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Dream house 'off the grid' Features Tulikivi fireplace as sole heating

PLEASANT TOWNSHIP, N.D. — By the end of February, Missy Borgen will likely be off the grid. The power grid, that is.

Borgen will own a new home that doesn't draw a single watt of energy from a power line, much less have a power line near it.

Every aspect of the home, which sits on 40 acres about six miles south of Horace, is designed to be "green," or environmentally friendly.

If energy prices keep rising, it could also make neighbors green with envy.

"This is my break from the stick-andframe conventional home", said Borgen, an anesthetist at Fargo's Innovis Health. "This is my dream home."

Borgen, 45, who is now selling her north Fargo home, said she has researched environmentally-friendly and energy-efficient home designs for nearly a decade.

She decided not to tie an electrical

line to the house as a power backup when she was given an estimate of \$25,000. For that kind of money, she said, "I could buy a lot of solar panels or whatever else I needed."

The home uses a sophisticated combination of photovoltaic panels mounted in an array that follows the sun, a small wind turbine, and a propane generator for backup—just in case—to generate electricity, said contractor Bill Worth of Fargo's Worth Construction. (Powering up)

The power is stored in a bank of 12volt batteries, with power converters to provide 120- or 240-volt power for lights, TVs and appliances, Worth said.

Hot water is provided by a passive solar panel system mounted on the roof, he said.

"It's totally off the grid. There's no power within a mile in any direction," Worth said.

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Tulikivi Distributors Meet In Alaska

Tulikivi 2008 Distributor Meeting - May 20 - 24th, 2008

Tulikivi held its annual distributor meeting at the Seward Windsong Lodge in Seward, Alaska. Ron, Jerry and Phil from WarmStone were all able to attend this event and they brought along their wives to share the Alaska experience.

The beautiful Windsong Lodge overlooks the Resurrection River Valley and is surrounded by giant spruce trees and Alaskan wildflowers. Tulikivi representatives from Finland hosted meetings to educate the North American distributors about the upcoming lower emission fireplaces for 2009, technical updates, brochure planning for 2009, and the European promotional campaigns. All of the distributors en-

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Matt Madden—Builder

Matt Madden braved the June blizzard (okay, so maybe it was only a light snow shower) to meet with me in our show-room to chat about Riverbend Builders.

Matt grew up in Pittsfield, Massachusetts and has a carpentry background going back to his childhood. He recalled working with his dad during summers learning and doing carpentry work. He later attended the University of Massachusetts and earned his degree in Wood Management, which, as Matt explained, "is the science of wood and building technology." After graduating, Matt spent a summer working in Glacier National Park where he became hooked on the beauty of Montana. He later moved to Bozeman and worked as a carpenter for a while. In 2000, Matt started Riverbend Builders which specializes in building custom homes.

Matt describes Riverbend Builders as a small company

Matt extolled the many advantages of the product – first and foremost being the exceptional built-in thermal, acoustic, and fire protection qualities. Not only are these homes moisture resistant, which means they won't rot or decay, but they are insect resistant as well. There is no offgassing of the product. The material has a highly recycled content and is fully recyclable. Finally, the use of Durisol® blocks provides an ease and increased speed of building.

When the Durisol® blocks are stacked, the insulation is positioned towards the exterior of the wall which results in additional energy efficiency that is not possible with other insulated concrete forms.

Matt has installed Tulikivi fireplaces in most of the homes that Riverbend Builders has built. He indicated that Tulikivi fireplaces are so clean-burning and energy efficient that they work perfectly with the type of homes he



Interior of Montagne home built with Durisol®



Madden built the Taylor residence in Bozeman, Montana



Madden Family enjoying the warmth of a Tulikivi at home

which employs two crews of four carpenters each. Focused on sustainable building practices, his ultimate goal is always "to build a better home." In Matt's words, "We focus on building perfect homes, meaning durable, healthy, and efficient homes." He manages to achieve this quite by using Durisol® building products.

Durisol® products are made from a cement-bonded wood fiber material that has only natural ingredients. They are composed of specially-graded, recycled waste wood (100% clean, natural, softwood lumber). The wood is chipped into wood fiber which is then mineralized and bonded together with Portland cement. This material is then molded into reinforced concrete forms (interlocking modular units that are dry-stacked and filled with concrete and reinforcing steel).

builds. The Tulikivi radiates heat out into the room and then that heat is trapped in the walls and is radiated back into the home as the air temperature drops in the room.

When I asked Matt to tell me about the most interesting project he has worked on, he replied, "The home we did for Cliff and Joan Montagne was very interesting, and labor-intensive, because we actually dismantled the existing home until all that was left was an existing fireplace which was left standing. We then rebuilt the home, recycling many of the materials from the old home, around the fireplace. In addition to the fireplace, we also installed a Tulikivi. We used solar panels which also provide for hot water."

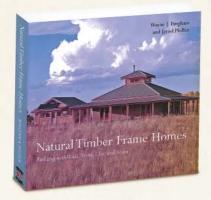
Matt recently completed building his own home, located in Bozeman, last year and lives there with his wife of nine years, Lisa Hughes, and their daughters, Gillian who

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is six, and Molly who is three. Their home is a 2700 square foot beauty and has a Tulikivi model 2200 on the main level. The see-through unit is located between the kitchen and dining room. Matt noted "now that I've been able to enjoy a Tulikivi in my own home, I'm finally able to appreciate what I've been trying to achieve in the homes that I've built for others."

Barb Wise lives in Livingston, MT where she works part-time at WarmStone (when she's not playing at fishing, hiking, skiing or kayaking).



