

# UCTE



## October 2003

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

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<sup>1</sup> Monthly provisional values as of UCTE database as of 26 January 2004

| Countries       | Net production in GWh <sup>1</sup> |              |               |                           | Exchange balance<br>in GWh | Pump<br>in GWh | Consumption in GWh <sup>1</sup> |                    |                   |                    |
|-----------------|------------------------------------|--------------|---------------|---------------------------|----------------------------|----------------|---------------------------------|--------------------|-------------------|--------------------|
|                 | Hy                                 | Tn           | Tc            | Total                     |                            |                | monthly                         | Δ <sup>3</sup> [%] | last<br>12 months | Δ <sup>3</sup> [%] |
| B               | 96                                 | 3985         | 2798          | 6879 <sup>2</sup>         | 647                        | 119            | 7407                            | 1,2                | 84535             | 0,9                |
| D               | 1704                               | 14025        | 30207         | 45936 <sup>2</sup>        | -2010                      | 581            | 43345                           | 2,4                | 508876            | 2,3                |
| E               | 2275                               | 4544         | 11918         | 18737 <sup>2</sup>        | 55                         | 390            | 18402                           | 4,7                | 221487            | 4,5                |
| F               | 4444                               | 35440        | 4005          | 43889                     | -3951                      | 650            | 39288                           | 6,5                | 446702            | 2,0                |
| GR              | 318                                | 0            | 3535          | 3853 <sup>2</sup>         | 104                        | 83             | 3874                            | 2,9                | 49596             | 3,5                |
| I               | 2863                               | 0            | 20843         | 23706                     | 4216                       | 862            | 27060                           | 1,0                | 319405            | 3,1                |
| SLO             | 234                                | 488          | 400           | 1122                      | -42                        | 0              | 1080                            | 3,3                | 12247             | 4,9                |
| HR              | 323                                | 0            | 534           | 857 <sup>2</sup>          | 447                        | 13             | 1291                            | 8,1                | 15293             | 2,1                |
| BiH             | 291                                | 0            | 610           | 901                       | 56                         | 0              | 957                             | n.a.               | n.a.              | n.a.               |
| FYROM           | 52                                 | 0            | 478           | 530 <sup>2</sup>          | 3                          | 0              | 533                             | n.a.               | n.a.              | n.a.               |
| SCG             | 780                                | 0            | 2247          | 3027                      | 264                        | 41             | 3250                            | n.a.               | n.a.              | n.a.               |
| L               | 88                                 | 0            | 280           | 368                       | 284                        | 108            | 544                             | 0,9                | 6091              | 1,1                |
| NL              | 0                                  | 334          | 7605          | 7939 <sup>2</sup>         | 1621                       | 0              | 9560                            | 1,6                | 110028            | 1,5                |
| A               | 2552                               | 0            | 1880          | 4432                      | 264                        | 215            | 4481                            | 0,9                | 51620             | 0,6                |
| P               | 869                                | 0            | 2467          | 3336 <sup>2</sup>         | 362                        | 51             | 3647                            | 3,9                | 42588             | 3,5                |
| CH              | 2605                               | 2400         | 215           | 5220 <sup>2</sup>         | 25                         | 159            | 5086                            | 1,3                | 59082             | 0,8                |
| CZ              | 117                                | 2198         | 4475          | 6790 <sup>2</sup>         | -1417                      | 53             | 5320                            | 2,7                | 59921             | 2,2                |
| H               | 15                                 | 738          | 1815          | 2568 <sup>2</sup>         | 735                        | 0              | 3303                            | 2,0                | 38311             | 2,6                |
| PL <sup>5</sup> | 222                                | 0            | 13597         | 13819 <sup>2</sup>        | -1187                      | 195            | 12437                           | 2,4                | 138609            | 3,6                |
| SK              | 265                                | 1404         | 796           | 2465 <sup>2</sup>         | -52                        | 31             | 2382                            | 2,6                | 26379             | 0,8                |
| <b>UCTE</b>     | <b>21201</b>                       | <b>67266</b> | <b>115723</b> | <b>204190<sup>2</sup></b> | <b>-109</b>                | <b>3602</b>    | <b>200479</b>                   | <b>3,2</b>         | <b>2236297</b>    | <b>3,4</b>         |
| RO              | 889                                | 522          | 2811          | 4222 <sup>2</sup>         | 42                         | 0              | 4264                            | n.a.               | n.a.              | n.a.               |
| BG              | 199                                | 1188         | 2207          | 3594 <sup>2</sup>         | -575                       | 51             | 2968                            | n.a.               | n.a.              | n.a.               |
| West-UA         | 15                                 | 0            | 671           | 686 <sup>2</sup>          | -317                       | 0              | 369                             | n.a.               | n.a.              | n.a.               |

<sup>1</sup> Percentage as referred to total values in %

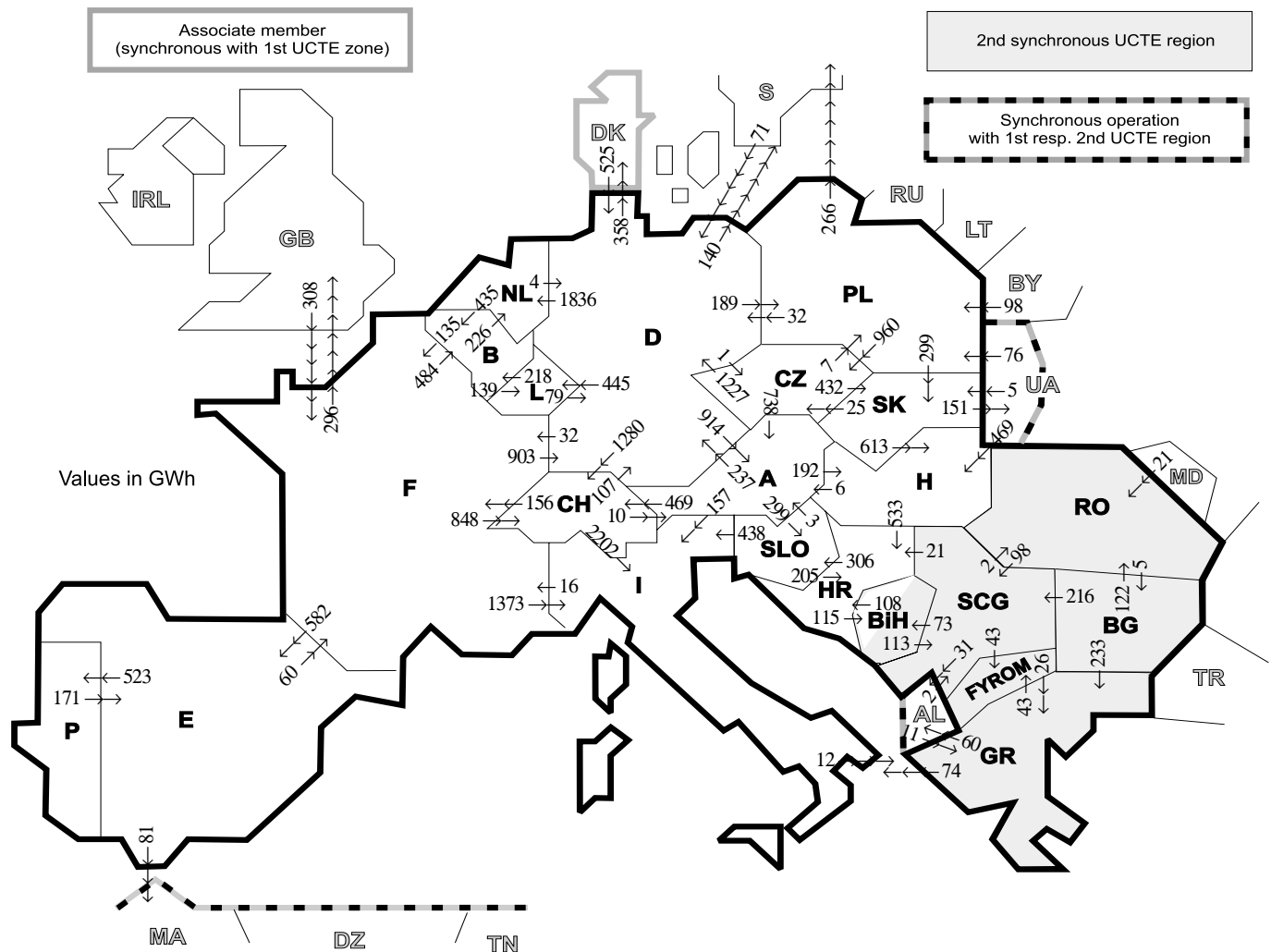
| Countries   | B  | D  | E  | F  | GR <sup>4</sup> | I   | SLO | HR  | BiH | FY-<br>ROM | SCG | L  | NL  | A  | P  | CH  | CZ  | H   | PL  | SK  | RO  | BG  | West-<br>UA |
|-------------|----|----|----|----|-----------------|-----|-----|-----|-----|------------|-----|----|-----|----|----|-----|-----|-----|-----|-----|-----|-----|-------------|
| Production  | 99 | 94 | 94 | 97 | 93              | 100 | 95  | 100 | 99  | 100        | 96  | 98 | 100 | 84 | 92 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100         |
| Consumption | 99 | 94 | 94 | 97 | 93              | 100 | 95  | 100 | 99  | 100        | 96  | 99 | 100 | 90 | 92 | 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 whole country including the isolated systems of the Greek island is 93%.  
The representativity of data referring interconnected system on the mainland is 99%.

