

# Air-Source Heat Pumps

Charlie and Cathy's "South Hill Contemporary" House



## From Natural Gas to Multi-Zone ASHP: *2016 Ithaca Installation Case Study*

Install air-source heat pumps for room-to-room heating during those cold Upstate winters PLUS air-conditioning for those hot summer months!



"If there was one thing that I didn't expect, I guess it would be the convenience. Just pushing a button. It's so easy to use."

- Charlie, Homeowner

### Project Specifics:

Area of Home:	About 1,800 square feet
Age of Home:	Built in 1992
Other Info:	"South Hill Contemporary"
Installer Partner:	Halco Energy

### Previous System: Natural Gas-Fired Boiler & Wood Stove

**Heating:** Property was previously heated by a natural gas-fired boiler and a wood stove as back-up heat during the winter.

**Cooling:** Property previously didn't have any type of cooling system.

### New System: Multi-Zone Air-Source Heat Pump

Ithaca homeowners Charlie and Cathy Woodcock were motivated to install an air-source heat pump to heat and cool their home during the first phase of the HeatSmart Tompkins program, in 2016. They went into the heat pump installation process wanting to get a renewable, reliable source of energy for heating in the cold months and air-conditioning in the warmer months. Their property previously didn't have any type of cooling system, and with the hotter and hotter summers as of late, the Woodcocks decided that they would be needing an effective source of air-conditioning.

## Cost / Usage:

\$/yr

## Annual Savings: \$

\$/yr

Before:

After:

### Project Cost (reflects 2016 incentives):

Cost Category	Initial Cost	Incentives	Final Cost
Installation of an ASHP	\$11,099	\$0 (2016 NYSERDA Incentive)	\$11,099
		\$0 (Outside, Additional Incentives)	

#### Project Specifications

3.5-ton Mitsubishi Multi-Zone Ductless Air-Source Heat Pump w/ 2 outdoor units and 4 total heads: 1 in studio, 1 in each of the two upstairs bedrooms, and 1 in downstairs living room

### Project Highlights:



Provides Air-Conditioning



Renewable Source of Heating & Cooling



Year-Round Comfort

Charlie and Cathy live in a two-story contemporary house, located on Ithaca's South Hill and designed by Charlie himself, a retired architect. In 2016, during the first phase of the HeatSmart Tompkins program, they reached out to Halco Energy, one of the HeatSmart Tompkins installer partners, for a home assessment. They were interested in installing an air-source heat pump to heat and cool their home in the cold Upstate winters and hot Ithaca summers.

Halco's team of professional heat pump installers visited Charlie and Cathy's home and decided that the home's insulation was already well-above average. They then got to work installing a 3.5-ton Mitsubishi multi-zone air-source heat pump with two outdoor units and a total of four heads throughout the home. Halco also disconnected and removed the previous heating system of the natural gas-fired boiler. As the above project cost chart indicates, NYSERDA incentives to install an air-source heat pump were nonexistent in 2016, when this project took place, but the cost of an air-source heat pump installation was also lower at the time. Therefore, the installation's final cost is the same as the initial cost, as no rebates were available to the homeowners.

Charlie and Cathy were very happy to ditch their old gas-fired boiler for the renewable, clean energy of an air-source heat pump. When asked, Charlie told us that his favorite part of his new air-source heat pump heating and cooling system is the air-conditioning, in addition to its convenience and ease-of-use! Charlie and Cathy now have an ongoing maintenance contract with Halco, and every year Halco visits the home to do check-ups and routine maintenance.

For questions about this project or program, contact:

**607-500-HEAT** or visit **HeatSmartTompkins.org**

