Glossary of Terms

Addition
Any change to a building that increases conditioned floor area and conditioned volume. See also, "Newly Conditioned Space".

Albedo
Albedo is another word for reflectivity. A roofing product that has high reflectivity has high albedo.

Alteration
Any change to a building's water heating system, space conditioning system, lighting system, or envelope that is not an addition. See also, "Addition".

Alternative Calculation Method (ACM)
Different approved techniques for calculating a building's energy performance including: The California Energy Commission's Public Domain Computer Programs, one of the Commission's Simplified Calculation Methods, or any other calculation method approved by the Commission.

APP (Atactic Polypropylene)
A group of high molecular weight polymers formed by the polymerization of propylene. APP is used as a modifier to asphalt flux to improve performance qualities of the asphalt.

ASHRAE
The American Society of Heating, Refrigerating, and Air-Conditioning Engineers.

ASTM
The American Society for Testing and Materials.

Building Envelope
The exterior and demising partitions of a building that enclose the conditioned space; sometimes called just "Envelope".

Btu
British thermal unit. The amount of heat required to raise the temperature of one pound of liquid water by one degree on the Fahrenheit scale.

BUR (Built-Up Roofing)
A roof membrane consisting of layers of bitumen, which serves as the waterproofing component, with plies of reinforcement fabric installed between each layer. The reinforcement material can consist of bitumen-saturated felt, coated felt, polyester felt or other fabrics. A surfacing is generally applied and can be asphalt, aggregate, emulsion or a granule-surfaced cap sheet.

CABEC
The California Association of Building Energy Consultants.

CEC
The California Energy Commission.

Climate Zones
The 16 geographic areas of California for which the CEC has established typical weather data, prescriptive packages and energy budgets. Climate zone boundary descriptions are in the document, "California Climate Zone Descriptions", July, 1995.

Coatings
Products, such as water-based acrylic, soy, etc., that can be field applied with a brush, roller or spray equipment, over a roofing system for purposes of weatherproofing and/or increasing reflectivity and emissivity.

Condition
To equip (as a building) with an apparatus for washing air and controlling its humidity and temperature.

Conditioned Floor Area (CFA)
The floor area (in square feet) of enclosed conditioned space on all floors of a building, as measured at the floor level of the exterior surfaces of exterior walls enclosing the conditioned space.

Conditioned Space
Space in a building that is directly conditioned, indirectly conditioned, or semi-conditioned.

Conditioned Volume
The total volume (in cubic feet) of the conditioned space within a building.

Cool Roofs
A roof with reflective and emissive properties that help improve the energy efficiency of the building and/or mitigate the "urban heat island effect".

CRRC
The Cool Roof Rating Council is the sole supervising entity for the standards and testing of Title 24 compliant roofing products, and is responsible for administering the certification program relating to reflectivity and emissivity ratings for those roofing products.

Design Heat Gain Rate
The total calculated heat gain through the building envelope under design conditions.

Design Heat Loss Rate
The total calculated heat loss through the building envelope under design conditions.

Directly Conditioned Space
An enclosed space that is provided with wood heating or mechanical heating that has a capacity exceeding 10 Btu/(hr•ft^2), or mechanical cooling that has a capacity exceeding 5 Btu/(hr•ft^2).

Elvaloy®
Elvaloy KEE (ketone ethylene ester) from DuPont is advanced, solid phase, non-migrating polymer thermoplastic polymer. When used in a roofing membrane, it enables the membrane to stay flexible and easy to maintain.

Emissivity
Infrared emissivity (or emittance) is a measure of the ability of a surface to shed some of its heat (in the form of infrared radiation) away from the surface (i.e., roofing membrane). High infrared emissivity helps keep surfaces cool. Metallic surfaces have a low infrared emissivity.

Energy Efficiency Ratio (EER)
The ratio of net cooling capacity (in Btu/hr) to total rate of electrical energy (in watts), of a cooling system under designated operating conditions, as determined using the applicable test method in the California Appliance Efficiency Regulations.

Energy Factor (EF)
The ratio of energy output to energy consumption of a water heater, expressed in equivalent units, under designated operating conditions over a 24-hour use cycle, as determined using the applicable test method in the California Appliance Efficiency Regulations.

ENERGY STAR®
A voluntary labeling program designed to identify and promote energy-efficient products, including roofing products, developed by the Environmental Protection Agency.

