

# Glossary

## Weatherization Assistance Program Standardized Training Curricula

Absolute humidity	Air moisture content expressed in grains (or pounds) of water vapor per pound of dry air.
Acceptable maximum CFM <sub>50</sub> shell leakage (AMSL)	A guideline of how much air leakage from a building is permitted, measured in cubic feet per minute at -50 Pa. If the building exceeds AMSL, air sealing measures are indicated.
Accredited Standards Committee (ASC)	A group established by the American National Standards Institute to develop standards. The ASC Z223 works with the National Fire Protection Agency to develop and publish the National Fuel Gas Code, also known as ANSI Z223.1 and NFPA 54.
ACH <sub>50</sub>	Measure of how often the air is refreshed when the pressure difference is 50 Pa.
Acrylonitrile butadiene styrene (ABS)	A rigid thermoplastic polymer common in piping applications. ABS is the counterpart to off-white PVC pipe; ABS pipes are black. ABS is very durable but breaks down when exposed to acetone.
Action levels	Levels of CO (in ppm, as tested) at which action (mitigation and/or evacuation) is suggested.
Active ventilation	A system of ventilation in which air is forced through ventilation ducts under pressure. Also known as mechanical or forced ventilation.
Air barrier (air boundary)	Any part of the building shell that offers resistance to air leakage. The air barrier is effective if it stops most air leakage. The primary air barrier is the most effective of a series of air barriers. Also called air boundary or pressure boundary.
Air changes per hour (ACH)	The number of times in one hour that all of the air in a home is replaced by outside air through air leakage and/or ventilation.
Air Conditioning Contractors of America (ACCA)	Industry group that works toward improving the air-conditioning industry, promoting good practices, and keeping homes and buildings safe, clean, and comfortable.

Air leakage	Uncontrolled ventilation through gaps in the pressure boundary. Typical sites of air leakage include around windows, pipes, wires, and other penetrations.
Air transport	Movement of moisture vapor by convective air currents.
Air-free CO content	Unit of measurement referring to the level of CO not diluted with oxygen in a flue gas sample.
Air-handling unit (AHU)	An equipment package that includes a fan or blower, heating and/or cooling coils, air filtration, etc. for providing heating, ventilating, and air conditioning to a building.
Albedo	The ratio of reflected to incident light.
Aldehydes	Any class of organic compounds containing the group -CHO, which yields acids when oxidized and alcohols when reduced. Also a toxic byproduct of oil combustion.
Aluminum brake	A tool that is used to produce perfect 90 degree bends in metal.
Aluminum coil stock	A rolled product which is a continuous strip of aluminum, produced in coil form. The coil has both an inner and outer diameter and comes in a variety of finishes and features.
Ambient	Of the surrounding area or environment.
Ambient air	Outdoor or unconditioned air
American Gas Association (AGA)	A trade association representing American natural gas supply companies. AGA collaborates with ASC and NFPA on the National Fuel Gas Code.
American National Standards Institute (ANSI)	A private non-profit organization that oversees the development of voluntary consensus standards.
American Recovery and Reinvestment Act (ARRA)	Bill signed by President Obama in February 2009 as an economic stimulus package.
Amperage	The amount of electrical energy flowing through an appliance at any given time; also called "current."
Anemometer	A device for measuring wind speed, used in weatherization work to determine flow rates at registers.
Angle of incidence	The angle of the sun hitting the roof.
Appendix A	Specifications and standards for weatherization materials as set forth in DOE WAP Rule 10 CFR, Part 440.
Area	Length x width = area.

As-measured CO content	Unit of measurement referring to the level of CO, including oxygen, in a flue gas sample. As-measured values will always be lower than air-free samples.
ASHRAE	American Society of Heating, Refrigerating, and Air-Conditioning Engineers. International technical society which develops standards for those concerned with refrigeration processes and the design and maintenance of indoor environments.
ASHRAE 62.1-1989	Air quality standard developed for large commercial buildings, usually with forced ventilation. Is accepted for use on small residential buildings as of this writing.
ASHRAE 62.2-2007	Air quality standard developed for low-rise residential buildings. Defines the roles of and minimum requirements for mechanical and natural ventilation systems and the building envelope.
ASHRAE guidelines	Standards of the American Society of Heating, Refrigeration, and Air-Conditioning Engineers
Association of Energy Engineers (AEE)	A professional organization for energy engineers. AEE offers many certification programs, including one for residential energy auditors.
Association of Home Appliance Manufacturers (AHAM)	Trade association representing the appliance manufacturing industry.
Atmospheric	Used in reference to combustion appliances. Atmospheric appliances draw combustion air from the room where they are located. The term used in building and safety codes is "natural draft."
Auditory/verbal learners	Auditory learners learn best by hearing information. They can usually remember information more accurately when it has been explained to them orally.
Awning window	Awning windows are essentially casement windows that swing vertically. Awning windows are often used in basements. Jalousie windows, found on older mobile homes, are a type of awning window.
B-vent	A double-wall pipe for gas- or propane-fired combustion appliances.
Backdrafting	Continuous spillage of combustion gases from a combustion appliance.
Baffle	A plate or strip designed to retard or redirect the flow of flue gases.

Balloon framing	In carpentry, the lightest and most economical form of construction in which the studding and corner plates are set up in continuous lengths from the first floor line or sill to the roof plate to which all floor joists are fastened. Wall cavities act as major air leakage pathways in balloon framed homes.
Band joist	The outermost joist around the perimeter of the floor framing. Also known as a rim joist.
Barometric damper	A device installed in a chimney to allow for the adjustment of dilution air.
Base load	The energy used by electric or gas appliances in a home that is not used for space conditioning, thus not a seasonal load.
Belly blow	A process for re-insulating floor cavities with blown-in insulation.
Belly return or belly return system	A type of mobile home air distribution system. The mobile home heating or cooling system receives return air through the belly cavity or plenum.
Bernoulli Principle	Phenomenon in which a sufficient air stream across an opening will create enough of a pressure difference to draw a liquid or gas out of a vessel.
Blower	Used in reference to furnace blowers, also called squirrel cages. The blades should be cleaned for optimal performance.
Blower door	A diagnostic tool used to locate the points of infiltration in the building envelope and help guide air sealing.
Board feet	A measurement of lumber volume. A board foot equals 144 cubic inches of wood.
Body language	The gestures, postures, and facial expressions by which a person manifests various physical, mental, or emotional states and communicates nonverbally with others.
Boot	A duct section that connects a duct to a register or a round duct to a square duct.
Boroscope	An inspection tool; a flexible tube with a light and camera or viewer at one end. Boroscopes can be used to look into wall cavities and other tight spaces that would be otherwise impossible to visually inspect.
Box sill	Common method of framing floor joists, where a header is nailed to the ends of the floor joists.
Branch duct	An air duct which branches from a main duct.

