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NEW UNDER

Innovative passive solar home looks to be 90 percent more efficient

By STARLA POINTER

Of the News-Register

Cellar Ridge Construction broke ground in mid-September on what stands to become "the most efficient home ever built in McMinnville, by far," according to John Mead, co-owner of the green building company.

While it will look like any other dwelling, the house will meet a new "Passive House" standard that provides 90 percent more efficiency than conventional construction. That far exceeds the 30 to 50 percent gain achieved through typical "green" building standards in the U.S.

The new standard was developed in Germany, where it is called Passivhaus. Some German and Austrian cities have adopted this strict energy efficiency as the standard for all new homes, and it is already spreading to other countries in Europe.

It's fairly new to this country, but Mead thinks it will come into common use here within a decade.

Passive requires super-insulated walls, twice the thickness of those incorporated into most new homes, along with extra insulation beneath the slab and in the attic, and joints tight enough they don't allow any leakage.

It's so efficient, there's no need for a separate heating system, Mead said. Heat from lights, appliances and occupants typically keeps a passive-certified house warm enough, he said.

"These houses are so highly insulated, they can overheat on a sunny day in winter," he said. Because of that, such houses include a ventilation system, serving to draw fresh air in and expel stagnant air.

Mead said a tiny heater is included to warm incoming air, when necessary. He said it uses about the same amount of energy as a blow dryer.

Owners John and Debbie Pitney tore down a small, older house in northwest McMinnville in order to fulfill their dream of highly energy-efficient housing. They dismantled the structure themselves, carefully removing nails and sorting out the reusable materials.





Above: Construction worker Don Mock installs R15 insulation around the base of the p out and maintain even temperatures inside the house. Marcus Larson/News-Register Left: D

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THE SUN



assive structure. Before concrete is poured inside the frame, crews will lay down six layers of 2-inch thick insulation to keep cold ebbie and John Pitney break a bottle of bubbly on the bucket of the excavator, signaling the start of construction. Submitted photo

A lifetime of work for the environment

By STARLA POINTER

Of the News-Register

For Debbie and John Pitney, building an eco-friendly passive house is just another step in a lifelong march for social and environmental justice.

Both are retired United Methodist ministers. She served as senior pastor and he as associate pastor at a First United Methodist church in Eugene for 16 years before moving into retirement this summer.

For decades, they've been involved with environmental justice, organizing in their own church as well as the larger faith community, John said.

They also have lived their views as much as possible, installing a solar hot water system in the church parsonage, for example, and taking other steps to help the environment.

"For us, being responsible for the Earth has always been part of our world as people of faith," he said.

They've also tried to make their efforts visible in order to model good stewardship of the environment.

"We've wanted to be a model to show that a lot of people can live this way," he said, "That way, we're going to have to live to meet the goals we'll all have to meet."

Retirement offered them the opportunity to go a step further and built a home that both meets their needs and shows off their values.

"We don't want to be those grandparents who have to explain to our grandchildren why we didn't do all we could," he said.

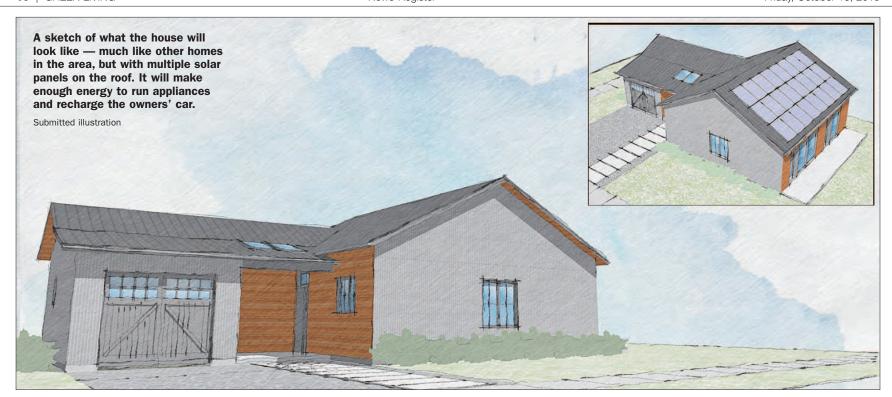
They chose McMinnville as the location because they'd become familiar with the area while their daughter was attending Linfield College.

