



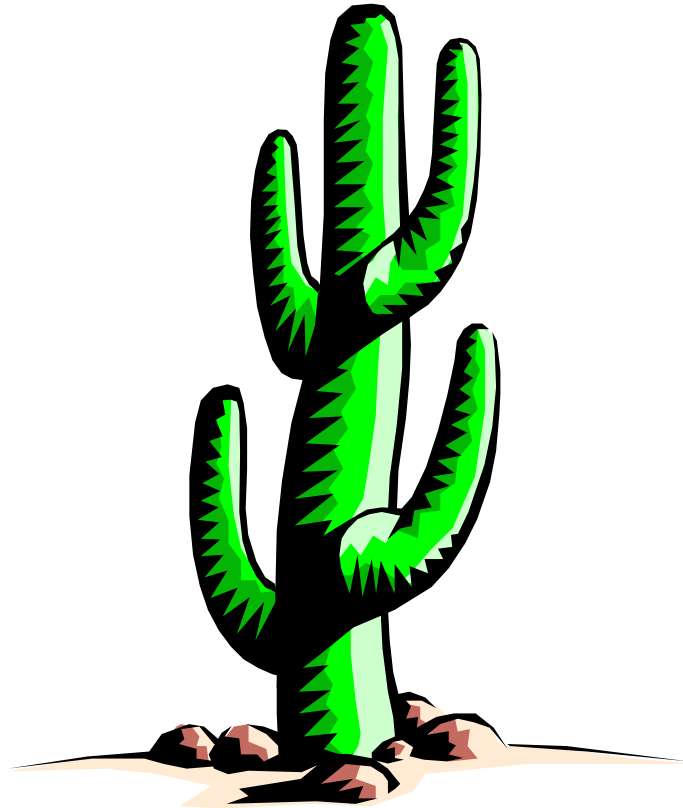
PROGRAM BOOKLET

(Agendas, Rosters, and Past Draft Minutes enclosed)

NFRC 2009 Spring Membership Meeting

Tucson, Arizona

March 2 – 5, 2009



National Fenestration Rating Council

6305 Ivy Lane, Suite 140

Greenbelt, MD 20770

301/589-1776

www.nfrc.org

NFRC 2009 Spring Membership Meeting Schedule ~ March 2 - 5, 2009

Tucson Marriott - University Park; Tucson, Arizona

The Madera Ballroom

Schedule subject to change

	Monday 03/02/09 (Registration opens 6:30 a.m.)		Tuesday 03/03/09 Madera Ballroom	Wednesday 03/04/09 Madera Ballroom	Thursday 03/05/09 Madera
7:30 a.m.	Interior/Exterior Attachments Task Group (7:30 a.m.- 8:30 a.m.)	PCP Task Group (7:30 a.m.-9:00 a.m.)	~Room in Use~	Research & Technology Block (Part Two: 8:00 a.m.-12:00 p.m.)	Technical Committee Block (Part Two: 8:00 a.m.-11:00 a.m.)
8:30 a.m.					
9:00 a.m.	Storm Window Task Group (9:00 a.m.-9:30 a.m.)	Product Line ID Task Group (9:00 a.m.-9:30 a.m.)	Garage/Rolling Door Task Group (9:00 a.m.-9:45 p.m.)	Subcommittees to Convene: • Research Subcommittee • Optical Properties Subcommittee	Subcommittees to Convene: • Condensation Resistance SC • Annual Energy Performance SC • Attachment Subcommittee • CMA Subcommittee (Technical)
9:30 a.m.	Awning Task Group (9:30 a.m.-10:00 a.m.)	CMA Technical Task Group (9:30 a.m.-11:00 a.m.)			
10:00 a.m.	NFRC 300,301-2009 Task Group (10:00 a.m.-11:00 a.m.)		Door Task Group (11:00 a.m.-11:30 a.m.)	Tubular Daylighting Devices TG (10:30 a.m.-11:00 a.m.)	NOTE: 15 min break between SC & Committee R&T COMMITTEE CONVENES
10:30 a.m.		Skylight Task Group (11:00 a.m.-11:30 a.m.)			
11:00 a.m.	Validation Testing Task Group (11:00 a.m.-11:30 a.m.)				
11:30 a.m.	Meeting Break Buffet Luncheon Provided by NFRC (11:30 a.m.-12:30 p.m.) <i>For all registered meeting attendees</i>				Meeting Break (11:00 a.m.-12:30 p.m.)
12:00 p.m.	-NFRC Spring Membership Meeting 2009- Opening Session (12:30 p.m.-2:00 p.m.) • Welcome/Opening Remarks • Chair's Reports • Speaker – Dr. Ross McCluney, SunPine Consulting				
12:30 p.m.				Meeting Break (12:00 p.m.-1:30 p.m.)	Regulatory Affairs & Marketing Committee (12:30 p.m.-1:30 p.m.)
1:00 p.m.					
1:30 p.m.	NFRC CPD 2.0 Presentation (2:00 p.m.-3:00 p.m.) Presentation with Q&A				
2:00 p.m.	NFRC Policy Committee Block (3:00 p.m.-4:00 p.m.) Committees to Report: • Accreditation Policy Committee • Technical Interpretations Policy Committee • Certification Policy Committee				
2:30 p.m.	Research & Technology Block (Part One: 4:00 p.m.-5:30 p.m.) Subcommittees to Convene: • Thermophysical Properties of Materials SC • Glossary Task Group <i>R&T Committee - Continued 8:00 a.m. 03/03/09...</i>				
3:00 p.m.				Technical Committee Block (Part One: 1:30 p.m.-5:00 p.m.) Subcommittees to Convene: • Software Subcommittee • Air Leakage Subcommittee • U-Factor Subcommittee • Solar Heat Gain Subcommittee	Ratings Committee Block (1:30 p.m.-5:00 p.m.) Subcommittees to Convene: • Labeling Subcommittee • Certification Subcommittee • CMA Subcommittee (Ratings)
3:30 p.m.					
4:00 p.m.					
4:30 p.m.					
5:00 p.m.					
5:30 p.m.					
6:00 p.m.	Meeting Attendees – on your OWN.....				
7:00 p.m.			NFRC Membership Reception All Registrants Welcome (5:30 p.m.-7:30 p.m.)		



Continental Breakfast will be served Monday –Thursday before the first meeting convenes (will be available for up to one hour). Complimentary for all NFRC Meeting Registrants.

rev. 02/17/2009



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National Fenestration
Rating Council®

---Welcome from the NFRC Chair of the Board ---



BOARD OF DIRECTORS

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James C. Benney

February 12, 2009

NFRC Members and Guests, welcome to beautiful Tucson, Arizona!

We gather for the first membership meeting in 2009 with an opportunity to build on our success in 2008 and with a very full agenda.

We have so many hard-working task groups that we've implemented a three-track meeting schedule for the morning of Monday, March 2. But don't worry – if you can't be in two or three places at once, check out our On-Line Meeting site at www.nfrcnews.blogspot.com for notes from the meeting throughout the week.

During the Opening Session on Monday, you will not want to miss the presentation from one of NFRC's foremost energy efficient experts, Dr. Ross McCluney. He has put together a compelling scenario outlining the challenges the world faces in achieving real sustainability and our organization's possible role in making a difference.

Finally, we have important ballots to address on attachment products, CMA, the glossary, and other issues in various subcommittees and committees.

So we'll be very busy. Still, I hope everyone gets a chance to enjoy the warmth, sunshine and activities that Tucson has to offer.

As always ... thanks for all you do!

Joseph A. Hayden

Joseph A. Hayden
NFRC Chairman



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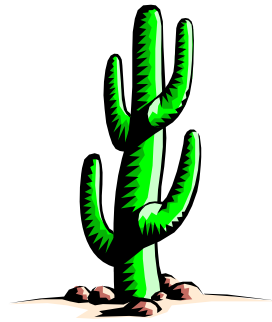
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NFRC’s Spring Meeting: SPECIAL NOTES

Meeting Hotel:

Tucson Marriott University Park
<http://www.marriotttucson.com>
 880 E. Second Street
 Tucson, Arizona 85719
 520-792-4100 • **Reservations 800-228-9290**



Monday, March 2, 2009

Meetings start 7:30 a.m.: The NFRC will host task group meetings throughout the morning in the Madera, Pima and Ventana Ballrooms. Committees will then get a start on the week, beginning at 3:00 p.m., with the NFRC Policy Committee Block followed by the Research and Technology Committee Block which will meet until 5:30 p.m. and reconvene on Tuesday morning at 8:00 a.m. The NFRC’s meeting schedule can be found on the inside cover of this Program Book.

NFRC’s Opening Session, featuring A Fresh Perspective from a Long-Time Member:

The NFRC’s opening session will be held at 12:30 p.m. in the Madera ballroom following an NFRC hosted luncheon buffet (at 11:30.) This session will include an overview from the Chair of the Board, housekeeping by the Executive Director, Chairs’ Reports outlining the week’s highlighted topics and a presentation from Dr. Ross McCluney.

Dr. McCluney, a long-time NFRC member and contributor, will present on the important questions facing our current generation in relation to the future of science and technological advances, and what type of role NFRC may consider taking to make a difference. He has dedicated his career to environmental research and has authored and/or served as editor of four books and more than 75 essays and technical papers, including two textbooks.

Dr. McCluney currently works as a consultant and is a member through his firm Sun Pine Consulting. He resides in Chattanooga, Tenn., where he is active with several environmental organizations and continues his technical consulting practice following his 2007 retirement from the Florida Solar Energy Center.

CPD 2.0 Presentation – NFRC staff and Board committee updates the Membership:

Directly following the Opening Session the NFRC staff will lead a presentation and hold a Q&A session regarding the current status of the Certified Products Directory. This session will also give a background on the philosophical strategic mapping of the change and future direction of the project to ensure the commitment to stakeholder care and data integrity.

Tuesday, March 3, 2009

NFRC Reception: (For ALL registered Attendees)

5:30 p.m. - 7:30 p.m.: *Lounge and Patio Area*

The NFRC invites all registered attendees and guests to share in after-meeting-networking and fellowship with a hosted reception. The NFRC warmly invites all to enjoy light hors d’oeuvres, spirits, and the company of the best & brightest minds in the energy focused fenestration industry.





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Guidelines for Orderly Conduct of NFRC Meetings

The following general guidelines apply to meetings of NFRC Committees and Subcommittees. As guidelines, committee/subcommittee chairs have the discretion in how rigidly to enforce these requirements (subject to being overruled by the members on a specific issue pursuant to a 2/3 majority). The intent is that committee/subcommittee chairs will use their good judgment in applying these rules to assist NFRC in conducting its meetings in an orderly fashion, while giving interested parties a reasonable opportunity to present their views. However, nothing in these guidelines, nor any flaw in committee and/or subcommittee conduct or procedure, will be construed to prohibit the NFRC Board from taking action on any matter if it deems it necessary in the best interests of the organization.

1. All material to be presented or discussed at an NFRC scheduled meeting shall be published as a listed item of the NFRC meeting agenda. The initial agenda shall be published 30 calendar days in advance of the meeting. All significant written or electronic presentations or documents to be handed out during the NFRC meeting shall be submitted to the committee chair and NFRC staff for review and determination of compliance with any applicable NFRC requirements. The presentations shall be submitted to the respective chair, who in turn would provide a copy to NFRC staff, no later than 15 calendar days before the NFRC meeting date. Any revisions to a published agenda shall be made by the chair no later than 12 calendar days before the NFRC scheduled meeting. The final meeting agenda shall be published by NFRC staff no later than 10 calendar days before a scheduled NFRC meeting. Issues not included on the published agenda can be brought up as announcements or for preliminary discussion only. No final action is to be taken on any item not specifically listed on the published agenda.
2. At a scheduled NFRC meeting, no person shall present his/her view until the chair recognizes the person to do so.
3. Minutes shall reflect all written ballot responses that are declared to be negatives and/or approved with comments and shall also reflect how each was addressed.



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4. All motions put forth in an NFRC meeting **MUST** be written down on a Motion Form to be formally presented to the group and incorporated into the meeting minutes. Chairs shall provide enough time for the NFRC staff to collect all written motions and register them in the meeting minutes. The chair shall not proceed to a vote on an issue or to the next issue or agenda item until minute taker advises the chair that the needed action item has been duly registered, the motion form has been received, and the motion has been read to the group.
5. The minute taker shall register all action items in the meeting minutes. The minutes should try to contain a short summary of the proponent's reason for making the motion, so as to provide background for the intent. If modifications are made to the motion, there should also be a short summary of the intent for the modification. Unless recognized by the chair, minute taker shall not list any issues/notes other than the action items and short summary in meeting minutes.
6. Rules of common courtesy and Roberts Rules of Order generally apply to the conduct of NFRC meetings.





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Exterior – Interior Attachments Task Groups

Monday, March 2, 2009

7:30 a.m. – 8:30 a.m.

Chair: *Mike Cienian, Hunter Douglas (Interior Attachments)*

Chair: *TBD (Exterior Attachments)*

1. Call to Order

- a. Circulate task group interest sheet
- b. Welcome to All Attendees ...Cell phones & pagers to Silent Mode
- c. Antitrust reminder
- d. NFRC Meeting Guidelines

2. Appoint Recording Secretary (Task Group Participant)

3. Review and approve agenda

4. Unfinished Business

- a. Review ballot for NFRC 100 (Rob Simons)
- b. Review ballot for NFRC 200 (John Gant)

5. New Business

6. Adjourn

SCOPE

The Exterior & Interior Attachments Task Groups shall develop and assess procedures for rating exterior & interior fenestration attachments.



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PCP Review Task Group

Monday, March 2, 2009

7:30 a.m. – 9:00 a.m.

Chair: *Tina Jenkins, Simonton Windows*

1. Call to Order

- a. Circulate task group interest sheet
- b. Welcome to All Attendees ...Cell phones & pagers to Silent Mode
- c. Antitrust reminder
- d. NFRC Meeting Guidelines

2. Appoint Recording Secretary (Task Group Participant)

3. Review and approve agenda

4. Business

- a. 2009 Spring PCP Review ballot
- b. Update on Product Line ID TG

5. Adjourn

SCOPE

The task group is responsible for maintaining the PCP document.



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Applied Film Task Group

Monday, March 2, 2009

8:30 a.m. – 9:00 a.m.

Chair: *Darrell Smith, International Window Film Assoc.*

1. Call to Order

- a. Circulate task group interest sheet
- b. Welcome to All Attendees ...Cell phones & pagers to Silent Mode
- c. Antitrust reminder
- d. NFRC Meeting Guidelines

2. Appoint Recording Secretary (Task Group Participant)

3. Approve notes from Jacksonville NFRC Membership Meeting

4. Review and approve agenda

5. New Business

6. Adjourn

SCOPE

Shall develop and access procedure for rating of applied films.

Committee Chain: * Technical Committee * Attachment Subcommittee * *Applied Film Task Group*
NFRC Staff Liaison: *Scott Hanlon, Senior Programs Manager * shanlon@nfr.org*
*Dennis Anderson, LAP Manager * danderson@nfr.org*



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Storm Window Task Group

Monday, March 2, 2009

9:00 a.m. – 9:30 a.m.

Chair: *Thomas Zaremba, Roetzel & Andress*

1. Call to Order

- a. Circulate task group interest sheet
- b. Welcome to All Attendees ...Cell phones & pagers to Silent Mode
- c. Antitrust reminder
- d. NFRC Meeting Guidelines

2. Appoint Recording Secretary (Task Group Participant)

3. Review and approve agenda

4. Unfinished Business

- a. Development of Base Case Windows for use with attachments

5. New Business

6. Adjourn

SCOPE

Develop a technical procedure, corresponding PCP language and a label for certifying and labeling storm windows as fenestration attachments.



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Product Line ID Task Group

Monday, March 2, 2009

9:00 a.m. – 9:30 a.m.

Chair: *John McFee, Window and Door Manufacturer's Association (WDMA)*

1. Call to Order

- a. Circulate task group interest sheet
- b. Welcome to All AttendeesCell phones & pagers to Silent Mode
- c. Antitrust reminder
- d. NFRC Meeting Guidelines

2. Appoint Recording Secretary (Task Group Participant)

3. Review and approve agenda

4. New Business

- a. Create scope
- b. Discuss draft PCP language for Product Line ID language in CPD.

5. Adjourn

SCOPE

TBD.

Committee Chain: * Ratings Committee * Certification Subcommittee * *Product Line ID Task Group*
NFRC Staff Liaison: *Sherri Wendt, Certification Associate * swendt@nfr.org*
NFRC Staff Liaison: *Scott Hanlon, Senior Programs Manager * shanlon@nfr.org*



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Garage Door/Rolling Door U-factor Task Group

Monday, March 2, 2009

9:00 a.m. – 9:45 a.m.

