



Dear Building Owner,

Improving the energy efficiency and performance of existing buildings is a priority to many building owners seeking cost savings. However, it is sometimes difficult to plan and execute a complex improvement project or determine what measures should be taken to improve efficiency based on a building's size, design and location. While cool roofs have been promoted by some as the universal key to energy efficiency, a recent series of Advanced Energy Retrofit Guides (AERGs) published by the Pacific Northwest National Laboratory in Richland, WA and the Portland Energy Conservation (PECI) in Portland, OR show that cool roof installation is **NOT** included in the recommended package to improve energy efficiency when retrofitting a roof. In fact, a significant heating penalty may be associated with installing a cool roof in a cold, northern climate.

The "AERG for Retail Buildings" and the "AERG for Office Buildings" indicate that these two types of structures are responsible for 30 percent of all energy use in commercial buildings. The overall purpose of AERGs is to help building owners and other industry professionals design and implement energy improvement projects that will generate financial returns. These guides recommend measures that should always be included in an energy efficiency project, regardless of a building's location and its climatic conditions. These measures are generally more effective than installing a cool roof and include:

- Making changes to the HVAC system
- Making changes to internal lighting
- Adding building (walls and roof) insulation
- Taking steps to ensure the building is properly sealed

These AERGs also give a special warning regarding the use of cool roofs in cold climates like Washington or Minnesota. The guides show that net annual energy savings can be achieved in buildings located in climates with long cooling seasons and short heating seasons like Miami. But in heating-dominated climates like Seattle or Minneapolis, cool roofs will likely incur a significant heating penalty. Other studies and reports developed, in part, by the U.S. Department of Energy, have verified that the use of cool roofing is only justifiable in ASHRAE Zones 1, 2, and 3.

Many factors must be considered when retrofitting a building or selecting an appropriate roofing system. With the continuous integration of energy efficiency and sustainability into building design, it is important to understand these factors in order to ensure the cost-effectiveness and positive environmental impacts of a project.

Sincerely,

A handwritten signature in black ink that reads "Ronald L. Goodman". The signature is fluid and cursive, with a long horizontal line extending from the end.

Ronald L. Goodman  
Marketing Manager, EPDM Roofing Systems