Natural Timber Frame Homes Building with Wood, Stone, Clay, and Straw

Natural Timber Frame Homes, written by Wayne J. Bingham and Jerod Pfeffer is a great read and is filled with wonderful photographs depicting not only timber frame design, but strawbale, clay and stone design as well. The book was published by Gibbs Smith and is available thru www.gibbs-smith.com.

Architect Wayne J. Bingham assists owners and builders in planning, designing and constructing natural timber frame and strawbale homes. Wayne, along with his wife Colleen, reside in Teton Valley, ID where they built their own timber frame and strawbale home. They incorporated a Tulikivi TLU2002/50 model into their design.

Wayne's work has been published in Architectural Di-



Authors Wayne Bingham and Jerod Pfeffer (and Sage)





gest, The New Strawbale Home, Nikkei Architecture and Popular Science to name a few. He has also coauthored Strawbale Home Plans.

Coauthor, Jerod Pfeffer has a background in carpentry along with a formal education in photography and journalism. He teaches others the craft of timber framing and hand-tool woodworking through demonstrations in his workshops. Jerod built his timber frame home in rural Idaho where he installed a Tulikivi TLU2450/1 and an H700 cookstove.



Juha Turnnen (Jutu to us) recently announced that he would be leaving his current capacity as Vice President of sales for the V.S. Jutu moved back to Finland from Monterey, California a few years Jutu moved back to Finland from Monterey and has been managing the North American market from there.

JuTu will continue to work with the North American distributors on a part time basis, though in a more technical capacity after his three month sailing vacation). He will also be spending time with a new, soon to be announced, North American marketing manager helping him become oriented to the idiosyncrasies of the U.S. marketplace.

Jutu was a great help to me personally on conquering dozens of challenges over the past few years. We all wish Jutu the very best in his new capacity!

Dream house 'off the grid'

Heat through the North Dakota winter (and spring and fall) will come primarily from a handsome gray Finnish-made soapstone furnace and oven that divides the kitchen and dining area from the living room, Worth said.

Two passive solar panels built into the south wall of the house have fans to blow sun-warmed air through the abode.

The large south-facing windows are glazed to let maximum light into rooms so the sun can heat the red concrete floors and warm the home during the day, Worth said. The home's other windows are much smaller and energy efficient to conserve energy, he said.

"The first year is going to be a big learning curve" to figure out how to properly control temperatures, Borgen said.

The house is super-insulated. The walls are 13 inches thick, with rigid foam panels on each side of poured concrete walls that extend from the foundation to the roofline, Worth said. On the second floor, the peaked ceilings and walls were sprayed with a special flexible foam insulation providing 10 inches of insulation.

A berm that's up to 5 feet high in spots shelters and insulates three sides of the home, he said.

Rainwater runoff will be directed to a reservoir just southeast of the house, and will be used to irrigate a large vegetable garden, Borgen said.

Water used for laundry, dishes and washing her three Australian shepherds—also called gray water—will be recycled during warm weather for irrigating flowers and an orchard that Borgen started planting last spring.

Over time, she intends to make her acreage into a hobby farm, starting with chickens, turkeys and ducks.

"Fowl are a good pairing with an orchard,"she said, because they clean up dropped fruit and prevent the spread of insects.

Ground was broken on the house

in August. It will have about 3,280 finished square feet of space between the first and second floors, Worth said. Another roughly 2,600 square feet is available for finishing over the triple garage, he said.

Neither Worth nor Borgen would talk about construction costs.

Worth said the prices of the passive solar system or paying for threequarters of a mile of piping to bring in rural water make the cost of building Borgen's new home anything but typical.

If electrical lines are strung to the area for other subdivisions, Borgen can sell excess energy to a power company, speeding up her payback on the original investment, Worth said.

"If energy costs keep going the way they are, then it doesn't look like such an expensive investment," he said.

"It's an environmental choice," which does not provide an instant or even a quick payback, he said.

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Distributors Meet In Alaska

joyed the warm hospitality and the peaceful surroundings that the lodge had to offer.

An evening reception was hosted by Jamie and Lori Paiken and Gary and Susan Ogden of Alaska Masonry Heat, at the Alaska Sea Life Center in Seward. Attendees were treated to an array of marine life exhibits and the opportunity to learn how the Center works to maintain and rehabilitate the marine ecosystem of Alaska. The reception was held in the Center's spectacular aquarium viewing room where the attendees were entertained by puffins, sea lions, and numerous fishes and crabs.

Tulikivi also hosted a Kenai Fjords cruise that included a salmon bake at Fox Island. During the cruise, many forms of wildlife were spotted including seals and whales. The experience was truly amazing, and everyone had a fabulous time (except for the few landlubbers who got a touch of seasickness!).

Ever the sportsman, Jerry Jessen of WarmStone, and his wife, Kim, managed to get in quite a bit of fishing. On the front page is Kim with the 40 pound king salmon she snagged. They both brought in some impressive halibut as well! Ws

Countertop & Sinks From Alberene Soapstone Company

WarmStone is offering soapstone for countertops and sinks that is quarried from the Alberene Soapstone Company located in Schuyler, Virginia. Jerry Jessen, WarmStone's resident countertop expert, recently visited this quarry and was pleased with the quality and appearance of the soapstone slabs. This handsome stone, named Old Dominion, is a dark charcoal grey with some veining which will complement any kitchen or bath décor. The hand-carved soapstone vessel sinks from Alberene Soapstone Company shown here are also available. Contact us for more information and pricing.