

Take Control & Save®

A Cooperative Effort for Energy Efficiency

www.TakeControlAndSave.coop

Build an energy-efficient home and save

Why should I build an energy-efficient home?

Before designing and building a new home, consider incorporating energy-efficient products and construction techniques. You'll save energy and money in the long run. Other benefits include increased whole-house comfort in the hot summer and cold winter months, added home value and improved building durability.



Whole-house approach

Designing and constructing an energy-efficient house requires careful planning and attention to details. A whole-house approach can help you develop a successful strategy for incorporating energy efficiency into your home's design. A whole-house approach takes into consideration every

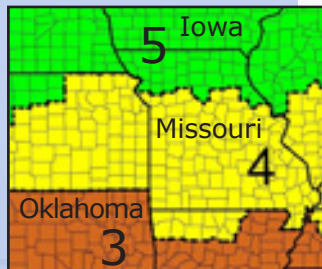
element of your home, including your building site, climate, insulation and air-sealing, heating and cooling, water heating, windows and doors, lighting and appliances. Since any of these features can greatly affect the others and ultimately affects the overall efficiency of the house, using this approach will result in energy-saving benefits.

Effective insulation

Properly installed insulation in floors, walls, and attics ensures even temperatures throughout the house, reduced energy use and increased comfort. For maximum energy efficiency, your home should be properly insulated from the roof down to its foundation. Efficient types of insulation include blown-in cellulose, sprayed or injected foam and rigid insulation. Insulation is measured in R-value, and recommended R-value amounts vary by region. See the map below for your region.

Recommended levels of insulation¹

- ~ **Zone 5 (green)** - Attic: R49 to R60;
Floor: R25 to R30; Wall: R13 to R21
- ~ **Zone 4 (yellow)** - Attic: R38 to R60;
Floor: R25 to R30; Wall: R13 to R15
- ~ **Zone 3 (brown)** - Attic: R30 to R60;
Floor: R19 to R25; Wall: R13 to R15



Landscape for energy savings

A well-designed landscape can add beauty to your new home, and reduce your heating and cooling costs. Here are some things to consider when landscaping:

- **Deflect winter winds away from buildings, and funnel summer breezes toward your home.**

Properly selected and placed landscaping can provide great wind protection, which reduces heating costs considerably. Dense evergreen trees and shrubs planted to the north and northwest of the home are the most common type of windbreak. Place plants to be used for channeling summer breezes to the south and southwest away from the home.

- **Maximize shade in the summer, and warming effects of the sun in the winter.**

Incorporating shading concepts can help reduce solar heat gain, reducing your cooling costs. To block solar heat in the summer but let much of it in during the winter, use deciduous trees with high leaves and branches to the south of your home to provide maximum summer roof shading.

Learn more about energy-efficient landscaping at www.energy.gov. Go to Energy Saver, Landscaping.

¹Source: ENERGY STAR®, www.energystar.gov; U.S. Department of Energy, www.energysavers.gov

Effective air-sealing

Any air sealing efforts will complement your insulation efforts, and vice versa. Common techniques and materials for new homes include air barriers, airtight drywall, caulk and weatherstripping.

Efficient heating and cooling equipment

According to the U.S. Department of Energy, heating and cooling account for about 54 percent of the energy use in a typical U.S. home, making it the largest energy expense for most homes. 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.

Efficient water heating

Water heating is the third largest energy expense in your home, behind heating and cooling. You can reduce your monthly water heating use and costs by choosing the right size and type of water heater, and one with the right fuel source for your home.

Windows and doors

Energy-efficient windows and doors can help lower a home's heating, cooling and lighting costs. If an exterior door or window is not properly installed or air sealed it can result in significant air leakage and energy losses. Choose doors and windows with high energy performance ratings.



Find the right contractor

After speaking with your electric cooperative, one of the first steps in building an energy-efficient home is finding the right partner. Many long-term energy saving measures require the assistance of a knowledgeable, qualified contractor, so be sure to do your research before hiring a contractor.

- * *Ask friends for recommendations*
- * *Focus on local companies*
- * *Look for licensed, insured contractors*
- * *Get three bids with details in writing*
- * *Ask about previous experience*
- * *Check references*
- * *Check with the Better Business Bureau*
- * *Find an ENERGY STAR® qualified home builder at www.energystar.gov.*
- * *Locate a Certified Green Professional builder in your community by visiting the National Association of Home Builder's website at www.nahb.org.*

Efficient lighting

Choosing more efficient light bulbs or fixtures can make a big difference on your utility bills. The most common energy-efficient lighting types include compact fluorescent lights (CFLs) and light-emitting diodes (LEDs). They are significantly more energy-efficient than traditional incandescent bulbs, and can be found in most hardware and home improvement stores.

Efficient appliances and home electronics

In a typical U.S. home, appliances and home electronics account for about 20 percent of the energy bill. By choosing ENERGY STAR® appliances, you can reduce your home appliance use and costs.

Take Control & Save!

To find out more about each of these new home construction techniques, talk with your electric cooperative and visit www.TakeControlAndSave.coop. You will find energy saving calculators, real-life success stories, an energy saving video and more. There are also energy saving publications detailing techniques and products mentioned here such as insulation, heating and cooling equipment, efficient appliances and more.

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