British thermal unit (BTU)	The quantity of heat required to raise the temperature of one pound of water one degree Fahrenheit.
Building envelope	The area of the building that encloses conditioned space. Only the exterior four walls to the ceiling under the attic and the floor above the unheated basement area are considered part of the building envelope. The floor of a unit that is built on stilts or is above an unheated crawl space is considered a part of the building envelope. The roof of a building that has no ceilings (or that is part of the ceiling) is considered part of the building envelope.
Building management system (BMS)	Computer-based control system installed in buildings that controls and monitors the building's mechanical and electrical equipment such as air handling and cooling.
Building Performance Institute (BPI)	Organization supporting the development of a highly professional building performance industry through individual and organizational credentialing and a quality assurance program.
Building tightness limit (BTL)	A level of air tightness at which indoor air quality and building integrity may be compromised if the residence is any tighter.
Bulk moisture	Large amounts of water intrusion, for example from wind-driven rain or sub-surface water.
Butyl-backed tape	Heavy-duty, pressure-sensitive duct joint rolled sealant.
Bypass	A channel through air and thermal boundaries where air passes, uncontrolled, into or out of the building envelope.
Cad cell	A flame sensor composed of the chemical compound cadmium sulfide. Its purpose is to sense whether a flame is present during a burner cycle. If a flame is not detected, it activates a relay, which shuts the burner down.
Calibration	Comparison of the test results of an instrument to a known reference point.
Call-back	Having a weatherization team return to a job site to perform work not done or redo work done unsatisfactorily.
Can light	A light fixture (or can) that is set into the ceiling. Also called recessed light fixture.
Can't reach fifty (CRF)	A factor that extrapolates air flow at lower pressure differences to air flow at 50 pascals pressure difference. Used in blower door diagnostics when the shell is too leaky to allow the blower door to reach a pressure difference of 50 pascals.

Cantilevered floor	A floor that extends beyond the foundation of the framed structure below it and is exposed to outside conditions.
Capillary action	Movement of liquid water across a material as a function of the surface tension of the water and the porosity of the material.
Carbon dioxide (CO <sub>2</sub> )	One of two main products of complete combustion of a hydrocarbon. (The other is water vapor.)
Carbon dioxide content	A measure of the bicarbonate level in the air. Higher than normal levels of carbon dioxide may induce a number of negative side effects.
Carbon monoxide (CO)	Carbon monoxide is a tasteless, odorless, colorless, and poisonous gas that is a by-product of incomplete combustion of fossil fuels. It is usually caused by a lack of air to support combustion or impingement of the flame.
Carbon monoxide content	A measure of the carbon monoxide level in the air.
Casement window	Casement windows have a single operable sash that swings outward on a horizontal plane. Casement window frames that have gone out of square due to settling can stick and quite possibly render these types of windows inoperable.
Cementitious	Having the properties of cement. Cementitious roof coatings, unlike elastomeric varieties, do not stop water infiltration.
Central HVAC system	Heating, ventilating, and/or air conditioning equipment that serves a building from a main unit. A system generally includes the heat producing or air conditioning appliance, the return and supply system, and ducts or pipes for venting flue gases. Compare to separate equipment for each room or apartment.
Certification	Recognition by an independent person or group that someone can competently complete a job or task, frequently demonstrated by passing an exam.
Certification label	Metal plate fastened to the exterior of a mobile home, showing that it meets all construction requirements under the HUD Code.
Certified renovator	A person authorized by EPA to perform repair and renovation projects that disturb lead-based paint.
CFM <sub>50</sub>	Measurement of air leakage in cubic feet per minute at 50 Pa pressure difference.

CFM <sub>natural</sub>	Amount of air leakage in cubic feet per minute under natural conditions.
Change order	A process through which a business and its client can alter an original business agreement.
Chaseway	Cavity within a building with the purpose of conveying pipes, ducts, etc. through the building. Chaseways, such as plumbing walls, are common sites for air leakage.
Chimney chase	Typically refers to the cavity between the chimney and the framing and other building materials that surround the chimney. Because of fire-safety clearances, there is usually a gap of at least 2" between building materials and the chimney, allowing substantial air leakage.
Classroom testing	Examination of students that takes place in a classroom setting. See also field testing.
Classroom training	Teaching students to perform jobs or tasks in a classroom setting. See also on-site/in-field training.
Clearances	Allowable distances between heat-producing appliances, chimneys, or vent systems and combustible surfaces.
Climate zone	An area with a prevailing climate that distinguishes it from other areas by parameters such as temperature, rainfall, and humidity.
Clothing insulation value (CLO)	CLO is used to measure the thermal insulation of clothes.
Codes	Any set of standards set forth and enforced by a government agency for the protection of public health and safety.
Collar beam	A horizontal piece in roof framing that provides structural strength by connecting opposite rafters.
Color rendering index (CRI)	A measurement of a light source's ability to render colors the same as sunlight. CRI has a scale of 0 to 100.
Color scale	The relation between an incandescent substance's temperature and the color of the light it emits.
Combustible gas leak detector	Device used for finding natural gas or propane leaks.
Combustion air	Air that chemically combines with a fuel during the combustion process to produce heat and flue gases, mainly carbon dioxide and water vapor.
Combustion analyzer	Instrument that measures flue gas samples to determine the safety and efficiency of the combustion process.
Combustion appliance zone (CAZ)	Any area within a house containing a combustion appliance that can be closed off from another area.

Combustion appliance zone (CAZ) testing	Diagnostics performed to ensure that combustion appliances work properly and that pressures in the home allow adequate ventilation for health and safety.
Combustion byproducts	Combustion byproducts are produced whenever carbon-based fuels such as gas, oil, kerosene, wood, or charcoal are burned. Many of these byproducts are pollutants.
Combustion efficiency	Percentage of fuel burned during combustion, also referred to as steady state efficiency.
Combustion gases	Combustion byproducts.
Community Action Agency (CAA)	Community Action Agencies are non-profit private and public organizations established under the Economic Opportunity Act of 1964 to fight America's War on Poverty. Community Action Agencies are designed to help people achieve self-sufficiency. Often used interchangeably with "Community Action Program."
Community Action Programs (CAP)	See "Community Action Agency."
Compact fluorescent lamps (CFLs)	A small fluorescent light bulb that uses 75% less energy than a traditional incandescent bulb.
Competency	Demonstrated ability to perform a job or task.
Concentric flue	A double wall flue pipe allowing the supply of combustion air and the simultaneous evacuation of combustion gases.
Condensation	The conversion of a gas to a liquid. Typically used here in relation to water when discussing moisture dynamics in the home.
Condensing furnace	A high-efficiency furnace that also removes latent heat from combustion products.
Conditioned air	Air that has been heated, cooled, humidified, or dehumidified to maintain an interior space within the "comfort zone."
Conditioned space	Intentionally heated or cooled areas of a building.
Conduction	The transfer of energy through matter from particle to particle. When a teaspoon handle becomes hot while stirring hot tea, that is an example of heat transfer through conduction.
Conductive heat loss	The transfer of heat through a material.
Consumption analysis	A method to determine how energy is used in the home, what the main base loads are, and if a home's utility bills make sense after a site survey.

Convection	The transfer of heat caused by the movement of a fluid like water or air. When a fluid becomes warmer, it becomes lighter and rises. The stack effect is an example of convective currents at work.
Convective losses	Heat loss in a building resulting from air movement.
Core competencies	Essential skills for weatherization workers, defined by the Weatherization Trainers Consortium.
Corrective action	Typically used in reference to deferral of services, the action a prospective client must take to allow weatherization work to proceed on the home. Having a roof repaired and removing a threatening animal from the premises are both example of corrective actions.
Cost averaging	Costing method in which the value of new purchases is averaged with the value of existing stock for like items.
Crackage	Small gaps around doors, windows, and other parts of a building envelope through which ventilation air may pass.
Crawl space	The low space beneath the ground floor of a building that gives workers access to wiring and plumbing.
Crawl space conditioning	The method by which a crawl space is intentionally heated or cooled.
Crosswise floor joist configuration	Mobile home joist configuration where the main duct is located beneath the floor joists and connected by boots to the sub-floor.
Cubic feet per hour (CFH)	A measurement of air-transported heat loss. Calculated in BTU.
Cubic feet per minute (CFM)	A measurement of air movement past a certain point or through a certain structure. Used in pressure diagnostics to quantify air leakage.
Cure	Used in reference to spray foam insulation: The process of expanding and hardening. Many manufacturers consider the insulation cured when residue-free trimming is possible. Off-gassing can occur for many days after this.
Daily sign-out sheet	Source document for the weatherization program material inventory system. It documents all materials removed from the warehouse, all materials installed on the job, and the material expenditures on the job.
Data plate	Mobile home label permanently affixed to the home, usually in a bedroom closet, the electrical panel box cover, or kitchen cabinet, which contains the name and address of the manufacturer, serial and model numbers, date of manufacture, and certification label numbers.

