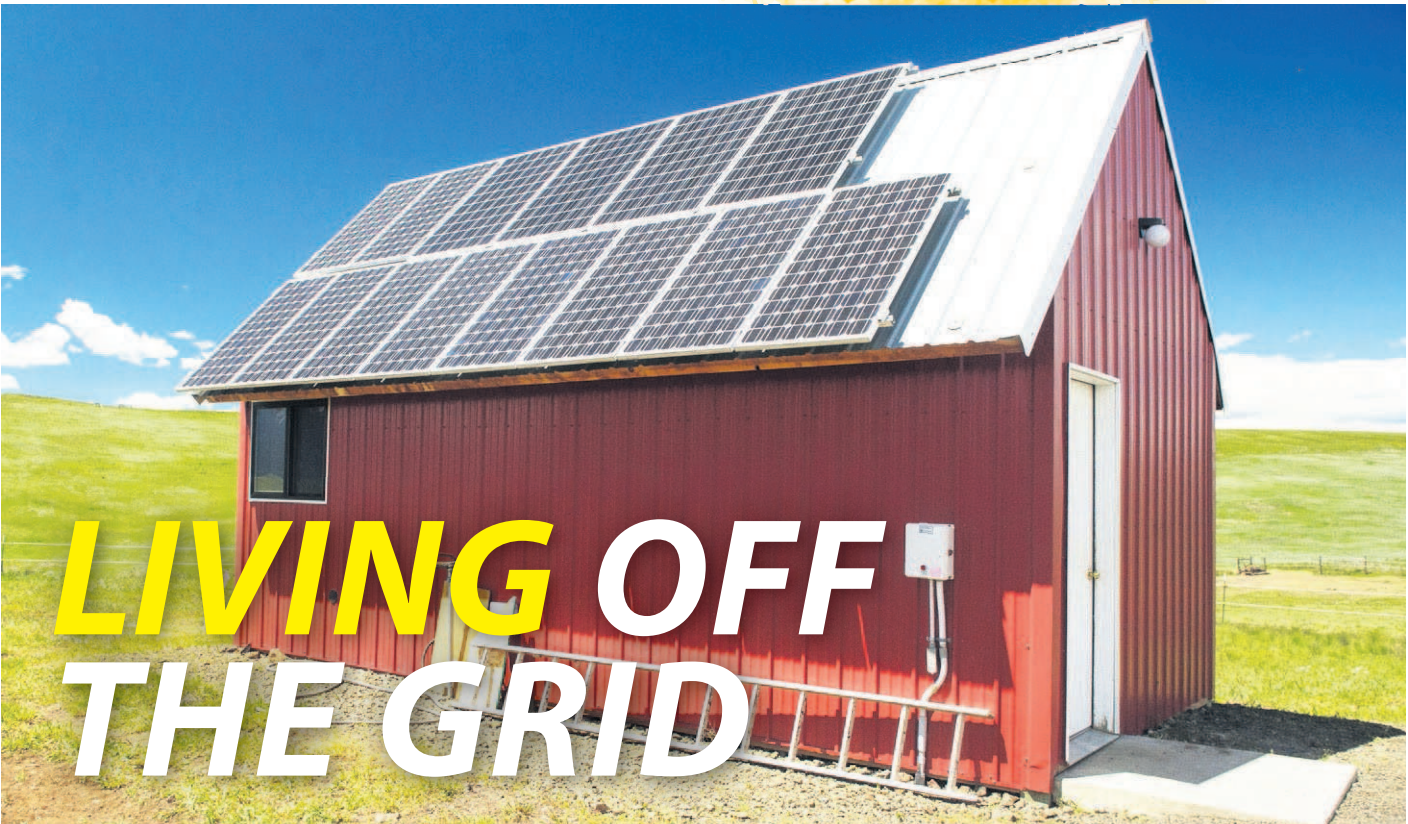


HOME & GARDEN



Ellen Bishop/Special to the Chieftain

Within a sturdy shed located behind Lesley Neuman’s house is her solar system, it provides power for her house, barn, and well-water pumping system. The building also houses the inverters, batteries, and generator, as well as gardening and horse supplies.



