The Cool-roof Bandwagon: Is It Headed To Your City?

MAY 26, 2014 BY ELLEN THORP  |  LEAVE A COMMENT

Spring is here, and summer is on the horizon. But for millions of Americans, it will take more than a few days of sunshine to thaw the memories of the winter of 2013-14. The National Weather Service is still compiling the statistics to let us know just how bad the winter really was. In the meantime, most of us have a more immediate way to measure the impact of the polar vortex on our lives: One look at our heating bills and we know that this past winter deserves its reputation as one of the most brutal on record.

On the West Coast, as 2014 dawned, very different climate issues were front and center. The city of Los Angeles was being praised for its mandate requiring all new and renovated domestic housing to install “cool”, or reflective, roofing. The L.A. City Council passed the requirement as one of its last acts of 2013, and the new ordinance became part of California’s Title 24, which already required “cool” roofs in new and remodeled commercial construction.

THE NEWS media hailed Los Angeles as the “first major city to require cool roofs”, implying other urban areas will inevitably follow its lead. However, the winter of 2013-14 did a good job of reminding us that the climatic conditions of Southern California are dramatically different from the Midwest, Northeast and Mid-Atlantic regions of the U.S. This simple fact needs to be underscored as the bandwagon to require cool roofs travels somewhat erratically to major Eastern cities.

Last June, the mayor of Pittsburgh initiated a lukewarm cool roofs program by calling for volunteers to help paint the roofs of 10 city buildings white. Two-thirds of the Pittsburgh effort—$56,000—was funded by the Bloomberg Philanthropies, a project of former New York City Mayor Michael Bloomberg. The tagline of Bloomberg Philanthropies is “Good Intentions, Great Results.” I applaud the mayor’s good intentions in supporting projects that are designed to save energy. As for achieving “great results” by painting the roofs of 10 Pittsburgh buildings white? Don’t bet your next heating bill on it.

While Bloomberg was mayor of New York, the city launched the “NYC “Cool-Roofs” initiative, encouraging building owners to cool their rooftops by applying a reflective white coating as part of the city’s overall plan to reduce greenhouse gas emissions 30 percent by 2030.

In Baltimore, the talk about cool roofs was fueled by a report issued last October by the Abell Foundation, a non-profit dedicated to enhancing quality of life in Baltimore and Maryland. The report, which is primarily an overview of previously published research, recommended increased use of cool roofs in Baltimore.
While these cities institute varied programs to support cool roofs, several major facts are ignored:

- Energy costs are closely related to climate. A solution that works in a warm and temperate climate to curb energy costs will not necessarily work in a colder climate.
- It’s vitally important to consider the source of information about cool roofing. Unbiased, up-to-date scientific studies can provide the data you need to make an independent judgment. Likewise, the manufacturers of roofing membranes have a vested interest in ensuring their products are used correctly and have in-depth knowledge of how roofing systems will perform in a wide variety of conditions.
- Choosing and installing a roof that will contain energy costs is a complex business. It requires understanding the interaction between building design, climate, insulation and all the other factors that impact the efficiency of a roofing system. A one-size-fits-all approach will only delay the discovery of workable, cost-effective, energy-efficient solutions.

IN FACT, a study conducted by Arizona State University published this past winter in the Proceedings of the National Academy of Sciences underscores the pitfalls of disregarding climate differences in roofing decisions. “What works over one geographical area may not be optimal for another,” says sustainability scientist Matei Georgescu, who led the research.

Although the headlines are touting Los Angeles' cool roof requirements, I’d like to see headlines that read, “Energy Savings Achieved by Roofs Designed to meet Midwest and Northeast Climate Challenges”. Before anyone thinks about driving that cool-roofing bandwagon from Los Angeles to New York, you might want to equip it with snow tires.
investigates and analyzes how to properly design, install and maintain a roof system. Through the voices of professionals in the field, Roofing's editorial provides a unique perspective.