

A Few Twists and Turns in the Road

by REX A. EWING

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If you should happen to get invited to Ed Brown and Val Hall's summer party, a yearly event held at their end-of-the-road, off-the-grid log home in the northern Colorado Rockies, you should be prepared for a few twists and turns in the road. If you're coming from the north, a seasonally-maintained dirt road wriggles and writhes for 20 miles through high-mountain passes and densely-forested valleys. If you come instead from the south you will encounter The Narrows, an infamous two-mile stretch of canyon road that hugs a swift serpentine creek like a sidewinder's shadow.

Either way, once you head off the county road you'll ascend over thousand feet on a two-and-a-half mile white-knuckle road cut into a nearly-vertical mountainside. Then, just when you think that anyone who'd choose to build here must truly be insane, you'll drop down into a peaceful valley and spy a cozy, tightly-built log home on 52-acres of rolling, pine-rimmed meadows.

And you'll quickly forget the road as you find yourself wishing you lived here.

It's the same feeling that washed over Ed and Val seven years ago, when they first set eyes on their future home site.

Today it all looks like it must have been easy. The couple's 1,500-square-foot home stands proud and stout amidst the surrounding terrain. The octet of solar panels mounted on the south side of the

spacious three-sided deck seems perfectly germane to the setting, and a small wind turbine southwest of the house spins effortlessly atop its 40-foot mast. And to the east of the house a small frame workshop—appearing now as little more than an afterthought—stands as a reminder of Ed and Val's toils, for this was home while they were building the log house. "We lived in a small camper while we built the workshop, so moving in there was a real step up for us," Ed recalls, with a wry grin.

The workshop, they soon discovered, was just a warm-up—a tiny nibble of the banquet of labor that lay ahead. Since they both worked fulltime during home construction—Ed as a builder of manufactured homes and Val as an information technology specialist—they quickly realized they would not have time to do all the work themselves. To speed things along they hired out the basement foundation and paid a crew to set the wall logs from their custom Real Log Homes package. From there they were on their own.

Working weekends and before and after work, Ed and Val's labor of love slowly began to take shape over the next year and a half. One neighbor helped with the plumbing, another—known locally as Windmill Jon—offered much-needed assistance with the solar, wind and electrical systems. By the time they moved in toward the end of the summer of 2001, practically everyone in the canyon had pitched in to help with one project or another. "We were amazed at the number of talented friends and

neighbors willing to lend us a hand,” Val gratefully acknowledges.

After nearly two years of living with not many more conveniences than a pair of well-equipped backpackers, Ed and Val were ready to enjoy the luxury of their solar- and wind-powered home. It didn't take long to realize their diligence and perspicacity had all been worth it—living with solar and wind energy really was as simple as they hoped it would be.

The system's success owes as much to good equipment and design as to expert installation. “We bought most of the system from Real Goods, and their technical staff turned out to be a godsend,” Val explains. “Whenever we had a problem, they had the solution.”

The solar and wind systems that provide electricity to Ed and Val's home are simple yet elegant and, for the most part, more than adequate. The deck-mounted solar array is the workhorse of the system. Rated at 980 watts, it keeps the bank of sixteen L16 solar batteries—enough battery power to store away 37 kilowatt hours of electricity—in a high state of charge on any day with a reasonable amount the sunshine. For welcome backup on not-infrequent windy days, a Southwest Wind Power Air 403 wind turbine, rated at 400 watts, augments the steady flow of solar energy.

A Trace SW4024 inverter is responsible for transforming the 24-volt DC current from the charging sources into usable 120-volt AC house current, and a TriMetric digital meter provides constant information about the batteries' state of charge and the rate of charge coming in from the charging sources.

A very nice system. But is it perfect? Not quite, or at least not yet, according to Ed. “Just a couple more solar panels will make a world of difference,” Ed confides, “to help get us through the winter when the furnace is running and the sun's low in the sky.” Ed candidly admits that forced-air heat was not the best choice, and if they could do it all over again he and Val would

probably go with either hot-water heat or simply wall-mounted propane heaters.

So, while Ed's 7,000-watt gasoline-powered generator sits placidly in the basement most days he doesn't use it to pump water into a large cistern from a 400-foot well, he finds that he needs to run it for several hours to charge the batteries after a spell of cold and cloudy weather. Ed figures another 200 or 300 watts of solar will just about solve the problem.

To help save precious watts, Ed and Val use mostly propane appliances. A catalytic woodstove in the great room takes the strain off the heating system when someone is there to stoke it, and large south-facing windows provide a bounty of light and heat, even on the coldest sunny days.

Cell phones keep them in touch with friends and relatives, and satellite TV and internet services keep them connected. Best of all, they haven't experienced an electrical blackout in five years.

Two years ago a neighbor brought electrical power to within a couple hundred yards of Ed and Val's house. Did it arouse any feelings of temptation? “We didn't give it a minute's thought,” Val declares, with a dismissive flip of her hand. “Ed and I have forgotten what an electric bill looks like, and we see no reason to be reminded.”

Despite a few twists and turns in the long road to energy independence, Ed Brown and Val Hall, it seems, are exactly where they want to be.

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