



What is Energy Star?

Essentially, a rating system of either how much energy something consumes or how much energy something conserves.

In other words

A washing machine would get rated on how much energy it consumes, while insulation or windows would get rated on how much energy they conserve.

What is Energy Star?

- Is a joint program between the Environmental Protection Agency and the U.S. Department of energy
- Applies to residential and commercial buildings, businesses, and, most notably to appliances
- Energy Star works with more than 9,000 public and private sector organizations to improve energy efficiency and to promote manufacturing of Energy Star rated products and Energy Star building practices



Energy Star Builders

In Florida – 250 Builders

- Beazer Homes
- Bee Tree Homes
- Capella Homes
- Mercedes Homes

★ Beazer Homes has made a commitment to building 100% of their homes to Energy Star performance guidelines



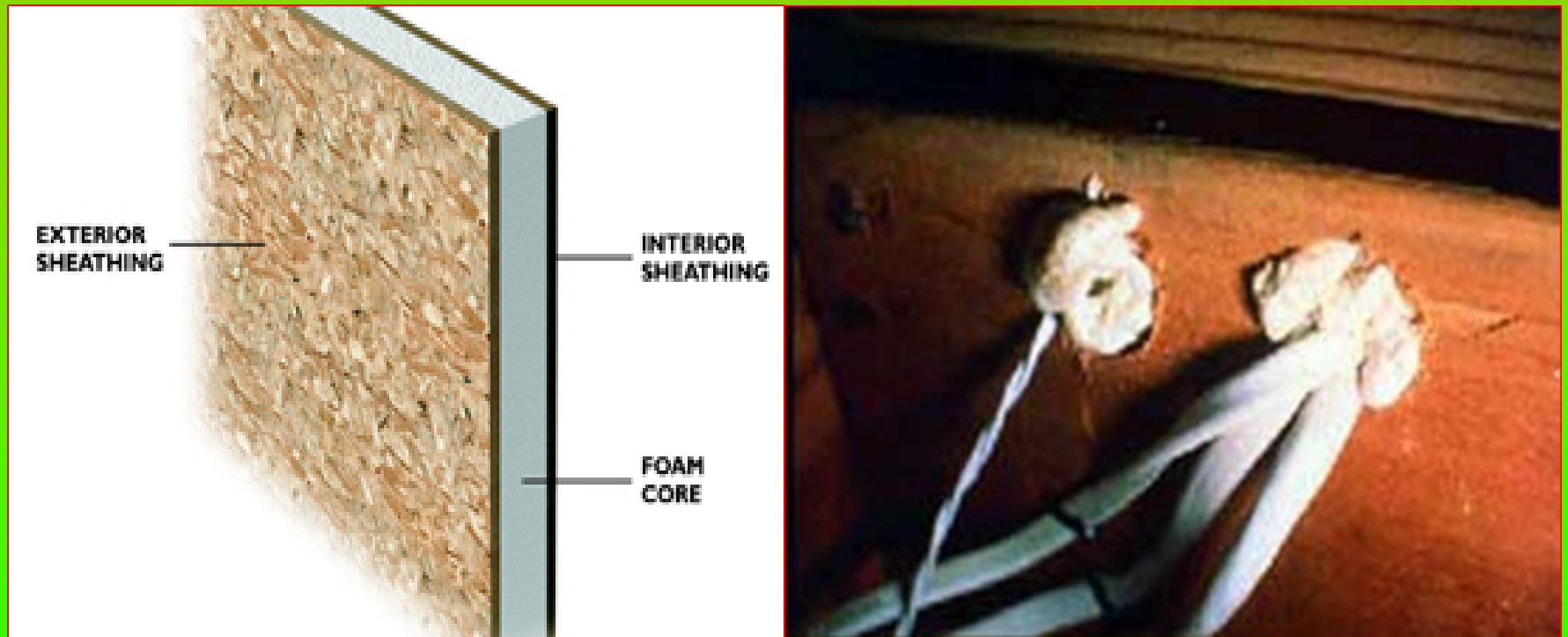
Energy Star Buildings

★ Insulation

Rigid

Blown Insulation

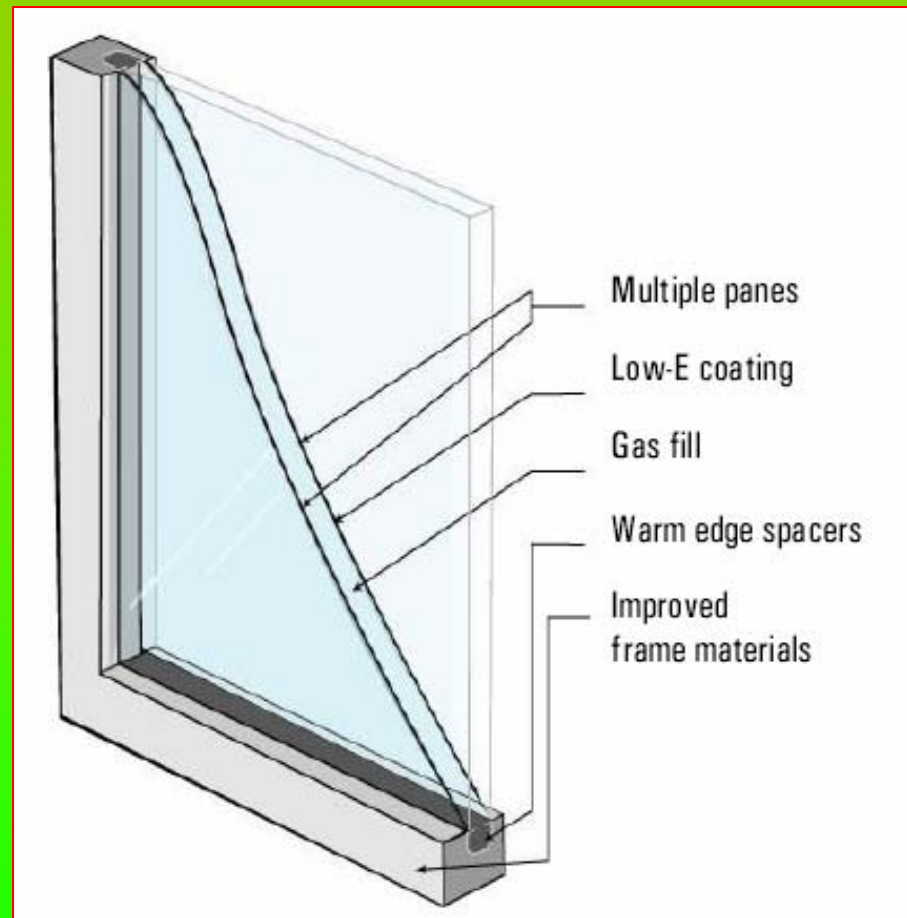
Foam



Energy Star Buildings

★ High performance windows

Block out 70 percent more solar heat gain in the summer, and reflect heat indoors during the winter

