

COMPARE ENERGY COSTS - GEOTHERMAL HEAT PUMPS TO FOSSIL FUELS

Geothermal Heat Pump (GHP) with a COP of 3.5 price/kWh	Fuel Oil 65% efficient price/gallon	LP 90% efficient price/gallon	Natural Gas 90% efficient price/therm	Cost per Million BTU	
\$0.052	\$0.40	\$0.36	\$0.39	\$4.35	
\$0.054	\$0.41	\$0.37	\$0.41	\$4.52	
\$0.056	\$0.43	\$0.39	\$0.42	\$4.69	
\$0.058	\$0.44	\$0.40	\$0.44	\$4.86	
\$0.060	\$0.46	\$0.41	\$0.45	\$5.02	
\$0.062	\$0.47	\$0.43	\$0.47	\$5.19	* ECEC Off-Peak Electric Heat base rate
\$0.064	\$0.49	\$0.44	\$0.48	\$5.36	
\$0.066	\$0.50	\$0.46	\$0.50	\$5.53	
\$0.068	\$0.52	\$0.47	\$0.51	\$5.69	
\$0.070	\$0.53	\$0.48	\$0.53	\$5.86	
\$0.072	\$0.55	\$0.50	\$0.54	\$6.03	
\$0.074	\$0.56	\$0.51	\$0.56	\$6.20	
\$0.076	\$0.58	\$0.52	\$0.57	\$6.36	
\$0.078	\$0.59	\$0.54	\$0.59	\$6.53	
\$0.080	\$0.61	\$0.55	\$0.60	\$6.70	
\$0.082	\$0.62	\$0.57	\$0.62	\$6.86	
\$0.084	\$0.64	\$0.58	\$0.63	\$7.03	
\$0.086	\$0.66	\$0.59	\$0.65	\$7.20	
\$0.088	\$0.67	\$0.61	\$0.66	\$7.37	
\$0.090	\$0.69	\$0.62	\$0.68	\$7.53	
\$0.092	\$0.70	\$0.63	\$0.69	\$7.70	
\$0.094	\$0.72	\$0.65	\$0.71	\$7.87	
\$0.096	\$0.73	\$0.66	\$0.72	\$8.04	
\$0.098	\$0.75	\$0.68	\$0.74	\$8.20	
\$0.100	\$0.76	\$0.69	\$0.75	\$8.37	
\$0.102	\$0.78	\$0.70	\$0.77	\$8.54	
\$0.1036	\$0.79	\$0.71	\$0.78	\$8.67	* ECEC General Purpose base rate
\$0.106	\$0.81	\$0.73	\$0.80	\$8.87	
\$0.108	\$0.82	\$0.74	\$0.81	\$9.04	
\$0.110	\$0.84	\$0.76	\$0.83	\$9.21	
\$0.112	\$0.85	\$0.77	\$0.84	\$9.38	
\$0.114	\$0.87	\$0.79	\$0.86	\$9.54	
\$0.116	\$0.88	\$0.80	\$0.87	\$9.71	

Fuel	BTU Heat Content
GHP/COP of 3.5	11,945/kWh
Fuel Oil	140,000/gal
LP	91,500/gal
Natural Gas	100,000/therm

Example: If you are comparing a geothermal heat pump with a COP of 3.5, at \$0.062/kWh (6.2 cents/kWh), to a 65% efficient fuel oil system, you would have to buy fuel oil at \$0.47/gal., or less, to have as low an operating cost as the geothermal heat pump.

* ECEC rates subject to change at any time