Chair: *Joseph R. Hetzel, P.E., DASMA*

1. Call to Order

- a. Circulate task group interest sheet
- b. Welcome to All Attendees ...Cell phones & pagers to Silent Mode
- c. Antitrust reminder
- d. NFRC Meeting Guidelines

2. Appoint Recording Secretary (Task Group Participant)

3. Review and approve agenda

4. Review and approve minutes from November 2008 Jacksonville Meeting

5. New Business

- a. Review mission and scope
- b. RFP to review ASHRAE and DASMA research project data
- c. Research on necessity of vertical jamb hardware in testing and simulation
- d. Simulation Manual details
- e. Other

6. Adjourn

MISSION

To develop and recommend the most suitable and repeatable U-factor testing and simulation provisions for garage doors and rolling doors.

SCOPE

To evaluate all known existing testing and simulation methods, including available data or conclusions from use of such methods, to determine practicality of simulation, and to draft recommended provisions – including multiple testing and/or simulation methods if feasible – for review by the NFRC U-Factor Subcommittee.



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Awning Task Group

Monday, March 2, 2009

9:30 a.m. – 10:00 a.m.

Chair: *John Gant, Glen Raven Inc.*

1. Call to Order

- a. Circulate task group interest sheet
- b. Welcome to All Attendees ...Cell phones & pagers to Silent Mode
- c. Antitrust reminder
- d. NFRC Meeting Guidelines

2. Appoint Recording Secretary (Task Group Participant)

3. Review and approve agenda

4. Unfinished Business

- a. Research Proposal
- b. Product Group Table

5. New Business

6. Adjourn

SCOPE

The awning task group shall develop and assess procedures for rating non-coplanar projecting awning fenestration attachment products.



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Component Modeling Approach (CMA) Technical Task Group

Monday, March 2, 2009

9:30 a.m. – 11:00 a.m.

Chair: *Mahabir Bhandari, Carli, Inc.*

1. Call to Order

- a. Circulate task group interest sheet
- b. Welcome to All Attendees ...Cell phones & pagers to Silent Mode
- c. Antitrust reminder
- d. NFRC Meeting Guidelines

2. Appoint Recording Secretary (Task Group Participant)

3. Review and approve agenda

4. Unfinished Business

- a. Muntins, spandrel panels, composite and combination windows

5. New Business

6. Adjourn

SCOPE

To provide resolution of any outstanding technical issues related to Non-residential component modeling approach procedure. This task group reports to the CMA Technical Subcommittee.



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Air Leakage Task Group

Monday, March 2, 2009

9:45 a.m. – 10:30 a.m.

Chair: *John Lewis, American Architectural Manufacturers Association (AAMA)*

1. Call to Order

- a. Circulate task group interest sheet
- b. Welcome to All AttendeesCell phones & pagers to Silent Mode
- c. Antitrust reminder
- d. NFRC Meeting Guidelines

2. Appoint Recording Secretary (Task Group Participant)

3. Review and approve agenda

4. Business

- a. Create scope
- b. Define issues with current *NFRC 400* document
- c. Discussion of various approaches available in the modification of *NFRC 400*
- d. Determine timeline for completion
- e. Setting next meeting date (conference call)
- f. Review of action items

5. Adjourn

SCOPE

TBD.



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NFRC 300 and 301 Task Group

Monday, March 2, 2009

10:00 a.m. – 11:00 a.m.

Chair: *Bipin Shah, WinBuild*

1. Call to Order

- a. Circulate task group interest sheet
- b. Welcome to All Attendees ...Cell phones & pagers to Silent Mode
- c. Antitrust reminder
- d. NFRC Meeting Guidelines

2. Appoint Recording Secretary (Task Group Participant)

3. Review and approve agenda

4. Unfinished Business

5. New Business

- a. NFRC 300 ballot

6. Adjourn

SCOPE

This TG will modify NFRC 300 and 301 for the 2009 document cycle.



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Tubular Daylighting Devices Task Group

Monday, March 2, 2009

10:30 a.m. – 11:00 a.m.

Chair: *Dave DeBlock, ODL Inc.*

1. Call to Order

- a. Circulate task group interest sheet
- b. Welcome to All AttendeesCell phones & pagers to Silent Mode
- c. Antitrust reminder
- d. NFRC Meeting Guidelines

2. Appoint Recording Secretary (Task Group Participant)

3. Review and approve agenda

4. Review and approve old minutes

5. Business

- a. U-factor test method and calibration panel updates
- b. VT test methods and solar orientation for VT rating

6. New Business

7. Adjourn

SCOPE

The Tubular Daylighting Device Task Group mission is to do what is required, using recognized science and NFRC published procedures to accurately define, rate and label thermal performance characteristics of Tubular Daylighting Devices.

Committee Chain: * Technical Committee * Attachment Subcommittee * TDD Task Group
NFRC Staff Liaison: Scott Hanlon, Senior Programs Manager * shanlon@nfr.org
Dennis Anderson, LAP Manager * danderson@nfr.org



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Validation Testing Task Group

Monday, March 2, 2009

11:00 a.m. – 11:30 a.m.

Chair: *Sneh Kumar, TRACO*

1. Call to Order

- a. Circulate task group interest sheet
- b. Welcome to All Attendees ...Cell phones & pagers to Silent Mode
- c. Antitrust reminder
- d. NFRC Meeting Guidelines

2. Appoint Recording Secretary (Task Group Participant)

3. Review and approve agenda

4. Unfinished Business

- a. Discussion on proposals for changes in ‘validation test matrix’ requirements
- b. Discussion on proposal for ‘General testing requirement: Special rule’
- c. Update on PCP review TG activities w.r.t validation testing requirements
- d. Update from Willie DuPont on long term validation test plan

5. New Business

6. Adjourn

SCOPE

To reexamine current validation testing requirements and propose modifications to the Technical Committee.



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Swinging Door Task Group

Monday, March 2, 2009

11:00 a.m. – 11:30 a.m.

Chair: *Steve Jasperson, Therma-Tru, Inc.*

Vice Chair: *Dave De Block, ODL, Inc.*

1. Call to Order

- a. Circulate task group interest sheet
- b. Welcome to All Attendees ...Cell phones & pagers to Silent Mode
- c. Antitrust reminder
- d. NFRC Meeting Guidelines

2. Appoint Recording Secretary (Task Group Participant)

3. Review and approve agenda

4. Business

- a. Review balloted chapter 4 door size chart changes.
- b. Review balloted chapter 5 half lite size chart changes.
- c. ¼ lite and ¾ lite elimination from the label
- d. New Concept on the Door Matrix Label

5. New Business

6. Adjourn

SCOPE

The Swinging Door Task Group mission is to do what is required, using recognized science and NFRC published procedures to accurately define, rate and label thermal performance characteristics of Swinging Doors.



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Skylight Task Group

Monday, March 2, 2009

11:00 a.m. – 11:30 a.m.

Chair: *Roger LeBrun, VELUX America, Inc.*

1. Call to Order

- a. Circulate task group interest sheet
- b. Welcome to All Attendees ...Cell phones & pagers to Silent Mode
- c. Antitrust reminder
- d. NFRC Meeting Guidelines

2. Appoint Recording Secretary (Task Group Participant)

3. Review and approve agenda

4. Unfinished Business

- a. U-Factor ratings for skylights mounted on field-constructed curbs
 - i. Review research and discuss next steps

5. New Business

6. Adjourn

SCOPE

The Skylight task group is responsible for coordinating/maintaining/developing thermal issues for NFRC technical documents. The TG reports all recommendations to the U-factor Subcommittee.



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NFRC's Spring Membership Meeting OPENING SESSION AGENDA

Monday, March 2, 2009

12:30 p.m. – 2:00 p.m.

Chair: *Joseph Hayden, Pella Corporation*

- 1. NFRC Chairperson's Welcoming Remarks (J. Hayden)**
- 2. Executive Director's Report (J. Benney)**
- 3. Legal Counsel's report (S. Meza)**
- 4. Committee Chair Reports**
 - a. Accreditation Policy Committee (M. Falke)
 - a. Technical Interpretation Policy Committee (T. Culp)
 - b. Certification Policy Committee (R. Temple)
 - c. Research and Technology Committee (W. Lichtenberger)
 - d. Regulatory Affairs and Marketing Committee (G. Stone)
 - e. Technical Committee (J. Baker)
 - b. Ratings Committee (S. Strawn)
- 5. Guest Speaker –Dr. Ross McCluney, SunPine Consulting**
- 6. Adjourn**



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Accreditation Policy Committee

Monday, March 2, 2009

Under Policy Committee Block: 3:00 p.m. – 4:00 p.m.

Chair: Marcia Falke, Keystone Certification Inc.

Vice Chair: Werner Lichtenberger, TruSeal Technologies, Inc.

1. Call to Order

- a. Circulate attendance sheet
- b. Welcome to All Attendees ...Cell phones & pagers to Silent Mode
- c. Antitrust reminder
- d. NFRC Meeting Guidelines
- e. Review committee voting requirements: one vote per voting Policy Committee member listed on the roster.

2. Roll call / Establish quorum

3. Appoint Recording Secretary (NFRC Staff)

4. Review and approve agenda

5. Reports

- a. Simulation Lab Inspection status
- b. Test Lab Inspection status
- c. Interlaboratory Simulation status
- d. Interlaboratory Test Lab status

6. Unfinished Business

- a. 2009 LAP Update
- b. 2009 CEAP Update

7. New Business

- a. None

8. Adjourn

SCOPE

The NFRC Accreditation Policy Committee oversees NFRC's Laboratory Accreditation Program (LAP), including:

- *Issuing policy interpretations related to laboratory accreditation;*
- *Ruling on appeals properly brought pursuant to the LAP;*
- *Recommending modifications to the NFRC LAP; and*
- *Grants final approval of accreditation of testing and simulation laboratories*

*NFRC Staff Liaison: Dennis Anderson, Laboratory Accreditation Manager * danderson@nfrc.org*



NFRC 2009 Spring Membership Meeting
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Accreditation Policy Committee Roster

First Name	Last Name	Company Name
Marcia	Falke	Keystone Certifications, Inc.
Tom	Culp	Birch Point Consulting, LLC
Joseph	Hayden	Pella Corporation
Werner	Lichtenberger	TruSeal Technologies, Inc.
Brad	Schultz	Associated Laboratories, Inc.
Bipin	Shah	WinBuild Inc. <i>below line non-voting</i>
Shelia	Gore	Enermodal Engineering, Inc.
Dave	Kehrli	ETC Laboratories, Inc.
Mahabir	Bhandari	Carli, Inc

Meeting Notes:



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Technical Interpretation Policy Committee

Monday, March 2, 2009

Under Policy Committee Block: 3:00 p.m. – 4:00 p.m.

Chair: Tom Culp, BirchPoint Consulting

Vice Chair: Randy VanVoorst, Quality Testing, Inc.

1. Call to Order

- a. Circulate attendance sheet
- b. Welcome to All Attendees ...Cell phones & pagers to Silent Mode
- c. Antitrust reminder
- d. NFRC Meeting Guidelines
- e. Review committee voting requirements: one vote per voting Policy Committee member listed on the roster.

2. Roll call / Establish quorum

3. Appoint Recording Secretary (NFRC Staff)

4. Review and approve agenda

5. Reports

- a. Actions taken during conference calls or via ballots between November 2008 through February 2009

6. Unfinished Business

7. New Business

8. Adjourn

SCOPE

The NFRC Technical Interpretations Policy Committee (TIPC) will provide oversight and clarification toward the implementation of NFRC's Technical Procedures. Its mission includes, but is not limited to:

- *Developing Technical Interpretations to any adopted NFRC Technical Procedure, or which cross cut Technical Procedures, with input from interested members and program participants and consistent with the intent of the original procedure(s);*
- *Reviewing Technical Memorandums of technical questions from program participants which do not require TIs, as decided by the TIPC;*
- *Working with staff and the Technical Committee to ensure that the Simulator's Workbook is current and consistent with adopted procedures and TIs.*



NFRC 2009 Spring Membership Meeting
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Technical Interpretation Policy Committee Roster

First Name	Last Name	Company Name
Thomas	Culp	Birch Point Consulting LLC
Randal	Van Voorst	Quality Testing, Inc.
Michael J.	Thoman	Architectural Testing, Inc. - PA
Joe	Jonely	Amsco Windows
Charlie	Curcija	Carli, Inc.
Jeff	Baker	WESTLab
Steve	Strawn	Jeld-Wen
Brad	Schultz	Associated Laboratories, Inc.

Meeting Notes:



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Certification Policy Committee

Monday, March 2, 2009

Under Policy Committee Block: 3:00 p.m. – 4:00 p.m.

Chair: Roland Temple, AZS Consulting

Vice Chair: Brad Schultz, Associated Laboratories, Inc.

1. Call to Order

- a. Circulate attendance sheet
- b. Welcome to All Attendees ...Cell phones & pagers to Silent Mode
- c. Antitrust reminder
- d. NFRC Meeting Guidelines
- e. Review committee voting requirements: one vote per voting Policy Committee member listed on the roster.

2. Roll call / Establish quorum

3. Appoint Recording Secretary (NFRC Staff)

4. Review and approve agenda

5. Report

- a. PCP Interpretations

6. Unfinished Business

- a. 2009 CAP Update
- b. 2009 IG Update
- c. Update on metric conversion language

7. New Business

- a. None

8. Adjourn

SCOPE

The NFRC Certification Policy Committee will provide oversight to the implementation of NFRC's Product Certification Program including, but not limited to:

- *Responding to requests for certification policy interpretation*
- *Ruling on appeals related to product certification matters*
- *Making recommendations to the Board of Directors on appeals related to IA certification.*
- *Making recommendations for amendments to the NFRC Product Certification Program*

*NFRC Staff Liaison: Sherri Wendt, Certification Associate * swendt@nfr.org*
*NFRC Staff Liaison: Scott Hanlon, Senior Programs Manager * shanlon@nfr.org*



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Thermophysical Properties of Materials Subcommittee

Monday, March 2, 2009

Under Research & Technology Committee Block: 4:00 p.m. – 5:30 p.m.

Chair: Charlie Curcija, Carli, Inc.

1. Call to Order

- a. Welcome to All Attendees ...Cell phones & pagers to Silent Mode
- b. Antitrust reminder
- c. NFRC Meeting Guidelines
- d. Review subcommittee voting requirements: one vote per member company

2. Appoint Recording Secretary (NFRC Staff)

3. Approve Minutes from November 2008 meeting in Jacksonville, FL.

4. Review and approve agenda

5. Reports

- a. Thermophysical Properties Peer Review-Ray McGowan
- b. Thermophysical Properties ILC status-Ray McGowan

6. Unfinished Business

- a. NFRC 101 electronic database discussion

7. New Business

- a. NFRC 101 and 103 TG (ballots considered)-Peter Lyons
- b. Reaffirm NFRC 101 and NFRC 103 for 2009 document cycle (if ballots fail)

8. Adjourn

SCOPE

The Thermophysical Properties of Materials Subcommittee is responsible for developing and maintaining NFRC 101 and NFRC 103. It is also responsible for the review and approval of the submitted data in accordance with these documents. This subcommittee reports to the Research and Technology Committee.

Committee Chain: *Research and Technology Committee * *Thermophysical Properties of Materials Subcommittee*
NFRC Staff Liaison: Ray McGowan, Manager Technical Services* rmcgowan@nfrc.org



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Program Booklet

*****DRAFT MINUTES*****

Thermophysical Subcommittee

Monday, November 3, 2008

Under Research & Technology Committee Block: 4:00 p.m. – 5:30 p.m.

Chair: *Charlie Curcija, Carli, Inc.*

1. Charlie Curcija, chair, called the meeting to order at 4:00PM
2. Scott Hanlon (staff) appointed recording secretary
3. The agenda was reviewed and approved as presented
4. The minutes from July 2008 (Chicago, IL) were approved as presented
5. Report
 - a. NFRC 101/103 TG – C. Curcija reported for P. Lyons. The TG created the NFRC 101 and 103 ballots for this meeting.
 - b. Thermophysical Properties Peer Review – Ray McGowan (staff) reported on that the peer review has approved two materials and one pending approval.
 - c. 2008 Thermophysical Properties ILC status – Ray (staff) McGowan reported test labs ILC and the preliminary data ready in the spring and the final report completed by the summer.
6. Unfinished Business
 - a. C. Curcija reported no progress on the electronic material properties database and that NFRC Staff will pursue this request. The chair noted that the TG should meet to discuss the DB format.
7. New Business
 - a. NFRC 101-2009 Ballot
 - i. Architectural Testing, Inc., NEG
MOTION: M. Thoman / J. Hayden moved to find the negative persuasive and substantive returning document to TG. Motion passes by unanimous voice vote.
 - b. NFRC 103-2009 Ballot
 - i. Architectural Testing, Inc., NEG
 - ii. Traco, APC
 - iii. Pella, APC
MOTION: J. Hayden / S. Kumar moved to find the all ballot responses persuasive and substantive and to bring ballot back to the task group and incorporate comments into the next ballot. Motion passes by unanimous voice vote.

