

|  |  |  |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|--|--|--|--|--|--|---|--|--|--|---|--|--|--|---|--|--|--|
| Electricity demand (TWh/year): Flexible demand0,00<br>Fixed demand 7,95 Fixed imp/exp. 3,72<br>Electric heating + HP 2,93 Transportation 0,06<br>Electric cooling 0,22 Total 14,88   |  |  |  |  |  | Capacities Efficiencies<br>Group 2: MW-e MJ/s elec. Ther COP<br>CHP 0 1500 0,40 0,50<br>Heat Pump 0 0 3,00<br>Boiler 0 0,90<br>Group 3:<br>CHP 1017 82 0,21 0,47<br>Heat Pump 0 0 3,00<br>Boiler 0 0,90<br>Condensing 1099 0,29 |  |  |  | Regulation StrategyTechnical regulation no. 1<br>CEEP regulation 000000000<br>Minimum Stabilisation share 0,00<br>Stabilisation share of CHP 0,00<br>Minimum CHP gr 3 load 0 MW<br>Minimum PP 0 MW<br>Heat Pump maximum share 1,00<br>Maximum import/export 2500 MW |  |  |  | Fuel Price level: Basic<br>Capacities Storage Efficiencies<br>Elec. Storage MW-e GWh Elec. Ther.<br>Charge 1: 0 0 0,80<br>Discharge 1: 0 0,90<br>Charge 2: 0 0 0,80<br>Discharge 2: 0 0,90<br>Electrolysers: 0 0 0,80 0,00<br>Rockbed Storage: 0 0 1,00<br>CAES fuel ratio: 0,000 |  |  |  |
| District heating (TWh/year) Gr.1 Gr.2 Gr.3 Sum<br>District heating demand 1,13 0,00 0,50 1,63<br>Solar Thermal 0,00 0,00 0,00 0,00<br>Industrial CHP (CSHP) 0,00 0,00 0,00 0,00<br>Demand after solar and CSHP 1,13 0,00 0,50 1,63                         |  |  |  |  |  | Heatstorage: gr.2: 0 GWh gr.30 GWh<br>Fixed Boiler: gr.2:0,0 Per cent gr.0,0 Per cent   |  |  |  | Distr. Name : Hour_nordpool.txt<br>Addition factor 0,00 EUR/MWh<br>Multiplication factor 2,00<br>Dependency factor 0,00 EUR/MWh pr. MW<br>Average Market Price227 EUR/MWh<br>Gas Storage 0 GWh<br>Syngas capacity 0 MW<br>Biogas max to grid 0 MW                   |  |  |  | (TWh/year) Coal Oil Ngas Biomass<br>Transport 0,00 13,43 0,01 0,00<br>Household 1,15 0,41 0,71 13,47<br>Industry 2,47 1,32 0,89 0,20<br>Various 5,83 1,87 1,07 0,39   |  |  |  |
| Wind 87 MW 0,16 TWh/year 0,00 Grid<br>Photo Voltaic 35 MW 0,08 TWh/year 0,00 stabili-<br>River Hydro 172 MW 0,44 TWh/year 0,00 sation<br>River Hydro 0 MW 0 TWh/year 0,00 share<br>Hydro Power 2105 MW 4,21 TWh/year<br>Geothermal/Nuclear 0 MW 0 TWh/year |  |  |  |  |  | Electricity prod. from CSHP Waste (TWh/year)<br>Gr.1: 0,00 0,00<br>Gr.2: 0,00 0,00<br>Gr.3: 0,00 0,00   |  |  |  |   |  |  |  |   |  |  |  |

Output

|           | District Heating        |             |                      |           |           |          |           |              |          |                    | Electricity           |                        |                         |          |                     |                    |            |                  |                       |                      |           |          |                    |           |           |            | Exchange  |                                   |               |     |
|-----------|-------------------------|-------------|----------------------|-----------|-----------|----------|-----------|--------------|----------|--------------------|-----------------------|------------------------|-------------------------|----------|---------------------|--------------------|------------|------------------|-----------------------|----------------------|-----------|----------|--------------------|-----------|-----------|------------|-----------|-----------------------------------|---------------|-----|
|           | Demand                  | Production  |                      |           |           |          |           |              |          | Bal-<br>ance<br>MW | Consumption           |                        |                         |          |                     |                    | Production |                  |                       |                      |           |          | Balance            |           |           |            |           | Payment<br>Imp Exp<br>Million EUR |               |     |
|           | Distr.<br>heating<br>MW | Solar<br>MW | Waste-<br>CSHP<br>MW | DHP<br>MW | CHP<br>MW | HP<br>MW | ELT<br>MW | Boiler<br>MW | EH<br>MW |                    | Elec.<br>demand<br>MW | Flex.&<br>Transp<br>MW | Elec-<br>trolyser<br>MW | EH<br>MW | Hydro<br>Pump<br>MW | Tur-<br>bine<br>MW | RES<br>MW  | Hy-<br>dro<br>MW | Geo-<br>thermal<br>MW | Waste-<br>CSHP<br>MW | CHP<br>MW | PP<br>MW | Stab-<br>Load<br>% | Imp<br>MW | Exp<br>MW | CEEP<br>MW | EEP<br>MW |                                   |               |     |
|           |                         |             |                      |           |           |          |           |              |          |                    |                       |                        |                         |          |                     |                    |            |                  |                       |                      |           |          |                    |           |           |            |           |                                   |               |     |
| January   | 391                     | 0           | 0                    | 271       | 81        | 0        | 0         | 0            | 0        | 39                 | 795                   | 7                      | 4                       | 0        | 701                 | 0                  | 0          | 100              | 484                   | 0                    | 0         | 999      | 563                | 100       | 34        | 0          | 0         | 0                                 | 10            | 0   |
