

Shelter first in state to run on renewable energy

The apartment house in Alfred will house people transitioning from being homeless to independent.

By *TUX TURKEL, Staff Writer* November 28, 2008

Formerly homeless residents have begun moving into the first shelter facility in Maine to get most of its heat and half its electricity from renewable energy sources.

Vinton Hall is an eight-unit building next to the York County Shelter in Alfred. The heavily insulated apartment house has solar panels that warm water and generate electricity. Much of the space heat comes from a high-efficiency wood boiler.

The building's nonprofit owner, York County Shelter Programs Inc., finds housing options for more than 600 homeless and low-income residents annually. It tapped a variety of grants and loans to finance the \$800,000 project, calculating that the higher up-front capital costs for green construction would be offset over time by lower operating expenses.

Petroleum prices are half what they were during the summer. But Vinton Hall was designed in anticipation of \$5 a gallon heating oil becoming the norm.

"We wanted to make this building sustainable for decades to come," said David Beseda, the shelter's housing director. "We can keep people in housing for a longer term by making it more affordable."

The project has other goals, besides saving money. The shelter wants all its housing in York County to help reduce the state's dependence on fossil fuels and slow climate change. It recently installed a solar hot water system at a women's shelter in Sanford.

At Vinton Hall, the agency also is aiming to use renewable energy to make a therapeutic connection with shelter residents.

The agency operates a farm in Newfield, where formerly homeless residents harvest firewood. They're delivering some of that wood this fall to Vinton Hall. Residents at the hall are responsible for feeding the boiler with the five or so cords needed to heat the 5,500-square-foot apartment house.

"It makes them feel good about living there," Beseda said. "They feel part of the solution."

Vinton Hall is set among historic buildings that in the 18th century made up a thriving Shaker community, now owned by the Brothers of Christian Instruction. The firm that designed the building, Joy & Hamilton Architects of Sanford, used steep gables and a

metal roof to reflect the Shaker's agricultural heritage. It also made the most of the sunny site to create bright, uplifting rental units for residents who are in transition from being homeless to becoming independent.

Set onto the roof's southern pitch is a solar electric array, expected to generate half the building's power needs. Eight flat-plate collectors will supply all domestic hot water during the summer. The solar hot water system is tied to a 900-gallon thermal storage tank in the basement, as is the wood boiler.

Energy is stored in the tank until needed to warm the radiant slab floors. Digital controls balance the wood and solar systems, and a touch screen in the lobby lets residents monitor the functions.

The building uses no oil. The wood boiler also can burn propane as a back-up fuel.

"Here's an organization that said it wanted to tackle the global warming, energy independence issue, and this is what they came up with," said Pat Coons, co-owner of ReVision Energy in Portland.

Coons installed the renewable energy equipment at the project. The two solar systems and the wood boiler and tank cost \$86,124.

The heavy insulation in the walls and ceiling and the high-performance windows boost the total cost of green building components to roughly \$120,000.

These costs are amortized in the mortgage, not utility bills. That shift makes financial sense, Coons said, because utility bills will be cut by more than the mortgage has increased.

The Vinton Hall project was financed through grants and low-interest loans from federal, state and private institutions. The green building measures are in line with energy-efficiency standards now required by the Maine State Housing Authority, one of the lenders.

Some of the 800 affordable housing projects financed by the agency have been operating at a loss because of high energy costs, according to Dale McCormick, the agency's director. Nonprofit developers that own these buildings can pay off any added renewable energy costs in a few years of lower operating costs, she said.

"We think it's just good business," she said.

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Vinton Hall's rooftop solar array is expected to generate half of the eight-unit building's power needs.