# May 2008

## Monthly provisional values

union for the co-ordination of transmission of electricity

UCTE

**Table of contents** Page



**General remarks and abbreviations used in the tables**

- All values of production and consumption in chapter 1, 3&4, 5&6 and 12 are calculated to represent 100% of the national values.

- DK_W Denmark West represents the Western part of Denmark synchronously interconnected with UCTE (Jutland and Funen).

- UA_W Ukraine West represents the so-called Burshtyn Island synchronously interconnected with UCTE.

- CET Central European Time

- The Bulgarian load values on the 3rd Wednesday are gross values

# 1 Electricity supply situation of the countries

**May 2008**

| Coun-tries | Net production in GWh: Therm. nuclear | Therm conv. | Hydro prod | Other renew. | Of which wind | Not iden-tify | Total | Exchange balance in GWh | Pump in GWh | Consumption in GWh: monthly | var. [%] | last 12 months | var. [%] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AT | 0 | 912 | 4016 | 0 | 0 | 762 | **5690** | 22 | 349 | 5363 | 1,2 | 68530 | 3,4 |
| BA | 0 | 638 | 362 | 0 | 0 | 0 | **1000** | -92 | 0 | 908 | 4,5 | 11507 | 5,4 |
| BE[2] | 3319 | 2460 | 146 | 282 | 30 | 0 | **6207** [1] | 1154 | 154 | 7207 | 0,7 | 91105 | 2,1 |
| BG | 1334 | 1410 | 399 | 0 | 0 | 0 | **3143** | -587 | 34 | 2522 | 2,4 | 34198 | 2,0 |
| CH | 2332 | 165 | 3554 | 90 | 2 | 0 | **6141** [1] | -848 | 314 | 4979 | 1,2 | 64234 | 3,4 |
| CZ | 1987 | 3660 | 211 | 29 | 12 | 0 | **5887** [1] | -772 | 16 | 5099 | 1,8 | 65952 | 4,4 |
| DE | 11320 | 26658 | 2261 | 4004 | 1648 | 0 | **44243** [1] | -683 | 536 | 43024 | 0,0 | 558408 | 0,5 |
| DK_W | 0 | 1168 | 2 | 282 | 178 | 0 | **1452** [1] | 272 | 0 | 1724 | 0,5 | 21873 | 1,1 |
| ES | 4669 | 11881 | 3486 | 2346 | 1756 | 0 | **22382** | -761 | 200 | 21422 | 0,7 | 271407 | 3,2 |
| FR | 31972 | 2080 | 7117 | 599 | 278 | 0 | **41768** [1] | -5792 | 455 | 35521 | 1,5 | 493192 | 5,9 |
| GR | 0 | 3693 | 264 | 96 | 78 | 0 | **4053** [1] | 456 | 101 | 4408 | 2,0 | 56258 | 4,1 |
| HR | 0 | 347 | 488 | 3 | 3 | 0 | **838** [1] | 525 | 10 | 1353 | 2,6 | 17880 | 8,0 |
| HU | 997 | 1767 | 0 | 0 | 0 | 0 | **2764** [1] | 560 | 0 | 3324 | 0,4 | 41794 | 3,1 |
| IT | 0 | 18615 | 4509 | 855 | 423 | 0 | **23979** | 3891 | 637 | 27233 | -3,7 | 340355 | 0,7 |
| LU | 0 | 24 | 77 | 9 | 3 | 0 | **110** | 562 | 99 | 573 | 0,9 | 6894 | 3,1 |
| ME | 0 | 7 | 96 | 0 | 0 | 0 | **103** | 223 | 0 | 326 | -5,2 | 4688 | n.a. |
| MK | 0 | 285 | 95 | 0 | 0 | 0 | **380** | 253 | 0 | 633 | 7,5 | 8791 | 7,6 |
| NL | 275 | 6798 | 0 | 501 | 232 | 0 | **7574** [1] | 1784 | 0 | 9358 | 0,7 | 117160 | 0,7 |
| PL[3] | 0 | 10720 | 247 | 39 | 27 | 0 | **11006** [1] | 56 | 61 | 11001 | -1,0 | 143912 | 4,6 |
| PT | 0 | 1892 | 982 | 523 | 336 | 0 | **3397** [1] | 774 | 36 | 4135 | -0,1 | 52105 | 2,0 |
| RO | 618 | 2193 | 1905 | 0 | 0 | 0 | **4716** [1] | -292 | 23 | 4401 | 3,0 | 55522 | 5,4 |
| RS | 0 | 2012 | 927 | 0 | 0 | 0 | **2939** | -107 | 52 | 2780 | -12,9 | 38705 | n.a. |
| SI | 514 | 333 | 372 | 0 | 0 | 0 | **1219** [1] | -188 | 0 | 1031 | -7,5 | 13273 | -0,6 |
| SK | 1437 | 584 | 414 | 24 | 0 | 0 | **2459** [1] | -212 | 27 | 2220 | 2,0 | 27974 | 3,4 |
| **UCTE** | **60774** | **100302** | **31930** | **9682** | **5006** | **762** | **203450** [1] | **198** | **3104** | **200545** | **0,7** | 2605717 | **3,7** |
| UA_W | 0 | 585 | 18 | 0 | 0 | 0 | 603 | -297 | 0 | 306 | -1,3 | 4358 | 4,8 |

[1] Including deliveries from industry

[2] The reported figures are best estimates based on actual measurements and extrapolations

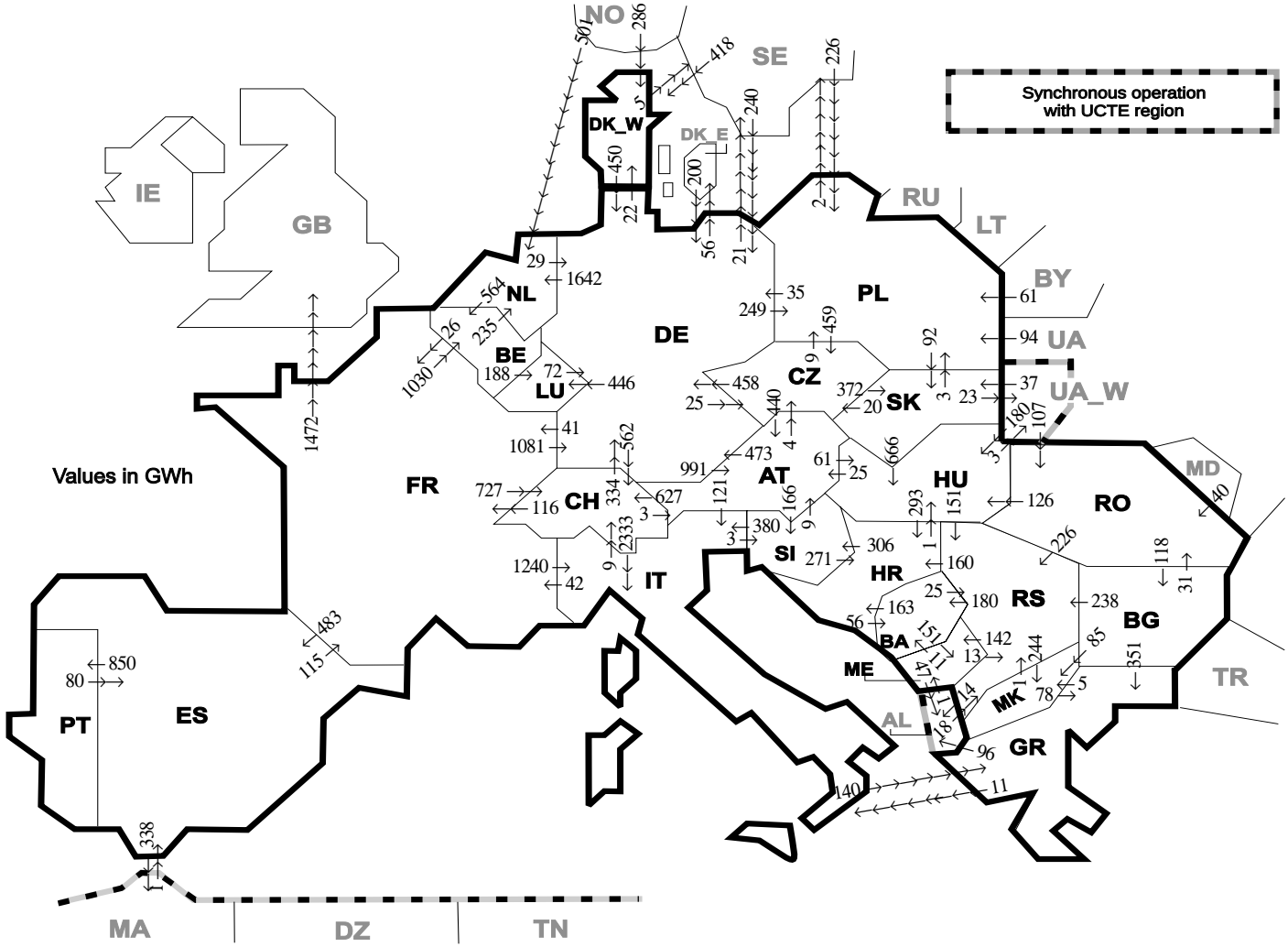
[3] Operational data

All representativities of the national production and consumption values used to calculate values at a representativity of 100% as stated in the table above:

| Countries | AT | BA | BE | BG | CH | CZ | DE | DK_W | ES | FR | GR | HR | HU | IT | LU | ME | MK | NL | PL | PT | RO | RS | SI | SK | UA_W |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Production | | | | | | | | | | | | | | | | | | | | | | | | | |
| Therm.nuclear | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| Thermal conv. | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 97 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 93 | 100 | 100 | 100 | 100 | 100 |
| Hydro prod | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| Other renew. | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 95 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| Not identify | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| Consumption | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 98 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 97 | 100 | 100 | 100 | 100 | 100 |