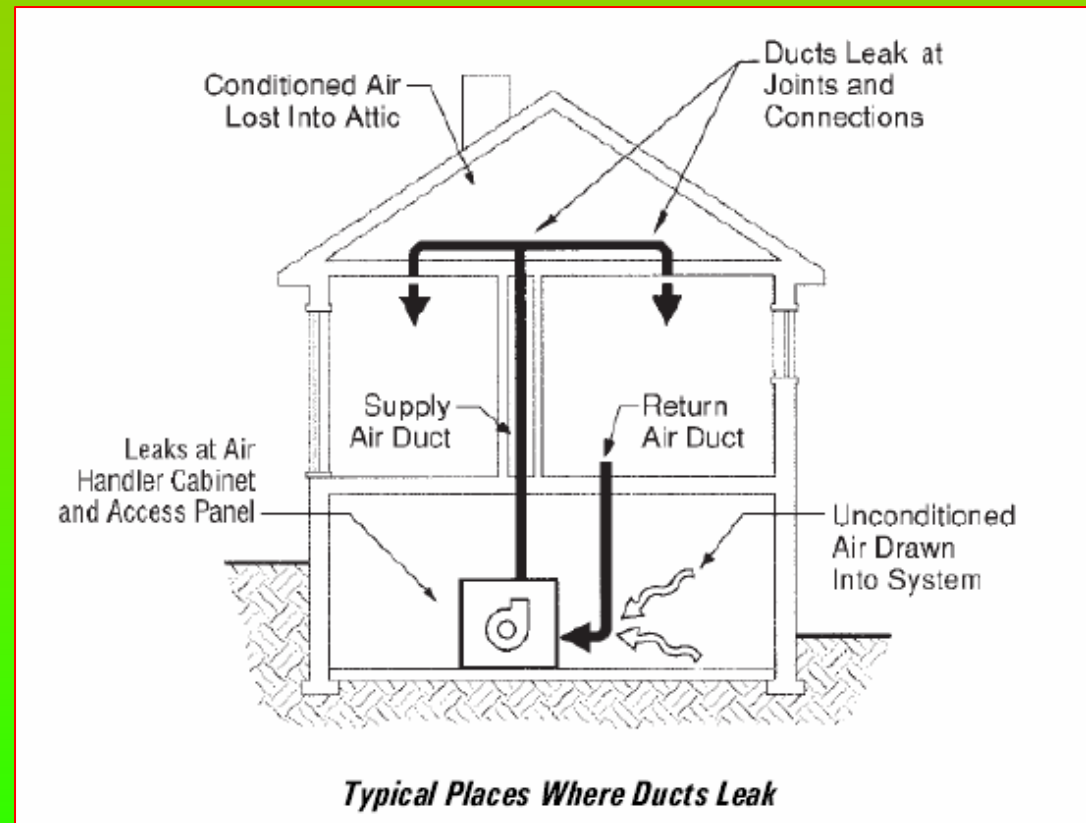


Energy Star Buildings

★ Efficient Duct Systems

20% of the air moving through duct systems is lost due to leaks, holes and poorly connected ducts.

Duct systems found in Energy Star homes are third-party tested for tight seals.



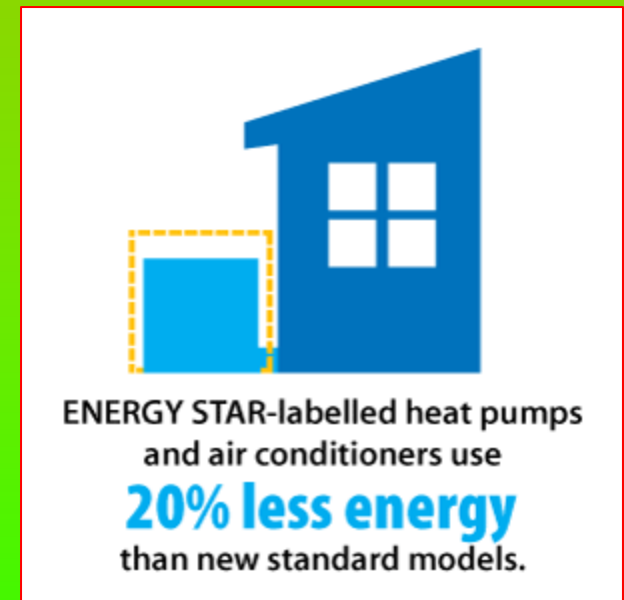
Energy Star Buildings

★ Cooling & Heating Systems

Proper System Size – instead of square footage ratios, use more accurate methods to determine need, such as load calculations based on Air Conditioning Contractors of America (ACCA) manuals

Proper Equipment Placement – locate handling equipment inside air conditioned spaces, and compressors should be shaded

