The Global Cool Cities Alliance Urges Cities to Install Cool Roofs and Pavements to Combat Future Heat Waves

Washington, DC – Nearly half the country is in the grip of a record-setting heat wave. Yesterday, parts of 18 states faced a heat emergency and even more are expected as the heat moves further east. Conditions are worst in cities, where a lack of trees and an abundance of dark surfaces cause temperatures to be 5-7 degrees hotter than surrounding rural areas.

This historic heat wave is another in a long line of heat events that seem to be happening more and more frequently. These events have real economic, social and human costs that take their toll on budgets that are already strained. It is time for cities to take a proactive approach, rather than simply reacting to the dangers of extreme heat. Luckily there is a low-cost, high-return way to do that: install highly reflective cool roofs and pavements.

On Thursday July 21st at 2PM in Room SVC 212/210 of the U.S. Capitol Visitor Center, the Environmental and Energy Study Institute will host *Cool Roofs for Cooler Summers*: a forum of leading technical, policy and program experts to discuss the benefits of cool roofs, the state of the industry and available technology, and how to lead successful deployment programs. Participants include:

- Senator Chris Coons (D-DE);
- Art Rosenfeld, Distinguished Scientist Emeritus, Lawrence Berkeley National Laboratory;
- Laurie Kerr, Senior Policy Advisor on Buildings and Energy, Mayor's Office of Long Term Planning and Sustainability, New York City;
- James Hoff, Research Director, Center for Environmental Innovation in Roofing, and
- Kevin Kampschroer, Director, Office of Federal High-Performance Green Buildings, U.S. General Services Administration.

The concept is simple. Dark surfaces absorb more sunlight and get much hotter than white surfaces. On a summer afternoon, a black roof could be 80 – 90 degrees hotter than a white roof. By simply changing the color of our roofs and planting trees, cities could be 4 – 5 degrees cooler. This reduction not only makes the city more comfortable, but also improves the air quality because smog "cooks" more rapidly on hot days. According to a study of the Los Angeles basin, a combination of lighter surfaces and shade trees could reduce exposure to unhealthy air by 10 percent. Nationwide, the healthier air made possible by cooler temperatures could cut health care costs and lost time from work by $10 billion a year.

Cool roofs lower a building's net energy use (cooling savings minus winter heating penalty) by 10 to 20 percent, if the building is air-conditioned. That is a $700 million savings opportunity for U.S. commercial buildings alone. Based on only these savings, cool roof investments often pay back in a matter of months to a few years. But the benefits go far beyond reduced energy use.

On buildings without air conditioning, a white roof can reduce inside temperatures on the top floors by 4 to 5 degrees, making buildings more comfortable and possibly saving lives in extreme heat waves. For example, the majority of the 739 people who perished in the infamous Chicago heat wave of 1995 were located on the top floor of a building with a dark roof. Even a few degrees can make a big difference in the incidence of heat-related illness and death during heat events.

Cities have a number of policy options to speed deployment of cool roofs. In California, new flat roofs on commercial buildings must be white. "Roofs have a service life of about 20 years, so an average of 5% of roofs fail each year. Requiring new and replacement flat roofs to be white, high performance systems, is a simple, almost no-cost way to quickly gain the benefits of a cooler city and a cooler planet." says Art Rosenfeld, Distinguished Scientist Emeritus at Lawrence Berkeley National Laboratory and a Director of Global Cool Cities Alliance.

The Global Cool Cities Alliance is dedicated to advancing policies and actions that increase the solar reflectance of our buildings and pavements as a cost-effective way to promote cool buildings, cool cities, and, most importantly, to mitigate the effects of climate change through global cooling. Global Cool Cities Alliance is pursuing its mission through partnerships with other networks dedicated to city - level action as well with leading real estate, science, and building efficiency groups, and through direct work with cities and companies globally.

Learn more about the Alliance at www.globalcoolcities.org or contact Kurt Shickman (202-550-5852, kurt@globalcoolcities.org) or Amy Dickie (415-421-4213x21, amy@globalcoolcities.org)