



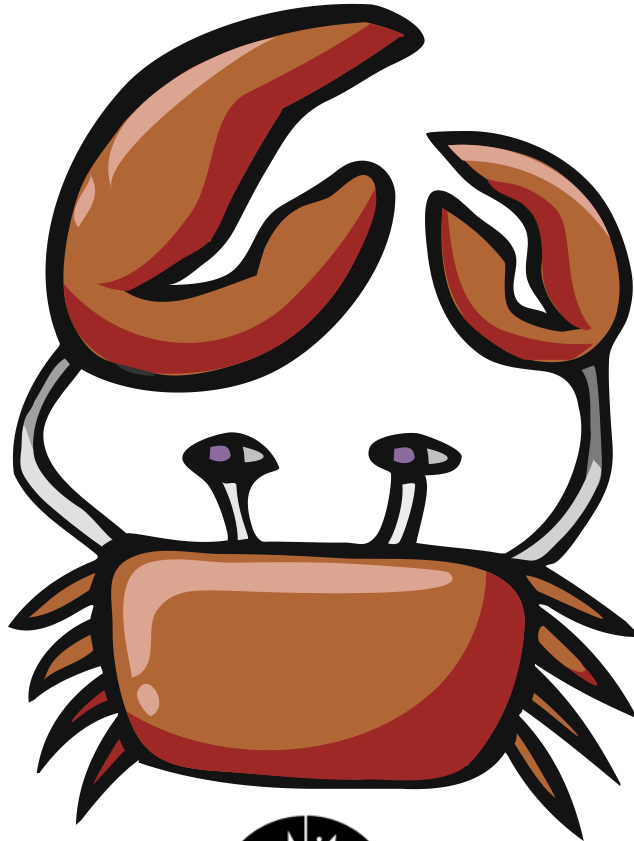
PROGRAM BOOKLET

(Agendas, Rosters and Past Draft Minutes enclosed)

NFRC 2009 Summer Membership Meeting

Baltimore, Maryland

July 20 – 23, 2009



National Fenestration Rating Council

6305 Ivy Lane, Suite 140

Greenbelt, MD 20770

301/589-1776

www.nfrc.org

NFRC 2009 Summer Membership Meeting Schedule ~ July 20 - 23, 2009

Sheraton Inner Harbor Hotel • Baltimore, Maryland

Schedule subject to change

	Chesapeake A & B Monday [†] 07/20/09 (Registration opens 6:30 a.m.)	Potomac Room	Tuesday 07/21/09 Chesapeake A & B	Wednesday 07/22/09 Chesapeake A & B	Thursday 07/23/09 Chesapeake A & B
7:30 a.m.					
8:00 a.m.	Attachments Block (7:30 a.m.-10:00 a.m.) Task Groups to Convene: • Interior/Ext TG • Awnings TG • DASD TG* • Storm Window TG • Applied Film TG	PCP Task Group (7:30 a.m.-9:00 a.m.)	Research & Technology Block (7:30 a.m.-12:30 p.m.) Subcommittees to Convene: • Thermophysical Prop of Materials SC • Glossary & Terminology Task Group • Research Subcommittee • Optical Properties Subcommittee <i>NOTE: 15 min break between SC & Committee</i> R&T COMMITTEE CONVENES	Technical Committee Block (Part Two: 7:30 a.m.-12:30p.m.) Subcommittees to Convene**: • Solar Heat Gain Subcommittee • Attachment Subcommittee • Condensation Resistance SC • Annual Energy Performance SC • CMA Subcommittee (Technical) <i>NOTE: 15 min break between SC & Committee</i> TECHNICAL COMMITTEE CONVENES	NFRC Board Meeting (8:00 a.m.-11:00 a.m.)
8:30 a.m.					
9:00 a.m.					
9:30 a.m.					
10:00 a.m.	Air Leakage Task Group (10:00 a.m.-11:00 a.m.)	Tubular Daylighting Devices Task Group (10:00 a.m.-10:45 a.m.)			
10:45 a.m.					
11:00 a.m.	Validation Testing Task Group (11:00 a.m.-11:30 a.m.)	Garage/Rolling Door U-Factor Task Group (10:45 a.m.-11:30 a.m.)			
11:30 a.m.	Meeting Break <i>Buffet Luncheon Provided by NFRC</i> (11:30 a.m.-12:30 p.m.) <i>For all registered meeting attendees</i>				
12:00 p.m.					
12:30 p.m.	-NFRC Summer Membership Meeting 2009- Opening Session (12:30 p.m.-2:00 p.m.) • Welcome/Opening Remarks • Chair's Reports • Speaker				
1:00 p.m.					
1:30 p.m.					
2:00 p.m.	Regulatory Affairs & Marketing Committee (2:00 p.m.-4:00 p.m.)		Technical Committee Block (Part One: 2:00 p.m.-5:00 p.m.) Subcommittees to Convene:** • Software Subcommittee • Air Leakage Subcommittee • U-Factor Subcommittee <i>Technical Committee - Continued 8:00 a.m. 07/22/09**...</i>	Ratings Committee Block (2:00 p.m.-5:00 p.m.) Subcommittees to Convene: • Certification Subcommittee • Labeling Subcommittee • CMA Subcommittee (Ratings) <i>NOTE: 15 min break between SC & Committee</i> RATINGS COMMITTEE CONVENES	
2:30 p.m.					
3:00 p.m.					
3:30 p.m.					
4:00 p.m.	NFRC Policy Committee Block (4:00 p.m.-5:30 p.m.) Committees to Report: • Accreditation Policy Committee • Technical Interpretations Policy Committee • Certification Policy Committee		Complex Window/Attachment Ratings: <i>"What is now possible to calculate and measure"</i> Presentation by LBNL (5:00 p.m.-5:30 p.m.)	Meeting Attendees – on your OWN.....	
4:30 p.m.					
5:00 p.m.					
5:30 p.m.	Meeting Attendees – on your OWN.....		NFRC Membership Reception All Registrants Welcome (5:30 p.m.-7:30 p.m.)		
6:00 p.m.					
7:00 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.

**DASD TG" = Full Task Group Name is "Dynamic Attachments for Swinging Doors Task Group"

** Subcommittees Under the Technical Block will run consecutively - as time allows, groups listed on 7/22 may meet on 7/21



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Special Thanks to the NFRC Meeting Sponsors for the 2009 Summer Membership Meeting in Baltimore, MD

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Professional Awning
Manufacturers Association

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



National Fenestration
Rating Council®

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Alliance to Save Energy

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Lawrence Berkeley Laboratory

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Executive Director
James C. Benney

July 20, 2009

Welcome to Baltimore - NFRC members and guests!

We gather together mid-year and in the middle of a momentous period of change and challenges for the nation and the hard-working membership of NFRC.

To help put the past year in perspective and to rally everyone to a productive meeting, the Opening Session on Monday, July 20, will feature a presentation from a brave veteran who will speak of courage under fire. Retired military Staff Sergeant Thomas Morrissey (a current member through his employment at Hunter Douglas) will share his experiences with the group and kickoff the week of meetings reminding us of the core values needed to keep our programs strong.

In the biggest change to the agenda, the Regulatory Affairs and Marketing meeting is moving from its usual Wednesday position to follow the Opening Session on Monday. New for this meeting will be an insider's look at the latest from Capitol Hill from NFRC's Legislative Affairs Coordinator. We also hope to welcome a number of representatives from allied organizations such as the State of Maryland and the local chapter of the American Institute of Architects.

In addition, we have 17 ballots to be reviewed during the week, continuing progress on the CMA Pilot Program, and a presentation from LBNL on Complex Rating Systems on Tuesday, July 2 (before the member reception).

One final word – the Baltimore meeting's close proximity to the NFRC offices is allowing an opportunity for meeting attendees to meet the entire staff at the Membership Luncheon on Monday. If the member-volunteers are at the heart of NFRC's success, Jim Benney, his current staff, and all of the professionals who have come before them are certainly the heartbeat that keeps all of us focused and on task. In my experience, this team is committed to making our jobs easier and ensuring the success of NFRC's various and emerging programs. Please take a moment to recognize and thank the staff of NFRC headquarters.

Again, I welcome you to the NFRC's Summer Membership meeting and as always ...

Thanks for all you do!!!

Joseph A. Hayden

Joseph A. Hayden
NFRC Chairman



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NFRC's Summer Meeting: SPECIAL NOTES

Meeting Hotel:

Sheraton Inner Harbor, Baltimore, Maryland

<http://tinyurl.com/NFRC-Summer-09>

300 South Charles Street

Baltimore, Maryland 21201

410-962-8300 * Reservations (online above or 800-325-3535)

Monday, July 20, 2009

Meetings start 7:30 a.m.: The NFRC will host task group meetings throughout the morning in the Chesapeake Ballroom (I&II) and the Potomac Room – both located on the third floor of the hotel. Committees will then get a start on the week, beginning at 2:00 p.m. Please note a change to this meeting's line up: The Regulatory Affairs and Marketing Committee will meet at 2:00 p.m. on Monday with an extended session.

NFRC's Opening Session, featuring A Story of Courage and Determination from One of Our Own:

The NFRC's opening session will be held at 12:30 p.m. in the Chesapeake 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 Thomas Morrissey (member & armed service veteran.)

Sgt. Major First Class Thomas Morrissey retired from the military after 30 years of service. After being wounded while serving in Afghanistan he overcame great obstacles: enduring three years of surgeries and rehabilitation. This NFRC volunteer, and vice president with Hunter Douglas, Inc., has graciously agreed to share his amazing experience of triumph over adversity with the group gathered in Baltimore.

