



SOLAR WEEK EDUCATIONAL MATERIALS SPONSORED BY:



Frequent Terms **GLOSSARY**



Not sure about the difference between PV or solar thermal or what SIPs are?

What follows is a handy list of frequent terms you might hear while on the Tour of Solar and Green Homes or at a Boulder Solar Week Workshop. If the following definitions are not enough to answer your questions, we recommend that you visit the Boulder Solar Week Education Web Site at www.ConservationCenter.org, where we have posted a number of articles and fact sheets to help you make sense of it all.

Advanced Framing Techniques—replace lumber with insulation material and maximize the wall that's insulated, which improves the whole-wall thermal resistance or R-value.

Bamboo flooring—more sustainable than traditional wood floors.

Building envelope—the separation (foundation, roof, walls, doors, and windows) between the interior and exterior environments of a building.

Composite lumber—extruded lumber made primarily from recycled wood and recycled plastic.

Deconstruction—reverse home construction at the end of a building's useful life.

Demolition recycling—using materials from deconstructed homes on new construction projects, diverting as much as possible from landfills.

Drip irrigation—minimizes the use of water and fertilizer by allowing water to drip slowly to the roots of plants.

ENERGY STAR—a federal labeling program that identifies energy-efficient appliances.

Engineered lumber—lumber that has been engineered for efficiency and is composed of fast-growing trees.

Evaporative cooler—cools and humidifies outdoor air by allowing it to pass through water-soaked pads; uses about 75% less energy than central air conditioners.

Fiber-cement exterior siding—offers a long-lasting alternative to typical exterior wall cladding.

Foam/Blown-in insulation—insulation made of polyurethane foam that is sprayed into a cavity, then expands and hardens to fill the available space.

Forest Stewardship Council (FSC) Certified—a certification that ensures that lumber is taken from sustainable and healthy forests.

Geo-exchange or Ground-source heat pump—uses a system of underground piping and the constant temperature of the earth to heat air in winter or cool air in summer, reducing energy loads required to achieve a comfortable indoor temperature.

Green Points—a mandatory residential green-

building program that requires a builder or homeowner to include a variety of sustainable building components and awards points for sustainable building practices.

Heat-recovery ventilation (HRV)—a system designed to provide continuous or timed ventilation throughout a home and recover the heat carried in the exhausted stale air.

HERS Index—a scoring system between 0 and 100; the lower the score, the more energy efficient the home; a net-zero-energy home scores a HERS Index of 0.

High-performance window—have new frame materials and designs; low-E and/or solar control coatings; low conductance gas fills; insulating spacer between glazings.

High-Efficiency Boiler/Furnace—achieves 90%–97% efficiency in the energy in its fuel over the course of a typical year.

Hydro-zoning—a landscape practice that groups plants with similar water requirements together in an effort to conserve water.

LEED—a third-party certification program and the nationally accepted benchmark for the design, construction, and operation of high-performance green buildings.

Low-E—low-emissive glass is coated with a metallic oxide layer that improves thermal performance.

Low-flow plumbing—toilets, showerheads, and faucets that use low amounts of water while still maintaining adequate water pressure; washing machines and dishwashers with high water-conservation standards.

Passive solar—a design approach in which solar energy is brought into a home through south-facing windows and is absorbed and then slowly released by thermal mass to heat a building.

Pervious pavement—designed to allow percolation or infiltration of stormwater through the surface into the soil below where the water is naturally filtered and pollutants are removed.

Photovoltaic (PV)—PV cells are electricity devices made of semiconductor materials that convert light into DC voltage, connected to form PV modules (or solar panels). Modules can be

combined and connected to form PV arrays. A PV system consists of PV arrays, electrical connections, mounting hardware, power-conditioning equipment, and batteries (if not grid-tied). A grid-tied system is connected to the power grid, whereas a battery-backup system stores electricity generated in large batteries.

Programmable thermostat—allows you to automatically adjust your home's temperature, saving you energy while you are away or sleeping.

Radiant floor heat—distributes heat via hot water pumped through tubes under the floor.

Residential Energy Audit Program—helps homeowners understand their energy usage and gives them a personalized set of recommendations to lower their energy bill; offered by the CRC.

Rigid board/foam—rigid panels of insulation provide good thermal resistance and often add structural strength to the home.

R-value—the measure of a material's resistance to heat flow. The higher the R-value, the more it insulates.

SEER—measures the efficiency for air conditioners (A/C); the current minimum is 13 for central A/C and 12 or more for ENERGY STAR models.

SIPs (structurally insulated panels)—structural panels that use an insulating material sandwiched between two sheets of boards to create roofs and walls.

Smart Irrigation Controller—irrigation clocks that automatically adjust irrigation run-times in response to environmental changes. Smart controllers reduce outdoor water use by an average of 15 to 30 percent.

Solar Thermal (flat plate/evacuated tubes) collectors—use direct heat from the sun to provide domestic hot water and/or space heating.

Tankless water heating—while traditional hot water heaters must keep a water storage tank consistently heated, tankless water heaters heat water only when it is needed.

Xeriscape—a type of landscaping that utilizes plants with low-water needs.

Zoned heating—allows heat to be delivered to individual areas of the home when needed.