Correct Airflow – third party inspection of ducts and airflow

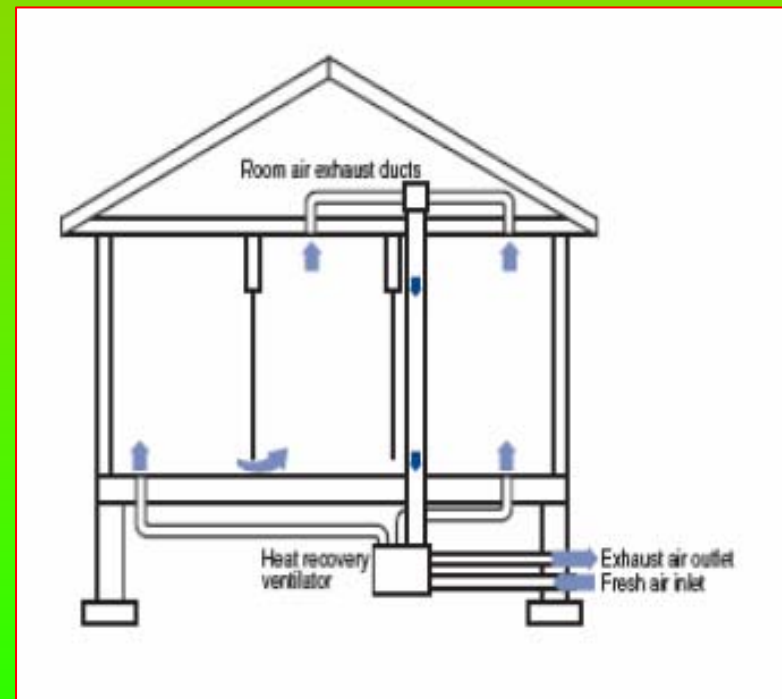


Energy Star Buildings

★ Ventilation Systems

Mechanical ventilation systems circulate fresh air using ducts and fans, rather than relying on airflow through small holes or cracks in a home's walls, roof, or windows.

With ventilation systems, heating and cooling systems are less stressed and more efficient



Energy Star Buildings

★ Qualified Products

Appliances

Refrigerators
Washing machines
Dishwashers



Lighting

CFL light bulbs
Lighting fixtures



Note: draft requirements for water heaters are being explored, but traditional electric resistance heaters will not be rated.



Energy Star Buildings

★ Independent Inspection and Testing



Home Energy Rater performs a blower door test.

↶ Independent home energy rater

➔ Documentation of Energy Star qualification

The image shows a blue and white sticker for an ENERGY STAR qualified home. At the top left is the ENERGY STAR logo. To its right, the text reads "AN ENERGY STAR QUALIFIED HOME". Below this, there are four white rectangular boxes for "Address:", "Built by:", "Verified by:", and "Date:". Underneath these is a larger white box for "Optional information:". At the bottom of the sticker, there is a small paragraph of text: "This home has been individually verified by an independent professional to meet ENERGY STAR's strict guidelines for energy efficiency. Each ENERGY STAR qualified home can keep 4,500 lbs of greenhouse gases out of our air each year." and the website "www.energystar.gov".

Look for the ENERGY STAR on the breaker box of your next home.



Energy Star Buildings

★ Additional Building Costs

According to a recent study by the World Business Council for Sustainable Development (WBCSD), "green" buildings cost 5% more to build than conventional construction....

Although Green Building News (October 2007) cites a survey that reports costs of 17% greater, which is further substantiated by an October 25, 2007, article on "Green Developers," which states that experts calculate additional costs at 15% (New York Sun, October 25, 2007)



Energy Star Development

Madera

- Located in Gainesville, Florida
- Developed by Green Trust, LLC, in partnership with the University of Florida's Energy Extension Service
- 88 Single-family homes