Regulatory Affairs and Marketing – Extended Session

Changes can hit like a tidal wave if you are not “in the know.” NFRC meeting attendees will get an opportunity to plug-in to all the latest from Washington, D.C., during Monday's Regulatory Affairs and Marketing (RAM) Committee meeting. The extended committee meeting will feature reports from the DOE, ENERGY STAR® and a legislative update from Lisa Kountoupes, NFRC's legislative affairs coordinator.

Special Note: As with all the committees throughout the week, the subcommittees will meet consecutively under their allotted committee block. This may mean that subcommittee meetings scheduled for one day could be moved to the day before if time allows. (Watch for this with the split Technical block July 21 and 22.)

Tuesday, July 21, 2009

Complex Window and Attachment Ratings

“What is Now Possible to Calculate & Measure”

5:00 p.m. - 5:30 p.m.: Chesapeake I&II

After the Technical Committee concludes for the evening there will be a brief presentation on complex window and attachment ratings by Lawrence Berkeley National Laboratory.

NFRC Reception: (For ALL registered Attendees)

5:30 p.m. - 7:30 p.m.: Potomac Room and adjoining patio

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.

Wednesday, July 22, 2009

R-5 Windows – Manufacturing Members Invited to Participate

12:30 p.m. - 2:00 p.m.: Chesapeake III

During the NFRC's meeting break, representatives from the Department of Energy's Building Technology Program will be on hand to present a session and answer any questions on R-5 Windows and the current Volume Purchase Program.



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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, July 20, 2009

Attachment Block: 7:30 a.m. – 10:00 a.m.

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

Chair: *Thomas Zaremba, Roetzel & Andress (Exterior Attachments)*

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. Unfinished Business

- a. Reminder of 6 points of direction from NFRC Board on Attachments (Mike Cienian)
- b. NFRC 100 U-Factor Work Group Update (Rob Simons)
- c. NFRC 200 SHGC Work Group Update (John Gant and Sanjiv Malkan)
- d. New Task Group - PCP Language (Tom Morrissey)
- e. New Task Group - Labeling (Tom Morrissey)
- f. Cellular shade Work Group Update - (Mike and Sanjiv)
- g. Product Grouping List Update (Sanjiv)
- h. Base Case Windows Update (Willie duPont)

5. New Business

6. Adjourn

SCOPE

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

Committee Chain: * Technical Committee * Attachment Subcommittee * *EATG-IATG*
NFRC Staff Liaison: *Dennis Anderson, Laboratory Accreditation Program Manager * danderson@nfr.org*



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Awning Task Group

Monday, July 20, 2009

Attachment Block: 7:30 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. Review Product Table (John Gant)
- b. Review Awning Research RFP
- c. Report on Complex Attachments Workshop at LBL

5. New Business

6. Adjourn

SCOPE

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

Committee Chain: * Technical Committee * Attachment Subcommittee * *Awning Task Group*
NFRC Staff Liaison: *Dennis Anderson, Laboratory Accreditation Program Manager * danderson@nfrc.org*



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Dynamic Attachments for Swinging Door Task Group

Monday, July 20, 2009

Attachment Block: 7:30 a.m. – 10:00 a.m.

Chair: *Dave DeBlock, 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 DOE door requirements and how that affects NFRC documents, including opaque, half-lite, and full-lite swinging doors.
- b. Timing for 2010 implementation

5. Adjourn

SCOPE

The Dynamic Attachments for Swinging Doors Task Group mission is to do what is required, using recognized science and NFRC published procedures to accurately define, simulate, test and label thermal performance characteristics of Dynamic Attachments for Swinging Doors.



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Storm Window Task Group

Monday, July 20, 2009

Attachment Block: 7:30 a.m. – 10:00 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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Applied Film Task Group

Monday, July 20, 2009

Attachment Block: 7:30 a.m. – 10:00 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. Review and approve agenda

4. Discuss ballots (NFRC 100, 200, 304, and 700) submitted for Summer Meeting

5. 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: *Dennis Anderson, Laboratory Accreditation Program Manager * danderson@nfr.org*



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PCP Review Task Group

Monday, July 20, 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 ballots

5. Adjourn

SCOPE

The task group is responsible for maintaining the PCP document.

Committee Chain: * Ratings Committee * Certification Subcommittee * *PCP Review 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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Product Line ID Task Group

Monday, July 20, 2009

9:00 a.m. – 10:00 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 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. New Business

- a. Review PCP language ballot.
- b. Discuss CPD procedures

5. Adjourn

SCOPE

Recommend language changes to the PCP to allow the determination of NFRC Product Line Numbers prior to the issuance of a Certification Authorization Report (CAR)

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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Air Leakage Task Group

Monday, July 20, 2009

10:00 a.m. – 11:00 a.m.

Chair: *Chris Nolt, ProVia Door*

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 Member)

3. Review and approve agenda

4. Business

- a. Discussion on changes to NFRC 400

5. Adjourn

SCOPE

Modify NFRC 400 in such a manner that compliance with other air leakage standards satisfies the requirements of NFRC 400.



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Tubular Daylighting Devices Task Group

Monday, July 20, 2009

10:00 a.m. – 10:45 a.m.

Chair: *Dave DeBlock, 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. Discussion on Energy Star & TDD's

- a. U-Factor Research Project: Mike Thoman will present a Peer Review Paper on the Research project
- b. Discuss simulation vs testing in light of NFRC decision allowing simulation until March of 2012 for TDDs and testing of HTDDs.

5. Complex VT Testing

- a. Dan State to give complex VT testing update from LBNL, Solatube and VELUX testing facilities. Begin discussion of VT for NFRC label and output file lighting design matrix.

6. 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.



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Garage Door/Rolling Door U-Factor Task Group

Monday, March 2, 2009

10:45 a.m. – 11:30 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 notes from November 2008 and March 2009 meeting

5. New Business

- a. DASMA Research Project
 - Phase 1: Affirming new NFRC 100/102 provisions
 - Phase 2: Evaluating vertical jamb hardware
 - Phase 3: Simulation of common garage door and rolling door sizes
- b. Simulation manual details
- c. Solar heat gain provisions in NFRC 200 (potential new Task Group)
- d. 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.

Committee Chain: * Technical Committee * U-Factor Subcommittee * *Garage Door/Rolling Door U-Factor Task Group*
NFRC Staff Liaison: *Scott Hanlon, Senior Programs Manager * shanlon@nfr.org*
*Dennis Anderson, Laboratory Accreditation Program Manager * danderson@nfr.org*



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Validation Testing Task Group

Monday, July 20, 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. Further discussion of last TG call regarding proposal to re-certification plan for validation testing.

5. New Business

6. Adjourn

SCOPE

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

Committee Chain: * Technical Committee * Garage Door/Rolling Door U-Factor Task Group
NFRC Staff Liaison: Scott Hanlon, Senior Programs Manager * shanlon@nfrc.org
Dennis Anderson, Laboratory Accreditation Program Manager * danderson@nfrc.org



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NFRC's Summer Membership Meeting OPENING SESSION AGENDA

Monday, July 20, 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 – Master Sergeant Thomas Morrissey** (*NFRC active member with Hunter Douglas*)
- 6. Adjourn**



NFRC 2009 Summer Membership Meeting
July 20-23, 2009, Baltimore, MD

Program Booklet

Regulatory Affairs and Marketing Committee

Monday July 20, 2009

2:00 p.m. – 4:00 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 March 2009 meeting in Tucson, AZ.

5. Review and approve agenda

6. Reports

- a. Codes
- b. EWC
- c. DOE/Energy Star
- d. International
- e. Communications Team
- f. CMA Program
- g. Legislative Update
- h. 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@nfr.org*



NFRC 2009 Summer Membership Meeting
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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.
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
Michael	La Fevre	Custom Window Systems, Inc.
Joe	Hetzl	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.
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
Joseph	Hayden	Pella Corporation
David L.	Duly	Pilkington North America, Inc.
Scott	Widmer	ProVia Door, Inc.



NFRC 2009 Summer Membership Meeting
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Regulatory Affairs & Marketing Committee Roster continued

First Name	Last Name	Company Name
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
Julia	Schimmelpenningh	Solutia, Inc.
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
Bipin	Shah	WinBuild Inc.
Jeff	Lowinski	Window and Door Manufacturer's Association (WDMA)

**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 Summer Membership Meeting
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Program Booklet

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

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. Chair called the meeting to order at 12:30 p.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 Nov 2009 (Jacksonville, FL) 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. Review of BCAP's current assessment of the status of state and energy codes adoption of IECC for (both residential and commercial)
 2. 2009 IECC Codes
 - a. The new book/guideline is now available with significant changes to the requirements for windows ranging from 10-15% and even more in some cases.
 - b. Code proposals for the next IECC cycle of changes will be due in late April and additional improvements are expected of 10-15%.
 - c. It was also noted that ASHRAE is also considering 30% improvements to their codes.
 - b. EWC
 - i. Report given by N. Peterman, Alliance to Save Energy: Efficient Windows Collaborative
 1. EWC is ending a three year contract with the Department of Energy (DOE) and currently looking to extend contract for two years
 2. They noted that increased activity on current goals of outreach and market transformation with expected funding from the stimulus package.
 3. Peterman also identified several opportunities already identified through mandates in the package including the required improvement of energy efficiency in federal buildings, the new tax credit for windows and weatherization program.
 - c. DOE
 - i. Report given by R. Karney, DOE
 1. Final draft criteria for the ENERGY STAR qualification will be released on March 10, 2009.
 - a. This will be followed by a two week comment period with the Final criteria released in no later than April 3, 2009 for a January 1, 2010 implementation date.
 - ii. Report given by M. LaFrance, DOE
 - a. The stimulus package has designated 25 million dollars for window thermal projects.
 - b. Interested parties can join an email list to be alerted of proposal deadlines and other opportunities at [://www.netl.doe.gov/business/index.html](http://www.netl.doe.gov/business/index.html)
 7. **Unfinished Business**
None to report.
 8. **New Business**
None to report
 9. **Meeting adjourned at 1:06 pm.**



