Program Summary

DESCRIPTION OF PROJECT

In late 2009, Flynner Homes was approached by the St. Jude Children's Research Hospital for participation in St. Jude's Dream Home Program. Created in 1991, the St. Jude Dream Home Giveaway is the largest single event fundraiser for St. Jude nationwide – having raised more than $173 million for the hospital to date. Builders, vendors and sponsors donate labor, materials and cash to construct a new home which is later raffled off. The humanitarian campaign creates a unique promotional initiative based around community interaction that is truly incomparable.

The 2010 Boise St. Jude Dream Home was designed, built, and verified to reach net zero energy consumption by Flynner Homes. Simply stated, the home will produce as much energy as it consumes over the course of each year. To achieve this pinnacle level of green building, every component within the home was specified to reduce the overall energy required for operation.

The Net Zero home, built by Flynner Homes with support from the Department of Energy's Building America program, is designed to show how smart building choices can result in a home that minimizes energy use while maximizing comfort and style. Located in Willowgreens, a sustainable 100% ENERGY STAR® community in Boise on the Boise River Greenbelt, the community is just a minute's walk to the Willow Lane Sports Complex and Park.

Boise's First Verified Net Zero Home

Flynner Homes' project is among the nation's most energy-efficient homes ever built - the first verified Net-Zero Home within Idaho. This home will actually generate as much energy as it uses, delivering on the "net zero" concept of no overall energy consumption and eliminating utility bills for the homeowner.

In Idaho, solar energy represents one of the most abundant sources of renewable energy currently available. The Net Zero Dream Home features a tight building envelop to ensure that the energy generated by the eight kilowatt solar system will be utilized as efficiently as possible to reach net zero energy use.

The home is connected to Idaho Power's (IDP) energy system using their Net Metering program, which allows customers to install

NET ZERO HOME

4859 West Willow Lane
Boise, Idaho 83703

HERS Rating: -12
Square Feet: 1,935
Cost/Sq. Ft.: $225
Home Value: $440,000

FLYNNER HOMES

Flynner Homes has been sustainably building and renovating quality green homes since 2001.

Core Values:
- Building and renovating certified green homes at no additional cost
- Enhancing customer's quality of life
- Supporting healthy and active lifestyles
- Creating sustainable communities

Scott Flynn, Managing Principal:
- EPA Lead-Safe Certified Firm
- Member of Think Boise First
- Member of Green Works of Idaho
- Certified Green Professional (CGP) designation from the NAHB
- Accredited member of the Better Business Bureau (BBB)

solar on their property and connect to IDP's electrical grid. The purpose of the program is to enable customers to offset their electricity usage – homes generating more electricity than they use can earn a credit on their utility bill.

Green Building Certifications

Flynner Homes chooses to certify all homes, including the Net Zero project, under the National Association of Home Builders (NAHB) Green Building and Northwest ENERGY STAR Homes programs. The NAHB program utilizes a third-party verification process that guarantees that the homeowner receives exactly what was promised – a healthy, environmentally responsible, and more economical home.

NAHB's program incorporates a 'House as a System' approach to areas of environmental concern into each home. Combined with Northwest ENERGY STAR, these features include:

- **Lot Design, Preparation, and Development** – Resource-efficient design and development practices help reduce the environmental impacts and improve the energy performance of the home.
- **Resource Efficiency** – Creating resource-efficient designs and using resource-efficient materials can maximize function while optimizing the use of natural resources. This includes reused, recycled and renewable materials.
- **Energy Efficiency** - This is a "whole systems" approach, which incorporates HVAC systems, foundations, insulation, windows, appliances, duct sealing, tankless water heaters and more.
- **Water Efficiency** – Green homes focus on water conservation both indoors and out by using such items as dual-flush toilets, ENERGY STAR appliances and moisture sensing sprinkler systems.
- **Indoor Environmental Quality** – Green homes reduce the amount of indoor toxins by eliminating the materials and sources that emit harmful vaporous contaminants.
- **Operation Maintenance and Homeowner Education** – Improper or inadequate maintenance can defeat the builder's best efforts to create a resource efficient home; therefore time is taken to educate the homeowner about proper operation of their new systems.

Northwest ENERGY STAR: http://www.northwestenergystar.com/
National Association of Home Builders: http://www.nahbgreen.org/

NORTHWEST ENERGY STAR®

The Northwest ENERGY STAR Homes program forms the energy efficiency foundation for NAHB and LEED programs.

- Designed by the EPA and the DOE; facilitated regionally by the Northwest Energy Efficiency Alliance and locally by Idaho Power Co.
- Homes are third-Party verified to be at least 20% more efficient than code
- Energy efficient features: better windows, air sealing, insulation, heating + cooling to provide superior comfort, healthier indoor air, and energy savings

NATIONAL ASSOCIATION OF GREEN BUILDING (NAHB)

NAHB Certified homes take a holistic approach to green building, incorporating site development and lot design, energy efficiency, water efficiency, resource efficiency, global impact, indoor environmental quality, home maintenance and operation.

