

Idaho's first Energy Neutral home, now under construction, will produce more energy than it demands

Eagle company developing new home that will incorporate solar, computer technology to be an energy producer; company eyes markets in business and agriculture

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For more information,

Micah Gosney 208-939-3495

Don Gillispie 208-939-9311

www.aehipower.com

www.energyneutralinc.com

www.facebook.com/AEHIPower

www.twitter.com/energyneutral

An Eagle company is constructing its first "Energy Neutral" home, designed from the ground-up to produce more energy than it consumes.

"This first home will establish that an efficiently built home equipped with renewable technologies will achieve energy neutrality" said Micah Gosney, Executive Director of Energy Neutral.

The idea of using renewable energy to augment residential power has been around for years. However, Energy Neutral is using established methods of energy production – such as solar panels - and combining them with energy-saving construction practices to provide an affordable home that achieves energy neutrality. The home may draw energy from the grid as needed, such as during evening hours, but send energy back into the grid on sunny days. In all, the home is expected to be a net producer of electricity and carry a zero energy bill over its life.

Energy Neutral is a holding of Eagle-based Alternate Energy Holdings Inc., which is seeking to build a nuclear plant in Idaho and other states and is working with Chinese companies on related energy ventures. AEHI CEO Don Gillispie said he has had the idea for several years to make an energy neutral home and is funding its construction with a personal loan to the company.

"Renewables produce energy considerably less than half the time, so integrating them with a reliable source baseload power gives the best of both worlds," said Gillispie. "This is another way to help the state and country by lowering grid demand and consumers' power bills not to mention reducing emissions."

"This house, costing the same as a conventional heated and cooled building, will save its owner over \$200,000 in energy bills over a fifty year life at today's costs," Gillispie said. "When you consider the escalating cost of energy, the savings could approach \$1,000,000 over the same time period effectively allowing the homeowner to buy the house including interest with his energy savings."

Biltmore Company of Meridian was chosen to construct the home and construction started on November 3, 2009 and will be completed in the spring of 2010. The home's address is 12963 W.

Scotfield Court in Boise in the Monet Meadows subdivision, located in west Boise, near Centennial High School.

The 2,900 square-foot Craftsman/bungalow style home costs about as much as a typical home to build (around \$100 a square foot), due to government and utility incentives. It will include:

- Photovoltaic panels sufficient to supply energy requirements to more than cover everyday consumption
- 2 X 6 wall construction using advanced framing techniques for energy efficiency and material conservation
- High efficiency insulation upgrades including foam insulation and blow-in blanket
- Radiant Low E roof barrier to reduce heat transfer
- Power save energy conservation controls
- Solar attic fans for heat expulsion during hot summer days
- Low E and U factor windows to conserve heat transfer
- Key placement of sun tubes for day time illumination
- Room occupancy sensors can tell if someone is in the room and shut off the lights if they aren't
- Compact fluorescent and LED light bulbs
- High-efficiency heat pump with zoned air conditioning system
- Integrated Green Materials.
- A computerized system that monitors energy use in the house and looks for waste and potential savings.

The home will feature standard amenities such as a full basement; five bedrooms; home office; three bathrooms; covered front and rear patio; three car garage; large master suite with sitting area and spacious master bathroom; large kitchen with solid surface counter tops and large dining area; 10' ceilings in living area; 14' ceiling in office; 9' ceilings for all other area; hardwood floors; expansive windows and 8' entry and interior doors; fully landscaped front and rear yard with sod, trees, planter bed with bushes and underground sprinklers; and finished and painted garage.

The home will participate in Idaho Power's net metering program, drawing and supplying energy to and from the grid. Energy Neutral Inc. seeks to assist homeowners and businesses to reduce their dependence on traditional power by implementing alternative renewable power sources.

Energy forecasters predict more and more people will charge their hybrid vehicles at home, making further demands on the energy grid. Gillispie said energy neutral homes will be able to soak up some of that demand, allowing people to power their cars, in part, with free energy from their homes.

Energy Neutral is able to add more energy production features in future houses, such as photovoltaic panels that resemble shingles and small wind turbines for windy areas. While Energy Neutral is showcasing its abilities with the model home, it can also apply these technologies to farms and businesses and is hoping to break into those markets as well. Gillispie

said he hopes to eventually develop an Energy Neutral subdivision in Idaho and the model home is the first step.

“We think this will become more common over time in all kinds of development, especially if someone builds an example to show that energy neutrality is attainable, affordable and can be done with traditional construction methods. It is a green house that saves your green backs.” Gillispie said.