Decommissioning	Removing or retiring from active service. In reference to refrigerators and air conditioners, includes the safe removal and storage or recycling of the coolant.
Deferral of services	Postponement or denial of weatherization services to the client.
Dehumidification	The removal of water from the air. Excess humidity can cause mold.
Delta T	Temperature difference.
Dense-pack insulation	Loose-fill insulation that is blown into building cavities to a specific density that substantially reduces air leakage while providing recommended R-value. Easy to use for irregularly shaped areas and around obstructions.
Depressurization	A condition that occurs when the air pressure inside a structure is lower than the air pressure outdoors.
Depressurization tightness limit (DTL)	A test for back drafting.
Desk monitoring	Monitoring activities performed through review of paperwork. See also On-site monitoring.
Dew point	The warmest temperature of an object in an environment where water condensation from the surrounding air would form on that object.
Diffusion	Movement of water vapor through a material as a function of the driving force across and the porosity of the material.
Digital probe thermometer	Device for testing temperature rise and fan operating temperatures.
Dilution	Relying on adequate ventilation to reduce the concentration of pollutants to acceptable levels.
Dilution air	Room air that mixes with flue gases.
Dilution rate	Used in context to mean the rate at which indoor air is diluted with outdoor air.
Direct leakage	Air enters and exits at same location; occurs at direct openings to outdoors.
Direct penetration	Those leaks associated with the exchange of indoor and outdoor air through exterior openings, such as windows and doors.
Direct-vented appliance	Appliances that draw combustion air directly from the outdoors, e.g., most 90+ condensing furnaces.

Discount rate	The interest rate at which expected future cash flows can be discounted. It includes both the present value and fuel escalation rate, and is used to account for the time value of money and the changing price of fuels.
DOE Knob and Tube Memorandum 1988	This memorandum discusses WAP's policy on insulating homes that contain knob and tube wiring.
DOE project officer (DOE PO)	A DOE representative responsible for monitoring grantees to ensure compliance with current, approved annual plans.
Domestic hot water (DHW)	A separate, closed system to heat potable (drinkable) water and supply it to the dwelling unit for washing, bathing, etc.
Domestic hot water tank (DHWT) access door	Portal allowing access to the domestic hot water tank in a mobile home.
Dominant duct leakage	To measure either dominant supply or return leaks.
Door casing	A wooden trim around doors that covers the seam between the jamb and the wall.
Door stop	The wood trim fastened to the inside of the jamb that positions the door within the jamb and into the latching mechanism.
Double-hung window	Double-hung windows have operable upper and lower sashes that slide vertically in a channel. Upper sashes are often painted shut.
Downflow	Air flow configuration in a furnace where cool air is taken from above and discharged as warm air from the bottom.
Downflow air distribution system	Air distribution system where air is forced downward.
Downflow furnace	Furnace type where the blower is located at the top of the furnace cabinet and air is forced downwards across the heat exchanger and into the ducts located in the belly cavity
Draft	A measurable pressure difference caused by combustion byproducts exhausting through a chimney flue as influenced by temperature difference, height of the flue, and the Venturi effect (the reduction in pressure that results when flow occurs through a constricted section of pipe).
Draft diverter	An intentional opening in the vent system serving an atmospheric furnace or water heater where dilution air is drawn from the surrounding room to mix with the flue gases in the chimney.
Draft gauge	Device for testing chimney draft.
Draft hood	See draft diverter.
Draft reversal	See backdrafting.

Drainage plane	A combination of water-resistant materials like building paper or house wrap, plus a physical space to allow water to flow.
Dropped down belly	Mobile home configuration where a hump is formed in the floor by the main duct running in the center.
Dropped soffit	A lowered part of the ceiling in a home.
Dry bulb	Part of one in a pair of thermometers used in a hygrometer. See also Wet bulb.
Dual fuel	The ability of an HVAC system to use either of two fuels (e.g., natural gas or fuel oil). The decision is frequently based on cost or availability.
Duct blaster	Combination of a small fan and a pressure gauge to pressurize a house's duct system and accurately measure air leakage of the ductwork.
Duct blower	A device for testing duct leakiness and airflow.
Duct boot	Transition piece that connects the main duct to the floor and is often vulnerable to failure.
Duct-induced pressure differences	Pressure differences between rooms in a building caused by the ducted air delivery system, can be due to supply ducts, return ducts, or both.
Eave chute	Device that maintains air space between the insulation blanket and the roof sheathing and prevents insulation from clogging eave vents.
Eave vent	Vent opening located in the soffit under the eaves of a house to allow the passage of air through the attic and out the roof vents.
Elastomeric	A characteristic of a material that is flexible and permits movement.
Elastomeric coating	Polymeric material, such as acrylic, that is used to solve roof leaks and can be used to restore virtually all types of roofs. Used mainly in reference to cool roof coatings that reduce solar heat gain.
Elimination	Removing the source of the pollution.
Emittance	The ability of a material to emit radiant energy from its surface. Also called emissivity.
Encapsulation	Containing the pollutant so it will not affect air quality.
Energy Audit Institute (EAI)	A company offering online energy audit training and certification.
Energy Audit using the Queens Information Package (EA-QUIP)	A tool that determines the economically optimal mix of energy-saving measures for a building.

Energy burden	The percentage of a household's income that must be used for energy bills. The energy burden for low-income households is over four times that of other households.
Energy conservation measures (ECM)	Building components or products installed to reduce the building's energy consumption.
Energy Information Administration (EIA)	Section of the U.S. Department of Energy providing statistics, data, and analysis on resources, supply, production, and consumption for all energy sources.
Equivalent duct length (EDL)	A measure of how much static pressure an exhaust fan has to overcome.
Equivalent leakage area (ELA)	Calculation, in square inches, of the total area of all holes and cracks in a structure. The leakage area is then combined to represent one total leakage point.
Evaporation	The change that occurs when a liquid becomes a gas. Evaporation is the key process in the operation of air conditioners and evaporative coolers.
Excess air	Air in excess of what is needed for combustion.
Exfiltration	This term describes the movement of air out of a building. Often refers to warm air leaving a building due to pressurization, infiltration, wind, stack effect, and/or convective flow.
Expanding foam	An insulation product designed to expand and harden upon contact with the air. Available in canisters with spray nozzles that make it easy to apply foam in a wide variety of situations.
Fan-off temperature	The furnace combination fan and limit control FAN OFF setting lets the furnace blower continue to run for an interval after the furnace burner has turned off, but will shut the blower off after the heat exchanger has been cooled down and the heat it contained has been sent to the occupied space.
Fan-on temperature	When the designated warm temperature has been reached inside of the furnace warm air plenum chamber the FAN ON switch turns on the furnace blower to deliver warm air to the occupied space.
Fenestration	Window and door openings in a building's wall.
Field guides	Region-specific installation standards for weatherization programs, developed by Saturn Resource Management in collaboration with DOE.