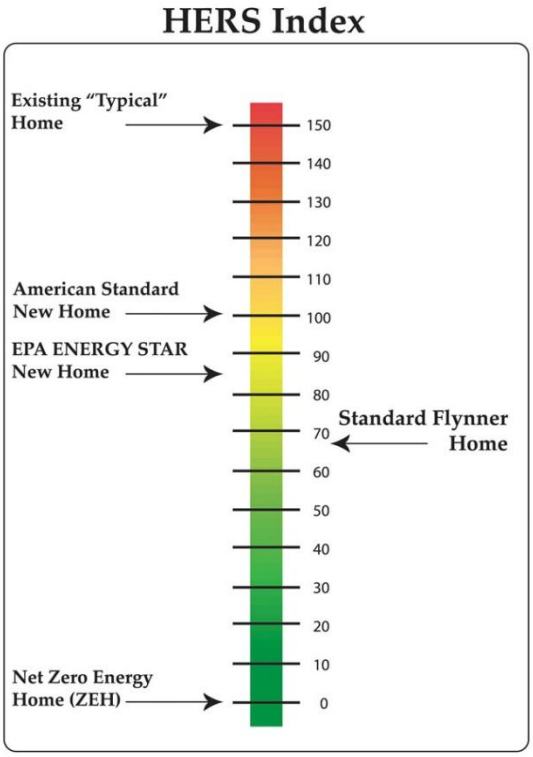
- Third Party inspected + certified
- Certification based on points system

PROGRAM RESULTS + COST SAVINGS

On June 27th, the new ENERGY STAR & NAHB Green certified, Net Zero home was raffled off to one of 7,777 ticket holders. **$705,400 was raised and donated to St. Jude Children's Research Hospital** as a result the campaign. Despite economic hurdles, the entire project was constructed with minimal costs for media, labor or materials, thanks to community donations and support.

HERS Index

A Home Energy Rating Score (HERS) is an internationally recognized measurement of home energy performance that reflects how efficient a home is relative to a new home built to current energy codes (a HERS Index of 100). A HERS verification consists of the evaluation, diagnostic testing, cost-effective recommendations and work specifications of each home.



When it comes to the HERS Index, the lower the better. An ENERGY STAR home is at least 15% more efficient than a code-built house, and therefore would have a HERS Index of 85. A typical Flynner Home is twice as efficient as an ENERGY STAR home, and therefore would have a HERS Index of 70.

The Net Zero home had an **OFFICIAL HERS SCORE OF -12 (THAT'S NEGATIVE TWELVE!).** This means the project exceeded its goal of reaching Net Zero. With proper education and energy conscious purchases and behaviors, the homeowner should enjoy $0 utility bills and a potential utility credit year after year.

Through the Northwest ENERGY STAR Homes program standards alone, Flynner Homes' 17 ENERGY STAR qualified homes, including the Net Zero project, have kept 76,500 lbs of greenhouse gases out of the air each year. And as a result of designing and constructing better built homes, these homes have an increased lifespan which reduces the environmental impact.

OTHER BENEFITS

Consumer Awareness for Green Building

In addition to the direct cost and environmental benefits, through the Boise Net Zero project, Flynner Homes and their partners were able to provide mass exposure and awareness for green building and better choices in everyday living to the entire Idaho community and beyond. Open houses and events that featured home tours of the Net Zero project were held regularly before the home raffle to educate consumers on the energy-saving features of the home.

Media coverage from the project further promoted this 'better choices' concept by showing builders and consumers what can be accomplished through smart design and thoughtful product selection. Coverage included radio, print, TV, and internet, resulting in over 900 attendees touring the home at the very first Open House in May and setting a new bar for green building.

Additionally, with support from Northwest ENERGY STAR and Idaho Power, 'Boise Green Home Guides' were created and distributed to over 10,000 people through Lowe's and other retail distribution points. These guides walked the consumer through the Net Zero home and provided them with ways that they can make changes in their own daily lives to be more sustainably conscious.

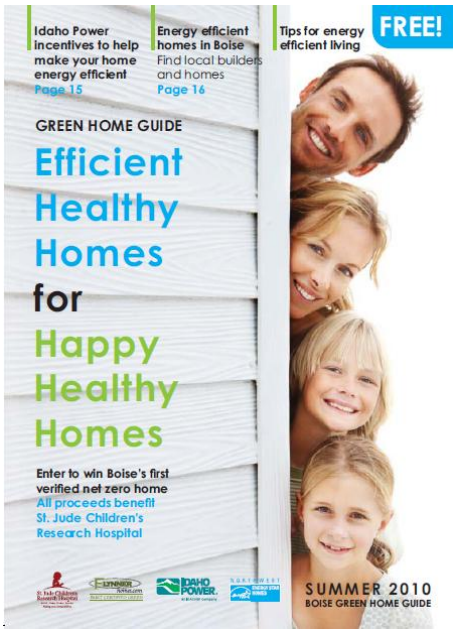
More Information

Dedicated Boise Net Zero Dream Home Microsite/blog
http://boisenetzerodreamhome.com/

Flynner Homes
http://www.flynnerhomes.com/

St. Jude Children's Research Hospital
http://www.stjude.org/

Boise Green Guide 'Efficient Healthy Homes for Happy Healthy Families'
http://www.northwestenergystar.com/downloads/Boise-Healthy-Home-Guide.pdf



Supporting Data

GREEN BUILDING SPECIFICATIONS

The net zero home features advanced building techniques and products including:

Alternative Energy:
- 8.2 kilowatt photovoltaic system (solar panels)

ENERGY STAR Appliances:
- Dishwasher
- Clothes Washer
- Refrigerator

ENERGY STAR Lighting:
- 100% of sockets have ENERGY STAR qualified compact fluorescent light bulbs

Windows + Doors:
- triple-pane <0.2 U-value window
- R-7 doors

Insulation:
- R-77 attic + ceiling
- Insulated side foundation R-13 rigid material and cover with James Hardie soffit panel for protection
- R-40 insulated slab on grade with 8" of rigid material
- R-60 wall with advanced wall framing + 9.5" I-Joist
- 14 inch thick exterior wall system

Heating + Cooling System:
- Daikin air-to-air, electric ductless heat pump 4-port mini-split system with HSPF 9.2
- Solar water heating system
- Heat recovery ventilator (HRV)

Third-Party Verified:
- Tested by qualified NAHB GREEN BUILDING and ENERGY STAR verifier John D. Coldiron and Associates