Ellen Bishop/Special to the Chieftain

Tulips bloom in profusion in the front yard of Lesley Neuman’s solar home. “I put the panels on a separate building,” she said, “because I didn’t want the house to look like it was solar.”

Solar power makes Neuman’s Wallowa dream come true

By Ellen Morris Bishop

Special to the Wallowa County Chieftain

From Lesley Neuman’s front porch, the full sweep of the Wallowa Mountains seems close enough to touch. But without solar power, living here would be impossible.

Neuman, an avid horsewoman with a career in graphic arts, bought her 320 acres about 10 miles outside Lostine in 2007.

“Wallowa County just felt like home,” she said. “When I got to the house site and saw the mountains, I cried.”

Getting power to the site was a priority. But sticker-shock set in when she began investigating. Bringing conventional electricity to the site would cost around \$40,000.

“And that was just for the poles,” she said.

So she set about finding an alternative power source to make her dream come true. Ultimately, solar seemed the best choice.

Solar power was a relative newcomer to Wallowa County in 2007. With the help of Enterprise Electric and Backwoods Solar of Sandpoint, Idaho, Neuman designed a system with eight 165-watt solar panels and eight deep cell storage batteries linked to the panels to provide electricity when the sun wasn’t shining.

The complete solar system, including a deep well pump and cistern to supply water for home and horses, cost roughly \$15,000

“Since then, I’ve added more batteries and two more panels. There’s a huge difference. The newer panels are about the same size, but generate 285 watts. Solar technology has greatly improved in only a few years,” Neuman said.

The solar electrical system is fully contained in a small building constructed between her house and barn. It consists of 14 roof-mounted solar panels that produce close to 4 kilowatt-hours of electricity on a sunny day. The power is routed through

a sinewave inverter and stored in 14 large, heavy deep-cell batteries.

“I can pick up a 50-pound feed sack easily,” Neuman said. “But these are a lot heavier — maybe 100 pounds. It’s really hard to pick one up.”

Battery maintenance is critical, she noted. “I check the water levels in them almost daily, and top them off with distilled water when they need it.”

From the batteries, power goes to house and barn.

Living off the grid requires system redundancy. The shed also shelters a hefty 10,000 watt diesel generator that supplements solar panel power when needed.

Like the panels, the generator funnels power into the batteries, which, in turn, provide electricity to house and barn. But even in cloudy weather or winter storms, the generator doesn’t get used much.

“I turn it on about twice per week,” Neuman said. “The last time I put diesel fuel in the generator’s tank was in 2015.”

Ensuring that her water system works is a top priority. With a 650-foot-deep well, Neuman uses a “soft-start pump” that begins pumping water into her cistern at a rate

of nearly five gallons per minute, and then switches to a more robust pumping rate.

“It’s a 500 gallon tank,” Neuman said. “I fill it when the water level drops about 20 percent or 100 gallons.” That takes about 20 minutes. But keeping the tank near-full means that in the case of a system malfunction, she and her horses will have sufficient water for days.

Propane provides power for some appliances and heating in this off-grid home. The stove and drier are propane powered, and the propane heater is more efficient than her wood stove, though it has a completely different ambiance.

“I love the wood-stove, Neuman said. “But propane costs less.”

Within the last decade, solar power generation has grown across Wallowa County. Estimates by Renewable Energy Solutions of Enterprise in 2011 say more than 10,000 megawatt-hours of renewable electricity were generated in Wallowa County, enough to power 27 percent of county households, or about 840 homes. The combined value of renewable heat and electricity generated in Wallowa County is \$5.1 million annually (nearly 2 percent of the county’s GDP).

MORE INFO | Renewable Energy Solutions: 401 NE First Street, Enterprise, Oregon • 541-426-4100 • renewablesolutionsllc.com/home



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