

Strategic Plan Update

Jeffrey Steuben
CRRC Executive Director

History

- Strategic Plan updated roughly every 5 years
- New process
- New facilitator
- Different formats



2009 Strategic Goals (Part 1)

- Diversify Membership
- Improve Communication with Industry
- Strengthen the Technical Program
- Improve Organizational Services
- Ensure Financial Stability

2009 Strategic Goals (Part 2)

- Plan for International Expansion
- Expansion to Rate Walls
- Expansion to Rate Roof Systems
- Expansion to Provide Environmental Impact Assessment

2014

Task 1: Admin	Task 2: Marketing	Task 3: Rating Program	Task 4: Finance
Other Surfaces Expansion Plan	Outreach Tools	Improve Random Testing	Code Adoption
International Expansion Plan	Fact Sheets	Technical Research Plan	ES-CRRC Evaluation

2019

<i>Strategic Priority Areas</i>			
Code Adoption	Growth	Education	Technical Advancement
1-1 Increase references to CRRC by codes, regulations, and voluntary programs	2-1 Expand Rating Program	3-1 Improve public awareness and comprehension of cool surfaces	4-1 Grow the science of radiative property measurements
	2-2 Increase visibility and value of CRRC participation		4-2 Support the development of methods, equipment, & standards for radiative property measurements
			4-3 Expand the technical brain trust of the organization



2023

Goal A:

The CRRC is known by the public as the pre-eminent resource on cool surfaces

Goal B:

The CRRC expands its program offerings and services

Goal C:

The CRRC is a global leader in cool surface information

Consistent Themes

- Responses to immediate concerns
 - Attracting new members
 - Improving program operations and efficiency
 - Need for specific educational content
- Developing new programs
- Expanding internationally
- Promoting code adoption and references to CRRC

An Evolving Vision



An Evolving Vision - 2009

**The Cool Roof Rating Council (CRRRC)
will be the foremost internationally
recognized radiative roof surface rating
and educational organization.**



An Evolving Vision - 2014

The Cool Roof Rating Council (CRRRC)
will be the foremost internationally
~~recognized~~ ~~referenced~~ radiative ~~roof~~
surface rating and educational
organization.



An Evolving Vision - 2019

The Leader in Cool Science

Current Vision

CRRC data and resources on the impacts of cool surfaces enhance individual and community resilience to extreme heat.

Recent Accomplishments & Current Efforts



Accomplishments



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It is well known that reflective surfaces help keep buildings cooler and reduce the costs and greenhouse gas emissions from air conditioning, but is your cool roof also contributing to a cooler planet? Learn about atmospheric cooling from cool roofs in our brand-new one-pager: https://lnkd.in/gYqvs_SF

COOLING BEYOND THE BUILDING:
THE POTENTIAL FOR REFLECTIVE SURFACES TO COUNTER GLOBAL WARMING

It is well known that reflective surfaces help keep buildings cooler and reduce emissions from air conditioning, but is your cool roof also contributing to highlights the ability of cool surfaces to reflect more sunlight, rather than more of the sunlight back through the atmosphere and out into space, so

WHAT IS ATMOSPHERIC COOLING?

The Earth gets energy from the sun in the form of sunlight, also known as solar radiation. Increasing the fraction of solar energy that is reflected from the Earth's surface cools the planet's surface and the atmosphere. We can do so by replacing dark, more solar-absorptive surfaces with lighter, more solar-reflective surfaces, such as cool roofs.

In addition to potentially reducing new GHG emissions via energy efficiency, cool roofs could offset the warming effect of GHGs already in the atmosphere. Scientists have tried to quantify the global cooling effect in terms of offsetting GHG emissions since much of our climate policy and finance is based on GHG mitigation.

HOW MUCH ATMOSPHERIC COOLING IS POSSIBLE?

It turns out, quite a lot. Efforts to quantify this effect concluded that the use of more solar-reflective surfaces in cities around the world could cancel the warming effect of 44-57 billion metric tons of emitted carbon dioxide—up to 55% more than the annual global emissions of carbon dioxide in 2022. At a building scale, that means that increasing the reflectivity of 1,000 ft² (93 m²) of roof area could offset the warming effect of 10 tons of CO₂ emissions [1,2].

