

HeatMap CHP

- Developed by Washington State University Cooperative Extension Energy Program (formerly Washington State Energy Office)
- Primary use: Detailed 3-D design simulation of proposed and existing CHP systems using DOE-2 simulation engine
- Provides baseline comparison (existing system)
- Data libraries: weather, building loads, production equipment, fuels, piping
- CHP applications: Process steam, hot water, chilled water, thermal storage
- Analysis duration/time step: 1 year; hourly (8,760 hours)
- Economic analyses: cash flow, revenue requirement, payback
- Cost: \$4,000 (<http://www.energy.wsu.edu/software/HEATMAP/>)
- Requires separate installation of AutoCad software (approx. \$3,000)
- No free trial or demo versions

Input to HeatMap CHP Is Through Pop-Up Windows

HEATMAP Production Equipment Library

Select production equipment Heating Cooling

Coal boiler - water

Description: Coal boiler - water

Unit type: Boiler/Coal

Medium: Water

Fuel: Coal (Bituminous)

Electricity input: 4 (kWh/MBtu)

Emissions (lb/MBtu)

CO2:	178.0	NOX:	0.1
SOX:	0.4	Particulates:	0.1

Seasonal Data

	Summer	Winter	Mid-season
Cogen heat rate (Btu/kWh):	N/A	N/A	N/A
Efficiency (%):	82.0	82.0	82.0

Capacities Add Delete Save Cancel

HeatMap CHP Output

- Estimated annual and peak consumer loads
- Annual fuel use and cost
- Capacity & cost of energy plant
- Size & cost of distribution system
- Distribution system flow, temperature, pressure, and heat transfer
- Cost of energy
- Cash flow and revenue requirements
- Annual emissions