

# Hybrid-Heat Dual Fuel System



## Brian and Barbara's Ranch House

### Installation of a Heat Pump Compressor: 2019 Cayuga Heights Installation Case Study

Heat and cool your home with a hybrid-heat, dual fuel system. Reduce your gas usage and increase your home's energy efficiency, all with the use of existing ductwork and a heat pump compressor!



"Many people are in a position that they have recently purchased a very expensive home heating system, and they're unable to spend the money for a [new] whole-house [heat pump] system. So we thought, we probably would be taking more people off the use of gas with this kind of a system than if we forced everyone to choose a system that had no fossil fuel input."

- Brian, Homeowner

#### Project Specifics:

Area of Home:	2,800 square feet
Age of Home:	Built in 1955
Other Info:	Ranch House
Installer Partner:	Halco Energy

**Previous System: Highly Efficient Gas Furnace**

**New System: Hybrid-Heat, Dual Fuel System of an Efficient Gas Furnace and an Attached Heat Pump Compressor**

Heating: Property was previously heated by a highly efficient gas furnace.

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

Homeowners and spouses Brian and Barbara Eden were motivated to install a hybrid-heat, dual fuel system when their two old furnaces needed to be replaced. At the time, Snug Planet recommended the installation of a state-of-the-art, highly efficient, furnace for their large house. However, within a year or two of the installation, Brian and Barbara discovered that these furnaces were being powered by gas. Wanting to switch to electricity and reduce their home's gas consumption while also adding the features of air-conditioning and dehumidification for the warm Upstate summers, Brian and Barbara reached out to Halco Energy and decided to hook-up a heat pump compressor to their existing, highly efficient gas furnace.

Making the switch to a new dual fuel system made the most sense for these homeowners because it reduces their usage and reliance on fossil fuels, provides them with air-conditioning during the summers, and was a more cost-effective option than replacing a newly installed, highly efficient gas furnace.

## Project Cost (reflects 2019 incentives):

Cost Category	Initial Cost	Incentives	Final Cost
Installation of a Heat Pump Compressor & Duct Cleaning	\$12,425	\$0 (2019 NYSERDA Incentive)	\$12,425
		\$0 (Outside, Additional Incentives)	

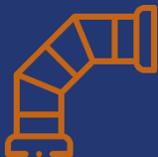
### Project Specifications

Bryant Heat Pump Compressor: one large outdoor unit serves the entire house; hooked-up to the Bryant gas furnace in the basement

## Project Highlights:



Increase Your Home's Energy Efficiency & Reduce Gas Usage



Use Home's Existing Ductwork



Simple Addition of a Heat Pump Compressor

In 2018, homeowners Brian and Barbara Eden contacted Matt Dennis from Halco Energy looking to install a hybrid-heat, dual fuel system rather than an entirely new heating and cooling system in their 1955 ranch house. Their decision to install a Bryant heat pump compressor was informed partly by the fact that they had just recently purchased and installed a new, highly efficient Bryant gas furnace to heat their home. Wanting to use their newly installed gas furnace yet reduce their home's gas usage, Brian and Barbara decided on the addition of a heat pump compressor to make their home heating more environmentally friendly with the added benefit of cooling and dehumidification.

In March of 2019, the Halco Energy team did the Eden family's dual fuel system installation. Our trained HeatSmart Tompkins partners hooked-up the new Bryant heat pump compressor to the house's previous heating system and used the home's existing ductwork for the new hybrid-heat, dual fuel system! The Halco team also cleaned the home's ducts.

Brian and Barbara didn't apply to receive any 2019 NYSERDA rebates or incentives to help finance their hybrid-heat, dual fuel system installation, since the heat pump compressor installation didn't qualify as a whole-house heating and cooling energy system. However, the final cost of the heat pump compressor installation, in addition to the duct cleaning, ended up being comparable to the final cost of installing an air-source heat pump heating and cooling system. Most importantly, Brian and Barbara discovered that it was possible to reduce their home's carbon emissions without the need to trash their old heating system and purchase and install an entirely new heat pump heating and cooling system. With their new hybrid-heat, dual fuel system, Brian and Barbara heat their home in a more environmentally-conscious way, further increase their home's energy efficiency, and have the added comfort of air-conditioning and dehumidification in the summers without needing to install an entirely new system.

For questions about this project or program, contact:

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