If all dark roofs were replaced with more solar-reflective roofs, the planet would immediately reflect more sunlight to space, cooling the atmosphere in a manner that is equivalent to removing

REFERENCES

[1] H. Akbari, S. Menon, A. Rosenfeld, Global cooling: Increasing world-wide urban albedos to offset CO₂. *Climate Change* 94 (2009) 275–286. <https://doi.org/10.1007/s10584-008-9515-9>.

[2] S. Menon, H. Akbari, S. Mahanama, I. Sedore, R. Levinson, Radiative forcing and temperature response to changes in urban albedos and associated CO₂ offsets, *Environmental Research Letters* 5 (2010). <https://doi.org/10.1088/1748-9326/5/1/014005>.

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FROM THE NEWSROOM

First International Accredited Independent Testing Laboratory Approved by CRRC

coolroofs.org/news/press-release

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The CRRC is pleased to announce the approval of the first CRRC Accredited Independent Testing Laboratory (AITL) that is located outside of the United States! Last month, the **Centre for Advanced Research in Building Science and Energy (CARBSE)** at the **CEPT Research and Development Foundation**, located in Navrangpura, Ahmedabad, India, received approval to perform testing for the CRRC Product Rating Programs. Read our full press release at <https://lnkd.in/gYpbMbm>.



FROM THE NEWSROOM

First International Accredited Independent Testing Laboratory Approved by CRRC

coolroofs.org/news/press-release

Stacey Weister and 71 others · 4 reposts

Reactions

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Increasing Heat Resilience in the Built Environment with Cool Roofs, Cool Walls, and Cool Pavements

REINFORCING TEMPERATURE THREATEN OUR COMMUNITIES

Heat negatively affects our health and well-being, productivity, energy use, school performance, and more. Low-income communities and communities of color more frequently face these challenges.

CITIES ARE HOTTER THAN OUTLYING AREAS

According to the U.S. Environmental Protection Agency (EPA), daytime temperatures in urban areas are about 1–7°F higher than temperatures in outlying areas, with nighttime temperatures about 2–5°F higher. This is due to the urban heat island (UHI) effect. An entire city or area within a city can be a heat island.

URBAN HEAT ISLANDS

The urban heat island (UHI) effect is caused by the way that cities are built. Dark surfaces like asphalt and concrete absorb heat from the sun and re-radiate it back into the air. This heat is then absorbed by buildings, roads, and other surfaces, making the city even hotter. The UHI effect is a problem because it can lead to higher energy costs, more air pollution, and worse health outcomes for people living in cities.

HOW CAN WE MITIGATE URBAN HEAT ISLANDS?

Installing solar-reflective "cool" roofs, walls, and paved areas is one straightforward way to combat heat islands. These "cool" surfaces reflect more of the sun's energy, rather than absorbing it as heat.

Increasing the albedo of our cities by 0.1 could result in an average surface temperature reduction of more than 1°F and a corresponding air temperature reduction of up to 1°F. Each degree of cooling leads to increased

THIRD-PARTY RATINGS

The Cool Roof Rating Council (CRRC) is a 501(c)(3) nonprofit organization that develops fair, accurate, and credible methods for evaluating and labeling the radiative properties of roofing and exterior wall products.

HOW DO COOL SURFACES WORK?

Cool surfaces reflect more sunlight and absorb less heat than dark surfaces. This helps keep buildings cooler and reduces the need for air conditioning. Cool surfaces also help reduce the urban heat island effect, which is the warming of the city and surrounding areas due to the heat absorbed by buildings, roads, and other surfaces.

COOL EFFORTS IN

BALTIMORE SMART SURFACES

The City of Baltimore worked with the Smart Surface Coalition (SSC) to understand and quantify the costs and benefits of "cool" surfaces—green, porous, and reflective surfaces. The city is now implementing a city-wide program to replace dark, heat-absorbing surfaces with lighter, more reflective surfaces. This program is expected to save the city over \$10 million in energy costs over the next 10 years.

HEAT ISLAND REDUCTION PROGRAM

The U.S. EPA's Heat Island Reduction Program works with local officials, community groups, researchers, and other stakeholders to identify opportunities to implement heat island mitigation policies that create healthy and sustainable communities, including cool surfaces. The program provides technical assistance and financial incentives to help cities implement these policies.