Field testing	Assessment of a trainee's abilities conducted on-site, rather than in a classroom.
Fill tube	Specialized tool for blowing insulation into enclosed cavities such as mobile home bellies or roof cavities.
Fire-tube	Boiler in which hot gases from a fire pass through one or more tubes running through a sealed container of water. The heat energy from the gases passes through the sides of the tubes by thermal conduction, heating the water and ultimately creating steam.
First-in, first-out system (FIFO)	Costing system in which the first items purchased are the first items to be used. Inventory stock is identified by the acquisition cost.
Flame impingement	The striking of flame against an object.
Flame roll-out	Fuel gas combustion process occurring outside the normal combustion area of a combustion appliance.
Flue gas	Gases arising from the combustion of fuels, mainly consisting of carbon dioxide. Fuel gas normally contains pollutants, such as carbon dioxide, nitrogen oxide, sulfur dioxide, and dust.
Fuel escalation rate	Annual escalation rate of fuel prices based on the annual energy price forecasts of DOE's Energy Information Administration.
Furnace blower	A part of the furnace that produces a current of air. Often referred to as the "blower" or "squirrel cage."
Furnace plenum	An air chamber that gets filled directly by a large blower that is above, below, or adjacent to it.
Furred-out walls	Wall construction using furring strips (usually 1 x 3 lumber) to set the materials off from the substrate or existing wall being built upon. Common use of this detail is for rain-screen walls. The air spacing between the walls allows for protection against moisture.
Gable vent	A screened vent installed at or near the peak of a roof gable that allows warm attic air to escape.
Gallons per minute (GPM)	The unit for measuring water flow, frequently for showers.
Glass pane	Sheet glass cut in shapes for windows or doors.
Glazing	Glass installation. Pertaining to glass assemblies or windows.
Grade	The pitch of a slope such as a roof or a hill.
Grantee	The individual or organization that receives a grant.

Gross vehicle weight (GVW)	The total weight of a vehicle, including passengers, fuel, cargo, and attachments.
Ground fault circuit interrupter (GFCI)	An electrical connection device that breaks a circuit if a short occurs. GFCIs are required for all exterior use of electrical equipment and when electrical outlets are located near water sources.
Ground vapor retarder	A material that impedes the passage of water vapor from the ground.
Guarded hot box testing	Process used to determine the R-value of a material.
Hallway return or hallway return system	A type of mobile home air distribution system. The mobile home heating or cooling system receives return air through a central trunk line beneath the hallway.
Hands-on training	Teaching students by having them perform the relevant tasks.
Head jamb	Groove at the top of the window that allows the window sashes to slide into place and sit inside the window frame.
Health and safety (H&S)	Provision included in a 1976 law change for the Weatherization Assistance Program. WAP now considers the health and safety of low-income families, as well as reducing their energy costs.
Heat	Molecular movement.
Heat exchanger	Furnace component that transfers the heat from the combustion gases to the surrounding air. Combustion gases travel from the burner through the heat exchanger and then out the flue in properly functioning furnaces.
Heat pump water heater	System that heats water by using electricity to move heat from surrounding air into a tank of water.
Heat recovery ventilation (HRV)	Most common in cold climates, these are typically whole-house systems that reclaim some of the heat from exhaust air and pass that heat on to the intake air so less energy is needed to heat the home.
Heat rise	The number of degrees of temperature increase that air is heated as it is blown over the heat exchanger. Heat rise is measured as supply temperature minus return temperature.

Heating degree days (HDD)	The number of degrees per day that the daily average temperature (the mean of the maximum and minimum recorded temperatures) is below a base temperature, usually 65 degrees Fahrenheit. Used to determine indoor space heating requirements and heating system sizing. Total HDD is the cumulative total for the year/heating season. The higher the HDD for a location, the colder the daily average temperature(s).
Heating, ventilating, and air conditioning (HVAC) system	All components of the appliances used to condition interior air of a building.
High density fiberglass	Insulation product that has a high R-value. The denser material is intended for insulating areas with limited cavity space.
High limit	Safety feature that causes the burner to shut down if the factory-set maximum temperature in the supply plenum is reached (typically set at 200 degrees F).
Hinges	The metal objects that attach your door to the jamb, normally with screws. They can be made from brass, steel, iron, or other metals.
Home Energy Rating System (HERS)	An index established by the Residential Energy Services Network (RESNET) for assessing the energy efficiency of a home.
Home Ventilating Institute (HVI)	A non-profit association of manufacturers of residential ventilating products offering a variety of services including test procedures, certification and verification programs for products, and market support.
House as a system	The concept that many components of a house (e.g., building envelope, space conditioning and distribution, lighting, appliance) interact, affecting the home's comfort and performance.
House of Pressure	A tool developed by the New River Center for Energy Research and Training for teaching the effects of air flow dynamics in a home.
House wrap	A polyethylene barrier wrapped around a house to protect building materials from moisture and save energy.
HUD code	Standards and specifications applied to mobile home construction as set forth by the U.S. Department of Housing and Urban Development.
Hygrometer	A tool for measuring relative humidity. A psychrometer, which uses two thermometers, one with a dry bulb and one with a wet bulb, is a simple hygrometer.

I-beam	A rolled or extruded metal beam having a cross section resembling an I.
I-Codes	A complete set of coordinated building safety, fire prevention, and energy efficiency codes developed by the International Codes Council.
IC rated	Insulation Contact rating for light fixtures. IC housings must be installed wherever insulation will be in direct contact with the housing.
Ice dam	Ice that forms at the roof eaves during differential freezing and thawing.
In-progress units	Homes where weatherization work is being performed.
Inches of water column (IWC)	A unit used in measuring pressure difference. One inch of water column equals 0.25 kPa; or 0.036 psi.
Incidental repair	Repair necessary for the effective performance or preservation of weatherization materials. Such materials may include framing or limited roof repair, so attic insulation doesn't get wet. It does not cover roof replacement.
Indirect leakage	When air leaks into the home at one point, and out at a different opening. Indirect leakage is more difficult to find, and is associated with interior bypasses or chaseways of a home's interstitial cavities.
Indoor air quality (IAQ)	The quality of indoor air relative to its acceptability for healthful human habitation. Assessing and ameliorating, when necessary, the quality of indoor air is a major concern of the weatherization process. In particular, all by-products of major combustion appliances must be directly evacuated to the outdoors under all operating conditions.
Induced draft furnace	Furnace type that has a chimney vent and a motor.
Infiltration	The movement of air into a building through cracks and penetrations in the building envelope. Cold air often enters the structure due to depressurization, exfiltration, wind, stack effect, and/or convective airflow.
Infrared (IR)	A type of radiation not visible to the human eye, but detectable by thermography.
Infrared (IR) camera	Camera that converts surface temperature patterns into a visible picture.
Infrared (IR) imaging	Use of an infrared camera to generate a visible picture of surface temperature patterns.
Infrared (IR) thermography	The science of using infrared imaging to detect radiant energy or heat loss characteristics of a building.

Inspecting	The process through which a representative of a subgrantee visits completed units to ensure appropriateness and quality of work.
Inspection mirror	A small round mirror on the end of a handle used for viewing inside an inaccessible cavity.
Inspector	A representative of a subgrantee responsible for visiting completed units to ensure appropriateness and quality of work.
Instructional flow	The progression and order of the content of a course.
Instructional pace	The speed at which course material is covered.
Internal gain	The heat generated by bathing, cooking, and operating appliances.
International Association of Plumbing and Mechanical Officials (IAPMO)	The industry trade group that develops the Uniform Mechanical Code and the Uniform Plumbing Code.
International Codes Council (ICC)	An international non-governmental organization for developing building safety, fire prevention, and energy efficiency codes (I-codes).
International Fuel Gas Code (IFGC)	Code that addresses the design and installation of fuel gas systems and gas-fired appliances through requirements that emphasize performance.
International Residential Code (IRC)	A comprehensive, stand-alone residential code that brings together all building, plumbing, mechanical, fuel gas, energy, and electrical provisions for one- and two-family residences three stories or less. The IRC also provides a prescriptive approach (i.e., a set of measures) and a performance approach (i.e., energy modeling) for determining compliance.
Intrusion	Air moving into and out of insulation without going through the wall or ceiling assembly.
Jalousie windows	A type of window usually associated with mobile homes with two or more panes of glass that pivot on a horizontal axis.
Jambs	The wood that surrounds the door unit to which the door is attached on the hinge side.
Job shadowing	Learning a skill or skill set by working closely with an experienced practitioner.
Kelvin temperature	Used in reference to the scale used to define the color of a light source. Abbreviated as "K."