J. Hayden requested that the 101/103 TG needs to have the ballots ready for the 2009 document cycle.
 - c. Peer review for thin metal (Rolled SS)
 - i. Chair discussed the possibility of using a conductivity report on a product that did not use approved NFRC methods and that the testing was performed outside the NFRC testing requirements; such as the temperature range.
MOTION: B. Briese / W. Lichtenberger moved to refer to the TG of materials scientists to develop a recommendation. Motion passes by unanimous voice vote.
8. Meeting Adjourned at 4:49 p.m.



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Glossary and Terminology Task Group

Monday, March 2, 2009

Under Research & Technology Committee Block: 4:00 p.m. – 5:30 p.m.

Chair: Charlie Curcija, Carli, Inc.

1. Call to Order

- a. Circulate task group interest sheet
- b. Welcome to All Attendees ...Cell phones & pagers to Silent Mode
- c. Antitrust reminder
- d. NFRC Meeting Guidelines

2. Appoint Recording Secretary (Task Group Participant)

3. Review and approve agenda

4. Unfinished Business

5. New Business

- a. Resolve Glossary Ballot
- b. Status of Non-Residential definitions and their inclusion in NFRC 600

6. Adjourn

SCOPE

To maintain a glossary of NFRC terms and maintain the document at the request of the Research and Technology committee.



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Research Subcommittee

Tuesday, March 3, 2009

Under Research & Technology Committee Block: 8:00 a.m. – 12:00 p.m.

Chair: Bipin Shah, WinBuild, Inc.

Vice Chair: Rich Biscoe, Architectural Testing, Inc.

1. Call to Order

- a. Welcome to All Attendees ...Cell phones & pagers to Silent Mode
- b. Antitrust reminder
- c. NFRC Meeting Guidelines
- d. Review subcommittee voting requirements: one vote per member company

2. Appoint Recording Secretary (NFRC Staff)

3. Approve Minutes from November 2008 meeting in Jacksonville, FL.

4. Review and approve agenda

5. Reports

- a. Research status (staff)
- b. Condensation Resistance Procedure for CMA PMTG (Kevin Vilhauer, Chair – PMTG)
- c. Tubular Daylighting Devices U-factor rating PMTG (Dave De Block, Chair - PMTG)
- d. Window 6/Therm 6 Validation Research PMTG (Joe Hayden, Chair of PMTG)

6. Unfinished Business

7. New Business

- a. Exterior Awning Research RFP ballot (John Gant)
- b. Fenestration Attachment Rating Research Summary Page ballot (Willie du Pont)
- c. Complex Product VT Research RFP ballot (Paul Jaster)
- d. Reaffirm Research manual for 2009 document cycle

8. Adjourn

SCOPE

The Research Subcommittee is to act as a repository for research requests. These requests will be prioritized and recommendations passed to the Research and Technology Committee. The Research Subcommittee is to function as an intermediary for the collection, coordination, and publication of research and test data pertinent to the NFRC organization and its membership. The purpose of this coordinated effort is to provide concise, useful information such as reports of tests in progress and accumulated test results. (Last approved January 8, 2004)

Committee Chain: *Research and Technology Committee * Research Subcommittee
NFRC Staff Liaison: Ray McGowan, Technical Services Manager * RMcGowan@nfr.org



NFRC 2009 Spring Membership Meeting
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*****DRAFT MINUTES*****

Research Subcommittee

Tuesday, November 4, 2008

Under Research & Technology Committee Block: 8:00 a.m. – 12:00 p.m.

Chair: *Bipin Shah, WinBuild, Inc.*

Vice-chair: *Rich Biscoe, Architectural Testing, Inc.*

-
1. Werner Lichtenberger (substitute for Bipin Shah), chair, called the meeting to order at 9:00AM
 2. Scott Hanlon (staff) appointed recording secretary
 3. The agenda was reviewed and approved as presented
 4. The minutes from July 2008 (Chicago, IL) were approved as presented
 5. Report
 - a. Research Status – Ray McGowan (staff) reported on the research budget and project status.
 - b. Condensation Resistance Procedure for CMA PMTG – C. Curcija reported that the final report will be sent by the end of November with follow-up conference calls to discuss the report. J. Franson has stepped down as chair of the Condensation Resistance Project chair, W. Lichtenberger will discuss with members of the PMTG to find a chair.
 - c. Tubular Daylighting Devices U-factor Rating PMTG – D. DeBlock reported that the contractor will not write the peer review paper and that the PMTG should be disbanded.

MOTION: D. DeBlock / R. Temple moved to R & T Committee to terminate this research project based on the recommendation of the PMTG and that payment should be considered complete and the remaining 20% will not be paid. Motion passes by unanimous voice vote.
 - d. Window 6/Therm 6 Validation Research PMTG – J. Hayden had reported that the research is on schedule. W. duPont presented a status of the research project.
 - e. Complex Product VT Research PMTG report – P. Jaster reported that based on discussion ATI-PA had with “optical experts” that this project is not the correct approach for VT ratings.

MOTION: J. Hayden / R. Temple moved to have the Research SC recommend to the R & T Committee and the Board that the current complex product VT research project be suspended pending the presentation of a revised proposal from the PMTG. Motion passes: 22-4.
 - f. Long Range Research Planning Task Group – R. McGowan reported for R. Biscoe that the Domed Skylight research and Garden House research were matched to “A” priority, and the Exterior Awning Research was matched to “C” priority.
 6. Unfinished Business
 - a. Garden Window Simulation Method RFP

MOTION: R. Temple / C. Curcija moved to withdraw the Garden Window Simulation Method RFP to a later date due to a potential lack of promised industry support. Motion passes by unanimous voice vote.
 - b. Domed Skylight Simulation Method RFP
 - i. CEC, APC: **MOTION:** N. Pena / J. Baker moved to find the CEC negative persuasive and substantive. Motion passes by unanimous voice vote. (RFP will be rewritten per negatives)
 - c. Awning Rating Research Summary Page – J. Gant

MOTION: J. Gant / R. McCluney moved to accept research summary page and develop an RFP for ballot. Motion passes by unanimous voice vote.
 7. New Business
 - a. None
 8. Meeting Adjourned at 10:22 p.m.



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Optical Properties Subcommittee

Tuesday, March 3, 2009

Under Research & Technology Committee Block: 8:00 a.m. – 12:00 p.m.

Chair: Sneh Kumar, TRACO Inc.

1. Call to Order

- a. Welcome to All Attendees ...Cell phones & pagers to Silent Mode
- b. Antitrust reminder
- c. NFRC Meeting Guidelines
- d. Review subcommittee voting requirements: one vote per member company

2. Appoint Recording Secretary (NFRC Staff)

3. Approve Minutes from November 2008 meeting in Jacksonville, FL.

4. Review and approve agenda

5. Reports

- a. OPS priorities presentation – Mike Rubin/ Ross McCluney
- b. Non-planar Simulation TG-Charlie Curcija
- c. NFRC 300 and NFRC 302 TG reports (ballots considered)-Bipin Shah
- d. ASTM E44.05 SC report-Ray McGowan
- e. Solar Optical Performance of Non Planar Transparent Systems Task Group (Charlie Curcija)
- f. Attachment optical properties TG - Tom Morrissey

6. Unfinished Business

7. New Business

- a. Reaffirm NFRC 300 (if ballot fails), 301, 302 (if ballot fails), 303 and 304 for 2009 document cycle

8. Adjourn

SCOPE

The Optical Properties Subcommittee shall be responsible for determining, reviewing, and maintaining solar optical properties data for glazing materials and systems for use in NFRC procedures. The Optical Properties Subcommittee shall report to the Research and Technology Committee.

*Committee Chain: *Research and Technology Committee * Optical Properties Subcommittee
NFRC Staff Liaison: Ray McGowan, Technical Services Manager * rmcgowan@nfrc.org*



NFRC 2009 Spring Membership Meeting
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*****DRAFT MINUTES*****

Optical Subcommittee

Monday, November 5, 2008

Under Research & Technology Committee Block: 8:00 a.m. – 12:00 p.m.

Chair: *Sneh Kumar, Traco*

1. Sneh Kumar, chair, called the meeting to order at 8:00AM
2. Scott Hanlon (staff) appointed recording secretary
3. The agenda was reviewed and approved as presented
4. The minutes from July 2008 (Chicago, IL) were approved as presented
5. Reports
 - a. Non-planar Simulation TG – Charlie Curcija reported a lack of industry support and it may be difficult to move forward on this subject. Charlie is hoping that the skylight manufacturers participate. The TG will provide a one page summary on dealing with materials in the products being tested.
 - b. NFRC 300/301 TG – Sneh Kumar summarized the ballot responses and action items discussed at the task group meeting held on Monday, 11/3/08. The TG reported continued debate on references to ISO or ASTM. The NFRC 300 and 301 documents will remain as is for now and continued monitoring of ISO standards may lead the changes in NFRC 300 and 301 references in the future.
 - c. NFRC 302/303/304 TG – S. Kumar reported that work will continue on the standards.
 - d. ASTM E44.05 SC report – Ray McGowan (staff) reported he will take developed NFRC 300 language and propose it for E903
6. Unfinished Business
 - a. None
7. New Business
 - a. NFRC 300-2009 Ballot
 - i. Pella, NEG: **MOTION:** J. Hayden / J. Krahn moved to find Pella's persuasive and substantive and recommend delaying implementation of NFRC 300 until at least April 1, 2009. Motion passes by unanimous voice vote.
 - ii. All other responses will be sent back to the TG based on the Pella motion.
 - b. F. Higgins requested the formation of an Attachment Optical Properties task group. Participants will be: J. Gant, R. McCluney, F. Higgins, T. Morrissey (Chair), K. Stoddard, C. Kohler, K. Edgar, C. Curcija, S. Kumar, and W. duPont
8. Meeting Adjourned at 11:10 p.m.



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Research & Technology Committee

Block Period: Monday, March 2, 2009 4:00 p.m. – 5:30 p.m.

Continued – Tuesday, March 3, 2009 8:00 a.m. – 12:00 p.m.

Chair: *Werner Lichtenberger, Truseal Technologies*

Vice Chair: *Dave DeBlock, ODL, Incorporated*

1. Call to Order

- a. Circulate attendance sheet
- b. Welcome to All Attendees ...Cell phones & pagers to Silent Mode
- c. Antitrust reminder
- d. NFRC Meeting Guidelines
- e. Review committee voting requirements: one vote per member company listed on the roster

2. Appoint Recording Secretary (NFRC Staff)

3. Roll call / Establish quorum

4. Approve Minutes from November 2008 meeting in Jacksonville, FL.

5. Review and approve agenda

6. Reports

- a. Research SC-Bipin Shah
- b. Optical Properties SC-Sneh Kumar
- c. Thermophysical Properties SC-Charlie Curcija
- d. Glossary and Terminology TG-Charlie Curcija

7. Unfinished Business

8. New Business

9. Adjourn

SCOPE

The Research and Technology Committee shall be responsible for developing and maintaining accurate technical data used to support the NFRC rating procedures. The committee shall have responsibility over the following specific areas:

- *Optical Properties*
- *Technical Research*
- *Thermophysical Properties*
- *Long Term Energy Performance Research*
- *Glossary*

The Research and Technology Committee shall report to the Board of Directors.

[Last approved January 8, 2004]

*NFRC Staff Liaison: Ray McGowan, Technical Services Manager * rmcgowan@nfrc.org*



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Research & Technology Committee Roster*

First Name	Last Name	Company Name
Lisa	Winckler	AIMCAL - Window Film Committee
Gilbert	Riopel	Air-Ins
Nils	Peterman	Alliance to Save Energy
John	Lewis	American Architectural Manufacturers Association (AAMA)
Steve M.	Johnson	Andersen Corporation
Frank	Fischer	Arcadia, Inc.
Michael J.	Thoman	Architectural Testing, Inc.
Brad	Schultz	Associated Laboratories, Inc.
Steve	Harp	Associated Materials, Inc.
Patrick M.	Muessig	Azon USA, Inc.
Roland	Temple	AZS Consulting, Inc.
Travis	Windleharth	Baekert Specialty Film LLC
Thomas	Culp	Birch Point Consulting LLC
Nelson	Pena	California Energy Commission
James	Larsen	Cardinal Glass Industries, Inc.
Charlie	Curcija	CARLI, Inc.
Kerry	Haglund	Center for Sustainable Building Research
Michael	Le Fevre	Custom Window Systems, Inc.
Joe	Hetzel	DASMA (Door & Access Systems Manufacturers Assoc. International)
Tracy	Rogers	Edgetech I.G., Inc.
George	Nash	Einsinger Building Products Division
Morgan	Hanam	Enermodal Engineering Limited
Ross	McCluney	Sun Pine Consulting, Inc.
Greg	Carney	Glass Association of North America (GANA)
John	Gant	Glenraven, Inc.
Robert	Simons	Hunter Douglas, Inc.
Margaret	Webb	Insulating Glass Manufacturers Alliance (IGMA)
Darrell	Smith	International Window Film Association (IWFA)
Steve	Strawn	Jeld-Wen, Inc.
Marcia	Falke	Keystone Certifications, Inc.
Christian	Kohler	Lawrence Berkeley National Laboratory (LBNL)
James C.	Krahn	Marvin Windows & Doors
Grant	Muller	Mikron Industries
Kevin	Vilhauer	Milgard Manufacturing
David A.	De Block	ODL Incorporated
Joseph	Hayden	Pella Corporation



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Research & Technology Committee Roster continued...

First Name	Last Name	Company Name
Peter	Lyons	Peter Lyons and Associates
Tina	Reberger	PGT Industries
David L.	Duly	Pilkington North America, Inc.
Scott	Widmer	ProVia Door, Inc.
Marles	McDonald	Quality Testing, Inc.
Thomas S.	Zaremba	Roetzel & Address
Marvin	Stover	Royal Group
Tina	Jenkins	Simonton Windows
Paul	Jaster	Solatube, Inc.
Julia	Schimmelpenningh	Solutia, Inc.
John	Meade	Southwall Technologies
William C.	du Pont	Sunergy Consulting
Milind	Jhaveri	Technoform
Mike	Manteghi	TRACO
Werner	Lichtenberger	TruSeal Technologies, Inc.
Roger	LeBrun	Velux-America, Inc.
Daniel	Wacek	Viracon, Inc.
Fred	Higgins	Wayne Dalton, Inc.
John	McFee	Window and Door Manufacturer's Association (WDMA)
Jeff	Baker	WESTLab
Bipin	Shah	WinBuild, Inc.
Michael	Turner	YKK AP America, Inc.

**Committee Membership requires members to sign up onsite at meeting for inclusion on roster/voting rights.
Please note if two consecutive meetings are missed without a voting representative signing the onsite roster – company will be dropped and interested parties must sign up once again.*

If you notice a problem – PLEASE contact the staff of NFRC as soon as possible. Discrepancies cannot be addressed at the meeting: membership@nfr.org.



NFRC 2009 Spring Membership Meeting
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****DRAFT MINUTES****

Research and Technology Committee

Block Period: Tuesday, November 4, 2008, 8:00 a.m. – 12:00 p.m.

Chair: Werner Lichtenberger, Truseal Technologies

1. Chair called the meeting to order at 11:22am
 - a. Roll call was taken and a quorum was established.
2. Scott Hanlon (Staff) appointed recording secretary
3. Minutes from July 2008 (Chicago, IL) meeting were approved as presented
4. The agenda was reviewed and approved as presented
5. Reports
 - a. Optical Properties SC – Sneh Kumar
 - i. An Attachment Optical Properties TG was formed
 - ii. The NFRC 300-09 ballot is being sent back to TG for rework.
 - b. Research SC – Werner Lichtenberger (substituting for Bipin Shah)
 - i. An Exterior Awnings Research summary page was approved by the Research SC for RFP development.
 - ii. **MOTION:** D. DeBlock / R. Temple moved to terminate the Tubular Daylighting Device U-factor research project based on the recommendation of the PMTG and that payment should be considered complete and the remaining 20% will not be paid. Motion fails 11-17-13.
 1. The contractor (ATI, Mike Thoman) confirmed the peer review paper will be completed.
 - iii. **MOTION:** R. Temple / J. Hayden moved to recommend to the Board from the R & T Committee that the current Complex Product VT Research Project be suspended pending the presentation of a revised proposal from the PMTG. Motion passes 28-4.
 - c. Thermophysical Properties SC – Charlie Curcija
 - i. Reported that the ballots for the NFRC 101 and NFRC 103 are being sent back to the TG, which will incorporate all negatives and approved with comments into a ballot for the next meeting.
 - ii. A TG of material experts will be formed to discuss testing of thin metal materials.
 - d. Glossary and Terminology TG – Charlie Curcija
 - i. The TG will continue to work on NFRC and ASHRAE common definitions.
6. Meeting adjourned @ 11:51AM.