Madera – Model Home Plan



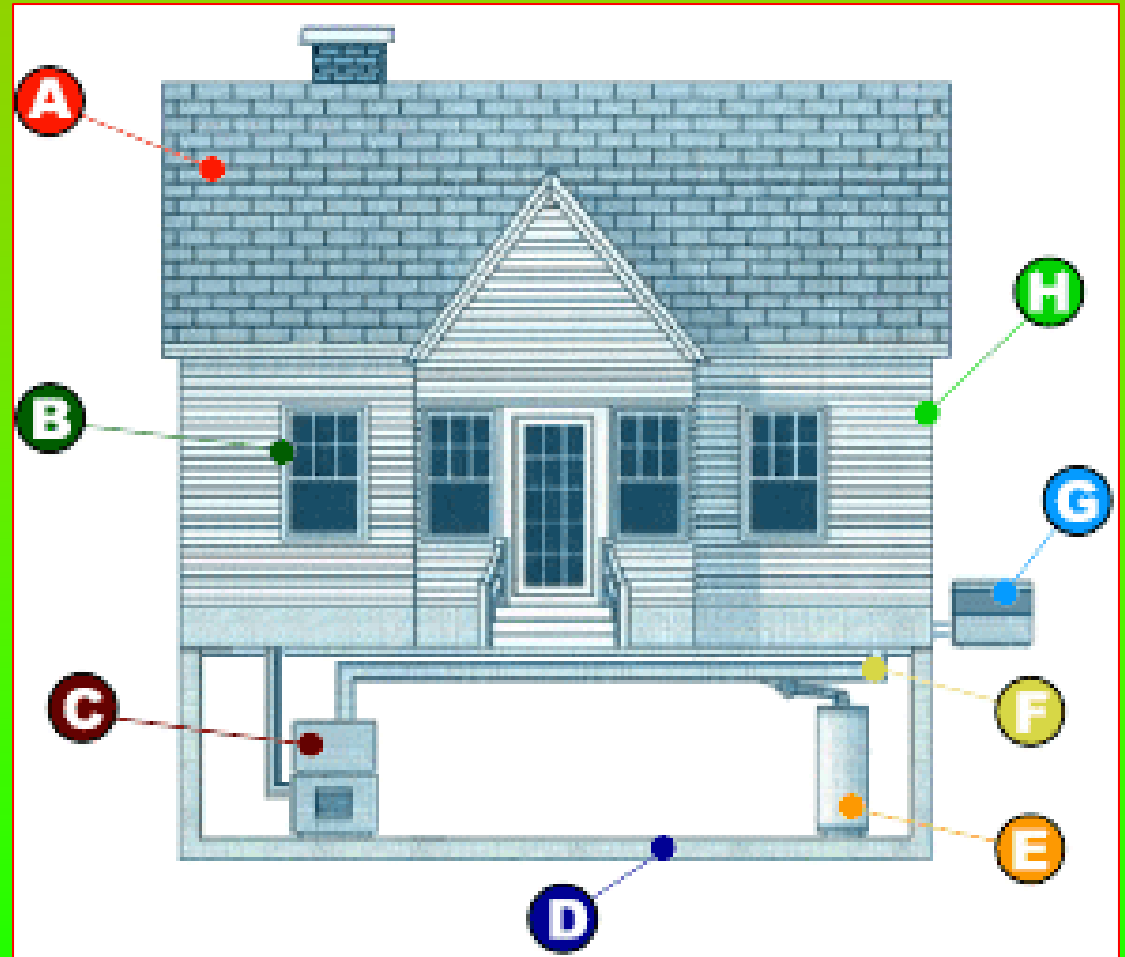
Source: University of Florida News, October 4, 2005)

Pierce Jones (left), director of UF's Program for Resource Efficient Communities, and Stephen Mulkey, director of research and outreach/extension for UF's School of Natural Resources and Environment, hold an insulated concrete form at the Madera residential development in Gainesville.