<sup>5</sup> Production values are gross values.



| Exporting countries | Importing countries |      |     |     |     |      |     |     |     |        |     |     |      |      |     |      |     |      |     | Σ Export |     |    |     |         |                 |                  |      |
|---------------------|---------------------|------|-----|-----|-----|------|-----|-----|-----|--------|-----|-----|------|------|-----|------|-----|------|-----|----------|-----|----|-----|---------|-----------------|------------------|------|
|                     | B                   | D    | E   | F   | GR  | I    | SLO | HR  | BIH | FY-ROM | SCG | L   | NL   | A    | P   | CH   | CZ  | H    | PL  |          | SK  | RO | BG  | West-UA | DK <sup>2</sup> | III <sup>1</sup> |      |
| B                   | -                   | -    | -   | 135 | -   | -    | -   | -   | -   | -      | -   | 139 | 226  | -    | -   | -    | -   | -    | -   | -        | -   | -  | -   | -       | -               | -                | 500  |
| D                   | -                   | -    | -   | 32  | -   | -    | -   | -   | -   | -      | -   | 445 | 1836 | 914  | -   | 1280 | 1   | -    | 189 | -        | -   | -  | -   | -       | 358             | 498              | 5553 |
| E                   | -                   | -    | -   | 60  | -   | -    | -   | -   | -   | -      | -   | -   | -    | -    | 523 | -    | -   | -    | -   | -        | -   | -  | -   | -       | -               | 81               | 664  |
| F                   | 484                 | 903  | 582 | -   | -   | 1373 | -   | -   | -   | -      | -   | -   | -    | -    | -   | 848  | -   | -    | -   | -        | -   | -  | -   | -       | -               | 296              | 4486 |
| GR                  | -                   | -    | -   | -   | -   | 74   | -   | -   | -   | -      | -   | -   | -    | -    | -   | -    | -   | -    | -   | -        | -   | -  | 0   | -       | -               | 60               | 177  |
| I                   | -                   | -    | -   | 16  | 12  | -    | 0   | -   | -   | -      | -   | -   | -    | 0    | 0   | -    | -   | -    | -   | -        | -   | -  | -   | -       | -               | -                | 28   |
| SLO                 | -                   | -    | -   | -   | -   | 438  | -   | 205 | -   | -      | -   | -   | -    | 3    | -   | -    | -   | -    | -   | -        | -   | -  | -   | -       | -               | -                | 646  |
| HR                  | -                   | -    | -   | -   | -   | -    | 306 | 115 | -   | 0      | -   | -   | -    | -    | -   | -    | -   | 0    | -   | -        | -   | -  | -   | -       | -               | -                | 421  |
| BIH                 | -                   | -    | -   | -   | -   | -    | 108 | -   | -   | 113    | -   | -   | -    | -    | -   | -    | -   | -    | -   | -        | -   | -  | -   | -       | -               | -                | 221  |
| FYROM               | -                   | -    | -   | -   | 26  | -    | -   | -   | -   | -      | 5   | -   | -    | -    | -   | -    | -   | -    | -   | -        | -   | -  | 0   | -       | -               | -                | 31   |
| SCG                 | -                   | -    | -   | -   | -   | -    | -   | 21  | 73  | 43     | -   | -   | -    | -    | -   | -    | -   | -    | 0   | -        | -   | 2  | 0   | -       | -               | 31               | 170  |
| L                   | 218                 | 79   | -   | -   | -   | -    | -   | -   | -   | -      | -   | -   | -    | -    | -   | -    | -   | -    | -   | -        | -   | -  | -   | -       | -               | -                | 297  |
| NL                  | 435                 | 4    | -   | -   | -   | -    | -   | -   | -   | -      | -   | -   | -    | -    | -   | -    | -   | -    | -   | -        | -   | -  | -   | -       | -               | -                | 439  |
| A                   | -                   | 237  | -   | -   | -   | 157  | 299 | -   | -   | -      | -   | -   | -    | -    | -   | 469  | 0   | 192  | -   | -        | -   | -  | -   | -       | -               | -                | 1354 |
| P                   | -                   | -    | 171 | -   | -   | -    | -   | -   | -   | -      | -   | -   | -    | -    | -   | -    | -   | -    | -   | -        | -   | -  | -   | -       | -               | -                | 171  |
| CH                  | -                   | 107  | -   | 156 | -   | 2202 | -   | -   | -   | -      | -   | -   | -    | 10   | -   | -    | -   | -    | -   | -        | -   | -  | -   | -       | -               | -                | 2475 |
| CZ                  | -                   | 1227 | -   | -   | -   | -    | -   | -   | -   | -      | -   | -   | -    | 738  | -   | -    | -   | -    | 7   | 432      | -   | -  | -   | -       | -               | -                | 2404 |
| H                   | -                   | -    | -   | -   | -   | -    | 533 | -   | -   | 0      | -   | -   | -    | 6    | -   | -    | -   | -    | -   | 0        | 0   | -  | 0   | 0       | -               | 0                | 539  |
| PL                  | -                   | 32   | -   | -   | -   | -    | -   | -   | -   | -      | -   | -   | -    | -    | -   | -    | 960 | -    | 299 | -        | -   | 0  | -   | 0       | -               | 266              | 1557 |
| SK                  | -                   | -    | -   | -   | -   | -    | -   | -   | -   | -      | -   | -   | -    | -    | -   | -    | 25  | 613  | 0   | -        | -   | -  | -   | 151     | 151             | 940              |      |
| RO                  | -                   | -    | -   | -   | -   | -    | -   | -   | -   | -      | 98  | -   | -    | -    | -   | -    | -   | -    | 0   | -        | -   | 5  | -   | -       | -               | 0                | 103  |
| BG                  | -                   | -    | -   | -   | 233 | -    | -   | -   | -   | 0      | 216 | -   | -    | -    | -   | -    | -   | -    | -   | -        | 122 | -  | -   | -       | -               | 0                | 571  |
| West-UA             | -                   | -    | -   | -   | -   | -    | -   | -   | -   | -      | -   | -   | -    | -    | -   | -    | -   | 469  | 76  | 5        | 0   | -  | -   | -       | -               | -                | 550  |
| DK <sup>2</sup>     | -                   | 525  | -   | -   | -   | -    | -   | -   | -   | -      | -   | -   | -    | -    | -   | -    | -   | -    | -   | -        | -   | -  | -   | -       | -               | -                | 525  |
| III <sup>1</sup>    | -                   | 71   | 0   | 308 | 11  | -    | -   | -   | -   | -      | 2   | -   | -    | -    | -   | -    | -   | 469  | 174 | 5        | 21  | 0  | -   | -       | -               | -                | 1061 |
| Σ Import            | 1137                | 3185 | 753 | 707 | 282 | 4244 | 605 | 867 | 188 | 86     | 434 | 584 | 2062 | 1671 | 523 | 2597 | 986 | 1274 | 370 | 736      | 145 | 5  | 151 | 358     | 1383            | 25883            |      |