She now teaches math at a middle school in Beaverton. "We figure she'll always nearby," John said

They like McMinnville. And they love their neighborhood, which is filled with older homes of modest size.

Their house will be 1,000 square feet. "That seems about right for us," he said.

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"That's one thing the owners want to show. You don't have to be a millionaire to build an efficient home. Even on a modest budget, you can go passive."





RECYCLING PAINT IS EASIER THAN EVER!

Household paint can now be taken to the Newberg and McMinnville Sherwin Williams Paint Stores, Newberg Parr Lumber and the McMinnville Habitat for Humanity ReStore anytime during regular business hours. It doesn't matter if the paint is reusable or not.

If the paint is dried up or the cans are empty, throw the cans in the garbage. If the cans have frozen or separated paint, usable little amounts of paint, or half the can is still full, take them to one of these locations. Why wait in line at the Household Hazardous Waste Collection event, if you have other options? The paint is going to end up at the same recycle location wherever you take it.





is your public agency that works to keep the air, water and environment safe for you and your family Friday, October 16, 2015 News-Register GREEN LIVING | 11

For instance, rough-sawn Douglas fir from the old house will be cut into trim and window moldings for the new one.

Not only is that a good example of recycling, Mead said, but it also adds beauty. "The best part of reclaimed wood is the patina," he said.

He said workers will cut the repurposed wood carefully, then apply a coat of zero volatile organic compounds sealer, an eco-friendly product that won't affect indoor air quality.

Cellar Ridge invested about six months in planning and design work before breaking ground, Mead said.

Pre-groundbreaking work included a computerized analysis of the lot to determine which parts get the most sun and shade, in order to take maximum advantage of natural warmth. "The computer model showed the potential energy use of each area," he said.

Finally, with the old house down and the wood sorted, Cellar Ridge excavated for the slab that will serve as the base for the new structure.

Workers laid down six layers of 2-inch foam, creating a foot-thick insulation barrier. Then a cement mixer arrived to pour a thick layer of concrete over the foam.

In the coming months, Cellar Ridge will stuff insulation into the 13-inch thick walls, and blow another two feet into the attic.

They'll install special triple-pane windows, being shipped from a factory



Submitted photo

An excavator begins digging the hole for the well-insulated slab.

CCB#48494

in Lithuania. Mead said they couldn't find any super-efficiency windows in the U.S. at an affordable price.

He said workers will also be installing solar panels, to "power their house and their electric car."

He estimated construction would take about eight months, about three months longer than conventional construction.

Building to passive standards is more expensive, Mead said, but only slightly exceeds the cost of high-end construction. And with no need for heating or air conditioning systems, the house will be cheaper to operate.

"That's one thing the owners want to show," he said. "You don't have to be a millionaire to build an efficient home. Even on a modest budget, you can go passive."

Look for an update on the passive solar construction project in the next edition of Green Living, coming in early 2016.

Church helps recycling effort

Members of New Hope Church in Sheridan collect and recycle cereal bags and liners to reduce landfill waste.

The church, at 919 S.W. Second St., has become a drop-off location in the MOM Brands Cereal Bag Brigade — a free, national recycling program created by MOM Brands

and TerraCycle.
People can
now drop
off their
traditionally
nonrecyclable cereal
bags at the
church.



For every shipment of cereal bags sent to Terra-Cycle for recycling, New Hope Church earns points toward a charity donation for the nonprofit of members' choice. All of the collected cereal bags sent to Terra-Cycle are recycled into new products and materials, such as playgrounds, park benches and recycling bins.

More information is available online at www.terracycle.com and by calling 443-618-7042 or e-mailing aibrougher @hotmail.com.

— The News-Register

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