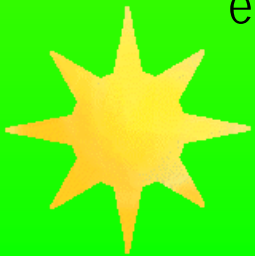


Madera – Model Home Plan

- A** = Vented attic, truss framing
- B** = double pane, argon windows
- C** = Energy Star w/ power vents
- D** = insulated slab on grade
- E** = water heater, energy factor of 2.0 (twice the EF factor of traditional electric)

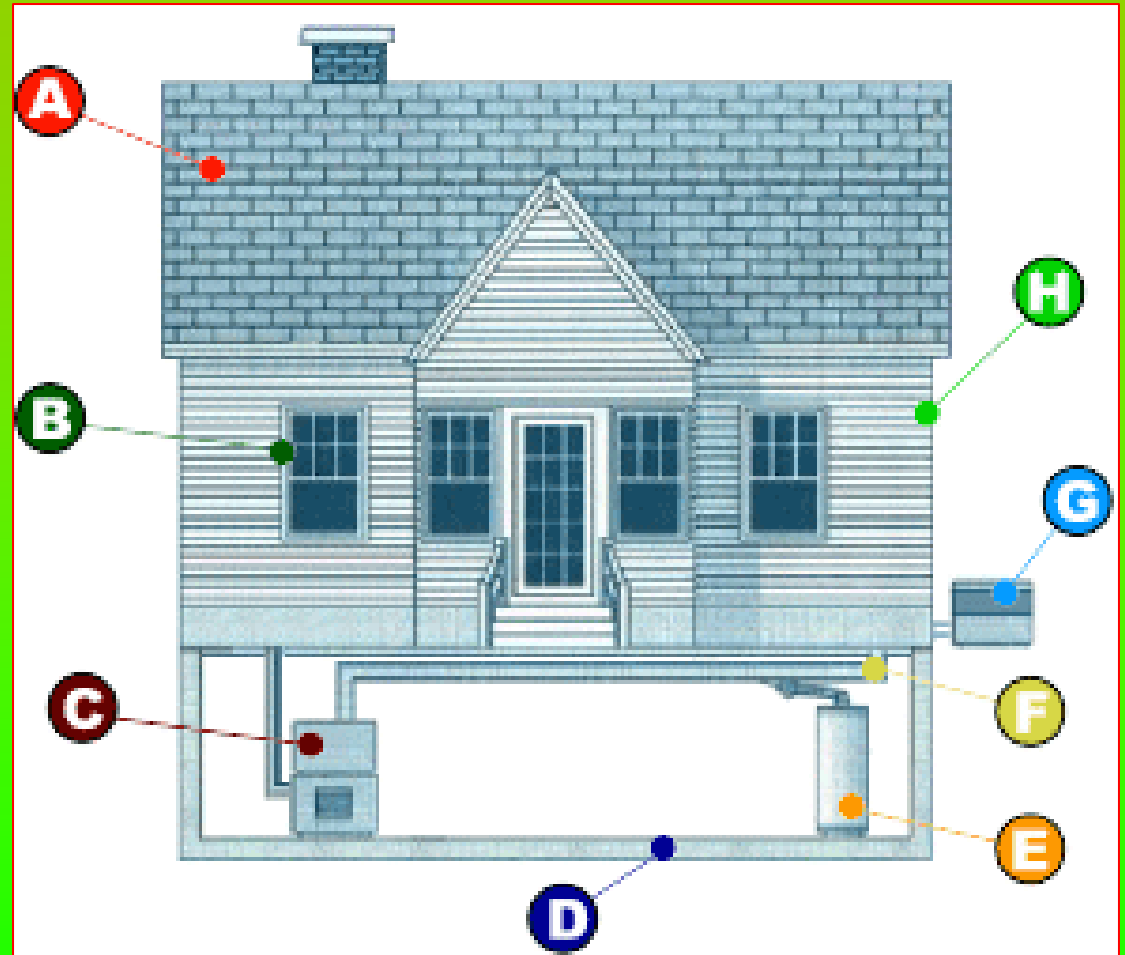


Source: US Department of Energy



Madera – Model Home Plan

- F** = Air handler in AC space,
- G** = Compressor located on shade-side of house - 17.5 SEER rating (minimum standards for Florida = 13)
- H** = Insulated concrete forms (wall components)



Source: US Department of Energy

SEER = seasonal energy efficiency ratio; essentially equivalent to MPGs for cars



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gparola, 11/16/2007