Sum of physical energy flows between UCTE countries = 22006 GWh

Total physical energy flows = 24824 GWh

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

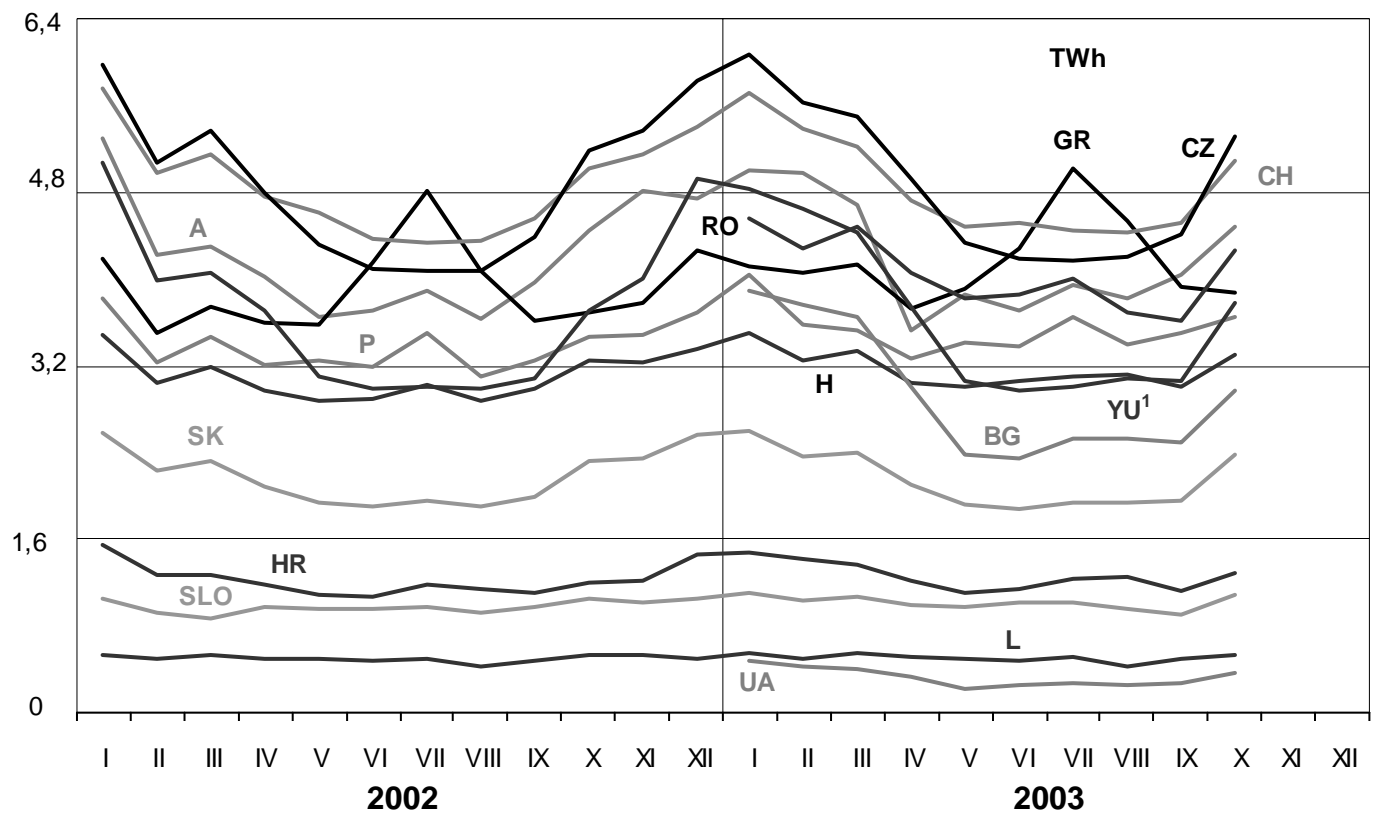
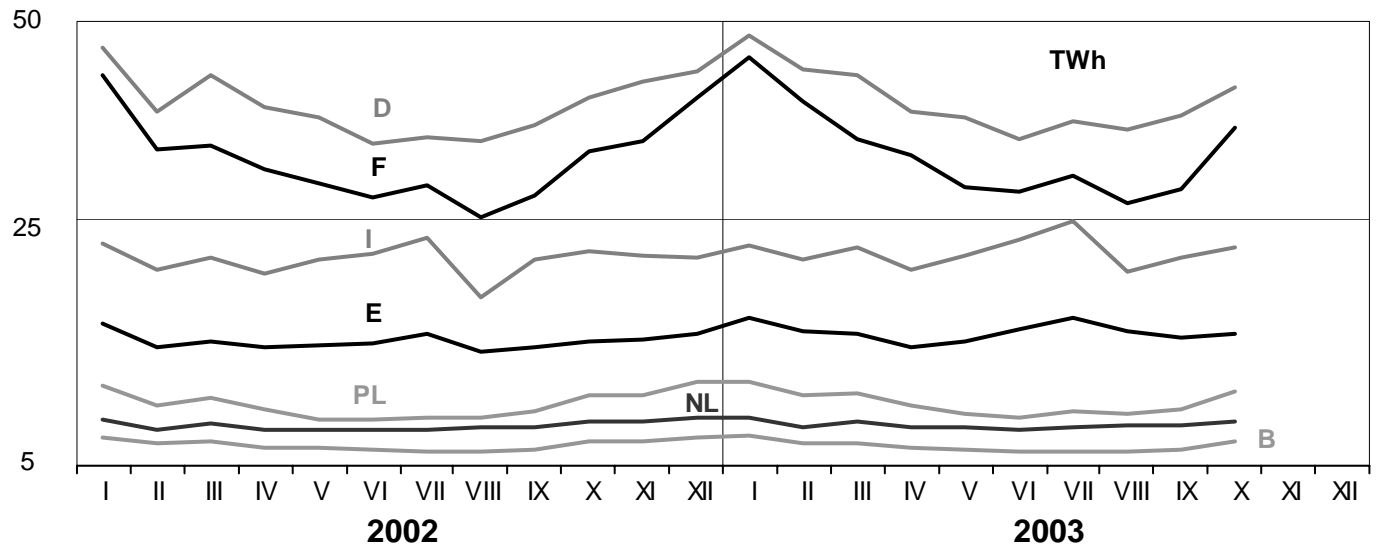
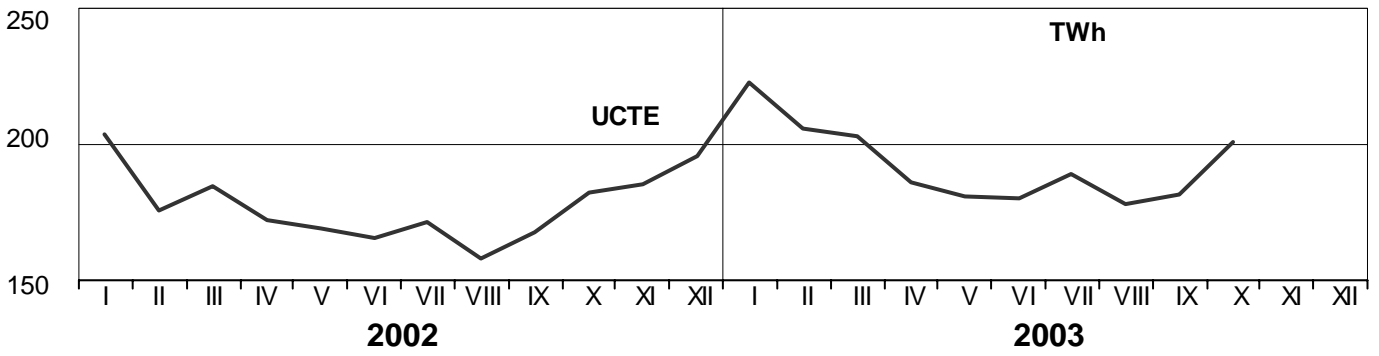
<sup>2</sup> Denmark (Jutland)

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.

