



THE BENEFITS OF
**A GREENER
 HOUSE**

120 ROWLEY AVE.
 V a n c e b u r g , K Y

The home at 120 Rowley Avenue in downtown Vanceburg, Kentucky, designed and constructed by People's Self-Help Housing, Inc., will be receiving a LEED Gold certification. LEED, or Leadership in Energy and Environmental Design, is an internationally recognized green building certification program. Gold is the second highest level of LEED certification, and our house is only the second home in Kentucky to achieve this level. So what makes 120 Rowley Avenue a green home? Here is a summary:

DURABILITY

Although a durable house may require more resources up front, during its lifetime it will consume much less than a poorly built house. Simple design features in our green home such as large roof overhangs and covered entryways will extend the life of the house, and reduce maintenance costs.

**LOW IMPACT
 LANDSCAPING**

A green lawn does not necessarily mean a green home. Fertilizers, herbicides, and pesticides used on lawns are among the largest polluters of waterways, and the air is polluted with lawnmowers and other powered lawn care equipment. Additionally, during hot, dry summer months, home landscaping can be a huge water hog. Our green house has limited conventional lawn, and most of the plants chosen for the landscape are drought tolerant.

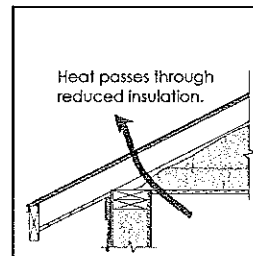
**COMPACT
 DESIGN**

One of the best ways to reduce the impact of a house on the environment is to reduce the square footage of the house; a smaller house uses less resources, both to build and maintain, than a larger one. Our green home has a modest 1120 square feet, but is designed to function and feel like a much larger house.

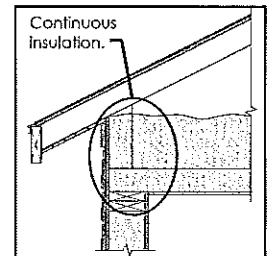
**MORE
 INSULATION**

Our green home has significantly better insulation than the average house:

- Walls - The exterior walls are constructed with 2x6 studs instead of the 2x4 studs used in standard walls, which has several advantages. First, the now thicker wall can hold an additional 2 inches of insulation. Second, the stronger 2x6 studs can be spaced farther apart, allowing for even more insulation. Finally, even though 2x6s are bigger than a 2x4s, because fewer 2x6s are needed the overall amount of wood in the house is less.
- Ceiling - Standard roof construction restricts the use of ceiling insulation near exterior walls (see diagram to the right). Raised-heel trusses, on the other hand, allow much more insulation to be installed here.
- Windows - Dual panes of glass with a layer of insulating gas in between give the windows superior thermal qualities. A clear film on the glass also reduces the radiant heat loss.



Standard Truss



Raised-Heel Truss

AIR TIGHT

Proper sealing of cracks and gaps is even more important than insulation for saving on energy costs. Anything that goes through a wall, ceiling, or floor, such as plumbing, wiring, or windows, if not properly sealed, is an easy escape route for heated or cooled air. Also, moisture laden air frequently deposits condensation as it passes through walls, contributing to mold and building deterioration. Finally, leaking air also carries with it allergens and contaminants, especially if it is leaking from a moist and dirty crawlspace or attic. Our green home has been sealed much tighter than the average house to prevent these air leakage problems.

FRESH AIR

For a long time it has been said that a house needs to “breathe”, meaning that a house needed to be leaky in order to exhaust stale air and bring in fresh. Although there is some wisdom in this, a better way to provide fresh air is summed up in the catch phrase: “seal tight, ventilate right.” In other words, once a house is sealed tightly to control air leakage, ventilation fans are introduced to bring in fresh air. While this may seem counterintuitive, with ventilation fans the source of fresh air can be controlled; moisture does not pass through walls, contaminants can be filtered, and, as in the case of our green home it is possible to pre-heat or pre-cool the incoming fresh air with outgoing exhaust air so there is minimal energy loss.

WATER THRIFTY

With large fresh water sources nearby such as the Ohio River, water conservation may not seem important. However, it takes a significant amount of energy to clean, pump, and in many cases heat the water that you use in your home. Saving water saves energy and will lower your water, sewer, and electric bills. Our green home utilizes plumbing fixtures that maximize pressure with minimal water.

A GREAT LOCATION

By utilizing a small, previously developed site with existing infrastructure, the impact of our green house on the land is minimal. Also, the house’s close proximity to community resources such as a grocery, library, and post office, reduce automobile usage.

EFFICIENT EQUIPMENT

The lights, washer, dryer, fans, and refrigerator in our green home are all Energy Star certified. High efficiency heat pumps heat the water and heat and cool the home.

People’s Self-Help Housing, Inc.

Providing Affordable Housing Opportunities in Lewis County since 1982



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