Energy Efficiency/Green Building Terms

A/C - An abbreviation for air conditioner or air conditioning.

A/C Disconnect - The main electrical disconnection switch for the AC condenser, located near the near the unit on the exterior of the building.

Above-Grade - The portion of a building that is above ground level.

Above-Grade Wall - A wall more than 50 percent above grade and enclosing *conditioned space*. This includes between-floor spandrels, peripheral edges of floors, roof and basement knee walls, dormer walls, gable end walls, walls enclosing a mansard roof and skylight shafts.

Absolute Humidity - Air moisture content expressed in grains (or pounds) of water vapor per pound of dry air.

Absorptance - The ratio of a solar energy absorbed to incident solar, also called absorptivity.

Absorption - A solid material's ability to draw in and hold liquid or gas.

Accent Lighting - Lighting that illuminates walls, reducing brightness contrast between walls and ceilings or windows.

Advanced Framing - A construction method (also known as "Optimum Value Engineering" or "OVE") that uses less material in the framing of a home and can reduce material costs and improve energy efficiency.

Aerator- The round screened screw-on tip of a sink spout. It mixes water and air for a smooth flow.

AFUE - Acronym for Annual Fuel Utilization Efficiency. It is a measure of the amount of heat actually delivered to your house compared to the amount of fuel that you must supply to the furnace.

AHRI - Acronym for the Air Conditioning, Heating, and Refrigeration Institute (AHRI), formed in 2008 by a merger of the Air-Conditioning and Refrigeration Institute (ARI) and the Gas Appliance Manufacturers Association (GAMA). It is a North American trade association of manufacturers of air conditioning, heating, and commercial refrigeration equipment. The organization performs political advocacy on behalf of its member industries, maintains technical standards, certifies products, shares data, conducts research, and awards scholarships.

AHRI Matching - (a) The use by HVAC equipment manufacturers of the Air Conditioning, Heating, and Refrigeration Institute (AHRI) standards to certify that their equipment has been certified or "matched" to operate at an optimal efficiency when combined. (b) The use of the AHRI directory of certified equipment (air handler, evaporator and condensing coil) by design professionals to select "matched" equipment, which help to insure they perform optimally together.

Air Barrier - Material(s) assembled and joined together to provide a barrier to air leakage through the building envelope. An air barrier may be a single material or a combination of materials. It includes any part of the building shell that prevents infiltration of outdoor air into the conditioned

space and exfiltration of indoor air to the outside. It may also be referred to as the "pressure boundary." It should be continuous and aligned with the thermal boundary (the part of the home that physically separates the conditioned spaces from unconditioned spaces).

Air Changes at 50 Pascals (ACH_{50}) - The number of times that the complete volume of a home is exchanged for outside air when a blower door depressurizes the home to 50 Pascals.

Air Conditioning - Cooling buildings with a refrigeration system. More generally means both heating and cooling. May be identified using the acronym HVAC.

Air Duct – A hollow conduit or tube (square or round) that circulates air from a forced-air heating and/or cooling system to a room (supply duct) or returns air back to the main system from a room (return duct). Ducts may be made of sheet metal, fiberglass board, or flexible plastic that carry conditioned air to all rooms.

Air Exchange - The total building air exchanged to the outdoors through air leakage and ventilation.

Air Exchange Rate - The measured value for total building air exchanged to the outdoors through air leakage and ventilation and usually referred to as Air Changes per Hour (ACH).

Air Filters - Adhesive filters made of metal or various fibers that are coated with adhesive liquid to which the particles of lint and dust adhere. These filters will remove as much as 90% of the dirt if they do not become clogged. The more common filters are of the throwaway or disposable type.

Air Handler - A steel cabinet containing a blower with cooling and/or heating coils connected to ducts.

Air Infiltration - This refers to the air leaking into a building through cracks in walls, windows and doors.

Air Leak - A hole, crack, or gap where air can leak in or out of a house. Air leaks can make a home feel drafty or uncomfortable and waste energy.

Air Sealing - This is the process of sealing bypass ducts in the pressure boundary to prevent air leakage. Air sealing reduces heat flow from air movement and prevents water vapor from entering the wall.

Air Space (Gap) - The area between insulation facing and interior of exterior wall coverings, normally a 1" air gap.

Air Transport Factor - The ratio of the rate of useful sensible heat removal from the conditioned space to the energy input to the supply and return fan motor(s), expressed in consistent units and under the designated operating conditions.

Ambient Lighting - Lighting spread throughout the lighted space for safety, security, and aesthetics.

Ammeter - Device to measure the current flowing in a circuit.

Ampere (AMPS) - Is the unit of measurement of electrical current flow, equals a coulomb per second. It is the rate at which electricity flows through a conductor.

Annual Fuel Utilization Efficiency (AFUE) – A laboratory-derived efficiency rating for heating appliances which accounts for chimney losses, jacket losses, and cycling losses. The ratio of annual output energy to annual input energy which includes any non-heating season pilot input loss, and for gas or oil-fired furnaces or boilers, does not include electrical energy.

Annual Return - The yearly savings divided by the initial cost needed to achieve the savings, expressed as a percent.

Approach Temperature - Is the difference in temperature between the fluid inside a heat exchanger and the fluid outside it.

Aquastat - A heating control that switches the burner or the circulator in a hydronic heating system.

Asbestos - A heat resistant material made of brittle mineral fibers that damage lungs and other bodily tissues. Previously in many building products; represents serious health hazard as an airborne particulate.

Asphalt - A dark brown to black, highly viscous, hydrocarbon produced from the residue left after the distillation of petroleum. Asphalt is used on roofs and highways as a waterproofing agent.