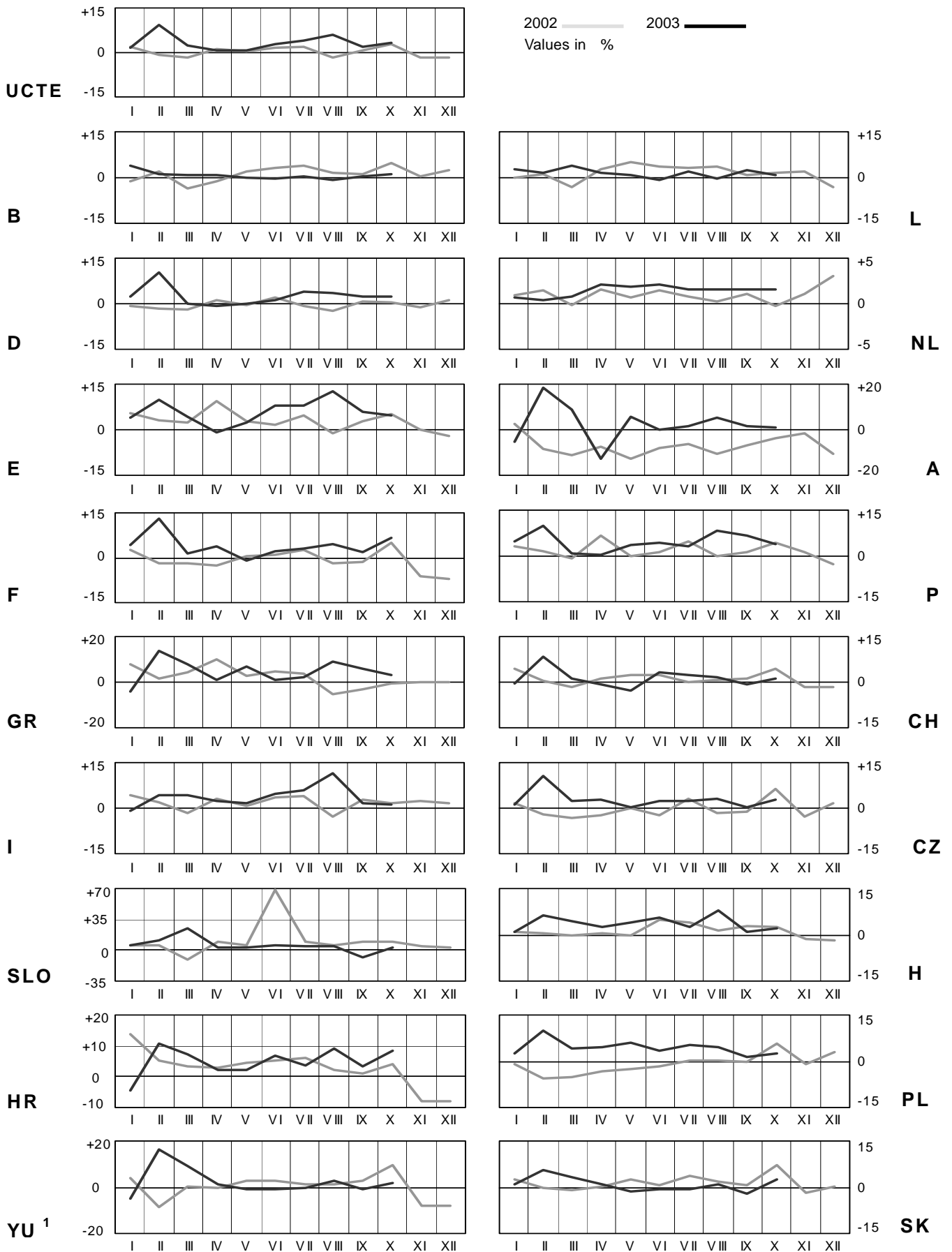
# 3

## Monthly consumption

October 2003



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

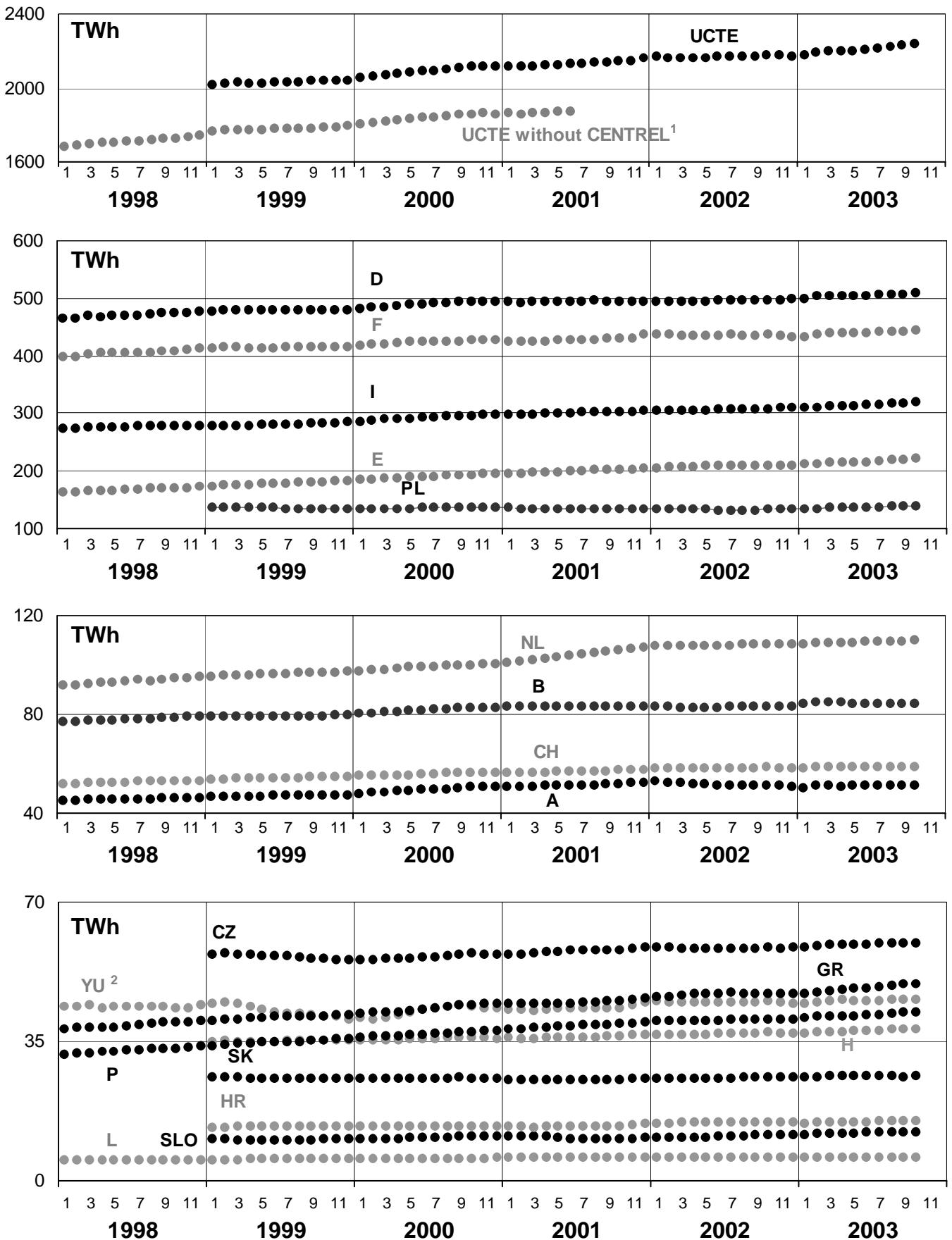


<sup>1</sup> YU = FRY + FYROM (Federal Republic of Yugoslavia and former Yugoslav Republic of Macedonia)

