



Package Cost by Improvement

Evaluated Packages

	Cost	Annual Savings MMBtu	Annual Savings \$	% Savings	Payback Years	Cashflow \$/Year	SIR
Ground Source Heat Pump w Electric IR Supplemental	\$31,000	72.1	\$1,913	49 %	16.2	\$243	1.44
Air Source Heat Pump w Electric Radiant Bkup	\$13,000	48.4	\$1,303	33 %	10.0	\$602	2.37
Pellet Boiler	\$20,000	-11.1	\$936	-8 %	21.4	(\$141)	0.92
Propane Furnace	\$5,000	9.1	(\$181)	6 %	N/A	(\$450)	N/C
LED Lighting Upgrade over HID	\$500	8.0	\$196	5 %	2.6	\$169	3.87

Package Descriptions

Ground Source Heat Pump w Electric IR Supplemental

	Cost	Annual Savings MMBtu	Annual Savings \$	Payback Years	Cashflow \$/Year	Imp. Life Years	SIR in Package
Ground Source Heat Pump (4 ton)	\$28,000	42.6	\$1,125	24.9	(\$384)	20	0.79
Electric Radiant Heat (Backup)	\$3,000	29.5	\$788	3.8	\$626	20	5.14
Total for Package	\$31,000	72.1	\$1,913	16.2	\$243	N/A	1.44

Non-Energy Benefits:

1. Ground Source Heat Pump (4 ton): Increased equity.
2. Electric Radiant Heat (Backup): Increased equity.

Air Source Heat Pump w Electric Radiant Bkup

	Cost	Annual Savings MMBtu	Annual Savings \$	Payback Years	Cashflow \$/Year	Imp. Life Years	SIR in Package
Electric Radiant Heat (Backup)	\$3,000	18.9	\$519	5.8	\$357	20	3.39
Air Source Heat Pumps - 2 FH18s	\$10,000	29.5	\$784	12.8	\$245	20	1.54
Total for Package	\$13,000	48.4	\$1,303	10.0	\$602	N/A	2.37

Non-Energy Benefits:

1. Electric Radiant Heat (Backup): Increased equity.
2. Air Source Heat Pumps - 2 FH18s: Increased equity.



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Pellet Boiler

	Cost	Annual Savings MMBtu	\$	Payback Years	Cashflow \$/Year	Imp. Life Years	SIR in Package
Pellet Boiler w Thermal Storage	\$20,000	-11.1	\$936	21.4	(\$141)	20	0.92
Total for Package	\$20,000	-11.1	\$936	21.4	(\$141)	N/A	0.92

Non-Energy Benefits:

1. Pellet Boiler w Thermal Storage: Increased equity.

Propane Furnace

	Cost	Annual Savings MMBtu	\$	Payback Years	Cashflow \$/Year	Imp. Life Years	SIR in Package
Propane Furnace	\$5,000	9.1	(\$181)	N/A	(\$450)	20	N/C
Total for Package	\$5,000	9.1	(\$181)	N/A	(\$450)	N/A	N/C

Non-Energy Benefits:

1. Propane Furnace: Increased equity.

LED Lighting Upgrade over HID

	Cost	Annual Savings MMBtu	\$	Payback Years	Cashflow \$/Year	Imp. Life Years	SIR in Package
LED Hi Bay Lights	\$500	8.0	\$196	2.6	\$169	10	3.87
Total for Package	\$500	8.0	\$196	2.6	\$169	N/A	3.87

Non-Energy Benefits:

1. LED Hi Bay Lights: Reduce maintenance, reduce replacement cost (fluorescent bulbs last 10,000 hours whereas incandescent bulbs typically last less than 1,000 hours).