

# Green Glossary of Terms

Aluminum Roof	-	Roof constructed primarily or solely of aluminum material.
Asphalt Shingles	-	Roof constructed primarily or solely of asphalt shingles.
Atrium	-	A courtyard or patio surrounded by a house. May be open to the outside or be roofed with skylights to admit natural light; typically contains plants.
Attic Fan	-	Attic temperatures can get up to 150°F without an attic fan. Attic fans create a positive air-flow through your attic that does not rely on wind or require excessive passive venting. (If poorly done, excessive passive venting can cause excessive moisture infiltration in the form of snow or rain.) The attic fan is normally mounted up on the roof of the home toward the back about two feet down from the peak. It goes on and off automatically with a thermostat, so it only runs when it is beneficial. The attic fan has a flashing that fits in with the shingles and is water-proof. Attic fans use less than 300 Watts, and offer these important advantages: <ol style="list-style-type: none"> <li>1. Lowers upstairs room temperatures by 10°.</li> <li>2. Lengthens roof life by keeping shingles cooler.</li> <li>3. With an optional humidistat, keep attics dry during winter months.</li> <li>4. Saves up to 30% on air-conditioning costs. (Savings vary by region and roof characteristics.)</li> </ol>
Austin Energy's Green Building Program	-	Assistance from the City of Austin Energy to make improvements on dwellings in the City of Austin.
Bamboo Flooring	-	Flooring made from bamboo, a sustainable flooring material.
Blanket	-	Rolls of Insulation; may have facing of kraft paper or aluminum foil backed paper.
Blown-In Insulation	-	As opposed to bats of fiberglass insulation, blown insulation (which can be fiberglass, cellulose, or wool) can often be easier and less expensive to install because of the time savings involved. Various pros and cons associated with different types of insulation can be examined at the Web site shown at right and the report posted there.
Brick/Adobe Flooring	-	Flooring made of brick and/or adobe material.
Ceiling Fan(s)	-	Ceiling fans can be considered an efficient characteristic of a home b/c they can be used in lieu of air conditioners before temperatures get very high, and in cold months they can be set on low to help push warm air down into the living space, particularly in homes with high ceilings.
Ceiling Insulation	-	Insulation placed in the ceiling of a structure that reduces or prevents the transmission of heat or sound or electricity.
Cellulose	-	Cellulose insulation is plant fiber used in wall and roof cavities to separate the inside and outside of the building thermally and acoustically. Typical materials used to manufacture it include old newspapers, and telephone directories. For fire retardant and pest control, borates and ammonium sulfate are added. Four major types of loose-fill cellulose products have been developed under a variety of brand names. These are generally characterized as dry cellulose, spray applied cellulose, stabilized cellulose and low dust cellulose. These types are used in different parts of a building and for different reasons.
Compost Area/Bin	-	A closed container in which the controlled biological decomposition of organic matter, such as food and yard wastes, into humus, a soil-like material, takes place.
Concrete Roof	-	Roof constructed primarily or solely of concrete.
Cork Flooring	-	Flooring made of cork material. Cork flooring is durable, acoustical and an insulator. It comes from harvesting the outer bark of the cork oak tree found in the Mediterranean region. It is considered a green product because the same tree can be harvested numerous times.
Double Pane Windows	-	Double or triple pane glass windows are used to reduce heat flow. They often contain argon, krypton, or other gases between panes, which insulate better than regular air.
Downdraft	-	A furnace with a downward air current.
Electrostatic Air Filter	-	An air filter that uses electric charge to collect debris in the air vents.
Energy Audit	-	This term is used fairly broadly to describe any type of energy assessment of a home, whether it be a HERS rating, a "clipboard" inspection, or an energy audit where diagnostic equipment is used and recommendations are made, but no score is given. The true meaning of this term will vary by region and by local availability of types of audits or energy assessments.
Energy Efficient	-	A description of a property which has special features aimed at reducing use of electrical or heating power (i.e. insulation, double-insulated windows, high-efficiency furnace, etc.).
Energy Star Appliances	-	Government program that sets standards for energy efficiency in a variety of products as well as in new home construction. In some areas, a "Home Performance with ENERGY STAR" label can be earned on the retrofit or improvement of an existing home to ENERGY STAR standards.