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Software Subcommittee

Tuesday, March 3, 2009

Under Technical Committee Block: 1:30 p.m. – 5:00 p.m.

Chair: Brian Crooks, Cardinal Glass Industries, Inc.

Vice Chair: Jim Krahn, Marvin Windows & Doors

1. Call to Order

- a. Welcome to All AttendeesCell phones & pagers to Silent Mode
- b. Antitrust reminder
- c. NFRC Meeting Guidelines
- d. Review subcommittee voting requirements: one vote per member company

2. Appoint Recording Secretary (NFRC Staff)

3. Review and approve agenda

4. Approve Minutes from November 2008 meeting in Jacksonville, FL.

5. Reports

- a. WINDOW 6/ THERM 6 Approval TG – Joe Hayden
- b. CMAST Approval TG – Dan Wacek

6. Unfinished Business

- a. None

7. New Business

- a. Possible formation of a new TG for CPD (Database)

8. Adjourn

SCOPE

The scope of the Software Subcommittee is to:

- *Develop guidelines for the development of software tools and their documentation as used in NFRC ratings;*
- *Review and prioritize software development requests;*
- *Provide oversight for software development efforts; and*
- *Develop and maintain software acceptance criteria.*

The purpose of this effort is streamlined, robust, accurate and well documented software that fulfills NFRC core mission.

This subcommittee reports to the Technical Committee.

*Committee Chain: * Technical Committee * Software Subcommittee
NFRC Staff Liaison: Scott Hanlon, Senior Programs Manager * shanlon@nfr.org
Dennis Anderson, LAP Associate * danderson@nfr.org*



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*****DRAFT MINUTES*****

Software Subcommittee

Tuesday, November 4, 2008

Under Technical Committee Block: 1:30 p.m. – 5:30 p.m.

Chair: Brian Crooks, Cardinal Glass Industries, Inc.

Vice Chair: James Krahn, Marvin Windows

1. The chair called the meeting to order @ 1:40 p.m.
2. Dennis Anderson (Staff) appointed recording secretary
3. Minutes from July 2008 (Chicago, IL) meeting were approved as presented.
4. The agenda was reviewed and approved as presented
5. Reports
 - a. WINDOW 6/ THERM 6 Approval TG – J. Hayden reported no actions to bring forward.
 - b. CMAST Approval TG – D. Wacek reported a scope was developed and approved upon at TG level. The original schedule is January or February

MOTION: D Wacek / J. Hayden moved that the CMAST Implementation TG report findings directly to the Board after completion with a recommendation to the Board for implementation. Motion passes: 22-2-0.

6. Unfinished Business
 - a. None
7. New Business
 - a. None
8. Meeting Adjourned at 1:47 p.m.



NFRC 2009 Spring Membership Meeting
March 2-5, 2009, Tucson, AZ

Program Booklet

Air Leakage Subcommittee

Tuesday, March 3, 2009

Under Technical Committee Block: 1:30 p.m. – 5:00 p.m.

Chair: Michael Thoman, Architectural Testing, Inc.

Vice Chair: Tracy Rogers, Edgetech IG, Inc.

1. Call to Order

- a. Welcome to All AttendeesCell phones & pagers to Silent Mode
- b. Antitrust reminder
- c. NFRC Meeting Guidelines
- d. Review subcommittee voting requirements: one vote per member company

2. Appoint Recording Secretary (NFRC Staff)

3. Review and approve agenda

4. Approve Minutes from November 2008 meeting in Jacksonville, FL.

5. Unfinished Business

- a. Work on 2009 document cycle

6. New Business

- a. TBD

7. Adjourn

SCOPE

TBD.



NFRC 2009 Spring Membership Meeting
March 2-5, 2009, Tucson, AZ

Program Booklet

****DRAFT MINUTES****

Air Leakage Subcommittee

Tuesday, November 4, 2008

Under Technical Committee Block: 1:30 p.m. – 5:30 p.m.

Chair: Michael Thoman, Architectural Testing Inc.

1. Michael Thoman, chair, called the meeting to order at 2:12PM
2. Dennis Anderson (staff) appointed recording secretary
3. The agenda was reviewed and approved as presented
4. The minutes from July 2008 (Chicago, IL) were edited to correct the reference of AAMA 101 as NAFS-08 and approved.
5. Report
 - a. Air Leakage TG – J. Lewis. TG has not met since last meeting and anticipate a ballot for Spring Meeting.
6. Unfinished Business
 - i. None
7. New Business
 - a. None
8. Meeting Adjourned at 2:16 p.m.



NFRC 2009 Spring Membership Meeting
March 2-5, 2009, Tucson, AZ

Program Booklet

U-Factor Subcommittee

Tuesday, March 3, 2009

Under Technical Committee Block: 1:30 p.m. – 5:00 p.m.
Chair: *Michael Thoman, Architectural Testing, Inc.*
Vice Chair: *Mahabir Bhandari, Carli, Inc.*

1. Call to Order

- a. Welcome to All AttendeesCell phones & pagers to Silent Mode
- b. Antitrust reminder
- c. NFRC Meeting Guidelines
- d. Review subcommittee voting requirements: one vote per member company

2. Appoint Recording Secretary (NFRC Staff)

3. Review and approve agenda

4. Approve Minutes from November 2008 meeting in Jacksonville, FL.

5. Reports

- a. Tubular Daylighting Devices Task Group – Dave DeBlock
- b. Garage / Rolling Door Task Group – Joe Hetzel
- c. Door Task Group – Steve Jaspersen
- d. Testing Laboratory Task Group – Mike Thoman
- e. Skylight Task Group – Roger LeBrun

6. Unfinished Business

- a. Progress of Work Groups and 2009 NFRC document cycle
 - i. Spacer WG – chaired by T. Rogers
 - ii. Reinforcement WG – chaired by M. Thoman
 - iii. Grids WG – chaired by J. Krahn
 - iv. Glass / Low-E WG – chaired by R. DePaola

7. New Business

- a. NFRC 100 Attachment Ballot
- b. NFRC 100 Swinging Door TG Ballot
- c. NFRC 100 Thermal-Break Definition Ballot
- d. NFRC 100-2009 Document Ballot

8. Adjourn

SCOPE

The U-Factor Subcommittee is responsible for developing and coordinating NFRC 100: The Technical Procedures for Determining Fenestration Product U-Factors.

Committee Chain: * Technical Committee * U-Factor Subcommittee
NFRC Staff Liaison: Scott Hanlon, Senior Programs Manager * shanlon@nfr.org
Dennis Anderson, LAP Manager * danderson@nfr.org



NFRC 2009 Spring Membership Meeting
March 2-5, 2009, Tucson, AZ
Program Booklet

*****DRAFT MINUTES*****

U-Factor Subcommittee

Tuesday, November 4, 2008

Under Technical Committee Block: 1:30 p.m. – 5:30 p.m.

Chair: *Michael Thoman, Architectural Testing, Inc.*

Vice Chair: *Mahabir Bhandari, Carli, Inc.*

-
1. Chair called the meeting to order at 2:17 - antitrust reminder given and reviewed voting requirements
 2. Dennis Anderson (Staff) appointed recording secretary
 3. Minutes from Chicago 2008 (Chicago, IL) meeting were approved as presented but date was changed to be correct day of week.
 4. The agenda was reviewed and approved as presented
 5. Reports
 - a. Tubular Daylighting Devices Task Group – D. DeBlock reported no actions items to move forward.
 - b. Garage / Rolling Door Task Group – J. Hetzel reported ballots were addressed and negatives resolved for 100 and 102.
 - c. Door Task Group – D. DeBlock reported no action items. Any suggestions of doors language for NFRC documents should be evaluated and brought forward any changes.
 - d. Testing Laboratory Task Group – M. Thoman reported no official meetings but discussions were held at annual LAP Workshop.
 6. Unfinished Business
 - a. Progress of work groups and 2009 document cycle –
 - i. M. Thoman reported that an attempt to have something ready before Spring Meeting. Ballot language due in January.
 - T. Rogers hopes to have something for Spacer WG for Spring meeting ballots
 - M. Thoman. Work group on reinforcement issues – looking for comments.
 - J. Krahn has done work on divider issues
 - Glass/LowE WG have done prelim work – nothing to report.
 7. New Business
 - a. M. Cienian addressed SC with regard to Attachments TG hope to have ballots ready.
 - b. Garage/Rolling Door Ballots
 - i. Sunergy negative:
MOTION: J. Hetzel / W. duPont move forward language to Technical Committee for implementation upon publication in the 100-2004. Motion passes by unanimous voice vote.
 - c. NFRC 102 Garage Door Ballot
 - i. Sunergy negative #1: Withdrawn
 - ii. Sunergy negative #2:
MOTION: R. Temple / W. duPont moved that the negative was persuasive and editorial and to move forward to Technical Committee. Motion passes by unanimous voice vote.
 - iii. Sunergy negative #3: Withdrawn.
 - d. NFRC 100 Architectural Sizes Ballot
 - i. All negatives:
MOTION: R. VanVoorst / R. Temple moved that the negatives are persuasive and substantive. Motion passes: 21-5-4.
 - e. Timeline for 2009 document is for Spring Meeting.
 8. Meeting Adjourned at 3:08 pm.



NFRC 2009 Spring Membership Meeting
March 2-5, 2009, Tucson, AZ

Program Booklet

Solar Heat Gain Coefficient Subcommittee

Tuesday, March 3, 2009

Under Technical Committee Block: 1:30 p.m. – 5:00 p.m.

Chair: James Larsen, Cardinal Glass, Inc.

Vice Chair: Bipin Shah, WinBuild, Inc.

1. Call to Order

- a. Welcome to All AttendeesCell phones & pagers to Silent Mode
- b. Antitrust reminder
- c. NFRC Meeting Guidelines
- d. Review subcommittee voting requirements: one vote per member company

2. Appoint Recording Secretary (NFRC Staff)

3. Review and approve agenda

4. Approve Minutes from November 2008 meeting in Jacksonville, FL.

5. Reports

- a. None

6. Unfinished Business

- a. Work on 2009 NFRC Document Cycle

7. New Business

- a. Review of ballot to approve concept to disregard grids for SHGC/VT ratings
- b. Review of ballot for Attachments in NFRC 200, Section 5.8

8. Adjourn

SCOPE

The Solar Heat Gain Subcommittee is responsible for developing and coordinating NFRC 200: Procedure for Determining Fenestration Product Solar Heat Gain Coefficients and Visible Transmittance at Normal Incidence. The Solar Heat Gain Subcommittee reports to the Technical Committee.

*Committee Chain: * Technical Committee * Solar Heat Gain Coefficient Subcommittee
NFRC Staff Liaison: Scott Hanlon, Senior Programs Manager * shanlon@nfr.org
Dennis Anderson, LAP Manager * danderson@nfr.org*



NFRC 2009 Spring Membership Meeting
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Program Booklet

****DRAFT MINUTES****

Solar Heat Gain Subcommittee

Tuesday, November 4, 2008

Under Technical Committee Block: 1:30 p.m. – 5:30 p.m.

Chair: *James Larsen, Cardinal*

Vice-Chair: *TBD*

-
1. Chair called the meeting to order at 3:23pm - antitrust reminder given and reviewed voting requirements
 2. Dennis Anderson (Staff) appointed recording secretary
 3. Minutes from July 2008 (Chicago, IL) meeting were approved as presented.
 4. The agenda was reviewed and approved as presented
 5. Reports
 - a. None
 6. Unfinished Business
 - a. Work on 2009 NFRC Document Cycle – Jim has TG starting on document to be ready for Spring Meeting ballot
 - b. John Gant working on new section of 200 to include in 2009 document
 7. New Business
 - a. R. VanVoorst asked that 200 document be reviewed for the significant figures per the CPD 2.0 requirements.
 8. Adjourned at 3:26 PM



NFRC 2009 Spring Membership Meeting
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Program Booklet

Condensation Resistance Subcommittee

Wednesday, March 4, 2009

Under Technical Committee Block: 8:00 a.m. – 11:00 a.m.

Chair: Kevin Vilhauer, Milgard Manufacturing, Inc.

Vice Chair: Steve Harp, Associated Materials, Inc.

1. Call to Order

- a. Welcome to All AttendeesCell phones & pagers to Silent Mode
- b. Antitrust reminder
- c. NFRC Meeting Guidelines
- d. Review subcommittee voting requirements: one vote per member company

2. Appoint Recording Secretary (NFRC Staff)

3. Review and approve agenda

4. Approve Minutes from November 2008 meeting in Jacksonville, FL.

5. Reports

- a. Condensation Resistance discussion with CSA working group

6. Business

- a. Need a vice chair

7. Adjourn

SCOPE

The Condensation Resistance Subcommittee is responsible for developing and coordinating NFRC 500: Procedure for Determining Fenestration Product Condensation Resistance Values and NFRC 500UG: The User Guide. The Condensation Resistance Subcommittee reports to the Technical Committee.

*Committee Chain: * Technical Committee * Condensation Resistance Subcommittee
NFRC Staff Liaison: Scott Hanlon, Senior Programs Manager * shanlon@nfr.org
Dennis Anderson, LAP Manager * danderson@nfr.org*



NFRC 2009 Spring Membership Meeting
March 2-5, 2009, Tucson, AZ

Program Booklet

*****DRAFT MINUTES*****

Condensation Resistance Subcommittee

Tuesday, November 4, 2008

Under Technical Committee Block: 1:30 p.m. – 5:30 p.m.

Chair: *Kevin Vilhauer, Milgard Manufacturing, Inc.*

Vice Chair: *TBD*

1. Chair called the meeting to order at 0:00pm - antitrust reminder given and reviewed voting requirements
2. Dennis Anderson (Staff) appointed recording secretary
3. Minutes from July 2008 (Chicago, IL) meeting were approved as presented.
4. The agenda was reviewed and approved as presented
5. Reports
 - a. Condensation Resistance discussion with CSA working group – J. Baker reported that there was an effort started about 18 months ago but on hold with rest of harmonization progress. Keep on agenda for one more meeting.
6. Unfinished Business
 - a. None
7. New Business
 - a. Review NFRC 500-2009 ballot
 - i. Pella, APC: **MOTION:** R. Temple / J. Hayden Second move forward NFRC 500 to Technical Committee with Pella's comments to the Board for implementation upon publication. Motion passes by unanimous voice vote.
 - b. Review NFRC 501-2009 ballot
 - i. **MOTION:** R. Temple / J. Jonely moved that NFRC 501-2009 is moved forward to Technical. Motion passes by unanimous voice vote.
8. Meeting adjourned at 1:55 pm.



NFRC 2009 Spring Membership Meeting
March 2-5, 2009, Tucson, AZ

Program Booklet

Annual Energy Performance Subcommittee

Wednesday, March 4, 2009

Under Technical Committee Block: 8:00 a.m. – 11:00 a.m.

Chair: Tom Culp, BirchPoint Consulting

Vice Chair: James Larsen, Cardinal Glass, Inc.

1. Call to Order

- a. Welcome to All AttendeesCell phones & pagers to Silent Mode
- b. Antitrust reminder
- c. NFRC Meeting Guidelines
- d. Review subcommittee voting requirements: one vote per member company

2. Appoint Recording Secretary (NFRC Staff)

3. Review and approve agenda

4. Approve Minutes from November 2008 meeting in Jacksonville, FL.

5. Reports

- a. International Activities

6. Unfinished Business

- a. Discussed the need to work on reference house procedure in NFRC 901

7. New Business

- a. None

8. Adjourn

SCOPE

The Annual Energy Performance Subcommittee shall be responsible for developing the procedures to rate the annual energy performance of fenestration products and fenestration product attachments in homes, taking into account the variability of housing characteristics and operation. The Annual Energy Performance Subcommittee shall report to the Technical Committee.



NFRC 2009 Spring Membership Meeting
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Program Booklet

****DRAFT MINUTES****

Annual Energy Performance Subcommittee

Wednesday, November 5, 2008

Under Technical Committee Block: 8:00 a.m. – 11:00 a.m.

Chair: Tom Culp, BirchPoint Consulting, LLC

Vice Chair: Jim Larsen, Cardinal Glass Industries, Inc.

-
1. Chair called the meeting to order at 8:02 am - antitrust reminder given and reviewed voting requirements
 2. Dennis Anderson (Staff) appointed recording secretary
 3. Minutes from July 2008 (Chicago, IL) meeting were approved as presented.
 4. The agenda was reviewed and approved as presented
 5. Reports
 - a. International Activities – T. Culp reported on ISO 18292 standard in that is not exact with 901 standard but consistent with its methodology. Each country has to develop their own reference home.
 6. Unfinished Business
 - a. NFRC 901 procedure passed after a decade of work. But, need to work on a reference house. Can input specific parameters but not user-friendly to use.
 - b. T. Culp informed the membership about reference home issues and the LBNL's objection to the assumptions on the temperature setpoints/ranges.
 - c. T. Culp to meet with LBNL to work on the bell curve approach to present any findings to the membership. G. Stone would like to see another ballot to be issued to get enough input to move things forward. C. Curcija would like to reconvene conference calls to agree on a reference house and use DOE data to come up with a single set of parameters. D. Smith discussed the possibility with getting homeowners habits with usage of their homes and any new available data sets. What happened to the RFP – survey or measured home approach; it should be tweaked and reintroduced to current times and more interest may be out there to bid?
 7. New Business
 - a. None
 8. Meeting Adjourned at 8:42 am.



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Program Booklet

Attachment Subcommittee

Wednesday, March 4, 2009

Under Technical Committee Block: 8:00 a.m. – 11:00 a.m.

Chair: Michael Cienian, Hunter Douglas

1. Call to Order

- a. Welcome to All Attendees ...Cell phones & pagers to Silent Mode
- b. Antitrust reminder
- c. NFRC Meeting Guidelines
- d. Review subcommittee voting requirements: one vote per member company

2. Appoint Recording Secretary (NFRC Staff)

3. Review and approve agenda

4. Approve Minutes from November 2008 meeting in Jacksonville, FL.

5. Reports

- a. Dynamic Attachments for Swinging Door TG – Dave DeBlock
- b. Exterior Attachment TG – Michael Cienian/Fred Higgins
- c. Interior Attachment TG – Michael Cienian
- d. Storm Windows TG – Thom Zaremba
- e. Applied Films TG – Darrel Smith

6. Unfinished Business

- a. Approve scope statement

7. New Business

- a. NFRC 100 Attachment Ballot
- b. NFRC 200 Attachment Ballot
- c. Special report or presentation describing daylighting, created by Marilyne Anderson.
see: <http://daylighting.mit.edu>
- d. Schedule Next TG Call

8. Adjourn

SCOPE

The Attachments Sub-committee is responsible for coordinating the development of procedures and ratings categories of attachment products in compliance with the NFRC 100 and 200 documents.

*Committee Chain: * Technical Committee * Attachment Subcommittee
NFRC Staff Liaison: Scott Hanlon, Senior Programs Manager * shanlon@nfr.org
Dennis Anderson, LAP Manager * danderson@nfr.org*



NFRC 2009 Spring Membership Meeting
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*****DRAFT MINUTES*****

Attachment Subcommittee

Tuesday, November 4, 2008

Under Technical Committee Block: 1:30 p.m. – 5:30 p.m.

Chair: Fred Higgins, Wayne-Dalton, Corp.

Vice Chair: Dave DeBlock, ODL

-
1. Chair called the meeting to order at 1:58pm - antitrust reminder given and reviewed voting requirements
 2. Dennis Anderson (Staff) appointed recording secretary
 3. Minutes from July 2008 (Chicago, IL) meeting were approved as presented.
 4. The agenda was reviewed and approved as presented.
 5. Reports
 - a. Applied Films TG – D. Smith reported that a scope was created. Follow-up work to TG is to look at reference base case windows developed in Attachments TG's for implementation with applied films
 - b. Dynamic Attachment for Swinging Doors – D. DeBlock reported monitoring the 1st phase of testing and keep membership informed.
 - c. Exterior/Interior Attachments – M. Cienian reported on behalf of conjoined Exterior and Interior Attachments TG of several active Work Groups (Base Case Windows, Product Family Groupings, Installation for Testing/Simulations, NFRC 100, NFRC 200, Road Mapping, Glossary). Base case reference window concept has been adopted.
 - d. Storm Window – T. Zaremba reported that this TG will work with Attachments TG's to develop a ballot to bring to membership at Spring Meeting with regard to Reference Base Windows.
 6. Unfinished Business
 - a. None
 7. New Business
 - a. M. Cienian asked to form a TG to deal with attachments for CMA – chaired by C. Curcija. TG members: R. Simons, M. Cienian, S. Malkan, R. McCluney, T. Morrissey.
 - b. J. Gant asked SC to form a TG to work on ratings of exterior applied awnings – chaired by J. Gant. TG members: R. Temple, S. Smith, R. McCluney, W. duPont.
 - c. Special report or presentation describing daylighting, created by Marilyne Anderson. see: <http://daylighting.mit.edu>
 8. The meeting was adjourned at 2:11 p.m.



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Program Booklet

Component Modeling Approach (CMA) Technical Subcommittee

Wednesday, March 4, 2009

Under Technical Committee Block: 8:00 a.m. – 11:00 a.m.

Chair: Mike Manteghi, TRACO

Co-Chair: Gary Curtis, West Wall Group

1. Call to Order

- a. Welcome to All AttendeesCell phones & pagers to Silent Mode
- b. Antitrust reminder
- c. NFRC Meeting Guidelines
- d. Review subcommittee voting requirements: one vote per member company

2. Appoint Recording Secretary (NFRC Staff)

3. Review and approve agenda

4. Approve Minutes from November 2008 meeting in Jacksonville, FL.

5. Reports

- a. CMA Technical Task Group – Mahabir Bhandari

6. Unfinished Business

7. New Business

- a. CMA Non-Standard Products – NFRC 100
 - i. Report
 - ii. Ballot Review
- b. CMA Non-Standard Products – NFRC 200
 - i. Report
 - ii. Ballot Review
- c. CMA Validation Testing – NFRC 100
 - i. Report
 - iii. Ballot Review

8. Adjourn

SCOPE

To develop a component based nonresidential technical procedure for fenestration products that will yield accurate energy performance data for use in code compliance and for meaningful building energy analysis.



NFRC 2009 Spring Membership Meeting
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*****DRAFT MINUTES*****

Component Modeling Approach (CMA) - Technical Subcommittee

Wednesday, November 5, 2008

Under Technical Committee Block: 8:00 a.m. – 11:00 a.m.

Chair: *Mike Manteghi- Traco, Inc.*

Co-Chair: *Gary Curtis-WestWall Group*

-
1. Chair called the meeting to order at 8:44AM - antitrust reminder given and reviewed voting requirements
 2. Scott R. Hanlon (Staff) appointed recording secretary
 3. Minutes from July 2008 (Chicago, IL) meeting were approved as presented.
 4. The agenda was reviewed and approved as presented
 5. Reports
 - a. CMA Technical Task Group – C. Curcija reported for M. Bhandari that the TG discussed some of the technical issues, such as definition of mullion and treating system that have spandrels and should these products be incorporated in CMA and that the Board needs to provide direction on what is to be done with systems that include these additional commercial products. The TG also discussed the issue when the spacer height is equal to or exceeds a ½” in the spacer Path II methodology. The possibility of using a fixed value for dividers instead of having to model dividers.
 - b. Chair recommends having more conference calls to handling these remaining issues.
 6. Unfinished Business
 - a. None
 7. New Business
 - a. CMA 100 Validation Testing – NFRC 100 Ballot
 - i. Pella, NEG (Definition): Withdrawn the glossary response. **MOTION:** J. Hayden / T. Culp moved to withdraw the comment regarding the NFRC 600 and find the remainder persuasive and editorial. Motion passes by unanimous voice vote.
 - ii. Pella, NEG (5.6.5.6.2): Withdrawn
 - iii. **MOTION:** J. Hayden / R. Temple moved to find the remaining Pella responses persuasive and editorial. Motion passes by unanimous voice vote.
 - iv. BirchPoint Consulting, NEG (Definition): Withdrawn.
MOTION: T. Culp / S. Kumar moved to find the BirchPoint responses to sections 5.6.2 and 5.6.5.6.3 persuasive and editorial. Motion passes by unanimous voice vote.
 - v. BirchPoint Consulting, NEG (5.6.5.6.1.A): Withdrawn
 - vi. BirchPoint Consulting, NEG (5.6.5.2): Withdrawn
 - vii. Carli, NEG (5.6.5.6.3.A): Withdrawn
 - viii. Carli, NEG (5.6.5.6.2.A): **MOTION:** C. Curcija / T. Rygg moved to remove the upper limit of the COG U-Factor to 0.35. Motion fails 1-25. **MOTION:** G. Curtis / M. Thoman moved to find the AAMA negative ballot non-persuasive. Motion passes by unanimous voice vote.

- ix. AAMA, NEG (General): **MOTION:** M. Thoman / T. Culp moved to find the AAMA negative ballot non-germane. Motion passes by unanimous voice vote.

MOTION: T. Culp / S. Kumar moved to move forward this ballot to the Technical Committee for approval. Motion passes 28-0.

- b. CMA 200 Frame Grouping – NFRC 200 Ballot
 - i. Carli, NEG: **MOTION:** C. Curcija / M. Thoman moved to find this negative persuasive and editorial and move the document forward to the Technical Committee for approval. Motion passes by unanimous voice vote.
- c. CMA 100 Non-Standard Products – NFRC 100 Ballot
 - i. Pella, NEG (Definition): Withdrawn
 - ii. Traco, APC (Definition): **MOTION:** J. Hayden / S. Kumar moved to find this APC non-persuasive and move this definition back to the TG. Motion passes by unanimous voice vote.
 - iii. CEC, APC (General): Withdrawn
 - iv. Velux, APC (5.6.3): **MOTION:** J. Hayden / J. McFee moved to find this non-persuasive and to direct the comments to the TG for re-ballot. Motion passes by unanimous voice vote.
 - v. Velux, APC (5.6.4.1): Chair to send this comment back to the TG for review.
 - vi. ALI, APC (General): Withdrawn
- d. CMA 200 Non-Standard Products – NFRC 200 Ballot
 - i. Pella, NEG (Definition): Withdrawn; handled by previous action and will be sent back to the TG.
 - ii. CEC, APC (General): Withdrawn
 - iii. Velux, APC (5.6.3): Chair to send this comment back to the TG for review.
 - iv. Velux, APC (5.6.4): Chair to send this comment back to the TG for review.

MOTION: J. Hayden / N. Pena moved to send this ballot back to the TG for rebalot. Motion passes by unanimous voice vote.

8. New Business

- a. None

9. Meeting Adjourned at 9:57 AM.



NFRC 2009 Spring Membership Meeting
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Technical Committee

Block Period: Tuesday, March 3, 2009 1:30 p.m. – 5:00 p.m.
Continued – Wednesday, March 4, 2009 8:00 a.m. – 11:00 a.m.

Chair: *Jeff Baker, WESTLab, Inc.*

Vice Chair: *Steve Johnson, Andersen Window Corporation*

1. Call to Order

- a. Circulate attendance sheet
- b. Welcome to All Attendees ...Cell phones & pagers to Silent Mode
- c. Antitrust reminder
- d. NFRC Meeting Guidelines
- e. Review committee voting requirements: one vote per member company listed on the roster.

2. Roll call / Establish quorum

3. Appoint Recording Secretary (NFRC Staff)

4. Review and approve agenda

5. Approve Minutes from November 2008 meeting in Jacksonville, FL.

6. Reports

- a. Canadian/American Harmonization Task Group (Jeff Baker, John Hogan)
- b. Validation Testing TG (Sneh Kumar)
- c. Software Subcommittee (Brian Crooks)
- d. Attachment Subcommittee (Fred Higgins, Dave DeBlock)
- e. Annual Energy Performance Subcommittee (Tom Culp, James Larsen)
- f. Condensation Resistance Subcommittee (Kevin Vilhauer, TBD)
- g. Air Leakage (Michael Thoman, Tracy Rogers)
- h. U-factor Subcommittee (Mike Thoman, Mahabir Bhandari)
- i. Solar Heat Gain Subcommittee (Jim Larsen, Bipin Shah)
- j. Component Modeling Approach Subcommittee (Mike Manteghi, Gary Curtis)

7. New Business

- a. None

8. Adjourn

SCOPE

The Technical Committee is responsible for developing rating system tools and procedures necessary to ensure the technical accuracy of the rating system.

*NFRC Staff Liaison: Scott Hanlon, Senior Programs Manager * shanlon@nfr.org*



NFRC 2009 Spring Membership Meeting
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Technical Committee Roster

First Name	Last Name	Company Name
Mark	Cody	AGC Flat Glass North America, Inc.
Lisa	Winckler	AIMCAL - Window Film Committee
Gilbert	Riopel	Air-Ins, Inc.
Nils	Peterman	Alliance to Save Energy
Dennis	Raske	All Metal, Inc.
John	Lewis	American Architectural Manufacturers Association (AAMA)
Joe	Jonely	Amsco Windows
Steve M.	Johnson	Andersen Corporation
Frank	Fisher	Arcadia, Inc.
Michael J.	Thoman	Architectural Testing, Inc.
Stephen	Carson	Arkema, Inc.
Brad	Schultz	Associated Laboratories, Inc.
Steve	Harp	Associated Materials, Inc.
Patrick M.	Muessig	Azon USA, Inc.
Roland	Temple	AZS Consulting
Travis	Windleharth	Bekaert Specialty Films, LLC
Thomas	Culp	Birch Point Consulting LLC
Garrett	Stone	Brickfield, Burchette, Ritts, & Stone, P.C.
Nelson	Pena	California Energy Commission
James	Larsen	Cardinal Glass Industries, Inc.
Charlie	Curcija	CARLI, Inc.
Kerry	Haglund	Center for Sustainable Building Research - Univ. of Minnesota
Michael	LaFevre	Custom Window Systems, Inc.
Tracy	Rogers	Edgetech I.G.
Morgan	Hanam	Enermodal Engineering Limited
George	Nash	Ensinger Building Products
Ross	McCluney	SunPine Consulting
Greg	Carney	Glass Association of North America (GANA)
John	Gant	Glen Raven, Inc.
Michael	Cienian	Hunter Douglas, Inc.
Margaret	Webb	Insulating Glass Manufacturers Alliance (IGMA)
Darrell	Smith	International Window Film Association (IWFA)
Steve	Strawn	Jeld-Wen, Inc.
Marcia	Falke	Keystone Certifications, Inc.
Krish	Kudva	Kinro, Inc.
Christian	Kohler	Lawrence Berkeley National Laboratory (LBNL)



NFRC 2009 Spring Membership Meeting
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Technical Committee Roster continued

First Name	Last Name	Company Name
James C.	Krahn	Marvin Windows & Doors
Grant	Muller	Mikron Industries, Inc.
Kevin	Vilhauer	Milgard Manufacturing, Inc.
David A.	De Block	ODL Incorporated
Richard E.	Wright	Oldcastle Glass, Inc.
Joseph	Hayden	Pella Corporation
Peter	Lyons	Peter Lyons & Associates
Tina	Reberger	PGT Industries
David L.	Duly	Pilkington North America, Inc.
Scott	Widmer	ProVia Door, Inc.
Marles	McDonald	Quality Testing, Inc.
Thomas S.	Zaremba	Roetzel & Address
Marvin	Stover	Royal Group
Chuck	Hayes	Sage Electrochromics
John	Hogan	Seattle Dept. of Planning and Development
Tina	Jenkins	Simonton Windows
Julia	Schimmelpenningh	Solutia, Inc.
John	Meade	Southwall Technologies
William C.	duPont	Sunergy Consulting
Milind	Jhaveri	Technoform
Mike	Manteghi	TRACO
Werner	Lichtenberger	TruSeal Technologies, Inc.
Roger	LeBrun	VELUX-America Inc.
Daniel	Wacek	Viracon, Inc.
John	McFee	Window and Door Manufacturer's Association (WDMA)
Jeff	Baker	WESTLab
Gary	Curtis	West Wall Group, LLC
Bipin	Shah	WinBuild, Inc.
Jim	Westphal	YKK AP America, Inc.

