# Input CediS_data.txt

# The EnergyPLAN model 10.1

| | | | |
|---|---|---|---|
| Electricity demand (GWh/year): | | Flexible demand | 0.00 |
| Fixed demand | 14.07 | Fixed imp/exp. | 0.00 |
| Electric heating | 0.00 | Transportation | 0.00 |
| Electric cooling | 0.00 | Total | 14.07 |

| District heating (GWh/year) | Gr.1 | Gr.2 | Gr.3 | Sum |
|---|---|---|---|---|
| District heating demand | 0.00 | 0.00 | 0.00 | 0.00 |
| Solar Thermal | 0.00 | 0.00 | 0.00 | 0.00 |
| Industrial CHP (CSHP) | 0.00 | 0.00 | 0.00 | 0.00 |
| Demand after solar and CSHP | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Photo Voltaic | 5566 | kW | 5.97 | GWh/year | 1.00 | Grid |
| Wind | 0 | kW | 0 | GWh/year | 0.00 | stabili- |
| Wave Power | 0 | kW | 0 | GWh/year | 0.00 | sation |
| River Hydro | 0 | kW | 0 | GWh/year | 0.00 | share |
| Hydro Power | 4592 | kW | 17.95 | GWh/year | | |
| Geothermal/Nuclear | 0 | kW | 0 | GWh/year | | |

| | Capacities kW-e | kJ/s | Efficiencies elec. | Ther | COP |
|---|---|---|---|---|---|
| Group 2: | | | | | |
| CHP | 0 | 0 | 0.40 | 0.50 | |
| Heat Pump | 0 | 0 | | | 3.00 |
| Boiler | | 0 | | 0.90 | |
| Group 3: | | | | | |
| CHP | 0 | 0 | 0.40 | 0.50 | |
| Heat Pump | 0 | 0 | | | 3.00 |
| Boiler | | 0 | | 0.90 | |
| Condensing | 0 | | 0.45 | | |

Heatstorage: gr.2: 0 MWh gr.3: 0 MWh
Fixed Boiler: gr.2: 0.0 Per cent gr.3: 0.0 Per cent

| Electricity prod. from | CSHP | Waste (GWh/year) |
|---|---|---|
| Gr.1: | 0.00 | 0.00 |
| Gr.2: | 0.00 | 0.00 |
| Gr.3: | 0.00 | 0.00 |

| | |
|---|---|
| Regulation Strategy: | Technical regulation no. 2 |
| KEOL regulation | 00000000 |
| Minimum Stabilisation share | 0.30 |
| Stabilisation share of CHP | 0.00 |
| Minimum CHP gr 3 load | 0 kW |
| Minimum PP | 0 kW |
| Heat Pump maximum share | 0.50 |
| Maximum import/export | 10000 kW |

CIVIS_CEdiS_Hour_Elec_Price_distribution.txt

| | | |
|---|---|---|
| Addition factor | 0.00 | EUR/MWh |
| Multiplication factor | 1.00 | |
| Dependency factor | 0.00 | EUR/MWh pr. MW |
| Average Market Price | 62 | EUR/MWh |
| Gas Storage | 0 | MWh |
| Syngas capacity | 0 | kW |
| Biogas max to grid | 0 | kW |

Fuel Price level:

| | Capacities kW-e | Storage MWh | Efficiencies elec. | Ther. |
|---|---|---|---|---|
| Hydro Pump: | 0 | 0 | 0.80 | |
| Hydro Turbine: | 0 | | 0.90 | |
| Electrol. Gr.2: | 0 | 0 | 0.80 | 0.10 |
| Electrol. Gr.3: | 0 | 0 | 0.80 | 0.10 |
| Electrol. trans.: | 0 | 0 | 0.80 | |
| Ely. MicroCHP: | 0 | 0 | 0.80 | |
| CAES fuel ratio: | | 0.000 | | |

| (GWh/year) | Coal | Oil | Ngas | Biomass |
|---|---|---|---|---|
| Transport | 0.00 | 0.00 | 0.00 | 0.00 |
| Household | 0.00 | 12.59 | 3.78 | 12.59 |
| Industry | 0.00 | 0.00 | 0.00 | 0.00 |
| Various | 0.00 | 0.00 | 0.00 | 0.00 |

