



PROGRAM BOOKLET

(Agendas, Draft Minutes & Committee Rosters enclosed)

NFRC 2010 Fall Membership Meeting

San Francisco, California

November 8 – 11, 2010



National Fenestration Rating Council

6305 Ivy Lane, Suite 140

Greenbelt, MD 20770

301/589-1776

www.nfrc.org



NFRC 2010 Fall Membership Meeting
November 8 - 11, 2010, San Francisco, CA

Program Booklet

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Electronic Program Booklet

Flash Drive Versions Onsite/no printed booklets will be available

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Special Thanks

Program Booklet Sponsor: Potomac Communications Group



[Find out more about NFRC Sponsorship for your organization on the NFRC's website.](#)

NFRC 2010 Fall Membership Meeting Schedule ~ November 8 - 11, 2010

Hilton Financial District • San Francisco, California

Schedule subject to change

	Monday [†] 11/08/10 (Registration opens 6:30 a.m.)	Tuesday 11/09/10	Wednesday 11/10/10	Thursday 11/11/10
	Grand Ballroom 3rd floor ↓	Jackson Room 2nd floor ↓	Grand Ballroom 3rd floor	Grand Ballroom 3rd floor
7:00 a.m.	First Time Meeting Attendees: Orientation (7:00 a.m.-7:30 a.m.)		Research & Technology Committee Block (7:00 a.m.-11:30a.m.)	Technical Committee Block (Part Two: 7:30 a.m.-11:30 a.m.)
7:30 a.m.	Garage/Rolling Door SHGC TG (7:30 a.m.-8:00 a.m.)	Optical Properties - Non Planar Glazings Task Group (7:30 a.m. - 8:30 a.m.)		
8:00 a.m.	Garage/Rolling Door U-Factor Task Group (8:00 a.m.-8:30 a.m.)			
8:30 a.m.	Ventilation Task Group (8:30 a.m.-9:30 a.m.)	Tubular Daylighting Task Group (8:30 a.m.-9:30 a.m.)		
9:00 a.m.				
9:30 a.m.	Daylighting Rating Task Group (9:30 a.m.-10:30 a.m.)	CMA Labeling Task Group (9:30 a.m.-10:30 a.m.)		
10:00 a.m.				
10:30 a.m.	Attachments Block (10:30 a.m. - 12:00 p.m.)			
11:00 a.m.	Task Groups to Convene: • Awnings TG • Interior/Exterior TG • Attachment-Optical Prop TG • Attachment-PCP TG • Attachment-Label TG • Applied Film TG			
11:30 a.m.		Grand Ballroom 3rd floor		
12:00 p.m.	PCP Task Group (12:00 p.m.-1:00 p.m.)		Grand Ballroom 3rd floor	Meeting Break (11:30 a.m.-1:00 p.m.)
12:30 p.m.	NFRC Networking Luncheon (1:00 p.m.-2:00 p.m.) <i>Buffet Luncheon Provided by NFRC for all registered meeting attendees</i>		Grand Ballroom 3rd floor	Research & Technology Committee Block - continues.... (1:00 p.m.-3:00p.m.)
1:00 p.m.	-NFRC Fall Membership Meeting 2010- Opening Session (2:00 p.m.-3:30 p.m.) • Welcome / Opening Remarks • Chair's Reports • Speaker - PGE, NFRC Utility Member		Ratings Committee Block (1:00 p.m.-5:00 p.m.)	
1:30 p.m.			Research & Technology Committee will convene after 15 mintue break once all Subcommittees have adjourned.	
2:00 p.m.			Technical Committee Block (Part One: 3:00 p.m.-6:00p.m.)	
2:30 p.m.			Subcommittees to Convene: • Certification Subcommittee • Labeling Subcommittee • CMA Subcommittee (Ratings)	
3:00 p.m.	Regulatory Affairs & Marketing Committee (3:30 p.m.-4:30 p.m.)		Ratings Committee will convene after 15 mintue break once all Subcommittees have adjourned.	
3:30 p.m.	NFRC Policy Committee Block Committees to Report: • Certification Policy Committee • Technical Interpretations Policy Committee • Accreditation Policy Committee		Daylighting Presentation Featuring Lisa Heschong - Heschong Mahone Group (5:00 p.m.-6:00 p.m.)	
4:00 p.m.			NFRC Membership Reception All Registrants Welcome (6:00 p.m.-7:30 p.m.)	
4:30 p.m.				
5:00 p.m.	Meeting Attendees – on your Own.....			
5:30 p.m.	Meeting Attendees – on your Own.....		Meeting Attendees – on your Own.....	
6:00 p.m.				
6:30 p.m.				

**Membership Meeting Ends;
Attendees –
on your Own.....**

ACE Training
Advance Registration Required
Thursday (12:00 p.m.- 6:00 p.m.)

NOTE: Not part of the NFRC Membership Meeting
Registration
[**click here to register**](#)



[†]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.
^{**} Subcommittees Under the Technical Block will run consecutively - as time allows, groups listed will go in order - but date/time is not guaranteed.

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



BOARD OF DIRECTORS

CHAIR

Joseph Hayden
Pella Corporation

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California Energy Commission

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Alliance to Save Energy

Tony Rygg
Consultant

Steve Selkowitz
Lawrence Berkeley Laboratory

Michael Thoman
Architectural Testing, Inc.

Executive Director
James C. Benney

October 29, 2010

Welcome to San Francisco - NFRC members and guests.

When I think about San Francisco, I think about Lombard Street. This steep, winding thoroughfare located in the heart of the City by the Bay is often called, "America's crookedest street" because of its numerous, meandering curves. Navigating Lombard Street can be daunting. It requires strategic planning and thoughtful execution – the very same skills NFRC members bring to our Fall Membership Meeting.

It's these and similar skills, which NFRC members possess in great abundance, that will guide us through the 25 ballots that are up for review and enable us to traverse the intricacies each one of them presents. Looking ahead, a number of things about this meeting stand out.

One prominent aspect is that the Research Subcommittee will consider a record number of potential research items, represented by the submission of eleven summary pages and two requests for proposal.

Another notable aspect is that The University of Minnesota's Center for Sustainable Building Research will present a proposal to investigate window lifecycle cost analysis (LCA).

During the meeting, we'll also aggressively pursue completing the NFRC 100A and 200A documents. Accomplishing this task would represent a milestone in our development by enabling the attachments industry to obtain NFRC ratings for their products.

Meeting attendees can also gain unique insight from our guest speakers, including Duane Larson from Pacific Gas & Electric (PGE), Doug Anderson from the U.S. Environmental Protection Agency (EPA), and Lisa Heschong from the building energy efficiency consulting firm, Heschong Mahone Group. Enlightening presentations from pioneering minds like these educate our members so they can remain at the forefront of our industry even while continuing to break new ground.

Speaking of education, I also encourage everyone to take advantage of the rare and unique opportunity to enjoy a guided tour of Lawrence Berkeley National Laboratory (LBNL). Getting a first-hand look at the inner workings of this facility will provide an invaluable educational experience, and considering its hilltop location on the Berkeley campus, a breathtaking and unforgettable view of the San Francisco Bay.

Holding this meeting in San Francisco is symbolic of the issues we'll address here. Like Lombard Street itself, the work that lies before us presents challenges that require strategic planning and thoughtful execution. I've personally seen these kinds of challenges bring out the best in our members time and again, and I'm confident that's what we'll see here. Once our meeting is complete we will have arrived at the end of our own version of "Lombard Street" more accomplished, more knowledgeable, and better prepared to provide value to our stakeholders.

Again, I welcome you, and as always, thanks for all you do.

Sincerely,

Joseph A. Hayden

Joe Hayden
NFRC Chairman



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NFRC's Fall Meeting: SPECIAL NOTES

Meeting Hotel:

Hilton Financial District, San Francisco
(<http://tinyurl.com/NFRCFall10>)
750 Kearny Street
San Francisco, California 94108
415-433-6600* Reservations (online above) or 1-800-HILTONS

NFRC Program Booklet:

NFRC is once again going **green**: NOTE - there will be **no printed copies of this program book available** on-site. **ONLY** Flash drives with an electronic version! If you need any hard copies - please print before coming to meeting or you will need to use the hotel's business center. Included on the flash drives will be the program booklet, ballots and ballot summaries, motion forms and task group notes pages.

Monday, November 8, 2010

Packed Schedule! Meetings start 7:00 a.m.: The NFRC will host a first time attendee Meeting Orientation followed by task group meetings throughout the morning in the Grand Ballroom located on the 3rd floor of the hotel. Additional task group meetings will be held on the second floor in the Jackson room. The NFRC Committee Blocks begin after a Networking Luncheon (all registrants welcome) and the Meeting's Opening Session.

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 November 9 and 10.)

NFRC First Time Meeting Attendees: Orientation

7:30 a.m. – 8:00 a.m.: Grand Ballroom

First time attendees, new members, and others wanting to learn more about the NFRC and the Meeting program are encouraged to attend the meeting orientation being held in the main meeting area for the conference. A presentation outlining the basics of NFRC programs and processes will be given along with a period for Question and Answers.

NFRC Opening Session

2:00 p.m. - 3:30 p.m.: Grand Ballroom

The Opening Session of the NFRC's meeting will be a full program featuring an overview of the new interactive voting tool making its debut at the subcommittee meetings on 11/9/2010 ([read more here](#)). Other highlights include the 2010 NFRC Board Election results and a special presentation from long-time NFRC Member: Duane Larson with Pacific Gas and Electric.

Duane Larson is the Director of Mass Market Energy Solutions and Service at Pacific Gas and Electric Company. He has spent thirty years doing energy efficiency at PG&E as an Energy Auditor, Program Manager, Supervisor, Manager, and Director and was a former NFRC Board Member. He will do a presentation for the group on Integrated Demand-Side Resources: Enabling A Sustainable Electric System.

Special Notes Continued on the next page.....



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Tuesday, November 9, 2010

NFRC Membership Reception: (For ALL registered Attendees)

6:00 p.m. - 7:30 p.m.: *The Mason Rooms – 2nd floor*

NFRC is hosting a reception for all registered attendees. Come meet and greet each other at an after-meeting networking and fellowship event. You are warmly invited to enjoy light hors d'oeuvres, spirits, and the company of the best and brightest minds in the energy focused fenestration industry.

***NFRC Member of the Year:** NFRC will announce the recipient of the 2010 Member of the Year Award during the Reception. This prestigious award recognizes the recipient's talent, achievements, and notable contributions to the fenestration industry that support the NFRC mission.*

Wednesday, November 10, 2010

Daylighting Presentation

5:00 p.m. - 6:00 p.m.: *Grand Ballroom*

Featuring Lisa Hescong – Hescong Mahone Group.

Sites, History, Nightlife, and Fenestration

The NFRC meeting is sure to keep all of our attendees busy – however we hope you find some time to explore San Francisco's various diversions – from the teeming nightlife of the many diverse neighborhoods in this historic city to the various must-see sites – just steps away!

Check out the following websites that may offer some assistance in planning for your free time:

- **Dining, Shopping, Exploring – all outside your door:** The Hilton Financial District has a handy online mapping tool available: [check out this link for a full listing of restaurants close by as well as shopping and other attractions.](#)
- **Are you ready for some football?** The NFRC's meeting Nov 8-11, offers opportunities for football fans on either the weekend before or after to see a football game. Click below for ticket information:
 - Sunday, November 7, 2010: [Kansas City at Oakland Raiders – 1:15pm](#)
 - Sunday, November 14, 2010: [St. Louis Rams at San Francisco 49ers - 4:15pm](#)
- **The Neighborhoods:** From Chinatown to Haight Ashbury, San Francisco's many neighborhoods are as diverse as they are interesting. Trip Advisor is a great resource for everything San Francisco. [Start here with a detailed listing of the various neighborhoods to explore while in San Francisco.](#) The hotel also has a detailed listing of the nearby neighborhoods.
- **Not to Miss:** About.com has gathered a top 10 listing of things not to miss in San Francisco: [Click here to access the link.](#)

***The San Francisco Convention & Visitors Bureau will have walking maps & Restaurant Guides on site ***

Special Notes Continued on the next page.....



credit: Lawrence Berkeley Nat'l Lab - Roy Kaltschmidt, photographer



NFRC Incorporates Audience Response Software into the Subcommittee and Committee Voting



How it works:

- NFRC will distribute programmed response cards to registered member companies (one per member company) and those holding proxies*.
- After each motion attendees will be able to press 1 for yes or 2 for no to submit a vote on all motions up for vote at the meeting.
- NFRC Staff will get an automatic vote count in-real time which will be used as the voting results.
- Automatic Polling will be used Tuesday, November 9 & Wednesday, November 10th at the Committee and Subcommittee Meetings.
- Members will be responsible for checking out response cards through the registration staff on Monday, November 8th, after 2 p.m.

Questions? [Contact Cheryl Gendron](#), NFRC Meeting Manager prior to the meeting or onsite.

**Proxies must be received prior to the start of the NFRC Meeting. They must be filled out and signed by a member representative from the absent organization.*



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Use box below to type any meeting notes you would like to capture



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Garage Door SHGC Task Group

Monday, November 8, 2010

7:30 a.m. – 8:00 a.m.

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

1. Call to Order

- a. Welcome to All AttendeesCell phones & laptops to Silent Mode
- b. Antitrust reminder
- c. NFRC Meeting Guidelines

2. Appoint Recording Secretary (Task Group Participant)

3. Review and approve agenda

4. Unfinished Business

- a. DASMA research on testing to NFRC 201
- b. Ballot results - proposed changes to NFRC 200

5. New Business

6. Adjourn

MISSION

To verify suitable and repeatable Solar Heat Gain Coefficient (SHGC) testing and calculation provisions for garage doors.

SCOPE

To draft a recommended method of calculating garage door SHGC for inclusion in NFRC 200, and to evaluate the method of testing as per NFRC 201 and drafting recommended revisions as needed, all subject to review as necessary by the NFRC SHGC Subcommittee."

Committee Chain: * Technical Committee * SHGC Subcommittee * Garage Door SHGC Task Group
NFRC Staff Liaison: *Dennis Anderson, LAP Manager, danderson@nfr.org*



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Garage/Rolling Door U-factor Task Group

Monday, November 8, 2010

8:00 a.m. – 8:30 a.m.

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

1. Call to Order

- a. Welcome to All AttendeesCell phones & laptops to Silent Mode
- b. Antitrust reminder
- c. NFRC Meeting Guidelines

2. Appoint Recording Secretary (Task Group Participant)

3. Review and approve agenda

4. Unfinished Business

- a. DASMA Research Project - Evaluating rolling steel door vertical jamb hardware
- b. Ballot results - proposed changes to NFRC 100

5. New Business

- a. Use of NFRC 102 results without simulating to NFRC 100
- b. Potential refinement of NFRC 100 procedures

6. Adjourn

MISSION

To verify suitable and repeatable U-factor testing and simulation provisions for garage doors and rolling doors.