Kilowatt hour	The most commonly used unit for measuring the amount of electricity consumed over time; one kilowatt of electricity supplied for one hour. Equal to 3,600 kilojoules.
Kinetic energy	Moving or transitional energy.
Knee-wall attic	An attic with short walls, usually under three feet in height. Common in Cape Cods and bungalows.
Knob and tube wiring	Early standardized method for electrical wiring in homes consisting of insulated copper conductors supported by porcelain knobs (along their lengths) and tubes (when passing through framing members). Widely used from the 1880s until the 1930s, most States now require replacement of knob and tube wiring before installing any sort of insulation that will come into contact with the wiring.
Knowledge retention rate	The percentage of new information presented that a student remembers.
Known to unknown	Adult learners learn best when they progress in a systematic manner from current knowledge to new knowledge, while relating each new concept or skill to past experience.
Latent heat	The amount of heat absorbed or released in a phase change.
Lawrence Berkeley National Laboratory (LBNL)	Member of the national laboratory system supported by DOE through its Office of Science. It conducts unclassified research across a wide range of scientific disciplines.
Laws of thermodynamics	Statements of basic thermodynamic relationships in a system. The first law states that energy is neither created nor destroyed. The second law states that energy always goes from high to low (absent an outside influence expending other energy).
Lead-safe weatherization (LSW)	Methods, techniques, and engineering controls assuring that workers and home occupants are not exposed to harmful lead-based paint.
Leadership in Energy and Environmental Design (LEED)	A building certification system developed by the U.S. Green Building Council. The Green Building Certification Institute provides a series of exams leading to individual accreditation as a LEED building rater.
Learning styles	Preferred ways in which individuals process new information. Learning styles include visual, auditory/verbal, and tactile/kinesthetic.
Lengthwise floor joist configuration	Mobile home joist configuration where the main duct is located inside the joist cavities.

Logistics	Management of the flow of goods, information, and other resources from the point of origin to the point of consumption.
Loose-fill insulation	Small pieces of insulation that are blown into a home using a blowing machine. Loose-fill insulation is typically installed by a professional and is especially effective at filling small and irregularly-shaped spaces.
Louvered door	A louvered door has fixed or movable wooden fins that permit open ventilation while preserving privacy and preventing the passage of light to the interior.
Low Income Home Energy Assistance Program (LIHEAP)	A program of the U.S. Department of Health and Human Services to help low-income households, primarily in meeting their immediate home energy needs.
Low-e	Short for "low emissivity." In reference to window coatings, the characteristic of a metallic glass coating to resist the flow of radiant heat.
Low-flow rings	Part of a blower door that forces air past the sensors fast enough so that a reliable reading can be obtained.
Lower sash	The bottom portion of the window consisting of a pane of glass set inside a frame. The lower sash is fixed in a single-hung window and slides up and down in a double-hung window.
Lumen	The unit for measuring light output.
Magnehelic differential pressure gauge (aka, Magnahelic gauge)	Device that measures fan and blower pressures, filter resistance, air velocity, furnace draft, pressure drop across orifice plates, liquid levels with bubbler systems, and pressures in fluid amplifier or fluidic systems.
Make-up air	Air supplied to a space to replace exhausted air.
Manometer	A measuring device for small gas pressure differences.
Manual J	Load calculation that allows the user to properly size HVAC systems for single-family-detached homes, small multi-unit structures, condominiums, town houses, and manufactured homes.
Manufactured home	Transportable homes that are quick and cheap to build. Another name for mobile home.
Manufactured Home Construction and Safety Standards	Part of Title 24 of the HUD Code.

Manufactured Home Energy Audit	A tool to predict manufactured home energy consumption and recommend weatherization retrofit measures, accounting for local weather conditions, retrofit measure costs, and fuel costs.
Master inventory control sheet	Listing of all equipment that shows what is checked out, who has checked it out, and when it will be returned.
Mastic	A thick creamy substance used to seal seams and cracks in building materials.
Material Safety Data Sheets (MSDS)	Designed to provide both workers and emergency personnel with the proper procedures for handling or working with a particular substance. An MSDS includes information such as toxicity, health effects, first aid, disposal, and protective equipment.
Mean radiant temperature (MRT)	The area-weighted mean temperature of all the objects surrounding the body. Sometimes called the globe temperature, as it is measured with a globe thermometer, MRT affects thermal comfort.
Meeting rails	The rail of each sash that meets a rail of the other when the window is closed.
Mildew	A superficial coating or discoloration of organic materials, such as cloth, paper, or leather, caused by fungi, especially under damp conditions.
Minimum ventilation guideline (MVG)	Process used to emphasize the ventilation needed after a building is tightened to the maximum practical extent.
Minimum ventilation requirements (MVR)	Lowest level of ventilation that will be acceptable to human occupants and that will minimize the potential for adverse health effects. This level may be measured using ASHRAE Standard 62.2.
Mobile home belly	Part of a mobile home that contains the insulation, duct system, and plumbing. It is enclosed by the sub- and finished floor, with a rodent barrier underneath.
Mobile Home Energy Audit (MHEA)	Mobile Home Energy Audit software used to evaluate mobile home energy usage and predict cost effective retrofit based on savings to investment ratio.
Moisture meter	An instrument for measuring the percentage of water in a substance.
Mold	A growth of minute fungi forming on vegetable or animal matter and associated with decay or dampness.

Monitor	Frequently a representative of a State or Federal agency, a person responsible for visiting a specified percentage of completed units to ensure that weatherization funding is spent appropriately.
Monitoring	The process through which a person, frequently a representative of a State or Federal agency, visits completed units to ensure that weatherization funding is spent appropriately.
Mud sill	A wood component attached to the foundation of a building that creates a means of attaching various components of the framing to the foundation.
Mullions	Vertical framing members that don't run the full length of the door.
Multifamily (MF) housing	A building with five or more residential units.
Mushroom vent	A vent that has at the top of a vertical shaft a broad rounded cap that can be screwed down to close it.
N-factor	Used to convert readings taken at CFM <sub>50</sub> to CFM <sub>natural</sub> , the amount of air leakage that occurs naturally. The N-factor depends on climate, building height, and shielding from wind. N ranges from 9.8 to 29.4, but typically averages about 20. A higher N-factor means the blower door is creating more exaggerated conditions. A lower "N" means the blower door reading is closer to the natural leakiness of the home.
National Electric Code (NEC)	A safety code regarding the use of electricity. The NEC is sponsored by the National Fire Protection Institute. It is also used by insurance inspectors and many government bodies regulating building codes.
National Energy Audit Tool (NEAT)	A computerized auditing tool for prioritizing energy conservation measures for houses.
National Fenestration Rating Council (NFRC)	NFRC is a non-profit organization that administers the only uniform, independent rating and labeling system for the energy performance of windows, doors, skylights, and attachment products.
National Fire Protection Association (NFPA)	A U.S. organization charged with developing standards for fire prevention and suppression, including the National Electric Code.
National Fire Protection Association (NFPA) code	Codes and standards that are designed to minimize the risk and effects of fire by establishing criteria for building, processing, design, service, and installation in the United States.