# Output

| | District Heating | | | | | | | | | | Electricity | | | | | | | | | | | | | | | | Exchange | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Demand | Production | | | | | | | | Balance | Consumption | | | | | | Production | | | | | | | Balance | | | | | Payment | |
| | Distr. heating kW | Solar kW | Waste+ CSHP kW | DHP kW | CHP kW | HP kW | ELT kW | Boiler kW | EH kW | Balance kW | Elec. demand kW | Flex.& Transp. kW | HP kW | Elec-trolyser kW | EH kW | Hydro Pump kW | Tur-bine kW | RES kW | Hy-dro kW | Geo-thermal kW | Waste+ CSHP kW | CHP kW | PP kW | Stab-Load % | Imp kW | Exp kW | CEEP kW | EEP kW | Imp 1000 EUR | Exp |
| January | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1806 | 0 | 0 | 0 | 0 | 0 | 0 | 256 | 1502 | 0 | 0 | 0 | 0 | 333 | 333 | 286 | 0 | 286 | 18 | 13 |
| February | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1821 | 0 | 0 | 0 | 0 | 0 | 0 | 378 | 1057 | 0 | 0 | 0 | 0 | 333 | 602 | 216 | 0 | 216 | 28 | 9 |
| March | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1662 | 0 | 0 | 0 | 0 | 0 | 0 | 590 | 1940 | 0 | 0 | 0 | 0 | 333 | 144 | 1013 | 0 | 1013 | 8 | 48 |
| April | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1555 | 0 | 0 | 0 | 0 | 0 | 0 | 764 | 3886 | 0 | 0 | 0 | 0 | 333 | 5 | 3100 | 0 | 3100 | 0 | 129 |
| May | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1505 | 0 | 0 | 0 | 0 | 0 | 0 | 899 | 3828 | 0 | 0 | 0 | 0 | 333 | 0 | 3222 | 0 | 3222 | 0 | 119 |
| June | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1378 | 0 | 0 | 0 | 0 | 0 | 0 | 1191 | 2835 | 0 | 0 | 0 | 0 | 333 | 2 | 2649 | 0 | 2649 | 0 | 91 |
| July | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1423 | 0 | 0 | 0 | 0 | 0 | 0 | 1254 | 1415 | 0 | 0 | 0 | 0 | 333 | 118 | 1365 | 0 | 1365 | 6 | 61 |
| August | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1382 | 0 | 0 | 0 | 0 | 0 | 0 | 1142 | 899 | 0 | 0 | 0 | 0 | 333 | 294 | 953 | 0 | 953 | 15 | 38 |
| September | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1528 | 0 | 0 | 0 | 0 | 0 | 0 | 836 | 706 | 0 | 0 | 0 | 0 | 333 | 493 | 506 | 0 | 506 | 25 | 22 |
| October | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1614 | 0 | 0 | 0 | 0 | 0 | 0 | 359 | 1879 | 0 | 0 | 0 | 0 | 333 | 332 | 957 | 0 | 957 | 18 | 41 |
| November | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1666 | 0 | 0 | 0 | 0 | 0 | 0 | 252 | 2681 | 0 | 0 | 0 | 0 | 333 | 24 | 1291 | 0 | 1291 | 1 | 53 |
| December | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1886 | 0 | 0 | 0 | 0 | 0 | 0 | 220 | 1892 | 0 | 0 | 0 | 0 | 333 | 403 | 629 | 0 | 629 | 23 | 29 |
| Average | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1602 | 0 | 0 | 0 | 0 | 0 | 0 | 679 | 2043 | 0 | 0 | 0 | 0 | 333 | 228 | 1349 | 0 | 1349 | Average price | |
| Maximum | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3150 | 0 | 0 | 0 | 0 | 0 | 0 | 5566 | 4590 | 0 | 0 | 0 | 0 | 333 | 2354 | 8734 | 0 | 8734 | (EUR/MWh) | |
| Minimum | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 71 | 55 |
| GWh/year | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 14.07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.97 | 17.95 | 0.00 | 0.00 | 0.00 | 0.00 | | 2.00 | 11.85 | 0.00 | 11.85 | 142\0 | EUF652 |

