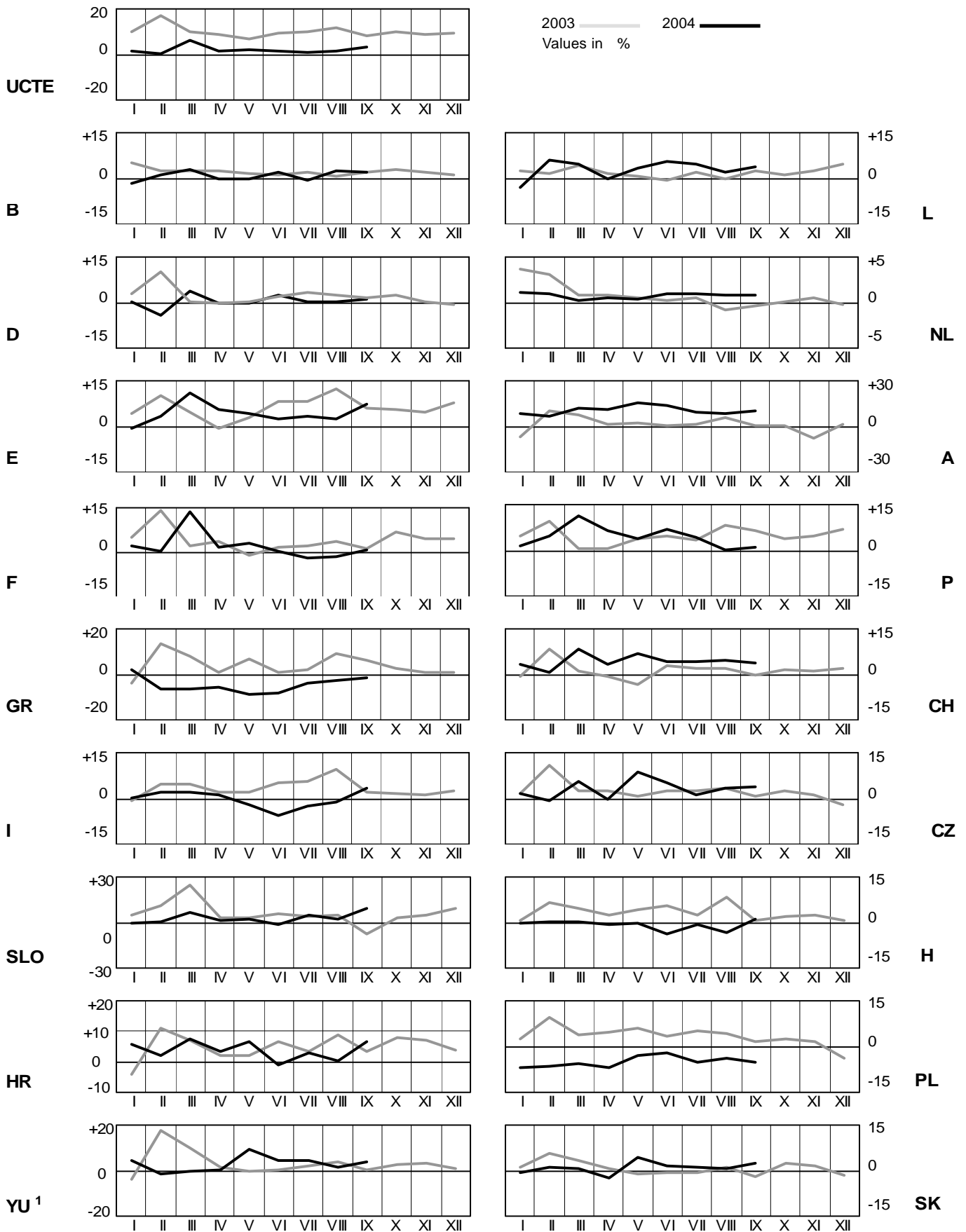


¹ West UA represents the so-called Burshtyn Island synchronously interconnected with UCTE