# 2 Physical energy flows

May 2008

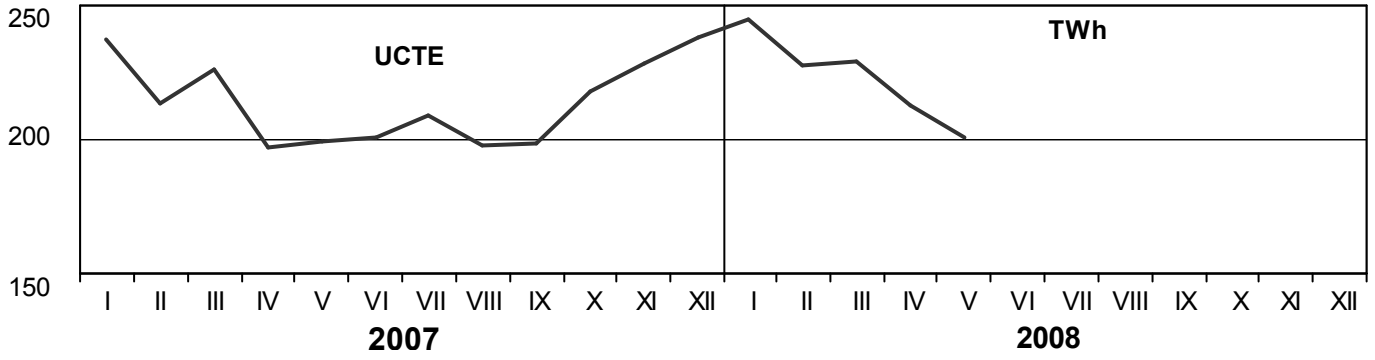


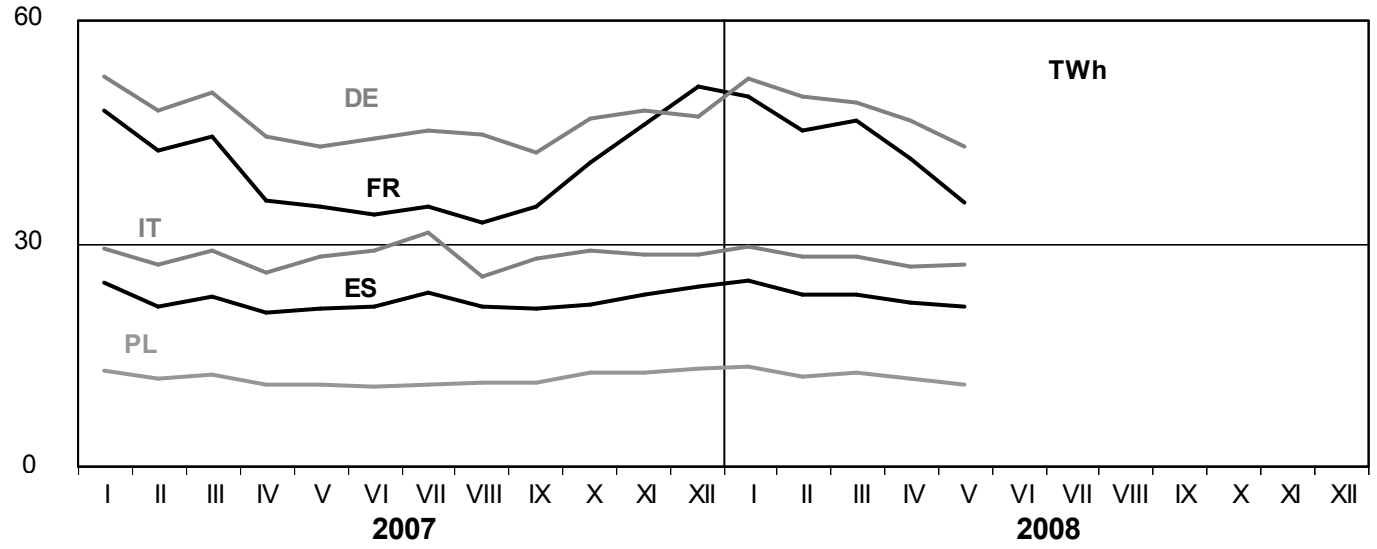

| Exporting countries | AT | BA | BE | BG | CH | CZ | DE | DK_W | ES | FR | GR | HR | HU | IT | LU | ME | MK | NL | PL | PT | RO | RS | SI | SK | UA_W | Other III[1] | Sum export |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AT | - | - | - | - | 627 | 4 | 473 | - | - | - | - | - | 61 | 121 | - | - | - | - | - | - | - | - | 166 | - | - | - | 1452 |
| BA | - | - | - | - | - | - | - | - | - | - | - | 163 | - | - | - | 151 | - | - | - | - | - | 25 | - | - | - | - | 339 |
| BE | - | - | - | - | - | - | - | - | - | 26 | - | - | - | - | 188 | - | - | 235 | - | - | - | - | - | - | - | - | 449 |
| BG | - | - | - | - | - | - | - | - | - | - | 351 | - | - | - | - | - | 85 | - | - | - | 31 | 238 | - | - | - | 0 | 705 |
| CH | 3 | - | - | - | - | - | 334 | - | - | 116 | - | - | - | 2333 | - | - | - | - | - | - | - | - | - | - | - | - | 2786 |
| CZ | 440 | - | - | - | - | - | 458 | - | - | - | - | - | - | - | - | - | - | - | 9 | - | - | - | - | 372 | - | - | 1279 |
| DE | 991 | - | - | - | 562 | 25 | - | 22 | - | 41 | - | - | - | - | 446 | - | - | 1642 | 249 | - | - | - | - | - | - | 77 | 4055 |
| DK_W | - | - | - | - | - | - | 450 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 5 | 455 |
| ES | - | - | - | - | - | - | - | - | - | 115 | - | - | - | - | - | - | - | - | - | 850 | - | - | - | - | - | 338 | 1303 |
| FR | - | - | 1030 | - | 727 | - | 1081 | - | 483 | - | - | - | - | 1240 | - | - | - | - | - | - | - | - | - | - | - | 1472 | 6033 |
| GR | - | - | - | 0 | - | - | - | - | - | - | - | - | - | 11 | - | - | 5 | - | - | - | - | - | - | - | - | 96 | 112 |
| HR | - | 56 | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | 0 | 306 | - | - | - | 363 |
| HU | 25 | - | - | - | - | - | - | - | - | - | - | 293 | - | - | - | - | - | - | - | - | 0 | 151 | - | 0 | 3 | - | 472 |
| IT | 0 | - | - | - | 9 | - | - | - | - | 42 | 140 | - | - | - | - | - | - | - | - | - | - | - | 3 | - | - | - | 194 |
| LU | - | - | 0 | - | - | - | 72 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 72 |
| ME | - | 11 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 13 | - | - | - | 47 | 71 |
| MK | - | - | - | 0 | - | - | - | - | - | - | 78 | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | 79 |
| NL | - | - | 564 | - | - | - | 29 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 0 | 593 |
| PL | - | - | - | - | - | 459 | 35 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 92 | - | 2 | 588 |
| PT | - | - | - | - | - | - | - | - | 80 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 80 |
| RO | - | - | - | 118 | - | - | - | - | - | - | - | - | 126 | - | - | - | - | - | - | - | - | 226 | - | - | 0 | 0 | 470 |
| RS | - | 180 | - | 0 | - | - | - | - | - | - | - | 160 | 0 | - | - | 142 | 244 | - | - | - | 0 | - | - | - | - | 14 | 740 |
| SI | 9 | - | - | - | - | - | - | - | - | - | - | 271 | - | 380 | - | - | - | - | - | - | - | - | - | - | - | - | 660 |
| SK | - | - | - | - | - | 20 | - | - | - | - | - | - | 666 | - | - | - | - | - | 3 | - | - | - | - | - | 23 | - | 712 |
| UA_W | - | - | - | - | - | - | - | - | - | - | - | - | 180 | - | - | - | - | - | - | - | 107 | - | - | 37 | - | - | 324 |
| Other III[1] | - | - | - | 0 | - | - | 440 | 704 | 1 | 0 | 0 | - | - | - | - | 1 | - | 501 | 381 | - | 40 | 18 | - | - | - | - | 2086 |
| **Sum imp** | 1468 | 247 | 1594 | 118 | 1925 | 508 | 3372 | 726 | 564 | 340 | 569 | 887 | 1034 | 4085 | 634 | 294 | 334 | 2378 | 642 | 850 | 178 | 672 | 475 | 501 | 26 | 2051 | 26472 |

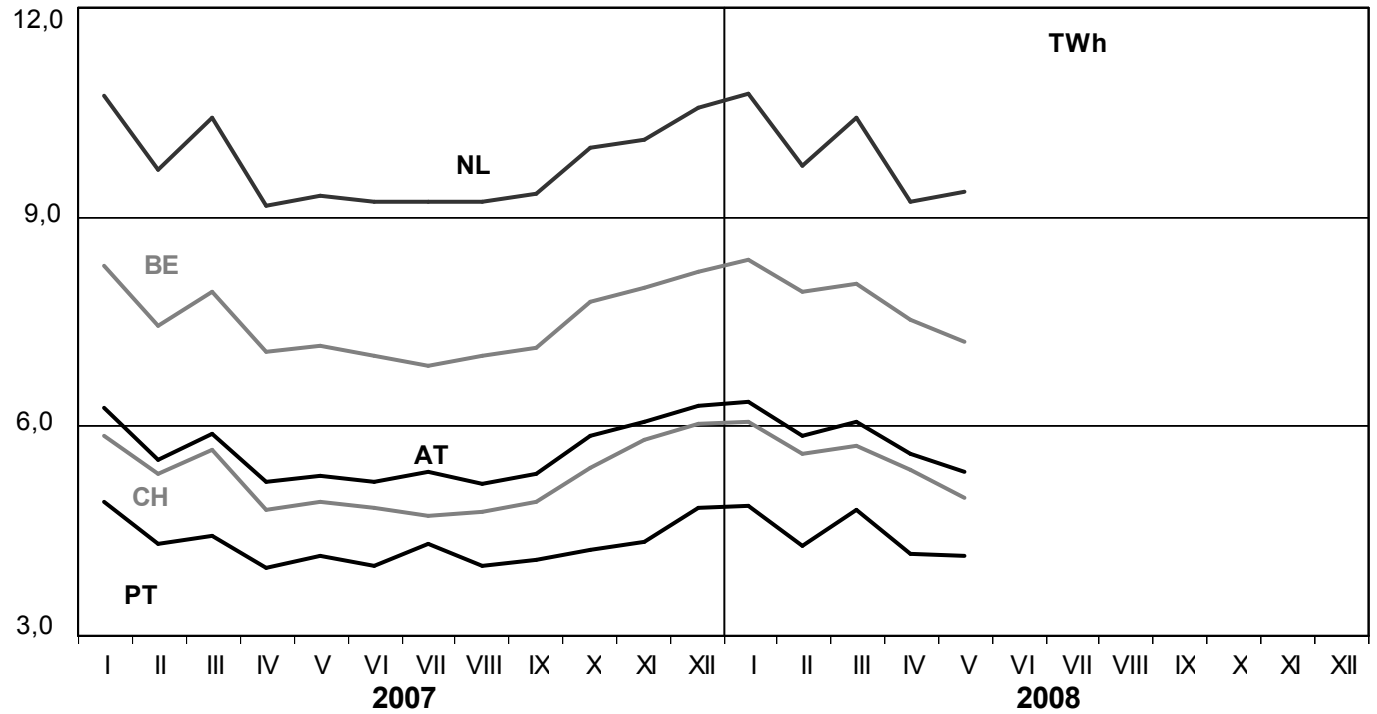
Sum of physical energy flows between UCTE countries = 21985GWh  Total physical energy flows = 26472GWh

