Dow And DOE Labs Partner On Cool Roofs

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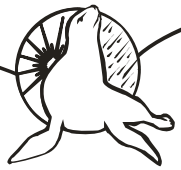
The roofs of buildings soak up the sun, contributing to the heat island effect in cities. Today, many green builders are focusing on white, reflective roofs and even green roofs to counteract this problem–but the Dow Chemical Company and the Oak Ridge National Laboratory (ORNL) have embarked on a plan to advance cool roof technology of tomorrow.

A critical element of this research agreement is a collaboration between ORNL and the Department of Energy's Lawrence Berkeley National Laboratory (Berkeley Lab) to further develop a range of cool roof technologies from their applied research in this field. This research will focus on advanced solar reflective technologies with the potential to increase energy savings by over 50% for new and existing commercial buildings.

image via Portland General Electric

Dow, of course, will be on board to develop and commercialize new cool roof coatings, which are widely considered a cost-effective means of improving the energy efficiency of both new and existing buildings. The DOE estimates that replacing or resurfacing conventional roofing materials with the kind of reflective elastomeric roof coatings (ERCs) produced by Dow could reduce a commercial building's annual air conditioning



energy use by up to 25% and decrease annual CO_2 emission by 5 metric tons for every 10,000 square feet of commercial roof space.

Dow and ORNL, in partnership with Berkeley Lab, will focus on technologies with the potential to improve the long-term resistance to dirt pick up and microbial growth in white elastomeric roof coatings–a key consideration as far as widespread commercial adoption goes. (Currently, after three years of exposure to the elements, today's cool roof coatings may lose as much as 45% of their reflectance.)

The aim of the program is to improve the effectivenes of these reflective materials overall using new testing protocols for faster commercialization.