NFRC 2009 Summer Membership Meeting
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Program Booklet

Accreditation Policy Committee

Monday, July 20, 2009

Under Policy Committee Block: 4:00 p.m. – 5:30 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 AttendeesCell 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

7. New Business

- a. LAP Workshops
- b. Window 6 / Therm 6 Training

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



NFRC 2009 Summer Membership Meeting
July 20-23, 2009, Baltimore, MD

Program Booklet

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.
Jackie	Campbell	WESTLab
Gurjinder	Dhami	ETC Laboratories, Inc.
Mahabir	Bhandari	Carli, Inc
Michael	Resech	Architectural Testing, Inc.

below line non-voting

Meeting Notes:



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Program Booklet

Technical Interpretation Policy Committee

Monday, July 20, 2009

Under Policy Committee Block: 4:00 p.m. – 5:30 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 March 2009 and June 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 Staff Liaison: Dennis Anderson, Laboratory Accreditation Program Manager * danderson@nfr.org*



NFRC 2009 Summer Membership Meeting
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Program Booklet

Certification Policy Committee

Monday, July 20, 2009

Under Policy Committee Block: 4:00 p.m. – 5:00 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. Staff report

6. Unfinished Business

- a. None

7. New Business

- a. Discussion on IG Certification

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

Tuesday, July 21, 2009

Under Research & Technology Committee Block: 7:30 a.m. – 12:30 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 March 2009 meeting in Tucson, AZ

4. Review and approve agenda

5. Reports

- a. Thermophysical Properties Peer Review-Ray McGowan
- b. Thermophysical Properties ILC status-Ray McGowan
- c. NFRC 101 and 103 TG (Peter Lyons)

6. Unfinished Business

7. New Business

- a. NFRC 101 Ballot

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, Senior Research and Technology Manager * rncgowan@nfr.org



NFRC 2009 Summer Membership Meeting
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Program Booklet

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

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. **Meeting called to order @ 4:07 PM**
 2. **The chair appointed Jessica Ferris recording secretary**
 3. **Minutes from November 2008 meeting in Jacksonville, FL approved as presented**
 4. **Staff Reports:**
 - a. Thermophysical Properties Peer Review-Ray McGowan (staff) reported several new materials have been reviewed and added to NFRC 101
 - b. Thermophysical Properties ILC status-Ray McGowan (staff) reported three labs have completed testing and four more remain.
 5. **Unfinished Business**
 - a. NFRC 101 electronic database discussion – the existing data in THERM could be expanded and continuously updated rather than maintaining NFRC 101, but no conclusion was reached. Members agreed to establish an electronic database of NFRC 101 material properties.
 - b. A working group was established to develop a proposal for an electronic database – Members: Charlie Curcija, Robin Mitchell, Peter Lyons, and Sheila Gore.
 6. **New Business**
 - a. NFRC 101 ballot-2 negatives and 1 approved with comment.
 - i. **Cardinal Negative:**
 1. **MOTION:** J. Hayden moved and W. du Pont seconded to find negative persuasive and to form a task group to review the generic table to ensure the listings are generic and the values represent a reasonable worst-case. Motion passes by unanimous voice vote.
 - ii. **Polar Seal Negative:**
 1. Motion: Found non-persuasive as it did not provide for a resolution.
 - iii. **Pella approved with comment:**
 1. Motion: J. Hayden moved and W. du Pont seconded to find this comment editorial and persuasive. Passes by unanimous voice vote.
 - b. NFRC 103 ballot– 2 negatives and 2 approved with comments.
 - i. **Cardinal Negative:**
 1. **MOTION:** M. McDonald moved and M. Thoman seconded to find negative non-persuasive. Motion passes by voice vote with one negative.
 - ii. **Polar Seal Negative:**
 1. **Motion:** found non-persuasive as it did not provide for a resolution.
 - iii. **QTI Approved with Comment:**
 1. **MOTION:** M. Thoman moved and J. Hayden seconded to find negative persuasive and substantive. Passes by unanimous voice vote.
 - iv. **Andersen Approved with Comment:**
 1. **MOTION:** J. Hayden moved and R. Temple seconded to find the comment persuasive and to resolve the comment by deferring it to a future version of the document. Motion passes by unanimous voice vote.
 7. **Meeting adjourned at 5:42 PM**



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Glossary and Terminology Task Group

Tuesday, July 21, 2009

Under Research & Technology Committee Block: 7:30 a.m. – 12:30 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. NFRC 600-Glossary and Terminology Ballot

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, July 21, 2009

Under Research & Technology Committee Block: 7:30 a.m. – 12:30 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 March 2009 meeting in Tucson, AZ.

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)
- d. Window 6/Therm 6 Validation Research PMTG (Joe Hayden, PMTG)
- e. Complex VT Rating Research Project PMTG (Ross McCluney, Chair)
- f. Attached Awning Ratings Research BRTG (John Gant, Chair)

6. Unfinished Business

7. New Business

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, Senior Research and Technology Manager * rmcgowan@nfr.org



NFRC 2009 Summer Membership Meeting
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*****DRAFT MINUTES*****

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. **Meeting called to order at 9:00 AM**
 2. **Recording Secretary appointed (Jessica Ferris)**
 3. **Minutes from November 2008 meeting in Jacksonville, FL approved as presented**
 4. **Agenda reviewed and approved**
 5. **Reports**
 - a. Ray McGowan (staff) reported the research financial status
 - b. Condensation Resistance Procedure for CMA PMTG (Kevin Vilhauer, Chair – PMTG) No activity at this time. Waiting for direction. There is a delay. Charlie clarifies that in last month he had to move to new location. Research going well but we need to create a report and has not been able to complete. Will get with Kevin and provide an updated timeline next month and prepare the results for the next month.
 - i. MOTION: K. Vilhauer moved and S. Harp seconded to request that research project deadline be extended 6 months from February 2nd date. Motion passes by unanimous voice vote.
 - c. Tubular Daylighting Devices U-factor rating PMTG (Dave De Block, Chair - PMTG) – still working on details in test chambers. Will be discussing U-factor and SC meeting. Need to resolve some issues with the chamber. Peer review paper is the only outstanding item remaining. Hopes to complete peer review paper in the next 3-6 months.
 - i. MOTION: D. DeBlock moved and R. LeBrun seconded to extend the peer review paper completion by 8/31/2009. Motion passes by unanimous voice vote.
 - d. Window 6/Therm 6 Validation Research PMTG (Joe Hayden, Chair of PMTG) – Research underway and on schedule. Willie du Pont provided a presentation on status. May completion is expected.
 6. **New Business**
 - a. Exterior Awning Research RFP ballot (John Gant) –
 - i. **Associated Lab negative:** Does not meet the definition of Fenestration or Fenestration Attachment - outside the scope of NFRC.
 1. **MOTION:** J. Gant moved and T. Culp seconded to find negative non-persuasive. 20 – 0 motion passes.
 - ii. Polar Seal negative: no comments
 1. **MOTION:** J. Gant moved and D. DeBlock seconded to find negative non-persuasive. Motion passes by unanimous voice vote.
 - iii. Andersen comment:
 1. **MOTION:** J. Hayden moved and R. Temple seconded to approve and forward the Awning Research RFP to the RTC for approval. 25-0, motion passes.
 - b. Complex Product VT Research RFP ballot
 - i. Roetzel and Andress negative:
 1. **MOTION:** D. DeBlock moved and D. State to find negative non-persuasive due to substantial reduction in cost as reflected in the RFP. 12-0 Motion passes
 2. **MOTION:** W. duPont moved and M. McDonald seconded that this RFP be returned to be re-drafted as a sole sourced contract based on the approved one-page summary. Vote: 4-7-10. Motion fails.
 - ii. **MOTION - D. DeBlock moved and R. Temple seconded to approve the RFP as amended to read as a request for services. 13-0-3 Motion passes.**
 - iii. Previous negatives withdrawn based on previous action. RFP to move to the RTC.
 - c. Reaffirm Research manual for 2009 document cycle –



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Optical Properties Subcommittee

Tuesday, July 21, 2009

Under Research & Technology Committee Block: 7:30 a.m. – 12:30 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 March 2009 meeting in Tucson.