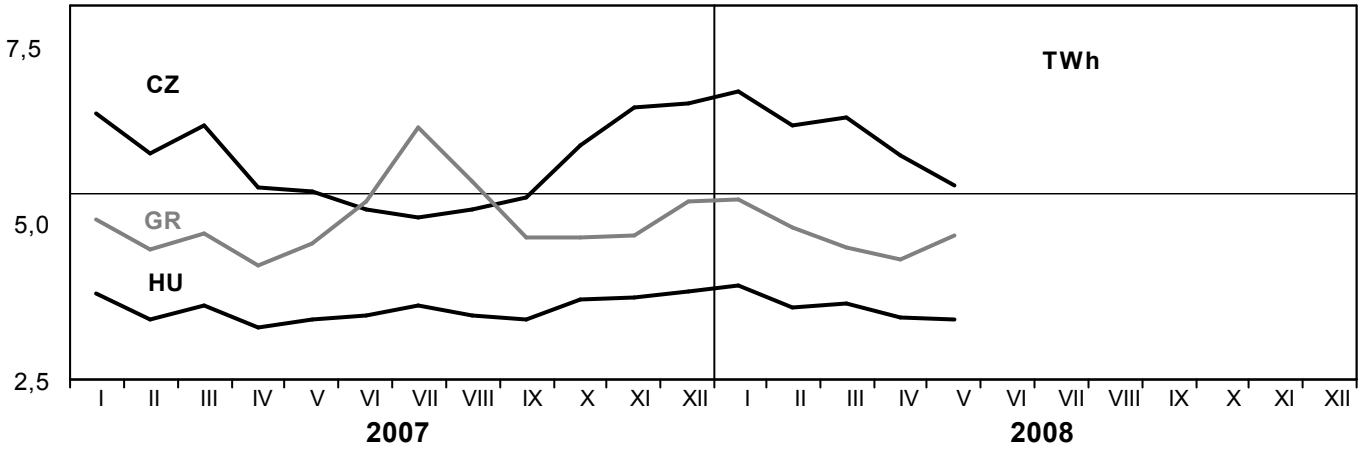
[1] Other III: Albania, Belarus, Denmark East, Great Britain, Morocco, Republic of Moldavia, Norway, Sweden, Republic of Turkey and Ukraina

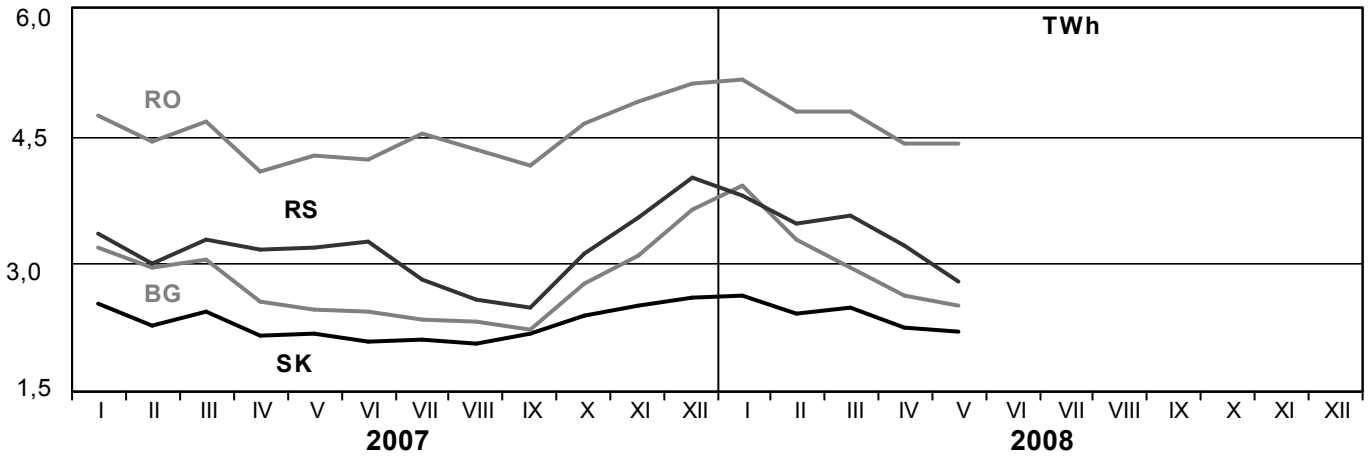
These physical energy flows were measured on the cross-frontier transmission lines (≤ 110 kV) listed in table 9 of the Statistical Yearbook. These values may differ from the official statistics and the exchange balances in chapter 1.

