



712 H Street, NE ~ Suite 1618  
Washington, D.C. 20002

November 10, 2022

Kevin Kampschroer  
Chief Sustainability Officer and Director Office of Federal High-Performance Buildings  
U.S. General Services Administration  
1800 F Street, NW  
Washington, D.C. 20405  
via email to [kevin.kampschroer@gsa.gov](mailto:kevin.kampschroer@gsa.gov)

**Re: Leading Roofing Manufacturers Request Federal Government and Non-Governmental Organizations Perform Updated Assessment of High Roof Albedo as Urban Heat Island Mitigation Strategy**

Dear Mr. Kampschroer:

The EPDM Roofing Association (ERA) is the national trade group consisting of manufacturers of EPDM roofing membranes, one of the nation's leading roofing materials used on over a third of the country's non-residential buildings. Throughout ERA's 20-year history, we have taken great pride in our emphasis upon sustainable roofing solutions supported by both science-driven modeling and real-world performance research.

It is because of this emphasis on science and real-world building performance that we now write to you. Like many leaders in the building industry, ERA members are deeply concerned about the impact that our changing climate is having on our built environment and the citizens that live within it. Clearly, increasing global heat and resulting threats to human health, especially in densely populated urban areas, are issues that require effective policy solutions. The strategies for reducing the impact of Urban Heat Islands (UHI) vary widely, and include increasing vegetated roof cover, installing "cool pavement" and mandating smart growth. For instance, the incoming head of the United Nations' Global Heat Program recently stated that "the strongest weapon that we have for lowering temperatures are trees and the best thing we can do for cities are green corridors that connect areas" (*Bloomberg News*, August 26th, 2022).

As manufacturers of both reflective/cool and dark colored roofing membranes, our members are keenly aware of the policy discussions at the governmental and building code development levels regarding what role roof color may play in meeting the urban heat island challenge. As you know, cool roofs have become a popular strategy for mitigating the impacts of urban heat. Ostensibly, the high albedo roofing surface material that reflects a portion of the incoming solar radiation away from the building before it is transmitted and absorbed has created the presumption that a cooler building and a cooler overall urban environment will result. Early modeling studies at Lawrence Berkeley National Labs supporting

this assumption have led to decisions by some cities and building code bodies to mandate reflective roofing in climate zones in the United States. These mandates have, unfortunately, removed the economic and science-based individualized design decisions which should be predicated upon such factors as local geography, building use, or the roofing materials' carbon footprint.

Because ERA members *make a variety of roofing membranes of various colors*, and since our products are used in countless geographic locations and building types around the country, we felt it incumbent upon us to dig more deeply into this issue to ensure that our customers were able to make correct, science-driven decisions in the use of our roof products. Two fundamental questions formed the basis for our research.

First, do reflective/cool roof mandates in a given locality have the desired impact of reducing or limiting UHI development and second, to what extent is there sufficient certainty in the protocol with which UHI is quantified to determine this at all?

ERA turned to ICF, one of the nation's foremost energy and environment consulting firms, to answer these questions. ICF compared existing data of surface temperatures in urban areas that have implemented cool roof mandates and compared these temperatures with cities with similar climate and geography to determine what benefit, if any, accrues from the white roof requirement. The ICF analysis found no discernible correlation between the imposition of cool roof mandates when compared to similarly situated cities without such mandates. In addition, the study revealed that the use of complex and inconsistent temperature assessment protocols are being utilized in virtually all UHI evaluations, making comparisons of efficacy problematic.

There is no question but that the federal government and relevant non-governmental organizations play an incredibly important role in addressing the UHI challenge by leading by example as well as by statutory and administrative fiat. The recently passed Inflation Reduction Act is emblematic of the kinds of initiatives that can aid local governments in addressing the growing heat threat. However, as the research discussed above reveals, there is much work that needs to be done in understanding the real-world implication of a one-size-fits-all reflective roofing mandate that is growing nationwide. The EPDM Roofing Association requests your agency begin a science-based, real-world analysis of the actual impact that reflective/cool roofing may have on UHI. In addition, we look to the Federal government and NGOs to support the establishment of an accepted standard by which UHI is measured in a given community and can be replicated by those seeking to understand the questions presented herein.

Representatives of our industry stand ready to meet with you and your staff at your earliest convenience to further discuss the work we have done in this important environmental and human health issue. We look forward to offering the expertise of our members to help further your agency's important work in this area.

Sincerely,



Ellen Thorp  
Executive Director



Jared Blum  
Federal Advocacy Counsel