

Introducing The New “Revolutionary Roof”



Cool / White Roof



Green Roof

The Sun is the common enemy to every facility’s roof. Due to constant exposure to the effects of the sun, conventional dark-colored roofs tend to absorb the sun’s rays and break down due to UV degradation. Most of the roofs in the world (including over 90% of the roofs in the United States) are dark-colored. In the heat of the full sun, the surface of a black roof can increase in temperature as much as 50 °C (90 °F), reaching temperatures of 70 to 90 °C (150-190 °F). This increase in heat/temperature can contribute to:

- Increased demand on the energy used for cooling and higher utility bills
- Higher peak electricity demand (the maximum energy load, in megawatts, an electric utility experiences to supply customers instantaneously, generally experienced in summer late afternoons, as businesses and residences turn up their air conditioners), raised electricity production costs, and a potentially overburdened power grid
- Reduced indoor comfort
- Increased air pollution due to the intensification of the "heat island effect".
- Accelerated deterioration of roofing materials, increased roof maintenance costs, and high levels of roofing material sent to landfills.

Cool and **Green** roofs offer both immediate and long-term savings in building energy costs. White reflective membranes, metal roofing with "cool roof" pigments, coated roofs and planted or green roofs can:

- Reduce building heat-gain, as a white or reflective roof typically increases only 5–14 °C (10–25 °F) above ambient temperature during the day.
- Create 15–30% savings on summertime air conditioning expenditures.
- Enhance/extend the life expectancy of both the roof membrane and the building’s cooling equipment.
- Improve thermal efficiency of the roof’s insulation: by reducing the temperature of the roof, the thermal conductivity of the roof’s insulation is also reduced improved.
- Reduce the demand for electric power by as much as 10 percent on hot days.
- Reduce resulting air pollution and greenhouse gas emissions.
- Provide energy savings, even in northern climates on sunny (not necessarily “hot”) days.