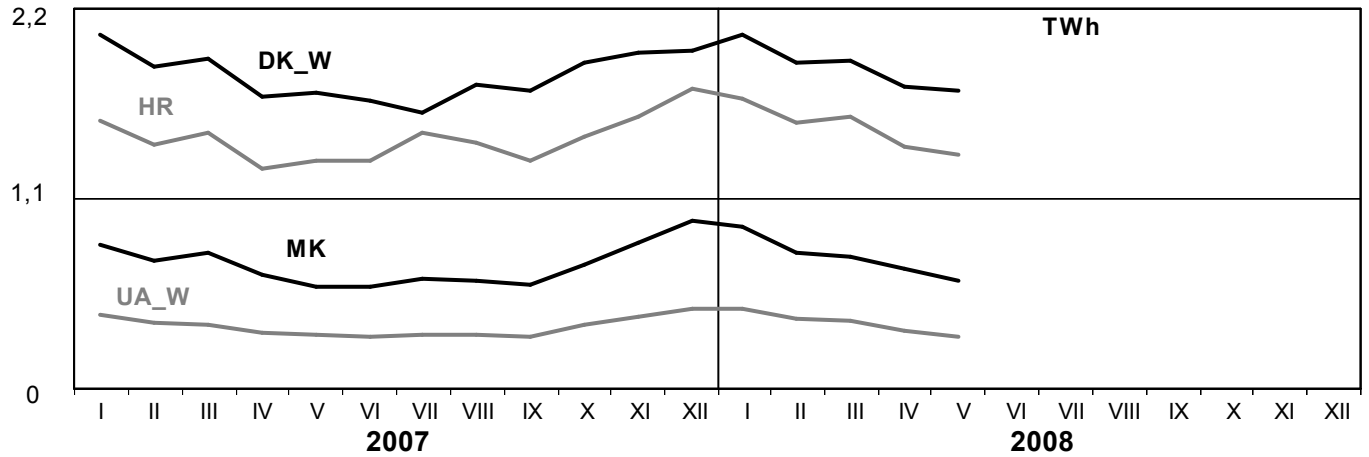

250
200
150
UCTE
TWh
I II III IV V VI VII VIII IX X XI XII I II III IV V VI VII VIII IX X XI XII
2007
2008

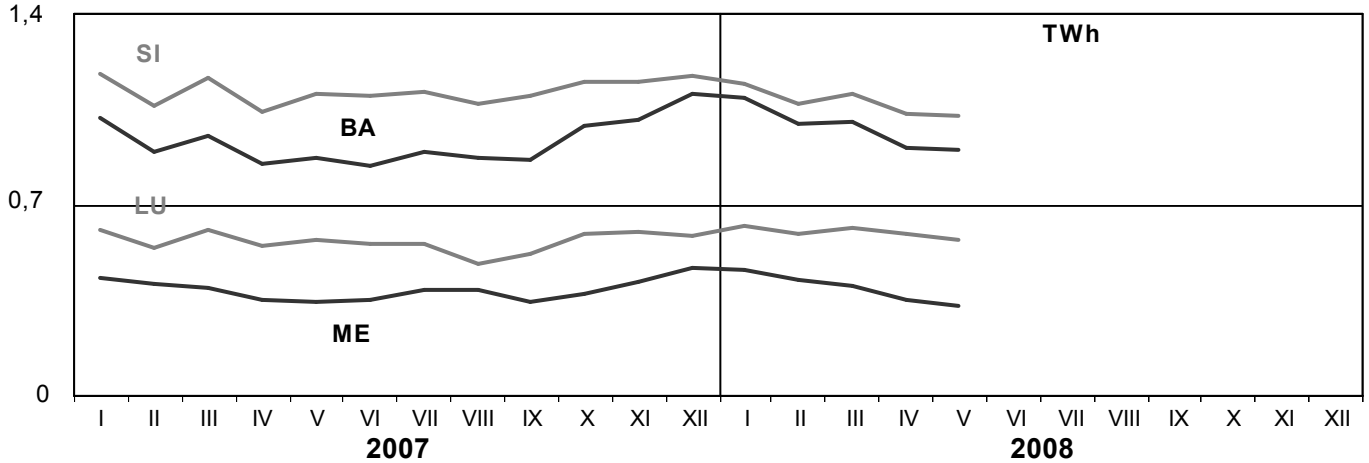

60
30
0
DE
FR
IT
ES
PL
TWh
I II III IV V VI VII VIII IX X XI XII I II III IV V VI VII VIII IX X XI XII
2007
2008

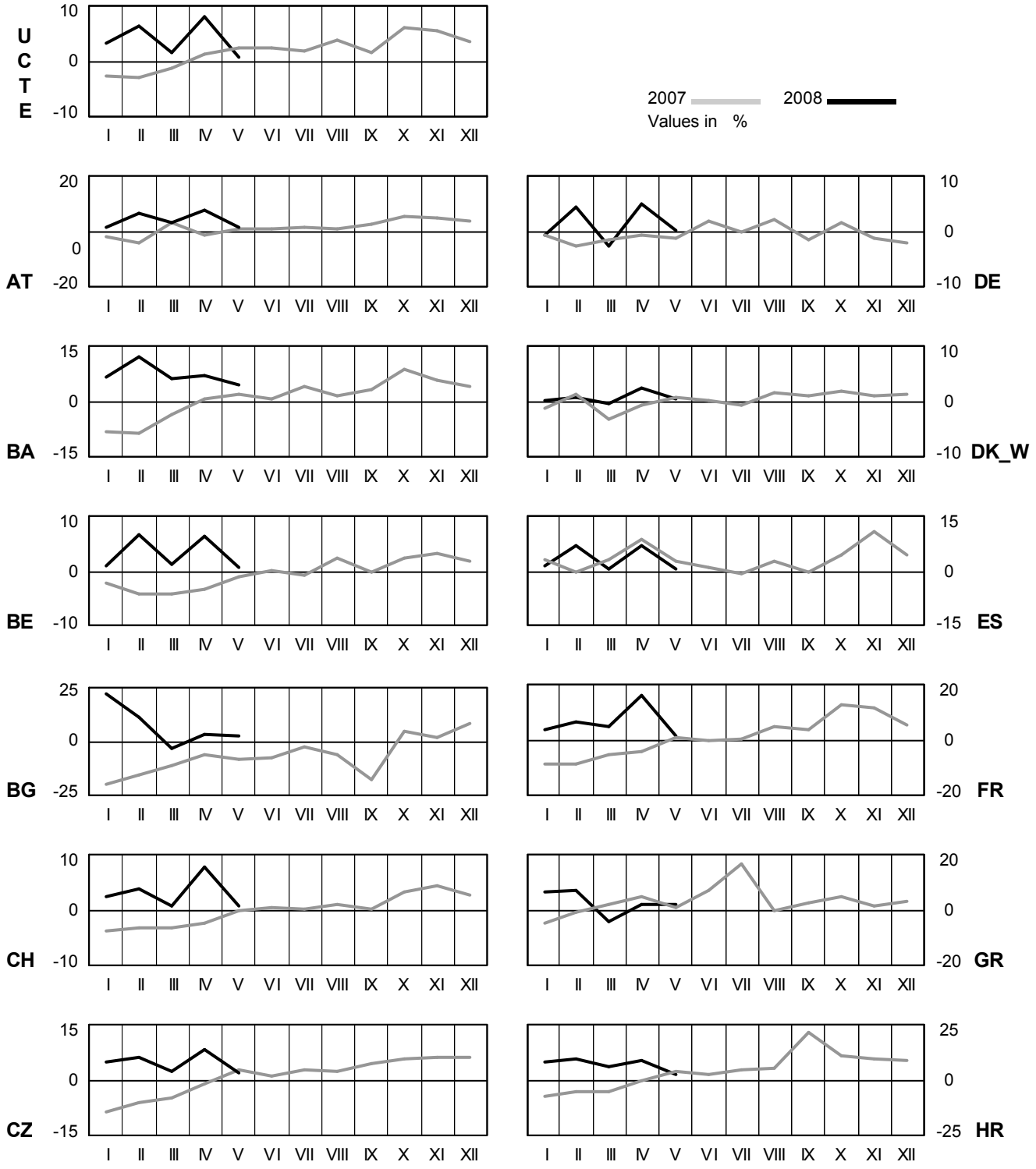

12,0
9,0
6,0
3,0
NL
BE
AT
CH
PT
TWh
I II III IV V VI VII VIII IX X XI XII I II III IV V VI VII VIII IX X XI XII
2007
2008