4

Monthly consumption variation

September 2004

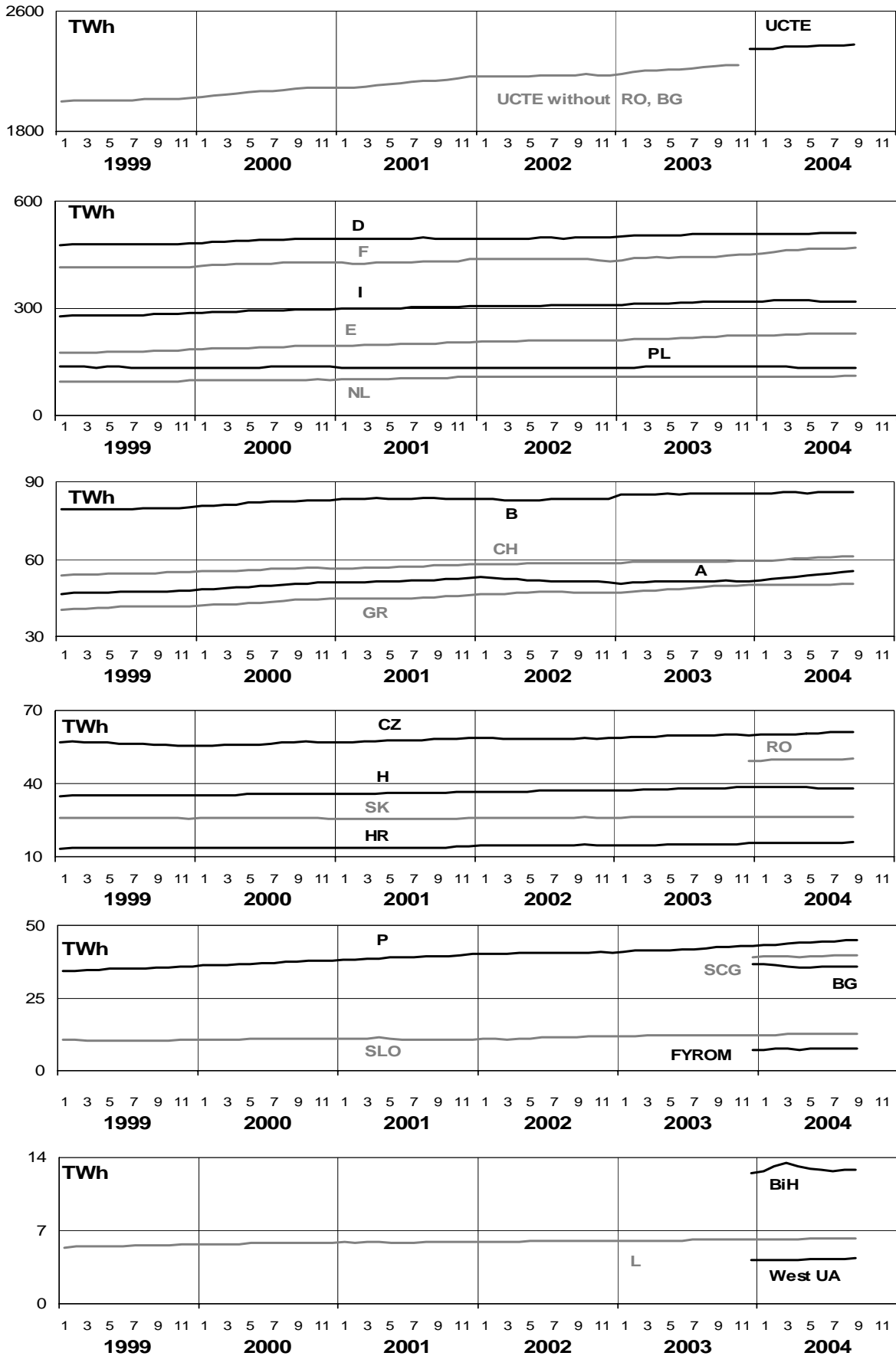


¹ YU = FRY + FYROM (Federal Republic of Yugoslavia and former Yugoslav Republic of Macedonia)

