

COST COMPARISONS

HOME HEATING COST COMPARISON

The chart to the right shows the price you would need to purchase fuel at to beat the EnergyWise rate for electric heating.

Heat Type	Efficiency	Electric Resistance			Air Source Heat Pump			Ground Source Heat Pump		
Electric		100% Efficient			250% Efficient			350% Efficient		
		6.30¢	kWh	11.72¢	6.30¢	kWh	11.72¢	6.30¢	kWh	11.72¢
L.P. Gas	95%	\$1.60	gal.	\$2.99	\$0.64	gal.	\$1.19	\$0.46	gal.	\$0.78
	80%	\$1.35	gal.	\$2.51	\$0.54	gal.	\$1.01	\$0.39	gal.	\$0.65
Fuel Oil	85%	\$2.18	gal.	\$4.05	\$0.87	gal.	\$1.62	\$0.62	gal.	\$1.05
	70%	\$1.79	gal.	\$3.33	\$0.72	gal.	\$1.33	\$0.51	gal.	\$0.86
Natural Gas	95%	\$1.75	therm	\$3.26	\$0.70	therm	\$1.30	\$0.50	therm	\$0.93
	80%	\$1.48	therm	\$2.75	\$0.59	therm	\$1.10	\$0.42	therm	\$0.78

The cost of heating a home will vary based on several factors, including the size of the home, heating fuel type, heating system efficiency, insulation of the home and even how the home is used. The chart above compares various heating system efficiencies and fuel types to Stearns Electric's rates. As an example, if you have an 80% efficient propane boiler, you would need to purchase propane for less than \$1.35 to beat the EnergyWise rate for electric heating.

AIR SOURCE HEAT PUMP SAVINGS

The chart to the right shows the benefit of cooling and heating a 2,000 square foot home with an air source heat pump rated at 250% efficient and operating on a Stearns Electric EnergyWise rate.

Cooling Mode	EnergyWise Summer Rate 8.3¢ per kWh	Regular Summer Rate 13.22¢ per kWh	Savings in Cooling Mode	
Annual Usage 1000 kWh	1000 x \$.083 = \$83.00	1000 x \$.1322 = \$132.00	\$49.20	
Heating Mode	2,000 square foot home with a five year average HDD of 8,200 per year.		Savings	
			1st Year	5 Years
ASHP 250% efficient	Baseline for Comparison		--	--
Electric Heat 100% Efficient	6.3¢ per kWh x annual kWh of 25,628 = \$1,614		\$1,091	\$5,457
L.P. Gas 95% Efficient	\$1.79 gal x annual gal 1,006 = \$1,804		\$1,281	\$6,403
L.P. Gas 80% Efficient	\$1.79 gal x annual gal 1,195 = \$2,142		\$1,619	\$8,094
Fuel Oil 85% Efficient	\$3.50 gal x annual gal 742 = \$2,596		\$2,073	\$10,365
Electric Heat 100% efficient at general service rate	11.72¢ per kWh x annual kWh of 25,628 = \$3,004		\$2,480	\$12,402

WATER HEATING COST COMPARISON

The chart to the right shows the average annual cost to heat water for your home using a Marathon water heater versus a regular electric water heater, a propane water heater and a natural gas water heater.

Electric Water Heater 85% Efficient		Marathon Water Heater 92% Efficient		L.P. Water Heater 65% Efficient	Natural Gas Water Heater 65% Efficient
Family Size	Regular Rate	Monthly Credit	E.W. Rate	Gas at \$1.79	Gas at \$.84
1	Annual Cost	\$160	\$140	\$195	\$84
2		\$338	\$241	\$335	\$144
3		\$511	\$338	\$470	\$202
4		\$650	\$416	\$579	\$248
5		\$708	\$449	\$625	\$268
6		\$977	\$549	\$765	\$328



ST. JOSEPH OFFICE (BRANCH OFFICE)

29643 Frontage Road, PO BOX 816, St. Joseph, MN 56374
(800) 962-0655 | Fax: (320) 363-4631

WWW.STEARNSELECTRIC.ORG