

# National Energy Star and Green Build Kentucky Project

**Spille Builders and Developers Inc.**

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This home is being built to the **National Energy Star** standards and is in the process of verification by a third party. To earn the **ENERGY STAR**, a home must meet strict guidelines for energy efficiency set by the U.S. Environmental Protection Agency. These homes are at least 15% more energy efficient than homes built to the 2004 International Residential Code (IRC), and include additional energy-saving features that typically make them 20–30% more efficient than standard homes. ENERGY STAR qualified homes offer homebuyers all the features they want in a new home, plus energy-efficient improvements that deliver better performance, greater comfort, and lower utility bills.

**The Energy Star Program includes such items as:**

## **1. Effective Insulation**

Properly installed and inspected insulation in floors, walls, and attics ensures even temperatures throughout the house, reduced energy use, and increased comfort

## **2. High-Performance Windows – Low E Glass**

Energy-efficient windows employ advanced technologies, such as protective coatings and improved frames, to help keep heat in during winter and out during summer. These windows also block damaging ultraviolet sunlight that can discolor carpets and furnishings

## **3. Tight Construction and Ducts**

Sealing holes and cracks in the home's "envelope" and in heating and cooling duct systems helps reduce drafts, moisture, dust, pollen, and noise. A tightly sealed home improves comfort and indoor air quality while reducing utility and maintenance

## **4. Efficient Heating and Cooling Equipment**

In addition to using less energy to operate, energy-efficient heating and cooling systems can be quieter, reduce indoor humidity, and improve the overall comfort of the home. When properly installed into a tightly sealed home, this equipment won't have to work so hard to heat and cool the home.

## **5. Efficient Products**

ENERGY STAR qualified homes may also be equipped with ENERGY STAR qualified products — lighting fixtures, compact fluorescent bulbs, ventilation fans, and appliances, such as refrigerators, dishwashers, and washing machines

## 6. Third-Party Verification

With the help of independent Home Energy Raters, ENERGY STAR builder partners choose the most appropriate energy-saving features for their homes. Additionally, raters conduct onsite testing and inspections to verify the energy efficiency measures, as well as insulation, air tightness, and duct sealing details

While the **National Energy Star Program** is also being implemented by a few other builders, a major difference with this home is that it is also being constructed under the **Green Build Kentucky Project** guidelines. This is a new energy program and **Spille Builders** is one of the leaders in this area. These guidelines go beyond the Energy Star Program and address seven areas of importance. Each area has required points to achieve and a third party verifier assigns those points earned. In many areas, this home far exceeds those required points. What does this mean to you, the homeowner? This gives you not only an energy efficient home to save on your energy bills, but also an environmentally friendly home as well. In addition, this home may qualify for an **Energy Efficient Mortgage**, allowing the lender to increase your income by an amount equal to the estimated energy savings. Green Build, making our environment better and saving the home owner on their energy budget. As you will notice, Energy Star is but one of the many items listed below for a truly energy efficient and green built home.

The seven areas addressed are:

- 1 **Lot Design**
- 2 **Resource Efficiency**
- 3 **Energy Efficiency**
- 4 **Water Efficiency**
- 5 **Indoor Environment**
- 6 **Homeowner Education**
- 7 **Global Impact**

Listed below are some of the items addressed in each area.

1. **Lot Design**
  - a. Avoid environmentally sensitive areas
  - b. Establish a knowledgeable team
2. **Resource Efficiency**
  - a. Using advanced framing techniques
  - b. Using building materials that require no additional finish
  - c. Use pre-assembled building systems or methods
  - d. Provide a covered entry
  - e. Install perimeter drain for all basement footings
  - f. Divert surface water from all sides of building
  - g. Provide a water-resistant barrier
  - h. Facilitate the sorting and reuse of scrap building materials
  - i. Use materials manufactured from renewable resources

3. **Energy Efficiency**
  - a. **Energy Star Certification**
  - b. HVAC design, equipment and installation
  - c. Water heater design, equipment and installation
  - d. Lighting and appliances
  - e. Verification of performance by blower door testing and thermal imaging conducted by a third party verifier.
  
4. **Water Efficiency**
  - a. Energy Star water-conserving appliance
  - b. Water-efficient showerhead
  - c. Water-efficient sink faucets/aerators
  
5. **Indoor Environment – Minimize and Manage Potential Pollutants**
  - a. Install direct vent equipment
  - b. Install induced/ mechanical draft combustion equipment
  - c. Install direct-vent, sealed-combustion fireplace
  - d. Ensure a tightly-sealed door between the garage and living area
  - e. Mask HVAC outlets during construction
  - f. Passive radon mitigation system
  - g. Install vapor retarder directly under basement floor
  - h. Protect unused moisture-sensitive materials from water damage
  
6. **Homeowner Education**
  - a. Provide manual to owners to care for their home
  
7. **Global Impact**
  - a. Choose low- or no-VOC indoor paints

You can find additional information and links on our web page under the **Energy Star** button located on the left side.

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