| FUEL BALANCE (GWh/year): | DHP | CHP2 | CHP3 | Boiler2 | Boiler3 | PP | Geo/Nu. | Hydro | Waste | CAES Elc.ly. | BioCon-version | Synthetic Fuel | PV | Wind | Wave | Hydro | Solar.Th. | Transp. | household | Industry Various | Total | Imp/Exp Corrected Imp/Exp | Netto | CO2 emission (kt): Total | Netto |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Coal | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 12.59 | - | 12.59 | -7.63 | -7.63 | 0.00 | -2.61 |
| Oil | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 3.78 | - | 3.78 | -0.44 | 12.15 | 3.35 | 3.24 |
| N.Gas | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 12.59 | - | 12.59 | -13.81 | -10.03 | 0.77 | -2.05 |
| Biomass | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Renewable | - | - | - | - | - | - | - | 17.95 | - | - | - | - | 5.97 | - | - | - | - | - | - | - | 23.92 | 0.00 | 23.92 | 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 |
| Nuclear/CCS | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | - | - | - | - | - | - | - | 17.95 | - | - | - | - | 5.97 | - | - | - | - | - | 28.96 | - | 52.88 | -21.88 | 31.00 | 4.13 | -1.42 |

District Heating Production

| | Gr.1 | | | | Gr.2 | | | | | | | | | | Gr.3 | | | | | | | | | | RES specification | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | District heating kW | Solar kW | CSHP kW | DHP kW | District heating kW | Solar kW | CSHP kW | CHP kW | HP kW | ELT kW | Boiler kW | EH kW | Stor-age kW | Ba-lance kW | District heating kW | Solar kW | CSHP kW | CHP kW | HP kW | ELT kW | Boiler kW | EH kW | Stor-age kW | Ba-lance kW | RES1 Photo \ kW | RES2 Wind: kW | RES3 Wave I kW | RES4 River H kW | Total o kW |
| January | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 256 | 0 | 0 | 0 | 256 |
| February | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 378 | 0 | 0 | 0 | 378 |
| March | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 590 | 0 | 0 | 0 | 590 |
| April | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 764 | 0 | 0 | 0 | 764 |
| May | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 899 | 0 | 0 | 0 | 899 |
| June | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1191 | 0 | 0 | 0 | 1191 |
| July | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1254 | 0 | 0 | 0 | 1254 |
| August | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1142 | 0 | 0 | 0 | 1142 |
| September | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 836 | 0 | 0 | 0 | 836 |
| October | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 359 | 0 | 0 | 0 | 359 |
| November | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 252 | 0 | 0 | 0 | 252 |
| December | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 220 | 0 | 0 | 0 | 220 |
| Average | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 679 | 0 | 0 | 0 | 679 |
| Maximum | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5566 | 0 | 0 | 0 | 5566 |
| Minimum | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total for the whole year GWh/year | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 5.97 | 0.00 | 0.00 | 0.00 | 5.97 |