SCOPE

To evaluate available data or conclusions from use of testing and simulation methods, and to draft recommended modifications to such methods, if needed, for review by the NFRC U-Factor Subcommittee.

Committee Chain: * Technical Committee * U-factor Subcommittee * Garage/Rolling Door U-factor Task Group
NFRC Staff Liaison: *Dennis Anderson, LAP Manager, danderson@nfr.org*



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Optical Properties of Non-Planar Products Task Group

Monday, November 8, 2010

7:30 a.m. – 8:30 a.m.

Chair: *Charlie Curcija, Lawrence Berkeley National Laboratory*

1. Call to Order

- a. Welcome to All AttendeesCell phones & pagers to Silent Mode
- b. Antitrust reminder
- c. NFRC Meeting Guidelines
- d. Review TG voting requirements: All present can vote

2. Appoint Recording Secretary (task group member)

3. Review and approve agenda

4. Unfinished Business

5. New Business

- a. Solar-Optical Simulation of Non-Planar Fenestration Products Summary Page ballot review
- b. Further steps for this TG

6. Adjourn

SCOPE

Evaluate and consider methodologies for simulating angle-dependent solar-optical performance of multi-layer, non-planar, specular and diffuse transparent systems and devices, such as domed skylights, tubular daylighting devices, barrel vault skylights, etc. Make recommendation to the APC if some methodology could lead to the development of an accredited laboratory program, with certified simulators for such systems and devices in the future.



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Ventilation Rating Task Group

Monday, November 8, 2010

8:30 a.m. – 9:30 a.m.

Chair: *Ray Garries, Jeld-Wen, Inc.*

1. Call to Order

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

2. Appoint Recording Secretary (TG participant)

3. Approve Minutes from most recent TG conference call

4. Review and approve agenda

5. Unfinished Business

- a. Scope Development

6. New Business

- a. Temporary Labels with Ventilation Rating
- b. Ventilation Rating Calculation
- c. Screen Mesh Ventilation

7. Adjourn

SCOPE

“To create a NFRC Ventilation rating system utilizing net clear opening less a screen factor. The process for developing the rating will be in three phases 1) Standardize the method for calculating fenestration net clear ventilation area dimensions, 2) Standardize the effect of screen mesh for two or three representative screen cloth categories, and 3) Develop a rating system for NFRC certification purposes based on current standardize sizes”

Committee Chain: * Research & Technology Committee * Research Subcommittee * Ventilation Rating Task Group
NFRC Staff Liaison: Stacy Germann, CMA Program Manager, sgermann@nfr.org



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Tubular Daylighting Devices Task Group

Monday, November 8, 2010

8:30 a.m. – 9:30 a.m.

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

1. Call to Order

- a. Welcome to All AttendeesCell phones & laptops to Silent Mode
- b. Antitrust reminder
- c. NFRC Meeting Guidelines

2. Appoint Recording Secretary (Task Group Participant)

3. Review and approve agenda

4. Unfinished Business

- a. Final report from ATI U-factor measurements. NFRC involvement in Energy Star 2013 for TDD's.
- b. A final report on complex VT measurements.
- c. Algorithm to utilize available sunlight in the US and how that may help define simple NFRC VT rating utilizing complex data from current VT measurement work. The objective here is to use the complex data to yield a reasonable usable consumer VT.
- d. Review one page RFP for U-factor simulation and TG input on final research report.

5. New Business

6. Adjourn

SCOPE

The Tubular 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. The TG still reports to U-factor subcommittee.

Committee Chain: * Technical Committee * U-Factor Subcommittee * TDD Task Group
NFRC Staff Liaison: Dennis Anderson, Laboratory Accreditation Program Manager * danderson@nfr.org



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Daylighting Rating Task Group

Monday, November 8, 2010

9:30 a.m. – 10:30 a.m.

Chair: *Mudit Saxena (HMG); Roger LeBrun (Velux)*

1. Call to Order

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

2. Appoint Recording Secretary (TG participant)

3. Approve Minutes from most recent TG conference call

4. Review and approve agenda

5. Unfinished Business

- a. Phase 1 - progress and next steps
- b. Phase 2 – discuss any concurrent activity that can be started

6. New Business

- a. Fenestration Illumination Rating Summary Page ballot

7. Adjourn

SCOPE

To create a rating system for daylighting potential utilizing the existing NFRC VT rating combined with known, bright day incident illuminance values.



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CMA Labeling Task Group

Monday, November 8, 2010

9:30 a.m. – 10:30 a.m.

Chair: *Charlie Curcija, Lawrence Berkeley National Labs*

1. Call to Order

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

2. Appoint Recording Secretary (TG participant)

3. Approve Minutes from most recent TG conference call

4. Review and approve agenda

5. Unfinished Business

6. New Business

- a. Review new label certificate format and discuss ballot results

7. Adjourn

SCOPE

“To develop a label certificate format for the CMA-based certification program.”



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Awning Task Group

Monday, November 8, 2010

Attachments Block: 10:30 a.m. – 12:00 p.m.

Chair: John Gant, Glen Raven

1. Call to Order

- a. Circulate task group interest sheet(s)
- b. Welcome to All AttendeesCell phones & laptops 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. Review current Ballot on Awning Metric Research

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 * Attachments Subcommittee * *Awning Task Group*
Staff Liaison: *John W. Lewis, Jr., Director, New Business Programs * jlewis@nfr.org*



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Exterior Attachments / Interior Attachments Task Group

Monday, November 8, 2010

Attachments Block: 10:30 a.m. – 12:00 p.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(s)
- b. Welcome to All AttendeesCell phones & laptops 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. Report from Reference Base Case Windows Working Group – N.Petermann

5. New Business

- a. Review current Ballot NFRC 100A
- b. Review current Ballot NFRC 200A
- c. Review current Ballot NFRC 100A Skylights

6. Adjourn

SCOPE

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

Committee Chain: * Technical Committee * Attachments Subcommittee * *Exterior / Interior Attachments Task Group*
Staff Liaison: *John W. Lewis, Jr., Director, New Business Programs * jlewis@nfr.org*



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Attachment Optical Property Task Group

Monday, November 8, 2010

Attachments Block: 10:30 a.m. – 12:00 p.m.

Chair: Tom Morrissey, Hunter Douglas

1. Call to Order

- a. Circulate task group interest sheet(s)
- b. Welcome to All AttendeesCell phones & laptops 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 general activities since summer virtual conference
- b. Update on Fabric Database Work Group – Mike Rubin or Christian Kohler
- c. Update cellular shade simulation work group - Teri Williamson
- d. Update standards work group – Rob Simons

5. New Business

- a. Recommendations from group for next actions

6. Adjourn

SCOPE

To determine optical properties for attachment materials to populate the impending Window 6 optical library for attachment simulation. This TG was formed at the Fall 08 membership meeting in Jacksonville, FL.



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Meeting Notes:

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Attachment PCP Task Group

Monday, November 8, 2010

Attachments Block: 10:30 a.m. – 12:00 p.m.

Chair: *Theresa Williamson, Newell, Inc.*

1. Call to Order

- a. Circulate task group interest sheet(s)
- b. Welcome to All AttendeesCell phones & laptops 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

6. Adjourn

SCOPE

To determine the rules and requirements for attachment manufacturers to certify and label their products.

Committee Chain: * Ratings Committee * Certification Subcommittee * *Attachment PCP Task Group*
Staff Liaison: *John W. Lewis, Jr., Director, New Business Programs * jlewis@nfr.org*



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Attachment Labeling Task Group

Monday, November 8, 2010

Attachments Block: 10:30 a.m. – 12:00 p.m.

Chair: *Tom Morrissey, Hunter Douglas*

1. Call to Order

- a. Circulate task group interest sheet(s)
- b. Welcome to All AttendeesCell phones & laptops 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 activities since summer virtual conference
- b. Update status/impact of the board's direction in their Vision Statement from early 2010
- c. Discussion on strategy for future Attachments Label ballot

5. New Business

- a. Recommendations from group for next actions

6. Adjourn

SCOPE

To determine the rules and requirements for attachment manufacturers to certify and label their products.



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Applied Film Task Group Monday, November 8, 2010

Attachments Block: 10:30 a.m.–12:00 p.m.

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

1. Call to Order

- a. Circulate task group interest sheet(s)
- b. Welcome to All AttendeesCell phones & laptops 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

6. Adjourn

SCOPE

The Applied Film Task Group shall develop and assess procedures for rating of applied films.

Committee Chain: * Technical Committee * Attachments Subcommittee * *Applied Films Task Group*
Staff Liaison: *John W. Lewis, Jr., Director, New Business Programs * jlewis@nfr.org*



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PCP Review Task Group

Monday, November 8, 2010

12:00 p.m. – 1:00 p.m.

Chair: *Tina Jenkins, Simonton Windows*

1. Call to Order

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

2. Appoint Recording Secretary (Task Group Participant)

3. Review and approve agenda

4. New Business

- a. Full CPD Number on Temporary Label
- b. Permanent label requirements for Pre-Hanger

5. Adjourn

SCOPE

The task group is responsible for maintaining the NFRC 700 document.



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NFRC's Fall Membership Meeting OPENING SESSION AGENDA

Monday, November 8, 2010

2:00 p.m. – 3:30 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 (S. Johnson)
 - 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. Presentation –**
 - a. Pacific Gas and Electric /Enabling A Sustainable Electric System
- 6. Adjourn**

*NFRC Staff Liaison: James Benney, CAE, Executive Director * jbenney@nfr.org*



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Regulatory Affairs and Marketing Committee

Monday, November 8, 2010

3:30 p.m. – 4:30 p.m.

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

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 member company listed on the roster.

2. Appoint Recording Secretary (NFRC Staff)

3. Roll call / Establish quorum

4. Approve Minutes from previous meeting in New Orleans, LA, April 2010.

5. Review and approve agenda

6. Reports

- a. Codes
- b. EWC
- c. EPA (Doug Anderson)
- d. Communications yearly report (Leonard Greenberger)
- e. CMA Program Update
- f. DOE Update (Marc LaFrance)
- g. International 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*



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Regulatory Affairs & Marketing Committee Roster*

As of 10/25/2010

First Name	Last Name	Company Name
Nils	Petermann	Alliance to Save Energy
Ken	Brenden	American Architectural Manufacturers Association (AAMA)
Joe Jonely		AMSCO Windows
Steve M.	Johnson	Andersen Corporation
Mike	Thoman	Architectural Testing, Inc.
Steve Harp		Associated Materials, Inc.
Doug Harden		Atrium Companies
Travis	Windleharth	Bekaert Specialty Films
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
Rik	Vonderhaar	Champion Window
John	Westerfield	Crystalite, Inc.
Joe Hetzel		DASMA (Door & Access Systems Manufacturers Assoc. International)
Gary Curtis		ECOS Consulting
Tracy	Rogers	EdgeTech, I.G., Inc.
Gurjinder	Dhami	ETC Laboratories, Inc.
John	Gant	Glen Raven, Inc.
Michael	Cienian	Hunter Douglas, Inc.
Lucas	Turner	Hurricane Testing Laboratories
Margaret Webb		Insulating Glass Manufacturers Alliance (IGMA)
Darrell Smith		International Window Film Association (IWFA)
Jose Antonio	Terrazas	J&A Windows, Inc.
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
Stephen Hebeisen		Mecho Shade Corporation
Kevin	Vilhauer	Milguard Manufacturing, Inc.
Teresa	Williamson	Newell Window Fashions
Dave DeBlock		ODL Inc.
Peter	Lyons	Peter Lyons & Associates
Joseph Hayden		Pella Corporation



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*Regulatory Affairs and Marketing Committee Roster Continued**

First Name	Last Name	Company Name
David L.	Duly	Pilkington North America, Inc.
Don	Smallwood	Professional Awnings Manufacturers Association (PAMA)
Scott	Widmer	ProVia Door, Inc.
Thomas S.	Zaremba	Roetzel & Andress
Marles	McDonald	NCTL dba Quality Testing, Inc.
Cole	Woodward	Ravenbrick
Marvin	Stover	Royal Group
Noel	King	Royal Mouldings
John	Hogan	Seattle Department of Planning and Development
Tina	Jenkins	Simonton Windows
Julia	Schimmelpenningh	Solutia, Inc.
John	Meade	Southwall Technologies
Steve	Haubert	Sunrise Windows
Sneh	Kumar	TRACO
Werner	Lichtenberger	TruSeal Technologies, Inc.
Roger	LeBrun	Velux America, Inc.
Thomas	Marusak	Window Covering Manufacturers Association (WCMA)
Jeff	Baker	WESTLab
William	Rygg	William Rygg Consultants
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: meetings@nfr.org*



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

Regulatory Affairs and Marketing Committee

Wednesday, April 14, 2010

2:00 p.m. – 3:00 p.m.

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

1. **Meeting called to order @ 2.10 pm.**
 2. **Ray McGowan appointed recording secretary (NFRC Staff)**
 3. **Roll call established a quorum**
 4. **Minutes from previous meeting in San Antonio, Texas, November 2009 approved**
 5. **Reports**
 - a. **Energy Codes:** Garrett Stone reported on recent changes to IECC and ASHRAE 90.1. Future changes will require more stringent U-factors and SHGCs since the federal government is focused on increased building energy savings. ARRA funding to all states requires adoption and compliance with IECC 09 and ASHRAE 90.1-07. Home Star and Building Star, proposed government energy efficiency programs, will require high performance, NFRC rated windows and doors.
 - b. **Efficient Window Collaborative:** Nils Peterman reported on various Efficient Windows Collaborative activities including promoting NFRC rated products on their website.
 - c. **ENERGY STAR:** Rich Karney of the US DOE reported on ENERGY STAR activities. EPA and DOE have signed an MOU transferring control of window ratings to EPA. The recent ENERGY STAR window criteria update went forward on January 1, 2010 with no changes. New ENERGY STAR window criteria are not scheduled yet, but are anticipated in the future. ENERGY STAR is enforcing third party testing on all qualified products and NFRC is expected to fit well with this requirement. EPA is considering random testing of ENERGY STAR window qualified products beginning in 2011. No decisions have been made.
 6. **New Business**
 - a. The board directed the RAMC to consider ventilation and daylighting ratings. RAMC needs to consider the public desire for information on these ratings. The chair will develop two task groups to investigate these potential ratings.
 7. **Meeting adjourned @ 3 pm.**
-



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Certification Policy Committee

Monday, November 8, 2010

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

Chair: *Steve Johnson, Andersen Windows Corporation*

Vice Chair: *Brad Schultz, Associate Laboratories, 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. Staff report
 - i. Inspection Agency Inspection status
 - ii. CAP Workshop

6. New Business

- a. None

7. 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*



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Certification Policy Committee Roster

First Name	Last Name	Company Name
Steve	Johnson	Anderson Corporation
Brad	Schultz	Associated Laboratories, Inc.
James C.	Krahn	Marvin Windows & Doors
Steve	Strawn	Jeld-Wen, Inc.
Jeff	Baker	WESTLab
Bipin	Shah	WinBuild, Inc.