4. Review and approve agenda

5. Reports

- a. Non-planar Simulation TG - Charlie Curcija
- b. Solar Optical Performance of Non Planar Transparent Systems Task Group (Charlie Curcija)
- c. Attachment optical properties TG - Tom Morrissey

6. Unfinished Business

7. New Business

- a. NFRC 304 ballot

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, Senior Research and Technology Manager * rmcgowan@nfr.org



NFRC 2009 Summer Membership Meeting
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*****DRAFT MINUTES*****

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. Meeting called to order at 11:00 AM

- 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 (Jessica Ferris)

3. Minutes from November 2008 meeting in Jacksonville, FL approved as presented.

4. Agenda reviewed and approved

5. Reports

- a. OPSC priorities presentation was given by Mike Rubin and Ross McCluney.
- b. Non-planar Simulation TG-Charlie Curcija – No activity, industry is not interested in the simulation of these product types.
- c. **NFRC 300** ballots considered:
 - i. **MOTION:** Ken Knittler (Westlab) moved and Jim Larsen (Cardinal) seconded to approve NFRC 300 without reference to ASTM G 197. Approved by voice vote and 2 opposed. Motion passes.
 - ii. **MOTION:** J. Hayden moved and W. du Pont seconded to refer all negatives and comments to ASTM G 197 to the NFRC 300 TG to develop an implementation plan. Motion passes by unanimous voice vote.
- d. **NFRC 302** report Ballot:
 - i. **Polar Seal negative ballot** – B. Shah moved and B. Schultz seconded to find negative non-persuasive. Passes by unanimous voice vote.
 - ii. **SunPine approved with comment** ballot- Bipin Shah (WinBuild) moved and Joe Hayden (Pella) seconded to find this ballot persuasive. Passes by voice vote.
- e. Attachment optical properties TG - Tom Morrissey – still clarifying scope of the TG.

6. New Business

- a. **MOTION:** B. Shah moved and S. Gore seconded to reaffirm NFRC 300, 301, 302, 303, 304 as 2009 documents with recommendation of implementation upon publication. Motion carries by unanimous voice vote.

7. Adjourned at 12:12 PM



NFRC 2009 Summer Membership Meeting
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Research & Technology Committee

Block Period: Tuesday, July 21, 2009 7:30 a.m. – 12:30 p.m.

Chair: *Werner Lichtenberger, TruSeal Technologies*

Vice Chair: *Dave DeBlock, ODL 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 member company listed on the roster

2. Appoint Recording Secretary (NFRC Staff)

3. Roll call / Establish quorum

4. Approve Minutes from March 2009 meeting in Tucson, AZ

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, Senior Research and Technology Manager * rmcgowan@nfr.org*



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Research & Technology Committee Roster*

First Name	Last Name	Company Name
Lisa	Winckler	AIMCAL - Window Film Committee
Nils	Peterman	Alliance to Save Energy
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.
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.
Tracy	Rogers	Edgetech I.G., Inc.
George	Nash	Einsinger Building Products Division
Morgan	Hanam	Enermodal Engineering Limited
Gurjinder	Dhami	ETC Labs
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
Kevin	Vilhauer	Milgard Manufacturing
David A.	De Block	ODL Incorporated
Joseph	Hayden	Pella Corporation
Peter	Lyons	Peter Lyons and Associates
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
Tina	Jenkins	Simonton Windows
Paul	Jaster	Solatube, Inc.



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Research & Technology Committee Roster continued

First Name	Last Name	Company Name
Julia	Schimmelpenningh	Solutia, Inc.
Ross	McCluney	Sun Pine Consulting, Inc.
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.
Jeff	Baker	WESTLab
Bipin	Shah	WinBuild, Inc.
John	McFee	Window and Door Manufacturer's Association (WDMA)

**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*****

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, Inc.*

-
1. **Meeting called to order at 12:26 PM**
 2. **Jessica Ferris (NFRC Staff) appointed recording secretary**
 3. **Roll call successfully established a quorum**
 4. **Minutes from November 2008 meeting in Jacksonville, FL approved as presented**
 5. **Reports**
 - a. Research SC-Bipin Shah – 5 action items
 - i. **MOTION:** B. Shah moved and D. DeBlock seconded to reapprove Research Program Manual as 2009 document and reference document as NFRC 703. 16-0-0 Motion passes.
 - ii. **MOTION:** B. Shah moved and D. DeBlock seconded to extend the peer review paper on TDD Research completion by 8/31/2009 – Motion passes.
 - iii. **MOTION:** CMA Condensation Resistance Research Project– B. Shah moved and J. Hayden seconded to extend date six month from Feb. 2, 2009. – Motion passes by unanimous voice vote.
 - iv. **MOTION:** Awning Research RFP ballot – B. Shah moved and R. McCluney seconded to move to Board for approval. Motion passed by unanimous voice vote.
 - v. **MOTION:** Complex Product VT Rating Research– B. Shah moved and D. de Block seconded to approve document as amended and as request for services, and forward to Board for approval. Motion passes by unanimous voice vote.
 - b. Optical Properties SC- Sneh Kumar- 2 action items:
 - i. **MOTION:** S. Kumar moved and S. Gore seconded to reaffirm NFRC 301, 302, 303, 304 documents and forward to the Board with recommendation of implementation upon publication. Motion passes by unanimous voice vote.
 - ii. **MOTION:** S. Kumar moved and S. Gore seconded to approve the amended NFRC 300 for the 2009 document cycle and recommend implementation upon publication. Motion passes by unanimous voice vote.
 - c. Thermophysical Properties SC-Charlie Curcija
 - i. Ballots returned to task group for further work. No action items.
 - d. Glossary and Terminology TG-Charlie Curcija
 - i. Ballot returned to task group. One action items
 - e. **MOTION:** C. Curcija moved and B. Shah seconded to bring issue of non-residential terms from CMA to BOD for further consideration on final location: NFRC 600 or a in each relevant CMA document. Motion passes by unanimous voice vote.
 6. **Meeting adjourned at 12:51 PM**



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Software Subcommittee

Tuesday, July 21, 2009

Under Technical Committee Block: 2:00 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 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 March 2009 meeting in Tucson, AZ

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. None

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, Laboratory Accreditation Program Manager * danderson@nfr.org*



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

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. Chair called the meeting to order at 2:01 p.m. – antitrust reminder given and reviewed voting requirements
 2. Sherri Wendt (NFRC Staff) Appoint Recording Secretary
 3. Minutes from November 2008 (Jacksonville, FL) meeting were approved as presented J.Larson First/
B.Crooks Second.
 4. The agenda was reviewed and approved as presented.
 5. Reports
 - a. WINDOW 6/ THERM 6 Approval TG – Joe Hayden
 - i. Presentation was conducted showing the progress to-date of this TG's activities.
 - b. CMAST Approval TG – Dan Wacek
 - i. Presentation was conducted showing the progress to-date of this TG's activities.
 6. Unfinished Business
 - a. None
 7. New Business
 - a. Possible formation of a new TG for CPD (Database)
 - i. Done, Staff has covered.
 8. Meeting was adjourned at 2:18 pm



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Air Leakage Subcommittee

Tuesday, July 21, 2009

Under Technical Committee Block: 2:00 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 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 March 2009 meeting in Tucson, Arizona.

5. Report

- a. Air Leakage Task Group - Chris Nolt

6. Unfinished Business

- a. None

7. New Business

- a. NFRC 400 ballot review

8. Adjourn

SCOPE

The Air Leakage Subcommittee is responsible for developing and coordinating NFRC 400, *Procedure for Determining Fenestration Product Air Leakage*.

Committee Chain: * Technical Committee * Air Leakage Subcommittee
NFRC Staff Liaison: Scott Hanlon, Senior Programs Manager * shanlon@nfrc.org
Dennis Anderson, Laboratory Accreditation Program Manager * danderson@nfrc.org



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

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. Chair called the meeting to order at 2:18 p.m. – antitrust reminder given and reviewed voting requirements
 2. Sherri Wendt (Staff) appointed recording secretary
 3. The agenda was reviewed were edited to determine a scope in the new business and approved.
 4. Minutes from November 2008 (Jacksonville, FL) meeting were approved as presented.
 5. Unfinished Business
 - a) Work on 2009 document cycle
 - i. Not retire 400, but revise so NAFS or 283 qualify within 400. To develop a draft in 3 weeks.
 - ii. Will have a ballot for draft in July meeting.
 6. New Business
 - a) Determine a Scope
 - i. The Air Leakage Subcommittee is responsible for developing and coordinating NFRC 400, "Procedure for Determining Fenestration Product Air Leakage."
MOTION: J.Hayden First /D.Deblock Second motion to approve new Scope. Motion passes by unanimous voice vote.
 7. Meeting was adjourned at 2:28 pm



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U-Factor Subcommittee

Tuesday, July 21, 2009

Under Technical Committee Block: 2:00 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 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 March 2009 meeting in Tucson, AZ.

