

Mountain Heating & Cooling

Case Study #3

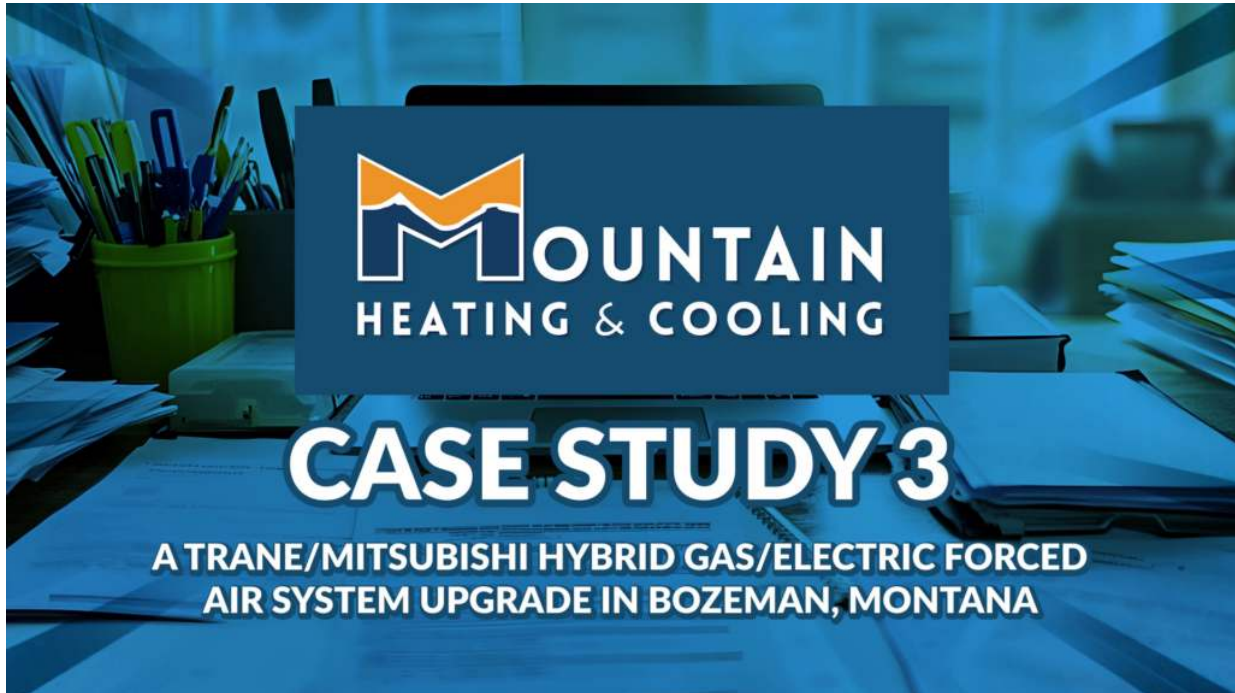
Hybrid Gas-Electric Forced Air System Upgrade Bozeman MT



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Hybrid Gas-Electric Forced Air System Upgrade Bozeman MT



Overview: Trane-Mitsubishi Hybrid Gas-Electric Forced Air System Upgrade

- HVAC Contractor: [Mountain Heating and Cooling](#)
- Client Profile: Corky and Lois J. are downsizing and moving into a single level home and are concerned about system efficiency, comfort, and being good stewards of resources.
- Location: [In Bozeman, near Valley View golf course.](#)
- Type of HVAC Service: Replaced a high efficiency, single stage furnace and base efficiency air conditioner with a Trane furnace with multiple stages and variable speed fan to reduce noise, a Mitsubishi Heat Pump to boost efficiency and performance at low outdoor temperatures.
- System Type: Trane S9V2 furnace, Mitsubishi IntelliHeat coil paired with a Mitsubishi Hyper Heat, (heat pump) condenser.-Fantech heat recovery ventilator.-Trane CleanEffects air purifier.-Navien tankless water heater
- Products Used: Trane S9V2B080U4SBA furnace, Mitsubishi PAA-A36BA1 dual fuel, coil, Mitsubishi PUZAK36NLHZ, PAC-SDW01RC-1 control, Trane EFD175DLFR000B, Fantech Hero 150H, Navien HB NPE0240.
- Duration: 16 daysProject Start Date 12-15-2025Project End Date 12-30-2025
- Specific Challenges: The challenge in Bozeman is to utilize as much of the electric heat pump efficiency and capacity as possible. This allows the homeowner to negotiate inflated energy costs in a strategic way. They were looking to be good stewards of our environmental resources as well as their economic resources as they are in retirement.
- Rebates/Tax Credits: Federal Tax Credit – Air Source Heat Pump, Northwestern Energy – Furnace, Distributor “Utility Rebate Bonus Promotion” Northwestern Energy – Heat Pump,
- Warranty Description: Trane Furnace and Air Purifier – 10 year Parts and Labor, Mitsubishi Heat Pump – 12 year Parts and Labor.