National Institute for Occupational Safety and Health (NIOSH)	NIOSH is the Federal agency responsible for conducting research and making recommendations for the prevention of work-related injury and illness. NIOSH issues recommendations for respirator use.
Natural draft	Used in reference to combustion appliances. Natural draft appliances draw combustion air from the room where they are located. Although the term "atmospheric" is often used to describe these appliances, all building and safety codes refer to natural draft, so practitioners should be familiar with both terms.
Natural driving forces	Wind, stack effect, combustion, and ventilation, which all change the pressure in a building.
Natural gas	A hydrocarbon gas that is usually obtained from underground sources, often in association with petroleum and coal deposits.
Net Free Area (NFA)	The area of a vent after adjusting for insect screen, louvers, and weather covering. The free area is always less than the actual area.
NFPA 211	National Fire Protection Association's <i>Standard for Chimneys, Fireplaces, Vents, and Solid-Fuel-Burning Appliances</i> includes installation procedures for vents and chimneys that serve wood-burning stoves and fireplaces.
NFPA 31	National Fire Protection Association's Standard for the Implementation of Oil-Burning Equipment, dictating that chimneys must be at least 2 feet higher than any portion of the building within 10 feet.
NFPA 54	National Fire Protection Association's National Fuel Gas Code stating that combustion air must be provided for any combustion zone where the collective fuel input exceeds 1,000 BTU per 50 cubic feet.
Non-expanding foam	Spray foam that does not expand. Used in window and door jambs, and other constricted spaces where expanding foam may distort building materials and negatively impact operation.
Oak Ridge National Laboratory (ORNL)	Laboratory where the Mobile Home Energy Audit (MHEA) software was developed.
Occupational Safety and Health Administration (OSHA)	United States government agency that establishes and enforces safety standards in the workplace.

Off-gas	Off-gassing is the evaporation of volatile chemicals in non-metallic materials at normal atmospheric pressure. This means that building materials can release chemicals into the air through evaporation. This evaporation can continue for years after the products are installed.
On center (o.c.)	Term used in carpentry for describing framing spacing. For example, a wall built with 2x4 framing, 16" o.c. means the studs are 2" x 4" lumber spaced so there are 16 inches between the center of one and the center of the next.
On-site monitoring	Monitoring activities conducted at the home being weatherized. See also Desk monitoring.
On-site/in-field training	Teaching students to perform jobs or tasks in a real-life setting. See also Classroom training.
On-the-job training	Learning while engaged in work, rather than in a classroom.
One-on-one training	Learning to a job or task through individualized instruction with one student per instructor.
One-part foam	One-part foam comes in spray cans (e.g., Great Stuff) and spray guns with screw-on cans. One-part foam is best suited for filling gaps and holes less than ¾".
Online/distance learning	Education in which the information and the student are separated by time, distance, or both.
Order point	The count balance of a material in inventory that signals the warehouse manager or crew chief to order more.
Over-fired	In reference to furnaces; when too much fuel is being burned, as a response to over-sized fuel nozzles, over-pressurization from the pump, etc.
Oxidation	The combination of a substance with oxygen.
Oxygen content	A measure of the amount of oxygen in the air.
Packaged terminal air conditioner (PTAC)	A self-contained space heating and/or cooling system, usually powered with electricity, commonly found in hotels and apartment buildings.
Packaged terminal heat pump (PTHP)	A self-contained space heating and/or cooling system, frequently installed in a sleeve through the exterior wall of a building, using heat pump technology.
Panel	Parts of a door between rails and stiles or mullions.
Parts per million (ppm)	Unit for quantifying very dilute concentrations of substances.

Pascals (Pa)	Metric standard for measuring pressure differences. 248 pascals equal one inch of water column, approximately the weight of one Post-it note.
Passive attic venting	Takes advantage of the natural buoyancy of air by providing inlets and outlets low and high on the roof. Warm air rises through higher vents and cooler air is drawn through eave vents as the warm air escapes.
Peer-to-peer training	Learning in which a colleague teaches the trainee a job or task.
Performance standard	Specification of the conditions that will exist when a satisfactory job is performed.
Permeance rating	Number that quantifies the rate of vapor diffusion through a material.
Perpetual inventory system	System that documents the flow of materials from purchase to installation, traces the purchase, storage, and final use or disposal of materials, and accounts for all dollars expended for materials.
Personal protective equipment (PPE)	Accessories such as safety glasses, ear plugs, and respirators worn to protect individuals from workplace hazards.
Personal space	The variable and subjective distance at which one person feels comfortable interacting with another.
Phase change	The act of changing from one state of matter to another, e.g., solid to liquid or liquid to gas.
Picture window	Picture windows have no operable sashes and are used primarily for aesthetics.
Pier and beam foundation	Housing base that uses a concrete footing and pier to support wood beams and floor joists.
Platform framing	A system of framing a building in which floor joists of each story rest on the top plates of the story below or on the foundation sill for the first story, and the bearing walls and partitions rest on the subfloor of each story.
Pocket doors	Doors that slide into a wall cavity and are typically very leaky.
Polyurethane foam	A versatile plastic foam insulation, usually yellow in color.
Porosity	Measure of the void spaces in a material, expressed as either a fraction or a percentage of the total volume of material.
Positive displacement blower	Blowing machines used in weatherization to blow insulation into attics and wall cavities.

Positive-pressure, supplied-air respirator	Has its own air compressor to supply fresh air to the worker, and can use a mask or hood.
Potential energy	Stored energy.
Pounds per square inch (psi)	Units of measure for the pressure a gas or liquid exerts on the walls of its container.
Power venting	An active ventilation approach. May be achieved through fans where air is pulled through open windows and exhausted through the attic. Also may be achieved through exhaust fans in air-conditioned homes.
Prescriptive standard	Specifies in detail the requirements and test procedures to be followed.
Present value (PV)	The amount that a future sum of money is worth today given a specified rate of return.
Pressure balancing	To equalize house or duct pressure by adjusting air flow in supply and return ducts. Used on dwellings with forced air heating systems.
Pressure boundary	The surface that separates inside from outside, in relation to conditioned space within the home. Also called air boundary or air barrier.
Pressure pan	A device used to measure pressure differences between ducts and the home during pressure diagnostics.
Pressure pan testing	One method for determining duct leakage. Uses a pressure pan, manometer, and a blower door to quantify pressure differences and verify improvements after duct sealing.
Primary air	Air mixed with fuel before combustion.
Priority list	The list or ranking of installation measures developed by a program to produce the most cost-effective energy savings results based on a savings-to-investment ratio calculation.
Problem-oriented training	Training that focuses on resolving problems using the trainee's own analytical problem-solving skills, rather than simply showing the trainee how to do the task.
Propane (liquefied petroleum gas, or LPG)	A colorless, flammable gas occurring in petroleum and natural gas.
Psychrometer	An instrument for determining atmospheric humidity by the reading of two thermometers, the bulb of one being kept moist and ventilated.