EPDM (Ethylene-propylene-diene monomer)
Commonly known as a thermoplastic rubber membrane with high tear strength that can be cross-linked by both peroxides and sulfur, EPDM falls into the category of single ply roofing.

Gross Exterior Roof Area
The sum of the skylight area and the exterior roof/ceiling area.

Heat Flux
The amount of energy flowing through any surface of one square meter per second.

Infiltration
Uncontrolled inward air leakage from outside a building, or unconditioned space, including leakage through cracks and holes, around windows and doors, and through any other exterior or demising partition, or pipe or duct penetration.

LEED
Leadership in Energy and Environmental Design is the U.S. Green Building Council's (USGBC) green building rating system. The objective of LEED is to decrease the energy consumption and environmental impact of buildings.

Low-e Coatings
Low emissivity metallic coatings for roofs.

Newly Conditioned Space
Any space being converted to directly conditioned or indirectly conditioned space. Newly conditioned space must comply with the requirements for an "Addition" in the California Title 24 regulations.

Non-Residential Building
A building is considered non-residential when it has a low-sloped roof (slope less than 2:12), and is mechanically air-conditioned or heated. Some examples of non-residential buildings include: office buildings, grocery stores, restaurants, assembly/conference areas, commercial/industrial warehouses, schools, churches, theaters, hotels and motels. Requirements for high-rise residential buildings and hotels/motels are included in the non-residential sections of Part 6.

Non-Residential Manual
The manual developed by the California Energy Commission, under Section 25402.1(c) of the Public Resources Code, to aid designers, builders and contractors in meeting the energy efficiency requirements for non-residential, high-rise residential, and hotel/motel buildings.

PVC (Polyvinyl Chloride)
A thermoplastic polymer that can be compounded into flexible and rigid forms through the use of plasticizers, stabilizers, fillers, and other modifiers; rigid forms are used in pipes; flexible forms are used in the manufacture of sheeting and roof membrane materials. PVC falls into the category of single ply roofing.

Reflectivity
Solar reflectivity (or reflectance) is the fraction of the solar energy that is reflected by the surface (i.e., roofing membrane) back to the sky. White membranes have the highest solar reflectivity, while black have the lowest.

SBS (Styrene-Butadiene-Styrene)
A group of high molecular weight polymers. SBS is used as a modifier to asphalt flux to improve performance qualities of the asphalt.

Semi-Conditioned Space
An enclosed non-residential space that is provided with wood heating, cooling by direct or indirect evaporation of water, mechanical heating that has a capacity of 10 Btu/(hr•ft^2) or less, mechanical cooling that has a capacity of 5 Btu/(hr•ft^2) or less, or is maintained for a process environment as set forth in the definition of "Directly Conditioned Space".

Solar Heat Gain Coefficient (SHGC)
The ratio of the solar heat gain entering the space through the window area to the incident solar radiation. Solar heat gain includes directly transmitted solar heat and absorbed solar radiation, which is then reradiated, conducted, or convected into the space.

Solar Reflective Index (SRI)
The Solar Reflective Index is a measure of the constructed surface's ability to reflect solar heat, as shown by a small temperature rise. It is defined so that a standard black (reflectance 0.05, emittance 0.90) is 0 and a standard white (reflectance 0.80, emittance 0.90) is 100. SRI combines reflectance and emittance into one number.

SpecRight
The SpecRight Program was developed by NRCA and other industry partners with the ultimate goal of providing useful and consistent information about roofs, energy and the environment to building owners, designers and consultants.

SPiRiT
Sustainable Project Rating Tool is the U.S. Department of Defense's green building rating system that is derived from the U.S. Green Building Council's LEED program. It is designed to award points for building design features and products that are environmentally preferable.

Title 24
The California Regulations that set energy efficiency design and construction standards for residential and non-residential buildings in California.

TPO (Thermoplastic Olefin)
A synthetic that becomes soft and pliable when heated, without a change in its intrinsic properties. TPO falls into the category of single ply roofing.

Urban Heat Island Effect
Building and pavement construction materials and high density structures that cause cities to actually become 2º to 8ºF warmer than the surrounding countryside.

U-Value
The overall coefficient of thermal transmittance of a construction assembly, in Btu/(hr•ft^2•ºF), including air film resistance at both surfaces.

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