ANNUAL COSTS (1000 EUR)

| | |
|---|---|
| Total Fuel = | 2506 |
| Uranium = | 0 |
| Coal = | 0 |
| FuelOil = | 0 |
| Gasoil/Diesel= | 1826 |
| Petrol/JP = | 0 |
| Ngas = | 0 |
| Biomass = | 680 |
| Food income = | 0 |
| Waste = | 0 |
| Marginal operation costs = | 45 |
| Total Electricity exchange = | -510 |
| Import = | 142 |
| Export = | -652 |
| Bottleneck = | 0 |
| Fixed imp/ex= | 0 |
| Total CO2 emission costs = | 0 |
| Total Ngas Exchange costs = | 325 |
| Total variable costs = | 2366 |
| Fixed operation costs = | 745 |
| Annual Investment costs = | 3098 |
| TOTAL ANNUAL COSTS = | 6209 |

| | DHP & Boilers kW | CHP2 CHP3 kW | PP CAES kW | Indi-vidual kW | Trans port kW | Indu. Var. kW | Demand Sum kW | Bio-gas kW | Syn-gas kW | CO2Hy gas kW | SynHy gas kW | SynHy gas kW | Stor-age kW | Sum kW | Im-port kW | Ex-port kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| January | 0 | 0 | 0 | 875 | 0 | 0 | 875 | 0 | 0 | 0 | 0 | 0 | 0 | 875 | 875 | 0 |
| February | 0 | 0 | 0 | 860 | 0 | 0 | 860 | 0 | 0 | 0 | 0 | 0 | 0 | 860 | 860 | 0 |
| March | 0 | 0 | 0 | 676 | 0 | 0 | 676 | 0 | 0 | 0 | 0 | 0 | 0 | 676 | 676 | 0 |
| April | 0 | 0 | 0 | 374 | 0 | 0 | 374 | 0 | 0 | 0 | 0 | 0 | 0 | 374 | 374 | 0 |
| May | 0 | 0 | 0 | 271 | 0 | 0 | 271 | 0 | 0 | 0 | 0 | 0 | 0 | 271 | 271 | 0 |
| June | 0 | 0 | 0 | 120 | 0 | 0 | 120 | 0 | 0 | 0 | 0 | 0 | 0 | 120 | 120 | 0 |
| July | 0 | 0 | 0 | 75 | 0 | 0 | 75 | 0 | 0 | 0 | 0 | 0 | 0 | 75 | 75 | 0 |
| August | 0 | 0 | 0 | 81 | 0 | 0 | 81 | 0 | 0 | 0 | 0 | 0 | 0 | 81 | 81 | 0 |
| September | 0 | 0 | 0 | 149 | 0 | 0 | 149 | 0 | 0 | 0 | 0 | 0 | 0 | 149 | 149 | 0 |
| October | 0 | 0 | 0 | 215 | 0 | 0 | 215 | 0 | 0 | 0 | 0 | 0 | 0 | 215 | 215 | 0 |
| November | 0 | 0 | 0 | 591 | 0 | 0 | 591 | 0 | 0 | 0 | 0 | 0 | 0 | 591 | 591 | 0 |
| December | 0 | 0 | 0 | 890 | 0 | 0 | 890 | 0 | 0 | 0 | 0 | 0 | 0 | 890 | 890 | 0 |
| Average | 0 | 0 | 0 | 430 | 0 | 0 | 430 | 0 | 0 | 0 | 0 | 0 | 0 | 430 | 430 | 0 |
| Maximum | 0 | 0 | 0 | 1217 | 0 | 0 | 1217 | 0 | 0 | 0 | 0 | 0 | 0 | 1217 | 1217 | 0 |
| Minimum | 0 | 0 | 0 | 74 | 0 | 0 | 74 | 0 | 0 | 0 | 0 | 0 | 0 | 74 | 74 | 0 |
| Total for the whole year GWh/year | 0.00 | 0.00 | 0.00 | 3.78 | 0.00 | 0.00 | 3.78 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.78 | 3.78 | 0.00 |

RES Share: 69.0 Percent of Primary Energy 170.0 Percent of Electricity 23.9 GWh electricity from RES