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 Attachments 100 Ballot
- b. NFRC 100 Applied Films Ballot
- c. NFRC 100 Ballot to accommodate Window6/Therm6 Software
- d. NFRC 100-2010 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, Laboratory Accreditation Program Manager * danderson@nfr.org*



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

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. Chair called the meeting to order at 2:30 - antitrust reminder given and reviewed voting requirements
 2. Scott Hanlon (Staff) appointed recording secretary
 3. D. DeBlock / S. Harp moved to approve the minutes from the Fall 2008 (Jacksonville, FL) meeting as presented. Passed by unanimous voice vote.
 4. The agenda was reviewed and approved as presented
 5. Reports
 - a. Tubular Daylighting Devices Task Group – D. DeBlock reported there are no actions items to move forward.
 - b. Garage / Rolling Door Task Group – J. Hetzel reported that the TG revised their scope because the TG previous tasks were completed. The DASMA membership hopes to provide some preliminary testing values based on new 100 and 102 procedures by July meeting. The simulation manual procedure for garage door modeling will be to TIPC for approval. The Door TG will dissolve when the following are complete: simulation manual for garage doors; DASMA research; and completion of the vertical jamb hardware research.
 - c. Door Task Group – D. DeBlock reported that there is a door ballot to be handled later in the U-Factor SC meeting.
 - d. Testing Laboratory Task Group – M. Thoman reported no official meetings and no new action items.
 - e. Skylight Task Group – R. LeBrun reported that the TG discussed the possibility of a research project on curb mounted skylights. M. Thoman requested that R. LeBrun provide insight on the possibility to ballot any part of Section 5.3 of the NFRC 100 for the 2009 document cycle.
 6. Unfinished Business
 - a. Progress of work groups and 2009 document cycle –
 - i. T. Rogers provided a presentation on simplifying spacers based on a spacer conductivity study from WESTLab.
Motion: J. Hayden / T. Rygg moved that the 3 spacer class and 1 specific modeling technique from the study be forwarded as a recommendation from the WG to the SC. Motion passed by unanimous voice vote.
 - ii. M. Thoman. Reinforcement simplification WG is not sure what the membership was looking and asked those individuals wanting reinforcement simplification to provide recommendations to the WG.
 - iii. J. Larsen provided a presentation on grid (divider) simplification.
 - iv. Glass/Low-E WG performed some preliminary work – nothing to report.
 7. New Business
 - a. NFRC 100 Attachment ballots will be handled at the Attachment SC.
 - b. NFRC 100 Swinging Door Ballot
 - i. QTI negative: Table 5-2
Withdrawn

MOTION: D. DeBlock / S. Strawn moved to move the ballot as revised to the Technical Committee for approval. Motion passes by unanimous voice vote.
 - c. NFRC 100 Thermal Break
 - i. QTI negative:
MOTION: M. McDonald / M. Falke moved to find the negative persuasive and substantive and to send the ballot to the Glossary TG for review. Motion passes by unanimous voice vote.



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- ii. All ballot responses (negative and APC) will be sent to the Glossary TG to review.
- d. NFRC 100-2009
 - i. Cardinal negative: General Withdrawn
 - ii. QTI negative: Section 2.2.E
MOTION: M. McDonald / J. Hayden moved that the negative be found persuasive and editorial. Motion passes by unanimous voice vote.
 - iii. QTI negative: Section 3
MOTION: M. McDonald / J. Hayden moved that all the definitions in the NFRC 100 be referred to the Glossary TG for review and balloting. Motion passes by unanimous voice vote.
 - iv. TRACO negative: Section 3
Handled by iii.
 - v. Pella APC: Section 3
Handled by iii.
 - vi. Velux APC: Section 4.1.2
Withdrawn
 - vii. Research Frontiers NEG: Section 4.1.4
MOTION: R. Temple / T. Rygg moved to find the negative non-persuasive. Motion passes by unanimous voice vote.

M. Thoman: The following 9 ballot responses dealing with Section 4.2 will be incorporated into the next NFRC 100 ballot since this section was not open for ballot.

- viii. ALI APC: Section 4.2.3.1
- ix. QTI negative: Section 4.2.4.3
- x. QTI negative: Section 4.2.4.4
- xi. QTI negative: Section 4.2.4.5
- xii. QTI negative: Section 4.2.5.F.ii
- xiii. QTI negative: Section 4.2.5.G
- xiv. QTI negative: Section 4.2.7
- xv. JELD-WEN APC: Section 4.2.7
- xvi. ETC Labs APC: Section 4.4
- xvii. QTI negative: Table 4-3
MOTION: M. McDonald / R. Temple moved to find the persuasive and editorial. Motion passes by unanimous voice vote.
- xviii. ALI APC: Table 4-3
MOTION: A. First / B. Second moved to find the persuasive and editorial. Motion passes by unanimous voice vote.

M. Thoman: The following 3 ballot responses dealing within the Section 5.2 will be incorporated into the next NFRC 100 ballot since this section was not open for ballot.

- xix. QTI negative: Section 5.2
- xx. QTI negative: Section 5.2.2
- xxi. QTI negative: Table 5-1
- xxii. QTI negative: Table 5-2
Withdrawn



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M. Thoman: The following 2 ballot responses dealing within the Section 5 will be sent back to the Skylight TG and incorporated into the next NFRC 100 ballot since this section was not open for ballot.

xxiii. BirchPoint APC: Section 5.2.4

xxiv. AAMA negative: Section 5.3.2

xxv. JELD-WEN APC: Section 6

MOTION: S. Strawn / T. Culp moved to find the APC persuasive and editorial. Motion passes by unanimous voice vote.

MOTION: D. DeBlock / M. McDonald moved to approve the following sections of NFRC 100-2009: Section 1 (Entire), Section 2 (Entire), Section 4 (All except 4.2), Section 5.1, 5.4, 5.5, 5.7, and Section 6 (Entire). These sections will not be moved forward to Technical until the remaining sections of the document are approved. These sections will not be available for ballot in July. Motion passes by unanimous voice vote.

8. Meeting Adjourned at 4:30 pm.



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Solar Heat Gain Coefficient Subcommittee

Wednesday, July 22, 2009

Under Technical Committee Block: 7:30 a.m. – 12:30 p.m.

Chair: James Larsen, Cardinal Glass, Inc.

Vice Chair: Bipin Shah, WinBuild, 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. Review and approve agenda

4. Approve Minutes from March 2009 meeting in Tucson, AZ.

5. Reports

- a. None

6. Unfinished Business

- a. None

7. New Business

- a. Review of NFRC 200 Applied Film ballot
- b. Review of ballot for NFRC 200 to accommodate Window6/Therm6 Software
- c. Ballot to reaffirm NFRC 200

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, Laboratory Accreditation Program Manager * danderson@nfr.org



NFRC 2009 Summer Membership Meeting
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*****DRAFT MINUTES*****

Solar Heat Gain Subcommittee

Tuesday, March 3, 2009

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

Chair: *James Larsen, Cardinal*

Vice-Chair: *TBD*

-
1. Chair called the meeting to order at 4:30pm - antitrust reminder given and reviewed voting requirements
 2. Scott Hanlon (Staff) appointed recording secretary
 3. Minutes from November 2008 (Jacksonville, FL) 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 – none to report.
 7. New Business
 - a. Concept to disregard grids for SHGC/VT ratings ballot
 - i. J. Larsen is removing the ballot based on the ballot responses received and the discussion during technical during the grid presentation. All the ballot response will be removed and will be considered for the July SHGC ballot.
 - b. SHGC SC will have a full ballot which will incorporate SHGC technical interpretations per W. duPont recommendation.
 - c. NFRC 100 Attachment ballots will be handled at the Attachment SC.
 8. Adjourned at 4:38 PM



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Attachment Subcommittee

Wednesday, July 22, 2009

Under Technical Committee Block: 7:30 a.m. – 12:30 p.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 March 2009 meeting in Tucson, AZ.

5. Reports

- a. Dynamic Attachments for Swinging Door TG – D. DeBlock
- b. Exterior / Interior Attachment TG – T. Zaremba / M. Cienian
- c. Storm Windows TG – T. Zaremba
- d. Awnings TG – J. Gant
- e. Applied Films TG – D. Smith

6. Unfinished Business

- a. None

7. New Business

- a. NFRC 100 Attachment Ballot
- b. Report on Labeling and Certification SC Attachment Task Groups

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: John Lewis, Manager of Business Development and Outreach * jlewis@nfrc.org



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

Attachment Subcommittee

Thursday, March 4, 2009

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

Acting Chair: *Michael Cienian, Hunter Douglas*

Vice Chair: *Dave DeBlock, ODL*

-
1. Chair called the meeting to order at 8:00am - antitrust reminder given and reviewed voting requirements
 2. Chair introduced Michael Cienian of Hunter Douglas as the acting chair.
 3. Scott Hanlon (Staff) appointed recording secretary
 4. D. DeBlock / R. Temple moved to approve the minutes from November 2008 (Jacksonville, FL) meeting. Motion passed by unanimous voice vote.
 5. The agenda was reviewed and approved as presented.
 6. Reports
 - a. Applied Films TG – D. Smith had nothing to report.
 - b. Dynamic Attachment for Swinging Doors – D. DeBlock reported that testing has been completed on a product that are ready for NFRC Certification and hopes to have the products in the CPD shortly.
 - c. Exterior/Interior Attachments – M. Cienian reported on behalf of conjoined Exterior and Interior Attachments TG.
 - i. T. Zaremba has agreed to take over as the chair of the Exterior Attachment TG.
 - ii. M. Cienian presented the Board of Directors direction related attachments.
 1. Rate all attachment products (on a case by case basis) per New Product Rating guidelines
 2. Use the existing NFRC committee structure / system; i.e. require that all attachments come up through the Attachment SC that reports to existing Technical and Ratings Committees.
 3. NFRC is to create a new trademark representing NFRC Attachments (to differentiate from whole product ratings)
 4. Allow attachments to have different ratings depending upon their business need.
 5. That a separate NFRC Technical document covering NFRC 100, 200 etc. be developed with separate sections pertaining to individual attachment types (Storm Windows, Awnings, Blinds, etc.)
 6. That a separate Attachment PP document will also be developed with sections related to various attachment types as appropriate.
 - d. Storm Window – T. Zaremba not present, No report provided.
 - e. Awning TG – J. Gant reported that a scope has been created. The feasibility research project was approved during R&T on Tuesday, and anticipates the project to start b the end of the year.
 7. Unfinished Business
 - a. Revised SC scope
Motion: D. DeBlock / J. Gant moved to approve the scope as presented. “The Attachment SC will coordinate the development of NFRC processes and procedures for attachment products per the NFRC Board’s Direction – Attachment communication of February 24, 2009”. Motion passed by unanimous voice vote.
 8. New Business
MOTION: J. Hayden / S. Strawn moved to refer all submitted negatives and comments from the NFRC 100 and NFRC 200 ballots back to the TG for consideration and development of new ballots. Motion passes by unanimous voice vote.
 - a. Attachments in NFRC 100, Section 5.8 Ballot – All ballot responses handled by motion.
 - b. Attachments in NFRC 200, Section 5.8 Ballot – All ballot responses handled by motion.
 - c. A question was proposed to perhaps move the Storm Window TG into the exterior / interior TG. M. Cienian will look into that suggestion.
 9. The meeting was adjourned at 8:34 a.m



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Condensation Resistance Subcommittee

Wednesday, July 22, 2009

Under Technical Committee Block: 7:30 a.m. – 12:30 p.m.