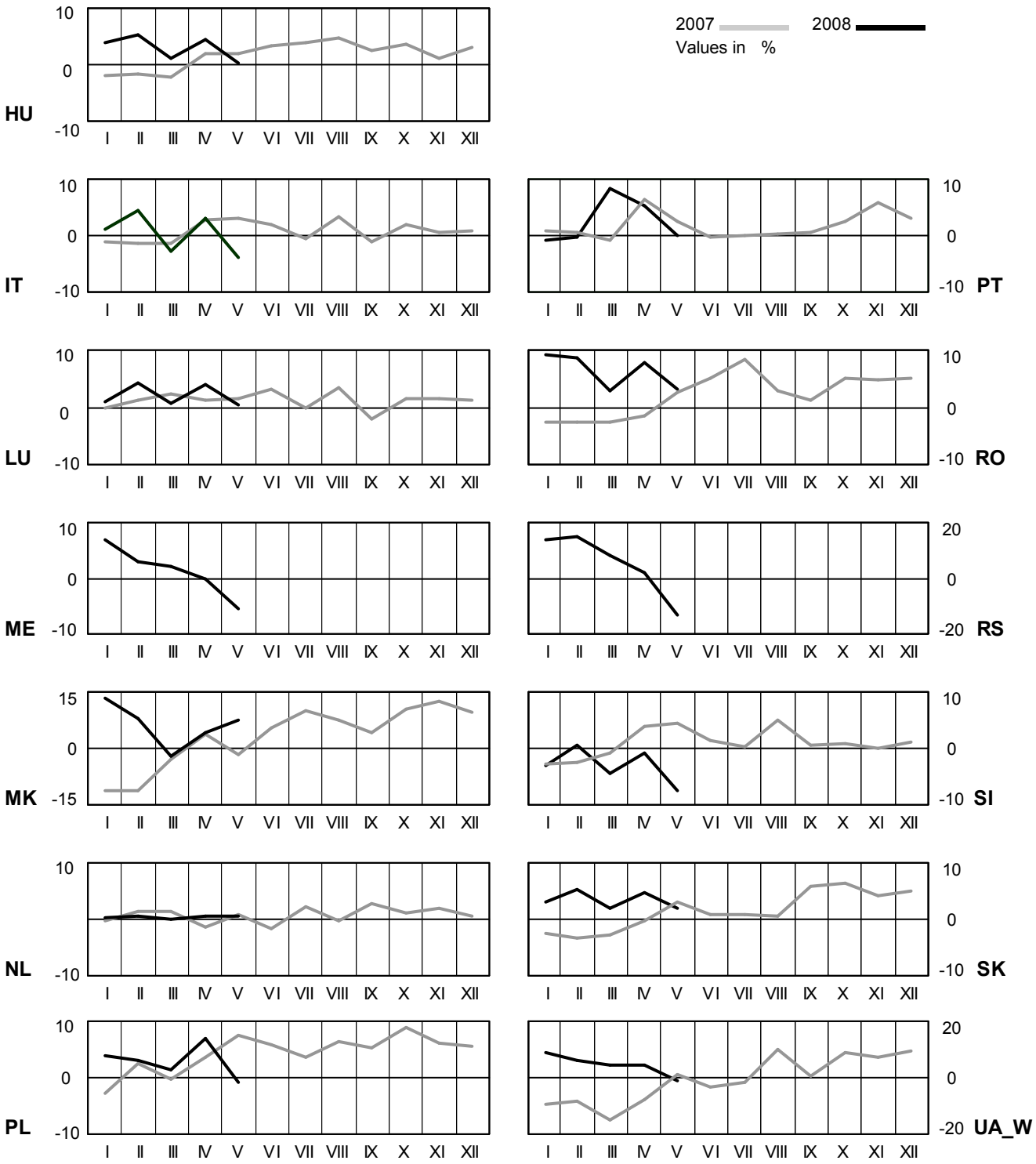

7,5
5,0
2,5
TWh
CZ
GR
HU
I II III IV V VI VII VIII IX X XI XII I II III IV V VI VII VIII IX X XI XII
2007
2008

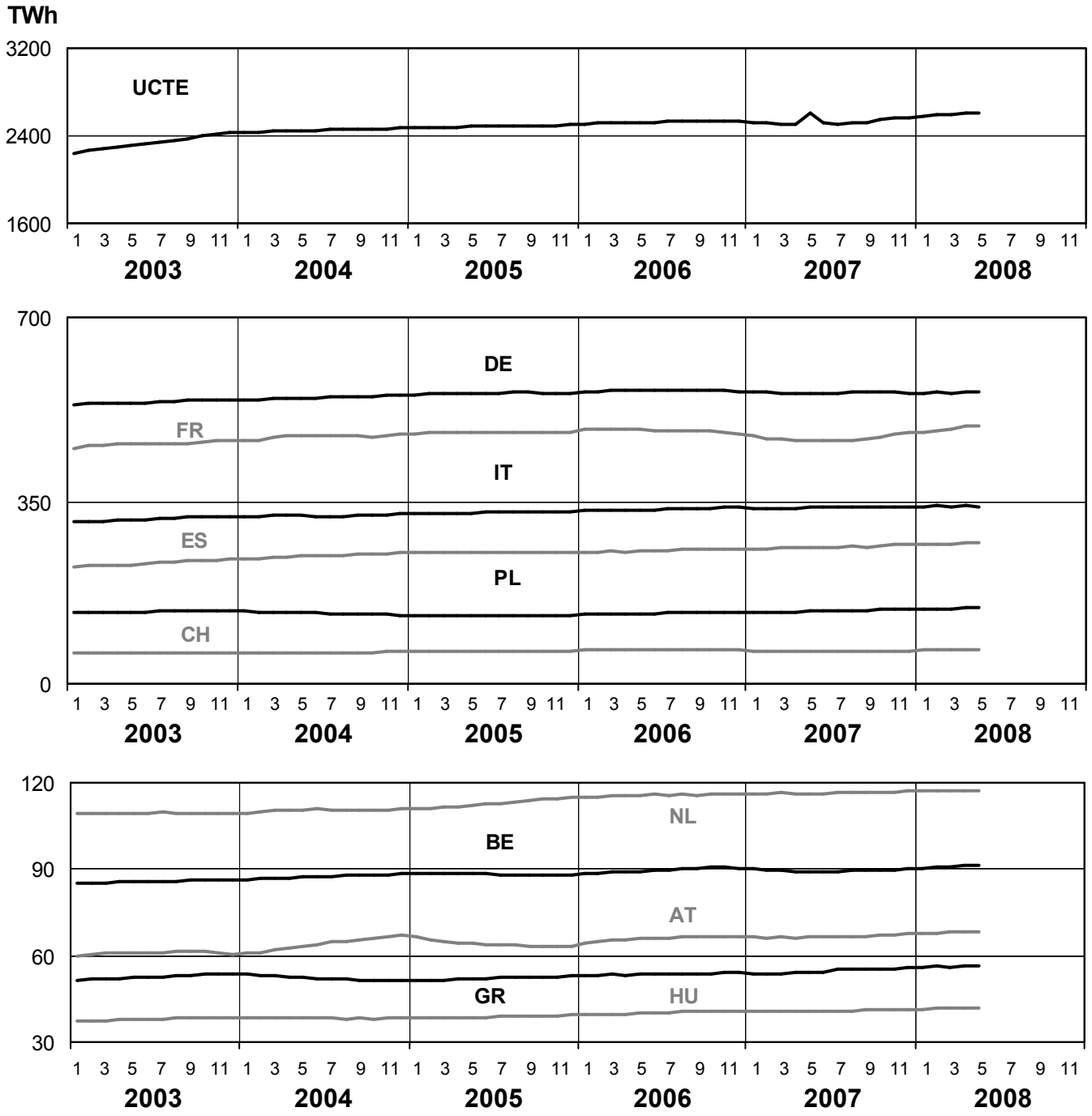

6,0
4,5
3,0
1,5
TWh
RO
RS
BG
SK
I II III IV V VI VII VIII IX X XI XII I II III IV V VI VII VIII IX X XI XII
2007
2008

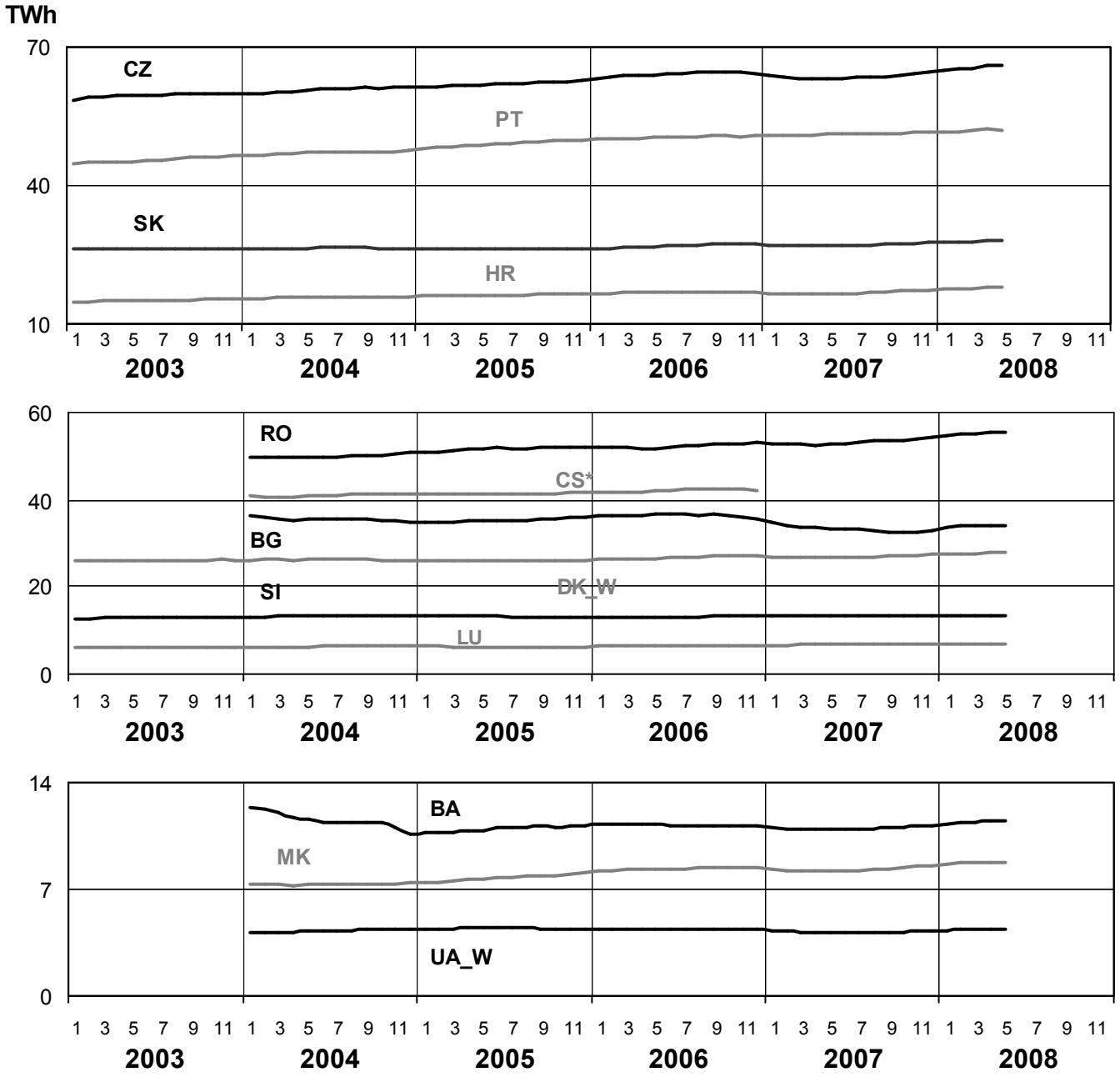

2,2
1,1
0
TWh
DK_W
HR
MK
UA_W
I II III IV V VI VII VIII IX X XI XII I II III IV V VI VII VIII IX X XI XII
2007
2008


1,4
0,7
0
TWh
SI
BA
LU
ME
I II III IV V VI VII VIII IX X XI XII I II III IV V VI VII VIII IX X XI XII
2007
2008


2007
2008
Values in %
UCTE
AT
BA
BE
BG
CH
CZ
DE
DK_W
ES
FR
GR
HR
I II III IV V VI VII VIII IX X XI XII


2007
2008
Values in %
HU
IT
LU
ME
MK
NL
PL
PT
RO
RS
SI
SK
UA_W
I II III IV V VI VII VIII IX X XI XII

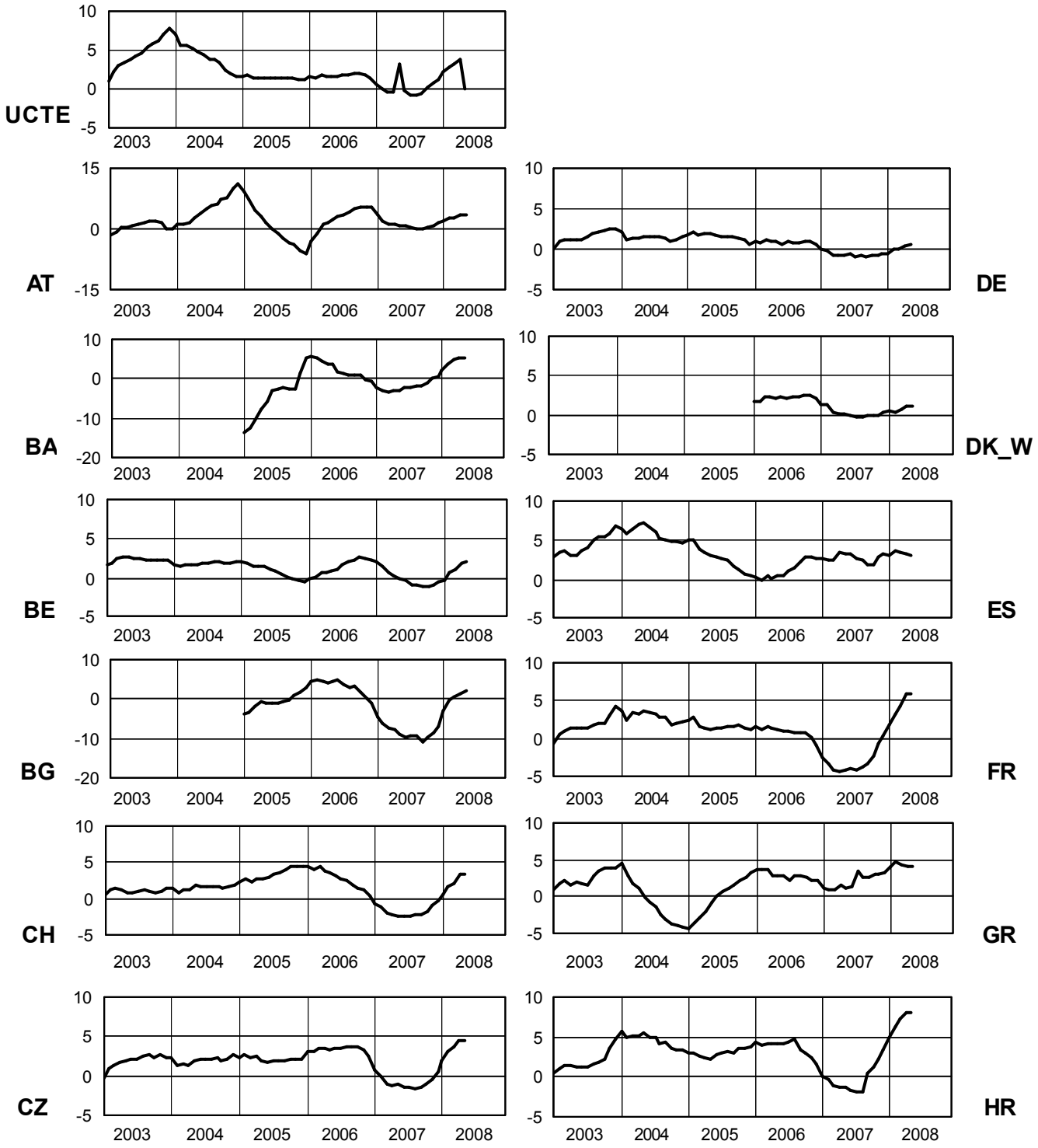

TWh
3200
2400
1600
UCTE
700
350
0
DE
FR
IT
ES
PL
CH
120
90
60
30
NL
BE
AT
GR
HU
1 3 5 7 9 11 1 3 5 7 9 11 1 3 5 7 9 11 1 3 5 7 9 11 1 3 5 7 9 11 1 3 5 7 9 11
2003
2004
2005
2006
2007
2008




* CS consumptiuon values until December 2006; from 2007 on ME and RS as separate countries

