COOL ROOF RATING COUNCIL
ANNUAL MEMBERSHIP MEETING
Las Vegas, NV
June 15, 2016
Although the Cool Roof Rating Council is a broad-based 501(c)3 organization, it does include numerous competitors in the roofing industry and thus care must be taken to scrupulously abide by federal and state antitrust laws. As you know, the CRRC has in effect Antitrust Compliance Guidelines.

Members should remember that antitrust compliance is important at all times whether at formed meetings such as this or in social settings. At this and other CRRC meetings, participants should not discuss sensitive issues including pricing, profitability, payment terms, and allocating markets or customers or anything else recommended against in the antitrust guidelines.
• Board Update
• Growth Report
• CRRC Rating Program Update
• Outreach Update
• ANSI Standard Update
• ES-CRRC Program Update
2015-2016 BOARD ROSTER

Class A Members
Lynne Christensen
George Daisey
Mike Ennis
Darrel Higgs
Jim Kirby
Rick Olson

Class B Members
Phil Dregger
Matthew Friday
Jim Hoff
Peter Turnbull
Mark Zehnal
<table>
<thead>
<tr>
<th>Member</th>
<th>Position</th>
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<tbody>
<tr>
<td>Hashem Akbari</td>
<td>International Committee Chair</td>
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<tr>
<td>Andre Desjarlais</td>
<td>Oak Ridge National Laboratory</td>
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<tr>
<td>Jonathan Humble</td>
<td>Ratings, Codes, &amp; Programs Cmte. Chair</td>
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<tr>
<td>Marc LaFrance</td>
<td>U.S. Department of Energy</td>
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<td>Ronnen Levinson</td>
<td>Lawrence Berkley National Laboratory</td>
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<tr>
<td>Steve Ryan</td>
<td>U.S. Environmental Protection Agency</td>
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<td>Rich Slomko</td>
<td>Technical Committee Chair</td>
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# BOARD OFFICERS

<table>
<thead>
<tr>
<th>Member</th>
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<tbody>
<tr>
<td>Mike Ennis</td>
<td>Chair</td>
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<tr>
<td>Rick Olson</td>
<td>Vice-Chair</td>
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<tr>
<td>George Daisey</td>
<td>Treasurer</td>
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<tr>
<td>Lynne Christensen</td>
<td>Secretary</td>
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</table>
• Class A (two open seats)
  – George Daisey *(seeking re-election)*
  – Darrel Higgs *(seeking re-election)*
  – Al Janni
  – Gary Whittemore
• Class B (two open seats)
  – Payam Bozorgchami
  – Matthew Friday *(seeking re-election)*
  – Stuart Ruis
• James (Jim) Hoff (not seeking re-election)
PROGRAM GROWTH
• August 2015 - Launched Rapid Ratings Program

• April 2016 – Publication of 2016 edition of ANSI/CRRC S100

• Annual CRRC laboratory trainings with Lawrence Berkeley National Laboratory to be held in late summer/early fall 2016
• Changes to next renewals cycle
  – Not using online site
  – Companies provided with PDF invoices
  – Allow changes to product listings
  – Ignore changes to contacts, Licensee class, addresses unless specified
• Largest update to CRRC Rating Program since its inception

• Goals:
  − Faster application submission & approval
  − Licensee control over product management
  − More convenient payment process
  − Transparency into product rating status

• Coming … 2018?
OUTREACH ACTIVITIES
• The CRRC does not set standards nor a minimum definition for “cool”
• Rated Products Directory, or rated product label, does not mean a product is “cool”
• In your marketing materials:
  – Do not advertise that a company or a product is approved or certified by the CRRC
  – Products are rated by the CRRC and labeled with their radiative properties
• Continued effort: unified CRRC brand
• Full page dedicated to the annual Marty Hastings Award
• New tab dedicated to published studies

www.coolroofs.org
• Random Testing overview
• Verification Testing overview
• Update LEED webpage with LEED v4
• Continued humanizing
• Rated Products Directory improvements
  − Fixed bugs
  − Simplified product type names
• June 2016: International Reflective Insulation Manufacturers (I-RIM) Conference
  − History and development of the CRRC and the Product Rating Program
  − Impacts of cool roofs
  − Energy efficiency codes and programs
  − Technical studies
• Article for *D+D In Depth* on Rapid Ratings, March 2016

• Article on cool roofing for *Florida Roofing Magazine*, April 2016
• Gold Sponsors:
  Atlas Material Testing Technology, LLC  Sika Corporation  Valspar Corporation

• Silver Sponsor:  The Dow Chemical Company

• Bronze Sponsor:  National Coatings Corporation
CRRC’S AMERICAN NATIONAL STANDARD

ANSI/CRRC S100
• CRRC became an ANSI standards developer in 2007

• Developed ANSI/CRRC S100 (formerly CRRC-1)
  – Consensus-developed standard for measuring radiative properties of roofing materials
  – Covers specimen preparation, testing requirements, aged testing location information, and reporting requirements