| February  | 307                     | 0           | 0                    | 213       | 75        | 0        | 0         | 0            | 0        | 18                 | 823                   | 7                      | 3                       | 0        | 550                 | 0                  | 0          | 84               | 452                   | 0                    | 0         | 935      | 354                | 100       | 2         | 1          | 0         | 1                                 | 0             | 0   |
| March     | 283                     | 0           | 0                    | 197       | 72        | 0        | 0         | 0            | 0        | 14                 | 761                   | 7                      | 3                       | 0        | 508                 | 0                  | 0          | 108              | 461                   | 0                    | 0         | 894      | 455                | 100       | 11        | 2          | 0         | 2                                 | 2             | 0   |
| April     | 190                     | 0           | 0                    | 132       | 53        | 0        | 0         | 0            | 0        | 5                  | 806                   | 7                      | 2                       | 0        | 341                 | 0                  | 0          | 61               | 461                   | 0                    | 0         | 661      | 264                | 100       | 0         | 0          | 0         | 0                                 | 0             | 0   |
| May       | 114                     | 0           | 0                    | 79        | 35        | 0        | 0         | 0            | 0        | 0                  | 874                   | 7                      | 1                       | 0        | 204                 | 0                  | 0          | 50               | 453                   | 0                    | 0         | 430      | 347                | 100       | 0         | 6          | 0         | 6                                 | 0             | 1   |
| June      | 70                      | 0           | 0                    | 49        | 21        | 0        | 0         | 0            | 0        | 0                  | 1010                  | 7                      | 1                       | 0        | 126                 | 0                  | 0          | 59               | 484                   | 0                    | 0         | 267      | 465                | 100       | 0         | 0          | 0         | 0                                 | 0             | 0   |
| July      | 48                      | 0           | 0                    | 33        | 15        | 0        | 0         | 0            | 0        | 0                  | 1121                  | 7                      | 1                       | 0        | 86                  | 0                  | 0          | 62               | 507                   | 0                    | 0         | 182      | 810                | 100       | 0         | 0          | 0         | 0                                 | 0             | 0   |
| August    | 41                      | 0           | 0                    | 28        | 12        | 0        | 0         | 0            | 0        | 0                  | 1080                  | 7                      | 0                       | 0        | 73                  | 0                  | 0          | 58               | 512                   | 0                    | 0         | 153      | 946                | 100       | 0         | 0          | 0         | 0                                 | 0             | 0   |
| September | 62                      | 0           | 0                    | 43        | 19        | 0        | 0         | 0            | 0        | 0                  | 1058                  | 7                      | 1                       | 0        | 111                 | 0                  | 0          | 67               | 499                   | 0                    | 0         | 234      | 691                | 100       | 0         | 0          | 0         | 0                                 | 0             | 0   |
| October   | 147                     | 0           | 0                    | 102       | 45        | 0        | 0         | 0            | 0        | 0                  | 985                   | 7                      | 2                       | 0        | 263                 | 0                  | 0          | 81               | 491                   | 0                    | 0         | 553      | 489                | 100       | 0         | 0          | 0         | 0                                 | 0             | 0   |
| November  | 256                     | 0           | 0                    | 178       | 67        | 0        | 0         | 0            | 0        | 11                 | 918                   | 7                      | 3                       | 0        | 459                 | 0                  | 0          | 85               | 487                   | 0                    | 0         | 829      | 578                | 100       | 4         | 0          | 0         | 0                                 | 1             | 0   |
| December  | 315                     | 0           | 0                    | 219       | 76        | 0        | 0         | 0            | 0        | 20                 | 924                   | 7                      | 4                       | 0        | 565                 | 0                  | 0          | 109              | 454                   | 0                    | 0         | 945      | 536                | 100       | 36        | 5          | 0         | 5                                 | 7             | 1   |