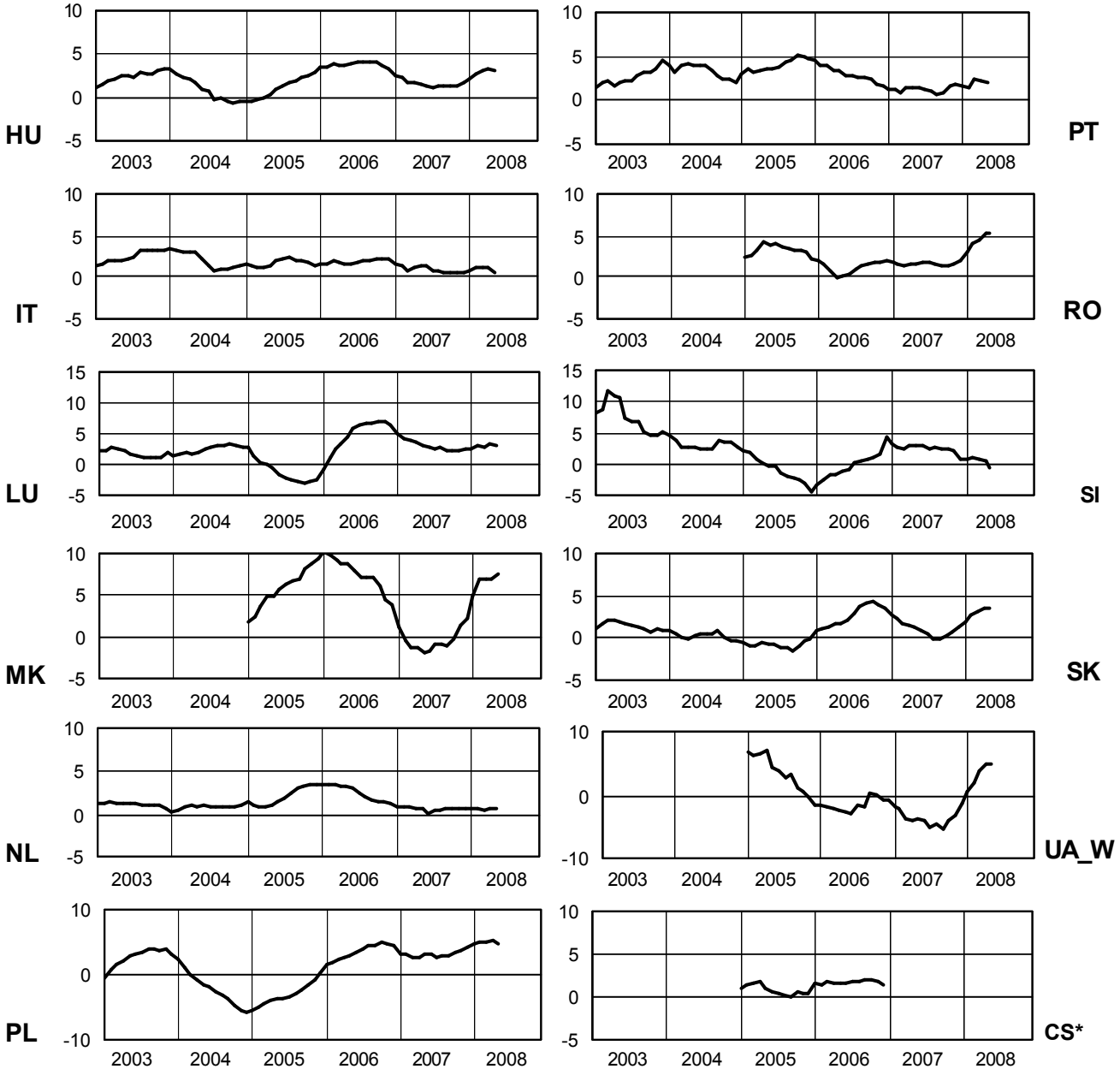
# 6 Variation of the last 12 months´consumption in %

May 2008



# 6 Variation of the last 12 months´consumption in %

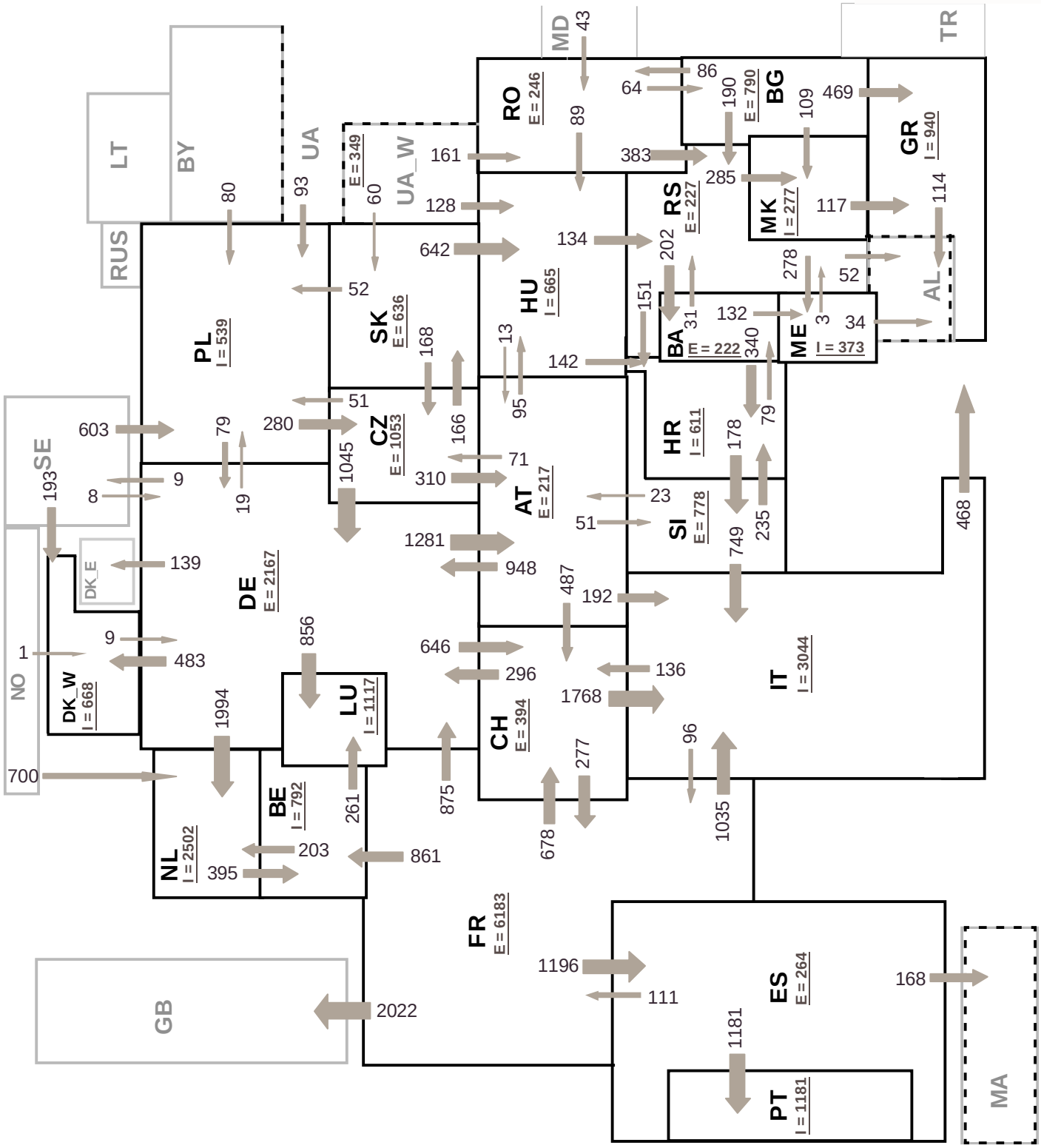
May 2008




* CS consumptiuon values until December 2006; from 2007 on ME and RS as separate countries

