

# Builders Challenge

Skyrocketing energy costs and increasing consumer demand for energy performance are driving the development of new energy efficiency and green building programs across the nation. The Builders Challenge

helps builders meet and communicate high levels of energy performance that will meet or exceed any existing performance home program. For more information visit [www1.eere.energy.gov/buildings/challenge/energysmart.html](http://www1.eere.energy.gov/buildings/challenge/energysmart.html)

## Eight Energy Efficiency Improvements In This Home

### 1 Closed/Conditioned Crawl Space

- Conditioned crawl spaces perform better than vented crawl spaces in terms of safety, health, comfort, durability and energy consumption.
- HVAC unit is placed in the closed/conditioned crawlspace, therefore, it is not exposed to the outside temperature that it is working against.

### 2 Energy Star Windows

- Lowers energy bills and saves you money over single-paned and even new double-paned, clear glass windows.
- Protects from the winter cold and summer sun, while also reducing condensation and interior fading.
- Keeps your home cooler in the summer and warmer in the winter, making you more comfortable.



### 4 Sealing Ductwork

- Sealing ductwork prevents conditioned air from leaking and increases the system's efficiency by as much as 20%, thus keeping the home at a comfortable temperature.

### 5 Energy Star Light Fixtures

- Uses 1/4 the energy of traditional lighting.
- Saves money on energy bills and bulb replacements, with bulbs that must last at least 10,000 hours (about seven years of regular use).
- Distributes light more efficiently and evenly than standard fixtures.

### 6 Energy Star Appliances

- Incorporates advanced technologies that use 10-50% less energy and water than standard models.

### 3 Air Sealing

- Improves comfort, especially during periods of hot or cold weather.
- Lowers energy use, which means lower energy bills.
- A quieter home due to less noise entering from the outside.
- Fewer holes where pollen, dust, pollution, and insects can enter your home.
- Improves durability of the building structure through the reduced movement of moist air.

### 7 Thermal Air Barrier Alignment

- A thermal barrier restricts or slows the flow of heat using insulation materials. Insulation is not fully effective unless it is installed without gaps, voids, and compression, and is aligned with a continuous air barrier.
- For the air barrier itself to be effective, it must be contiguous and continuous across the entire building envelope, with all holes and cracks fully sealed and it must be in full contact with the insulation.

### 8 Tankless Hot Water Heater

- Provides hot water only as it is needed.
- Traditional storage water heaters produce standby energy losses that cost money.



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