WHITE HOUSE INTERAGENCY WORKING GROUP ON EXTREME HEAT

The working group, formed by the White House Climate Policy Office in July 2021 and co-led by HHS, NOAA, and EPA, aims to coordinate, coordinate, and accelerate the federal government's efforts to increase the resilience of the nation to the impacts of extreme heat, with a focus on disadvantaged communities. A key priority was the benchmarking of heat goals in July 2022, a new one-stop shop to help the public and decision-makers understand and reduce the health risks of extreme heat.

PHOENIX, AZ

• Save 4.76¢/ft² on annual energy bills*
• This equates to \$470 in savings over 5 years for a 2,000 ft² home

SAN FRANCISCO, CA

• Save 2.35¢/ft² on annual energy bills*
• This equates to \$230 in savings over 5 years for a 2,000 ft² home

BALTIMORE, MD

• Save 1.2¢/ft² on annual energy bills*
• This equates to \$120 in savings over 5 years for a 2,000 ft² home

MIAMI, FL

• Save 5¢/ft² on annual energy bills*
• This equates to \$500 in savings over 5 years for a 2,000 ft² home

ANNUAL AVERAGE TEMPERATURE (°F) (1991–2020)

20 30 40 50 60 70 80

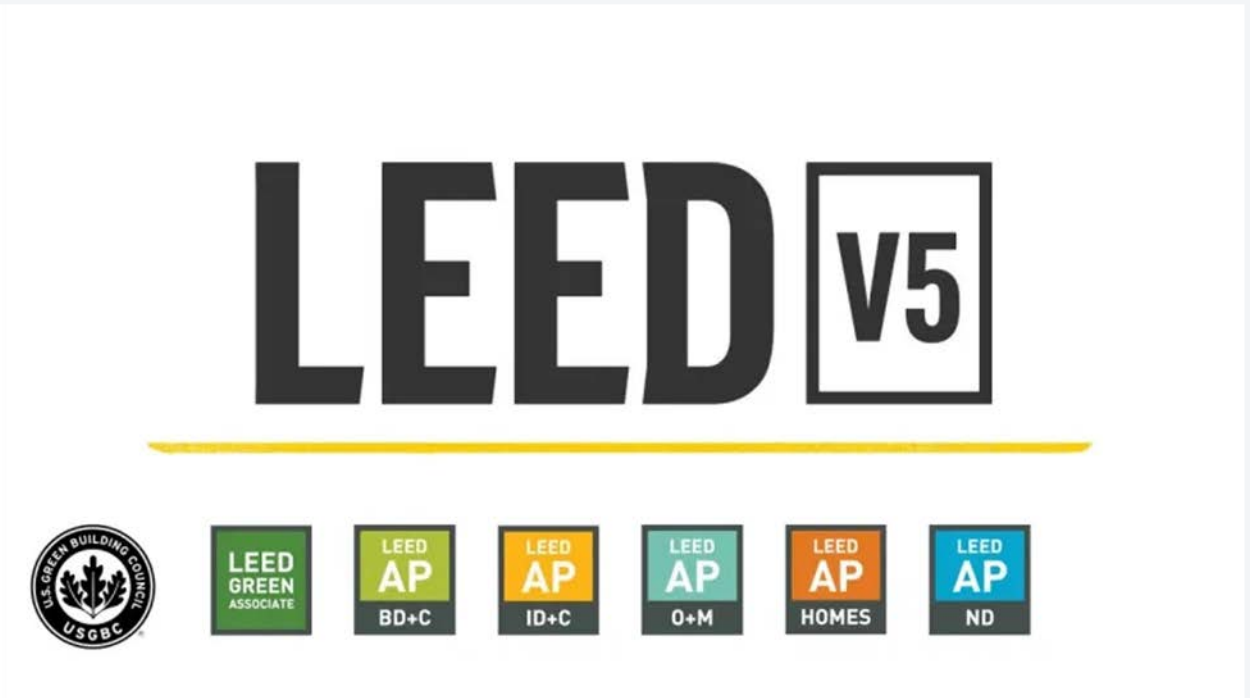
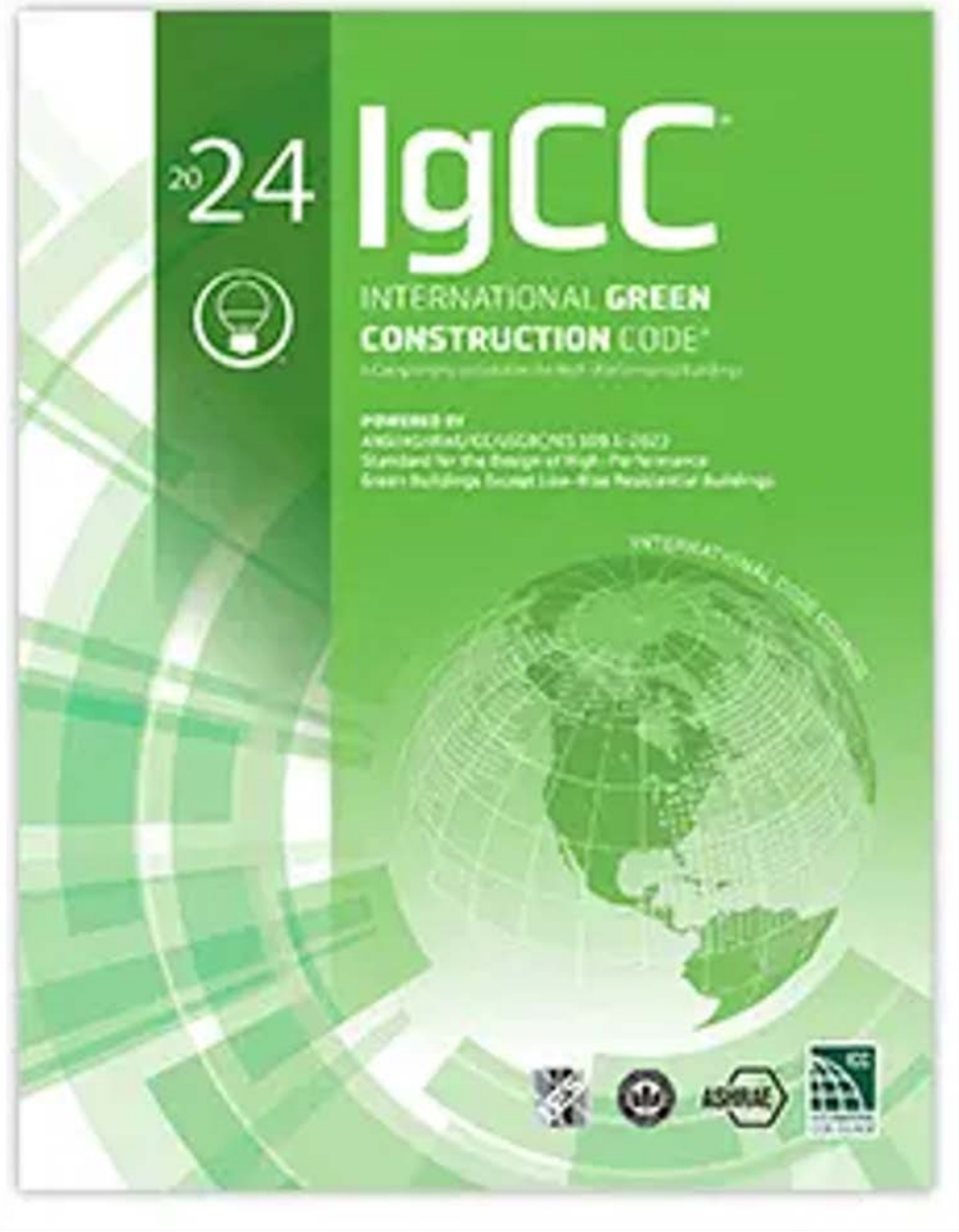
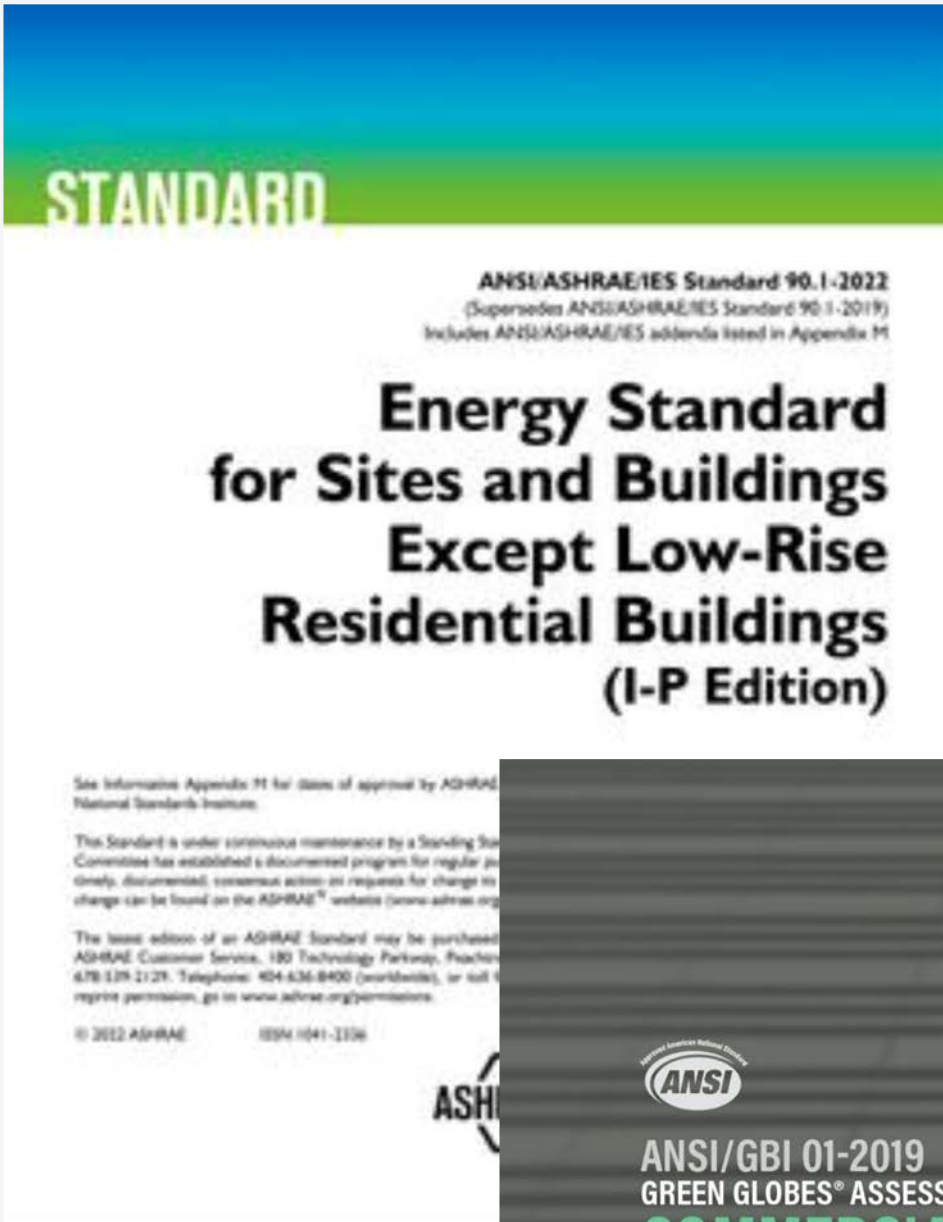
*The savings intensity (\$/ft²) is calculated based on the average cost of electricity and natural gas in each location in 2022. You can calculate estimated annual savings by multiplying the savings intensity for your city by the net wall area of your home (82.6% of conditioned floor area).

This information is based on a simulation study published by the California Energy Commission (CEC) in 2019. Savings for individual buildings depend on many factors. The examples in this document are for older single-family homes (built in 1989) with gas furnaces where the solar reflectance of all four walls is raised from 0.25 to 0.60. To find simulated data for homes with different characteristics, download this tool.

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Accomplishments



Accomplishments



Validation Testing Program Details

Actively rated products are

Required to be validated with passing test results every 7 years to remain on the Roof Directory

Sent directly to a CRRC Accredited Independent Testing Lab selected by CRRC

Tested according to the current test method

Given two opportunities to pass Validation Testing



Current Projects

- CRRC Resources “Microsite”
- Digital program manual
- Wall Rating Program Portal Integration
- Pavement Ratings Program Exploration

Looking Ahead



Plan Priorities for 2025

- Educate building contractors
- Increase code & program references
- Make cool surface research more accessible
- Improve and grow existing rating programs
- Network with international NGOs and look for opportunities
- Explore updates to CRRC Membership

Moving Forward

- Periodic Board review of plan
- Adjust if necessary
- Next Strategic Plan Update – 2028 (probably)

Strategic Plan Staff Contact

Jeff Steuben

jeff@coolroofs.org