Atmospheric Venting System – A standard chimney system, used to remove combustion by-products from the home, relying on the atmospheric lift caused by the flue gas temperature, creating a negative pressure.

Attic Access - This is an opening that is placed in the ceiling or wall covering of a home providing access to the attic.

Attic Bypass - An air flow connection between the living space and attic.

Attic Ventilation - Intended to remove heat and moisture from attic areas to the outside

Attic Ventilators (Vents) - In houses, screened openings provided to ventilate an attic space.

Audit - The process of identifying energy conservation opportunities in buildings.

Back Draft(ing) - Is the continuous spillage of combustion by-products into the home (after running the appliance for one minute). Instead of venting out through the chimney or flue, the combustion by-products spill into the home.

Back Draft Damper - A damper, installed near a fan that allows air to flow in only one direction.

Backer Rod - Polyethylene foam rope used as a backer for caulking. Or in glazing, a polyethylene or polyurethane foam material installed under compression and used to control sealant joint depth, provide a surface for sealant tooling, serve as a bond breaker to prevent three-sided adhesion, and provide an hour-glass contour of the finished bead.

Backflow - The flow of liquids through irrigation into the pipes of a potable or drinking water supply from any source which is opposite to the intended direction of flow.

Backflow Preventer - A device or means to prevent backflow into the potable water supply.

Baffle - A plate or strip designed to retard or redirect the flow of flue gases or air when used for attic ventilation.

Balometer - This is an instrument, a capture hood, that measures airflow.

Balance Point - This is the minimum outdoor temperature at which no heating is needed.

Ballast - A coil of wire or electronic device that provides a high starting voltage for a lamp and limits the current from flowing through it. It used to “step up” the voltage in a florescent light.

Barometer - Instrument for measuring atmospheric pressure.

Baseload - The amount of energy (electric, natural gas, propane or oil if these are used for heating) used to operate lighting and appliances year round. The minimum energy you use.

Basement Wall - Is an opaque portion of a wall which encloses one or more sides of a basement and having an average below grade area greater than or equal to 50 percent of its total wall area, including openings (see “Gross area of exterior walls”).

Batt - A rectangular section of fiber-glass or rock-wool insulation measuring 14.5 or 22.5 inches wide, 4 to 8 feet in length and various thicknesses. Sometimes "faced" (a paper covering on one side) or "un-faced" (without paper).

Batt Insulation - Strips of insulation, usually fiberglass that fit between studs or other framing.

Bead - An applied sealant in a joint irrespective of the method of application, such as caulking bead, glazing bead, etc. Also a molding or stop used to hold glass or panels in position.

Bed or Bedding - In glazing, the bead compound or sealant applied between a lite of glass or panel and the stationary stop or sight bar of the sash or frame. It is usually the first bead of compound or sealant to be applied when setting glass or panels.

Below-Grade - The portion of a building that is below ground level.

Bimetal Element - A metal spring, lever, or disc made of two dissimilar metals that expand and contract at different rates as the temperature around them changes. This movement operates a switch in the control circuit of a heating or cooling device.

Blanket Insulation - Fiber-glass or rock-wool insulation that comes in long rolls 15 or 23 inches wide.

Blow-Down - Draining water from a boiler to remove sediment and suspended particulates.

Blow(n) Insulation - Fiber insulation in loose form and used to insulate attics and existing walls where framing members are not exposed.

Blower - The squirrel-cage fan in a furnace or air handler.

Blower Door - A diagnostic device that consists of a fan, a removable panel, and gauges used to measure and locate air leaks.

Boot (Ducting) - A duct section that connects between a duct and a register.

Branch Circuit - An electrical circuit used to power outlets and lights within a home.

Breaker Panel - The electrical box that distributes electric power entering the home to each branch circuit (each plug and switch) and composed of circuit breakers.

Brightness - The intensity of sensation resulting from viewing a lit surface measured in foot lamberts and referred to as luminance or luminous intensity.

British Thermal Unit (Btu) - The quantity of heat required to raise the temperature of one pound of water one degree Fahrenheit.

British Thermal Unit / Hourly (Btu/h) - British thermal units per hour.

Brownfields - A former industrial site, particularly one compromised by hazardous contaminants; examples are former dry cleaning establishments and gas stations.

Building Cavities - The space(s) inside walls, floors, and ceilings between framing members and the interior and exterior sheeting.

Building Envelope - The elements of a building which enclose conditioned spaces through which thermal energy is capable of being transferred to or from the exterior or to or from spaces exempted by the provisions of Section 101.2.1.

Building Paper - A general term for papers, felts, and similar sheet materials used in buildings without reference to their properties or uses. Generally comes in long rolls.

Building Science - It is the collection of scientific knowledge and experience that focuses on the analysis and control of the physical phenomena affecting a building's design. It traditionally includes the detailed analysis of building materials, building envelope, heating, ventilation and air conditioning systems, natural and electrical lighting, acoustic, indoor air quality, passive strategies, fire protection, and renewable energies in buildings.

Building Thermal Envelope - The basement walls, exterior walls, floor, roof, and any other building element that enclose *conditioned space*. This boundary also includes the boundary between *conditioned space* and any exempt or unconditioned space.

Burner - A device that facilitates the burning of a fossil fuel like gas or oil.

Buttering - For window glazing, is an application of sealant or compound to the flat surface of some member before placing the member in position, such as the buttering of a removable stop before fastening the stop in place.

Butyl - Type of non-curing and non-skinning sealant made from butylene. Usually used for internal applications.