Psychrometric chart	A chart presenting the physical and thermal properties of moist air in graphical form. Used in conjunction with a psychrometer to determine relative humidity, dew point, and other characteristics.
Public Housing Authority (or Agency) PHA	A public/private organization at least partially funded by the U.S. Department of Housing and Urban Development that helps low-income individuals find affordable housing.
Pull-down staircase	Staircase that folds up into the attic until pulled down for use.
Pulley seals	A component of a window sash counterweight system that helps control the movement of the lower sash.
Quality control (QC)	Review of the final work product to ensure that it was correctly done.
R-value	A measurement of thermal resistance for materials and related surfaces.
Radiation	Used in reference to heat transfer, independent of any medium.
Radon	A radioactive gas present in certain soils that decomposes into radioactive particles. In certain areas, radon compromises IAQ when it enters the home through basements or crawl spaces.
Rate of airflow	A measurement of the movement of air over time, frequently measured in cubic feet per minute.
Refrigerant	A special fluid used in air conditioners and heat pumps that heats air when it condenses from a gas to a liquid and cools air when it evaporates from a liquid to a gas.
Refrigerator Info Toolkit	Resource available on WAPTAC full of proper refrigerator metering techniques, tools, databases of existing models' usage, and spreadsheets for determining replacement eligibility.
Relative humidity (RH)	The amount of water vapor in the air, expressed as a percentage of the maximum amount that the air could hold at a given temperature.
Rem/Design	A software tool to model a building for energy-use analysis, designed for buildings with 5-25 individually heated and cooled units.
Return plenum	Used in reference to mobile home furnaces: Part of the belly return system where air is drawn back to the furnace through a louver in the floor of the furnace closet.

Ridge venting	Ridge venting is a continuous vent (or two strips of vents) along the roof ridge. Usually combined with continuous soffit or eave vents as part of an overall attic ventilation system.
Right to appeal	Ability for a client to appeal a deferral of service. The first appeal must go through the agency director. If this does not resolve the issue, the client may appeal to the State.
Rim joist	The outermost joist around the perimeter of the floor framing.
Riser	See duct boot.
Rodent barrier	Guard used to keep rodents from entering a mobile home through the belly.
Roof jack	Chimney assembly that penetrates the roof and includes the flashing and chimney cap assemblies.
Roof vent	A louver or small dome mounted on a roof (often near the ridge) to allow the passage of air through the attic.
Rules	Regulations governing weatherization activities.
Sash	A framework that holds the panes of a window in the window frame.
Saturation	The condition in which the air cannot hold any more moisture, as a function of temperature and vapor pressure.
Savings-to-investment ratio (SIR)	A calculation that determines the cost-effectiveness of a weatherization measure by dividing the estimated savings over its lifetime by the cost. SIR is computed over the lifetimes of the retrofit measures installed. Investment includes materials, labor, and support costs. Savings is expressed in terms of the net present value of the retail cost of the dwelling's fuel. Under some methodologies, other benefits or investments are included. SIRs of greater than one are counted as cost effective under this DOE WAP method of determining cost-effectiveness.
Sealed combustion	A heater that draws air for combustion from outdoors and has a sealed exhaust system.
Secondary air	Air surrounding a flame.
Section 8	The portion of the U.S. Housing and Community Development Act of 1974 that established the Housing Choice Voucher Program for low-income families and individuals. It frequently refers to housing provided under the provisions of the act.

Sensible heat	The heat absorbed or evolved by a substance during a change of temperature that is not accompanied by a change of state.
Set-point	A temperature setting associated with a thermostat control.
Shading coefficient (SC)	A decimal describing how much solar energy is transmitted through a window opening compared to clear, single glass, which has an SC of 1.0.
Shelf life	Length of time under specified conditions that a product retains its usability.
Side jamb	Grooves in window that allow the window sashes to slide up and down or side to side.
Silicosis	A serious lung disease caused by inhaling particulate matter.
Sill	The very bottom of the window. The sill is usually sloped to allow water to run off the bottom of the window in rain or during cleaning.
Single-family (SF) home	A free-standing residential building
Site-built home	Homes that are constructed entirely at the building site. These homes conform to all State, local, or regional codes where the house is located.
Slab-on-grade foundation	Housing base that uses concrete slabs formed from molds set in the ground. Concrete is poured into the mold all at one time, with no space left between the ground and the home.
Slider window	A slider window is essentially a double-hung window turned on its side so the sashes move horizontally.
Sling psychrometer	An instrument used to determine relative humidity. It consists of wet and dry bulb thermometers, with the difference between their readings constituting the measure of moisture in the air.
Smoke tester	Device to test the amount of smoke being produced by an oil burning furnace. High smoke means the fuel-to-air ratio is off, and combustion is less efficient than it should be.
Soffit	The underside of a roof overhang or a small lowered ceiling, as above cabinets or a bathtub.
Solar absorption	Solar absorption is that portion of total solar energy neither transmitted nor reflected.
Solar exposure	The amount of solar energy falling on a horizontal surface.
Solar film	See window film.

Solar gain	Heat from the sun that is absorbed by a building's materials and contributes to the heating and cooling requirements of the dwelling.
Solar heat gain coefficient (SHGC)	SHGC is a measure of the degree of shading incorporated into the glass and is an important factor to consider when selecting windows. Heating climates benefit from a high SHGC. Cooling climates benefits from a lower SHGC.
Solar reflectance	See albedo.
Solar water heater	System in which water is heated by solar radiation.
Spauling	White, chalk-like coating on concrete caused by water picking up salts as it migrates through concrete, then leaving the salts on the surface when it evaporates. Also spelled, "spalling."
Spillage	Temporary flow of combustion gases from a combustion device.
Spot source ventilation	Spot source ventilation includes things like kitchen exhaust fans and bathroom exhaust fans.
Stack effect	The term describes the effect of higher pressure at the top of a structure, lower pressure at the bottom of a structure, and neutral pressure somewhere in between, relative to the ambient (surrounding) air pressure. It is usually the result of different densities of warmer and cooler air (convective airflow).
Standardized curricula	Education materials including PowerPoint presentations, speaker notes, and lesson plans to help instructors train the expanding weatherization workforce.
Standards for conformance	Standards that ensure that safe, code-compliant materials and equipment are installed. Materials must meet the standards described in Appendix A.
Static pressure	Static pressure is the resistance from the inlet grill, duct runs, elbows, and outside termination that a fan must overcome to move air through the system.

Steady-state efficiency	The measurement of heat system balance in the on-cycle when heat into system equals heat out. Generally provided as a percentage of the maximum available heat generation capacity (100%) against the amount of usable heat being sent to the distribution system. This figure can also represent the percentage of heat being used within the system as compared to the heat lost through the flue. The reading is most valid when the stack temperature becomes constant and the distribution pumps or blowers are operating.
Steel chassis	Supporting frame for the mobile home structure exclusive of the body or housing.
Stiles	Full-length vertical framing members of a door.
Stop	A wood trim member nailed to the window frame to hold, position, or separate window parts. The stop is often molded into the jamb liners on sliding windows.
Sub-floor	Rough or structural floor placed directly on the floor joists to which the finished flooring is applied.
Subcooling	The temperature difference between the middle of a condenser and the liquid service valve outside.
Subgrantee	A person or agency that is awarded a sub-grant and is accountable to the grantee for the utilization of resources.
Sulfur dioxide (SO <sub>2</sub> )	A colorless, nonflammable, water-soluble gas.
Superheat	The temperature difference between the evaporator and the compressor inlet.
Tactile/kinesthetic learners	Tactile/kinesthetic learners learn best by doing things. They like to find out how things work and remember through movement and manipulation.
Tankless water heater	Rather than storing hot water, a tankless unit heats water as it is being used.
Targeted Retrofit Energy Analysis Tool (TREAT)	A software tool to model a building for energy-use analysis, designed for buildings with at least 25 units.
Teachable moment	The time at which learning a particular topic or idea becomes possible or easiest.
Technical field monitor	A person responsible for ensuring that testing and work performed is accurate; staff are properly trained; appropriate measures are installed; and appropriate tests are properly conducted before, during, and after weatherization.