# 5

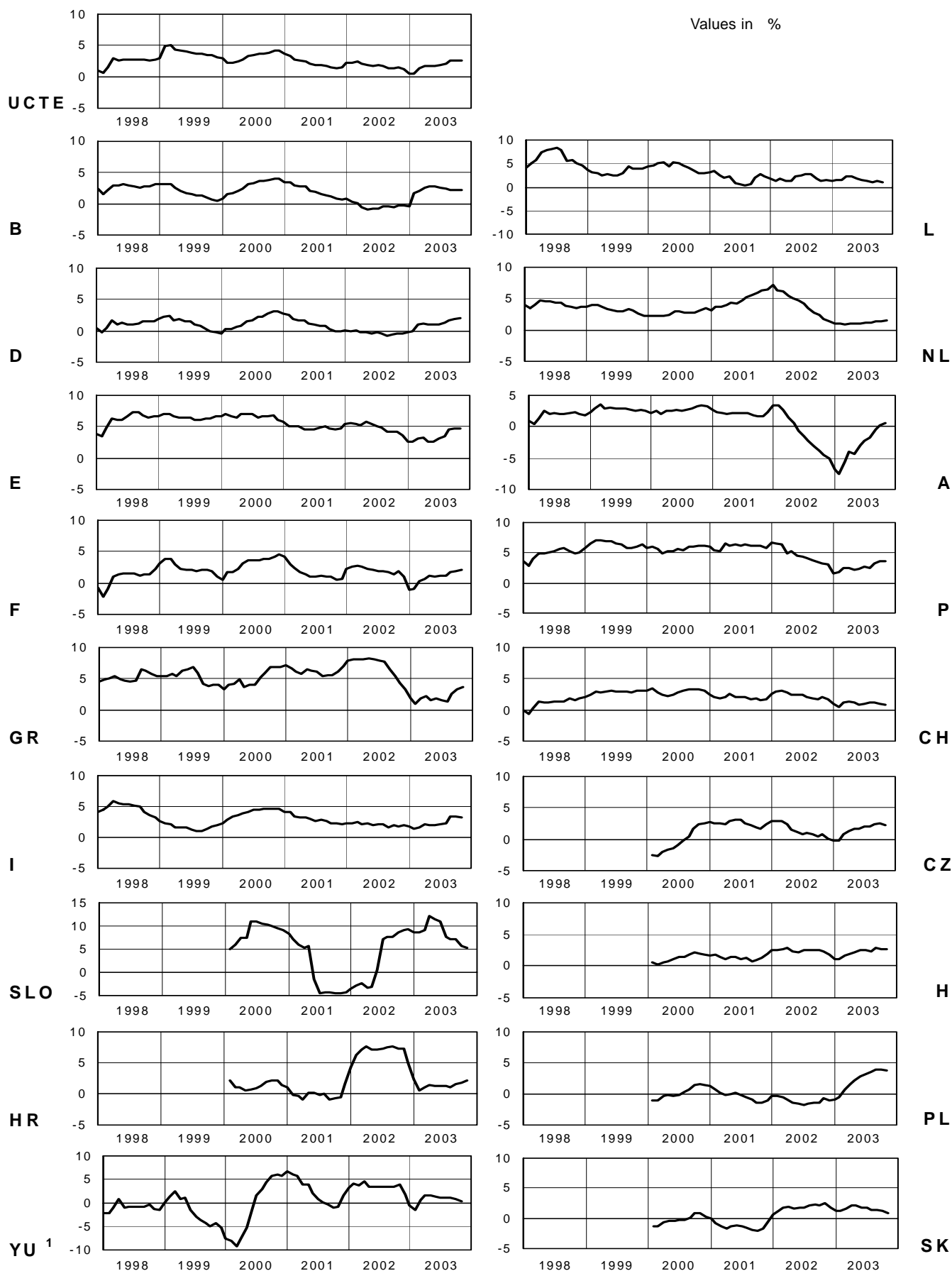
## Consumption of last 12 months

October 2003



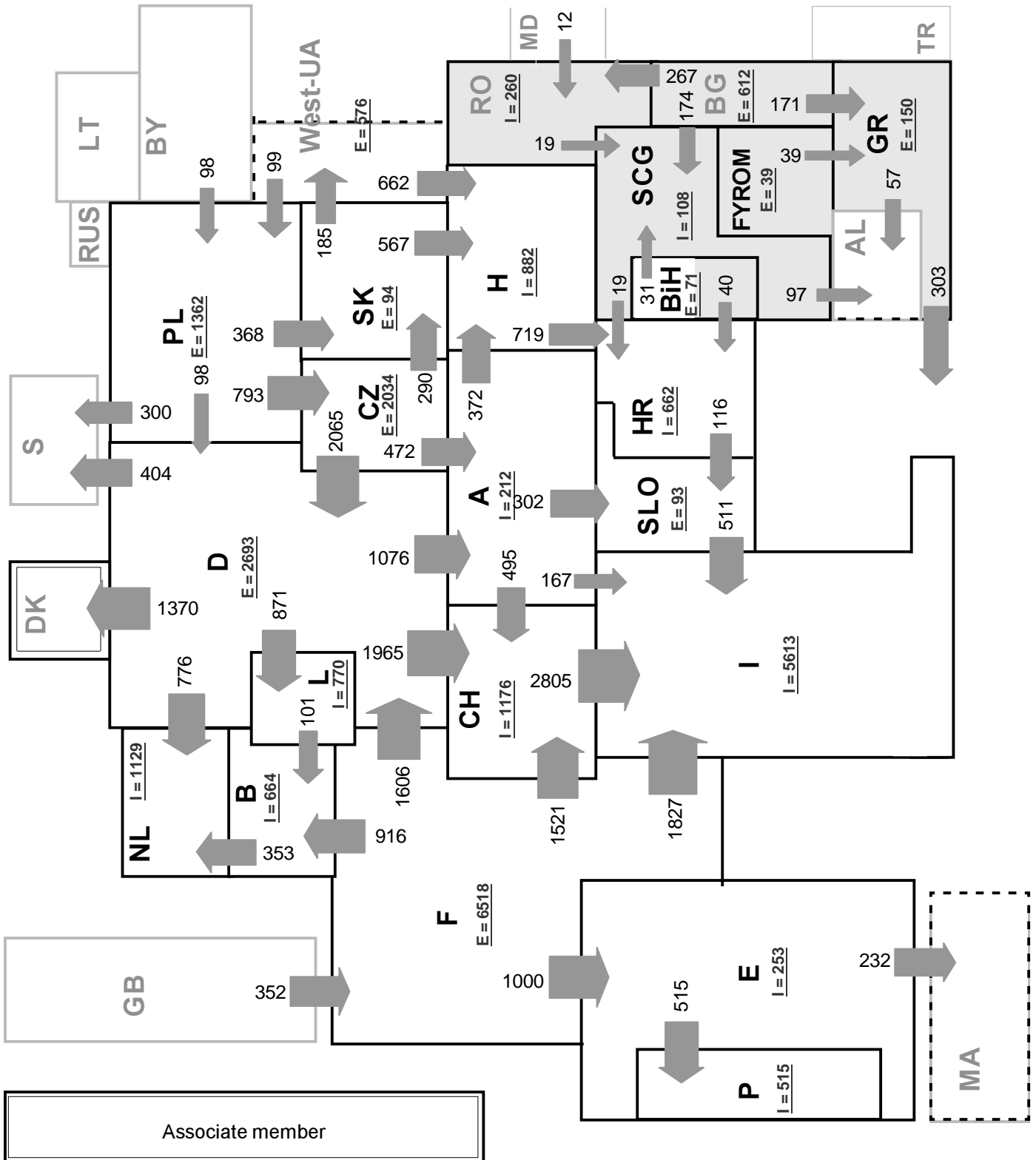
<sup>1</sup> CENTREL countries CZ, H, PL and SK member of UCTE from May 2001

<sup>2</sup> YU = FRY + FYROM (Federal Republic of Yugoslavia and former Yugoslav Republic of Macedonia)