# 7 Load flows (night) on 21.05.08 at 03:00 a.m. CET in MW

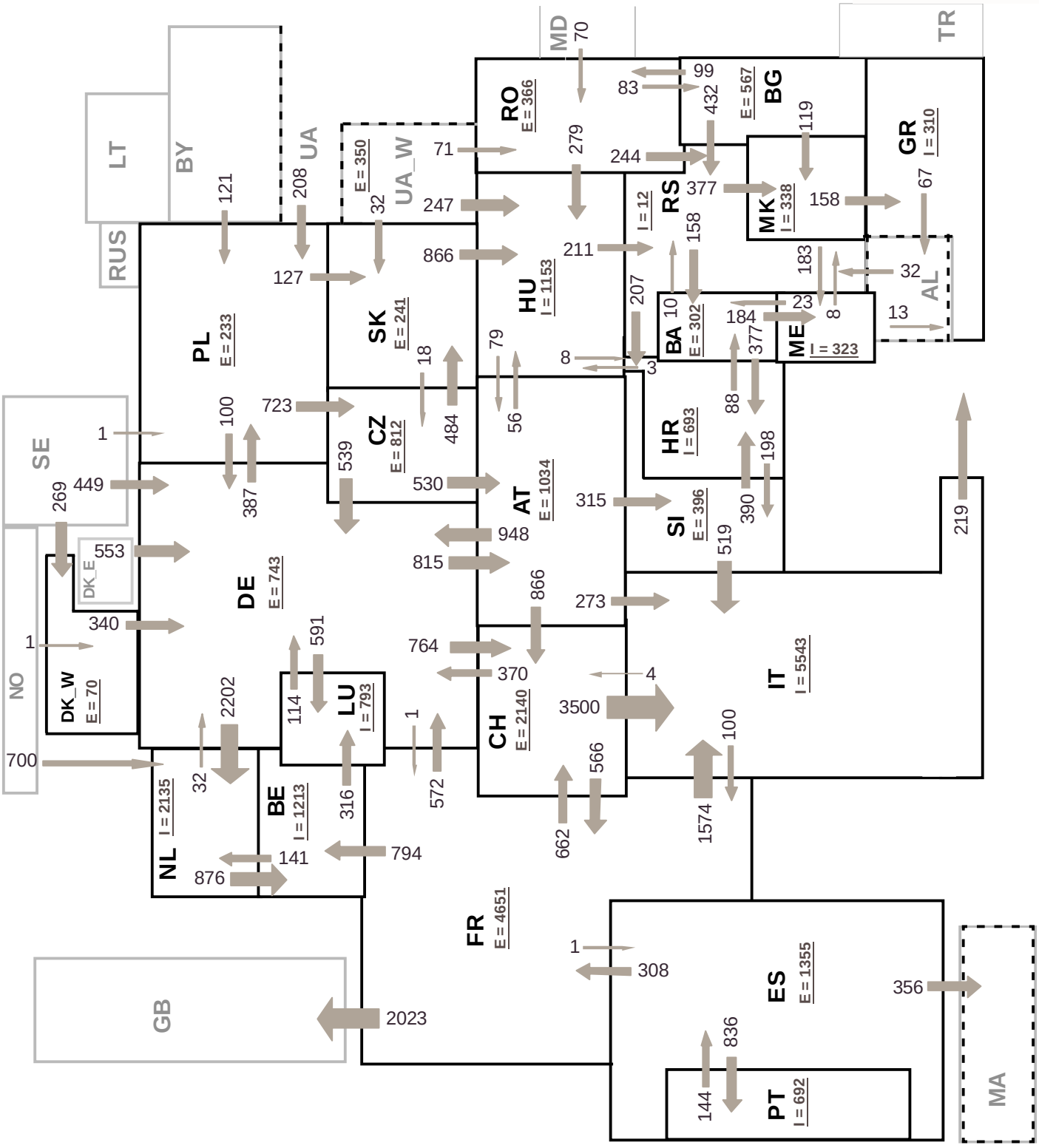
May 2008




**Sum of load flows in MW** **UCTE = 24244 MW** **Total = 28852 MW**

Synchronous operation with UCTE region

**I** = Import balance
**E** = Export balance



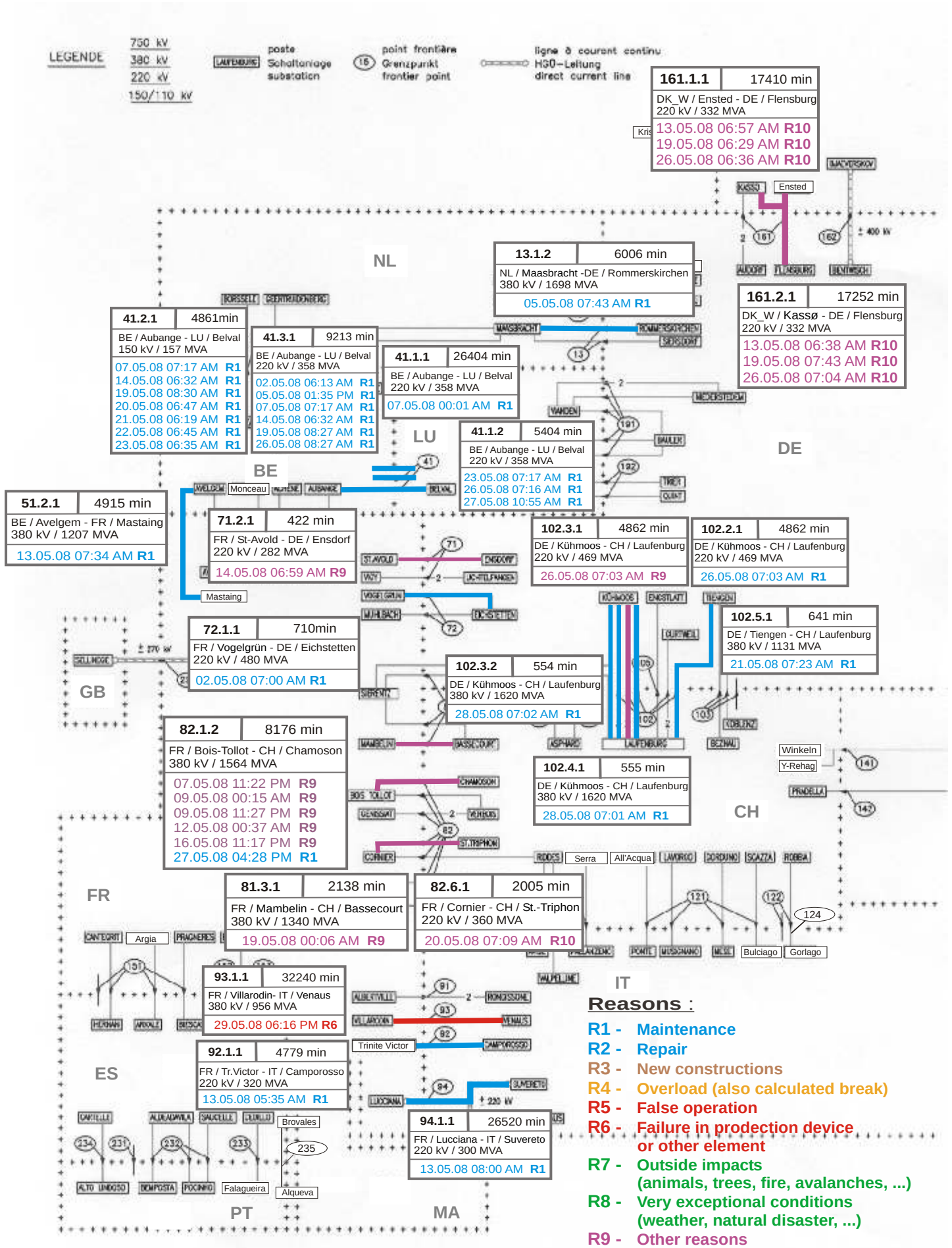

**Sum of load flows in MW** **UCTE = 26511 MW** **Total = 31724 MW**

Synchronous operation with UCTE region

**I** = Import balance
**E** = Export balance

# Unavailability of international tie lines
## ( major events with sum over 400 minutes )



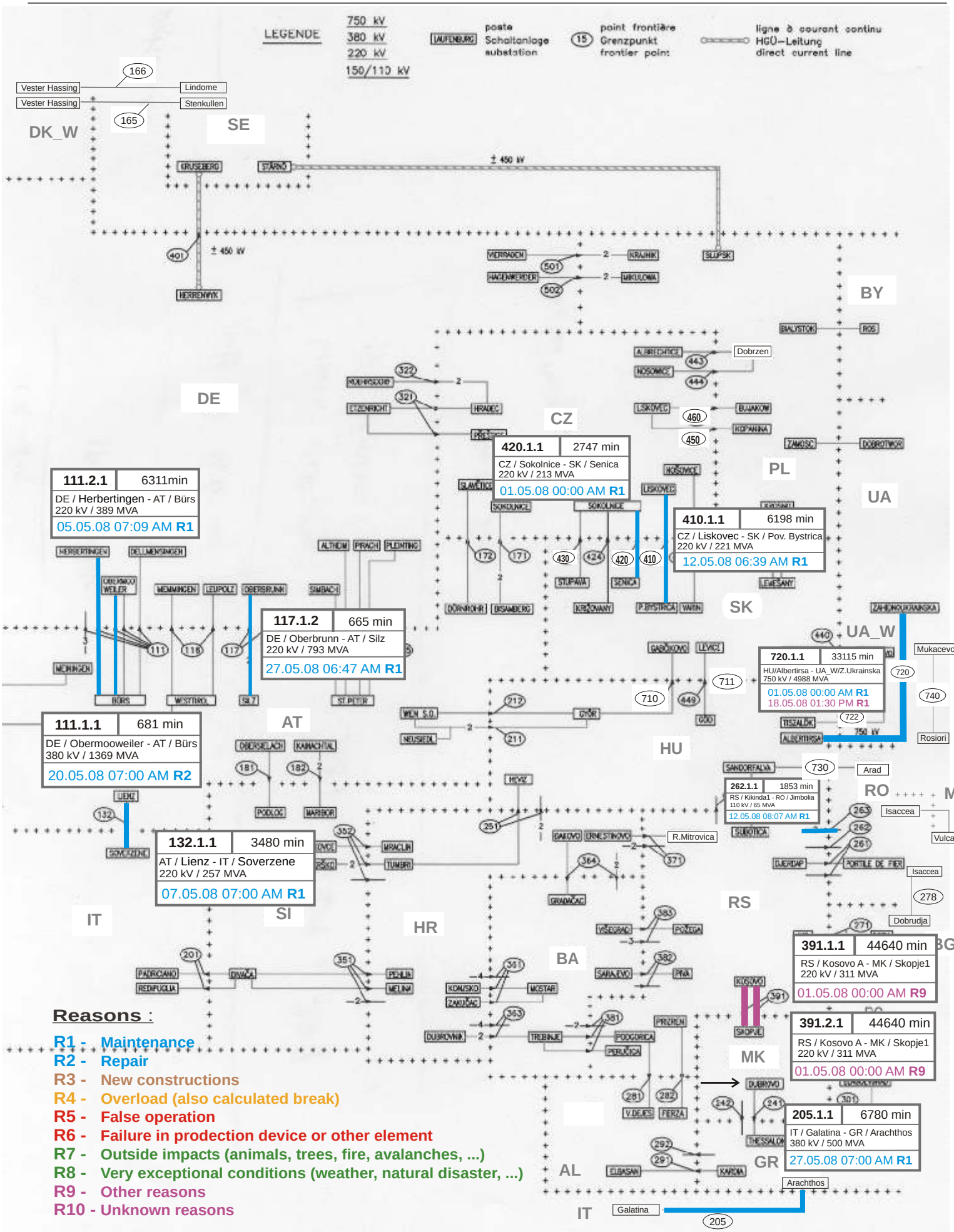


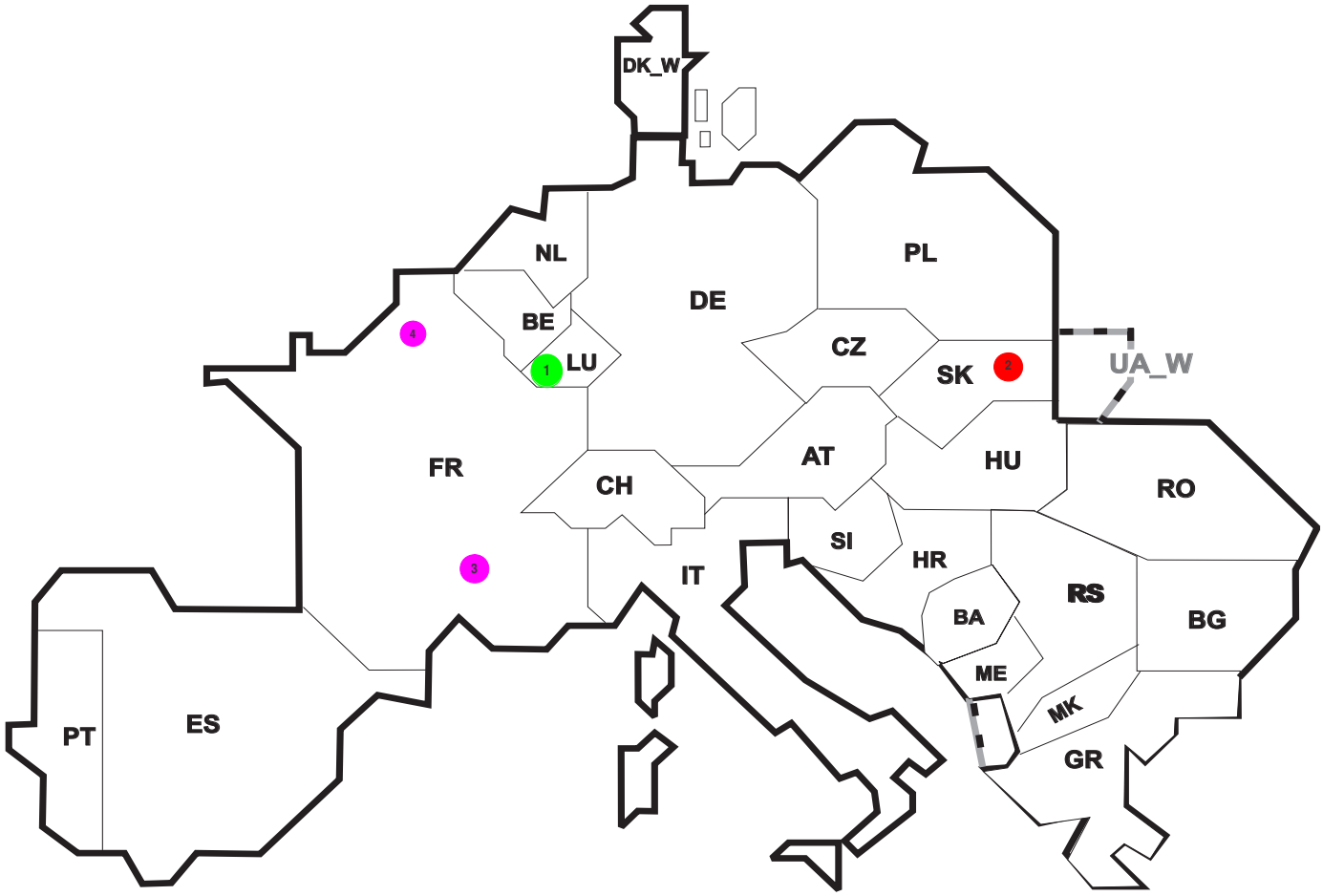

## Reasons :

- R1 - Maintenance
- R2 - Repair
- R3 - New constructions
- R4 - Overload (also calculated break)
- R5 - False operation
- R6 - Failure in prodection device or other element
- R7 - Outside impacts (animals, trees, fire, avalanches, ...)
- R8 - Very exceptional conditions (weather, natural disaster, ...)
- R9 - Other reasons
- R10 - Unknown reasons

