

The Re-Greening of a Mountain Home

Small Carbon Footprint with a Big, Warm Embrace

Outdoor enthusiasts will go to great extremes to set up camp. An example of just how far they'll go is the "re-greening" of a rural log home in central Pennsylvania.

Last fall, Travis and Rachel Wenger spent months looking for a family retreat and hunting lodge. During a second visit to one of the properties – a 2,400 s.f., three bedroom log home built in '94 – they were on the home's wrap-around deck when suddenly the realtor clammed-up and turned pale. A 400-pound black bear, ignoring them, climbed the opposite stair to assault the gas grill.

Convinced it was "the sign we were looking for, we immediately agreed to buy the place," said Travis Wenger.

Green mechanicals & a geothermal boiler

For Travis Wenger and his father Merv, the home wasn't their first remodel project. Their experience includes several home renovations, so they quickly set out to remodel the log house, adding more bedrooms and "truck loads of insulation." Plans called for extensive HVAC upgrades with geo-to-radiant heat and a large log garage with living quarters above for guests, all radiantly heated.

Dave Yates, president of York, PA-based F. W. Behler, Inc., was tapped to do the extensive mechanical system retrofit, a job that required geothermal bore-hole drilling and a geo-to-radiant heat system for the house and – through a well-insu-



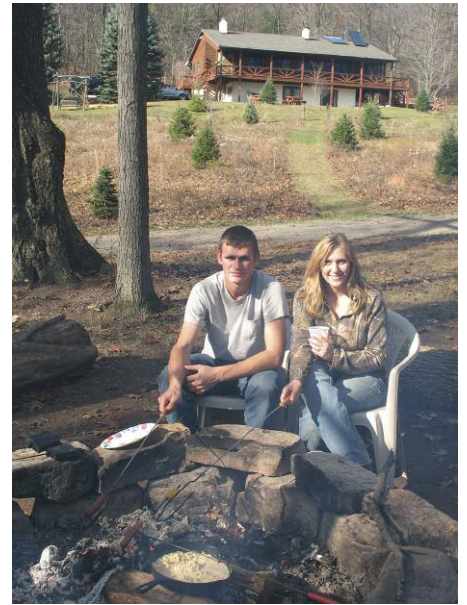
lated, underground injection loop – geo-generated warmth for the garage's radiant heat system as well.

During a period of several months, the energy-in-the-red log house metamorphosed into an unusually energy efficient base camp for outdoor enthusiasts – complete with all the comforts of home.

"Before the remodel, the place left a Sasquatch-sized carbon footprint," said Yates. "The log home leaked like a sieve. Winters are brutal up there, so they were burning LP gas furiously and watched the electric meter spin like an old 78 Victrola."

Heat for the home today is delivered through two ClimateMaster geothermal systems: one 3-ton water-to-water "geothermal boiler," and a 4-ton water-to-air Tranquility 27 for supplemental heat, and also to meet all air conditioning needs.

ClimateMaster's THW is the high-temperature water-to-water "boiler," providing more than enough water to meet the space heating needs of both well-insulated buildings.



Radiant, at a glance

The THW system sends 145-degree water into a 120-gallon, twin-coil Bradford White indirect water heater which Yates refers to as the "thermal target." This stored volume of heated water serves as the heat source for the extensive staple-up and in-slab radiant heat zones.

"The Wengers saw an 80-percent drop in energy expenses last winter," concluded Yates. "The carbon footprint got a lot smaller, but they've added tremendously to the size of their comfort zone!"