Summary: Of a Hybrid Gas-Electric Forced Air System Upgrade

Corky and Lois J., are downsizing to a new home in Bozeman, MT. and were looking to transition their system from a natural gas forced air with basic air conditioning to a dual fuel electric/gas system using Trane and Mitsubishi equipment. Being retired from the industry, they were also concerned about overall noise, comfort, humidity and indoor air quality. Bozeman is located in southwest Montana and is an area subject to extreme winter weather.

Trane Mitsubishi Hybrid Project Home1



Trane Mitsubishi Hybrid Project Home2



Mitsubishi Hyper Heat Puz Ak36nlhz Heat Pump



The Challenge:

The challenge in Bozeman is to utilize as much of the electric heat pump efficiency and capacity as possible. This allows the homeowner to negotiate inflated energy costs in a strategic way. They were looking to be good stewards of our environmental resources as well as their economic resources as they are in retirement.

The Solution:

The primary solution focused on a 97% efficient S9V2B0680U4VS gas furnace as the horsepower for this system as extremely low outdoor temperatures prevail. At the same time, a high capacity Mitsubishi Hyper Heat PUZ-AK36NLHZ heat pump designed for low temperature delivery is paired with the horsepower through a Mitsubishi IntelliHeat coil PAA-BA36NL to offer the least expensive delivery of heating to the home at all times. Additionally, a fantech HERO 150H heat recovery ventilator and EFD175DLFR000B air purifier from Trane were installed. This Indoor air quality package will offer clean air and respite from allergens present in our outdoor air in Bozeman while maximizing fresh air delivery.

The Benefits:

The benefits of installing the Trane S9V2 furnace are extremely high efficiency operation, and low operation noise of the variable speed fan. When matched with a Mitsubishi PAA-BA36NL IntelliHeat coil and PUZ-AK36NLHZ condenser, the furnace only needs to operate when outdoor temperatures are below 13 degrees Fahrenheit which, at today's gas and electric prices, sees substantial savings on gas/electric bills. Indoor air quality was added to reduce risks from colds, viruses, and allergens and has gotten to be one of our most common additions to systems in the last 5-8 years. And finally, the whole system is protected with labor warranties to match the terms of the manufacturer's parts warranty which reduces the customer's exposure to higher labor costs through the next 10-12 years.

Cost/Benefit Analysis:

While the initial costs of the Trane-Mitsubishi Hybrid system may exceed a more traditional system with furnace and air conditioning, the benefits of getting expertly matched system equipment for efficiencies are numerous. First and foremost, all the horsepower you need for the worst Montana can throw your way. Second, the efficient benefits of the Mitsubishi heat pump allow you to skate through most of our winter weather using the electric heat pump at nearly 2x the efficiency of the gas furnace. For many customers, knowing they spent the extra upfront to gain the efficiency and reduced utilities on the backend is well worth the extra effort.

Summary of a Successful HVAC Installation:

"We've been installing this type of system for years with very good results in our climate. The recent change from Mitsubishi to the R454b refrigerant has allowed us to install the first of it's kind right here in Bozeman, MT. for a customer who knows what to expect out of a quiet and efficient dual fuel system. This change has also boosted efficiency, capacity at low temperatures, capacity at high elevations, etc. There's never been a better time for this technology and a company who has committed to learning the ropes of these high tech systems."

– Corey Johnson, President of Mountain Heating and Cooling

Homeowner's Review

Coming soon...

Find out how a Custom Trane-Mitsubishi HVAC System Installation can increase your home comfort.

Based in Bozeman, Montana we serve the entire Gallatin Valley including Gallatin Gateway, Livingston, Belgrade, Manhattan, Three Forks, and Big Sky.

Get a FREE consultation today. CALL (406) 586-4007 Today!

Case Study Video





Hybrid Gas-Electric Forced Air...

Bozeman's Top HVAC Contractor

Experts in: Cooling, Heating, IAQ and more!

Since 1977 we have been providing heating and cooling installation and service to Bozeman homeowners and businesses. Ours is a family business so we know that every project we do bears our name and carries our reputation.

To learn more you can go to:

<https://mountainheating.com/cs3>