Chair: Kevin Vilhauer, Milgard Manufacturing, Inc.

Vice Chair: Steve Harp, Associated Materials, 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. Review and approve agenda

4. Approve Minutes from March 2009 meeting in Tucson, AZ.

5. Reports

- a. Review of ballot to accommodate WINDOW6 and THERM6 (W6/T6) software
- b. Condensation Resistance discussion with CSA working group

6. New Business

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, Laboratory Accreditation Program Manager * danderson@nfr.org*



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

Condensation Resistance Subcommittee

Tuesday, March 3, 2009

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

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

Vice Chair: *Steve Harp*

1. Chair called the meeting to order at 4:38pm - antitrust reminder given and reviewed voting requirements
2. Scott Hanlon (Staff) appointed recording secretary
3. Minutes from November 2008 (Jacksonville, FL) meeting were approved as presented.
4. The agenda was reviewed and approved as presented
5. Reports
 - a. Condensation Resistance discussion with CSA working group – K. Vilhauer reported that CSA is balloting their documents for the 2009 and the J. Baker will report back when the documents are completed.
6. Unfinished Business
 - a. None
7. New Business
 - i. None
8. Meeting adjourned at 4:44 pm.



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Annual Energy Performance Subcommittee

Wednesday, July 22, 2009

Under Technical Committee Block: 7:30 a.m. – 12:30 p.m.

Chair: Tom Culp, BirchPoint Consulting

Vice Chair: James Larsen, Cardinal Glass, 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. Review and approve agenda

4. Approve Minutes from March meeting in Tucson, AZ.

5. Reports

- a. International Activities

6. Unfinished Business

7. New Business

- a. Ballot - reference house procedure in NFRC 901

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.

Committee Chain: * Technical Committee * Annual Energy Performance Subcommittee
NFRC Staff Liaison: Scott Hanlon, Senior Programs Manager * shanlon@nfr.org
Dennis Anderson, Laboratory Accreditation Program Manager * danderson@nfr.org



NFRC 2009 Summer Membership Meeting
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*****DRAFT MINUTES*****

Annual Energy Performance Subcommittee

Tuesday, March 3, 2009

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

Chair: *Tom Culp, BirchPoint Consulting, LLC*

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

1. Chair called the meeting to order at 4:45pm - antitrust reminder given and reviewed voting requirements
2. Scott Hanlon (Staff) appointed recording secretary
3. Minutes from November 2008 (Jacksonville, FL) meeting were approved as presented.
4. The agenda was reviewed and approved as presented
5. Reports
 - a. International Activities – T. Culp reported that the ISO 18292 is in a comment period and staff or he will report back when completed.
6. Unfinished Business
 - a. NFRC 901:
 - i. Individuals interested in working on the NFRC 901 document to please sign the sheet being passed around.
 - ii. T. Culp provided a presentation on the current status of the NFRC 901 document.
 - iii. A NFRC 901 will be balloted in July.
7. New Business
 - a. None
8. Meeting Adjourned at 5:27pm.



NFRC 2009 Summer Membership Meeting
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Program Booklet

Component Modeling Approach (CMA) Technical Subcommittee

Wednesday, July 22, 2009

Under Technical Committee Block: 7:30 a.m. – 12:30 p.m.

Chair: Mike Manteghi, TRACO

Co-Chair: Gary Curtis, ECOS Consulting

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 March 2009 meeting in Tucson, AZ.

5. Reports

- a. CMA Technical Task Group – Mahabir Bhandari
- b. CMA Complex Products Task Group – Sneha Kumar

6. Unfinished Business

7. New Business

- a. Spacer Grouping (Path III) – NFRC 100
 - i. Report
 - ii. 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 Summer Membership Meeting
July 20-23, 2009, Baltimore, MD

Program Booklet

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

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, Inc.*

Co-Chair: *Gary Curtis-WestWall Group*

-
1. Chair called the meeting to order at 8:40AM - antitrust reminder given and reviewed voting requirements
 2. Scott R. Hanlon (Staff) appointed recording secretary
 3. Minutes from November 2008 (Jacksonville, FL) 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 has meet via conference calls and this Monday and discussed how to deal with complex product types and will bring this to the Ratings Committee since this is not a technical issue but a ratings issue. The TG established a workgroup investigating how to deal with dividers.
 6. Unfinished Business
 - a. None
 7. New Business
 - a. CMA Non-Standard Products – NFRC 100
 - i. Cardinal negative: Definition
MOTION: J. Hayden / J. Larsen moved to find the negative persuasive and editorial and to refer to the Glossary TG to define single and monolithic definitions. Motion passes by unanimous voice vote.
 - ii. Pella negative: Definition
MOTION: C. Curcija / J. Hayden moved to find the Pella and ETC Labs negatives persuasive and editorial and to refer to the Glossary TG to define double sash term. Motion passes by unanimous voice vote.
 - iii. ETC Labs APC: Definition
Handled by previous action.
 - b. CMA Non-Standard Products – NFRC 200
 - i. QTI negative: General
MOTION: M. McDonald / G. Dhami moved to find the negative persuasive and substantive and to refer this language back to TG. Motion passes by unanimous voice vote.
 - ii. Cardinal negative: Definition
Handled by previous action.
 - iii. ETC Labs APC: Definition
Handled by previous action.
 - c. CMA Validation Testing – NFRC 100
 - i. QTI negative: Section 3.2.1
MOTION: M. McDonald / M. Thoman moved to find both QTI negatives persuasive and substantive and to send this language back to TG. Motion passes: 15-4
 - ii. QTI negative: Section 5.6.5.6.2.A
Handled by previous action.
 - iii. Pella APC: Section 5.6.5.6.2.A
MOTION: J. Hayden / T. Culp moved to find Pella's APC persuasive and substantive and to send this language back to TG. Motion passes by unanimous voice vote.



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- iv. Cardinal negative: General
Handled by previous action.
 - v. ATI negative: Definition
Handled by previous action.
 - vi. Pella APC: General
Handled by previous action.
8. New Business
- a. None
9. Meeting Adjourned at 9:31 AM.



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Technical Committee

Block Period: Tuesday, July 21, 2009 2:00 p.m. – 5:00 p.m.
Continued – Wednesday, July 22, 2009 7:30 a.m. – 12:30 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 March 2009 meeting in Tucson, AZ.

6. Reports

- a. Canadian/American Harmonization Task Group (J. Baker, J. Hogan)
- b. Validation Testing Task Group (S. Kumar)
- c. Software Subcommittee (B. Crooks, J. Krahn)
- d. Attachment Subcommittee (M. Cienian, D. DeBlock)
- e. Annual Energy Performance Subcommittee (T. Culp, J. Larsen)
- f. Condensation Resistance Subcommittee (K. Vilhauer, S. Harp)
- g. Air Leakage (M. Thoman, T. Rogers)
- h. U-factor Subcommittee (M. Thoman, M. Bhandari)
- i. Solar Heat Gain Subcommittee (J. Larsen, B. Shah)
- j. Component Modeling Approach Subcommittee (M. Manteghi)

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 Summer 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
Nils	Peterman	Alliance to Save Energy
Chuck	Anderson	American Architectural Manufacturers Association (AAMA)
Joe	Jonely	Amsco Windows
Steve M.	Johnson	Andersen Corporation
Frank	Fisher	Arcadia, Inc.
Michael J.	Thoman	Architectural Testing, Inc.
Brad	Schultz	Associated Laboratories, Inc.
Steve	Harp	Associated Materials, 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.
Joseph	Hetzel	DASMA (Door & Access Systems Manufacturers Assoc. International)
Tracy	Rogers	Edgetech I.G.
Morgan	Hanam	Enermodal Engineering Limited
George	Nash	Ensinger Building Products
Gurjinder	Dhami	ETC Laboratories
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.
Christian	Kohler	Lawrence Berkeley National Laboratory (LBNL)
James C.	Krahn	Marvin Windows & Doors
Grant	Muller	Mikron Industries, Inc.
Kevin	Vilhauer	Milgard Manufacturing, Inc.
David A.	De Block	ODL Incorporated
Joseph	Hayden	Pella Corporation



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Technical Committee Roster continued

First Name	Last Name	Company Name
Peter	Lyons	Peter Lyons & Associates
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
John	Hogan	Seattle Dept. of Planning and Development
Tina	Jenkins	Simonton Windows
Julia	Schimmelpenningh	Solutia, Inc.
William C.	duPont	Sunergy Consulting
Ross	McCluney	SunPine 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

**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 Summer Membership Meeting
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Program Booklet

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

Technical Committee

Block Period: Tuesday, March 3, 2009 1:30 p.m. – 5:30 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 Corporation*

