

Green consultant renovates ranch, turns it into LEED-certified home in Iowa City



Martha Norbeck's Iowa City, Iowa, home Friday, June 30, 2017. (Jim Slosiarek/The Gazette)

By Molly Rossiter, correspondent

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IOWA CITY — Martha Norbeck doesn't believe in waste.

As founder and president of C-Wise, a “green” construction consulting group, she helps builders and homeowners find energy-saving ways to build homes and commercial buildings or to more efficiently use existing space. Her company’s list of projects ranges from private homes to office space, university dormitories — even the football training facilities at both University of Iowa and Iowa State University.

Her most recent project was the first Platinum rated LEED-certified new home in Iowa City. LEED — Leadership in Energy and Environmental Design — recognizes buildings for efficiency and sustainability.

It’s no surprise, then, that the woman with big ideas would make the most of her little home in Iowa City.

“It’s all about how you use the space,” Norbeck said of her home at 906 S. Seventh Ave., in Iowa City, a 570-square-foot ranch with a raised bedroom. “A lot of being energy efficient is in human behavior rather than in buying LED light bulbs or a lot of the other things that are out there. Making the most of your space and changing a few habits can make more of an impact.”

When Norbeck bought the house in 2006 it was just 425 square feet — the raised bedroom was something she and her partner built in 2015. The first room inside the front door was a small area that served as a bedroom, living room and office space all at once. A tiny bathroom separated that room from the kitchen.

“I was a young professional just starting out, and this was \$50,000,” she said. “What else was I going to find for that kind of money?”

She immediately went to work tearing down walls and removing the existing ceiling. She took out the bathroom and tiny bedroom to open the space to a larger living area. The bathroom was relocated off the kitchen. Her “bedroom” at the time was a bed on stilts at end of the living room, opposite the kitchen. Her office was a desk situation under her bed.

Now with the bedroom addition, stairs lead to a loft bedroom and a platform bed with drawers for towels and clothes. Even the space under the stairs is used — three drawers slide into the staircase and will hold things not needed for everyday use.

In putting the house back together, Norbeck fell back on her philosophy of letting nothing go to waste. Much of the wood removed from the walls was reused to frame the bathroom door, build a stand for the bathroom sink and a medicine chest/vanity in the bathroom. She went to several different Habitat for Humanity ReStore locations for everything from tile to light fixtures and even the toilet.

“We saved and reused most of the plaster from the original house,” Norbeck said, “but we replaced most everything else. The only things we didn’t take out were the kitchen cabinets.”

Every room has a reminder of Norbeck's passion for conserving resources.

In the living room, an indoor air handler peeks out of the top of the wall opposite the front door, and with the heat pump located outside, the air handler serves as both an air conditioner in the summer and a heater in the winter.

The kitchen is equipped with a countertop stove, a toaster oven, and a compact fridge/freezer Norbeck said she bought intentionally.

"Forty percent of the food we buy is wasted," she said. "We buy so much food, bring it home, put it in the fridge and forget about it. It's harder to lose food in a small refrigerator. This makes me eat the food I have because I don't have a lot of room to keep adding more."

The toaster oven serves as her main oven — it can roast a chicken, she said, and cook pizzas, lasagna, just about anything she'd need.

"I'm not a big meat eater, so I don't need anything really big," she said. "This does everything I need it to."

The bathroom is equipped with a dual-flush toilet and a shower system that regulates not only temperature, but water flow.

"If I'm taking a shower, I'll want a little bit of a faster flow," she said, "but when I'm giving my dog a bath, he doesn't want a lot of water coming out at once."

In addition to the dual regulator on the shower, her plumbing is set up as low-flow, to keep water waste to a minimum.

Outside, the metal roof ensures Norbeck won't have to replace it. Her yard is largely edible — strawberries and two varieties of raspberries grow in large patches in the front yard, and off to the side of the house is a large vegetable garden.

There is some grass to be mowed, however — and Norbeck uses an electric mower.

The countertop stove is a gas stove, but everything else in the house is electric, Norbeck said. Eight solar panels on the roof help keep costs down. Her electric bill for May was just \$8.59, and much of that was fees, she said. Her water bill is just \$10 per month.

“I’m not doing anything that most anyone else could do, if they wanted,” she said. “I keep the thermostat set really low in the winter, but it’s winter — I like wearing sweatshirts and my wool socks.”