Temperature	A measure of the heat present.
Temperature rise	See heat rise.
Thermal boundary/thermal barrier	The continuous layer of building components, such as insulation, that retard conductive heat flow.
Thermal break	A thermal break is an element of low thermal conductivity placed in an assembly to reduce or prevent the flow of thermal energy between conductive materials.
Thermal emittance	The ability of a material to release absorbed heat.
Thermal envelope	See thermal boundary.
Thermal mass	A solid or liquid material that will absorb and store warmth and coolness until it is needed.
Thermal transmittance	See U-factor
Threshold	A beveled wood member fastened to the floor and situated between the side jambs. The threshold seals the space between the bottom of the door and the floor.
Through-the-door	A characteristic of a refrigerator that enables dispensing water and/or ice without opening the appliance door.
Title 10 CFR Part 440	Regulations established by the Energy Conservation in Existing Buildings Act of 1976 directing DOE to provide weatherization services to low-income persons.
Title 10 CFR Part 600	Regulations directing procurement for projects using Federal funds.
Total solar energy rejected	The percent of incident solar energy rejected by a glazing system equals solar reflectance plus the part of solar absorption that is reradiated outward.
Trainee-centered training	Trainee-centered learning activities ensure that the trainee is actively participating, rather than simply observing the supervisor.
Training and Technical Assistance (T&TA)	Program structure that ensures that all work in the field meets State standards. This ensures that there is a feedback loop and accountability within the program.
Training center	A facility with demonstration materials and props for trainees to practice new skills.
Trim	Extends beyond the end of the window frame on the outside of the window opening. This allows the window to fit flush with the exterior wall when the window is installed.

Tuck-under garage	Architectural style in which the garage is situated underneath a room of the house.
Turbine vent	Vent usually mounted on the roof of a building. The vent has at its head a globular, vaned rotor that is rotated by wind, conveying air through a duct to and from a chamber below.
Two-part foam	A triple-expanding foam appropriate for larger and more numerous air leaks, and for insulating crawl space walls and other big jobs. Two-part foam comes in portable two-tank kits and truck-mounted rigs.
Type S fuses	Fuse type with a rejection base that prevents tampering as well as mismatching.
U-factor	U-factor is a measure of non-solar heat flow through all the components of a material, typically used in reference to windows. The lower the U-factor, the better the thermal performance. U-factor allows consumers and energy technicians to compare insulating properties of commercially available windows.
U.S. Department of Agriculture (USDA)	United States government agency charged with rulemaking and enforcement for agricultural programs, USDA also administers some low-income housing programs.
U.S. Department of Energy (DOE)	United States government agency whose mission is to advance energy technology and promote related innovation in the United States.
U.S. Department of Energy Hot Climate Initiative	Training program for whole-house weatherization for hot-climate States.
U.S. Department of Housing and Urban Development (HUD)	United States government agency charged with rule-making and enforcement of the HUD Code.
U.S. Environmental Protection Agency (EPA)	The mission of the U.S. Environmental Protection Agency is to protect human health and the environment.
Unconditioned space	An area within the building envelope that is not heated or cooled.
Under-fired	In reference to furnaces: When too little fuel is being made available for combustion processes.
Uniform Mechanical Code	A model code developed by the International Association of Plumbing and Mechanical Officials to govern the installation and inspection of mechanical systems.

Uniform Plumbing Code	A model code developed by the International Association of Plumbing and Mechanical Officials to govern the installation and inspection of plumbing systems.
Upflow furnace	A furnace in which the heated air flows upward as it leaves the furnace.
Upper sash	The top portion of the window consisting of a pane of glass set inside a frame. The upper sash is fixed in a single-hung window and slides up and down in a double-hung window.
Vapor barrier	A material such as sheet plastic or paint that effectively retards moisture movement by diffusion.
Vapor permeable	Describes a material that permits the passage of water vapor.
Vapor pressure	The ratio of water vapor to a given volume of air (also known as absolute humidity).
Vapor retarder	A material that impedes the passage of water vapor.
Vent	Openings in an HVAC system to allow air flow.
Vent pipe	The pipe carrying combustion gases from the appliance to the chimney.
Vent terminations	Where a vent leaves the building. Vent terminations must prevent intrusion of moisture, detritus, or pests into the building, and allow safe exhaust of vented gases.
Vented crawl space	Crawlspace with grilles or vents installed to allow for passive ventilation beneath the home.
Ventilation	Controlled air leakage usually created with mechanical exhausting devices such as fans and dryers.
Verbal learners	People who understand and retain information best when it is presented in words. Some verbal learners prefer to hear the material (auditory learners); others prefer to see the material (visual learners).
Vermiculite	A heat-expanded mineral once commonly used for insulation.
Visual learners	Visual learners learn best by seeing things. They easily use images, pictures, colors, and maps to organize information.
Voltage drop	The loss of voltage in a circuit caused by resistance.
Volume	The amount of space occupied by a three-dimensional object or region of space, expressed in cubic units.

Water management	Managing water to avoid damage to building components or low IAQ. Includes properly grading the landscape to ensure water flows away from building, installing or repairing gutters and downspouts, clearing perimeter drains, etc.
Weatherization Assistance Program (WAP)	DOE's Weatherization Assistance (Wx) Program is the nation's largest residential energy efficiency program. Its mission is to increase the energy efficiency of dwellings occupied by low-income Americans, thereby reducing their energy costs, while safeguarding their health and safety.
Weatherization program notices (WPN)	Guidance documents issued by the U.S. Department of Energy for the weatherization program.
Weep holes	Holes drilled for the purpose of allowing water to drain out of an area in a building where it has accumulated.
Wet bulb	Part of one in a pair of thermometers used in a hygrometer. See also Dry bulb.
Whole house exhaust ventilation systems	Use of one or more fans and duct systems to exhaust stale air and/or supply fresh air to the house.
Whole-part-whole approach	In this teaching style, the student attempts the whole skill and the coach monitors to identify those parts of the skill that the student needs to improve upon. Part instruction can then be used to address the limitations. Then the student repeats the whole skill with the coach monitoring for any further need for improvement.
Wi-Fi	The means by which a device such as a computer or MP3 player can connect to the Internet wirelessly.
Wind effect	A driving factor of pressure differences. The leeward, or sheltered, side of the home experiences negative pressure. The exposed side, positive pressure.
Wind-washing	Phenomenon particular to fiberglass attic insulation. Air entering and leaving the attic through the attic vent openings is frequently able to blow through fiberglass attic flat insulation, removing heat as it goes.
Window film	Plastic films, coated with a metallic reflective surface, that are adhered to window glass to reflect solar heat gain.
Window stop	A wood trim member nailed to the window frame to hold, position, or separate window parts. The stop is often molded into the jamb liners on sliding windows.

Winter mode	Closing off all exterior openings of a home and opening interior doors. Generally performed prior to doing a blower door test.
With reference to (WRT)	Compared to another measurement. In weatherization, a way to assess pressure differences between ducts and the rest of the home.
Work order	An order authorizing specific work to be done. Sometimes called the work scope.
Worst case CAZ testing	A safety test, performed by specific procedures, designed to assess the probability of backdrafting in the home.
WPN 02-6; Weatherization Activities and Federal Lead-Based Paint Regulations	Program notice from the U.S. Department of Energy concerning activities that disturb lead-based paint.
WPN 08-4; Space Heater Policy	Program notice from the U.S. Department of Energy concerning space heaters and their use. This notice makes the Weatherization program space heater policy consistent with the IRC and IFGC.
WPN 10-1; Program Year 2010 Weatherization Grant Guidance	Program notice from the U.S. Department of Energy concerning grant guidance and management information for the Weatherization program for Program Year 2010.
Zone pressure diagnostics (ZPD)	Using a blower door to determine the interconnectivity of various building components, which helps the practitioner locate the pressure boundary and know if the air and thermal barriers are aligned. Also called zonal pressure diagnostics.