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Please note if two consecutive meetings are missed without a voting representative signing the onsite roster – company will be dropped and interested parties must sign up once again.*

If you notice a problem – PLEASE contact the staff of NFRC as soon as possible. Discrepancies cannot be addressed at the meeting: membership@nfr.org.



NFRC 2009 Spring Membership Meeting
March 2-5, 2009, Tucson, AZ
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*****DRAFT MINUTES*****

Technical Committee

Block Period: Tuesday, November 4, 2008 1:30 p.m. – 5:30 p.m.
Continued – Wednesday, November 5, 2008 8:00 a.m. – 11:00 a.m.
Chair: *Jeff Baker, WESTLab, Inc.*

1. Chair called the meeting to order at 10:15 a.m. - antitrust reminder given and reviewed voting requirements
2. Roll call / Establish quorum
3. Jessica Ferris (Staff) appointed recording secretary
4. Minutes from July 2008 (Chicago, IL) meeting were approved as presented.
5. The agenda was reviewed and approved as presented
6. Reports
 - a. Canadian/American Harmonization Task Group – J. Baker reported that group is in suspension so nothing new to report.
 - b. Validation Testing TG – S. Kumar reported that there have been 2 TG meetings to date.
 - c. Door Calculation in WINDOW 6 TG – J. Baker reported that this TG is to work with LBNL on area weighting calculations for WINDOW 6. See Scott Hanlon or Dennis Anderson to be included on the TG.
 - d. Software Subcommittee – B. Crooks reported on 1 item.
MOTION: B. Crooks / R. Temple moved to propose that the CMAST Implementation TG report findings go directly to the Board after completion with a recommendation to the Board for implementation. Motion passes by voice vote with two negatives. Chair will take under advisement that if CMAST is not ready prior to March meeting, its approval will go through regular channels (i.e., Software SC).
 - e. Attachment Subcommittee – F. Higgins reported that the SC has formed two task groups: CMA Attachment TG, (C. Curcija) and Exterior Awning TG (J. Gant).
 - f. Annual Energy Performance Subcommittee – T. Culp had no action items to report.
 - g. Condensation Resistance Subcommittee – K. Vilhauer reported on 2 items.
MOTION: K. Vilhauer / R. Temple moved that the Technical Committee bring the NFRC 500 and 501 documents to the Board of Directors for approval and implemented with the complete 2009 set of technical documents. Passes by unanimous voice vote.
Appoint vice-chair: S. Harp
 - h. Air Leakage – M. Thoman had no items to report.
 - i. U-factor Subcommittee – M. Thoman reported on 1 item.
MOTION: M. Thoman / S. Strawn to move have 100 and 102 Garage door ballots as approved by U-Factor SC forward to the Board for approval with implementation to occur upon publication. Passes by unanimous voice vote.
 - j. Solar Heat Gain Subcommittee – J. Larsen had no items to report.
 - k. Component Modeling Approach Subcommittee – M. Manteghi reported on 3 items
MOTION: M. Manteghi / G. Curtis moved to have additional language for NFRC 100 CMA Validation testing moved forward to the Board for approval to be implemented upon implementation of the CMA program. Passes by unanimous voice vote.
MOTION: M. Manteghi / G. Curtis moved to have additional language for the NFRC 200 Frame Grouping rules moved forward to the Board for approval to be implemented upon implementation of the CMA program. Passes by unanimous voice vote.
The non-standard products ballots will go back to the TG for further work.
7. Unfinished Business
 - a. None
8. New Business
 - a. None
9. Adjourned at 10:47 a.m.



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Regulatory Affairs and Marketing Committee

Wednesday, March 4, 2009

12:30 p.m. – 1:30 p.m.

Chair: *Garrett Stone, Brickfield, Burchette, Ritts, & Stone, P.C.*

1. Call to Order

- a. Circulate attendance sheet
- b. Welcome to All Attendees ...Cell phones & pagers to Silent Mode
- c. Antitrust reminder
- d. NFRC Meeting Guidelines
- e. Review committee voting requirements: one vote per member company listed on the roster.

2. Appoint Recording Secretary (NFRC Staff)

3. Roll call / Establish quorum

4. Approve Minutes from November 2008 meeting in Jacksonville, FL.

5. Review and approve agenda

6. Reports

- a. Codes
- b. EWC
- c. DOE
- d. International
- e. Communications Team
- f. Other

7. Unfinished Business

8. New Business

9. Adjourn

SCOPE

The Regulatory Affairs and Marketing Committee is responsible for:

- *Developing and coordinating NFRC's relationship with and the use of NFRC's ratings by Federal, state, and local government, international rating organizations, code development, professional and trade organizations and other voluntary programs; and*
- *Developing and coordinating all NFRC communications, newsletter, publications, press releases, and other informational and educational materials and projects.*

*NFRC Staff Liaison: Tom Herron, Marketing & Communications Manager *therron@nfrc.org*



NFRC 2009 Spring Membership Meeting
 March 2-5, 2009, Tucson, AZ

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Regulatory Affairs & Marketing Committee Roster*

First Name	Last Name	Company Name
Mark	Cody	AGC Flat Glass North America, Inc.
Lisa	Winckler	AIMCAL - Window Film Committee
Nils	Petermann	Alliance to Save Energy
John	Lewis	American Architectural Manufacturers Association (AAMA)
Joe	Jonely	Amsco Windows
Steve M.	Johnson	Andersen Corporation
Mike	Thoman	Architectural Testing, Inc.
Brad	Schultz	Associated Laboratories, Inc.
Steve	Harp	Associated Materials, Inc.
Patrick M.	Muessig	Azon USA, Inc.
Roland	Temple	AZS Consulting, Inc.
Thomas	Culp	Birch Point Consulting LLC
Garrett A.	Stone	Brickfield, Burchette, Ritts, & Stone, P.C.
Nelson	Pena	California Energy Commission
James	Larsen	Cardinal Glass Industries, Inc.
Charlie	Curcija	CARLI, Inc.
Kerry	Haglund	Center for Sustainable Building Research
John	Arcati	Champion Window and Door
Michael	La Fevre	Custom Window Systems, Inc.
Joe	Hetzel	DASMA (Door & Access Systems Manufacturers Assoc. International)
George	Nash	Ensinger Building Products Division
Tracy	Rogers	EdgeTech, I.G., Inc.
Gurjinder	Dhami	ETC Laboratories, Inc.
Greg	Carney	Glass Association of North America (GANA)
John	Gant	Glen Raven, Inc.
Michael	Cienian	Hunter Douglas, Inc.
Margaret	Webb	Insulating Glass Manufacturers Alliance (IGMA)
Darrell	Smith	International Window Film Association (IWFA)
Steve	Strawn	Jeld-Wen, Inc.
Marcia	Falke	Keystone Certifications, Inc.
Krish	Kudva	Kinro, Inc.
Robin	Mitchell	Lawrence Berkeley National Laboratory (LBNL)
Jim	Krahn	Marvin Windows & Doors
Kevin	Vilhauer	Milguard Manufacturing, Inc.
Grant	Muller	Mikron Industries, Inc.
David A.	De Block	ODL Incorporated



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Regulatory Affairs & Marketing Committee Roster continued

First Name	Last Name	Company Name
Richard	Wright	OldCastle Glass, Inc.
Joseph	Hayden	Pella Corporation
Peter	Lyons	Peter Lyons & Associates
Tina	Reberger	PGT Industries
David L.	Duly	Pilkington North America, Inc.
Scott	Widmer	ProVia Door, Inc.
Marles	McDonald	Quality Testing, Inc.
Thomas S.	Zaremba	Roetzel & Andress
Marvin	Stover	Royal Group
Chuck	Hayes	Sage Electrochromics, Inc.
John	Hogan	Seattle Dept. of Planning and Development
Tina	Jenkins	Simonton Windows
Paul	Jaster	Solatube International, Inc.
Julia	Schimmelpenningh	Solutia, Inc.
John	Meade	Southwall Technologies
Milind	Jhaveri	Technoform
Mike	Manteghi	TRACO
Werner	Lichtenberger	TruSeal Technologies, Inc.
Roger	LeBrun	Velux America, Inc.
Dan	Wacek	Viracon
John	McFee	Window and Door Manufacturer's Association (WDMA)
Jeff	Baker	WESTLab
Gary	Curtis	Westwall Group
Bipin	Shah	WinBuild Inc.
Jeff	Lowinski	Window and Door Manufacturer's Association (WDMA)
Jim	Westphal	YKK AP America

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****DRAFT MINUTES****

Regulatory Affairs and Marketing Committee

Wednesday, November 5, 2008

11:00 a.m. – 12:00 p.m.

Chair: *Garrett Stone, Brickfield, Burchette, Ritts, & Stone, P.C.*

1. Chair called the meeting to order at 11:00 a.m. – antitrust reminder given and reviewed voting requirements
2. Cheryl Gendron (Staff) appointed recording secretary
3. Roll call was taken and quorum established
4. Minutes from July 2008 (Chicago, IL) meeting were approved as presented.
5. The agenda was reviewed and approved as presented
6. Reports
 - a. Codes
 - i. Report given by G. Stone, Brickfield, Burchette, Ritts, & Stone, P.C.
 1. Model and State Code Summary
 - a. 2009 IECC recap highlighting both residential & commercial changes.
 - b. Summarized progression of state adoption of 2006 IECC code from 2006 to 2008.
 - c. Looking forward to significant changes in code including changes in Florida, Maine, & Michigan.
 2. EE Tax Credits re-instituted for 2009
 - b. EWC
 - i. Report given by J. Carmody, University of Minnesota: Efficient Windows Collaborative
 1. Booth at Greenbuild Show & EcoBuild Conference
 - a. Debuting ComFen version 2.0
 - b. New commercial building website with façade design tool
 2. Fact Sheets available on website
 3. Moving to be supported by members rather than just by the DOE
 - a. Members get their windows referenced on the EWC website
 - c. DOE
 - i. Report given by R. Karney, DOE
 1. Still accepting comments on the ENERGY STAR qualification criteria through the November 14, 2008.
 2. Announce final criteria in early 2009
 - d. International
 - i. Report given by R. McGowan, NFRC
 1. US DOE increased international funding by 150k



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2. Grant from State Dept. 250k for Asian Pacific Partnership
 - a. Working with numerous partners
 3. International will now be internally budgeted separately from Research
 4. In addition to China reports were given on progress in India, Kuwait, Jordan, & Europe, ASEAN countries, & Japan.
 5. Updates on the International Licensees: Australia and South Africa.
 6. Reporting on ISO current ballots effecting fenestration
 7. Presence at several international tradeshow over the next few months.
- e. NFRC Marketing & Education Activity Report
- i. Report given by T. Herron, NFRC
 1. 35 million media impressions
 2. New outreach tools used
 3. Fact sheets updated
 4. Using live meeting updates since Chicago
 5. Staff has and will be attending numerous trade shows across the US and doing presentations
7. **Unfinished Business**
None to report.
 8. **New Business**
None to report
 9. **Adjourn**
 10. **Meeting adjourned @ 12:05 pm.**



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Meeting Notes:



NFRC 2009 Spring Membership Meeting
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Labeling Subcommittee

Wednesday, March 4, 2009

Under Ratings Committee Block: 1:30 p.m. – 5:00 p.m.

Chair: *John McFee, Window & Door Manufacturing Association (WDMA)*

Vice Chair: *TBD*

1. Call to Order

- a. Welcome to All Attendees ...Cell phones & pagers to Silent Mode
- b. Antitrust reminder
- c. NFRC Meeting Guidelines
- d. Review subcommittee voting requirements: one vote per member company

2. Appoint Recording Secretary (NFRC Staff)

3. Review and approve agenda

4. Approve Minutes from November 2008 meeting in Jacksonville, FL.

5. Reports

- a. CMA Label TG – Charlie Curcija
- b. Permanent Labeling TG – John Lewis
- c. Other Label issues from Task Groups or Committees

6. Unfinished Business

- a. Update on removing “RES-97” in Appendix B of PCP – Refer to PCP Ballot
- b. Update on issue dealing with “permanent label” for applied films

7. New Business

- a. Review format of Temporary Label for optional performance values.

8. Adjourn

SCOPE

To create the formats and specifications for temporary and permanent labeling for ratings developed by the NFRC and to coordinate the appropriate language consistent with such formats into the Product Certification Program.

Committee Chain: * Ratings Committee * Labeling Subcommittee
NFRC Staff Liaison: Sherri Wendt, Certification Associate * swendt@nfr.org
NFRC Staff Liaison: Scott Hanlon, Senior Programs Manager * shanlon@nfr.org



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*****DRAFT MINUTES*****

Labeling Subcommittee

Wednesday, November 5, 2008

Under Ratings Committee Block: 1:30 p.m. – 6:00 p.m.

Chair: *John McFee, WDMA*

-
1. Chair called the meeting to order at 1:34 p.m. – antitrust reminder given and reviewed voting requirements
 2. Sherri Wendt (Staff) appointed recording secretary
 3. Minutes from July 2008 (Chicago, IL) meeting were approved as presented.
 4. The agenda was reviewed and approved as presented
 5. Reports
 - a. CMA Labeling TG – C. Curcija reported did not have any activity. The CMA label was completed and approved last meeting. Requesting of disbanding the group. Pending CMA documents approval TG will stay retained for future items if needed.
 - b. Permanent Label TG – J. Lewis reported the TG will have a ballot to discuss later
 6. Unfinished Business
 - a. None
 7. New Business
 - a. PCP Permanent Label ballot:
 - i. Andersen approved with comment: Moved forward.
 - ii. Velux approved with comment:
MOTION: S. Johnson / D. DeBlock moved the motion as persuasive and editorial.
Motion passes by unanimous voice vote.
 - iii. Carli approved with comment: Withdrawn
MOTION: S. Johnson / R. Temple Motioned to move successful ballot forward to ratings committee for approval.
 - b. S. Strawn reported that language in the PCP on permanent label for films needs to be reviewed more thoroughly because label for these product types are on the packaging and then discarded. Therefore the “permanent” label is no longer available.
 - c. B. Shultz requested that the PCP TG review and make recommendations to remove “RES97” labels listed in the Appendix B.
 8. The meeting was adjourned at 1:47 p.m.



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Certification Subcommittee

Wednesday, March 4, 2009

Under Ratings Committee Block: 1:30 p.m. – 5:00 p.m.

Chair: Joe Jonely, AMSCO

Vice Chair: Tina Jenkins, Simonton Windows

1. Call to Order

- a. Welcome to All Attendees ...Cell phones & pagers to Silent Mode
- b. Antitrust reminder
- c. NFRC Meeting Guidelines
- d. Review subcommittee voting requirements: one vote per member company

2. Appoint Recording Secretary (NFRC Staff)

3. Review and approve agenda

4. Approve Minutes from November 2008 meeting in Jacksonville, FL.

5. Reports

- a. PCP Review TG – Tina Jenkins
- b. Product Line ID TG – J. McFee

6. Unfinished Business

- a. None

7. New Business

- a. PCP Ballot – Revision to PCP document - NFRC 700-2009

8. Adjourn

SCOPE

To create and maintain the Product Certification Program (PCP) document and procedures with the exception of label specific issues.



NFRC 2009 Spring Membership Meeting
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*****DRAFT MINUTES*****

Certification Subcommittee

Wednesday, November 5, 2008

Under Ratings Committee Block: 1:30 p.m. – 6:00 p.m.

Chair: *Joe Jonely, AMSCO*

Vice Chair: *Tina Jenkins, Simonton*

-
1. Chair called the meeting to order at 1:52 p.m. – antitrust reminder given and reviewed voting requirements
 2. Sherri Wendt (Staff) appointed recording secretary.
 3. Minutes from July 2008 (Chicago, IL) meeting were approved as presented.
 4. The agenda was reviewed and approved as presented. – Chair moved the new business PCP ballot first then shades.
 5. Reports
 - a. PCP Review TG – T. Jenkins reported IG certification ballots were disused and moved to Subcommittee level. Ballot to be prepared for spring meeting of the
 6. Unfinished Business
 - a. None
 7. New Business
 - a. PCP Ballot – IG Certification
 - i. KCI negative #1- Withdrawn
 - ii. JELD-WEN approved with comment #1: Withdrawn all comments.
 - iii. Pella approved with comment #1: **MOTION:** J. Hayden/ R. Temple moved the motion comment be ruled persuasive and editorial. Motion passes by unanimous voice vote.
 - iv. KCI negative #2: - Withdrawn
 - v. JELD-WEN approved with comment #2: -Withdrawn
 - vi. Pella approved with comment #2-Withdrawn
 - vii. KCI negative #3: -Withdrawn
 - viii. JELD-WEN approved with comment #3: -Withdrawn
 - ix. Pella approved with comment #3: -Withdrawn
 - x. KCI negative #4: -Withdrawn
 - xi. JELD-WEN approved with comment #4: -Withdrawn
 - xii. Pella approved with comment #4: -Withdrawn
 - xiii. KCI negative #5: -Withdrawn
 - xiv. JELD-WEN approved with comment #5: -Withdrawn
 - xv. Pella approved with comment #5: -Withdrawn
 - xvi. KCI negative #6: -Withdrawn
 - xvii. JELD-WEN approved with comment #6: -Withdrawn
 - xviii. Pella approved with comment #6: -Withdrawn



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MOTION: R. Temple/ J. Hayden motioned to move the ballot forward to Ratings Committee for approval. Motion passes by voice vote and 1 abstention.

b. Implementation of shades and Window 6

- i. S. Strawn: Therm 6 and Window 6 not ready. 1) Move mandatory date up for a specific date up Sept 2009 or March 2010; 2) Mandatory date out to any indefinite date for 2 simulation labs to be ready. 3) If 2 or more labs are ready for accreditation to be mandatory 6 months afterwards.

MOTION: S. Strawn / R. VanVoorst motioned to move mandatory date for labeling of dynamic products from March 1, 2009, to 6 months after 2 or more simulations labs are accredited to use Window 6 or Therm 6 for dynamic products, or March 1, 2010; whichever comes earlier. Motion passes by unanimous voice vote.

- c. J. McFee: Identified mixed terminology in PCP to respect to Product line number and CPD number. CPD = Entire string. Recommend clarification in PCP for spring meeting. To define CPD number and product line number. Minor editorial or clarification by ballot.
- d. S. Strawn: IG Certification. Entire packet for IG certification has not been combined / communicated to suppliers/buyers. NFRC marketing to work with T. Rogers to get an NFRC document for sales and reading/guidelines. (Upon approval of the 706 document).

- i. Task Group was formed for guidelines of IG certification. R. Temple, T. Rogers.
- ii. Presentation for next meeting of guidelines.

e. B. Shultz:

- i. PCP Sec 5.4.1.A (unfinished sentence)
- ii. 5.4.1.B Fig B-12 that shows both values to IP and SI on label. Currently there is no method to trace SI units because it's not kept in the CPD. There will be increase of need for SI on temp labels and wants clarification and research for implementation of these units on labels. (Database or labeling issue?)

8. Adjourned – 2:20 pm



NFRC 2009 Spring Membership Meeting
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Component Modeling Approach (CMA) Ratings Subcommittee

Wednesday, March 4, 2009

Under Ratings Committee Block: 1:30 p.m. – 5:00 p.m.

Chair: Gary Curtis, West Wall Group

Vice Chair: Mike Manteghi, TRACO

1. Call to Order

- a. Welcome to All Attendees ...Cell phones & pagers to Silent Mode
- b. Antitrust reminder
- c. NFRC Meeting Guidelines
- d. Review subcommittee voting requirements: one vote per member company

2. Appoint Recording Secretary (NFRC Staff)

3. Review and approve agenda

4. Approve Minutes from November 2008 meeting in Jacksonville, FL.

5. Reports

6. Unfinished Business

7. New Business

- a. Component Modeling Approach Product Certification Program (NFRC 705-2009) – Section 2.1
 - i. Report
 - ii. Ballot Review

8. Adjourn

SCOPE

To develop a new component-based certification and rating procedure for fenestration products that will yield accurate energy performance data for use in code compliance and for meaningful building energy analysis. The certification and rating program shall be credible, simple, cost- effective, fair, uniform, and useful.

Committee Chain: *Ratings Committee *CMA Ratings Subcommittee
NFRC Staff Liaison: Jessica Ferris, CMA Program Manager*JFerris@nfr.org



NFRC 2009 Spring Membership Meeting
March 2-5, 2009, Tucson, AZ

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*****DRAFT MINUTES*****

Component Modeling Approach (CMA) - Ratings Subcommittee

Wednesday, November 5, 2008

Under Ratings Committee Block: 1:30 p.m. – 6:00 p.m.

Chair: *Gary Curtis, The West Wall Group*

Vice Chair: *Mike Manteghi, TRACO*

-
1. Chair called the meeting to order at 2:21 p.m. – antitrust reminder given and reviewed voting requirements
 2. Scott R. Hanlon (Staff) appointed recording secretary
 3. Minutes from July 2008 (Chicago, IL) meeting were approved as presented.
 4. The agenda was reviewed and approved as presented
 5. Reports
 - a. None
 6. Unfinished Business
 - a. None
 7. New Business
 - a. Component Modeling Approach Product Certification Program (NFRC 705),
 - i. Architectural Testing, Inc, NEG – (Foreword): Chair accepted as editorial Motion passes by unanimous voice vote.
 - ii. Carli, Inc, APC (2.1): **MOTION:** C. Curcija / J. Hayden moved to accept ballot response as editorial. Motion passes by unanimous voice vote.
 - iii. Carli, Inc, APC (2.2): **MOTION:** C. Curcija / T. Rygg moved to accept ballot response as editorial. Motion passes by unanimous voice vote.
 - iv. Carli, Inc, APC (2.2.1): Withdrawn
 - v. Carli, Inc, APC (2.2.2): Withdrawn
 - vi. Carli, Inc, APC (2.3): **MOTION: MOTION:** C. Curcija / R. Temple moved to accept ballot response as editorial. Motion passes by unanimous voice vote.
 - vii. Carli, Inc, APC (2.3.1): **MOTION:** C. Curcija / R. Temple moved to accept ballot response as editorial. Motion passes 10-9.
 - viii. Carli, Inc, APC (2.3.1.2.B): Withdrawn.
 - ix. Carli, Inc, APC (2.3.1.3): **MOTION:** C. Curcija / R. Temple moved to accept ballot response as editorial. Motion passes by unanimous voice vote.
 - x. Architectural Testing, Inc, NEG – (2.3.1.3.A): **MOTION:** T. Culp / R. Temple moved to find negative non-persuasive. Motion fails 12-12.
Architectural Testing, Inc, NEG – (2.3.1.3.A): **MOTION:** R. VanVoorst/ R. Temple moved to find negative persuasive. Motion passes 16-12.
 - xi. Carli, Inc, APC (2.3.2): **MOTION:** C. Curcija / R. Temple moved to accept ballot response as editorial. Motion passes by unanimous voice vote.
 - xii. Architectural Testing, Inc., NEG – (4.1.2.C): **MOTION:** M. Thoman / R. Temple moved to find the negative persuasive and editorial. Motion passes by unanimous voice vote.

- xiii. Keystone, NEG – (4.2.B.vi): **MOTION:** R. Temple / C. Curcija moved to find the negative persuasive and editorial and to include “non-certified” text before “ratings”. Motion failed 11-15.
MOTION: S. Kumar / T. Culp moved to find the negative persuasive and editorial. Motion passes 16-7.
- xiv. Keystone, NEG (4.2.C): **MOTION:** S. Kumar / R. Temple moved to find the negative persuasive and editorial. Motion passes voice vote with two negatives.
- xv. Keystone, NEG (4.2.D): Withdrawn
- xvi. Keystone, NEG (5.1.A): **MOTION:** T. Culp / S. Kumar moved to find negative persuasive and editorial. Motion passes by unanimous voice vote.
- xvii. Architectural Testing, Inc, NEG – (5.1.B): **MOTION:** M. Thoman / B. Croak moved to find negative persuasive and editorial. Motion passes by unanimous voice vote.
- xviii. Architectural Testing, Inc, NEG – (5.1.1.A): Withdrawn. Chair directed NFRC Staff to verify that the flowchart is consistent with language.
- xix. Architectural Testing, Inc, NEG – (5.2.B): Chair directed NFRC Staff to verify that the sampling requirements can be achieved.
- xx. Architectural Testing, Inc, NEG – (Ref. List): **MOTION:** M. Thoman / J. Hayden moved to find negative persuasive and editorial. Motion passes by unanimous voice vote.
- xxi. Architectural Testing, Inc, NEG – (B.13.C.x): **MOTION:** M. Thoman / J. Hayden moved to find negative persuasive and editorial. Motion passes by unanimous voice vote.
- xxii. Architectural Testing, Inc, NEG – (B.14): Withdrawn.
- xxiii. Architectural Testing, Inc, NEG – (Flowchart): **MOTION:** M. Thoman / T. Rygg moved to find negative persuasive and editorial. Motion passes by unanimous voice vote.
- xxiv. BirchPoint Consulting, NEG – (2.3.1.2.A): **MOTION:** T. Culp / S. Kumar moved to find negative persuasive and editorial. Motion passes by unanimous voice vote.
- xxv. Graham Architectural, NEG – (General): Withdrawn

MOTION: R. Temple / M. Manteghi moved to forward all CMA PCP ballot to the Ratings Committee for approval. Motion passes by unanimous voice vote.

8. The meeting was adjourned at 3:35PM.



NFRC 2009 Spring Membership Meeting
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Ratings Committee

Wednesday, March 4, 2009

Block Period: 1:30 p.m. – 5:00 p.m.

Chair: *Steve Strawn, JELD-WEN*

Vice Chair: *TBD*

1. Call to Order

- a. Circulate attendance sheet
- b. Welcome to All Attendees ...Cell phones & pagers to Silent Mode
- c. Antitrust reminder
- d. NFRC Meeting Guidelines
- e. Review committee voting requirements: one vote per member company listed on the roster.

2. Roll call / Establish quorum

3. Appoint Recording Secretary (NFRC Staff)

4. Review and approve agenda

5. Approve Minutes from November 2008 meeting in Jacksonville, FL.

6. Reports

- a. Labeling SC – (John McFee)
- b. Certification SC – (Joe Jonely)
- c. CMA Certification SC – (Gary Curtis, Mike Manteghi)

7. New Business

- a. None

8. Adjourn

SCOPE

The NFRC Ratings Committee (formerly Ratings, Codes & Standards Committee) is responsible for developing programs to assure the uniform application of ratings for NFRC technical procedures. The Ratings Committee will work in conjunction with the Regulatory Affairs Committee to coordinate international ratings.



NFRC 2009 Spring Membership Meeting
March 2-5, 2009, Tucson, AZ

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Ratings Committee Roster*

First Name	Last Name	Company Name
Mark	Cody	AGC Flat Glass North America, Inc.
Lisa	Winckler	AIMCAL - Window Film Committee
Gilbert	Riopel	Air-Ins, Inc.
Nils	Petermann	Alliance to Save Energy
Dennis	Raske	All Metal, Inc.
Joe	Jonely	Amsco Windows
Steve M.	Johnson	Andersen Corporation
Frank	Fisher	Arcadia, Inc.
Michael J.	Thoman	Architectural Testing, Inc. - PA
Brad	Schultz	Associated Laboratories, Inc.
Steve	Harp	Associated Materials, Inc.
Patrick	Muessig	Azon USA, Inc.
Roland	Temple	AZS Consulting
Travis	Windleharth	Bekaert Specialty Films, LLC
Thomas	Culp	Birch Point Consulting LLC
Garrett	Stone	Brickfield, Burchette, Ritts & Stone, PC
Nelson	Pena	California Energy Commission
Jim	Larsen	Cardinal Glass Industries, Inc.
Charlie	Curcija	CARLI, Inc.
Kerry	Haglund	Center for Sustainable Building Research
Tracy	Rogers	Edgetech IG
Shelia	Gore	Enermodal Engineering Limited
George	Nash	Ensinger Building Projects
Greg	Carney	Glass Association of North America (GANA)
Michael	Cienian	Hunter Douglas
Darrell	Smith	International Window Film Association (IWFA)
Steve	Strawn	Jeld-Wen, Inc.
Marcia	Falke	Keystone Certifications, Inc.
Krish	Kudua	Kinro, Inc.
Robin	Mitchell	Lawrence Berkeley National Laboratory (LBNL)
James C.	Krahn	Marvin Windows & Doors
Grant	Muller	Mikron Industries, Inc.
Kevin	Vilhauer	Milgard Manufacturing
David A.	De Block	ODL Incorporated
Richard E.	Wright	Oldcastle Glass, Inc.
Joseph	Hayden	Pella Corporation



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Ratings Committee Roster continued

First Name	Last Name	Company Name
Tina	Reberger	PGT Industries
David L.	Duly	Pilkington North America, Inc.
Chris	Nolt	ProVia Door, Inc.
Marles	McDonald	Quality Testing, Inc.
Thomas S.	Zaremba	Roetzel & Andress
Tina	Jenkins	Simonton Windows
Julia	Schimmelpenningh	Solutia, Inc.
Milind	Jhaveri	Technoform
Mike	Manteghi	TRACO, Inc.
Werner	Lichtenberger	Truseal Technologies, Inc.
Roger	LeBrun	Velux America, Inc.
Dan	Waceck	Viracon
Jeff	Baker	WESTLab, Inc.
Gary	Curtis	West Wall Group, LLC
Bipin	Shah	WinBuild, Inc.
John	McFee	Window and Door Manufacturer's Association (WDMA)
Michael	Turner	YKK AP America, Inc.

**Committee Membership requires members to sign up onsite at meeting for inclusion on roster/voting rights.
Please note if two consecutive meetings are missed without a voting representative signing the onsite roster – company will be dropped and interested parties must sign up once again.*

If you notice a problem – PLEASE contact the staff of NFRC as soon as possible. Discrepancies cannot be addressed at the meeting: membership@nfr.org.



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*****DRAFT MINUTES*****

Ratings Committee

Wednesday, November 05, 2008

Ratings Block Period: 1:30 p.m. – 6:00 p.m.

Chair: *Steve Strawn, JELD-WEN, Inc.*

Vice Chair: *TBD*

1. Chair called the meeting to order at 3:47 PM and NFRC Staff called roll and established a quorum was present.
2. The antitrust reminder was given and a review of the voting requirements
3. Sherri Wendt (Staff) appointed recording secretary.
4. Minutes from July 2008 (Chicago, IL) meeting were approved as presented.
5. The agenda was reviewed and approved as presented
6. Reports
 - a. Labeling Subcommittee (J. McFee)
 - i. **MOTION:** J. McFee / J. Jonely motioned to move successful ballot forward to ratings committee for approval for implementation upon publication. Motion passes by unanimous voice vote.
 - b. Certification Subcommittee – (Joe Jonely)
 - i. **MOTION:** J. Jonely / T. Jenkins motioned to move the PCP IG Certification ballot from the Ratings Committee to the Board for approval and implementation upon publication with a mandatory date July 1, 2010. Motion passes by unanimous voice vote.
 - ii. Chair reported on PCP items that will be reviewed:
 1. 5.4.1.A & B - PCP Review TG
 2. Production line ID - CPD environment
 3. Reviewing labels for applied films for packaging
 4. NFRC Staff to work with T. Rogers to provide an IG Certification information guideline document for participants.
 - c. CMA Certification Subcommittee – (Gary Curtis, Mike Manteghi) J. Jonely:
 - i. **MOTION:** G. Curtis / R. Temple Motion to move all CMA PCP ballots forward to the Board for approval. Motion passes by unanimous voice vote.
7. New Business
 - a. **MOTION:** F. Higgins / D. DeBlock moved to form an Attachments SC under Ratings Committee. Motion withdrawn since a motion is not required and that the chair can create a SC at their discretion.
8. The meeting was adjourned at 4:08 p.m.



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Board of Directors Meeting

Thursday, March 5, 2009

8:00 a.m. – 11:00 a.m.

Chair: *Joseph Hayden, Pella Corporation*

1. Call to Order

- a. Roll call / establish quorum.
- b. Welcome to All Attendees ... Cell phones & pagers to Silent Mode.

2. Review and approve agenda

3. Appoint Recording Secretary (NFRC Staff)

4. Committee Reports

- a. Accreditation Policy Committee (M. Falke)
- a. Technical Interpretations Policy Committee (T. Culp)
- b. Certification Policy Committee (R. Temple)
- c. Research and Technology Committee (W. Lichtenberger)
- d. Regulatory Affairs and Marketing Committee (G. Stone)
- e. Technical Committee (J. Baker)
- b. Ratings Committee (S. Strawn)

5. Unfinished Business

6. New Business

7. Adjourn



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NFRC Staff Directory – Spring 2009

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Meeting Notes:



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Duties of Meeting Chairpersons

The chairperson of each committee is responsible for well-planned and fair meetings. Since many interests are generally present at NFRC meetings, it is the duty of the chairperson that all interests be heard and fairly dealt with. The chairperson of each committee, subcommittee and task groups shall use *Robert's Rules of Order, The Modern Edition* (The Berkeley Publishing Group 1989). The chairperson is also responsible for the management of the work of the group. It is up to the chair to assure that the work of the group is proceeding as scheduled and to oversee the work of the group during periods between meetings.

The following are some suggestions for the chair.

- Members should understand why the group exists and what are the expected goals.
- At the beginning of each meeting, determine quorum and identify voting members (one vote per voting member for subcommittees or one vote per voting member listed on the roster). For each task group, determine a well represented group of industry professionals.
- Review past minutes and recommendations and, if appropriate, make them part of the agenda.
- Distribute an agenda in time for the group Members to prepare themselves. One of the first items on the agenda should be approval of the minutes from the last meeting, if not already approved by letter ballot or other means.
- Determine if any items are to be added to the agenda.
- Follow up with Members who have been assigned tasks to assure they are completed.
- During the meeting, follow the agenda. Make sure items are covered, and if action is to be taken, it should be completed prior to moving on to the next agenda item.
- If the discussion is not related to the agenda item under consideration, ask that it be held until the proper time on the agenda.
- Make sure all assenting and dissenting views are heard before taking any action.
- After any action or vote is taken, repeat the decision and announce the vote for, against, and abstentions ensuring that the group understands. Do not move on to another agenda item until this is done.
- Only enter into discussions to expedite the business of the group, such as keeping the discussion on the appropriate topic.
- Before adjourning the meeting, review all votes taken, recommendations made or assignments given. Group participants should leave a meeting knowing what was decided and who is responsible for tasks prior to the next meeting.
- Make all assignments clear and concise and give a time when they should be completed.
- Be aware of the general principles regarding antitrust and tax exemption compliance provided by NFRC and remind your members of those principles from time to time. If you are concerned about the legal implications of any of the committee's actions or deliberations, contact NFRC's Executive Director and ask for input from NFRC's legal counsel, as appropriate.



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Duties of Members Attending NFRC Meetings

- Be prepared to complete any assignments given within the time scheduled.
- Review agendas and be prepared to address the appropriate items.
- Speak only to the agenda items under consideration.
- Know the functions of the group.
- Be able to support views with facts or reasonable conclusions.
- Be a positive influence on all group actions.
- Respect other views.
- Make sure that actions to be taken, assignments given or activities to be continued are understood.
- Read all materials provided prior to the meeting.
- **Committee Membership Responsibilities:**
 - To become a committee member, the designated member representative shall attend a meeting of the Committee, and request, by signing the attendance list and checking a member declaration box, inclusion on the Committee roster which is maintained by the Committee chairperson. A Committee member may vote at the first Committee meeting the organization is listed on the roster.
 - Committee members are expected to be experts on, or representatives of an organization directly involved in, the issues to be considered by the Committee.
 - Committee members shall be designated voting representatives, or designated alternate, of NFRC Members.
 - Acceptance of a position on a committee implies an agreement to participate constructively and consistently in committee proceedings.
 - After establishing committee membership, failure to attend two consecutive meetings without the approval of the chairperson will result in the removal of the committee member from the committee roster. Exercising of a proxy for more than two consecutive meetings does not constitute attendance.



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Getting Involved with NFRC *Guide to the different levels of participation:*

TASK GROUPS:

NFRC Definition & Purpose: Task groups are formed by chairmen of the subcommittees from members and non-members and are responsible for researching and developing specific issues presented to them by the chairman. Task Group findings and recommendations are reported to the Subcommittee responsible for its formation. Task groups are dissolved at the conclusion of their mission.

Current Listing Available: <http://www.nfrc.org/taskgroups.aspx>

Requirements and Details:

- All interested public welcome to join and participate.
- No NFRC membership or attendance requirements to be listed or participate as member of an NFRC Task Group.
- If interested in participation – name must be given to Chair of the task group

SUBCOMMITTEES:

NFRC Definition & Purpose: Subcommittees are formed from the membership at the discretion of the appropriate Committee Chairman and with the approval of the Board of Directors. They are responsible for tasks given to them by the Committee as they relate to the development of specific programs or procedures. Subcommittee findings and recommendations are reported to the Committee responsible for its formation.

Current Listing Available: <http://www.nfrc.org/subcommittees.aspx>

Requirements and Details:

- NFRC Membership qualifies for one vote per Subcommittee - *Membership Listing can be found at <http://www.nfrc.org/memberlist.aspx>*
- ALL voting members of the NFRC are automatically subcommittee members and allowed ONE VOTE per company at the subcommittee level.
- Ballots are issued via the NFRC website (www.nfrc.org) and voted on prior to NFRC Membership meetings – subcommittee membership qualifies one to vote on these ballots. (*One vote per member company*)
- Subcommittee meetings held at the NFRC Membership Meetings often hold final votes for balloted items. ***All voting members present are qualified to vote regardless of previous meeting attendance. One vote per Member Company.***
- Information on becoming an NFRC Member can be found at <http://www.nfrc.org/memberinfo.aspx> or by emailing membership@nfrc.org.



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Guide to the different levels of participation – continued.....

COMMITTEES:

NFRC Definition & Purpose: Committees are mandated by the Bylaws or formed at the direction of the Board of Directors from the membership. They are generally responsible for the establishment of NFRC procedures and programs which are presented to the Board of Directors for final approval before implementation.

Current Listing Available: <http://www.nfrc.org/committees.aspx> for further details.

- Members Appointed by Board:
 - Accreditation Policy Committee
 - Certification Policy Committee
 - Technical Interpretations Policy Committee

- NFRC Member Supported (see below for details):
 - Regulatory Affairs and Marketing Committee
 - Ratings Committee
 - Research and Technology Committee
 - Technical Committee

Requirements and Details:

- NFRC Committee Rosters (aka Committee Membership) are either BOARD appointed or are made up of interested member companies (Companies paying dues for NFRC Membership).
- To JOIN Member Supported COMMITTEE – Member must attend one meeting - signing the roster being sure to mark interest in having name added to the roster (becoming a voting member of the committee).
- Only one vote is allowed per NFRC dues paying Member Company.
- Member Name/Company Name will be added to the Committee Roster at the next meeting.
- Member Name/Company Name will be DROPPED from Roster if Representative misses TWO CONSECUTIVE COMMITTEE MEETINGS (fails to sign the roster as present)
- All current committee rosters are posted on the NFRC website prior to committee meetings for membership review or by contacting the Committee Chair or the NFRC's membership department at membership@nfrc.org.





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ACRONYMS/TERMINOLOGY*

NFRC – National Fenestration Rating Council – a nonprofit research/educational organization (501(c)3) whose mission is to develop and administer comparative energy and related rating programs that serve the public and satisfy the needs of its private sector partners by providing fair, accurate and credible, user-friendly information on fenestration product performance.

CAMP – Compliance and Monitoring Program: NFRC administers this program that monitors program activity and assists and educates architects, builders, code officials and other regulatory agencies.

CAP – Certification Agency Program: NFRC administers this program that sets rules and requirements for accredited IA's (NFRC-licensed Independent Certification and Inspection Agencies independent).

CMA – Component Modeling Program: A new rating program being developed by NFRC to address fenestration in commercial buildings.

CPD – Certified Products Directory: A freely accessible, web-based directory administered by NFRC that provides energy rating information on hundreds of thousands of fenestration products.

Fenestration – Openings in a building; typically, windows, doors, skylights, curtain wall and storefront systems.

LAP – Laboratory Accreditation Program: NFRC administers this program which contains the rules and requirements for licensed, accrediting thermal test and computer simulation laboratories.

PCP – Product Certification Program: NFRC administers this program which contains the rules and requirements for licensed manufacturers/participants to label windows (and responsible parties to produce Label Certificates).

Site-Built Program – A rating program developed in 1999 by NFRC to address fenestration in commercial buildings.

NFRC Energy Performance Ratings

Air Leakage – A measurement of the rate of outside air that is estimated to be transmitted through a line of fenestration products (NFRC 400).

Condensation Resistance – A rating that expresses the potential resistance of a fenestration product to the formation of condensation on the interior surface of the product (NFRC 500).



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SHGC – Solar Heat Gain Coefficient: A rating that expresses the percentage of incident solar heat transmitted through a fenestration product; the lower the SHGC, the less solar heat gain (NFRC 200).

U-factor – Thermal Transmittance: A rating that expresses the rate of heat flow through the fenestration product. The lower the U-factor, the less heat is allowed to transfer through the fenestration product (NFRC 100).

VT – Visible Transmittance: A rating that expresses the percentage of visible light transmitted through a fenestration product (NFRC 200).

Other Important Acronyms:

AAMA – American Architectural Manufacturers Association

AEC – Aluminum Extruders Council

AFRC – Australian Fenestration Rating Council

ANSI – American National Standards Institute

ASE – Alliance to Save Energy

-EWC – Efficient Windows Collaborative

ASHRAE – American Society of Heating, Refrigeration and Air-conditioning Engineers

ASTM – American Society of Testing and Materials

CEC – California Energy Commission

CSA – Canadian Standards Association

GANA – Glass Association of North America

ICC – International Code Council

-IECC – International Energy Conservation Code

-IBC – International Building Code

-IRC – International Residential Code

IGMA – Insulating Glass Manufacturers Alliance

LBNL – Lawrence Berkeley National Laboratories

NGA – National Glass Association

Title 24 – Building Energy Standard for California

WDMA – Window and Door Manufacturers Association

**For a detailed Glossary please see the NFRC's [Glossary and Terminology-2006-E0A0](http://www.nfrc.org/technicaldocs.aspx) available on the NFRC website at <http://www.nfrc.org/technicaldocs.aspx>*

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Pre-Registration List – *(by Company Name)*

*Note -all registrations received (with payment) by 2/19/2009

3G Mermet

Craig Dasse
Cowpens, SC 29330

AGC Flat Glass North America, Inc.

Thomas J. Mewbourne
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AIMCAL – Window Film Committee

Lisa Winckler
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All Metal, Inc.

Dennis Raske
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Alliance to Save Energy

Nils D Petermann
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American Architectural Manufacturers Association (AAMA)

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Arcadia, Inc.

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Architectural Testing, Inc. – PA

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Associated Laboratories, Inc.

Brad Schultz
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Associated Materials, Inc.

Steve Harp
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AZS Consulting, Inc.

Roland Temple
Bradley, SC 29819-2807

Benson Industries

Catherine A Best
Portland, OR 97209

Birch Point Consulting LLC

Thomas Culp
La Crosse, WI 54601

Brickfield, Burchette, Ritts, & Stone, P.C.

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California Energy Commission

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Brian Crooks
Eden Prairie, MN 55344

Cardinal Glass Industries, Inc.

James Larsen
Eden Prairie, MN 55344

Center for Sustainable Building Research

John Carmody
Minneapolis, MN 55414

Center for Sustainable Building Research

Kerry Haglund
Minneapolis, MN 55414

CPFilms, Inc.

Kara Stoddard
Martinsville, VA 24115

DASMA (Door & Access Systems Manufacturers Assoc. International)

Joseph R. Hetzel
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Edgetech I.G. Inc.

Tracy G Rogers
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EFCO Corporation

Michael Young
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Enermodal Engineering Limited

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Enermodal Engineering Limited

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Gurjinder Singh Dhama
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Hunter Douglas, Inc.

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Jeld-Wen, Inc.

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Kinro, Inc.

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Lawrence Berkeley National Laboratory

Robin Mitchell
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TRACO

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Contact Notes:



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Pre-Registration List – (by Last Name)

*Note -all registrations received (with payment) by 2/19/2009

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Michael Barclay

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Catherine A Best

Benson Industries
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Michael Carlson

New World West, Inc.
Las Vegas, NV 89118

John Carmody

Center for Sustainable Building
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Michael A Cienian

Hunter Douglas, Inc.
Broomfield, CO 80020

Brian Crooks

Cardinal Glass Industries, Inc.
Eden Prairie, MN 55344

Thomas Culp

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Craig Dasse

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Jason Davis

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Dale T. De Mann

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Gurjinder Singh Dhani

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David Duly

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Toledo, OH 43624

Marcia Falke

Keystone Certifications, Inc.
Etters, PA 17319

Frank Fisher

Arcadia, Inc.
Vernon, CA 90023

John Gant

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Glen Raven, NC 27217

Shelia Gore

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Kerry Haglund

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Minneapolis, MN 55414

Steve Harp

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Cuyahoga Falls, OH 44223

Joe Hayden

Pella Corporation
Pella, IA 50219

Chuck Hayes

Sage Electrochromics, Inc.
Faribault, MN 55021-5081

Vincent Bart Hensley

Technoform
Twinsburg, OH 44087

Joseph R. Hetzel

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NFRC 2009 Spring Membership Meeting
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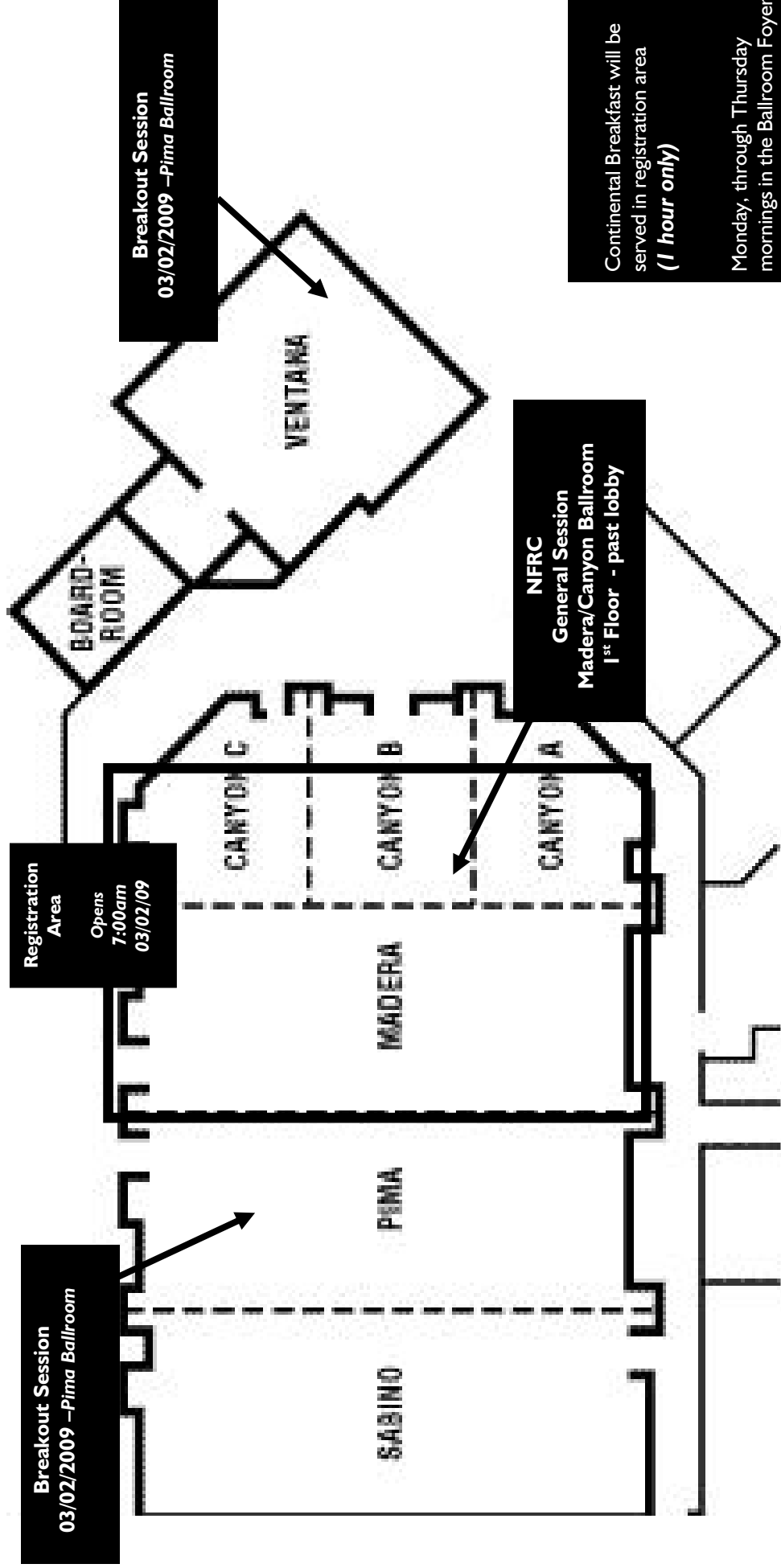
Welcome NFRC

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Monday, through Thursday mornings in the Ballroom Foyer; complimentary for all NFRC Meeting Registrants.

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