| Average   | 185                     | 0           | 0                    | 129       | 48        | 0        | 0         | 0            | 0        | 9                  | 930                   | 7                      | 2                       | 0        | 332                 | 0                  | 0          | 77               | 479                   | 0                    | 0         | 589      | 543                | 100       | 7         | 1          | 0         | 1                                 | Average price |     |
| Maximum   | 610                     | 0           | 0                    | 424       | 82        | 0        | 0         | 0            | 0        | 104                | 1578                  | 13                     | 7                       | 0        | 1094                | 0                  | 0          | 233              | 534                   | 0                    | 0         | 1017     | 1721               | 100       | 448       | 478        | 0         | 478                               | (EUR/MWh)     |     |
| Minimum   | 9                       | 0           | 0                    | 6         | 3         | 0        | 0         | 0            | 0        | 0                  | 65                    | 0                      | 0                       | 0        | 17                  | 0                  | 0          | 0                | 0                     | 0                    | 0         | 35       | 0                  | 100       | 0         | 0          | 0         | 0                                 | 306           | 195 |
| TWh/year  | 1,63                    | 0,00        | 0,00                 | 1,13      | 0,42      | 0,00     | 0,00      | 0,00         | 0,00     | 0,08               | 8,17                  | 0,06                   | 0,02                    | 0,00     | 2,91                | 0,00               | 0,00       | 0,68             | 4,21                  | 0,00                 | 0,00      | 5,18     | 4,77               |           | 0,06      | 0,01       | 0,00      | 0,01                              | 20            | 2   |

| FUEL BALANCE (TWh/year): |      |      |         |         |    |              |      |         |         | Waste/ CAES BioCon-Electro- |      |      |      | PV and Wind off |          |                |         | Industry |         |       |       | Imp/Exp Corrected |       | CO2 emission (Mt) |  |
|--------------------------|------|------|---------|---------|----|--------------|------|---------|---------|-----------------------------|------|------|------|-----------------|----------|----------------|---------|----------|---------|-------|-------|-------------------|-------|-------------------|--|
| DHP                      | CHP2 | CHP3 | Boiler2 | Boiler3 | PP | Geo/Nu.Hydro | HTL  | Elc.ly. | version | Fuel                        | Wind | CSP  | Wave | Hydro           | Solar.Tr | Transp.househ. | Various | Total    | Imp/Exp | Net   | Total | Net               |       |                   |  |
| Coal                     | 0,38 | -    | 0,84    | -       | -  | 17,77        | -    | -       | -       | -                           | -    | -    | -    | -               | -        | -              | 1,15    | 8,29     | 28,43   | 0,19  | 28,62 | 9,72              | 9,79  |                   |  |
| Oil                      | 0,38 | -    | -       | -       | -  | 0,05         | -    | -       | -       | -                           | -    | -    | -    | -               | -        | 13,43          | 0,41    | 3,18     | 17,45   | 0,00  | 17,45 | 4,65              | 4,65  |                   |  |
| N.Gas                    | 0,28 | -    | -       | -       | -  | 0,02         | -    | -       | -       | -                           | -    | -    | -    | -               | -        | 0,82           | 0,71    | 1,99     | 3,82    | 0,00  | 3,82  | 0,79              | 0,95  |                   |  |
| Biomass                  | 0,22 | -    | 0,04    | -       | -  | 0,01         | -    | -       | -       | -                           | -    | -    | -    | -               | -        | -              | 13,47   | 0,59     | 14,33   | 0,00  | 14,33 | 0,00              | 0,00  |                   |  |
| Renewable                | -    | -    | -       | -       | -  | -            | 4,21 | -       | -       | -                           | 0,16 | 0,08 | -    | 4,64            | -        | -              | -       | 4,88     | 0,00    | 4,88  | 0,00  | 0,00              |       |                   |  |
| H2 etc.                  | -    | -    | -       | -       | -  | -            | -    | -       | -       | -                           | -    | -    | -    | -               | -        | -              | -       | 0,00     | 0,00    | 0,00  | 0,00  | 0,00              |       |                   |  |
| Biofuel                  | -    | -    | 0,00    | -       | -  | -            | -    | -       | -       | -                           | -    | -    | -    | -               | -        | -              | -       | 0,00     | 0,00    | 0,00  | 0,00  | 0,00              |       |                   |  |
| Nuclear/CCS              | -    | -    | -       | -       | -  | -            | -    | -       | -       | -                           | -    | -    | -    | -               | -        | -              | -       | 0,00     | 0,00    | 0,00  | 0,00  | 0,00              |       |                   |  |
| Total                    | 1,25 | -    | 0,88    | -       | -  | 17,84        | -    | 4,21    | -       | -                           | -    | 0,16 | 0,08 | -               | 4,64     | -              | 14,25   | 15,74    | 14,06   | 68,91 | 0,19  | 69,10             | 15,16 | 15,39             |  |

