



Input Data Required for Operating Cost & Life Cycle Analysis

Project name: _____
 Project address: _____
 Client name: _____
 Client company: _____
 Client contact information: _____

Many of the inputs for a financial analysis and comparison between a GSHP and other mechanical system alternatives will be produced from the design of the ground heat exchanger, which includes the load calculations and heat pump schedule. The operating heat pump efficiencies derived from the loop analysis will be more accurate by accounting for the energy loads, interactive performance of the ground heat exchanger, and other variables, yielding a more realistic GSHP operating cost evaluation. Point source power usage may be assessed for estimated CO₂ production annual impacts; we reference CO₂ emissions by state from US EPA tables, usually expressed in lbs. CO₂ per kwh unless other information is provided.

GSHP System

Installation cost per ft ² , including ground loop	\$ _____ /ft ²
Mechanical room area, ft ²	_____ ft ²
Maintenance cost per year, \$/ft ²	\$ _____ /ft ²
Salvage value, \$/ft ²	\$ _____ /ft ²

Alternate System 1 - GSHP Hybrid System

Installation cost per ft ² , including ground loop	\$ _____ /ft ²
Mechanical room area, ft ²	_____ ft ²
Maintenance cost per year, \$/ft ²	\$ _____ /ft ²
Salvage value, \$/ft ²	\$ _____ /ft ²
Water usage rate, gpm/ton	gpm _____ /ton



Alternate System 2

Describe competing system:

Heating device (boiler, furnace, etc.) _____

Est'd heating efficiency (COP) _____

Cooling device (Fluid cooler, cooling tower, etc.) _____

Est'd cooling efficiency (SEER, EER) _____

Installation cost per ft² \$ _____ /ft²

Mechanical room area, ft² _____ ft²

Maintenance cost per year, \$/ft² \$ _____ /ft²

Salvage value, \$/ft² \$ _____ /ft²

Water usage rate, gpm/ton gpm _____ /ton

Alternate System 3

Describe competing system:

Heating device (boiler, furnace, etc.) _____

Est'd heating efficiency (COP) _____

Cooling device (Fluid cooler, cooling tower, etc.) _____

Est'd cooling efficiency (SEER, EER) _____

Installation cost per ft² \$ _____ /ft²

Mechanical room area, ft² _____ ft²

Maintenance cost per year, \$/ft² \$ _____ /ft²

Salvage value, \$/ft² \$ _____ /ft²

Water usage rate, gpm/ton gpm _____ /ton



Annual Inflation Rates (%)

Electricity	_____	%
Fuel oil	_____	%
Natural gas	_____	%
Propane	_____	%
Wood	_____	%
Coal	_____	%
Biomass	_____	%
Water	_____	%

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