



September 26th, 2022

Dear Marjorie McGinnis,

Energy Source is pleased to present you with this proposal. We trust you will find this a cost effective means to help electrify your facility by installing air source heat pumps.

Energy Source has included pre-approved rebates from the utility company which reduce the net cost of this project significantly.

I hope you find this proposal informative. If you have any questions, please do not hesitate to contact me.

Sincerely,

Daniel Wegner

Energy Source

Disclaimer

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For any questions regarding this report, please contact Daniel Wegner, Project Developer, Energy Source Inc. at (508)737-0683. Any additional use of this report is prohibited unless permission is given in writing from Energy Source, Inc.



Installation of Air Source Heat Pumps

Currently the Library uses a failing ground-source geothermal system with air handlers for distribution. The corroded system is not able to properly heat or cool the space efficiently and its estimated that at least 65% of the heating load is from the backup electric resistance heat. Both of these systems are costly to maintain and inefficient to operate. Energy Source proposes to install air source heat pumps, which provide a highly efficient way to heat & cool electrically. Below is a detailed scope of work:

- Disconnect (4) existing geothermal heat pump packaged units and dispose of them
- Provide and install (3) American Standard air handlers, model #TAM9A0C60V51
- 5-ton air handlers to be equipped with 15kW back up electric heater
- Provide and install (1) American Standard air handler, model #TAM9A0C42V41.
- 3.5-ton air handlers to be equipped with 10kW back up electric heater
- Air handlers are variable speed and fully communicating
- Fabricate and install custom sheet metal duct transitions to adapt existing ductwork to new air handlers
- Provide and install condensate pumps and pipe drain lines
- Provide and install (1) American Standard communicating zoning system for the (1) air handler that currently has two zones
- Provide and install (2) communicating zone dampers for that system
- Provide and install (4) American Standard 1050 controllers & (1) American Standard 1040 controller
- Provide and install (3) American Standard 20-SEER heat pumps, model #4A6V0048A1
- Provide and install (1) American Standard 20-SEER heat pump, model #4A6V0036A1
- Heat pumps are fully communicating and modulating
- Heat pumps to be installed on custom fabricated heat pump stands
- Provide materials to complete refrigerant piping for all systems, pressurize, evacuate, and charge systems accordingly
- Complete systems high and low voltage wiring



- Run, test, and commission systems
- 4-ton systems have a SEER rating of 19.50, an EER of 12.50, and an HSPF rating of 10.00, AHR/ reference #10093452
- 3-ton system has a SEER rating of 21.00, an EER of 13.50, and an HSPF rating of 10.00, AHR/ reference #10093449

Notes/Clarifications

- Removal of geothermal piping is not included in costs, extent of demo includes removing packaged system, capping/make safe piping where applicable
- High voltage wiring and associated permits are included in costs
- Energy Source not responsible for any existing code issues
- Work to be completed during normal business hours

Energy/Cost Savings

The proposed heat pump system is sized to handle the full heating load for the building.

Energy Conservation Measures	Electricity Savings	Total Cost Savings	Payback Period (years)
	kWh		
Heat Pump AHUs	17,254	\$5,434	17.3

Pricing

The cost to install the scope of work described above is \$130,779. Energy Source has direct access to utility rebates totaling \$36,525. Therefore, the net customer cost is **\$94,254** as shown below:

Energy Conservation Measures	Total Project Cost	Preapproved Utility Incentives	Customer Cost
Heat Pump AHUs	\$130,779	\$36,525	\$94,254



Installation and Warranty Information

If you decide to proceed with this proposal, Energy Source will be responsible for the following tasks:

- Develop final equipment specifications and equipment layout
- Processing and filing application for utility incentives
- Material ordering and receiving
- Installation and Startup

Installation

The removal and disposal of asbestos and toxic materials if present are the owner's responsibility and should be determined before proceeding with the project.

Installation to be performed during normal business hours Monday through Friday (~7am-4pm).

Warranty

Included with your project is a one-year warranty on all labor and materials provided by Energy Source. At the end of the first-year materials remain covered by standard warranties provided by the manufacturer. Warranty periods begin when the installation is completed. The owner has a one-month period following the completion of the installation to accept or reject work performed by Energy Source, after which time we will assume that the work has been accepted.

Due to the fluctuation in commodities this proposal is valid for a period of 30 days from the date shown at the top of this proposal, after which time we will be happy to provide an adjusted quote if necessary.