Engineering Report	- A report generated by an engineer describing the current physical condition of the property and its major building systems.
Environments for Living	- The only national turn-key program for homebuilders that offers a comprehensive set of energy and building science solutions – from plan reviews and training to field testing and certification – plus marketing tools.
Fiber Cement Roof	- This product is available from several manufacturers in a variety of textures that are said to provide the appearance of wood. Fiber-cement siding should be more durable than wood -- it is termite-resistant, water-resistant, non-combustible, and warranted to last 50 years. Fiber-cement siding is composed of cement, sand, and cellulose fiber that has been autoclaved (cured with pressurized steam) to increase its strength and dimensional stability. The fiber is added as reinforcement to prevent cracking. The planks come in 5¼" to 12" widths and 5/16" and 7/16" thickness.
Fiberglass Roof	- Roof constructed primarily or solely of fiberglass material.
Floor Insulation	- Insulation placed in the floor of a structure that reduces or prevents the transmission of heat or sound or electricity.
Foam Insulation	- By acting as an air barrier, spray foam insulation provides insulation and air sealing in one step. In addition, most foam insulation products have a higher R-value per inch than fiberglass batt insulation. This increases energy efficiency by allowing downsizing of the heating and cooling system equipment.
Foil-faced Surface	- Generally installed on the underside of roof sheathing in warm or hot climates, a radiant barrier can help reflect some of the sun's radiant heat energy from entering the attic. They can also help prevent winter heat loss from the home.
Gas Water Heater	- An automatically controlled vessel designed for heating water and storing heated water, heated by gas.
Geological	- The study and report of earth and land for a particular property.
Geotherm	- Geothermal heat pumps (GHPs) use the constant temperature of the earth to provide cooling and heating for a home. There are different types of geothermal heat pumps, but the principle on which they operate is similar. A loop of piping is buried in the ground and fluid circulates through the loop. In the summer, the fluid uses the cooler temperature of the ground to provide indoor cooling. During colder months, the geothermal heat pump uses the below-ground temperature, which is significantly warmer than the outside air, to warm the home.
Glass Fiber Insulation	- Glass in a strand form.
Green Building Rating	- The entity that evaluates and certifies a dwelling or business as environmentally friendly.
Green/Garden Roof	- A green roof is basically a roof which includes a typical roof surface covered by a water-proofing membrane, a drainage plane, a water retention medium, and plantings of drought-resistant species. However, designs differ depending on a variety of factors. Green roofs are not yet common on single family homes, but can be seen more frequently in multifamily or other large urban buildings. The benefits of a green roof include control of stormwater runoff which can reduce urban water pollution, absorption of airborne toxins and increase in oxygen in the air, reduction of surface temperature of the roof, cooling of surrounding air, reduction of the urban heat island effect, noise insulation, longer roof life, better insulation, and provision of additional "land" area.
Greenhouse	- A building with glass walls and roof; for the cultivation and exhibition of plants under controlled conditions
Heatilator	- Circulating fireplaces heat air. Heat is transferred to air moving across the hot surface. The air heats up and rises. The rising air draws more air up after it, causing <i>circulation</i> of air.
HERS Rating	- The HERS Index is a scoring system established by the Residential Energy Services Network (RESNET) in which a home built to the specifications of the HERS Reference Home (based on the 2006 International Energy Conservation Code) scores a HERS Index of 100, while a net zero energy home scores a HERS Index of 0. Each 1-point decrease in the HERS Index corresponds to a 1% reduction in energy consumption compared to the HERS Reference Home. Thus a home with a HERS Index of 85 is 15% more energy efficient than the HERS Reference Home and a home with a HERS Index of 80 is 20% more energy efficient.
High Roof Window	- A window in the roof line or in the roof to help regulate heat from the house.

Instant Hot Water	- Hot water recirculation systems can be activated by the push of a button, or by a thermostat, timer or motion sensor. Systems that use a thermostat or timer automatically turn on the pump whenever water temperature drops below a set-point, or when the timer reaches a setting. These systems ensure that hot water is always available at the faucet without any waiting. Hot water recirculation systems generally consist of a pump, an integrated electronic controller, and a zone valve. When the activation button is pushed, or when another type of control turns the system on, the pump starts recirculating cooled water that's been sitting in the hot water line and sends it back to the water heater through the cold water line. When the water reaches a desired temperature a control closes the zone valve and turns off the pump. It is much like turning on the hot water faucet and letting the water run until it gets hot, but instead of the water going down the drain, it is simply returned back to the water heater. When the hot water faucet is turned on, hot water is readily available.
Insulation	- The type of material used to slow the transfer of heat through walls so as to reduce energy costs and help maintain a uniform temperature.
Insulation Rating	- This refers to improved or added insulation in the attic or exterior walls to improve the R-value of the building envelope. An R-value indicates an insulation's resistance to heat flow. The higher the R-value, the greater the insulating effectiveness.
LEED-H	- A voluntary initiative to promote the transformation of the mainstream home building industry towards more sustainable practices.
Load Controller	- A load controller is an outdoor computer that is installed next to your breaker panel and is connected to the 220v appliances like A/C units, clothes dryers, water heaters, electric spa heaters, etc. This unit constantly measures the usage of power in your home and directs efficiently to a pre-set priority which lowers your demand and thus your bill. As the demand increases, the load controller "sheds" (shuts off), lower priority appliances to maintain a user pre-set demand level. Dropping your demand 5kw = a \$60 reduction per month.
Modular	- A modular home is factory constructed and delivered to the home site in modules where it is assembled on foundation walls which have been constructed on the site.
NAHB	- National Organization of Home Builders green building certification.
Partial Insulation	- Only partially installed insulation, not complete.
Perlite	- A volcanic glass that can be expanded through heating to produce a light, airy material used, among things, as infill insulation
PGE/PUD Energy Package	- Property owned as a group, where individuals own the specific piece of land and structure they occupy, but also have a divided interest in a common area. A board, often referred to as a Homeowners Association, will govern the development.
Photovoltaic	- The process of converting light directly into electricity using specially designed silicon cells.
Polystyrene	- A type of plastic foam. It is often used in insulation, plates, egg cartons, coffee cups and disposable food containers. Anything made of this product is not very biodegradable and is also difficult to recycle.
Programmable Thermostat	- A thermostat that allows the homeowner to set the temperature at different levels at different times of day. For example, in winter, it could be set to be colder while occupants sleep and warmer as occupants awaken, then colder again as occupants are away at work.
Rating Year	- The year a Green Building Rating was given.
Smart Building	- Probably refers to a series of automated processes whereby the homeowner can control the home's HVAC and other processes remotely. May also refer to a variety of sensors in the home that detect heat from sun and can shut blinds automatically, etc. Will vary depending on manufacturer or installer.
Solar Assisted	- Panels usually installed on a roof that collect the sun's energy and convert it to electricity for use in the home.
Solar Heat	- Active solar space-heating systems consist of collectors that collect and absorb solar radiation combined with electric fans or pumps to transfer and distribute that solar heat. Active systems also generally have an energy-storage system to provide heat when the sun is not shining. The two basic types of active solar space-heating systems use either liquid or air as the heat-transfer medium in their solar energy collectors.
Solar Screen	- A sun shading device, such as screens, panels, louvers, or blinds, installed to intercept solar radiation.
Solar Utilities	- Panels usually installed on a roof that collect the sun's energy and convert it to electricity for use in the home.
Solar Water Heater	- A solar hot water array on the roof supplements (but does not exclusively supply) the hot water to the home. Water warmed by solar energy is pumped into the hot water heater where less energy is required to get it hot or less cold water needs to be warmed to fill the tank.

