Cost Comparison of Heating Sources (Residential)

		Rates	
Name: Case Study - Thermal Mass System	Natural Gas:	$1.25	per Therm
	Propane Gas:	$1.80	per Gallon
Project: 2,500 Sq.Ft. - Slab on Grade Home	Heating Oil:	$4.00	per Gallon
Off-Peak Program	Off-Peak - Electricity:	$0.0467	per kWh
70° Inside Design Temperature	Dual Fuel - Electricity:	$0.062	per kWh
-10° Outside Design Temperature	Peak - Electricity:	$0.120	per kWh
7,192 Heating Degree Days (2022/2023)	Yearly Heating Load:	111,676,996	BTU's

Natural Gas (Forced Air)	Efficiency Rating	Estimated Therms	Price / Therm	Cost of Operation
	80%	1396	$1.25	$1,744.95
	90%	1241	$1.25	$1,551.07
Propane (Forced Air)	Efficiency Rating	Estimated Gallons	Price / Gallon	Cost of Operation
	80%	1744	$1.80	$3,138.46
	90%	1526	$1.80	$2,746.16
Electric Boiler (Dual Fuel Rate)	Efficiency Rating	Total kWh Needed	Price / kWh	Cost of Operation
	90%-100%	32731	$0.062	$2,029.30
Electric (Forced Air)	Efficiency Rating	Total kWh Needed	Price / kWh	Cost of Operation
	90% - 100%	40913	$0.120	$4,909.60
Heating Oil (Forced Air)	Efficiency Rating	Estimated Gallons	Price / Gallon	Cost of Operation
	70% - 80%	1349	4.00	$5,395.02
GSHP Ground Source Heat Pump	Efficiency Rating	Total kWh Needed	Price / kWh	Cost of Operation
	200% - 300%	10558	0.062	$654.61
TMFH Thermal Mass Floor Heat		Total kWh Needed	Price / kWh	Cost of Operation
	Off-Peak Rate	14293	0.0467	$667.50
ERC Electric Radiant Ceiling		Total kWh Needed	Price / kWh	Cost of Operation
	Dual Fuel Rate	14483	0.062	$897.92

Oil=138,000 BTU/gal., LP=91,500 BTU/gal., NG=100,000 BTU/Therm, Electricity=3412 BTU/kWh
Heating load is approximate but must stay consistant for all fuel sources

Comparison costs will vary based on location, type of building, construction practices, insulation values equipment, sizing, rates and programs available in your area.

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