



## Weatherization Glossary

**Air Leakage:** An optional NFRC energy performance rating that measures air leakage as a function of cubic feet of air passing through a square foot of window area (cfm/sq ft). The lower the AL, the less air will pass through cracks of a window.

**Blower Door:** A home energy audit tool, a blower door is a powerful fan that mounts into the frame of an exterior door. The fan pulls air out of the house, lowering the air pressure inside. The higher outside air pressure then flows in through all unsealed cracks and openings. The auditors may use a smoke pencil to detect air leaks.

**Building Envelope:** The exterior of your home — the outer walls, ceiling, windows, and floor.

**Caulk:** A soft, semi-solid paste that is squeezed into joints and cracks of a house, reducing unwanted air flow.

**Chimney Effect:** See stack effect.

**Condensation Resistance:** An optional NFRC energy performance rating that measures the ability of a product to resist the formation of condensation on the interior surface of that product. This is rated on a scale from 0 to 100, where the higher the rating, the better the product is at resisting the formation of condensation.

**Digital Infrared Camera:** This camera creates a thermal picture where different temperatures are represented in different colors. A strong contrast in colors over one surface can signal an air leak.

**Duct Blaster:** A home energy audit tool that uses an air flow measurement system to test and document the airtightness of air duct systems in houses. The fan is connected directly to the air handler cabinet of the duct system in a house. An auditor will temporarily seal the rest of the duct grilles and pressurize or depressurize the duct system to force the air out of any cracks or holes. Auditors will monitor the pressure in the ducts to determine their condition.

**Energy Efficiency:** Using less energy for the same level of performance. Weatherizing is one way to make your home more energy efficient.

**Energy Star:** A program run by the U.S. EPA and DOE that rates and certifies products with particular efficiency levels. On their website you can find their Energy Star products, locate various rebates and products that are eligible for tax credits, as well as tips to weatherize and

improve the energy efficiency of your home. They also provide a list of minimum standards for a product to receive an Energy Star rating, and many FAQ's. [www.energystar.gov](http://www.energystar.gov)

**Environmental Protection Agency (EPA):** A government organization whose mission is to protect human health and the natural environment—air, water, and land—on which life depends.

**Fenestration:** Any opening in the building envelope, including windows and doors.

**HERS Index (Home Energy Rating System):** An energy rating program developed by the Residential Energy Services Network ([RESNET](#)) established to analyze a home's design and rate it according to its energy efficiency. The reference score is 100, while a net zero home receives a score of 0. The lower the score the better, and each one point decrease in score is a 1% reduction in energy consumption compared to the reference home. Builders and homeowners use this system to see the energy quality of their home, compare it to other homes, and evaluate energy losing deficiencies in homes.

**Home Energy Audit:** A professional service that identifies energy saving opportunities in a building.

**LEED (Leadership in Energy and Environmental Design):** An internationally recognized green building certification system developed by the U.S. Green Building Council (USGBC) to establish a framework to help builders design, construct, operate, and maintain green buildings.

**Low Emissivity:** A window with a "Low-E" has a specially designed metal coating, often based on metallic oxide, applied to one or more surfaces of its insulated glass. These coatings reflect infrared energy, keeping the heat inside during the winter and outside during the summer, while letting visible light pass.

**Manufacturer's Certification Statement:** A signed document provided by a manufacturer that states that their product will qualify for the federal tax credit offered through the American Recovery and Reinvestment Act. You can often find these online.

**NFRC Ratings:** (National Fenestration Rating Council) The standardized rating system to measure heat loss through windows, doors, and skylights. The NFRC tag will include a rating for the U-Factor, solar heat gain coefficient, and visible transmittance. Air leakage and condensation resistance are optional ratings to include.

**R-Value:** A measure of the capacity of a material, such as insulation, to stop heat flow, with increasing values indicating a greater capacity. You can put multiple pieces of insulation together, just add the R-values together to find your total R-value.

**Roof overhang:** An extension of a roof that projects over the exterior of a building so that it (ideally) shades windows in the summer and protects walls from moisture damage.

**Solar Heat Gain Coefficient:** An NFRC energy performance rating that describes how much solar energy can be transmitted through a window. This is measured on a scale between 0 and 1, where the lower the rating the less solar heat the product transmits into a house. Energy Star recommends an SHGC of between .3 and .4 or lower for the Piedmont region.

**Stack Effect (chimney effect):** The phenomenon that occurs when air in the home is warmer than outside (winter). Cool air enters into the basement of a house and pushes the warmer air upwards. When the air in the house is cooler than outside (summer), the process reverses. Hot air is absorbed into the attic and pushes the cool air down out through the basement.

**Tax Credit:** Reduces ones tax payment dollar-for-dollar. Tax credits are generally better than a tax deduction, which only reduces the amount/proportion of your income that is taxable.

**U-Factor:** Measure of the amount of heat that moves through a square foot of window in an hour for every degree Fahrenheit difference in temperature across the window. The lower the rating the better a window is at resisting heat flow. Energy Star recommends a U-Factor of between .32 and .35 or lower for this region.

**Vapor barrier:** A waterproof liner used to prevent passage of moisture through the building structure. Vapor barriers in walls and ceilings should be located on the heated (indoor) surface of the building. Some insulation comes with a vapor barrier attached.

**Visual Transmittance:** An NFRC energy performance rating that measures how much visual light can come through a product. Measured between 0 and 1, the higher the VT, the more light can come through.

**Weatherization:** The practice of modifying a building to protect its interior from the elements, to reduce energy consumption, and to optimize energy efficiency.

**Weatherization Assistance Program (WAP):** A federal program overseen by the U.S. Department of Energy that enables low-income families to permanently reduce their energy bills by providing funds to go towards services and home improvements that make their homes more energy efficient.

**Weatherstrip:** A narrow strip of material (metal, felt, wood, etc.) used to cover the joint of a door and jamb, or between a window and its sash or sill to tighten the fit and reduce drafts.

**Windbreak:** A dense row of trees, or a fence or other barrier that acts as a layer of insulation, preventing wind from reaching a home at full force. Windbreaks on the north and west sides of a building in particular can save heat in the winter by reducing wind chill and air filtration.