5

Consumption of the last 12 months

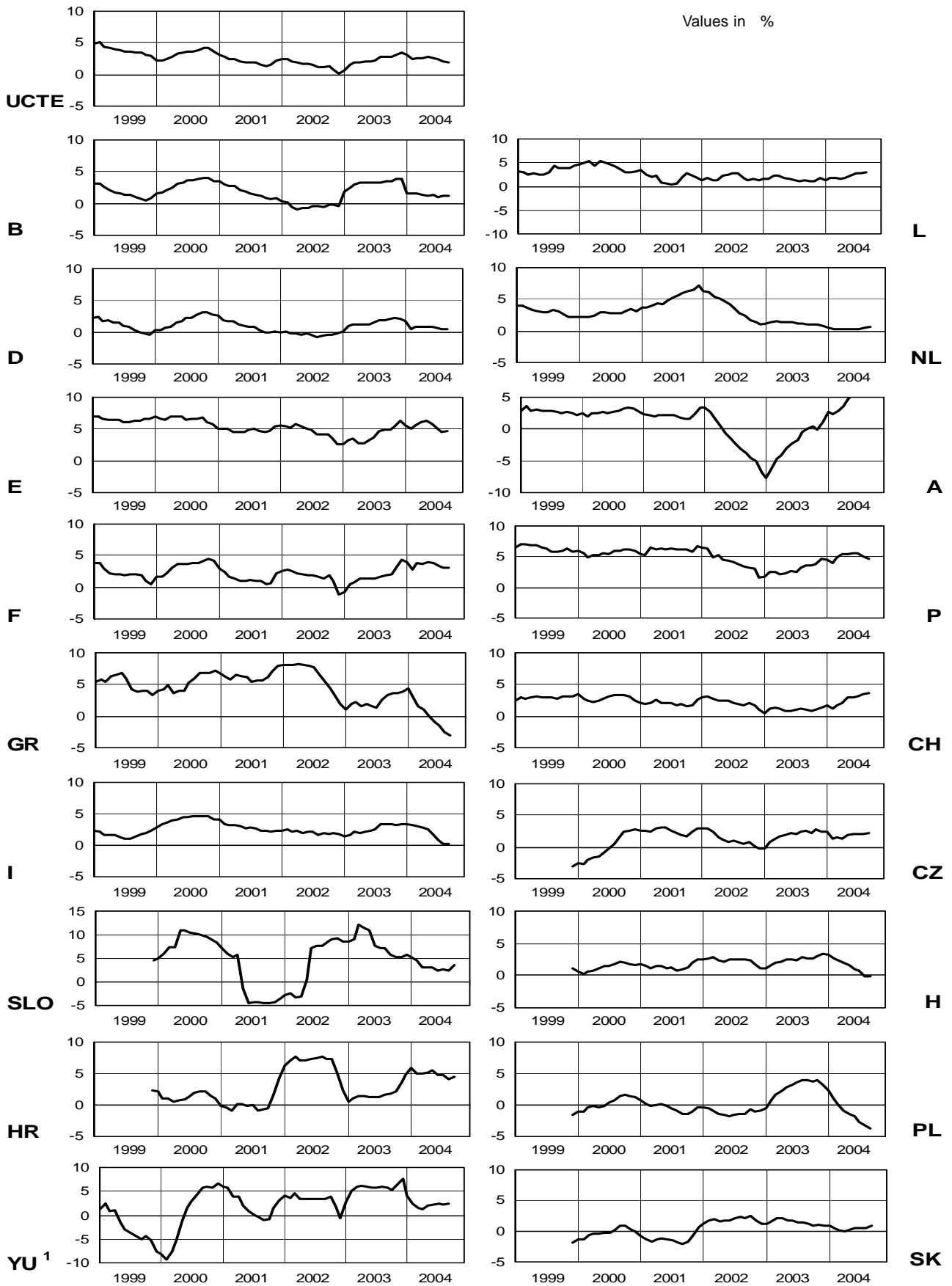
September 2004



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Variation of the last 12 months' consumption

September 2004

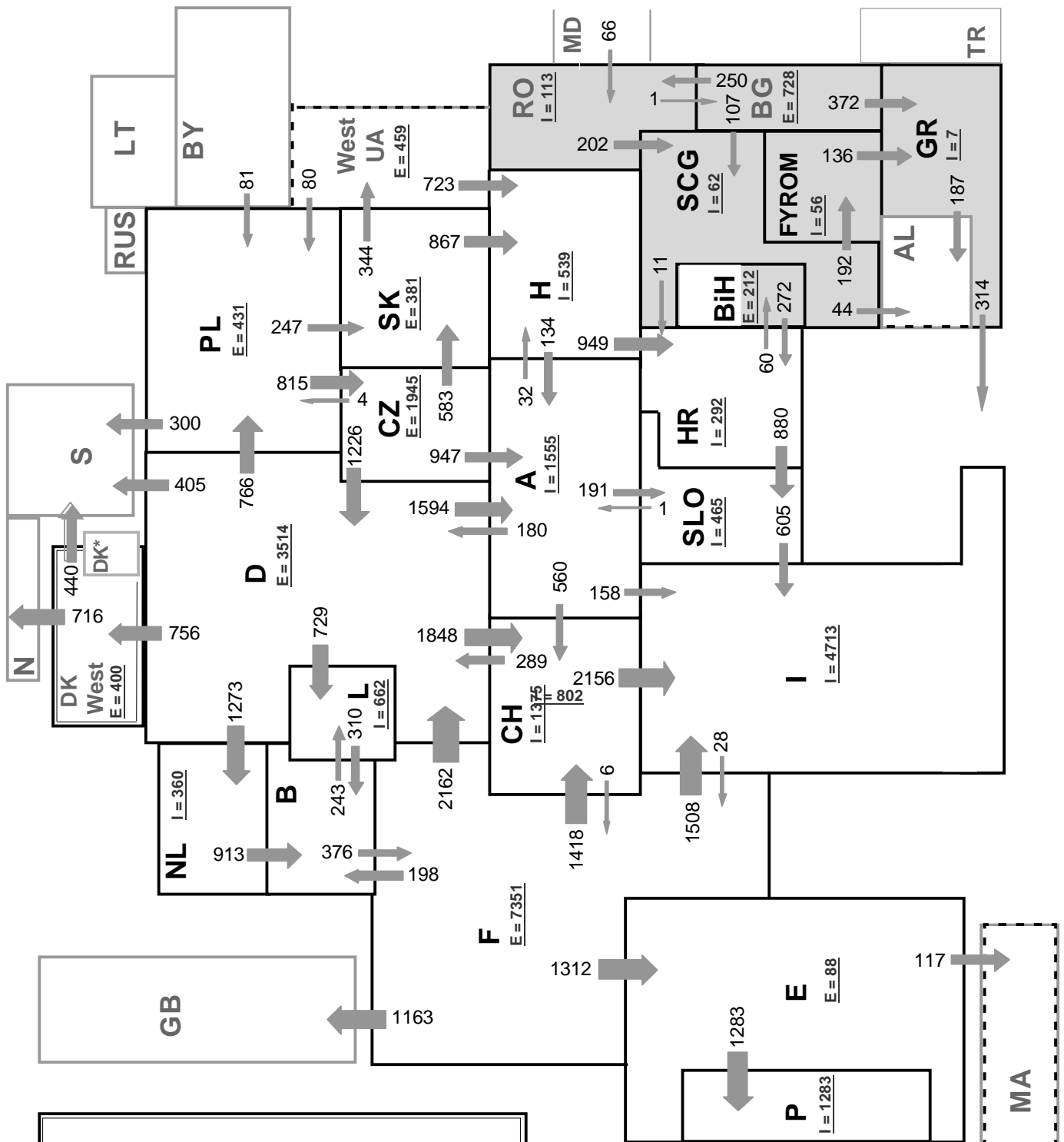


¹ YU = FRY + FYROM (Federal Republic of Yugoslavia and former Yugoslav Republic of Macedonia)

7

Load flows (night) on 15.09.04 at 03:00* in MW

September 2004



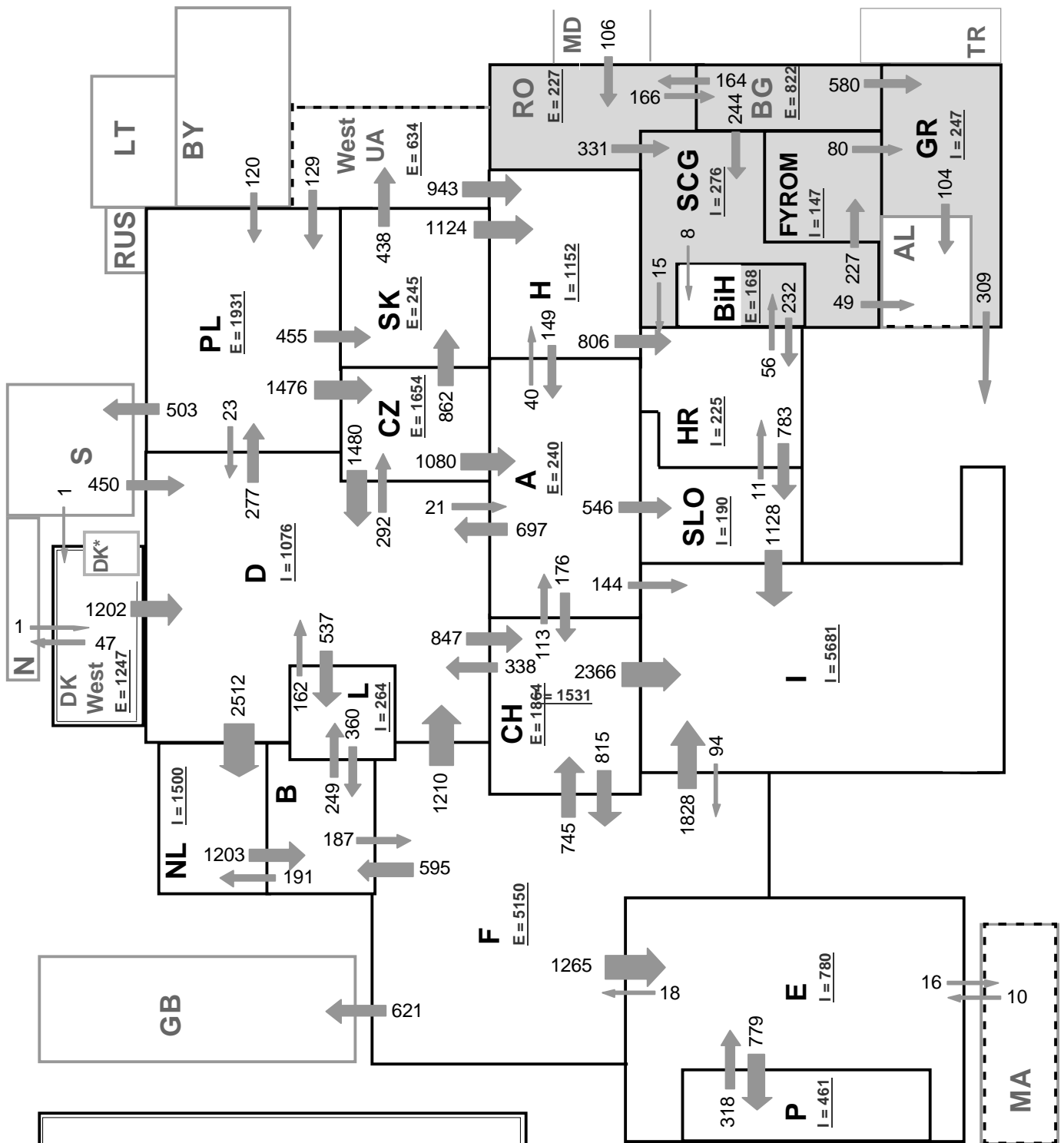
Sum of load flows in MW:

UCTE = 28708MW Total = 32974MW

* 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 = 30714MW Total = 35405MW

* Central European Time (CET)

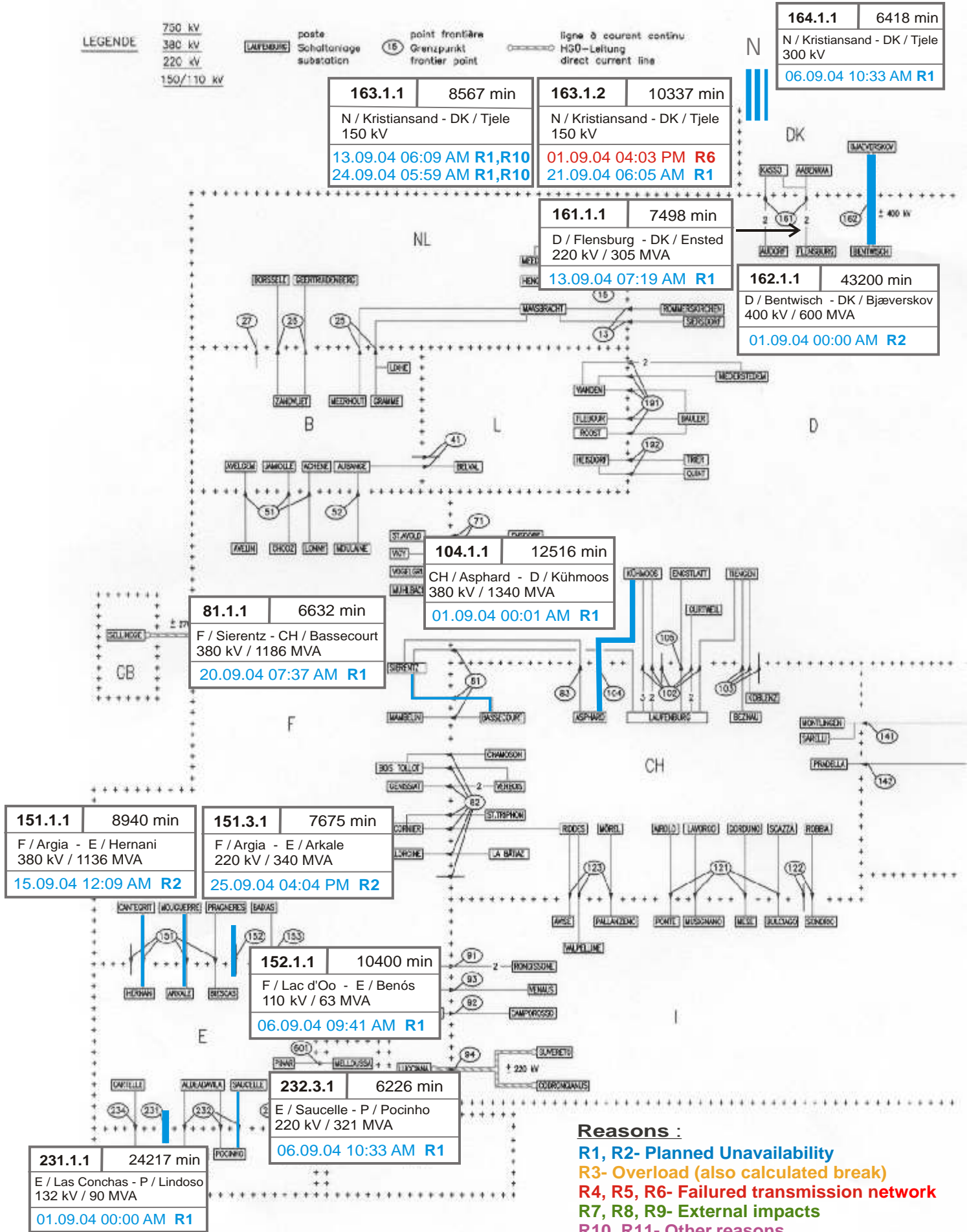
I = Import balance

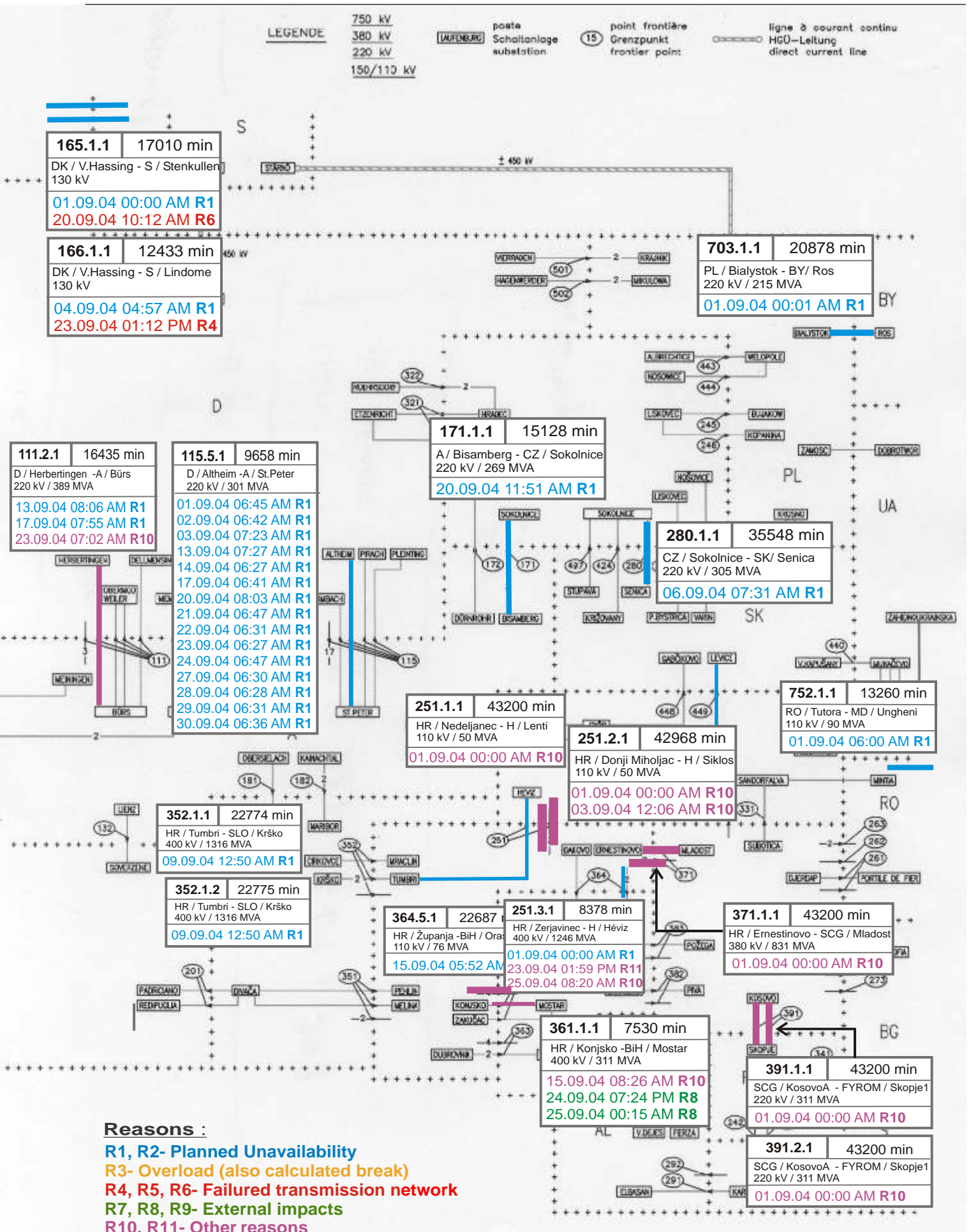
E = Export balance

9

Unavailability of international tie lines (major events with sum over 6200 minutes)

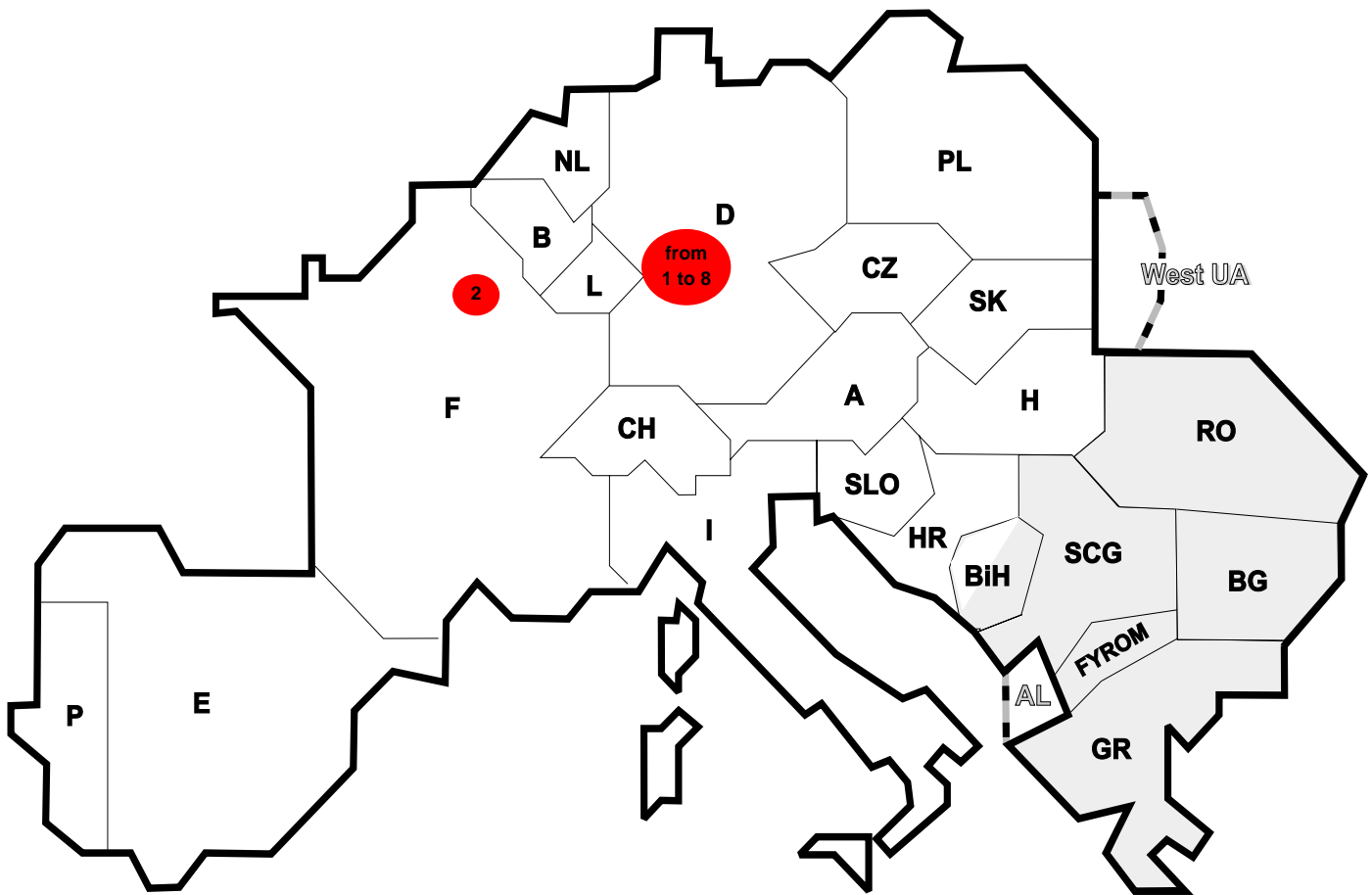
September 2004





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 ¹
1	D	Trier	R6	386	80	290	0,38
2	D	Quint	R6	176	80	132	0,17
3	D	Niederstedem	R6	138	80	104	0,13
4	D	Wengerrohr	R6	129	80	97	0,13
5	D	Trier	R6	105	80	79	0,10
6	D	Quint	R6	73	140	31	0,07
7	D	Bauler	R6	73	140	31	0,07
8	D	Trier	R6	73	140	31	0,07
9	F	Quint	R6	1	22	4	0,00

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

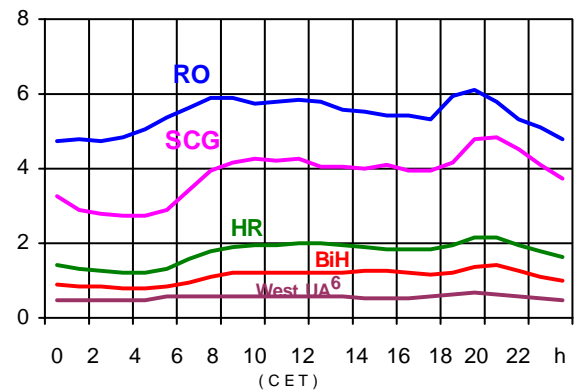
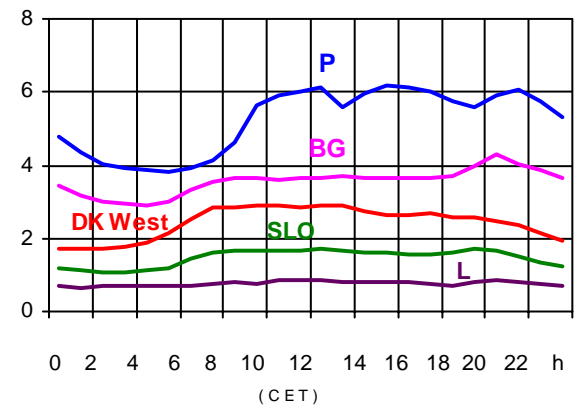
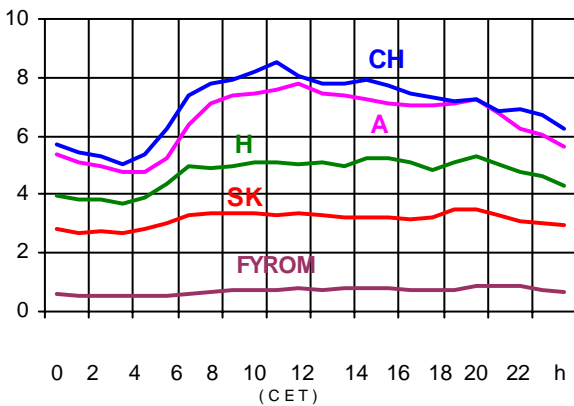
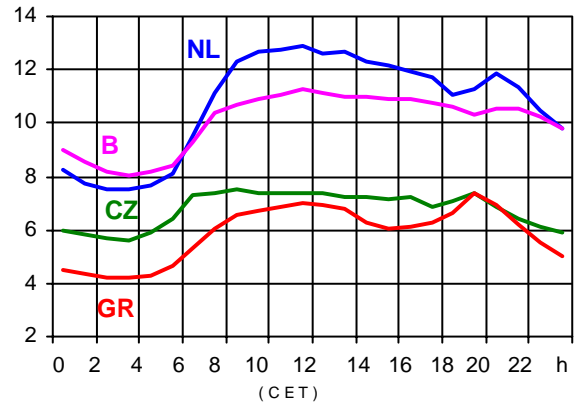
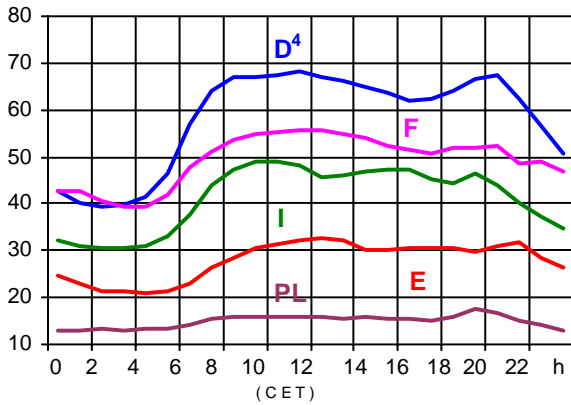
Control area	Export Programs	Import Programs	Export Programs at 03:00	Import Programs at 03:00	Export Programs at 11:00	Import Programs at 11:00
B	319874	954883	461	1180	121	1404
D	2875294	2735330	4370	2897	5427	4899
E	737144	670195	1410	1300	917	1730
F	7214397	2181550	10441	2968	10718	5557
GR	152220	329804	300	377	300	532
I	52306	3743112	28	4741	94	5775
SLO	284737	537667	331	800	476	677
HR	394391	495178	520	774	329	543
BiH	203320	81290	290	100	265	100
FYROM	48600	130600	112	168	198	345
SCG	334630	500644	524	553	650	938
NL	634216	1575531	1497	1845	772	2252
A	550801	310717	130	666	968	828
P	115885	588150	0	1300	430	902
CH	1913337	2101684	2869	4157	3469	2594
CZ	1793749	413233	2245	242	2704	982
H	332190	902676	579	1092	408	1558
PL	847878	185531	748	364	2066	161
SK	632886	514319	789	351	1056	754
RO	496800	356608	690	468	690	518
BG	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
DK West	483662	509209	1198	749	1100	178
West UA ¹	282327	0	382	0	500	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.

¹ West UA represents the so-called Burshtyn Island synchronously interconnected with UCTE

Consumption hourly load curves¹ on 15.09.04

Values in GW



	Peak load MW	Δ % ²	Load representativity ¹ %	Parallel power ³ MW
B	11302	3,1	100	9614
D	68200	-1,2	91	74200
E	32569	5,5	94	32569
F	55783	0,0	100	60638
GR ⁵	7363	1,6	99	6624
I	49076	7,0	100	42712
SLO	1702	2,3	95	1457
HR	2147	5,8	100	1712
BIH	1407	5,4	99	1371
FYROM	881	1,7	100	604
SCG	4832	-0,2	96	3959
L	866	11,6	99	849
NL	12863	-1,0	90	11284
A	7781	12,1	82	7998
P	6158	-5,2	94	5161
CH	8493	4,8	100	10353
CZ	7535	3,6	100	9386
H	5331	0,9	100	3944
PL	17526	-4,7	100	17626
SK	3479	2,9	100	3122
RO	6109	3,8	100	5815
BG	4290	-1,9	100	4481
UCTE	309406	2,3		315479
DK West	2915	n.a.	99	4289
West UA ⁶	702	n.a.	100	1066

¹ Percentage as referred to total values in %

² Variation as compared to corresponding month of the previous year

³ Power produced in parallel operation (including autoproduction)

⁴ 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.

⁵ 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%

⁶ 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
www.ucte.org