



BlueRidge
Company™

RADIANT HEAT SYSTEMS

Case Study

Wisconsin Barndominium

2-Zone Dual Fuel Radiant System with 60 Gal Indirect DHW Tank

- ▶ Slab-on-Grade Construction
- ▶ Self-Installed Radiant System

- RHT Prefabricated 3-Pump Dominator Panel dual fuel system
- RHT SS High Flow Stainless Steel manifolds, 11-port & 6 port
- High-efficiency AUFE 95% heat-only propane-fired boiler
- Brazed 50-plate 220,000 BTU heat exchanger for wood-fired boiler
- Heat-Flo 60 Gallon Indirect Tank
- Tekmar 561 WiFi Thermostats with slab sensors

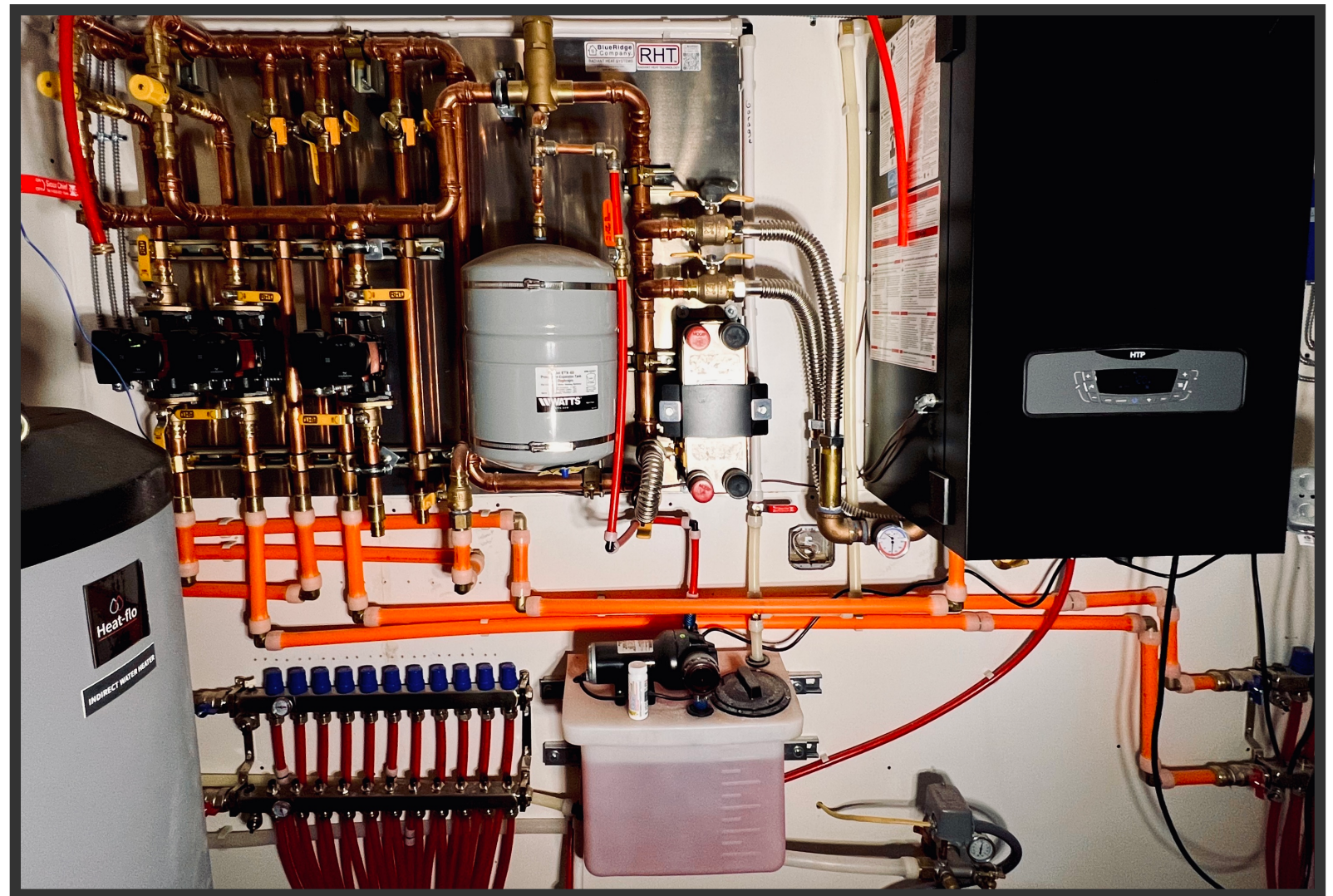


“If we had any questions during install, the team at Blue Ridge were great about answering them on the spot.”

In western Wisconsin, Keirsten and Justin set out to build their dream home—a custom 5,000+ square foot barndominium designed and built almost entirely by their own hands. Choosing to act as their own general contractors, they were determined to be involved in every aspect of the process. “We decided to general contract the entire build since we wanted to complete most of the work ourselves,” they shared.

One of the most critical decisions in Keirsten and Justin’s design process was how to heat such a large space through the region’s long, cold winters. Radiant heating quickly stood out. “We had been in homes before that use radiant heating and knew how efficient they could be, especially for us here in Wisconsin,” they explained. “When researching heating options for our build, we knew that we wanted to incorporate radiant heating into our system.”

Their heating goals were focused on both comfort and cost-efficiency. “Our main goal with using a radiant system is to have great efficiency and minimize our heating bill throughout the winter,” they said. They also had future plans in mind: “We wanted a system that would not only heat our slab but also a system that could be set up to utilize a wood stove or hot water coil in the furnace in the future.” BlueRidge Company helped bring that vision to life. “Blue Ridge was able to accommodate all of our requests and make our system completely custom for our needs.” For the heat



Keirsten and Justin’s custom, dual fuel radiant + DHW, designed and fabricated by BlueRidge Company, and installed by the home builders. A wood-fired boiler will be the “primary” heat source with LP Boiler as “backup up.” Note they are using glycol in the system for freeze protection, which is best practice.

source, they chose a propane boiler to match their other propane-powered appliances.

They first discovered BlueRidge Company through a simple online search. After reaching out, they connected with the team at BlueRidge. “Walker and the rest of the staff were extremely knowledgeable and helpful in

planning our system,” they said. “They took all of our ideas and created a completely custom system to fit all of our needs.”

When Keirsten and Justin’s prefabricated system arrived, they were impressed: “It was better than we had expected! It was such a well-built unit that was packaged well, organized, and ready for install.”

As the installation process began, their preparation and collaboration with BlueRidge paid off. “During install, we found that it was a fairly easy system to understand and hook up,” they noted. “We had many previous conversations regarding the layout of the system, and if we had any questions during install, the team at Blue Ridge were great about answering them on the spot.”

They didn’t waste any time getting the system running. “We were excited to use our system and had it up and running within days of delivery,” they said. Despite it still being cold in March and lacking ceiling insulation or drywall, the performance exceeded their expectations. “It took a day or two to get the slab to temperature but after that it was extremely efficient and only running a few hours a day! Even without having ceiling insulation or drywall yet, our new system was heating the space more than we had anticipated.”

For this Wisconsin family, radiant heating was more than just a functional choice—it was a decision that brought warmth, efficiency, and satisfaction to their ambitious barndominium build.



**BlueRidge Company's RHT
Prefabricated 2-Zone Column
Pump Panel.**

THERMOLEC