-
1. Chair called the meeting to order at 9:47 a.m. - antitrust reminder given and reviewed voting requirements
 2. Roll call / Establish quorum. Quorum established.
 3. Dennis Anderson (Staff) appointed recording secretary
 4. Minutes from November 2008 (Jacksonville, FL) meeting were approved as presented.
 5. The agenda was reviewed and approved as presented
 6. Reports
 - a. Canadian/American Harmonization Task Group – Nothing to report.
 - b. Validation Testing TG – S. Kumar reported no action items.
 - c. Software Subcommittee – B. Crooks reported no action items. J. Hayden warned the committee to be prepared for W6/T6 approval at summer meeting.
 - d. Attachment Subcommittee – M. Cienian reported that T. Zaremba to take over Exterior Attachments TG. M. Cienian to take over chair of Attachments SC. Approaching Ratings Committee to form a new TG.
 - i. **MOTION:** J. Hayden / R. Temple to approve M. Cienian as Attachments SC Chair.
Passes by unanimous voice vote.
 - e. Annual Energy Performance Subcommittee – T. Culp had no action items to report.
 - f. Condensation Resistance Subcommittee – K. Vilhauer had no action items to report.
 - g. Air Leakage – M. Thoman had no action items to report. M. Thoman made aware to committee that they will bring forward an NFRC 400-209 document for Summer ballot.
 - h. U-factor Subcommittee – M. Thoman reported nothing to bring forward. Approved several section of 100-2009 in ballot but will not bring forward to Technical until the remaining part of document is balloted and approved.
 - i. Solar Heat Gain Subcommittee – J. Larsen had no items to report.
 - j. Component Modeling Approach Subcommittee – M. Manteghi reported nothing to bring forward. Ballots from this meeting sent back to TG.
 7. New Business
 - a. None
 8. Adjourned at 10:01 a.m.



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Program Booklet

Certification Subcommittee

Wednesday, July 22, 2009

Under Ratings Committee Block: 2:00 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 March 2009 meeting in Tucson, AZ.

5. Reports

- a. PCP Review TG – Tina Jenkins
- b. Product Line ID TG – J. McFee
- c. Attachment PCP TG – T. Morrissey / M. Cienian

6. Unfinished Business

- a. None

7. New Business

- a. PCP Ballot Product Line ID / Door / Label – NFRC 700-2009
- b. PCP Ballot Private Labeler – NFRC 700-2009
- c. PCP Ballot Fenestration Attachment – 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.

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



NFRC 2009 Summer Membership Meeting
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*****DRAFT MINUTES*****

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*

-
1. Chair called the meeting to order at 2:07 p.m. – antitrust reminder given and reviewed voting requirements
 2. Scott Hanlon (Staff) appointed recording secretary.
 3. Minutes from November 2008 (Jacksonville, FL) meeting were approved as presented.
 4. The agenda was reviewed and approved as presented.
 5. Reports
 - a. PCP Review TG – S. Strawn, for T. Jenkins, reported on the discussion that took place about the PCP ballot, which will be discussed later.
 - b. Product Line ID – J. McFee reported on the task of the TG and will forward PCP language for a July ballot regarding product line ID number.
 6. Unfinished Business
 - a. None
 7. New Business
 - a. PCP Ballot
 - i. **MOTION:** S. Johnson / R. Temple moved to send the RES-97 language that was approved including the JELD-WEN comment related to Appendix C to the Ratings Committee and the remaining responses back to the PCP Review TG for consideration for a PCP ballot. Motion passes by unanimous voice vote.
 - b. At the request of Ratings chair, the Attachment SC will form a TG to begin working on developing an Attachment PCP document.
 8. The meeting was adjourned at 2:33 pm



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Labeling Subcommittee

Wednesday, July 22, 2009

Under Ratings Committee Block: 2:00 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 March 2009 meeting in Tucson, AZ.

5. Reports

- a. CMA Label TG – C. Curcija
- b. Attachment Label TG – T. Morrissey / M. Cienian
- c. Other Label issues from Task Groups or Committees

6. Unfinished Business

- a. None

7. New Business

- a. Discuss requirements for metric labeling

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



NFRC 2009 Summer Membership Meeting
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Program Booklet

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

Labeling Subcommittee

Wednesday, March 4, 2009

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

Chair: *John McFee, WDMA*

-
1. Chair called the meeting to order at 1:31 p.m. – antitrust reminder given and reviewed voting requirements
 2. Scott Hanlon (Staff) appointed recording secretary
 3. Minutes from November 2008 (Jacksonville, FL) meeting were approved as presented.
 4. The agenda was reviewed and approved as presented
 5. Reports
 - a. CMA Labeling TG – C. Curcija reported that there is an approved label certificate and has completed the work. TG will not need to report unless any else happens.
 - b. Permanent Label TG – J. Lewis reported that the TG has completed all tasks.
 2. Unfinished Business
 - a. Update on removing “RES-97” in Appendix B of PCP
 - i. This item is part of the PCP ballot which will be dealt with during the Certification SC.
 - b. Update on issue dealing with “permanent label” for applied films
 - i. Discussion took place how film manufacturers are applying the permanent label to the products. Rating chair recommended that the Attachment Label TG look at this issue and work with the applied film manufacturers.
 3. New Business
 - a. Review format of Temporary Label for optional performance values.
 - i. Figure B-1 in PCP-2008_E1A4 displays “Additional Performance Ratings”.
Motion: B. Schultz / R. Temple moved that the “Additional Performance Ratings” title bar is not mandatory and may be removed from the temporary label. Motion fails: 7-17
 - b. At the request of M. Cienian, the Label SC chair created a new TG for Attachment Labels. M. Cienian will serve as chair; other participants are J. Gant and K. Eger.
 - c. Discussion took place about Section 4.3.4 dealing with the labeling SHGC and VT ratings for swinging doors.
 4. The meeting was adjourned at 2:06 p.m.



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Component Modeling Approach (CMA) Ratings Subcommittee

Wednesday, July 22, 2009

Under Ratings Committee Block: 2:00 p.m. – 5:00 p.m.

Chair: Mike Manteghi, TRACO

Co-Chair: Gary Curtis, ECOS Consulting

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 March 2009 meeting in Tucson, AZ.

5. Reports

6. Unfinished Business

7. New Business

Forum Discussion – NFRC 705-2009, Section 5.1 – “Calculations performed by the ACE for label certificates shall be subject to review by an IA selected and contracted by the ACE.”

- i. Should ACEs “select and contract” with an IA that will conduct ACE calculation reviews?

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.



NFRC 2009 Summer Membership Meeting
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*****DRAFT MINUTES*****

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, The West Wall Group*

Vice-Chair: *Mike Manteghi, TRACO*

-
1. Chair called the meeting to order at 2:36 p.m. – antitrust reminder given and reviewed voting requirements
 2. Scott R. Hanlon (Staff) appointed recording secretary
 3. Minutes from November 2008 (Jacksonville, FL) 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. QTI, NEG – (General):
Withdrawn

MOTION: S. Kumar / R. Temple moved revisions to CMA PCP to the Ratings Committee for approval. Motion passes by unanimous voice vote.
 - b. CMA Rating SC vice-chair created a CMA Complex Products TG at the request of C. Curcija to handle the rating of complex products. S. Kumar will chair the TG; other participants are P. Lyons, C. Curcija, T. Culp, and M. Thoman.
 - i. The TG first task will be to develop the task groups scope.
 8. The meeting was adjourned at 3:05PM.



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Ratings Committee

Wednesday, July 22, 2009

Block Period: 2:00 p.m. – 6:00 p.m.

Chair: *Steve Strawn, JELD-WEN*

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

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 March 2009 meeting in Tucson, AZ.

6. Reports

- a. Validation Testing TG – (S. Kumar)
- b. Labeling SC – (J. McFee)
- c. Certification SC – (J. Jonely)
- d. CMA Certification SC – (M. 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 Staff Liaison: Scott Hanlon, Senior Programs Manager * shanlon@nfrc.org*



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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
Nils	Petermann	Alliance to Save Energy
Chuck	Anderson	American Architectural Manufacturers Association (AAMA)
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.
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
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
Gurjinder	Dhami	ETC Laboratories
Michael	Cienian	Hunter Douglas
Darrell	Smith	International Window Film Association (IWFA)
Steve	Strawn	Jeld-Wen, Inc.
Marcia	Falke	Keystone Certifications, Inc.
Robin	Mitchell	Lawrence Berkeley National Laboratory (LBNL)
James C.	Krahn	Marvin Windows & Doors
Kevin	Vilhauer	Milgard Manufacturing
David A.	De Block	ODL Incorporated
Joseph	Hayden	Pella Corporation
Peter	Lyons	Peter Lyons & Associates
David L.	Duly	Pilkington North America, Inc.
Chris	Nolt	ProVia Door, Inc.
Marles	McDonald	Quality Testing, Inc.
Thomas S.	Zaremba	Roetzel & Andress
Marvin	Stover	Royal Group Technologies



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Ratings Committee Roster continued

First Name	Last Name	Company Name
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.
Bipin	Shah	WinBuild, Inc.
John	McFee	Window and Door Manufacturer's Association (WDMA)

**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 Summer Membership Meeting
July 20-23, 2009, Baltimore, MD

Program Booklet

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

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. Chair called the meeting to order at 3:10 p.m. – antitrust reminder given and reviewed voting requirements
 2. Roll call was taken and a quorum was established.
 3. Sherri Wendt (Staff) appointed recording secretary
 4. The agenda was reviewed and approved as presented.
 5. Minutes from November 2008 (Jacksonville, FL) meeting were approved as presented.
 6. Reports
 - a. Labeling SC – (John McFee)
 - i. Product Line ID TG will be providing language for a July ballot.
 - ii. Requested a new TG, the Attachment Task group which will be chaired by M. Cienian. Ratings chair approved the new TG.
 - b. Certification SC – (Presented by S. Strawn)
 - i. PCP Ballot for validation testing language was sent back to Validation Testing TG.
 - ii. PCP Ballot for private labeler and other ballot responses was sent back to the PCP Review TG.