Storm Doors	- Storm doors help provide a pocket of air between the main door and the exterior of the home, creating an insulating effect. They can also help protect the main door from the elements such as wind, rain, and ice.
Storm Windows	- Storm windows are a single pane window often installed on the interior of the main windows of the home to help provide better insulation in the same way a storm door does. Sometimes if window replacement is cost prohibitive, adding storm windows can be the next best thing for saving energy.
Strawbale	- Straw-bale construction is not a new technology. It is merely getting more recognition today as consumers and builders look for more efficient and economic forms of construction. Straw-bale construction has been around in the United States since the turn of the century. Straw is a renewable resource in plentiful supply that can offer simple construction and great versatility. There is approximately 200 million tons of straw available each year for use in construction that would otherwise go to waste. This waste straw is left over from crops such as wheat, oats, barley, rye, rice and flax, after all the food has been extracted. The straw is gathered and baled using a baling machine. Sizes of straw bales vary from 18"x14"x36" to 24"x18"x48" and weigh between 50 to 90 pounds. The straw is compressed by the baler and tied together with wire or string. A typical 2000 square feet house requires about 300 medium sized bales. Typically the bales are placed over a "stem wall" which protects the straw from the ground soil. Then the straw bales are stuccoed and plastered over for finishing.
Stucco	- A mixture of sand and cement used to cover the exterior surface or interior walls of a home or building.
Tankless Water Heater	- Tankless water heaters provide hot water at a preset temperature when needed without storage, thereby reducing or eliminating standby losses. Tankless water heaters can be used for supplementary heat, such as a booster to a solar hot water system, or to meet all hot water needs. Tankless water heaters have an electric, gas, or propane heating device that is activated by the flow of water.
Thermal Windows	- Windows designed with multiple panes to trap air and provide greater insulation.
Tinted Windows	- There are many types of window tint available in the market for a wide variety of uses from solar heat reduction to UV protection, privacy to safety and security, decorative applications to heat retention.
Turbines	- Device that converts the flow of a fluid (air, steam, water, or hot gases) into mechanical motion for generating electricity.
Updated A/C unit (> 12 Seer)	- "SEER" is the Seasonal Energy Efficiency Ratio and is used to measure the efficiency of central air conditioners and air source heat pumps. The higher the rating, the more energy efficient it is. For reference, air conditioners that are 14 or higher SEER meet ENERGY STAR criteria. (14.5 or higher for split systems.)
Urethane	- A synthetic chemical structure formed by one of three specific chemical reactions. See Polyurethane.
Vermiculite	- One off a group of micaceous hydrated silicate minerals related to the chlorites and used in lightweight insulating concrete.
Wall Insulation	- Insulation placed in the walls of a structure that reduces or prevents the transmission of heat or sound or electricity
Whole House Fan	- A fan designed to move air through and out of a home and normally installed in the ceiling.
Xeriscape	- Creative landscaping for water and energy efficiency and lower maintenance. The seven xeriscape principles are: good planning and design; practical lawn areas; efficient irrigation; soil improvement; use of mulches; low water demand plants; good maintenance.
Zone Air/Heat	- Divide your central air/heat system into up to multiple zones for independent temperatures in various areas of your home.