# 9 Unavailability of international tie lines
## ( major events with sum over 400 minutes )

May 2008






Reasons:

R4 Overload (also calculated break)
R5 False operation
R6 Failure in protection device or other element
R7 Outside impacts (animals, trees, fire, avalanches, ...)
(animals, trees, fire, avalanches, ...)
R8 Very exceptional conditions
(weather, natural disaster, ...)
R9 Other reasons
R10 Unknown reasons

| No | Country | Substation | Reason | Energy not supplied [2] [MWh] | Total loss of power [MW] | Restoration time [min] | Equivalent time of interruption[1] |
|---|---|---|---|---|---|---|---|
| 1 | LU | Schifflange | R7 | 6 | 47 | 7 | 0,420 |
| 2 | SK | Medzibrod | R6 | 11 | 32 | 20 | 0,200 |
| 3 | FR | St.Joseph | R9 | 34 | 30 | 67 | 0,036 |
| 4 | FR | Mezerolles | R10 | 6 | 39 | 10 | 0,007 |

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

# 11 Scheduled exchanges in MWh

May 2008

| 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 |
|---|---|---|---|---|---|---|
| AT | 555601 | 736923 | 2039 | 601 | 737 | 564 |
| BA | 323505 | 231728 | 306 | 141 | 335 | 141 |
| BE | 91563 | 1436784 | 206 | 1297 | 0 | 1559 |
| BG | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| CH | 2423855 | 1575985 | 2241 | 1865 | 3752 | 1664 |
| CZ | 1806571 | 1049729 | 2507 | 1452 | 2833 | 2075 |
| DE | 2901972 | 1695772 | 3008 | 2597 | 4383 | 2189 |
| DK_W | 908587 | 100503 | 577 | 0 | 272 | 0 |
| ES | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| FR | 8164916 | 2486532 | 9812 | 3604 | 9589 | 4963 |
| GR | 32919 | 486129 | 0 | 962 | 0 | 288 |
| HR | 12423 | 535342 | 0 | 613 | 0 | 683 |
| HU | 650539 | 1210805 | 731 | 1382 | 723 | 1877 |
| IT | 194331 | 4043660 | 739 | 3518 | 333 | 5771 |
| ME | 200256 | 423058 | 180 | 441 | 180 | 464 |
| MK | 600 | 252800 | 16 | 293 | 11 | 351 |
| NL | 452809 | 2241937 | 375 | 2901 | 776 | 2903 |
| PL | 276620 | 323685 | 146 | 695 | 500 | 215 |
| PT | 445 | 773238 | 0 | 1200 | 0 | 700 |
| RO | 433259 | 141682 | 468 | 226 | 634 | 279 |
| RS | 571386 | 464522 | 708 | 468 | 704 | 618 |
| SI | 642617 | 455879 | 1027 | 300 | 840 | 442 |
| SK | 615415 | 346472 | 978 | 260 | 1050 | 695 |
| UA_W | 295076 | 1800 | 350 | 0 | 350 | 0 |

- Control areas can differ from national borders ( i.e. German block which includes parts of AT, LU 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.

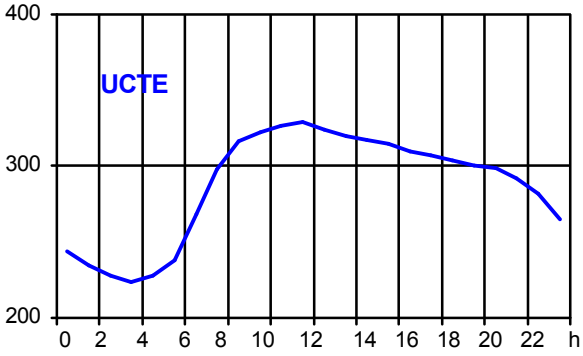
- Export Programs: Sum of all positive values of every hour of every border
- Import Programs: Sum of all negative values of every hour of every border

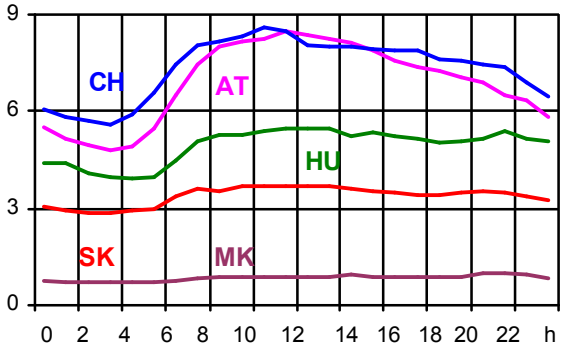
- Export Programs at 03:00: Sum of all positive values the third Wednesday from 02:00 to 03:00 a.m.
- Import Programs at 03:00: Sum of all negative values the third Wednesday from 02:00 to 03:00 a.m.

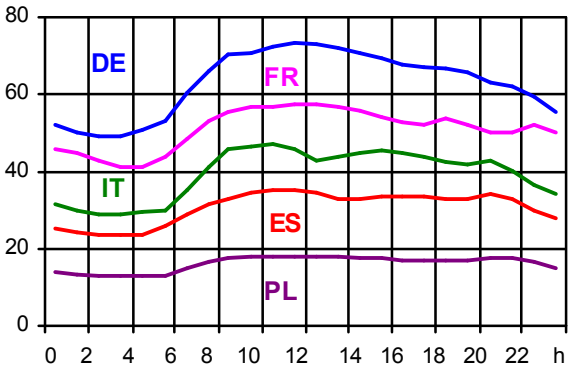
- Export Programs at 11:00: Sum of all positive values the third Wednesday from 10:00 to 11:00 a.m.
- Import Programs at 11:00: Sum of all negative values the third Wednesday from 10:00 to 11:00 a.m.

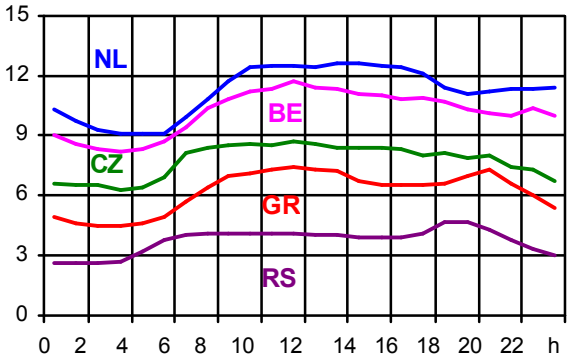
## Consumption hourly load curves on 21.05.2008 CET

Values in GW

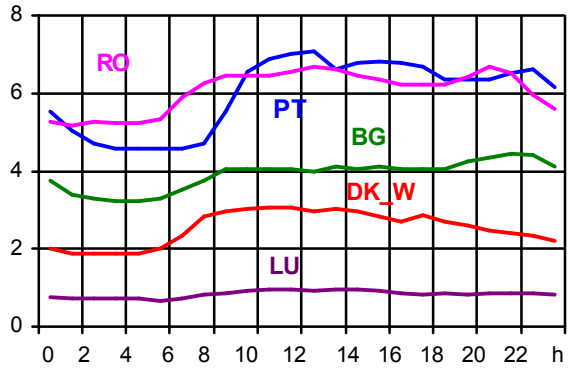


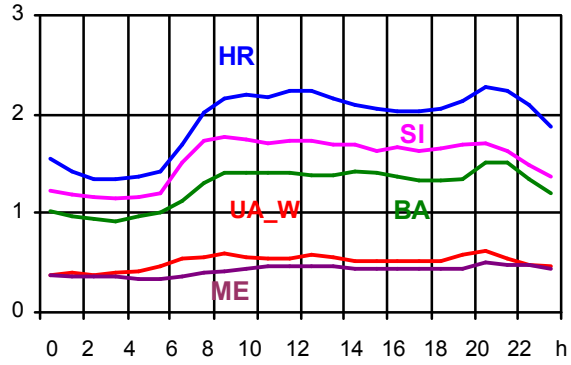




| | Highest load MW | var.%[1] | Load representativity % |
|---|---|---|---|
| AT | 8482 | 8,0 | 100 |
| BA | 1510 | 3,6 | 100 |
| BE [2] | 11656 | 0,6 | 100 |
| BG | 4467 | 4,6 | 100 |
| CH | 8623 | 6,2 | 100 |
| CZ | 8674 | 9,0 | 100 |
| DE | 73502 | 0,1 | 91 |
| DK_W | 3089 | -1,4 | 100 |
| ES | 35137 | -0,3 | 98 |
| FR | 57506 | -1,5 | 100 |
| GR | 7368 | -4,5 | 100 |
| HR | 2269 | 4,1 | 100 |
| HU | 5467 | 1,9 | 100 |
| IT | 46836 | -1,3 | 100 |
| LU | 999 | 20,4 | 100 |
| ME | 501 | -4,2 | 100 |
| MK [3] | 994 | n.a. | 100 |
| NL | 12601 | -15,2 | 100 |
| PL [4] | 18141 | 2,0 | 100 |
| PT | 7101 | 1,6 | 97 |
| RO | 6690 | 46,8 | 100 |
| RS | 4665 | -30,1 | 100 |
| SI | 1771 | -8,3 | 100 |
| SK | 3691 | 8,1 | 100 |
| **UCTE** | **329262** | 1,1 | |
| UA_W | 621 | -5,6 | 100 |




[1] Variation as compared to corresponding month of the previous year

[2] The reported figures are best estimates based on actual measurements and extrapolations.

[3] Operational data

## Contact

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