



# Ratings, Codes & Standards Update

Report created by Jonathan Humble  
Ratings, Codes & Programs Committee Chair  
**Membership Meeting**  
**June 24, 2010**  
**Las Vegas, NV**



## 2009-2010 News

- **CRRC-1 Standard - ANSI**
- Completed the consensus process.
- CRRC BOD voted document out for ANSI acceptance and publication in May 2010.
- Awaiting ANSI response.
- Plans are to submit CRRC-1 Standard to national model energy codes and standards developers.



## 2009-2010 News

- **ASHRAE Standard 90.1 (Commercial)**
- In process of updating to their 2010 edition of the standard, to be released fall 2010.
- Addenda “f” modified the cool roof provisions.
- CRRC “program” is still mentioned. We did not make the deadline for the CRRC-1 Standard to be recognized.



## 2009-2010 News

- **ASHRAE Standard 90.1 (Commercial)**
- Mandatory prescriptive cool roof requirements:

Minimum 3-year aged Reflectance	Minimum 3-year aged Emittance	Minimum 3-year aged SRI
0.55	0.75	64



## 2009-2010 News

- **Int. Energy Conservation Code**
- Three code change proposals were submitted in 2009 concerning cool roofs.
- Working with proponents of same proposals to have the CRRC-1 Standard recognized.
- Final action code hearings to be held 23 October thru 2 November 2010 in Charlotte, NC. See [www.iccsafe.org](http://www.iccsafe.org).



## 2009-2010 News

- **International Green Construction Code**
- Version 1 of the green code references the CRRC-1 Standard.
- First code hearings to be held 14-22 August 2010 in Rosemont, IL.
- Publication of code proposals July 2010.
- See [www.iccsafe.org](http://www.iccsafe.org) for more.



## 2009-2010 News

- **International Green Construction Code – Draft Version 4 Roof Requirements**
- 75% of roof surface of buildings in climate zones 1-3 = covered with green, cool or PV roofing.

Roof Slope	Minimum Aged Solar Reflectance	Minimum Aged Thermal Emittance	Minimum Aged SRI
< 2:12	0.55	0.75	60
>2: 12	0.30	0.75	25



## 2009-2010 News

- **CA Green Building Standards Code**
- On January 12, 2010 the CA Building Standards Commission adopted the 1<sup>st</sup> statewide code – to take effect Jan 2011.
- Applicable to all building types.
- State jurisdictions can adopt Tier 1 (SBD requirements) or Tier 2 (15% > than SBD).





# 2009-2010 News

## Tier 1 Cool Roof Requirements

Roof Slope	Roof Weight	Climate Zone	Minimum 3-year SR	Thermal Emittance	SRI
≤2: 12	N.A.	13 & 15	0.55	0.75	64
>2: 12	<5 lbs./ft <sup>2</sup> ≥5 lbs./ft <sup>2</sup>	10-15	0.2	0.75	16
		1-16	0.15	0.75	10



# 2009-2010 News

## Tier 2 Cool Roof Requirements

<b>Roof Slope</b>	<b>Roof Weight</b>	<b>Climate Zone</b>	<b>Minimum 3-year SR</b>	<b>Thermal Emittance</b>	<b>SRI</b>
≤2: 12	N.A.	2, 4, 6-15	0.65	0.85	78
>2: 12	N.A.	2, 4, 6-15	0.23	0.85	20



## 2009-2010 News

- **CA Green Building Standards Code**
- Exceptions for thermal mass construction projects of 25 lb/sqft.
- Roofing Products not certified with the CRRC are provided default values
  - Asphalt shingles = (SR) 0.08 (TE) 0.75
  - All other products = (SR) 0.10 (TE) 0.75



# 2009-2010 News

- **CA Title 24 Standards**
- 2008 Version effective January 1, 2010
- 2011 Version currently being developed

Slope Type	Minimum 3 year Aged Solar Reflectance	Minimum Thermal Emittance	Minimum Solar Reflectance Index (SRI)
Low Slope	0.55	0.75	64
Steep Slope < 5 pounds/ft <sup>2</sup>	0.2	0.75	16
Steep Slope ≥ 5 pounds/ft <sup>2</sup>	0.15	0.75	10



## 2009-2010 News

- **Collaborative for High Performance Schools**
- 2009 edition of CHPS for New Construction and Major Renovations includes requirements for minimum SRI.
- Roofing material must cover at least 75% of the roof area and meet or exceed the minimum specified SRI.
  - Steep slope = 29
  - Low slope = 82



## 2009-2010 News

- **City of Philadelphia**
- In 2010 the City of Philadelphia adopted into law (Law 3912, a.k.a. Bill 70555) cool roof provisions.
- Provisions cite the Cool Roof Rating Council CRRC-1 Product Rating Program.
- Focus is low sloped roofs.
- Law does differentiate roof product types.



## 2009-2010 News

- **Ballasted Roofing Systems**
- Recognized by
  - ASHRAE Std 189.1 as a prescriptive alternative
  - CEC Title 24 provides an exception ( $>25\text{lb}/\text{ft}^2$ )
  - City of Chicago municipal building code as an accepted cool roof alternative



## 2009-2010 News

- **EPA's Energy Star Changes**
- **CEIR's RoofPoint Program**
- To be presented on later during the Membership Meeting!





## Future Work

- When the CRRC-1 Standard is recognized by ANSI, CRRC will submit code change proposals for recognition to:
- ASHRAE Standard 90.1 (Commercial Energy Code)
- ASRHAE Standard 90.2 (Residential Energy Code)
- ASHRAE Standard 189.1 (Green Standard)



## Future Work

- For this fall 2010, attempt to seek recognition to:
- ICC International Energy Conservation Code (IECC)
- ICC International Residential Code-Energy Provisions (IRC-Energy)
- International Green Construction Code



## Existing References

- Because of how the CRRC-1 Roof Product Program and the CRRC-1 Standard are being developed there will not be a need for existing jurisdictions who reference the CRRC-1 Roof Product Program to modify their adopted code provisions.
- The Program will reference the Standard.
- However, the date of the Program may need to be updated when appropriate.



# Questions

