5.8 Promote Cool Roofs

5 – 70 Points

Action Updates

This action was last updated in 2024. The previous version of this action is available for comparison. Edits are highlighted in yellow.

Objective

Promote the use of cool roofs to reduce energy demand and utility costs, decrease greenhouse gas emissions, and mitigate the urban heat island effect.

Complementary Actions:

- Plan and Prepare for Extreme Heat

What to Do

Cool roofs use highly reflective, highly emissive materials to reflect light and heat from buildings. Cool roofing options include both building materials and painted coatings, which can be a more affordable, easier option for both new and existing buildings.

The more you do, the more points you earn.

1. Promote cool roofs through your municipality's building or permitting office. This must include information on the municipal website, and may also include posters and brochures in the municipal office building. **(5 points)**

   Submit: A screenshot of the website and a hyperlink to the cool roof information on your municipal website. Optional: an example of print materials disseminated.

2. Retrofit one or more municipal or Board of Education buildings with a cool roof, or install a cool roof on one or more newly constructed municipal or Board of Education building. The cool roof may be either a painted coating or roofing materials. Cool roof projects must have been completed in the last three years. **(15 points per building, with a maximum of 45 points)**

   Submit: The name and address of the retrofitted building(s), a contract, purchase order, or similar documentation showing that the work was done, the date the project was completed, and photos of the new cool roof. This subaction is included in the Sustainable CT Climate Leader Designation.

3. Enable and promote cool roofs in local zoning regulations. **(20 points for implementing one of the two options below)**

   a. Revise zoning regulations to ensure existing rules do not prohibit implementation of cool roofing strategies on new and existing buildings. Regulatory barriers might include design regulations on roofing colors or materials. You may also update the relevant portions of your zoning regulations to explicitly allow cool roofs.

   OR

   b. Create a new cool roof ordinance requiring cool roofs in new construction. See resources section for example ordinances.

Submit: A copy of the policy, ordinance, or zoning regulation formally adopted by your governing body; documentation that the policy, ordinance, or zoning regulation has been adopted (such as meeting minutes, a copy of the municipal zoning regulations with relevant portions highlighted, a link to municipal ordinances, or similar verification). This subaction is included in the Sustainable CT Climate Leader Designation.

Engaging Partners

Sustainable CT encourages regional collaboration and other forms of partnership. For every action, please complete the "Partners" box in your submission, indicating the name(s) of any municipalities and/or organizations you partnered with (if any) and a brief description of your municipality's role. If you collaborate with other municipalities, each community will receive points. For additional information, please see the "Partners Guidance Document".

Potential Municipal and Community Collaborators

Appropriate municipal and community stakeholders should be involved, with specific collaborators dependent upon the action items selected above. Staff from the building, planning and zoning, and engineering departments, and a representative from the planning and zoning, or energy commission could be helpful in implementing this action.

Funding

If available, below are potential funding sources specific to this Action. For a complete listing of potential funding opportunities to assist with implementing Sustainable CT Actions, please visit the Sustainable CT Grants Portal, which is searchable by Action. Please also visit the Support for Your Town page for opportunities for technical assistance and other supports.

- Urban Act Grant Program
- Sustainable CT Community Match Fund
- State Funding Readiness Project

Resources

Toolkits, Calculators, Guidance Documents

- US Environmental Protection Agency, Using Cool Roofs to Reduce Heat Islands
- Oak Ridge National Laboratory, Cool Roof Calculator
- US Department of Energy, Guide to Cool Roofs
- US Department of Energy, Guidelines for Selecting Cool Roofs
- Global Cool Cities Alliance, "A Practical Guide to Cool Roofs and Cool Pavements"
- UN Environment Programme, "Beating the Heat: A Sustainable Cooling Handbook for Cities"
- Cool Roof Rating Council, "Looking for Cool Roof or Cool Exterior Wall Codes, Standards, and Voluntary Programs?"
- City of New Haven, Zoning Ordinance Section 60.2. - Reflective heat impact from hardscape or paved surfaces.

Organizations and Relevant Programs

- US Environmental Protection Agency, Heat Island Effect
- Global Cool Cities Alliance
- Cool Roof Rating Council
- University of Connecticut Center for Land Use Education and Research (CLEAR)
- CT Nonpoint Education for Municipal Officials (CT NEMO)
- Connecticut Conservation Districts

Why This Matters

Cool roofs are an effective strategy to mitigate the urban heat island effect. The urban heat island effect is the phenomenon in which urban or suburban areas experience higher temperatures than outlying areas, due to the greater presence of buildings, roads, and other similar infrastructure. Because this built infrastructure absorbs and

re-emits heat more than greenery or bodies of water, urban areas can experience daytime temperatures 1-7° F higher than surrounding areas and nighttime temperatures 2-5° F higher than surrounding areas. The EPA reports that cool roofing materials can stay 50-60° F cooler than conventional roofing materials.

Benefits

In addition to helping mitigate the urban heat island effect, cool roofs can reduce energy demand and energy use. This can reduce greenhouse gas emissions and lower energy bills. Since some of the populations most affected by and most vulnerable to the urban heat island effect are also among the populations experiencing higher energy burdens, cool roofs provide social and equity benefits as well.

CT Success Stories

- West Hartford - Oct 2024 Certification