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Technical Interpretation Policy Committee

Monday, November 8, 2010

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

Chair: Tom Culp, BirchPoint Consulting

Vice Chair: Mike Thoman, Architectural Testing, 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. Actions taken during conference calls or via ballots since Spring 2010 Meeting
- b. 2010 TI Manual

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;*
- *Work 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*



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Technical Interpretation Policy Committee Roster

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



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Accreditation Policy Committee

Monday, November 8, 2010

Under Policy Committee Block: 4:30 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
- e. APC Task Spreadsheet

6. Unfinished Business

- a. LAP Workshops
- b. Window 6 / Therm 6 Training
- c. LAP document updates

7. New Business

8. Adjourn

SCOPE

The NFRC Accreditation Policy Committee oversees NFRC's Laboratory Accreditation Program (LAP) and the Calculation Entity Approval Program (CEAP), including:

- *Issuing policy interpretations related to laboratory accreditation and CEAP:*
- *Ruling on appeals properly brought pursuant to the LAP and CEAP:*
- *Recommending modifications to the NFRC LAP and CEAP; and*
- *Grants final approval of accreditation of testing and simulation laboratories*
- *Grants final approval to Approved Calculation Entities (ACE).*

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



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Accreditation Policy Committee Roster

First Name	Last Name	Company Name	
Marcia	Falke	Keystone Certifications, Inc.	
Tom	Culp	Birch Point Consulting, LLC	
Joseph Hayden		Pella Corporation	
Werner	Lichtenberger	TruSeal Technologies, Inc.	
Brad	Schultz	Associated Laboratories, Inc.	
Bipin	Shah	WinBuild Inc.	
Jackie Campbell		WESTLab	Below this line...non-voting
Marles	McDonald	Quality Testing, Inc.	
Lucas	Turner	Hurricane Test Laboratory	
Michael	Resech	Architectural Testing, Inc.	



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Thermophysical Properties Subcommittee

Tuesday, November 9, 2010

Block Period: 7:00 a.m. – 3:00 p.m.

Chair: Charlie Curcija, Lawrence Berkeley National Labs

1. Call to Order

- a. Circulate task group interest sheet
- b. Welcome to All AttendeesCell phones & laptops 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. Approve Minutes from July 2010 virtual meeting

4. Review and approve agenda

5. Reports

- a. Thermophysical Property manufacturer specific submissions-Ray McGowan, staff
- b. Thermophysical Properties ILC update-Ray McGowan, staff

6. Unfinished Business

7. New Business

- a. NFRC 101 and the THERM library-appendix a and b electronic development
- b. Appointment of the chair of TG to re-examine generic material tables (Appendices A and B)

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 * rmcgowan@nfrc.org



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*****Draft Minutes*****

Thermophysical Properties Subcommittee

Monday, July 19, 2010

Under Research & Technology Committee Block Period: 11:00 a.m. – 2:00 p.m.

Chair: Charlie Curcija, Carli, Inc.

-
1. **Call to Order.** Chair Charlie Curcija called the meeting to order at 2:21 pm EDT; the antitrust reminder was given and the special virtual meeting voting requirements were reviewed.
 2. **Appoint Recording Secretary.** John Lewis (NFRC staff) was appointed the recording secretary.
 3. **Approve Minutes from April 2010 meeting in New Orleans, LA.** Joe Hayden noted the voting [0-0-0] was recorded incorrectly in the minutes as presented; the minutes were approved as amended (NFRC staff shall correct the minutes as noted).
 4. **Repor ts**
 - a. **Thermophysical Property Manufacturer-Specific Submissions** Update - Ray McGowan (NFRC staff) provided a *PowerPoint* slide summarizing the activity in this area. Chair Curcija asked that comments on future submittals be forwarded to the entire task group. Peer reviews will be done via e-mail; NFRC 101 will be announced via Magnet Mail
 - b. **Thermophysical Properties ILC update**-Ray McGowan (NFRC staff) provided a *PowerPoint* slide summarizing the comparison activity with *composite board*.

W. du Pont suggested that ASTM E 691 be used in the analysis of the results.

Chair Curcija asked that for future work, labs that do not return their work within a specified time period be removed from the approved labs listing.
 - c. NFRC 101/103 TG – Chair Curcija provided an update for TG Chair Peter Lyons (Peter Lyons Associates). Chair Curcija advised this TG no longer needs to remain active.
 5. **Ne w Business**
 - a. NFRC 101 and the THERM library – Chair Curcija provided an overview of the NFRC 101 *Appendix A* Material List spreadsheet.

Chair Curcija suggested a new TG be formed to clean up and edit the values as cited in *Appendix A* and *Appendix B* (the Chair has yet to be named).

Chair Curcija suggested *Appendix B* be converted to electronic format as well, and require ASLs to use the values in thermal simulations.
 6. **Adjourn.** There being no further new business, the meeting was adjourned at 2:48 pm EDT.



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Research Subcommittee

Tuesday, November 8, 2010

Block Period: 7:00 a.m. – 3:00 p.m.

Chair: Bipin Shah, WinBuild, Inc.

Vice Chair: Peter Lyon, Peter Lyons & Associates

1. Call to Order

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

2. Appoint Recording Secretary (NFRC Staff)

3. Approve Minutes from July 2010 Virtual meeting

4. Review and approve agenda

5. Reports

- a. Research Project Status and Financial Summary-Ray McGowan, staff
- b. Long Range Research Planning TG-Bipin Shah, WinBuild
- c. Window 6-Therm 6 Validation Research PMTG-Joe Hayden, Pella
- d. TDD U-factor Rating Research PMTG-Dave DeBlock, ODL
- e. Condensation Resistance Procedure for CMA PMTG-Kevin Vilhauer, Milgard
- f. Complex VT Rating Research PMTG-Ross McCluney, Willie duPont
- g. Gas Permeability Research (IGMA project, NFRC cosponsoring)-Werner Lichtenberger, Truseal
- h. Ventilation Rating TG-Ray Garries, Jeld-Wen
- i. Daylighting Rating TG-Roger LeBrun, Velux;

Note: All research RFPs and Summary pages below were considered by the Long Range Research Planning Task Group as required by the NFRC 703-Research Program Manual. Notes are made on each item below indicating how the proposed research fits on the NFRC Research Priority List. (Review list here: <http://www.nfrc.org/tglrrp.aspx>)

6. Unfinished Business

- a. RFPs



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- i. Develop Improved Algorithms for Improving Accuracy of CMA Methodology RFP-ballot. Proponent: Dr. Charlie Curcija, LBNL (long range priority: improve existing procedures, priority A)
- ii. Tubular Daylighting Device VT Rating RFP-ballot. Proponent: TDD VT Rating Task Group (long range priority: ensure all products can be rated: priority A)
- b. Fenestration Illumination Measurement Standard Summary Page Ballot (long range priority: new rating, A priority) Proponent: Dr. Ross McCluney, Sunpine Consulting
- c. Develop Methodology for Solar-Optical Simulation of Non Planar Glazing Systems Summary Page ballot (long range priority: new rating procedure, priority A) Proponent: Dr. Charlie Curcija, LBNL

7. New Business

- a. Attachment Summary Page Ballots
 - i. Evaluate Impact of Specific Conditions on Attached Awning Performance Summary page ballot (long range priority: new ratings, A priority) Proponent: John Gant, Glen Raven
 - ii. Attachments Performance Strategic Plan Summary page ballot (long range priority: new rating, A priority) Proponent: Mudit Saxena, Heschong Mahone Group
- b. Tubular Daylighting Devices - Research Project to Develop Updated Modeling Procedure Summary Page ballot (long range priority: ensure all product can be rated, priority A) Proponent: Dr. Charlie Curcija, LBNL
- c. Long Term Energy Performance Related Summary Pages (all on long range priority: Develop New Rating Procedures, priority C) *Note: these summary page agenda items C.i.ii,iii. were not balloted but circulated directly to membership for consideration as the NFRC 703-Research Program Manual allows.*
 - i. Thermal Stress on IGs Research-Summary Page Proponent: Valerie Block, Dupont
 - ii. Research and Coordination to Develop an ASTM Energy Performance Durability Test-Summary Page Proponent: Marc LaFrance, DOE
 - iii. Upgrade ASTM 2190 for IGU Durability Testing-Summary Page Proponent: Marc LaFrance, DOE
- d. CMA summary pages (all not listed on long range priority list):



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- i. CMAST Feedback on Usability Study summary page ballot
Proponent: Mudit Saxena, Heschong Mahone Group
- ii. CMA Impact on HVAC Sizing Study Summary Page ballot.
Proponent: Mudit Saxena, Heschong Mahone Group
- iii. CMAST Parametric Targeting Tool- Summary Page ballot.
Proponent: Mudit Saxena, Heschong Mahone Group

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



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Meeting Notes:

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NFRC 2010 Fall Membership Meeting
November 8 - 11, 2010, San Francisco, CA
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*****Draft Minutes*****

Research Subcommittee

Monday, July 19, 2010

Under Research & Technology Committee Block Period: 11:00 a.m. – 2:00 p.m.

Chair: Bipin Shah, WinBuild, Inc.

Vice Chair: Peter Lyons, Peter Lyons and Associates

-
1. **Call to Order.** After a brief welcome and introduction by NFRC Chairman of the Board Joe Hayden (Pella), and after Chair of the R&T Committee Werner Lichtenberger (TruSeal) handed the meeting over to Chair Bipin Shah (WinBuild). Chair Shah called the meeting to order at 11:05 am EDT; the antitrust reminder was given and the special virtual meeting voting requirements were reviewed.
 2. **Appoint Recording Secretary.** John Lewis (NFRC staff) was appointed the recording secretary.
 3. **Approve Minutes from April 2010 meeting in New Orleans, LA.** Joe Hayden noted the voting [0-0-0] was recorded incorrectly in the minutes as presented; the minutes were approved as amended (NFRC staff shall correct the minutes as noted).

4. Reports

- a. Research Project Status and Financial Summary-Ray McGowan, NFRC staff, reported on the research financial status including DOE funding.
- b. Long Range Research Planning Task Group-Bipin Shah reported this TG met in May 2010 and updated the list.
- c. Window 6-Therm 6 Validation Research PMTG-Joe Hayden, Pella provided a brief update; principle subcontractor (W. du Pont) provided a *PowerPoint* presentation detailing the status of the project. Mr. du Pont stated the goal is to complete the project by the November NFRC membership meeting.

Motion (01): J. Hayden (Pella) /S. Kumar (TRACO) to extend the W6/T6 Validation Research Project Completion date to the November 2010 NFRC Membership Meeting. Motion passed 38-4.

- d. TDD U-factor Research PMTG-Dave DeBlock, ODL, reported the contractor work is complete, but the task group needs to finish reviewing the reports.
- e. Condensation Resistance Procedure for CMA PMTG-the contractor, Charlie Curcija, provided an update for Chair Kevin Vilhauer, the chair. Charlie stated that work continues and is expected to be completed by the Fall 2010 membership meeting.
- f. Complex VT Rating Research PMTG-Ross McCluney, Willie du Pont; R. McCluney provided an update.

Motion (02): L. Condit (Entech Solar) / D. De Block (ODL) to extend the Complex VT Rating Research Project completion date to the November 2010 NFRC Membership Meeting. Motion passed 31-3.

- g. Gas Permeability Research (IGMA project, NFRC cosponsoring)-Werner Lichtenberger, Truseal; Chair Lichtenberger provided a brief update via a series of slides.
- h. Ventilation Rating TG-Task Group member Steve Strawn (JELD-WEN) provided an update for Chair Ray Garries (JELD-WEN)



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- i. Motion (03): S. Strawn (JELD-WEN) / D. De Block (ODL) to revise the scope of the TG as provided (and revised) during the virtual meeting. Motion passed 25-2.

5. New Business

- a. The Fenestration Illumination Research Ballot was reviewed. R. McCluney provided a review of his Illumination Test Method Development Project proposal.
i. Motion (04): W. du Pont (Sunergy) / D. De Block (ODL) to find the Sunergy negative persuasive and substantive, and to return the Research Project summary page to the Daylighting Rating Task Group for further development. The industry shall consider cost sharing to move forward. The motion passed 30-3.
b. Nelson Pena (California Energy Commission) withdrew his negative based on the further explanation and clarification by Ross McCluney and the prior motion by Sunergy.
c. L. Condit (Entech Solar) withdrew his negative based on prior action.
d. Mike Cienian (Hunter Douglas) withdrew his negative based on prior action.
e. Marg Webb (IGMA) withdrew her negative based on prior action.
f. Steve Strawn (JELD-WEN) withdrew his negative based on prior action.
g. Jim Krahn (Marvin) withdrew his negative based on prior action; he also asked that an explanation of why the project is being undertaken be addressed as well.
h. The Torrington Lumber Company negative was withdrawn as no supporting comment was provided.
i. Tom Marisek (WCMA) withdrew his based on prior action.
j. Jeff Baker (WESTLab) withdrew based on prior action.
k. Ken Brenden (AAMA) withdrawn based on prior action.
l. Joe Hayden (Pella) considers his approve with comment addressed by prior action.
m. Roger LeBrun (VELUX) considers his approve with comment explained it was essential.
n. Marc LaFrance (DoE) provided a comment that DoE is interested in pursuing long term window product durability research and encourages NFRC to develop a RFPs to begin research.

6. Adjourn at 1:27 pm.

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)



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Optical Properties Subcommittee

Tuesday, November 9, 2010

Block Period: 7:00 a.m. – 3:00 p.m.

Chair: Sneh Kumar, Traco

1. Call to Order

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

2. Appoint Recording Secretary (NFRC Staff)

3. Approve Minutes from July 2010 virtual meeting

4. Review and approve agenda

5. Reports

- a. NFRC 302 TG-Jim Larsen
- b. Attachment optical properties TG - Tom Morrissey
- c. Optical Properties Priorities TG – TBD
- d. Non-planar Simulation TG - Charlie Curcija
- e. Daylighting Rating TG-Mudit Saxena, Roger LeBrun
- f. ISO activity-Ray McGowan

6. Unfinished Business

7. New Business

- a. NFRC 302 addendum 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



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NFRC 2010 Fall Membership Meeting
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*****Draft Minutes*****

Optical Properties Subcommittee

Monday, July 19, 2010

Under Research & Technology Committee Block Period: 11:00 a.m. – 2:00 p.m.

Chair: *Sneh Kumar, TRACO*

1. **Call to Order.** Chair Sneh Kumar (TRACO) called the meeting to order at 1:37 pm EDT; Chair Kumar advised the membership of the antitrust guidelines that pertain to these meetings.
2. **Appoint Recording Secretary.** John Lewis (NFRC staff) was appointed recording secretary.
3. **Repor ts**
 - a. NFRC 302 TG – Ray McGowan (NFRC staff) provided a report for Chair Jim Larsen (Cardinal) stating significant changes are beign considered, but no action has been taken yet.
 - b. Non-planar Simulation TG – Charlie Curcija (Carli, Inc.) advised no activity to report.
 - c. Attachment optical properties TG – Robert Simons (Hunter Douglas) provided a report for Chair Tom Morrissey (Hunter Douglas) stating LBNL has begun measuring properties and assembling data.
 - d. Optical Property Priorities TG – Mike Rubin (Lawrence Berkeley National Laboratory) provided an overview of the ‘Top Ten OPSC Priorities’ with the aid of a slide summarizing these priorities.
 - e. ISO activity – Mike Rubin/Ray McGowan; Chair Mike Rubin provided an update on “Status of International Standards” with the aid of a slide summarizing this activity.
 - f. Daylighting Rating TG – Mudit Saxena (Heschong Mahone Group), Roger LeBrun (VELUX); M. Saxena provided a *PowerPoint* presentation summarizing the activity of the task group.
 - g. Optical Property ILC – Ray McGowan/Mike Rubin; Chair Mike Rubin provided an update on status of the interlaboratory comparison project stating is is underway and a preliminary report may be ready by the Fall 2010 membership meeting.

Chair Kumar formed the Optical Properties ILC review/task group and appointed Mike Rubin as Chair.
4. **Adjourn.** There being no further new business, the meeting was adjourned at 2:15 pm EDT.



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Research and Technology Committee

Tuesday, November 9, 2010

Block Period: 7:00 a.m. – 3:00 p.m.

Chair: *Werner Lichtenberger, Truseal Technologies*

Vice Chair: *Dave DeBlock, ODL, Inc.*

1. Call to Order

- a. Circulate task group interest sheet
- b. Welcome to All AttendeesCell phones & laptops 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 July 2010 virtual meeting

5. Review and approve agenda

6. Reports

- a. Research SC-Bipin Shah
- b. Optical Properties SC-Sneh Kumar
- c. Thermophysical Properties SC-Charlie Curcija

7. Unfinished Business

8. New Business

- a. Window Life Cycle Cost Analysis Research presentation-University of Minnesota, Kerry Haglund

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*

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

*Staff Liaison: Ray McGowan, Senior Program Manager * rmcgowan@nfr.org*



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Research & Technology Committee Roster*

As of 10/25/2010

First Name	Last Name	Company Name
Ken	Brenden	American Architectural Manufacturers Association (AAMA)
Neal	Humphrey	Alliance to Save Energy
Fred	Clark	Alkenz USA
Joe Jonely		AMSCO Windows
Steve Johnson		Anderson Corporation
Brad	Schultz	Associated Laboratories, Inc.
Steve Harp		Associated Materials, Inc.
Doug	Harden	Atrium Companies Inc.
Thomas	Culp	Birch Point Consulting LLC
Jim	Larsen	Cardinal Industries
Mahabir Bhandari		CARLI, Inc.
Nelson	Pena	California Energy Commission
Kerry Haglund		Center for Sustainable Building Research
Rik	Vonderhaar	Champion Window
John	Westerfield	Crystallite
Charles Condit		Entech Solar
John	Gant	Glen Raven, Inc.
Tim	Singel	Guardian Industries Corp.
Mudit Saxena		Heschong Mahone Group
Robert	Simons	Hunter Douglas, Inc.
Lucas Turner		Hurricane Test Lab
Margaret Webb		Insulating Glass Manufacturers Alliance (IGMA)
Darrell Smith		International Window Film Association (IWFA)
Steve Strawn		Jeld-Wen, Inc.
Sue	Schreiber	Kolbe and Kolbe
Christian Kohler		Lawrence Berkeley National Laboratory (LBNL)
James C.	Krahn	Marvin Windows & Doors
Steve Hebeisen		Mecho Shade Corporation
Kevin Vilhauer		Milgard Manufacturing
Marles	McDonald	NCTL dba Quality Testing, Inc.
Gregg	Vincent	Natural Light Energy Systems
Theresa	Williamson	Newell Window Fashions
Dennis	Northcutt	N T Window
David A.	De Block	ODL Incorporated



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*Research & Technology Committee Roster Continued**

First Name	Last Name	Company Name
Michele	Sahlin	Professional Awnings Manufacturers Association (PAMA)
Joseph	Hayden	Pella Corporation
Peter	Lyons	Peter Lyons and Associates
Andrew	Caldwell	Phifer Incorporated
David L.	Duly	Pilkington North America, Inc.
Scott	Widmer	ProVia Door, Inc.
Cole	Woodward	Ravenbrick LLC
Thom	Zaremba	Roetzel and Address
Stefan	Poetsch	Rollac Shutters
Chris	Scoville	QAI labs
Tina	Jenkins	Simonton Windows
Dan	State	Solatube International, Inc.
Lisa	Winkler	Solutia, Inc.
John	Meade	Southwall Technologies
Brian	Amberg	Stork Twin City Testing
Ross	McCluney	Sun Pine Consulting, Inc.
Steve	Haubert	Sunrise Window
William C.	du Pont	Sunergy Consulting
Sneh	Kumar	TRACO
Werner	Lichtenberger	TruSeal Technologies, Inc.
Gena	Webb	Twitchell Corporation
Roger	LeBrun	Velux-America, Inc.
Jeff	Baker	WESTLab, Inc.
Bipin	Shah	WinBuild, Inc.
John	McFee	Window and Door Manufacturer's Association (WDMA)
Tony	Rygg	William Rygg Consulting
Anthony	Cinnamon	Wiss, Janney, Elstner & Associates

**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: meetings@nfr.org*



NFRC 2010 Fall Membership Meeting
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*****DRAFT MINUTES*****

Research and Technology Committee

Monday, July 19, 2010

Block Period: 11:00 a.m. – 3:30 p.m.

Chair: *Werner Lichtenberger, Truseal Technologies*

Vice Chair: *Dave DeBlock, ODL, Inc.*

-
1. **Call to Order.** Chair Werner Lichtenberger (TruSeal) called the meeting to order at 2:55 pm EDT; the antitrust reminder was given and the special virtual meeting voting requirements were reviewed.
 2. **Appoint Recording Secretary.** John Lewis (NFRC staff) was appointed the recording secretary.
 3. **Roll call / Establish quorum.** A quorum was established.
 4. **Reports**
 - a. Research SC — Chair Bipin Shah reported; there were 3 action items for the Committee:
 - Motion (04):** Bipin Shah (WinBuild) / Dave De Block (ODL) to extend the W6/T6 Validation Research Project Completion date to the November 2010 NFRC Membership Meeting. Motion passed 27-4.
 - Motion (05):** Bipin Shah (WinBuild) / Dave De Block (ODL) to extend the Complex Product VT Rating Research Project Completion date to the November 2010 NFRC Membership Meeting. Motion passed 29-2.
 - Motion (06):** Bipin Shah (WinBuild) / Steve Harp (Associated Materials, Inc.) moved to revise the scope of the TG as provided (and revised) during the virtual meeting. Motion passed 26-2.
 - b. Optical Properties SC — Chair Sneh Kumar reported; no action items for the Committee.
 - c. Thermophysical Properties SC — Chair Charlie Curcija reported; no action items for the Committee.
 5. **New Business**
 - a. Dissolve NFRC 600-Glossary TG
 - Motion (07):** Charlie Curcija (Carli, Inc.) / Joe Hayden (Pella) to dissolve the NFRC 600 Task Group. Motion passed 34-0.
 6. **Adjourn.** There being no further new business, the meeting was adjourned at 3:23 pm EDT.

*NFRC Staff Liaison: Ray McGowan, Senior Research and Technology Manager * rmcgowan@nfrc.org*



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Software Subcommittee

Tuesday, November 9, 2010

Under Technical Committee Block: 3:00 p.m. – 6:00 p.m.*

Chair: *Brian Crooks, Cardinal Glass Industries, Inc.*

Vice Chair: *Jim Krahn, Marvin Windows & Doors*

1. Call to Order

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

2. Appoint Recording Secretary (NFRC Staff)

3. Review and approve agenda

4. Approve Minutes from July 2010 Summer Virtual Meeting.

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

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.

* Subcommittees under the Technical Block will run consecutively as time allows; groups listed on the schedule will go in order, but date/time is not guaranteed.

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



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*****Draft Minutes*****

Software Subcommittee

Tuesday, July 20, 2010

Under Technical Committee Block: 11:00 a.m. – 2:00 p.m.*

Chair: Brian Crooks, Cardinal Glass Industries, Inc.

Vice Chair: Jim Krahn, Marvin Windows & Doors

-
1. Chair called the meeting to order at 11:05 AM- antitrust reminder given and reviewed voting requirements
 2. S. Hanlon (NFRC Staff) was appointed recording secretary
 3. The agenda was reviewed and approved as presented.
 4. The minutes from April 2010 meeting in New Orleans, LA were approved as presented.
 5. Reports
 - a. Window 6 / Therm 6 – J. Hayden brought forth the recommendation from the TG, which was supported by a presentation provided by C. Kohler:

MOTION: J. Hayden / D. DeBlock moved that the Software Subcommittee approve the recommendation from the WINDOW6/THERM6 Approval Task Group as indicated in the June 1, 2010 letter to the NFRC membership, and forward same to the Technical Committee for further consideration. This applies to version 6.3 for both software programs when available. Motion passes: 46-7.
 - b. CMAST Approval TG – S. Hanlon (Staff) reported that the task group has not meet recently and that D. Wacek has resigned as the chair of the TG; therefore, the TG is in need of a chair.
 6. Reports
 - a. J. Krahn raised the question if the ability to implement AutoCAD files in Therm is in the works.
 7. Meeting adjourned at 12:06 am.



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Annual Energy Performance Subcommittee

Tuesday, November 9, 2010

Under Technical Committee Block: 3:00 p.m. – 6:00 p.m.*

Chair: Tom Culp, BirchPoint Consulting

Vice Chair: James Larsen, Cardinal Glass, Inc.

1. Call to Order

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

2. Appoint Recording Secretary (NFRC Staff)

3. Review and approve agenda

4. Approve Minutes from July Summer Virtual Meeting.

5. Reports

- a. International Activities
- b. Commercial AEP Task Group

6. Unfinished Business

7. New Business

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 building characteristics and operation. The Annual Energy Performance Subcommittee shall report to the Technical Committee.

* Subcommittees under the Technical Block will run consecutively as time allows; groups listed on the schedule will go in order, but date/time is not guaranteed

Committee Chain: * Technical Committee * Annual Energy Performance Subcommittee
NFRC Staff Liaison: Dennis Anderson, LAP Manager * danderson@nfr.org



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*****Draft Minutes*****

Annual Energy Performance Subcommittee

Tuesday, July 20, 2010

Under Technical Committee Block: 11:00 a.m. – 1:00 p.m.*

Chair: Tom Culp, BirchPoint Consulting

Vice Chair: James Larsen, Cardinal Glass, Inc.

-
1. Chair called the meeting to order at 12:11 PM - antitrust reminder given and reviewed voting requirements
 2. S. Hanlon (NFRC Staff) was appointed recording secretary
 3. The agenda was reviewed and approved as presented.
 4. The minutes from April 2010 meeting in New Orleans, LA were approved as presented.
 5. Reports
 - a. International Activities
 - i. ISO 18292 –
 1. B. Shah work as been completed and is in the final stages of voting and may be approved within 6 months, most likely at the Spring meeting.
 2. C. Curcija – NFRC 901 and ISO 18292 cannot be compared but are very complimentary.
 3. B. Shah commented that many countries are look at the energy annual performance and recommends that perhaps the Board considers looking at this type of rating. J. Krahn commented that this can be a very complicated issue.
 - b. Commercial AEP TG
 - i. T. Culp reported that interested parties are ready to discuss how to rate different types of buildings and asked membership to contact T. Culp or staff if interested in participation in the TG.
 6. Unfinished Business
 - a. None
 7. New Business
 - a. Ratings AEP TG – T. Culp reported that at the Spring meeting an AEP TG was formed under the Rating Committee.
 8. The meeting was adjourned at 12:22 PM.



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Air Leakage Subcommittee

Tuesday, November 9, 2010

Under Technical Committee Block: 3:00 p.m. – 6:00 p.m.*

Chair: Michael Thoman, Architectural Testing, Inc.

Vice Chair: Tracy Rogers, Edgetech IG, Inc.

1. Call to Order

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

2. Appoint Recording Secretary (NFRC Staff)

3. Review and approve agenda

4. Approve Minutes from July 2010 Summer Virtual Meeting.

5. Report

- a. Air Leakage Task Group - Chris Nolt

6. Unfinished Business

- a. None

7. New Business

8. Adjourn

SCOPE

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

* Subcommittees under the Technical Block will run consecutively as time allows; groups listed on the schedule will go in order, but date/time is not guaranteed

Committee Chain: * Technical Committee * Air Leakage Subcommittee
NFRC Staff Liaison: Dennis Anderson, Laboratory Accreditation Program Manager * danderson@nfr.org



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*****Draft Minutes*****

Air Leakage Subcommittee

Monday, July 19, 2010

Under Technical Committee Block: 3:00 p.m. – 6:00 p.m.*

Chair: Michael Thoman, Architectural Testing, Inc.

Vice Chair: Tracy Rogers, Edgetech IG, Inc.

-
1. M. Thoman called the meeting to order at 3:47 PM - antitrust reminder given and reviewed voting requirements
 2. S. Hanlon (NFRC Staff) was appointed recording secretary
 3. The agenda was reviewed and approved as presented.
 4. The minutes from April 2010 meeting in New Orleans, LA were approved as presented.
 5. Reports
 - a. Air Leakage Task Group – C. Nolt reported that the TG has not meet since the last meeting and nothing to report
 6. Unfinished Business
 - a. N one
 7. New Business
 - a. J. Davis asked if the SC was going to address the new proposed air leakage maximum requirements from AAMA.
 8. The meeting was adjourned at 3:57 PM



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Condensation Resistance Subcommittee

Tuesday, November 9, 2010

Under Technical Committee Block: 3:00 p.m. – 6:00 p.m.*

Chair: Kevin Vilhauer, Milgard Manufacturing, Inc.

Vice Chair: Steve Harp, Associated Materials, Inc.

1. Call to Order

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

2. Appoint Recording Secretary (NFRC Staff)

3. Review and approve agenda

4. Approve Minutes from July 2010 Summer Virtual Meeting

5. Reports

- a. CR Update
- 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 501: User Guide to the Procedure for Determining Fenestration Product Condensation Resistance Rating Values. The Condensation Resistance Subcommittee reports to the Technical Committee.

* Subcommittees under the Technical Block will run consecutively as time allows; groups listed on the schedule will go in order, but date/time is not guaranteed.

*Committee Chain: * Technical Committee * Condensation Resistance Subcommittee
NFRC Staff Liaison: Dennis Anderson, Laboratory Accreditation Program Manager * danderson@nfr.org*



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*****Draft Minutes*****

Condensation Resistance Subcommittee

Tuesday, July 20, 2010

Under Technical Committee Block: 11:00 a.m. – 2:00 p.m.*

Chair: Kevin Vilhauer, Milgard Manufacturing, Inc.

Vice Chair: Steve Harp, Associated Materials, Inc.

-
1. Chair called the meeting to order at 12:07 PM- antitrust reminder given and reviewed voting requirements
 2. S. Hanlon (NFRC Staff) was appointed recording secretary
 3. The agenda was reviewed and approved as presented.
 4. The minutes from April 2010 meeting in New Orleans, LA were approved as presented.
 5. Reports
 - a. AAMA CRF Correlation – Chair reported that C. Curcija is working on a presentation and will present during the fall meeting.
 - b. CSA Working Group – J. Baker reported that the CSA condensation resistance has been completed and a full report should be available at the fall meeting.
 6. New Business
 - a. None
 7. The meeting was adjourned at 12:10 pm



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Attachments Subcommittee

Tuesday, November 9, 2010

Technical Committee Block: Tuesday: 3:00 p.m. – 6:00 p.m.

Chair: Michael Cienian, Hunter Douglas

1. Call to Order

- a. Circulate task group interest sheet
- b. Welcome to All AttendeesCell phones & laptops to Silent Mode
- c. Antitrust reminder
- d. NFRC Meeting Guidelines
- e. Review subcommittee 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 July 2010 Virtual meeting

5. Review and approve agenda

6. 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
- f. Attachments PCP TG – T Williamson
- g. Attachments Labeling TG – T. Morrissey
- h. Attachments Optical Properties TG – T.Morrissey

7. Unfinished Business

- a. Update on Presentation to Membership on Attachments Testing – M.Cienian, R. Simons

8. New Business

- a. Review current Ballot NFRC 100A
- b. Review current Ballot NFRC 200A
- c. Review current Ballot NFRC 100A Skylights

9. Adjourn

SCOPE

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

** Subcommittees under the Technical Block will run consecutively as time allows; groups listed on the schedule will go in order, but date/time is not guaranteed

Committee Chain: Technical Committee * Attachments Subcommittee
Staff Liaison: John Lewis, Director, New Business Programs* jlewis@nfr.org



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Meeting Notes:

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NFRC 2010 Fall Membership Meeting
November 8 - 11, 2010, San Francisco, CA
Program Booklet

*****Draft Minutes*****
Attachments Subcommittee

Tuesday, July 20, 2010

*Under Technical Committee Block: * 11:00 a.m. – 2:00 p.m.*

Chair: Michael Cienian, Hunter Douglas, Inc.

-
- 1. Chair Mike Cienian called the meeting to order at 1:45 pm.**
 - 2. The Chair appointed Ray McGowan (staff) recording secretary.**
 - 3. Minutes, April 2010 meeting in New Orleans were approved as submitted.**
 - 4. Reports**
 - a. Dynamic Attachments for Swinging Door TG - Dave De Block (ODL) reported no activity.
 - b. Exterior/Interior Attachments TG - Mike Cienian (Hunter Douglas) reported that ballots negatives and approve with comments were reviewed by the SC in preparation for this meeting.
 - c. Storm Windows TG – Thom Zaremba (Roetzel & Andress) was not present; no report was given.
 - d. Awnings TG – John Gant (Glen Raven) is working with the completed Awnings Research Report to continue towards development of the new attachment ratings.
 - e. Applied Films TG - Darrell Smith (International Window Film Association) reported that U-factors being added to the Certified Products Directory will require significant work and may require added resources to accomplish. This TG is working towards a solution, but labels with U-factors may be delayed until after January 1, 2011.
 - f. Attachments PCP TG – reports deferred to the Ratings Committee block.
 - g. Attachments Labeling TG –report deferred to the Ratings block.
 - h. Attachments Optical Properties TG – reported during the Optical Properties SC.
 - 5. Unfinished Business**
 - a. Base Case Reference Windows Work Group — Nils Petermann (Alliance to Save Energy) reported that work on the base case skylights is ongoing now and a ballot will be developed to propose these base case skylight products.
 - 6. New Business**
 - a. NFRC 100A Ballot
 - i. AAMA negative (Part 1)-Jeld-Wen (Steve Strawn) moved and AAMA (Ken Brenden) seconded to find this negative persuasive and substantive. Passed 36-8.
 - ii. AAMA negative-(Part 2)-Hunter Douglas (Robert Simons) and Newell (Terri Williamson) seconded to find the AAMA negative non germane and return it to the base case task group for further development. Passed 30-10.
 - iii. AMSCO negative-withdrawn, addressed by previous action.
 - iv. Birch Point Consulting negative (Part 1) -Birch Point Consulting (Tom Culp) moved and Jeld-Wen (Steve Strawn) seconded to find this negative persuasive and substantive and return it to task group. Passed 31-5.
 - v. Birch Point Consulting negative (Part 2) -Birch Point Consulting (Tom Culp) moved and ATI (Mike Thoman) seconded to find the negative persuasive and substantive and return to task group. Passed 21-10.
 - vi. Birch Point Consulting negative (Part 3)-withdrawn.
 - vii. IGMA negative (Part 1)-withdrawn.
 - viii. IGMA negative (Part 2)-withdrawn.



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- ix. IGMA negative (Part 3)-withdrawn, addressed by previous action.
 - x. IGMA negative (Part 4)-withdrawn.
 - xi. IGMA negative (Part 5)-withdrawn, will be addressed by the task group.
 - xii. IGMA negative (Part 6)-withdrawn, addressed by previous action.
 - xiii. IGMA negative (Part 7)-withdrawn, will be addressed by the task group.
 - xiv. IGMA negative (Part 8)-withdrawn, will be addressed by the task group.
 - xv. Jeld-Wen negative-withdrawn. The chair directed staff to work with the task group to develop a web presentation for membership to be given prior to the Fall 2010 balloting period to clarify the attachment rating goals.
 - xvi. Pella negative (Part 1)-withdrawn, addressed by previous action.
 - xvii. Pella negative (Part 2)-Pella (Joe Hayden) moved and Jeld-Wen (Steve Strawn) seconded to find this negative persuasive and substantive. Passed 30-7.
- b. NFRC 200A Ballot - Negative and APC review
- i. AAMA negative-AAMA (Ken Brenden) moved and Jeld Wen (Steve Strawn) seconded to table until presentation. Passed 21-7.
 - ii. AAMA negative 2-withdrawn.
 - iii. AMSCO negative-withdrawn.
 - iv. Birch Point Consulting negative-withdrawn; addressed by previous action.
 - v. IGMA negative (Part 1)-withdrawn; addressed by previous action.
 - vi. IGMA negative (Part 2)-withdrawn; address by previous action.
 - vii. IGMA negative (Part 3)-withdrawn; Technical Committee will consider this negative.
 - viii. IGMA negative (Part 4)-withdrawn; addressed by prior action.
 - ix. IGMA negative (Part 5)-withdrawn; addressed by prior action.
 - x. IGMA negative (Part 6)-withdrawn; addressed by prior action.
 - xi. IGMA negative (Part 7)-Andersen (Steve Johnson) moved and IGMA (Margaret Webb) seconded to find the negative persuasive and substantive. Passed 27-4.
 - xii. IGMA negative (Part 8)-withdrawn.
 - xiii. IGMA negative (Part 9)-withdrawn.
 - xiv. Pella negative (Part 1)-withdrawn; addressed by previous action.
 - xv. Pella negative (Part 2)-withdrawn; addressed by previous action.
 - xvi. Sunergy Consulting negative-withdrawn; addressed by previous action.
 - xvii. WESTLab negative (Part 1)-withdrawn.
 - xviii. W ESTLab negative (Part 2)-withdrawn.
 - xix. W ESTLab negative (Part 3)-withdrawn.
 - xx. Glen Raven APC-not addressed.
 - xxi. Hunter Douglass APC-not addressed.
 - xxii. ODL APC-not addressed.
 - xxiii. Sunpine Consulting APC-not addressed.

7. Meeting adjourned 3:46 pm.



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U-Factor Subcommittee

Wednesday, November 10, 2010

*Under Technical Committee Block: * 7:30 a.m. – 11:30 a.m.*

Chair: Michael Thoman, Architectural Testing, Inc.

Vice Chair: Mahabir Bhandari, Carli, Inc.

1. Call to Order

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

2. Appoint Recording Secretary (NFRC Staff)

3. Review and approve agenda

4. Approve Minutes from July 2010 Summer Virtual Meeting

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
- f. Sightline Tolerance Task Group – Joe Hayden

6. Unfinished Business

- a. None

7. New Business

- a. NFRC 102 Section 9 & Table A5-1 Ballot
- b. NFRC 102 Wind Velocity Ballot
- c. NFRC 102 Frequency Requirements 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.

* Subcommittees under the Technical Block will run consecutively as time allows; groups listed on the schedule will go in order, but date/time is not guaranteed.

Committee Chain: * Technical Committee * *U-Factor Subcommittee*
NFRC Staff: Dennis Anderson, Laboratory Accreditation Program Manager * danderson@nfr.org



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Meeting Notes:

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*****Draft Minutes*****

U-Factor Subcommittee

Monday, July 19, 2010

Under Technical Committee Block: 8:00 a.m. – 12:30 p.m.*

Chair: Michael Thoman, Architectural Testing, Inc.

Vice Chair: Mahabir Bhandari, Carli, Inc.

1. Chair called the meeting to order at 3:58 PM- antitrust reminder given and reviewed voting requirements
2. S. Hanlon (NFRC Staff) was appointed recording secretary
3. The agenda was reviewed and approved as presented.
4. The minutes from April 2010 meeting in New Orleans, LA were approved as presented.
5. Reports
 - a. Tubular Daylighting Devices Task Group – Dave DeBlock reported that the TG is working on VT as stated in R & T and that U-Factor work they are finalizing the research and reviewing the findings.
 - b. Garage / Rolling Door Task Group – M. Thoman reported that there is a ballot to discuss for this SC.
 - c. Door Task Group – Staff reported that the group is working on the spreadsheet in and request that the simulation labs review the sheet. D. DeBlock provided insight on Phase II of the task to implement the findings in the approved software programs.
 - d. Testing Laboratory Task Group –M. Thoman reported that the TG will meet before the next meeting and has nothing to report. One topic of discussion will be the 2010 ILC.
 - e. Skylight Task Group – Roger LeBrun reported that there is nothing to report and no action items.
 - f. Sightline Tolerance Task Group – J. Hayden reported the scope of the TG and how the group is reviewing some query information.
6. Unfinished Business
 - a. None
7. New Business
 - a. NFRC 100 Garage Door Ballot
Hunter Douglas; M. Cienian (5.5.1.A) - APC
To be discussed by TG.
WCMA; T. Marusak (5.5.1.A) - APC
To be discussed by TG.
MOTION: S. Strawn / D. DeBlock moved the language as balloted for approval and to be implemented upon publication. Motion passes by unanimous voice vote.

NOTE: The Garage Door TG shall look at the APC and the size issue discussed for future business.
 - b. NFRC 100 Sash Kit Ballot



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J. Baker announced that S. Strawn will chair a task group for this issue. M. Thoman approved the TG and will provide all negatives and comments to the TG for review.

c. NFRC 100 Table 4-3 Wall and Sloped Glazing Ballot

MOTION: N. Pena / S. Strawn moved to forward the NFRC 100-Table 4-3 footnote ballot forward to Technical for approval and to be implemented upon publication. Motion passes by majority hand vote.

d. B. Shah requested that Test Lab TG look at the emissivity questions raised in the 2007 ILC under consideration

e. B. Shah requested that the TDD TG to look at the differences between the 100 and 102 calculations.

The meeting was adjourned at 4:30 PM



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Solar Heat Gain Coefficient Subcommittee

Wednesday, November 10, 2010

Under Technical Committee Block: 7:30 a.m. – 11:30 a.m.

Chair: *Bipin Shah, WinBuild, Inc.*

Vice Chair: *Brad Schultz, Associated Laboratories, Inc.*

1. Call to Order

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

2. Appoint Recording Secretary (NFRC Staff)

3. Review and approve agenda

4. Approve Minutes from July 2010 Summer Virtual Meeting

5. Reports

- a. Garage Door SHGC Task Group – Joe Hetzel
- b. TDD SHGC Task Group – Les Condit
- c. SHGC Task Group – Brad Schultz
- d. Sightline Tolerance TG – J Hayden

6. Unfinished Business

- a. None

7. New Business

- a. NFRC 201 TDD Ballot

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.

* Subcommittees under the Technical Block will run consecutively as time allows; groups listed on the schedule will go in order, but date/time is not guaranteed.

Committee Chain: * Technical Committee * *Solar Heat Gain Coefficient Subcommittee*
NFRC Staff Liaison: *Dennis Anderson, Laboratory Accreditation Program Manager * danderson@nfr.org*



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Meeting Notes:

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*****Draft Minutes*****

Solar Heat Gain Coefficient Subcommittee

Monday, July 19, 2010

Under Technical Committee Block: 3:00 a.m. – 6:00 p.m.*

Chair: *Bipin Shah, WinBuild*

Vice Chair: *Brad Schultz, Associated Laboratories, Inc.*

-
1. Chair called the meeting to order at 4:32 PM- antitrust reminder given and reviewed voting requirements
 2. S. Hanlon (NFRC Staff) was appointed recording secretary
 3. The agenda was reviewed and approved as presented.
 4. The minutes from April 2010 meeting in New Orleans, LA were approved as presented.
 5. Reports
 - a. Garage Door SHGC Task Group – Staff reported that there is a ballot to discuss during the SC.
 - b. TDD SHGC Task Group – L. Condit reported that there is a ballot to discuss during the SC.
 - c. SHGC Task Group – B. Shah reported that there is a ballot to discuss during the SC and that some discussion took place on the CMA procedure.
 - d. Sightline Tolerance TG – J. Hayden reported the scope of the TG and how the group is reviewing some query information.
 6. Unfinished Business
 - a. None
 7. New Business
 - a. NFRC 200 Garage Door SHGC Ballot
Hunter Douglas; M. Cienian (5.5.1.A) - APC
Comment will be sent back to the TG for consideration for future work.
WCMA; T. Marusak (5.5.1.A) - APC
Comment will be sent back to the TG for consideration for future work.
MOTION: S. Strawn / J. Hayden moved to forward the NFRC 200 Garage Door ballot forward to Technical Committee for approval and to be implemented upon publication. Motion passes by majority hand vote.
 - b. NFRC 200 Section 4.5G Laminates Ballot
Glen Raven: J. Gant (4.5.G) – Negative (Withdrawn)
MOTION: S. Strawn / J. Hayden moved the NFRC 200 Section 4.5.G to Technical for approval and to be implemented upon publication. Motion passes 15-9.
 - c. NFRC 201 TI Ballot
Velux: R. LeBrun (Annex G; Section G2.3) – Negative
MOTION: R. LeBrun / W. Lichtenberger moved to find the negative persuasive and substantive and to move back to TG. Motion passes: 15-6.



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Sunergy Consulting: W. duPont – Negatives

MOTION: R. LeBrun / L. Condit moved to find the negative addressed in response to previous action. Motion passes by majority hand vote.

Entech Solar: L. Condit (Annex G; Section G2.3) – APC

Comment will be forwarded and addressed at TG.

Pella: J. Hayden (Annex G; Section G1.4) – APC

Editorial comment will be forwarded and addressed at TG.

SunPine Consulting: R. McCluney (Annex G) – APC

Comment will be forwarded and addressed at TG.

NOTE: All comments and negatives will be sent to the TG for discussion.

8. The meeting was adjourned at 5:39 PM



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Component Modeling Approach (CMA) Technical Subcommittee

Wednesday, November 10, 2010

*Technical Committee Block: * 7:30 a.m. – 11:30 a.m.*

Co-Chairs: *Gary Curtis, ECOS Consulting, Inc.; Sneh Kumar, TRACO*

1. Call to Order

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

2. Appoint Recording Secretary (NFRC Staff)

3. Approve Minutes from Summer 10 Virtual meeting

4. Review and approve agenda

5. Reports

- a. CMA Technical Task Group — Charlie Curcija
- b. CMA complex product Rating Task Group — Sneh Kumar

6. Unfinished Business

7. New Business

- a. NFRC 100 ballot-Spandrel considerations
- b. NFRC 200 ballot-spandrel considerations

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.

**Subcommittees times under each committee block will run consecutively - as time allows, groups listed will go in order - but time/date is not guaranteed.*

Committee Chain: * Technical Committee * CMA Technical Subcommittee
NFRC Staff Liaison: John Lewis, Director, New Business Programs * JLewis@nfr.org



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Meeting Notes:

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NFRC 2010 Fall Membership Meeting
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*****Draft Minutes*****

Component Modeling Approach (CMA) Technical Subcommittee
Tuesday, July 20, 2010
Under Technical Committee Block: 11:00 a.m. – 2:00 p.m.
Co-Chairs: *Gary Curtis, ECOS Consulting, Inc.; Sneh Kumar, TRACO*

1. Chair Sneh Kumar called the meeting to order at 11:00 am, July 21, 2010.
2. Chair Kumar appointed Ray McGowan (NFRC staff) recording secretary
3. Reports
 - a. CMA Technical Task Group — Charlie Curcija (Carli, Inc.) reported no recent meetings and no activity to report.
 - b. CMA complex product Rating Task Group — Sneh Kumar reported did not meet recently, but will meet during the next month or so to develop proposals for CMA product ratings.
4. New Business
 - a. Appointment recommendation; Sneh Kumar as co-chair of this subcommittee.
5. Meeting adjourned 11:10 am.



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Technical Committee

Tuesday, November 9, 2010

Block Period: 3:00 p.m. – 6:00 p.m.

Wednesday, November 10, 2010

Block Period: 7:30 a.m. – 11:30 a.m.

Chair: *Jeff Baker, WESTLab*

Vice Chair: *Tina Jenkins, Simonton Windows*

1. Call to Order

- a. Welcome to All AttendeesCell phones & laptops to Silent Mode
- b. Antitrust reminder
- c. NFRC Meeting Guidelines
- d. 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 July 2010 virtual meeting

5. Review and approve agenda

6. Reports

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

7. New Business

- a. NFRC Document Cycle

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, Program Director * shanlon@nfrc.org*



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Technical Committee Roster*

As of 11/17/2010

First Name	Last Name	Company Name
Nils	Petermann	Alliance to Save Energy
Ken	Brenden	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.
Doug Harden		Atrium Companies
Travis	Windleharth	Bekeart Speciality 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.
Mahabir Bhandari		CARLI, Inc.
Kerry Haglund		Center for Sustainable Building Research - Univ. of Minnesota
Joseph Hetzel		DASMA (Door & Access Systems Manufacturers Assoc. International)
Gary	Curtis	ECOS Consulting, Inc.
Morgan Hanam		Enermodal Engineering Limited
George Nash		Ensinger Building Products
Charles	Condit	Entech Solar, Inc.
Gurjinder Dhani		ETC Laboratories
Jose	Sanchez	Fenestration Testing Lab
John	Gant	Glen Raven, Inc.
Tim Singel		Guardian Industries
Lucas	Turner	Hurricane Test Laboratories
Michael	Cienian	Hunter Douglas, Inc.
Margaret Webb		Insulating Glass Manufacturers Alliance (IGMA)
Darrell Smith		International Window Film Association (IWFA)
Jose Antonio	Terraza	J & A Windows Inc.
Steve Strawn		Jeld-Wen, Inc.
Marcia	Falke	Keystone Certifications, Inc.
Krish K	udva	Kinro
Sue Schreiber		Kolbe-Kolbe
Christian Kohler		Lawrence Berkeley National Laboratory (LBNL)
James C.	Krahn	Marvin Windows & Doors



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*Technical Committee Roster Continued**

First Name	Last Name	Company Name
Steve	Hebeisen	Mecho Shade Corporation
Grant	Muller	Mikron industries
Kevin	Vilhauer	Milgard Manufacturing, Inc.
Gregg	Vincent	Natural Light Energy Systems
Teresa	Williamson	Newell Window Fashions
Dennis	Northcutt	NT Windows, Inc.
David A.	De Block	ODL Incorporated
Sean	Flanigan	Paradigm Windows
Joseph	Hayden	Pella Corporation
Peter	Lyons	Peter Lyons & Associates
Andrew	Caldwell	Phifer Incorporated
David L.	Duly	Pilkington North America, Inc.
Michelle	Sahlin	Professional Awnings Manufacturer Association (PAMA)
Chris	Nolt	ProVia Door, Inc.
Chris	Scoville	QAI Labs
Marles	McDonald	NCTL dba Quality Testing, Inc.
Cole	Woodward	Ravenbrick
Thomas S.	Zaremba	Roetzel & Andress
Michel	Pepin	The Royal Group
Tina	Jenkins	Simonton Windows
Dan S	tate	Solatube
Lisa	Winckler	Solutia, Inc.
John	Meade	Southwall Technologies
Brian	Amberg	Stork Twin City Testing
William C.	duPont	Sunergy Consulting
Ross	McCluney	SunPine Consulting
Steve	Haubert	Sunrise Windows
Caleb	Willis	Switch Materials
Milind	Jhaveri	Technoform
Sneh	Kumar	TRACO
Werner	Lichtenberger	TruSeal Technologies, Inc.
Gena	Webb	Twichell Corporation
Roger	LeBrun	VELUX-America Inc.
Thomas	Marusak	Window Covering Manufacturers Association (WCMA)
Bipin	Shah	WinBuild, Inc.
John	McFee	Window and Door Manufacturer's Association (WDMA)
Jeff	Baker	WESTLab
Tony	Rygg	William Rygg, Consultant



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**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: meetings@nfr.org*



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

Technical Committee

*Block Period: Tuesday, July 19, 2010 3:00 p.m. – 6:00 p.m.
Continued – Wednesday, July 20, 2010 11:00 a.m. – 2:00 p.m.*

Chair: Jeff Baker, WESTLab, Inc.

Vice Chair: Steve Johnson, Andersen Window Corporation

-
1. J. Baker (Chair) called the meeting to order - antitrust reminder given and reviewed voting requirements
 2. Roll call / Establish quorum. Quorum established.
 3. Dennis Anderson (Staff) appointed recording secretary
 4. Agenda reviewed and approved as presented
 5. Minutes from April 2010 meeting in New Orleans, LA approved as presented

6. Reports

- a. Validation Testing Task Group (S. Kumar) – No action items to report
- b. Software Subcommittee (B. Crooks, J. Krahn)

MOTION: B. Crooks / J Hayden moves to forward the Software SC recommendation for approval of W6/T6 version 6.3 for both programs when available in accordance with the stipulations indicated in the June 1, 2010 letter revised at SC. Motion passes by 36-1

NOTE: CMAST TG is looking for a chair.

- c. Attachment Subcommittee (M. Cienian, D. DeBlock) – Reported the 100A and 200A ballots have been sent back to TG for additional work.
- d. Annual Energy Performance Subcommittee (T. Culp, J. Larsen) – No action items to report.
- e. Condensation Resistance Subcommittee (K. Vilhauer, S. Harp) –

Chair reported that AAMA CRF Correlation presentation by C. Curcija will be presented during the fall meeting; and that the CSA Working Group's CSA condensation resistance study has been completed and a full report should be available at the fall meeting.

- f. Air Leakage (C. Nolt (acting for M. Thoman, T. Rogers) – No action items to report
- g. U-factor Subcommittee (M. Thoman, M. Bhandari) –
MOTION: M. Thoman / D. DeBlock moved to forward to the BOD the NFRC 100 Garage Door Ballot for approval and implement upon publication. Motion passes by 34-0.

Note. The Garage Door TG shall look at the APC and the size issue discussed for future business.

MOTION: M. Thoman / S. Strawn moved to forward the NFRC 100 Table 4-3 Wall and Sloped Glazing Ballot to the Board for approval and implement upon publication. Motion passes by 34-0.

M. Thoman reported that S. Strawn will chair a task group to address Sash Kits and expand it to include doors. TG will provide all negatives and comments from the 100 Sash Kit Ballot to the TG for review.

- h. Solar Heat Gain Subcommittee (B. Shah, B. Schultz) –



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MOTION: B. Shah / D. DeBlock moved to forward NFRC 200 Garage Door Ballot to the BOD for approval with implementation upon publication. Motion passes by 31-1.

MOTION: B. Shah / S. Strawn forward NFRC 200 Section 4.5.G Ballot to the BOD for approval with implementation upon publication. Motion passes by 30-2.

- i. Component Modeling Approach Subcommittee (B. Shah) – Recommend approving S. Kumar as the co-chair of CMA SC.

7. New Business

- a. T. Jenkins has offered to be the Technical Committee vice-chair due to S. Johnson stepped down since becoming the CPC chair.

8. Adjourned



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Certification Subcommittee

Wednesday, November 10, 2010

Block Period: 1:00pm – 5:00pm

Chair: *Joe Jonely, AMSCO*

Vice Chair: *Tina Jenkins, Simonton Windows*

1. Call to Order

- a. Welcome to All AttendeesCell phones & laptops to Silent Mode
- b. Antitrust reminder
- c. NFRC Meeting Guidelines
- d. Review committee voting requirements: one vote per Member Company.

2. Appoint Recording Secretary (NFRC STAFF)

3. Roll call / Establish quorum

4. Approve Minutes from July 2010 virtual meeting

5. Review and approve agenda

6. Reports

- a. PCP Review Task Group (T. Jenkins)
- b. Attachment PCP TG – (T. Morrissey)

7. New Business

- a. NFRC 700 – Reprint Labels Ballot
- b. NFRC 700 – FMC Ballot

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: *Sherrri Wendt, Certification Associate * swendt@nfr.org*



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Meeting Notes:

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*****Draft Minutes*****

Certification Subcommittee

Tuesday, July 20, 2010

Under Ratings Committee Block: 3:00 p.m. – 6:00 p.m.

Chair: Joe Jonely, AMSCO

Vice Chair: Tina Jenkins, Simonton Windows

-
1. Joe Jonely called the meeting to order at 4:12 PM EDT- antitrust reminder given and reviewed voting requirements.
 2. Sherri Wendt (NFRC Staff) Appoint Recording Secretary.
 3. The agenda was approved as presented.
 4. Minutes from April 2010 meeting (New Orleans, LA) were approved as presented.
 5. Reports
 - a. PCP Review TG – T. Jenkins – Nothing to report. Two ballots went to Labeling SC.
 - b. Attachment PCP TG – Terry Williamson reported that the TG is on hold to receive results from additional research to be conducted on the NFRC-100A and NFRC-200A.
 6. Unfinished Business
 - a. None
 7. New Business
 - a. Restructuring of Subcommittees and Task Groups under Ratings Committees
 1. Discussion of reorganizing Subcommittees and Task Groups to help facilitate the goals for the Ratings Committee. It is recommended that a presentation will be shown to illustrate the re-structuring prior to implementation and each group is to verify there are no conflicts within the NFRC documents.
 1. Labeling SC can be rolled into a TG under Certification SC to be taken under consideration to Ratings Committee.
 2. Proposed to have Attachments/Residential/Commercial/Labeling CMA TG under to be separated into their individual groups. Certification Subcommittee, CMA Ratings Subcommittee, etc.
 8. The meeting was adjourned at 4:21 PM EDT.



NFRC 2010 Fall Membership Meeting
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Labeling Subcommittee

Wednesday, November 10, 2010

Block Period: 1:00pm – 5:00pm

Chair: *John McFee, Window & Door Manufacturing Association*

Vice Chair: *TBD*

1. Call to Order

- a. Welcome to All AttendeesCell phones & laptops to Silent Mode
- b. Antitrust reminder
- c. NFRC Meeting Guidelines
- d. Review committee voting requirements: one vote per Member Company.

2. Appoint Recording Secretary (NFRC STAFF)

3. Roll call / Establish quorum

4. Approve Minutes from July 2010 virtual meeting

5. Review and approve agenda

6. Reports

- a. Attachment Label Task Group (T. Morrissey)
- b. Other Label issues from Task Groups or Committees

7. New Business

- a. NFRC 700 – Dash Language Ballot
- b. NFRC 700 – TDD Ballot
- c. Vice-Chair for SC

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



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Meeting Notes:

Use box below to type any meeting notes you would like to capture



NFRC 2010 Fall Membership Meeting
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*****Draft Minutes*****

Labeling Subcommittee

Tuesday, July 20, 2010

*Under Ratings Committee Block: * 3:00 p.m. – 6:00 p.m.*

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

Vice Chair: TBD

-
1. John McFee called the meeting to order at 4:22 PM EDT- antitrust reminder was given and reviewed voting requirements.
 2. Sherri Wendt (NFRC Staff) was appointed recording secretary.
 3. The agenda was approved as presented.
 4. Minutes from April 2010 meeting (New Orleans, LA) were approved as presented.
 5. Reports
 - a. Attachment Label TG – M. Cienian reported that a meeting is planned in August and working with L. Greenberger. Any new participants wishing to participate to contact T. Morrissey and a bulletin will be sent out to NFRC Members/participants for their participation.
 - b. Other Label issues from Task Groups or Committees
 - i. CMA Label TG - C. Curcija reported that the TG is requesting any comments on the CMA Label Certificate and anticipates a ballot in the Fall Membership Meeting.
 1. A bulletin can go out to participants, or ballot the change to the label.
 2. Changes: Elevation display of actual size products which is supplemental; Provide area weighted numbers; Code Compliance note to be modified.
 3. Currently have 2 revisions and TG will meet soon. Anyone interested in task group to contact C. Curcija. Staff (J. Lewis) will issue a bulletin.
 4. CMA Label TG advised that Naming Convention TG could affect the CMA Label Certificate.
 5. Reported that actual size product was unable to be done correctly on the CMA Label Certificate.
 6. Ballots for Fall Membership Meeting may be due Mid-September and TG to work accordingly.
 - c. Applied Films – D. Smith –Film labels including U-Factor may be delayed due to APD database capabilities and the TG may request a further extension for implementation dead line.
 6. Unfinished Business
 - a. None
 7. New Business
 - a. NFRC 700-2010 FMC Ballot
 - i. JELD-WEN, S. Strawn. – Negative: Section 1.1.3.A
MOTION: S. Strawn / S. Johnson moved to make this editorial and persuasive to reformat 1.1.3.A.v. so requirements are as bullet points. Motion passes: 24-1.
 - ii. Pella, J. Hayden. – Negative: Section 1.1.3.A.v



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Withdrawn - Resolved by previous action

- iii. JELD-WEN, S. Strawn. – Negative: Section 3.1.1.C

Withdrawn - Staff to include “, a Site Built Certificate,”

- iv. GlenRaven, J. Gant. – Negative: Section 3.4.1.B

MOTION: S. Johnson / J. Gant moved to find this negative persuasive and editorial by removing “approved” from 3.4.1.B, 6.6.2.A, and 6.3.G. and remove “s” at the end of the word ‘label’. Motion passes: 31-1.

J. Krahn - Task group to verify all “approved” language if required to be edited in NFRC 700, per group approval.

- v. GlenRaven, J. Gant. – Negative: Section 4.3.4.3.A

Withdrawn

- vi. GlenRaven, J. Gant. – Negative: Section 6, page 25

MOTION: J. Gant / D. De Block moved to find this persuasive and substantive and send back to Task Group. Motion passes: 23-8.

- vii. JELD-WEN, S. Strawn. – Negative: Section 6

Withdrawn -this covered by previous action

- viii. AAMA, K. Brenden. – Negative: Section 6.1.B

MOTION: K. Brenden / J. Hayden moved to find this persuasive and substantive to remove “and any text that describes energy or additional performances ratings on the manufacturer’s temporary label”. Motion passes: 25-4

- ix. GlenRaven, J. Gant. – Negative: Section 6.1.B

Withdrawn

- x. Insulating Glass Manufacturers Alliance, M. Webb. – Negative: Section 6.1.B

Withdrawn – Addressed by previous action

- xi. Pella Corporation, J. Hayden. – Negative: Section 6.1.B

Resolved, addressed by previous action

- xii. Kolbe & Kolbe Millwork, Inc., S. Schreiber. – Negative: Section 6.1.B

Resolved, addressed by previous action

- xiii. Insulating Glass Manufacturers Alliance, M.Webb. – Negative: Section 6.1.C

MOTION: J. Hayden / S. Strawn moved to find negative to be non-germane since the negative is not referencing balloted language and to have the PCP TG to look at language presented. Motion passes: 26-0.

- xiv. JELD-WEN, S. Strawn. – Negative: Section 6.1.C

Resolved, addressed by previous action

- xv. JELD-WEN, S. Strawn. – Negative: Section 6.1.D

Resolved, addressed by previous action

- xvi. JELD-WEN, S. Strawn. – Negative: Section 6.1.E

Resolved, addressed by previous action

- xvii. JELD-WEN, S. Strawn. – Negative: Section 6.1.F

Resolved, addressed by previous action.



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- xviii. GlenRaven, J. Gant. – Negative: Section 6.3.A
Resolved, addressed by previous action
- xix. JELD-WEN, S. Strawn. – Negative: Section 6.3.A
Resolved, addressed by previous action - PCP TG to look at the other attachments products having the label attached to the box.
- xx. GlenRaven, J. Gant. – Negative: Section 6.4.D, page 27
Withdrawn
- xxi. Insulating Glass Manufacturers Alliance, M.Webb. – Negative: Section 6.4.D
MOTION: J. Hayden / S. Strawn moved to find this negative non-persuasive because of the additional burden has not been justified. Motion passes: 19-1.
- xxii. JELD-WEN, S. Strawn. – Negative: Section 6.4
Withdrawn – resolved by previous action
- xxiii. GlenRaven, J. Gant. – Negative: Section 6.6.2.A, page 30
Withdrawn – resolved by previous action
- xxiv. Kolbe & Kolbe Millwork, Inc., S. Schreiber. – Negative: Section 6.6.4
MOTION: J. Hayden / S. Strawn moved to find the negative persuasive and editorial change the first “labeled” word to “applied” (“In the event that a properly *applied* NFRC temporary label...”). Motion passes: 20-2.
- xxv. JELD-WEN, S. Strawn. – Negative: Section 8.7.1.1.D.e
MOTION: S. Strawn / S. Harp moved to find the negative persuasive and substantive to modify section 8.7.1.1.D.e as “the Licensee shall, upon the request by the IA, provide a record of use of any FMC’s that have been completed and delivered to a responsible party. Motion passes: 22-1
- xxvi. JELD-WEN, S. Strawn. – Negative: Section 9.1.4.A & B
8. **MOTION:** S. Strawn / T. Rygg move to find the negative persuasive and editorial that the sections A and B are modified as follows:
A. A permanent label, temporary label, or FMC is missing, or illegible; or
B. A label creates a situation whereby the validity of the permanent label, temporary label, or FMC is in question; or
Motion passes: 21-1.
- i. GlenRaven, J. Gant. – Negative: Labels B4-A, page 70; and B4-B, page 71
Withdrawn
- ii. GlenRaven, J. Gant. – Negative: Section B6, page 75
Withdrawn – non balloted section
- iii. GlenRaven, J. Gant. – Negative: Figure B9, page 77
Withdrawn
- iv. GlenRaven, J. Gant. – Negative: Section B.10.A
Withdrawn
- v. JELD-WEN, S. Strawn. – Negative: Figure B-13
Withdrawn - Editorial and staff to take care of removing duplicate language at bottom of label “Veuillez consulter”.
- vi. GlenRaven, J. Gant. – Negative: Figure B-15, page 88



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Withdrawn

- vii. JELD-WEN, S. Strawn. – Negative: Appendix C; Section C

Withdrawn

- viii. Pella Corporation, J. Hayden. – Negative: Appendix C.2.C

MOTION: J. Hayden / S. Strawn move to find the comment persuasive and editorial to change C.2.C. all references of "Label Certificate" to "FMC". Motion passes: 13-0.

- ix. GlenRaven, J. Gant. – Negative: Figure B.i, page 90

MOTION: J. Gant / S. Strawn moved to find the negative persuasive and substantive and change language to state "Applied Film Label Certificate". Motion passes: 21-0.

- x. GlenRaven, J. Gant. – Negative: Figure C-2, page 94

Withdrawn – not part of balloted section.

- xi. California Energy Commission, N. Pena. – APC: Figure B-14 and B-15

Staff to make editorial changes as commented.

Change Spanish typos:

"fel producto" to "el producto"

"y n tamano" to "y tamaño"

"usi especifico" to " uso especifico"

- xii. Hunter Douglas, M. Cienian. – APC: General

Taken under advisement of PCP TG.

- xiii. WMCA, T. Marusak. – APC: General

Taken under advisement of PCP TG.

Ballot fails Subcommittee Level and will be sent back to the Task Group.

All individual items to be separated out that do not apply to FMC ballot for Fall Meeting, such as re-printing temporary labels.

b. NFRC 700-2010 TDD Label Ballot

- i. JELD-WEN, S. Strawn. – Negative: Figure B-1B

Withdrawn

- ii. Andersen Corporation, S. Johnson. – Negative: Figure B-2B and B-2C

MOTION: S. Johnson / S. Strawn moved to find this negative persuasive and substantive to go back to TG. Motion passes: 12-9.

- iii. JELD-WEN, S. Strawn. – Negative: Figure B-2B and B-7B

Withdrawn

Request for those opposed to help with the development of TDD Label: S. Strawn, J. Jonely, D. Smith

- iv. AAMA, K. Brenden. – Negative: Figure B-2B and B-7B

Withdrawn

- v. Pella Corporation, J. Hayden. – Negative: Figure B-2B and B-7B

Withdrawn

- vi. JELD-WEN, S. Strawn. – Negative: Figure B-2C

Withdrawn – to be taken back to TG.

Ballot fails Subcommittee level and will be sent back to the Task Group.

- 9. The meeting was adjourned at 7:05 PM EDT.



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Component Modeling Approach (CMA) Ratings Subcommittee

Wednesday, November 10, 2010

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

Co Chair: *Sneh Kumar, TRACO*

Co Chair: *Gary Curtis, ECOS Consulting, Inc.*

1. Call to Order

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

2. Appoint Recording Secretary (NFRC Staff)

3. Review and approve agenda

4. Approve Minutes from 2010 Virtual meeting

5. Reports

- a. CMA Labeling TG
- b. CMA Naming Conventions WG

6. Unfinished Business

7. New Business

- a. NFRC 705-CMA PCP ballot

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.



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Meeting Notes:

Use box below to type any meeting notes you would like to capture



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*****Draft Minutes*****

Component Modeling Approach (CMA) Ratings Subcommittee

Tuesday, July 20, 2010

Under Ratings Committee Block: 3:00 p.m. – 6:00 p.m.

Co-Chairs: *Gary Curtis, ECOS Consulting, Inc.; Sneh Kumar, TRACO*

1. Chair Sneh Kumar called the meeting to order at 4:00 pm.
2. Chair Kumar appointed Ray McGowan (NFRC staff) recording secretary.
3. Reports
 - a. Component Modeling Approach (CMA) Recertification Task Group — Ken Nittler (WESTLab) reported the TG has met about four times and continues to consider many options for recertification, but has reached no conclusion.
 - b. CMA Naming convention work group — John Lewis (NFRC staff) reported the WG has met about five times and expects to complete its mission in about one more month.
 - c. CMA complex product Rating Task Group — Sneh Kumar reported minimal progress thus far.
 - d. CMA Program Roll-out Status — John Lewis reported two ACE organizations are established, one is pending. HMG is progressing well on its task to promote CMA in CA and outreach to national code officials. Staff conducted ACE training at a curtain wall consulting and engineering firm in the Philippines during June.
4. Meeting adjourned @ 4:10 pm.

SCOPE

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

Committee Chain: * Ratings Committee**CMA Ratings Subcommittee*
NFRC Staff Liaison: *John Lewis, Director, New Business Programs * JLewis@nfr.org*



NFRC 2010 Fall Membership Meeting
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Ratings Committee

Wednesday, November 10, 2010

Block Period: 1:00 p.m. – 5:00 p.m.

Chair: Steve Strawn, JELD-Wen

Vice Chair: John McFee, Window & Door Manufacturing Association

1. Call to Order

- a. Welcome to All AttendeesCell phones & laptops to Silent Mode
- b. Antitrust reminder
- c. NFRC Meeting Guidelines
- d. 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 July 2010 virtual meeting

5. Review and approve agenda

6. Reports

- a. Validation Testing Task Group (S. Kumar)
- b. Attachment SC – (M. Cienian / D. DeBlock)
- c. Labeling SC – (J. McFee / TBD)
- d. Certification SC – (J. Jonely / T. Jenkins)
- e. CMA Certification SC – (G. Curtis / S. Kumar)
- f. AEP Ratings TG – (T. Culp)

7. New Business

- a. Rating's Subcommittee Restructuring
- b. Full CPD Number on temporary label

8. Adjourn

SCOPE

The NFRC Ratings 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, Program Director * shanlon@nfrc.org*



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Ratings Committee Roster*

As of 10/25/2010

First Name	Last Name	Company Name
Nils	Petermann	Alliance to Save Energy
Ken Brenden		AAMA (American Architectural Manufacturers Association)
Joe Jonely		AMSCO Windows
Steve M.	Johnson	Andersen Corporation
Frank Fisher		Arcadia, Inc.
Brad	Schultz	Associated Laboratories, Inc.
Steve Harp		Associated Materials, Inc.
Doug Harden		Atrium Companies
Travis	Windleharth	Bekaert Specialty Films, LLC
Thomas	Culp	Birch Point Consulting LLC
Garrett Stone		Birckfield, Burchette, Ritts, and Stone
Nelson	Pena	California Energy Commission
Jim Larsen		Cardinal Glass
Mahabir Bhandari		CARLI, Inc.
Kerry Haglund		Center for Sustainable Building Research
Gary	Curtis	ECOS Consulting, Inc.
Tracy Rogers		Edgetech IG
Morgan Hanam		Enermodal Engineering Limited
George Nash		Ensinger Building Projects
Gurjinder Dhani		ETC Laboratories
Michael Cienian		Hunter Douglas
Lucas Turner		Hurricane Testing Laboratories
Darrell Smith		International Window Film Association (IWFA)
Jose Antonio	Terraza	J & A Windows Inc.
Steve Strawn		Jeld-Wen, Inc.
Marcia	Falke	Keystone Certifications, Inc.
Krish K	udva	Kinro
Sue Schreiber		Kolbe-Kolbe
Robin Mitchell		Lawrence Berkeley National Laboratory (LBNL)
James C.	Krahn	Marvin Windows & Doors
Stephen Hebeisen		Mecho Shade Corporation
Kevin Vilhauer		Milgard, Inc.
Marles	McDonald	NCTL dba Quality Testing, Inc.
Teresa	Williamson	Newell Window Fashions
David A.	De Block	ODL Incorporated
Sean Flanigan		Paradigm Windows
Joseph Hayden		Pella Corporation



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*Ratings Committee Roster Continued**

First Name	Last Name	Company Name
Peter	Lyons	Peter Lyons & Associates
Michelle Sahlin		Professional Awnings Manufacturers Association (PAMA)
Chris Nolt		ProVia Door, Inc.
Cole Woodward		Ravenbrick
Thomas S.	Zaremba	Roetzel & Andress
Marvin Stover		Royal Group
Tina Jenkins		Simonton Windows
Dan S	tate	Solatube
Lisa Winckler		Solutia, Inc.
Brian	Amberg	Stork Twin City Testing
William DuPont		Sunergy Consulting
Steve Haubert		Sunrise Windows
Sneh Kumar		TRACO, Inc.
Werner	Lichtenberger	Truseal Technologies, Inc.
Roger	LeBrun	Velux America, Inc.
Thomas	Marusak	Window Covering Manufacturers Association (WCMA)
Jeff Baker		WESTLab
Bipin Shah		WinBuild, Inc.
John	McFee	Window and Door Manufacturer's Association (WDMA)
William Rygg		William Rygg, Consultant

**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: meetings@nfr.org*



NFRC 2010 Fall Membership Meeting
November 8 - 11, 2010, San Francisco, CA
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*****DRAFT MINUTES*****

Ratings Committee

Tuesday, July 20, 2010

Block Period: 3:00 p.m. – 6:00 p.m.

Chair: Steve Strawn, JELD-WEN

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

-
1. Chair, S. Strawn called the meeting to order at 7:05 PM EDT- antitrust reminder given and reviewed voting requirements
 2. S. Wendt (NFRC Staff) was appointed recording secretary
 3. Roll call was taken and a quorum was established
 4. The agenda was reviewed and approved as presented
 5. The minutes were approved from April 2010 meeting in New Orleans, LA.
 6. Reports
 - a. Validation Testing TG – (S. Kumar) No action items to report
 - b. CMA Complex Product TG – (S. Kumar) No action items to report (this group falls under Technical – to be removed)
 - c. Attachment SC – (M. Cienian) no action items to report
 - d. Labeling SC – (J. McFee) no action items to report; 2 ballots returned to TGs.
 - e. Certification SC – (J. Jonely) Recommendation to restructure SCs as TG under Ratings.
 - f. CMA Certification SC – (S. Kumar/G. Curtis) no action items to report
 - g. AEP Ratings TG – No action items to report
 7. New Business
 - a. Approve S. Kumar as CMA SC co-chair – to bring to Board.
 - b. Discussion about full CPD number on labels requirement
 - i. J. Jonely: PCP TG via Labeling SC to send out questionnaire about adding full CPD number on temp labels and ask for input and potential pitfalls. The letter will contain an explanation of all accommodations that are currently in place.
 1. J. Hayden: Request that to accomplish letter by end of July. Participants will then have the 6-8 months required to get new labels in place. PCP TG needs to schedule a call to make this happen.
 2. S. Johnson: Ensure participants are in the know, and that inventory, labels, and values all are up-to-date.
 - c. Discussion: Labeling SC to become task group under Certification SC.
 - i. There were action items discussed at the Certification SC and will make a recommendation to the Ratings if applicable.
 - d. R. LeBrun: Request a status of the EPA Verification Testing.
 - i. J. Benney is waiting for EPA reply on proposal provided by NFRC.
 8. The meeting was adjourned at 7:30 PM EDT.



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Board of Directors Meeting

Thursday, November 11, 2010

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)
- b. Technical Interpretation Policy Committee (T. Culp)
- c. Certification Policy Committee (S. Johnson)
- d. Research and Technology Committee (W. Lichtenberger)
- e. Regulatory Affairs and Marketing Committee (G. Stone)
- f. Technical Committee (J. Baker)
- g. Ratings Committee (S. Strawn)

5. Financial Overview

6. Unfinished Business

7. New Business

8. Seat New Board Members – Elected for 2011

9. Q&A (if time allows)

10. Adjourn

*NFRC Staff Liaison: James Benney, CAE, Executive Director * jbenney@nfr.org*



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Meeting Notes:

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Fall 2010**

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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.



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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.
4. All motions put forth in an NFRC meeting MUST be typed or written down on a designated 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 type or collect any 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 takers 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.
7. *NFRC's virtual meetings will follow all guidelines above – with specific virtual information available on the [NFRC FAQ page located online.](#)*



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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;



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- 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.

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. (At a virtual meeting – membership can be obtained by emailing meetings@nfr.org) 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:
 - o Accreditation Policy Committee
 - o Certification Policy Committee
 - o Technical Interpretations Policy Committee

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





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ACRONYMS/TERMINOLOGY*

NFRC – National Fenestration Rating Council – a nonprofit research/educational organization (501(c) 3) who develops and administer energy-related rating and certification programs that serve the public by providing fair, accurate, and credible information on fenestration performance.

ACE – Approved Calculation Entity: An individual, who has attended an NFRC Calculation Training Workshop, completed and passed all necessary examinations, and has obtained a Certificate of Approval which qualifies him or her to carry out performance calculations of fenestration products for certification using the Component Modeling Approach.

ASL/ATL – Accredited Simulation/Testing Laboratory: Computer simulation or testing laboratory that has met NFRC Laboratory Accreditation Program (LAP) requirements, has entered into a NFRC laboratory License Agreement, and received a NFRC Certificate of Accreditation, none of which has been revoked.

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. (NFRC 707)

CAP – Certification Agency Program: NFRC administers this program which includes a set of rules and procedures by which an independent certification and inspection agency becomes licensed and operates. (NFRC 702)

CEAP – Calculation Entity Approval Program: NFRC administers this program that contains the rules and requirements for becoming an Approved Calculation Entity (ACE) and ACE Organization in the CMA Program. The governing document for this program is the NFRC 708.

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

CMA PCP – Component Modeling Approach Product Certification Program: NFRC administers this program which contains the rules and requirements for component manufacturers/participants seeking spacer and frame component approval and Specifying Authorities seeking product certification by requesting a CMA Label Certificate. The governing document for this program is the NFRC 705. The program is being piloted in 2009 and is to be fully implemented in 2010.

CMAST CPD – Component Modeling Approach Software Tool Certified Products Directory: A freely accessible, web-based directory administered by NFRC that provides energy rating information for non-residential fenestration products as well as NFRC-approved components, and a listing of all CMA Label Certificates,

CPD – Certified Products Directory: A directory of fenestration products in electronic form, listing fenestration products and their performance ratings, for which product certification authorization has been granted by a licensed IA (inspection agency), and can be searched by the public.

Fenestration – Products that fill openings in a building envelope, such as windows, doors, skylights, curtain walls, etc., designed to permit or limit the passage of air, light, vehicles, or people.

Fenestration Attachment – A device (such as, but not limited to, shades, films, or blinds) designed to be physically attached to, incorporated with or covering a fenestration product.



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Film: Fenestration attachment products which consist of a flexible adhesive-backed polymer film which may be applied to the interior or exterior surface of an existing glazing system. See Fenestration Attachment.

IA - Independent Certification and Inspection Agency: An organization or person authorized by license to conduct specified services for the Certification Program.

LAP – Laboratory Accreditation Program: NFRC administers this program which contains the rules and requirements for licensed, accrediting thermal test and computer simulation laboratories. (NFRC 701)

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). (NFRC 700)

Site-Built Program – A rating program developed in 1999 by NFRC to rate non-residential fenestration products.

NFRC Energy Performance Ratings

AL- Air Leakage: The volume of air flowing per unit time per unit area through a fenestration system due to air pressure or temperature difference between the outdoor and indoor environment. (NFRC 400).

CR- Condensation Resistance – A relative indicator of a fenestration product's ability to resist the formation of condensation at a specific set of environmental conditions. The higher the Condensation Resistance value the greater the resistance to the formation of condensation. (NFRC 500).

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 and NFRC 201).

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 and NFRC 102).

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

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

ASTM International – formerly known as ASTM, The American Society of Testing and Materials

BIM – Building Information Modeling

CEC – California Energy Commission

CSA – Canadian Standards Association

DASMA – Door and Access System Manufacturers Association

EWC – Efficient Windows Collaborative (program under the Alliance to Save Energy)

EWC – Efficient Windows Collaborative (program under the Alliance to Save Energy)

GANA – Glass Association of North America

ICC – International Code Council

-IECC – International Energy Conservation Code

-IBC – International Building Code

-IRC – International Residential Code

IGCC – International Glass Certification Council

IGMA – Insulating Glass Manufacturers Alliance

ISO – International Organization of Standardization

IWFA – International Window Film Association

LBNL – Lawrence Berkeley National Laboratories

LEED – Leadership in Energy and Environmental Design

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 600 Glossary and Terminology-2009-E0A0. Available on the NFRC website at <http://www.nfrc.org/technicaldocs.aspx>*



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Meeting Notes:

Use box below to type any meeting notes you would like to capture



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NFRC Fall Membership Meeting 2010 Pre-Registration List – *(by Company Name)*

3G Mermet

Philippe E. Paugois
Cowpens, SC 29330

Airgas, Inc.

Earlene Shillingford
Bristol, PA 19007

Air-Ins, Inc.

Dave Deshaies McMahon
Varennes, QC J3X 1P7
Canada

Air-Ins, Inc.

Gilbert Riopel
Varennes, Quebec J3X 1P7
Canada

Alkenz USA

Fred M. Clark
Richmond, VA 23228

Alliance to Save Energy

Nils D. Petermann
Washington, DC 20036

Alliance to Save Energy

Neal Humphrey
Washington, DC 20036

**American Architectural
Manufacturers Association
(AAMA)**

Ken Brenden
Schaumburg, IL 60173

Amsco Windows

Joe Jonely
Salt Lake City, UT 84125

Andersen Corporation

Steven M. Johnson
Bayport, MN 55003-1096

**Architectural Glass and
Aluminum Co.**

Mark Tofflemire
Alameda, CA 94501

Architectural Testing, Inc. - PA

Michael J. Thoman
York, PA 17406

Associated Laboratories, Inc.

Brad Schultz
Dallas, TX 75315

Associated Materials, Inc.

Dan Green
Cuyahoga Falls, OH 44223

Associated Materials, Inc.

Steve Harp
Cuyahoga Falls, OH 44223

Associated Materials, Inc.

Ed D. Ellenberger
Cuyahoga Falls, OH 44223

Atrium Companies Inc.

Douglas E. Harden
Dallas, TX 75247

Bekaert Specialty Films, LLC

Travis Windleharth
San Diego, CA 92123

Birch Point Consulting LLC

Thomas Culp
La Crosse, WI 54601

California Energy Commission

Nelson Peña
Sacramento, CA 95814-5512

**Canadian Thermo
Windows/Magic Window**

Myrna P. Pula
Woodbridge, Ontario L4L 6C8
Canada

Cardinal Glass Industries, Inc.

Brian P. Crooks
Eden Prairie, MN 55344

Cardinal Glass Industries, Inc.

Jim Larsen
Eden Prairie, MN 55344

CARLI, Inc.

Mahabir Bhandari
Millers Falls, MA 1349

Cascade Windows

Greg J. Lambas
Spokane, WA 99206

**Center for Sustainable Building
Research**

Kerry Haglund
Minneapolis, MN 55414

**Champion Window and Patio
Room Company**

Rik Vonderhaar
Cincinnati, OH 45241-6419

Chelsea Building Products

Gary L. Hartman
Oakmont, PA 15139

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

Joseph R. Hetzel
Cleveland, OH 44115-2851

ECOS Consulting

Gary Curtis
Portland, OR 97204

EFCO Corporation

Joseph Holmes
Monett, MO 65708

EMCO Enterprises

Korey W. Gearhart
Des Moines, IA 50317

Enclos Corp.

Daniel W. Bettenhausen
Eagan, MN 55121

**Enermodal Engineering of
Canada**

Michael Barclay
Kitchener, ON N2K 3S2
Canada

Entech Solar

Charles "Les" Condit
Fort Worth, TX 76177

Glen Raven, Inc.

John Gant
Glen Raven, NC 27217

Greenberg Traurig, LLC

Scott Meza
McLean, VA 22102



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Pre-registration List (by Company) Continued....

Guardian Industries Corp.
Brent R. Boyce
Carleton, MI 48117

Guardian Industries Corp.
Tim Singel
Carleton, MI 48117

Guardian Industries Corp.
Steve Farrar
Auburn Hills, MI 48326

Heschong Mahone Group
Mudit Saxena
Gold River, CA 95670

Heschong Mahone Group
Lisa Heschong
Gold River, CA 95670

Hunter Douglas, Inc.
Michael A. Cienian
Broomfield, CO 80020

Hunter Douglas, Inc.
Sanjiv Malkan, Ph.D.
Broomfield, CO 80020

Hunter Douglas, Inc.
Robert A. Simons
Broomfield, CO 80020

Hunter Douglas, Inc.
Thomas Morrissey
Woodstock, IL 60098

Hurricane Test Laboratory, LLC
Lucas Turner
Hillboro, TN 37342

IGCC
John Kent
Sackets Harbor, NY 13685

Insulating Glass Manufacturers Alliance (IGMA)
Margaret K. Webb
Ottawa, Ontario K1H 1B8
Canada

International Window Film Association
Darrell L. Smith
Martinsville, VA 24115

J&A Windows Inc.
Jose Antonio Terrazas
Los Angeles, CA 90001

Jeld-Wen, Inc.
Steve Strawn
Portland, OR 97201

Keystone Certifications, Inc.
Marcia Falke
Etters, PA 17319

Keystone Certifications, Inc.
Steve Urich
Etters, PA 17319

Keystone Certifications, Inc.
Jon Hill
Etters, PA 17319

Lawrence Berkeley National Laboratory
Robin Mitchell
Berkeley, CA 94720

Lawrence Berkeley National Laboratory
Mike Rubin
Berkeley, CA 94720

Lawrence Berkeley National Laboratory
Charlie Curcija
Berkeley, CA 94720

Lawrence Berkeley National Laboratory
Jacob Jonsson
Berkeley, CA 94720

Lawrence Berkeley National Laboratory
Robert Hart
Berkeley, CA 94720

Lawrence Berkeley National Laboratory
Christian Kohler
Berkeley, CA 94702

Madico, Inc.
Andrew S. Hayes
Woburn, MA 1801

Manko Window Systems, Inc.
Kevin D. Dix
Manhattan, KS 66502

Marvin Windows & Doors
James C. Krahn
Warroad, MN 56763

Masonite
Steve Schreiber
Dickson, TN 37055

Mecho Shade Corporation
Steve Hebeisen
Long Island City, NY 11101

Mikron Industries, Inc.
Grant T. Muller
Kent, WA 98032

Milgard Manufacturing, Inc.
Kevin D. Vilhauer
Tacoma, WA 98424

National Certified Testing Laboratories
Steven H. Coble
York, PA 17406

National Certified Testing Laboratories
Christian J. Mitchell
York, PA 17402

National Certified Testing Laboratories - Northwest; dba Quality Testing
Marles McDonald
Everett, WA 98201

Natural Light Energy Systems
Gregg Vincent
PHOENIX, AZ 85029

Newell Window Fashions Inc.
Teresa A. Williamson
atlanta, GA 30128

ODL Incorporated
Raymond Dill
Zeeland, MI 49464

ODL Incorporated
David De Block
Zeeland, MI 49464

Oldcastle Glass, Inc.
Michael B. Krontz
Terrell, TX 75160

Pacific Gas & Electric Company (PG&E)
Theda Silver-Pell
San Francisco, CA 94105



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Pacific Northwest National Laboratory

Terry S. Mapes
Richland, WA 99352-0999

Peerless Products, Inc.

Jason Davis
Fort Scott, KS 66701

Pella Corporation

Joe Hayden
Pella, IA 50219

Peter Lyons & Associates

Peter Lyons
Kaleen, ACT 2617
Australia

PGT Industries

Michael Nau
Nokomis, FL 34275

Pilkington North America, Inc.

David Duly
Toledo, OH 43624

Professional Awning Manufacturers Assoc.

Don Smallwood
North Hollywood, CA 91605

Quast Consulting and Testing, Inc

Armeya Saroufiem
Mosinee, WI 54455

Roetzel & Andress

Thomas S. