

# UCTE



March 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 23 June 2004

| Countries            | Net production in GWh <sup>1</sup> |       |        |                     | Exchange balance<br>in GWh | Pump<br>in GWh | Consumption in GWh <sup>1</sup> |                    |         |       | last<br>12 months | Δ <sup>3</sup> [%] |
|----------------------|------------------------------------|-------|--------|---------------------|----------------------------|----------------|---------------------------------|--------------------|---------|-------|-------------------|--------------------|
|                      | Hy                                 | Tn    | Tc     | Total               |                            |                | monthly                         | Δ <sup>3</sup> [%] |         |       |                   |                    |
| B                    | 136                                | 3658  | 3125   | 6919 <sup>2</sup>   |                            | 894            | 136                             | 7677               | 4,7     | 84751 | 0,7               |                    |
| D                    | 1935                               | 13854 | 32846  | 48635 <sup>2</sup>  | -1838                      | 748            | 46049                           | 3,7                | 506427  | 0,6   |                   |                    |
| E                    | 3486                               | 4949  | 12615  | 21050 <sup>2</sup>  | -230                       | 339            | 20481                           | 11,1               | 226561  | 5,3   |                   |                    |
| F                    | 6539                               | 36137 | 6934   | 49610               | -4100                      | 577            | 44933                           | 13,8               | 461486  | 3,6   |                   |                    |
| GR <sup>4</sup>      | 518                                | 0     | 3541   | 4059 <sup>2</sup>   | 114                        | 49             | 4124                            | -6,0               | 50175   | 1,6   |                   |                    |
| I                    | 3514                               | 0     | 20915  | 24429               | 4267                       | 939            | 27757                           | 2,3                | 321025  | 2,7   |                   |                    |
| SLO                  | 259                                | 499   | 444    | 1202                | -58                        | 0              | 1144                            | 6,8                | 12472   | 3,1   |                   |                    |
| HR                   | 774                                | 0     | 369    | 1143 <sup>2</sup>   | 318                        | 3              | 1458                            | 7,4                | 15650   | 4,8   |                   |                    |
| BiH                  | 779                                | 0     | 432    | 1211                | 281                        | 0              | 1492                            | 29,6               | 13445   | n.a.  |                   |                    |
| FYROM                | 112                                | 0     | 475    | 587 <sup>2</sup>    | 3                          | 0              | 590                             | -8,0               | 6211    | n.a.  |                   |                    |
| SCG                  | 1513                               | 0     | 2179   | 3692                | 209                        | 113            | 3788                            | 0,1                | 39222   | n.a.  |                   |                    |
| L                    | 69                                 | 0     | 279    | 348                 | 305                        | 78             | 575                             | 4,7                | 6167    | 1,7   |                   |                    |
| NL                   | 0                                  | 336   | 7751   | 8087 <sup>2</sup>   | 1404                       | 0              | 9491                            | 1,0                | 109997  | 1,0   |                   |                    |
| A                    | 2611                               | 0     | 2382   | 4993                | 353                        | 174            | 5172                            | 10,6               | 52168   | 1,2   |                   |                    |
| P                    | 1143                               | 0     | 2326   | 3469 <sup>2</sup>   | 523                        | 24             | 3968                            | 11,5               | 43747   | 4,7   |                   |                    |
| CH                   | 2577                               | 2401  | 270    | 5248 <sup>2</sup>   | 476                        | 69             | 5655                            | 8,4                | 61035   | 3,5   |                   |                    |
| CZ                   | 272                                | 1765  | 5000   | 7037 <sup>2</sup>   | -1179                      | 62             | 5796                            | 5,4                | 60238   | 1,6   |                   |                    |
| H                    | 9                                  | 937   | 1696   | 2642 <sup>2</sup>   | 705                        | 0              | 3347                            | 0,0                | 38428   | 2,3   |                   |                    |
| PL <sup>5</sup>      | 377                                | 0     | 12697  | 13074 <sup>2</sup>  | -1187                      | 196            | 11691                           | -5,4               | 135937  | 0,1   |                   |                    |
| SK                   | 438                                | 1291  | 806    | 2535 <sup>2</sup>   | -101                       | 17             | 2417                            | 0,7                | 26415   | 0,2   |                   |                    |
| RO                   | 1455                               | 439   | 2682   | 4576 <sup>2</sup>   | -62                        | 0              | 4514                            | 0,7                | 49713   | n.a.  |                   |                    |
| BG                   | 284                                | 1539  | 1902   | 3725 <sup>2</sup>   | -442                       | 14             | 3269                            | -10,3              | 35741   | n.a.  |                   |                    |
| UCTE                 | 28800                              | 67805 | 121666 | 218271 <sup>2</sup> | 655                        | 3538           | 215388                          | 5,4                | 2357011 | 1,5   |                   |                    |
| West UA <sup>6</sup> | 14                                 | 0     | 692    | 706 <sup>2</sup>    | -286                       | 0              | 420                             | 1,9                | 4155    | 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  | West UA <sup>6</sup> |
|-------------|----|----|----|-----|-----------------|-----|-----|-----|-----|--------|-----|----|-----|----|----|-----|-----|-----|-----|-----|-----|-----|----------------------|
| Production  | 99 | 94 | 94 | 100 | 99              | 100 | 95  | 100 | 99  | 100    | 96  | 98 | 100 | 84 | 93 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100                  |
| Consumption | 99 | 94 | 94 | 100 | 99              | 100 | 95  | 100 | 99  | 100    | 96  | 99 | 100 | 90 | 93 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100                  |

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

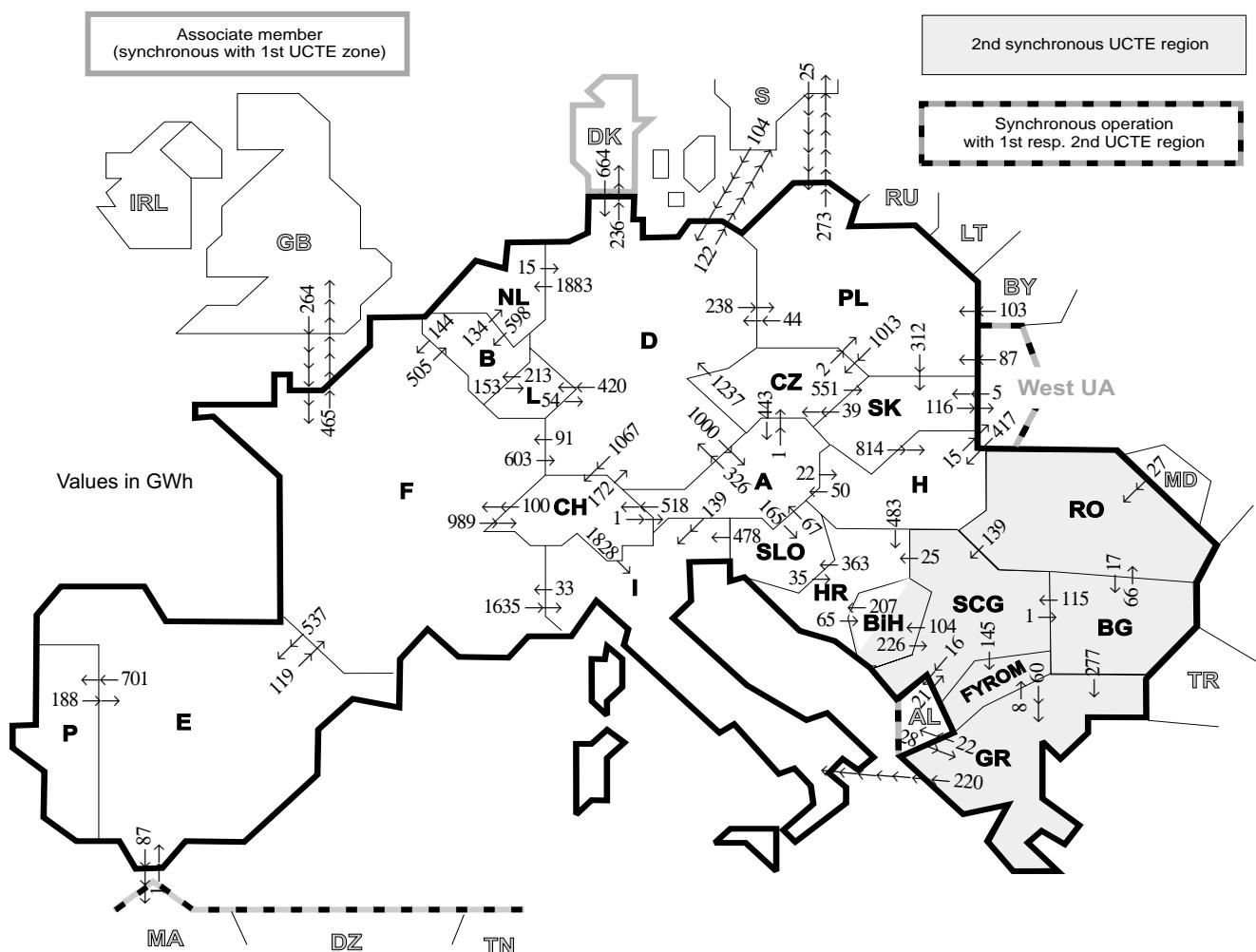
<sup>3</sup> Variation as compared to corresponding period of the previous year and representativity 100%

<sup>4</sup> 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  | Importing countries |      |     |     |     |      |     |     |     |       |     |     |      |      |      |      |      |      |     |     | Σ Export |      |      |     |     |       |
|----------------------|---------------------|------|-----|-----|-----|------|-----|-----|-----|-------|-----|-----|------|------|------|------|------|------|-----|-----|----------|------|------|-----|-----|-------|
|                      | B                   | D    | E   | F   | GR  | I    | SLO | HR  | BiH | FYROM | SCG | L   | NL   | A    | P    | CH   | CZ   | H    | PL  | SK  | RO       | BG   |      |     |     |       |
| B                    | -                   | -    | -   | -   | 144 | -    | -   | -   | -   | -     | -   | 153 | 134  | -    | -    | -    | -    | -    | -   | -   | -        | 431  |      |     |     |       |
| D                    | -                   | -    | -   | -   | 91  | -    | -   | -   | -   | -     | -   | 420 | 1883 | 1000 | -    | 1067 | 0    | -    | 238 | -   | -        | 358  | 236  |     |     |       |
| E                    | -                   | -    | -   | -   | 119 | -    | -   | -   | -   | -     | -   | -   | -    | -    | 701  | -    | -    | -    | -   | -   | -        | 907  |      |     |     |       |
| F                    | 505                 | 603  | 537 | -   | -   | 1635 | -   | -   | -   | -     | -   | -   | -    | -    | -    | 989  | -    | -    | -   | -   | -        | 4734 |      |     |     |       |
| GR                   | -                   | -    | -   | -   | -   | 220  | -   | -   | -   | -     | 8   | -   | -    | -    | -    | -    | -    | -    | -   | -   | -        | 250  |      |     |     |       |
| I                    | -                   | -    | -   | -   | 33  | 0    | -   | 0   | -   | -     | -   | -   | -    | 0    | 0    | 0    | -    | -    | -   | -   | -        | 33   |      |     |     |       |
| SLO                  | -                   | -    | -   | -   | -   | 478  | -   | 35  | -   | -     | -   | -   | -    | 67   | -    | -    | -    | -    | -   | -   | -        | 580  |      |     |     |       |
| HR                   | -                   | -    | -   | -   | -   | -    | 363 | -   | 65  | -     | 0   | -   | -    | -    | -    | -    | -    | -    | -   | -   | -        | 428  |      |     |     |       |
| BiH                  | -                   | -    | -   | -   | -   | -    | -   | 207 | -   | -     | 226 | -   | -    | -    | -    | -    | -    | -    | -   | -   | -        | 433  |      |     |     |       |
| FYROM                | -                   | -    | -   | -   | 60  | -    | -   | -   | -   | -     | 0   | -   | -    | -    | -    | -    | -    | -    | -   | -   | -        | 60   |      |     |     |       |
| SCG                  | -                   | -    | -   | -   | -   | -    | 25  | 104 | 145 | -     | -   | -   | -    | -    | -    | -    | -    | -    | -   | -   | -        | 291  |      |     |     |       |
| L                    | 213                 | 54   | -   | -   | -   | -    | -   | -   | -   | -     | -   | -   | -    | -    | -    | -    | -    | -    | -   | -   | -        | 267  |      |     |     |       |
| NL                   | 598                 | 15   | -   | -   | -   | -    | -   | -   | -   | -     | -   | -   | -    | -    | -    | -    | -    | -    | -   | -   | -        | 613  |      |     |     |       |
| A                    | -                   | 326  | -   | -   | -   | 139  | 165 | -   | -   | -     | -   | -   | -    | -    | 518  | 1    | 22   | -    | -   | -   | -        | 1171 |      |     |     |       |
| P                    | -                   | -    | 188 | -   | -   | -    | -   | -   | -   | -     | -   | -   | -    | -    | -    | -    | -    | -    | -   | -   | -        | 188  |      |     |     |       |
| CH                   | -                   | 172  | -   | 100 | -   | 1828 | -   | -   | -   | -     | -   | -   | 1    | -    | -    | -    | -    | -    | -   | -   | -        | 2101 |      |     |     |       |
| CZ                   | -                   | 1237 | -   | -   | -   | -    | -   | -   | -   | -     | -   | 443 | -    | -    | -    | 2    | 551  | -    | -   | -   | -        | 2233 |      |     |     |       |
| H                    | -                   | -    | -   | -   | -   | -    | -   | 483 | -   | -     | 0   | -   | 50   | -    | -    | -    | 0    | 0    | -   | 15  | -        | 548  |      |     |     |       |
| PL                   | -                   | 44   | -   | -   | -   | -    | -   | -   | -   | -     | -   | -   | -    | -    | 1013 | -    | 312  | -    | -   | 273 | -        | 0    | 1642 |     |     |       |
| SK                   | -                   | -    | -   | -   | -   | -    | -   | -   | -   | -     | -   | -   | -    | 39   | 814  | 0    | -    | -    | 116 | -   | 116      | 969  |      |     |     |       |
| RO                   | -                   | -    | -   | -   | -   | -    | -   | -   | 139 | -     | -   | -   | -    | -    | 0    | -    | -    | -    | 17  | 0   | -        | 0    | 156  |     |     |       |
| BG                   | -                   | -    | -   | -   | 277 | -    | -   | -   | 0   | 115   | -   | -   | -    | -    | -    | -    | -    | 66   | -   | 0   | -        | 458  |      |     |     |       |
| III <sup>1</sup>     | -                   | 768  | 1   | 264 | 28  | -    | -   | -   | -   | 21    | -   | -   | -    | -    | -    | 417  | 215  | 5    | 27  | 0   | -        | -    | 1746 |     |     |       |
| DK <sup>2</sup>      | -                   | 664  | -   | -   | -   | -    | -   | -   | -   | -     | -   | -   | -    | -    | -    | -    | -    | -    | -   | -   | -        | 664  |      |     |     |       |
| West UA <sup>3</sup> | -                   | -    | -   | -   | -   | -    | -   | -   | -   | -     | -   | -   | -    | -    | 417  | 87   | 5    | 0    | -   | -   | -        | 509  |      |     |     |       |
| Σ Import             | 1316                | 3219 | 726 | 751 | 365 | 4300 | 528 | 750 | 169 | 153   | 501 | 573 | 2017 | 1561 | 701  | 2574 | 1053 | 1253 | 455 | 868 | 93       | 18   | 1352 | 236 | 131 | 25296 |

Sum of physical energy flows between UCTE countries = 22198 GWh Total physical energy flows = 25296 GWh

<sup>1</sup> III = Third countries: Albania, Belarus, Denmark, Great Britain, Morocco, Republic of Moldavia, Sweden, Republic of Turkey and West Ukraine

<sup>2</sup> Denmark ( Jutland )

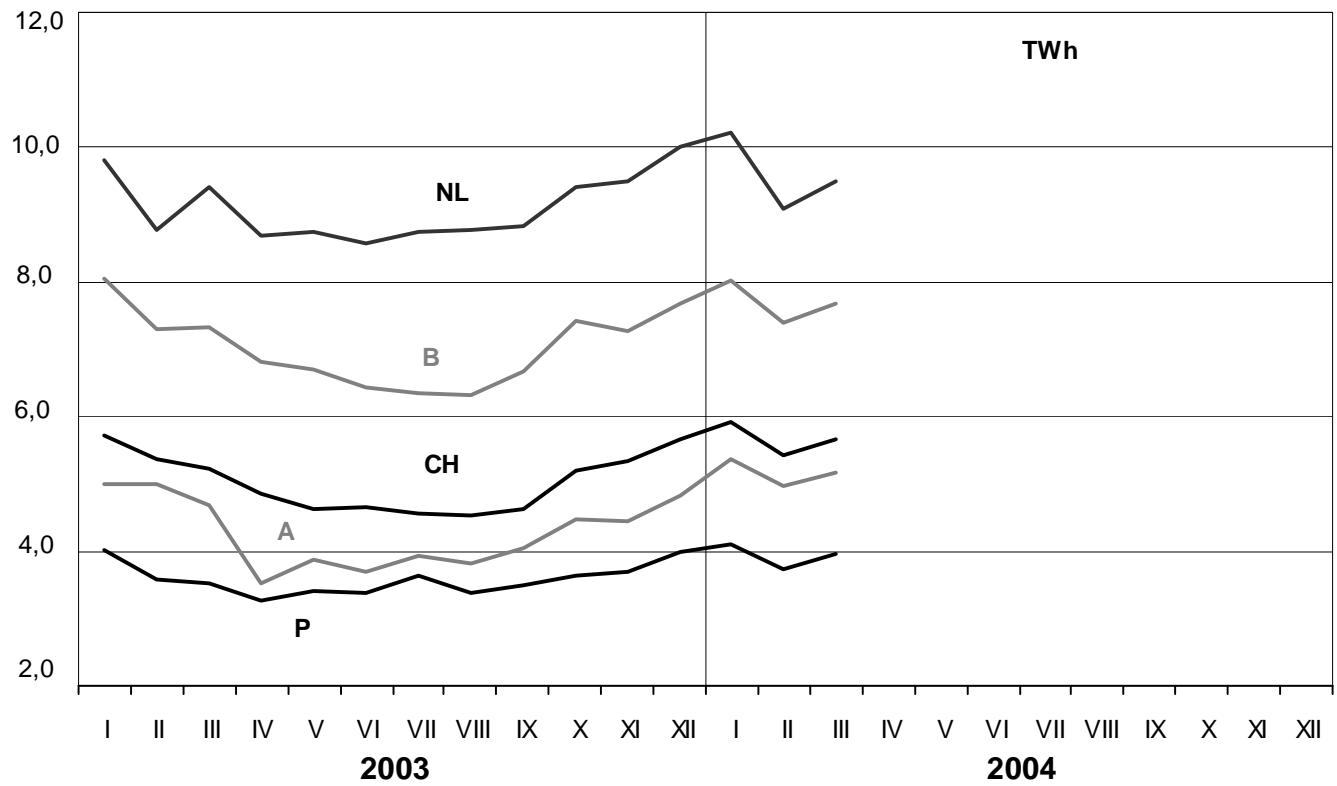
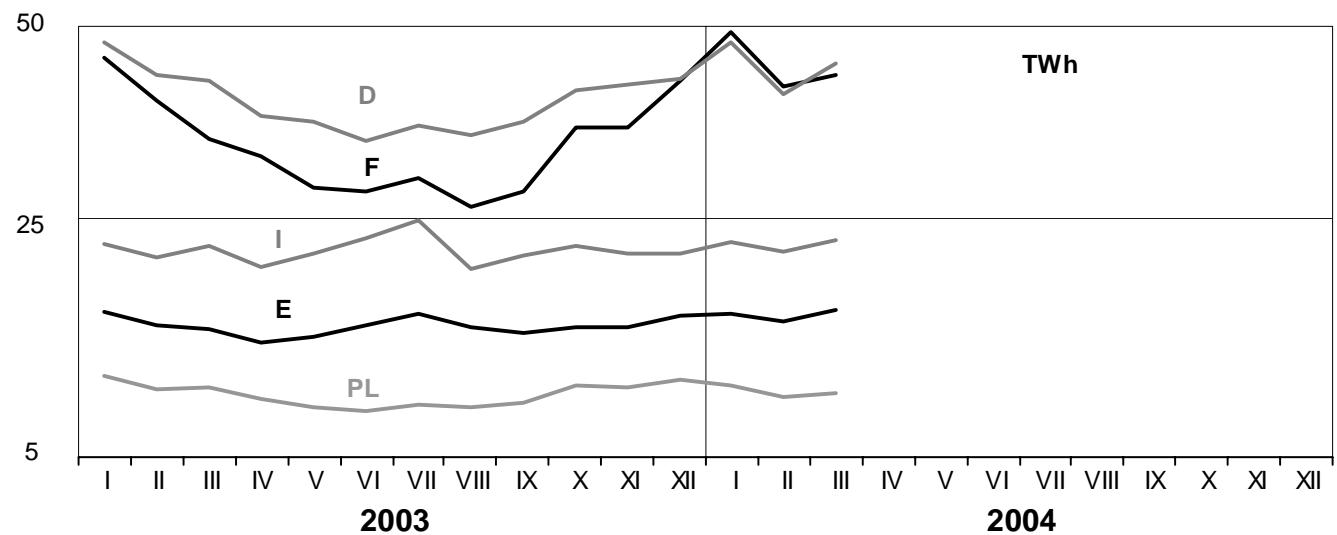
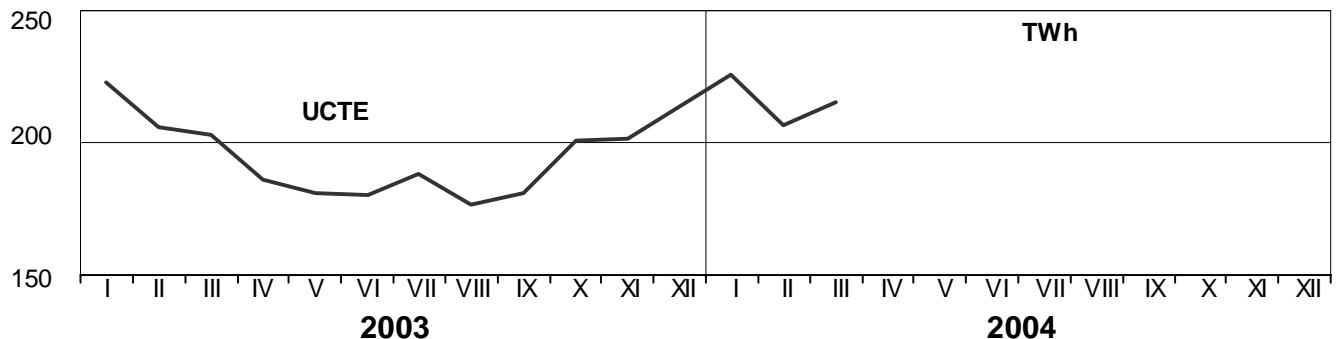
<sup>3</sup> West UA represents the so-called Burshtyn Island synchronously interconnected with UCTE

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

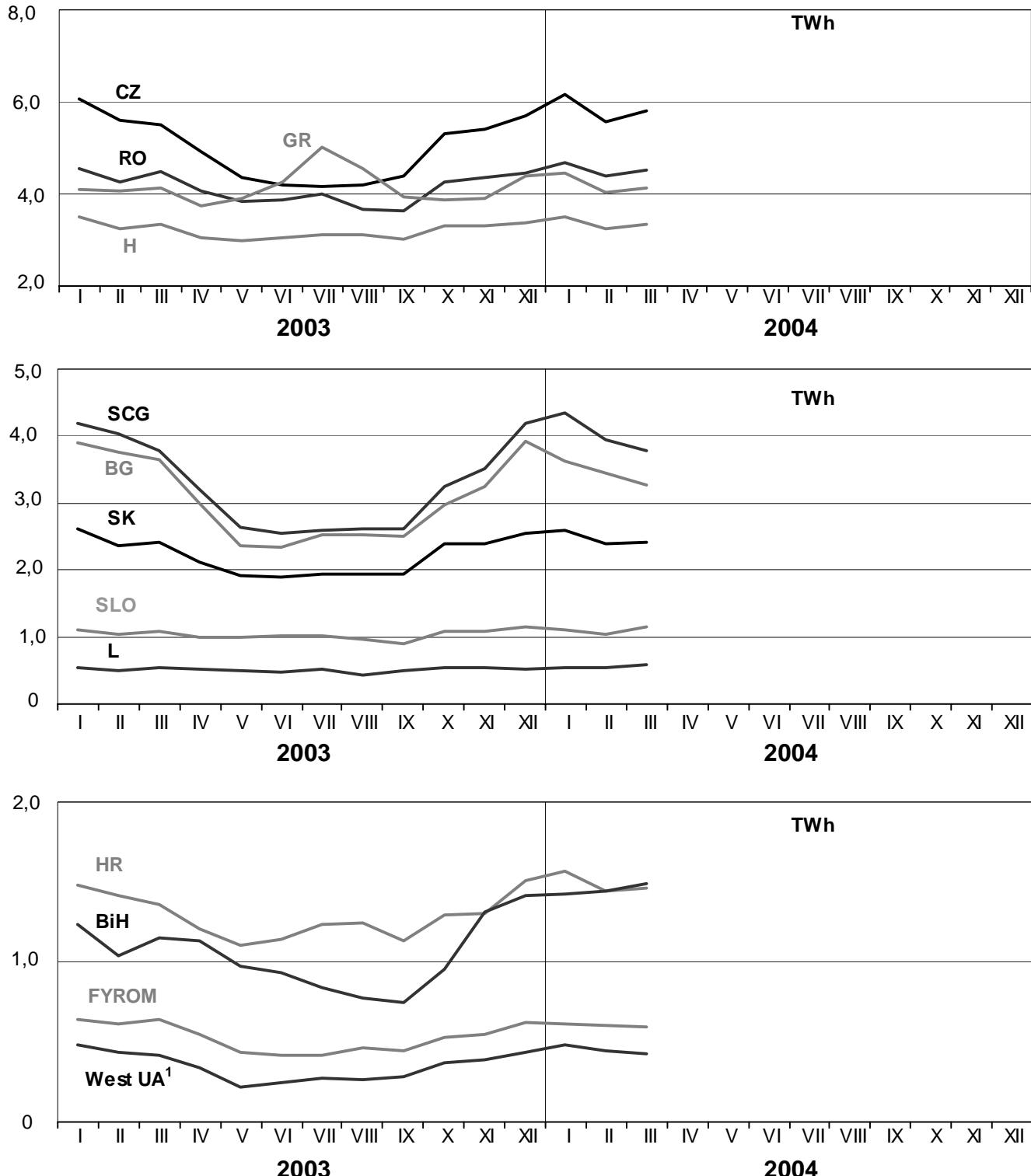
March 2004



# 3

## Monthly consumption

March 2004

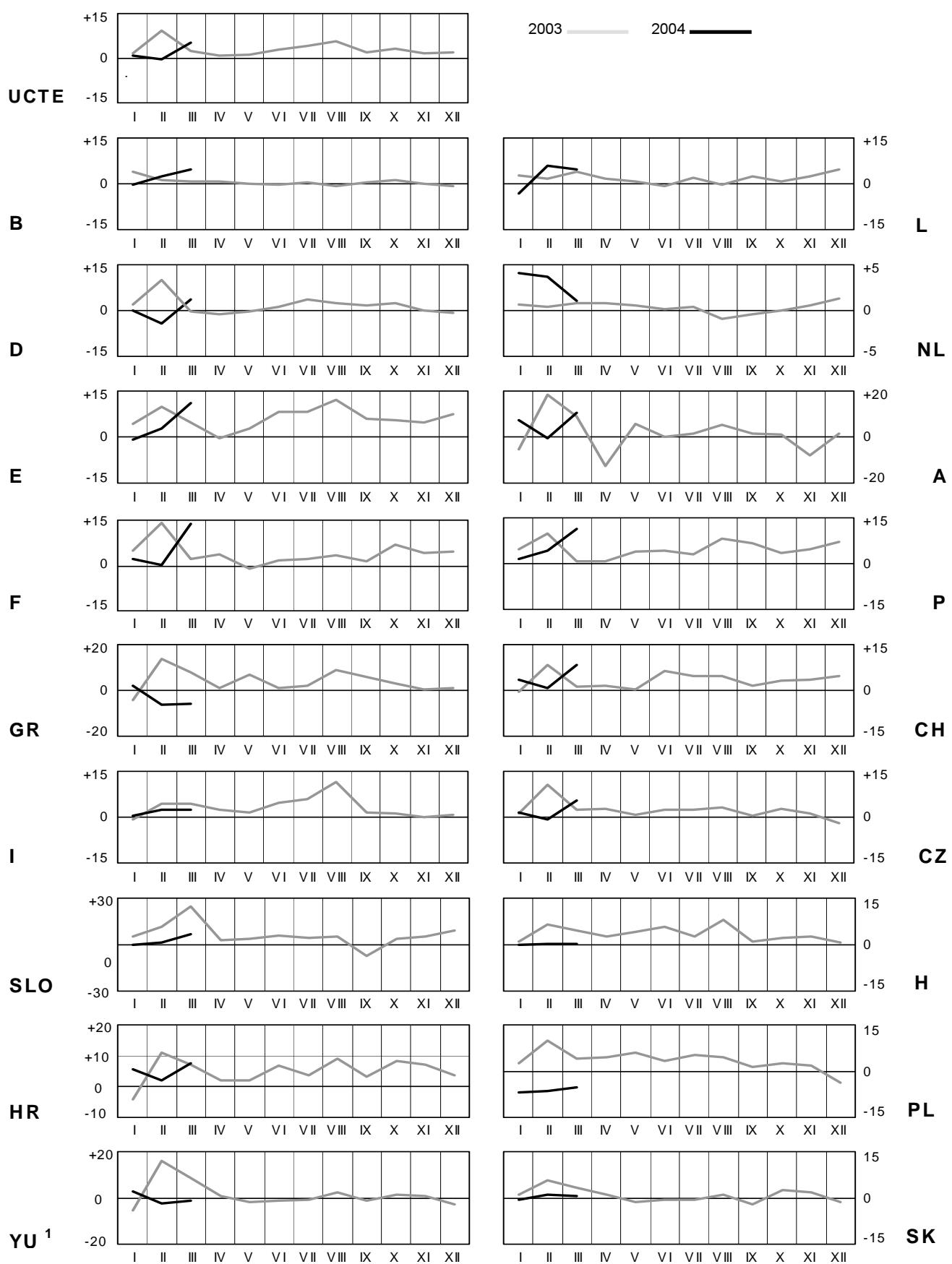


<sup>1</sup> West UA represents the so-called Burshtyn Island synchronously interconnected with UCTE

# 4

## Monthly consumption variation

March 2004

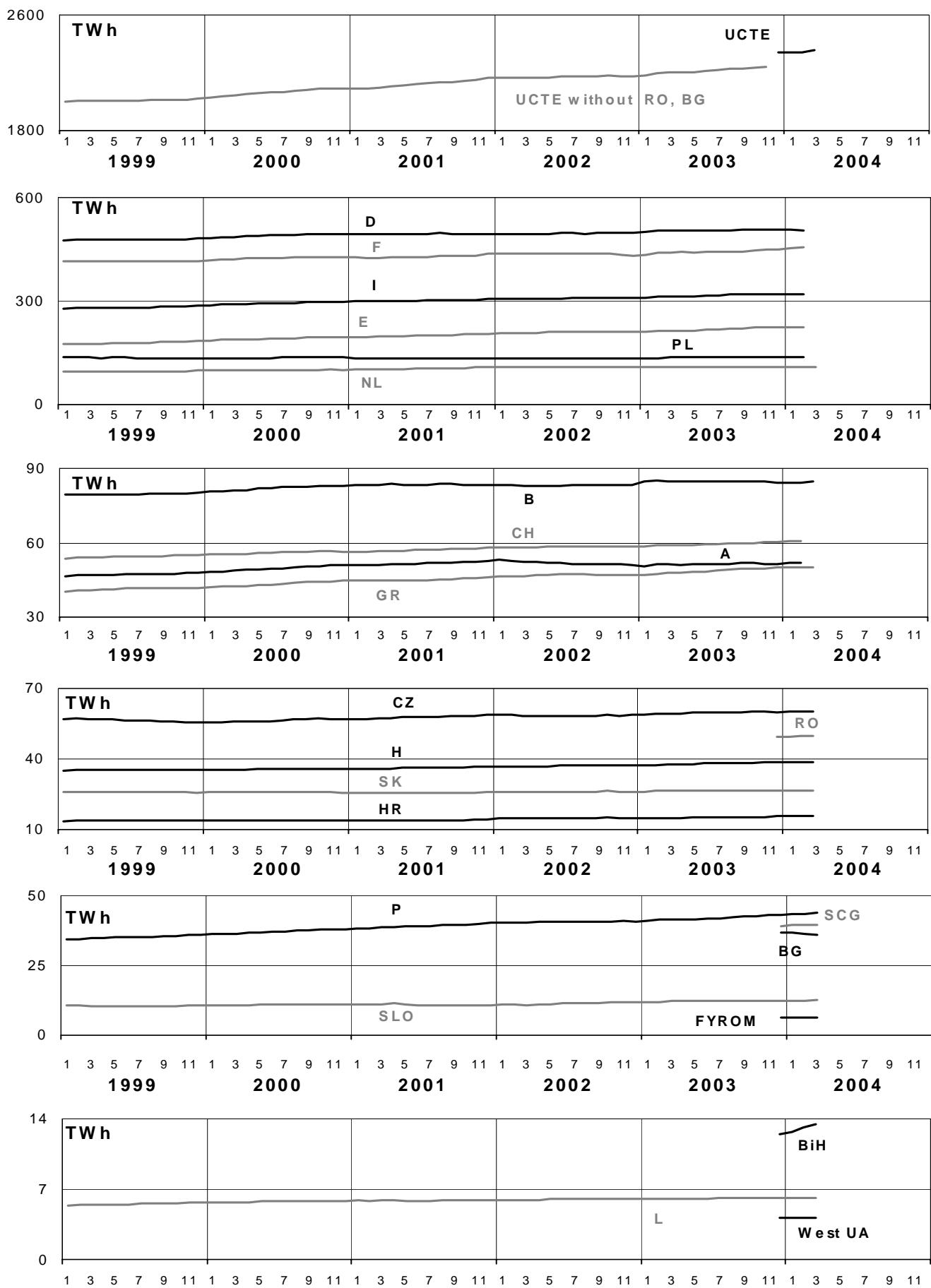


<sup>1</sup>YU = FRY + FYROM (Federal Republic of Yugoslavia and former Yugoslav Republic of Macedonia)

# 5

## Consumption of the last 12 months

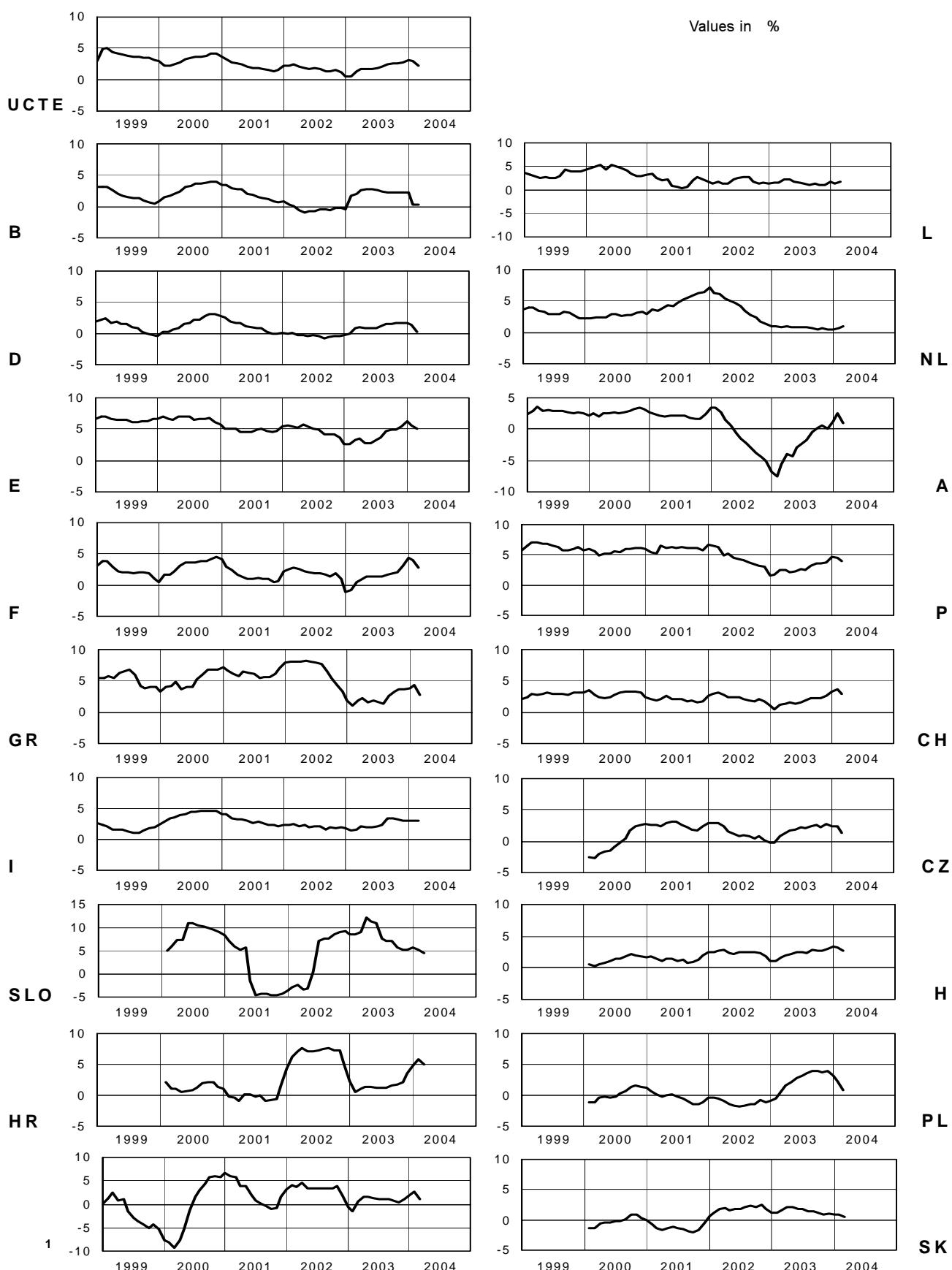
March 2004



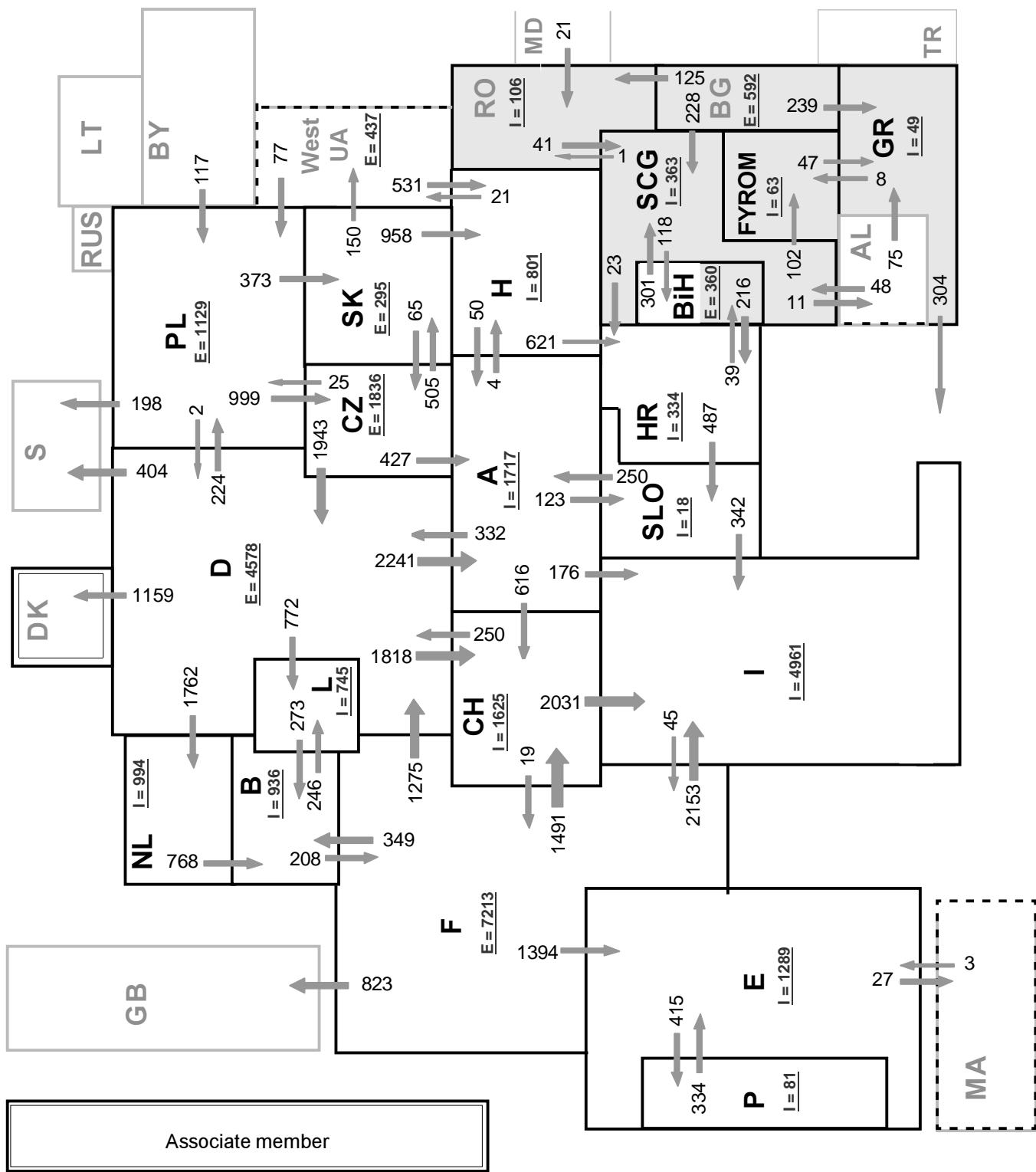
# 6

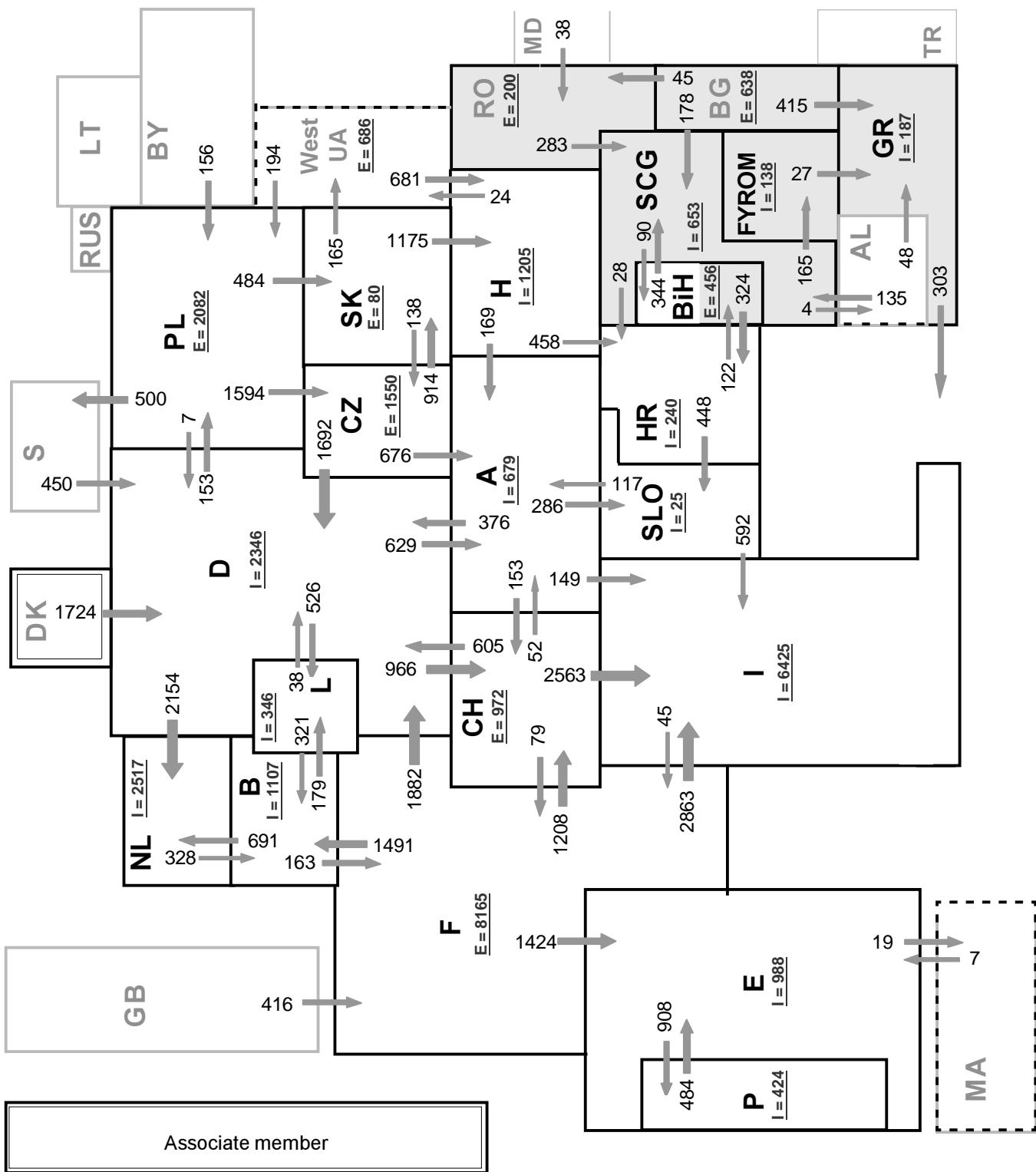
## Variation of the last 12 months' consumption

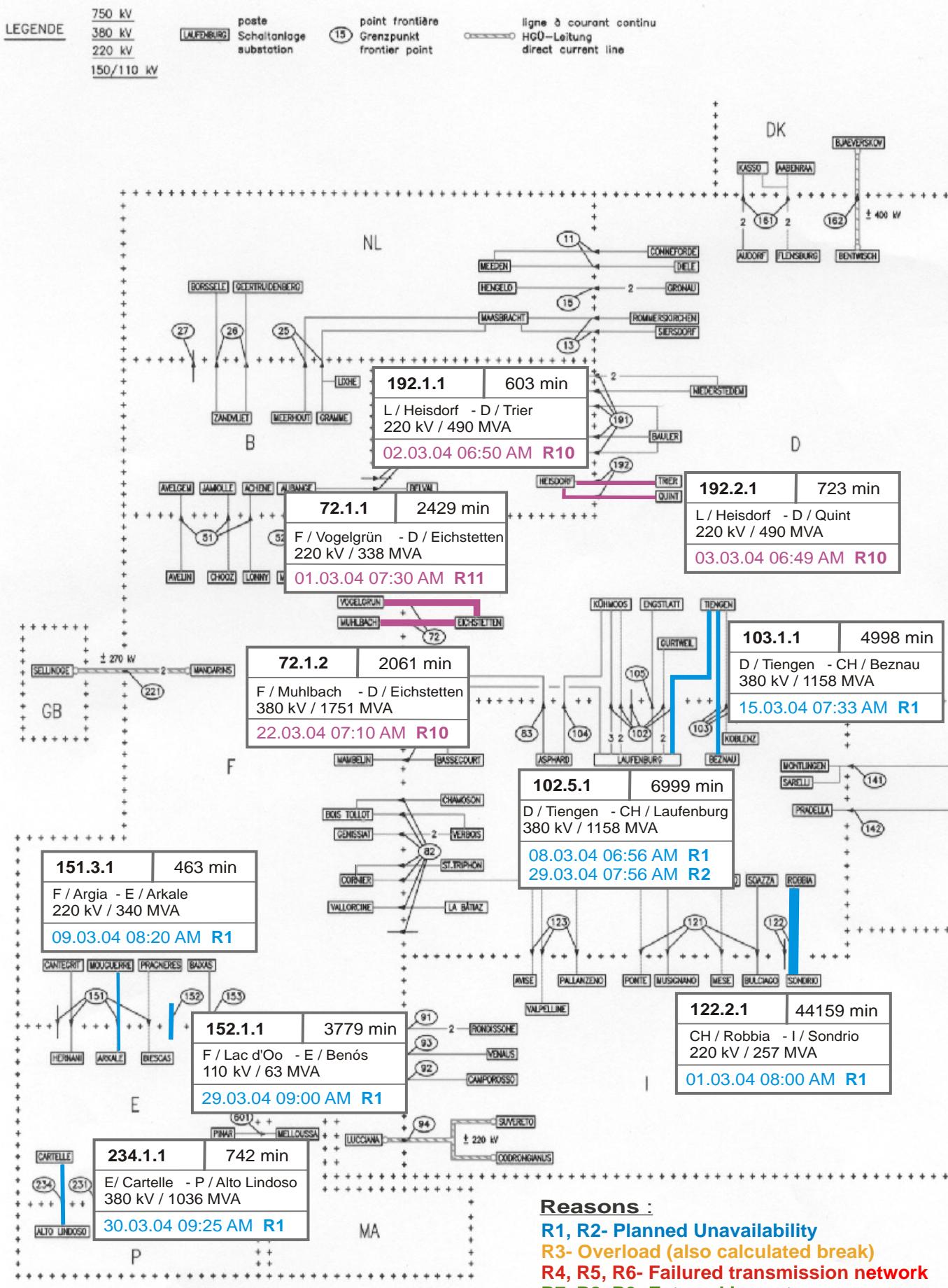
March 2004

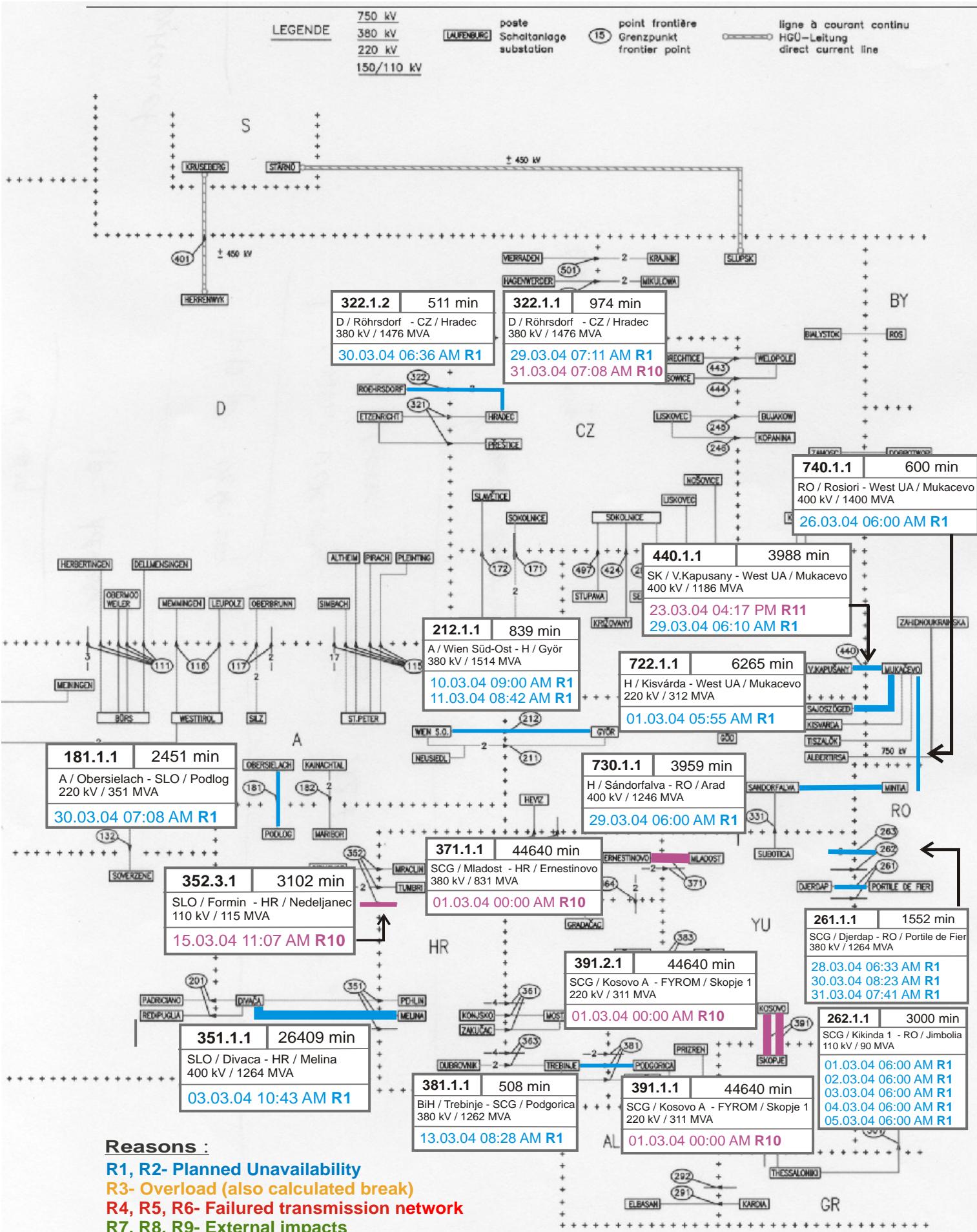


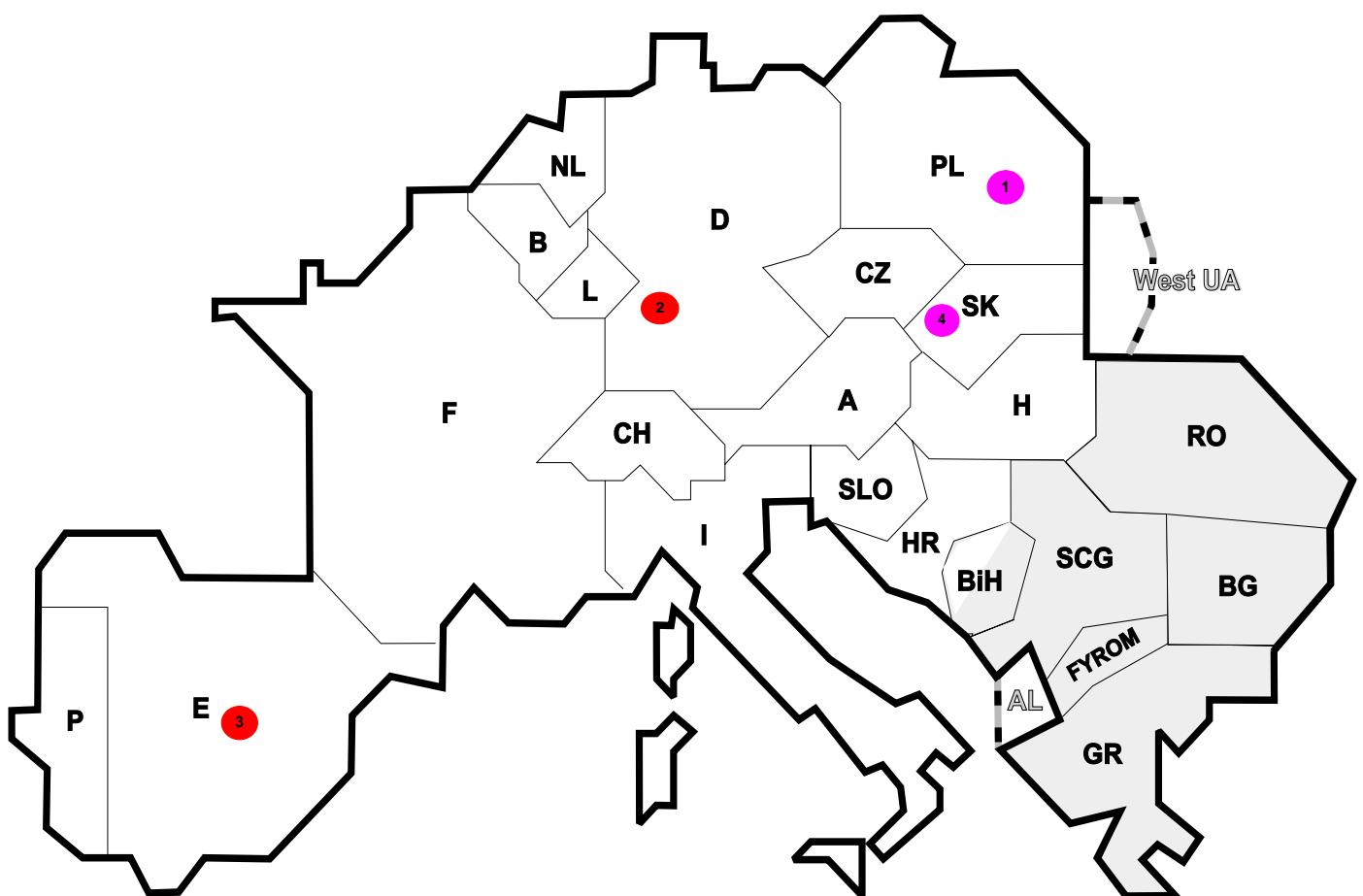
<sup>1</sup> YU = FRY + FYROM (Federal Republic of Yugoslavia and former Yugoslav Republic of Macedonia)











## 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   | PL      | Polaniec   | R9     | 382                         | 285                        | 154                      | 1,48   |
| 2   | D       | BASF W 210 | R5     | 71                          | 120                        | 82                       | 0,07   |
| 3   | E       | VIC 220 kV | R5     | 20                          | 0                          | 4                        | 0,00   |
| 4   | SK      | Lemesany   | R9     | 3                           | 20                         | 10                       | 0,06   |

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

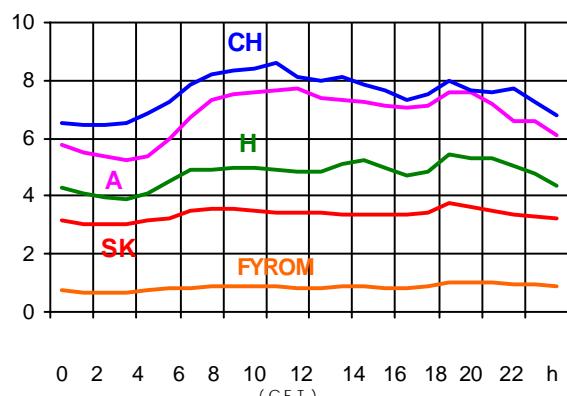
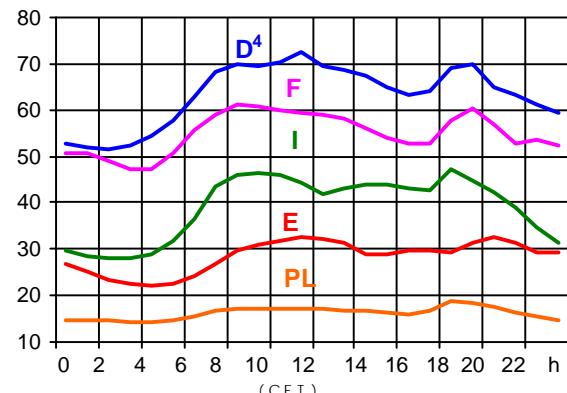
| Control area         | Prog_exp | Prog_imp | Prog_exp3 | Prog_imp3 | Prog_exp11 | Prog_imp11 |
|----------------------|----------|----------|-----------|-----------|------------|------------|
| B                    | 572470   | 1399430  | 680       | 1616      | 703        | 1775       |
| D                    | 4289558  | 2652543  | 3785      | 2672      | 3006       | 3947       |
| E                    | n.a.     | n.a.     | n.a.      | n.a.      | n.a.       | n.a.       |
| F                    | 7281423  | 3278328  | 10092     | 2906      | 10177      | 1992       |
| GR                   | 224651   | 341894   | 300       | 483       | 300        | 513        |
| I                    | 32933    | 430070   | 45        | 5006      | 45         | 6470       |
| SLO                  | 640614   | 588855   | 918       | 916       | 1002       | 1099       |
| HR                   | 278382   | 598954   | 598       | 623       | 540        | 476        |
| BiH                  | 89300    | 150000   | 390       | 10        | 403        | 20         |
| FYROM                | n.a.     | n.a.     | n.a.      | n.a.      | n.a.       | n.a.       |
| SCG                  | 299960   | 511412   | 385       | 688       | 498        | 1150       |
| NL                   | 498219   | 1903719  | 2167      | 1154      | 2689       | 170        |
| A                    | 412695   | 578420   | 688       | 316       | 894        | 674        |
| P                    | 112646   | 635503   | 250       | 323       | 654        | 1098       |
| CH                   | 1895442  | 2366319  | 1813      | 3318      | 3869       | 2298       |
| CZ                   | 1868718  | 693126   | 2532      | 686       | 2648       | 1109       |
| H                    | 221593   | 925870   | 442       | 1257      | 301        | 1508       |
| PL                   | 1354633  | 139016   | 1292      | 155       | 2332       | 200        |
| SK                   | 648250   | 467002   | 884       | 508       | 1000       | 816        |
| RO                   | 414160   | 205305   | 290       | 275       | 690        | 319        |
| BG                   | n.a.     | n.a.     | n.a.      | n.a.      | n.a.       | n.a.       |
| West UA <sup>1</sup> | 286194   | 0        | 373       | 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.
- 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.

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

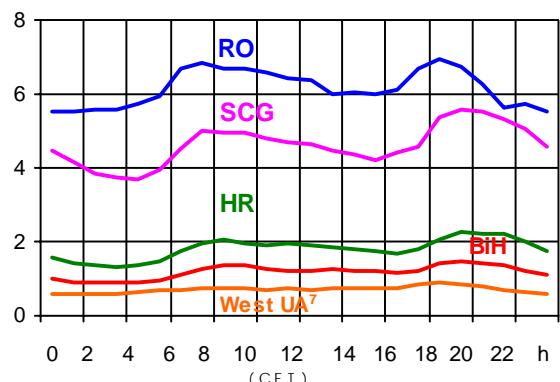
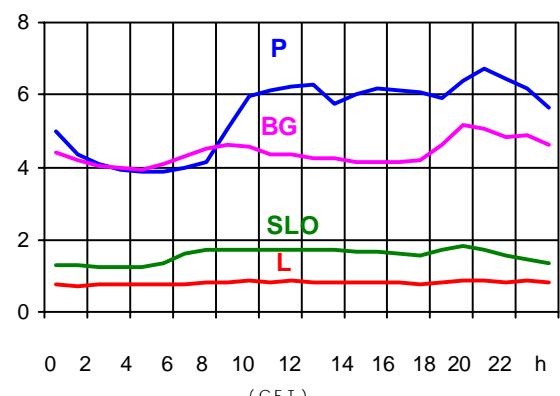
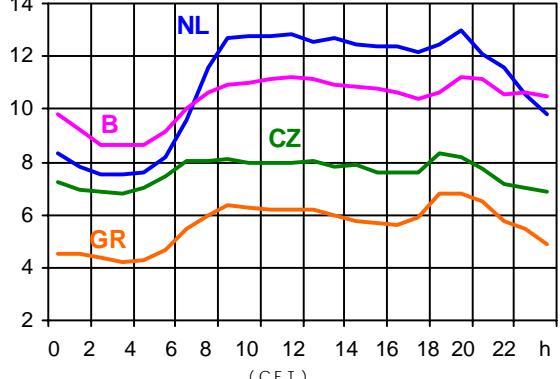
Consumption hourly load curves<sup>1</sup> on

17.03.04



|                      | Peak load<br>MW | $\Delta$ % <sup>2</sup> | Load<br>representativity <sup>1</sup><br>% | Parallel<br>power <sup>3</sup><br>MW |
|----------------------|-----------------|-------------------------|--|--------------------------------------|
| B                    | 11230           | -0,8                    | 100  | 10075                                |
| D                    | 72500           | 1,0                     | 91   | 77100                                |
| E                    | 32646           | 12,9                    | 94   | 32646                                |
| F                    | 60997           | -3,9                    | 100  | 67824                                |
| GR <sup>6</sup>      | 6818            | -10,4                   | 99   | 6043                                 |
| I                    | 47169           | -0,7                    | 100  | 40046                                |
| SLO                  | 1819            | 2,8                     | 95   | 1658                                 |
| HR                   | 2288            | -0,9                    | 100  | 2157                                 |
| BIH                  | 1500            | -1,8                    | 99   | 1748                                 |
| FYROM                | 1000            | -11,6                   | 100  | 713                                  |
| SCG                  | 5581            | -7,2                    | 96   | 4164                                 |
| L                    | 882             | 1,8                     | 99   | 816                                  |
| NL                   | 12970           | 2,0                     | 90   | 10208                                |
| A                    | 7744            | 1,8                     | 82   | 7601                                 |
| P                    | 6709            | 5,4                     | 93   | 6713                                 |
| CH                   | 8559            | 3,2                     | 100  | 9533                                 |
| CZ                   | 8338            | -2,6                    | 100  | 10364                                |
| H                    | 5451            | -2,4                    | 100  | 3751                                 |
| PL                   | 18670           | -6,8                    | 100  | 18801                                |
| SK                   | 3727            | -2,8                    | 100  | 3507                                 |
| RO                   | 6972            | -2,7                    | 100  | 6577                                 |
| BG                   | 5135            | -11,7                   | 100  | 5001                                 |
| UCTE                 | <b>319886</b>   | <b>0,2</b>              |  | <b>327046</b>                        |
| DK <sup>5</sup>      |                 |                         |  | 2645                                 |
| West UA <sup>7</sup> | 877             | 7,5                     | 100  | 1204                                 |

Values in GW

<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 former data from the German Federal Office for Statistics<sup>5</sup> Denmark (Jutland)<sup>6</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>7</sup> West UA represents the so-called Burshtyn Island synchronously with the UCTE



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