MOTION: J. Hayden / D. DeBlock moved to send the RES-97 language that was approved including the JELD-WEN comment related to Appendix C to the Board and the remaining responses back to the PCP Review TG for consideration for a PCP ballot. Motion passes by unanimous voice vote.

 - iii. A request to form a new TG, the PCP Attachment TG, which will be chaired by M. Cienian. Rating chair approved the new TG.
 - c. CMA Certification SC – (Gary Curtis, Mike Manteghi)
 - i. A request to form a new TG, the Addition of frame products. Rating chair approved the new TG.
 - ii. Ballot Motion

MOTION: M. Manteghi / R. Temple moved to send forward to the NFRC Board the CMA PCP for approval. Motion passes by unanimous voice vote.
 7. New Business
 - a. S. Kumar: the Validation TG will report to Ratings Committee.
 8. Meeting was adjourned at 3:47 pm.



NFRC 2009 Summer Membership Meeting
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Board of Directors Meeting

Thursday, July 23, 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



NFRC 2009 Summer Membership Meeting
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NFRC Staff Directory – Summer 2009

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Program Booklet

NFRC Antitrust Compliance Procedures

NFRC is committed to requiring the organization and its members and representatives to be in full compliance with all federal and state antitrust laws, rules and regulations. NFRC recognizes that some of its members and participants may be potential competitors and NFRC wishes to scrupulously avoid any discussion or activity that could lead to, or be reasonably perceived as leading to, improper restraints on competition. NFRC's Board of Directors has adopted the following procedures to assist the organization and its constituents to maintain full compliance with these antitrust laws. These procedures apply to all NFRC members, directors on NFRC Board of Directors, officers, NFRC staff, and all participants in NFRC sponsored meetings and task groups and to all other meetings attended by individuals as representatives of NFRC.

Avoiding Improper Agreements and Discussions Among Competitors.

1. Express of implicit agreements or discussions among competitors as to prices or price levels relating to their products and services is expressly prohibited. In addition, no discussion is permitted of any elements of a company's operations which might influence pricing such as:
 - a. how prices are determined and when they are issued;
 - b. costs of operations, supplies, labor or services;
 - c. allowances for discounts and rebates;
 - d. raw materials and costs and production and inventory matters;
 - e. terms of sale or products, including credit arrangements; or
 - f. profit margins and mark ups.

2. Competitors may not discuss or reach agreements not to compete with each other in any form. The following are examples of improper anti-competitive conduct prohibited by federal and state antitrust laws:
 - a. division of geographic market territories;
 - b. limitations on the nature of business to be carried on or the products to be sold; or
 - c. agreements to sell products for a specific market only.

3. Discussions or agreements to boycott or refrain from doing business with other commercial entity are also expressly prohibited in any form. Examples of these illegal boycotts include the following:
 - a. agreements not to pursue a new technology;
 - b. agreements about blacklisting or unfavorable reports about particular companies including their financial situation; or
 - c. agreements not to do business with identified vendors, customers and others.



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Compliance Education and Monitoring.

1. It is NFRC's policy to periodically acquaint NFRC members, members of NFRC's Board of Directors, staff and other participants in the organization with the policies and procedures set forth in the Antitrust Compliance Procedures. As part of that compliance effort, NFRC will take the following steps to better ensure that NFRC meets these legal requirements:
 - a. Legal counsel for NFRC will brief NFRC Board and staff from time to time as to the requirements of the antitrust laws and the application of those laws to the activities of the organization;
 - b. NFRC Board and Executive Director will keep NFRC legal counsel informed of current and projected activities of NFRC and, as appropriate, request an antitrust review of those activities which will be shared with the Board.
 - c. NFRC legal counsel will be consulted on the agendas for NFRC meetings and the purpose of those meetings. Minutes of all NFRC sponsored meetings will be maintained and submitted to legal counsel for review for anti-trust implications;
 - d. At any meetings attended by persons who are acting on behalf of NFRC where discussion relates to matters with antitrust implications, the NFRC representative shall request that the discussion be stopped and ask that the request be made a part of the minutes of the meeting. If others continue such discussion, the NFRC representative shall leave the meeting and request that the minutes show that s/he left the meeting at that point and why s/he left. The NFRC representative shall immediately report the incident to NFRC's Executive Director who shall promptly inform the Board of the incident.
 - e. It is NFRC's policy that a copy of these Antitrust Compliance Procedures be given to each officer, director, committee member, official representative of member companies and NFRC employees at least annually and that the same be read, and/or disseminated, at all NFRC sponsored meetings.

*Adopted by the NFRC Board of Directors
January 30, 2003*



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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>*

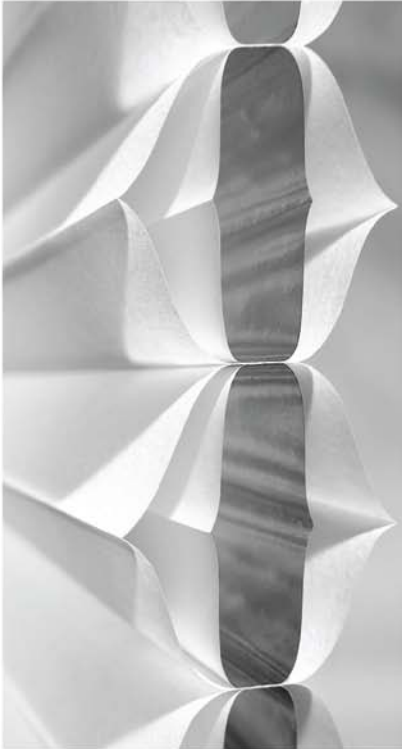
Notes:



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NFRC Sponsor Education Page



The patented cell-within-a-cell construction of Duette® Architella® honeycomb shades is the latest energy-saving design innovation from Hunter Douglas.

PROUD MEMBER OF THE NFRC

Hunter Douglas is honored to be working in collaboration with the NFRC and its members to establish a uniform rating system that communicates the significant energy-saving benefits interior window coverings can contribute to residential and commercial buildings.

Researching and developing forward-thinking new product designs that deliver increased insulation, solar heat management, UV protection and other benefits that reduce energy consumption and create a more comfortable space is a key component of our *Hunter Green* environmental-consciousness program. As the window coverings industry leader, we stand committed to this important cause and look forward to a strong and mutually beneficial partnership with the NFRC.

HunterDouglas

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NFRC Meeting Sponsors at the Gold and above levels get an opportunity to educate the NFRC meeting attendees through information in the NFRC Meeting Program Book as well as onsite at the meeting. If you want to find out more about the NFRC Meeting Sponsorship program contact Cheryl Gendron, NFRC's Senior Manager of Member Services at cgendron@nfr.org.



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Pre-Registration List – (by Company Name)

*Note -all registrations received (with payment) by 7/6/2009

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Earlene Shillingford
Bristol, PA 19007

Air-Ins, Inc.

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Alliance to Save Energy

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Alliance to Save Energy

Nils D Petermann
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Brad Schultz
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Associated Materials, Inc.

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Birch Point Consulting LLC

Thomas Culp
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California Energy Commission

Nelson Peña
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Cardinal Glass Industries, Inc.

Brian P Crooks
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Cardinal Glass Industries, Inc.

James Larsen
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CARLI, Inc.

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**Center for Sustainable Building
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Minneapolis, MN 55414

**Champion Window and Patio Room
Company**

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Comfortex

Richard Watkins
Maplewood, NY 12189

D&R International

Alice G Dasek
Silver Spring, MD 20910

D&R International

Emily Zachery
Silver Spring, MD 20910

**DASMA (Door & Access Systems
Manufacturers Assoc. International)**

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Portland, OR 97204

EFCO Corporation

Joseph Holmes
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Ensinger Building Products Division

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Rollac Shutter of Texas, Inc.
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Pre-Registration List – *(by Last Name)*

*Note -all registrations received (with payment) by 7/6/2009

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Craig Dasse
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Toledo, OH 43624

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Keystone Certifications, Inc.
Etters, PA 17319

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Auburn Hills, MI 48326

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Natural Light Energy Systems
Phoenix, AZ 85029

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Cuyahoga Falls, OH 44223

Joe Hayden
Pella Corporation
Pella, IA 50219

Steve Hebeisen
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Joseph R. Hetzel
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Salt Lake City, UT 84125

Richard Karney
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Washington, DC 20585-0121

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NFRC 2009 Summer Membership Meeting
July 20-23, 2009, Baltimore, MD
Program Booklet

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Welcome NFRC

**NFRC 2009 Summer
Membership Meeting**

~ July 20 – 23, 2009 ~

MAP

**Breakout Session
7/20/2009 –Potomac Room**

POOL

POTOMAC TERRACE

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**Registration
Area**

*Opens
7:00am
7/20/09*

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5

5C

**NFRC
General Session
Chesapeake Ballroom I&II**

Continental Breakfast will be served in
registration area (1 hour only)

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

THIRD LEVEL

Sheraton Inner Harbor Hotel

(<http://tinyurl.com/NFRC-Summer-09>)

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410-962-8300



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