• Referenced in codes and standards
  – ASHRAE 90.1 & 189.1 (2013)
  – ENERGY STAR Roofing Program Specification version 3.0
• S100 is updated every 3 years in accordance with ANSI Essential Requirements and CRRC written procedures
  - Update process covers introduction of changes to CRRC Product Rating Program
  - Public proposals

• CRRC ANSI Consensus Body
  - Balanced representation of industry stakeholders
  - Responsible for reviewing proposed revisions to S100
    o Revisions proposed by public, Consensus Body members, and CRRC

• Current S100 is 2016 edition
  - Recently completed two-year process to update S100
  - Next update will begin ~ 2018 (2019 edition)
2014 – 2016 TIMELINE

April 29, 2014
CRRC initiates ANSI public review process

May 29, 2014
First public comment period commences (60 days)

June 2, 2014
Consensus Body formed

August 5, 2014
Consensus Body call

March 5, 2015
Second public comment period commences (60 days)

December 31, 2014
Reconsideration ballots due

September 14, 2014
Consensus Body call

September 5, 2014
Ballots due

July 13, 2015
Consensus Body call

August 5, 2015
Ballots due

August 27, 2015
Reconsideration ballots due

October 30, 2015
Third public comment period commences (30 days)

April 26, 2016
ANSI approves revised S100 (2016 edition)

March 9, 2016
Board to adopt ANSI/CRRC S100 (2016)

February 3, 2016
Appeals period commences (30 days)

February 2, 2016
Final ballots due – Consensus Body approves revised standard in its entirety

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<thead>
<tr>
<th>First</th>
<th>Last</th>
<th>Company</th>
<th>Member Type</th>
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<tbody>
<tr>
<td>Jonathan</td>
<td>Humble</td>
<td>American Iron and Steel Institute</td>
<td>Producer</td>
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<tr>
<td>Hashem</td>
<td>Akbari</td>
<td>Concordia University</td>
<td>General Interest</td>
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<tr>
<td>Glenn</td>
<td>Bestor</td>
<td>Soprema</td>
<td>Producer</td>
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<td>Hugo</td>
<td>Destaillats</td>
<td>Lawrence Berkeley National Laboratory</td>
<td>General Interest</td>
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<tr>
<td>Mike</td>
<td>Ennis</td>
<td>SPRI</td>
<td>User</td>
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<td>Mark</td>
<td>Graham</td>
<td>National Roofing Contractors Association</td>
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<tr>
<td>Helene</td>
<td>Hardy-Pierce</td>
<td>Gaf</td>
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<tr>
<td>Lesley</td>
<td>Henry III</td>
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<td>Joyce</td>
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<td>Chris</td>
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<td>Kurt</td>
<td>Shickman</td>
<td>Global Cool Cities Alliance</td>
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<td>Thorsell</td>
<td>ICC-ES</td>
<td>User</td>
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<td>Dwayne</td>
<td>Wacenske</td>
<td>Firestone Building Products</td>
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<tr>
<td>Tyler</td>
<td>Westerling</td>
<td>Architectural Testing, Inc.</td>
<td>User</td>
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</table>
• Inclusion of laboratory aging practice requirements (ASTM D7897)
• Added CRRC-1 TM#1 variants
• Added slide method requirement to thermal emittance section
• Added glossary definitions for “variegated” and “wood roofing products”
• Removed CRRC-1 TM#1 language and included reference to C1549 Appendix X1
• 2016 edition of ANSI/CRRC S100 can be downloaded for free [coolroofs.org/product-rating/ansi-crrc-s100](http://coolroofs.org/product-rating/ansi-crrc-s100)

• Contact Sarah Schneider at [sarah@coolroofs.org](mailto:sarah@coolroofs.org) with questions about:
  - ANSI/CRRC S100 (2016)
  - ANSI process
  - Interest in serving on the Consensus Body for the next update
EVALUATION SERVICES-CRRC℠ PROGRAM UPDATES

ENERGY STAR® Certification Body
• CRRC became an EPA Certification Body in 2011
• Service to CRRC licensees and others seeking ENERGY STAR certification for roofing products
• ES-CRRC® program differs from CRRC Product Rating Program
  – Minimum threshold criteria
  – Solar reflectance values only
  – Certified products listed on ENERGY STAR Qualified Products List
New ENERGY STAR Roof Products Specification (version 3.0) – Effective July 1, 2017

- Version 3.0 requires all products to be weathered in 3 climate zones
  - Measurements of existing roofs no longer accepted
- **All** certified products must comply by July 1, 2017
- CRRC has been certifying products to version 3.0 since June 2014
  - Products that were certified *before* June 2014 must be certified to version 3.0 by July 1, 2017
  - **Any products not certified to version 3.0 by July 1, 2017 will lose ENERGY STAR certification**
• Products with three-year aged CRRC ratings, avoid the rush and certify to version 3 now
  - Approximately 700 products in ES-CRRC database than will be able to certify before July 1, 2017
• For questions, contact Melissa Rissman at melissa@coolroofs.org
QUESTIONS?