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





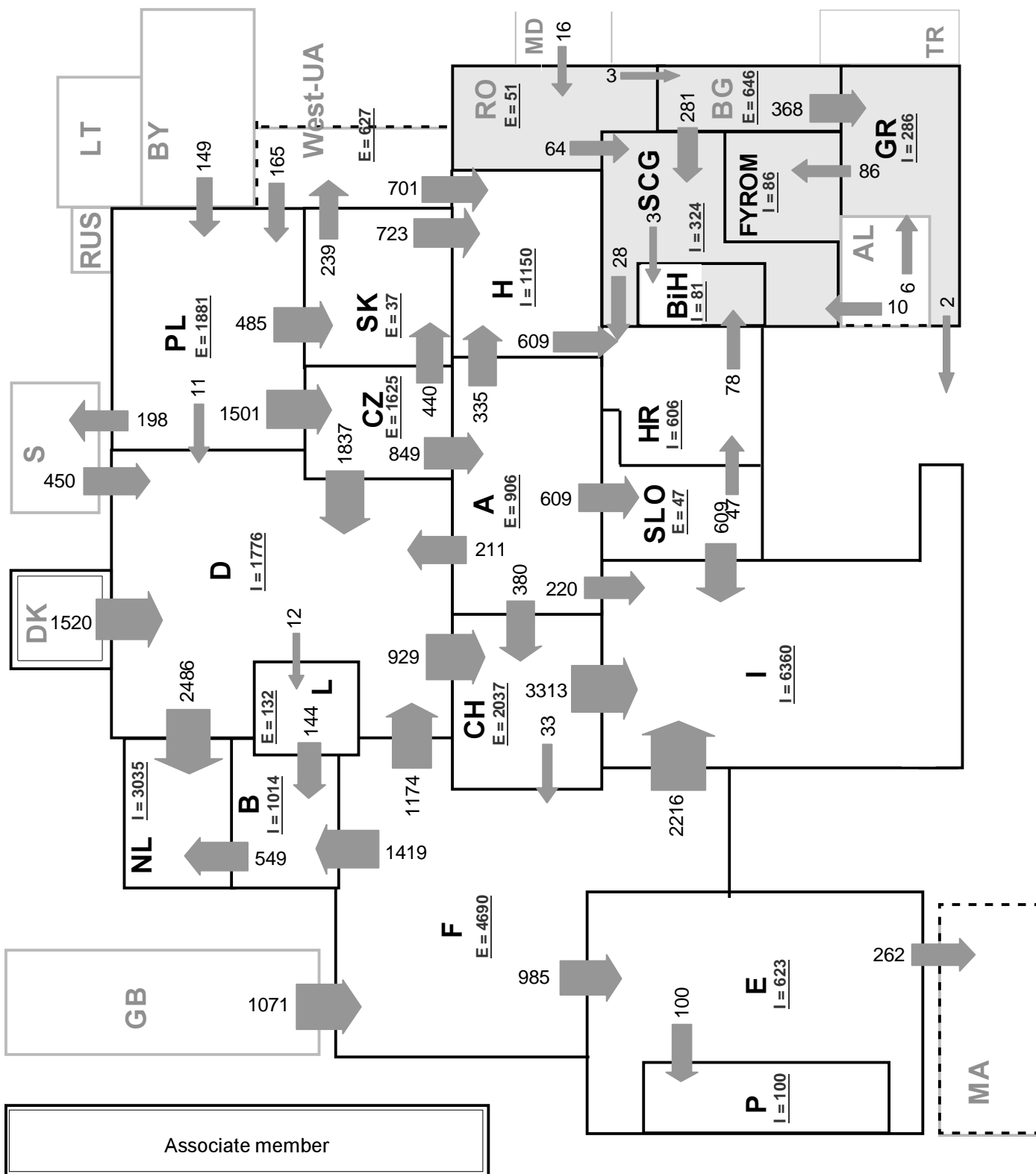
**Sum of load flows in MW:**

UCTE = 23730      Total = 27598

\* Central European Time (CET)

I = Import balance

E = Export balance



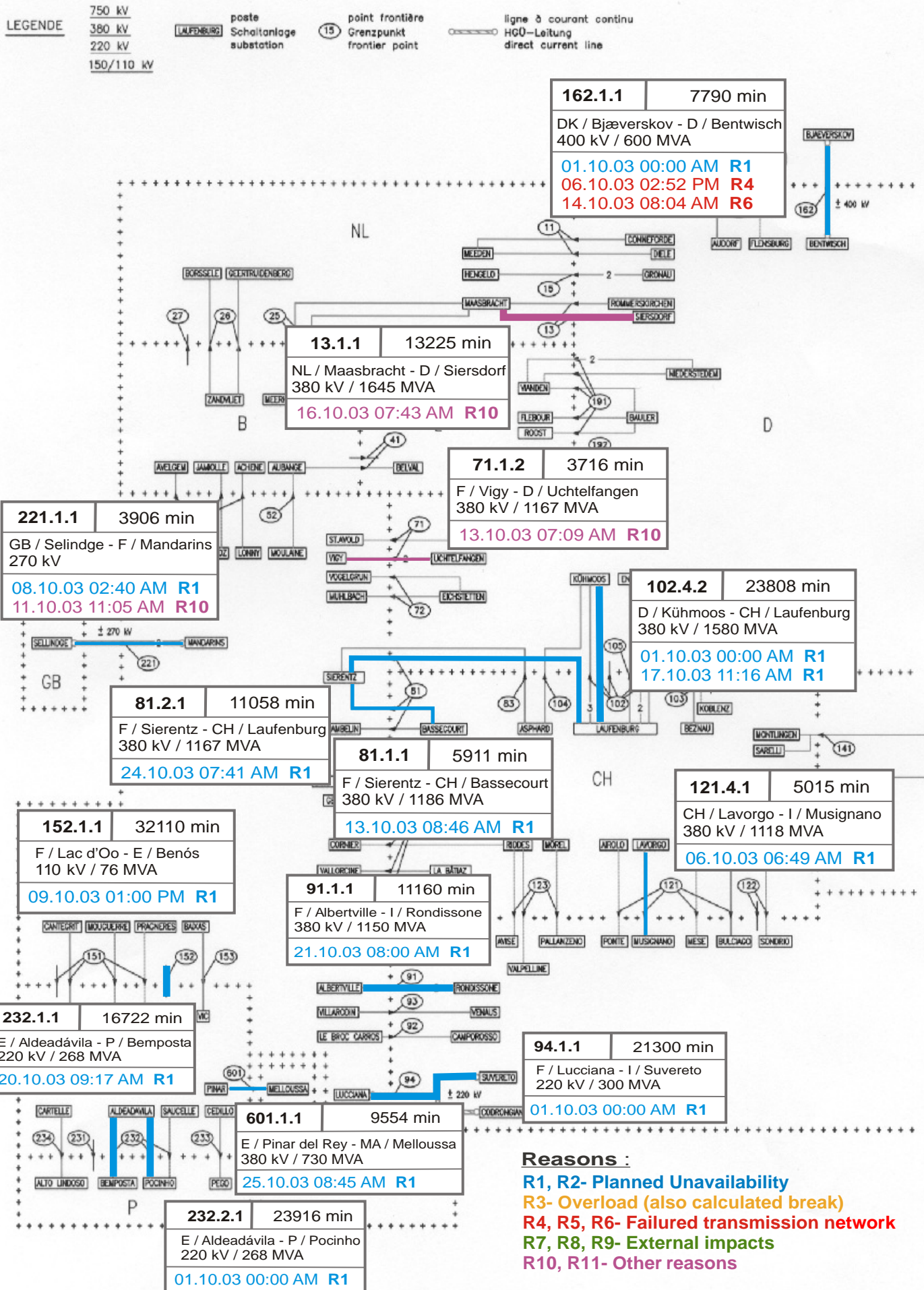
Sum of load flows in MW:

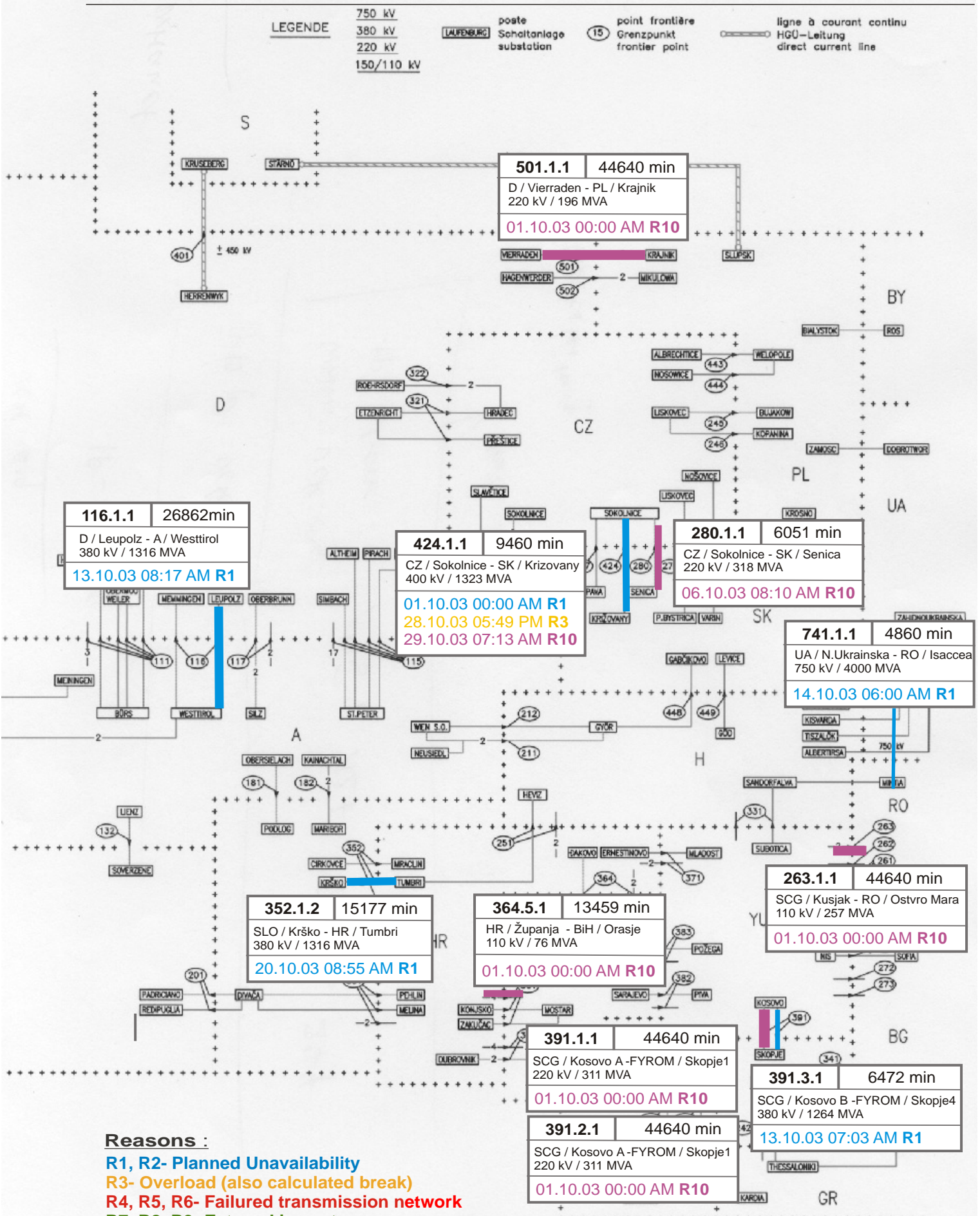
UCTE = 23139      Total = 27926

\* Central European Time (CET)

I = Import balance

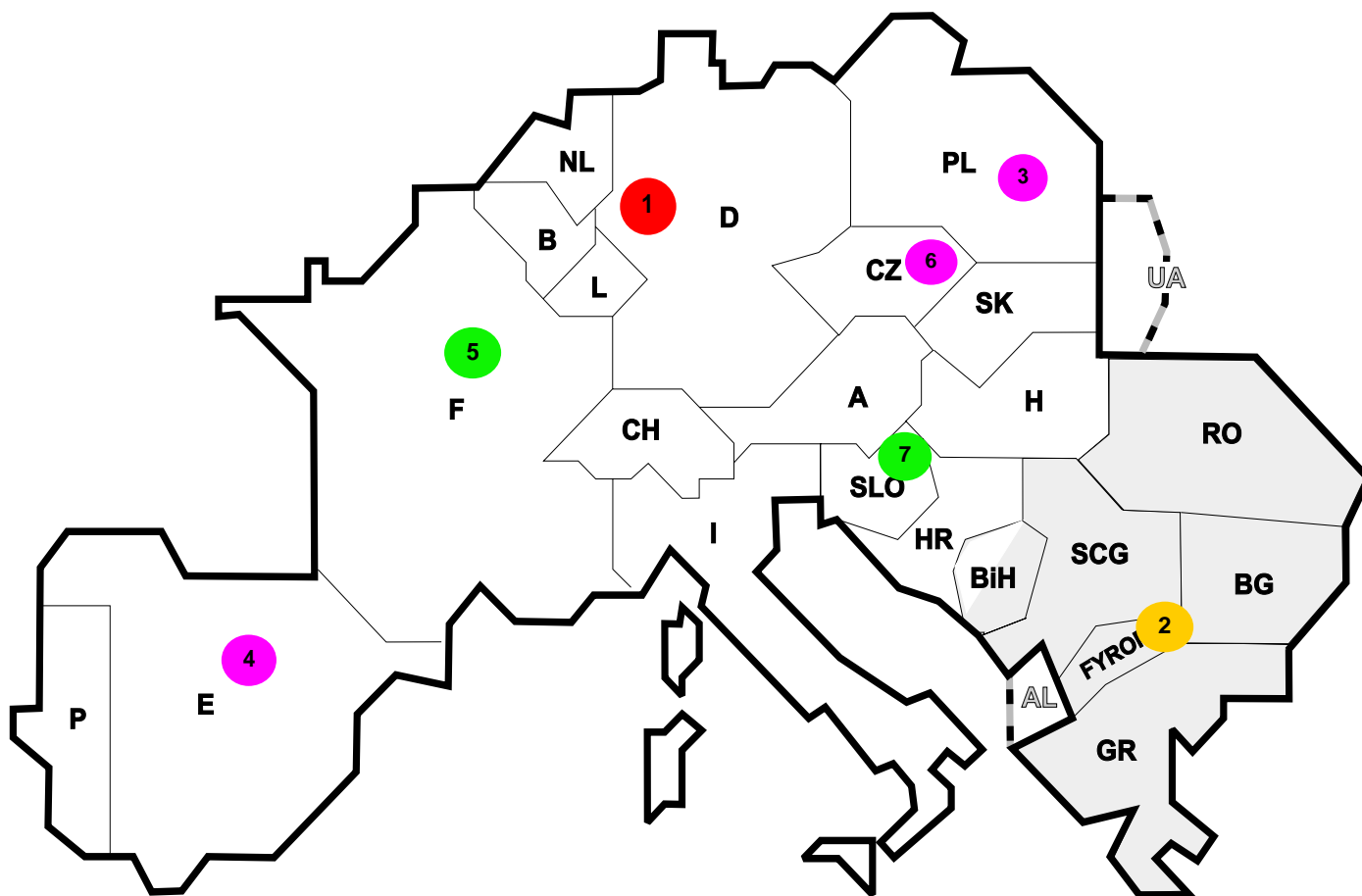
E = Export balance





**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:

**R3** Overload

**R7, R8, R9** External impacts (animals...)

**R4, R5, R6** Failure in the transmission network

**R10, R11** Other reasons

| Nbr | Country | Substation               | Reason | Energie not supplied [ MWh ] | Total loss of power [ MW ] | Restoration time [ min ] | Equivalent time of interruption <sup>1</sup> |
|-----|---------|--------------------------|--------|------------------------------|----------------------------|--------------------------|--|
| 1   | D       | Kusenhorst               | R4     | 469                          | 320                        | 88                       | 0,33   |
| 2   | FYROM   | Sk4                      | R3     | 300                          | 150                        | 6420                     | 15,33  |
| 3   | PL      | Slupsk                   | R10    | 180                          | 400                        | 27                       | 1,52   |
| 4   | E       | Puentes Garcia Rodriguez | R11    | 27                           | 0                          | 2                        | 0,00   |
| 5   | F       | Damery                   | R8     | 21                           | 48                         | 30                       | 0,06   |
| 6   | CZ      | Cebin                    | R11    | 3                            | 0                          | 1                        | 0,00   |
| 7   | SLO     | Diva&#269;a              | R8     | 0                            | 0                          | 4                        | 0,00   |

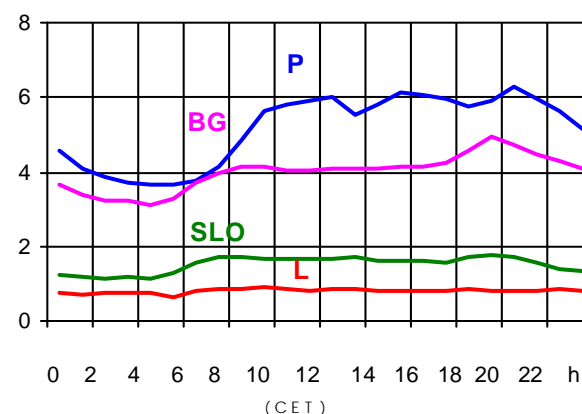
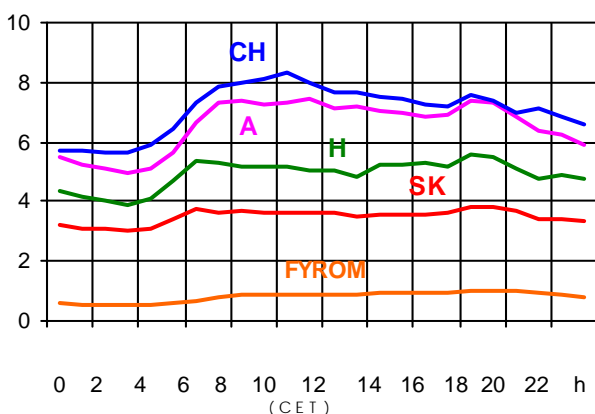
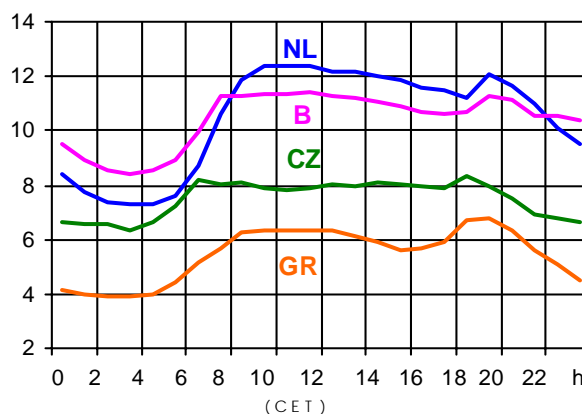
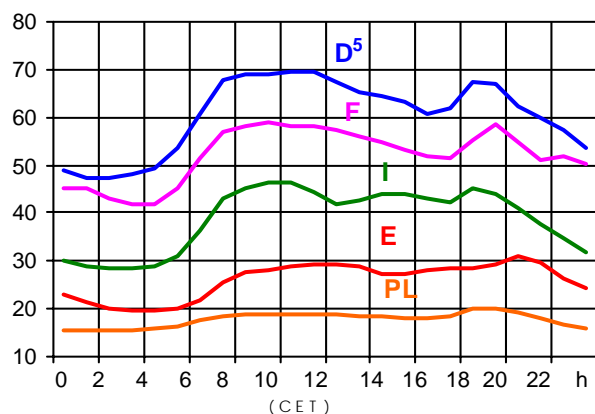
<sup>1</sup> ( year [in min] \* power loss ) / consumption last 12 months

| Control area | Prog_exp | Prog_imp | Prog_exp3 | Prog_imp3 | Prog_exp11 | Prog_imp11 |
|--------------|----------|----------|-----------|-----------|------------|------------|
| B            | 489167   | 1085832  | 412       | 1042      | 753        | 1645       |
| D            | 4056195  | 2350726  | 3201      | 3566      | 4430       | 3913       |
| E            | 504934   | 539053   | 832       | 1000      | 364        | 1000       |
| F            | 7349458  | 3556189  | 9362      | 2868      | 10171      | 5486       |
| GR           | 120139   | 224895   | 320       | 221       | 65         | 370        |
| I            | 28587    | 4244476  | 0         | 5613      | 0          | 6360       |
| SLO          | 634906   | 598332   | 816       | 755       | 864        | 832        |
| HR           | 261613   | 719555   | 312       | 681       | 257        | 576        |
| BiH          | 82       | 206      | 297       | 111       | 272        | 184        |
| FYROM        | 12600    | 61700    | 50        | 20        | 0          | 65         |
| SCG          | 175589   | 440529   | 362       | 522       | 102        | 492        |
| NL           | 311425   | 16200459 | 846       | 1971      | 305        | 3373       |
| A            | n.a.     | n.a.     | n.a.      | n.a.      | n.a.       | n.a.       |
| P            | 107023   | 469312   | 70        | 603       | 760        | 868        |
| CH           | 1867345  | 1991704  | 2053      | 3203      | 3122       | 1058       |
| CZ           | 2238173  | 763883   | 2991      | 868       | 3066       | 1362       |
| H            | 338702   | 1073657  | 538       | 1425      | 347        | 1497       |
| PL           | 1379175  | 199420   | 1348      | 200       | 2035       | 165        |
| SK           | 659190   | 550409   | 805       | 677       | 940        | 842        |
| RO           | 208418   | 102668   | 209       | 141       | 360        | 95         |
| BG           | n.a.     | n.a.     | n.a.      | n.a.      | n.a.       | n.a.       |
| West-UA      | 317228   | 0        | 450       | 0         | 450        | 0          |

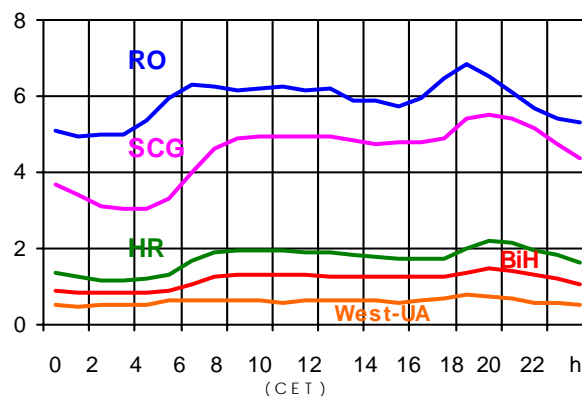
- Control areas can differ from national borders ( i.e. German block which includes parts of A, L and DK ).
- Values are calculated on an hourly base ( MWh ).
- This values are not the provisional values entered in the VULCANUS system, but the definitive values after an eventual correction during the 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.

### Consumption hourly load curves<sup>1</sup> on 15.10.03

Values in GW



|                 | Peak load<br>MW | $\Delta$ % <sup>2</sup> | Cons_load_repr <sup>1</sup><br>% | Parallel load <sup>3</sup><br>MW |
|-----------------|-----------------|-------------------------|----------------------------------|----------------------------------|
| B               | 11455           | -0,2                    | 100                              | 10322                            |
| D               | 69600           | 1,0                     | 91                               | 74500                            |
| E               | 31016           | 3,8                     | 94                               | 28271                            |
| F               | 58873           | 1,6                     | 97                               | 65217                            |
| GR <sup>4</sup> | 6754            | 5,1                     | 93                               | 6037                             |
| I               | 46541           | 0,3                     | 100                              | 39183                            |
| SLO             | 1750            | 0,3                     | 95                               | 1727                             |
| HR              | 2213            | 12,9                    | 100                              | 1855                             |
| BIH             | 1477            | n.a.                    | 100                              | 1237                             |
| FYROM           | 1014            | n.a.                    | 100                              | 811                              |
| SCG             | 5549            | n.a.                    | 96                               | 4647                             |
| L               | 894             | 9,2                     | 99                               | 860                              |
| NL              | 12384           | -0,8                    | 90                               | 9331                             |
| A               | 7434            | -4,0                    | 82                               | 8675                             |
| P               | 6271            | 12,1                    | 92                               | 5530                             |
| CH              | 8296            | -0,8                    | 100                              | 9770                             |
| CZ              | 8349            | 2,3                     | 100                              | 10056                            |
| H               | 5595            | 2,2                     | 100                              | 4001                             |
| PL              | 20165           | 1,8                     | 100                              | 20716                            |
| SK              | 3832            | 0,2                     | 100                              | 3621                             |
| <b>UCTE</b>     | <b>311983</b>   | <b>1,5</b>              |                                  | <b>317305</b>                    |
| DK <sup>6</sup> |                 |                         |                                  | 2855                             |
| RO              | 6860            | n.a.                    | 100                              | 6253                             |
| BG              | 4944            | n.a.                    | 100                              | 4685                             |
| West-UA         | 775             | n.a.                    | 100                              | 1080                             |



<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> Including autoproduction

<sup>4</sup> The representativity of data referring to the whole country, including the systems of the Greek islands, is 93%. The representativity of data to the interconnected system is 99%.

<sup>5</sup> Values estimated on the basis of former data from the German Federal Office for Statistics

<sup>6</sup> Denmark (Jutland)



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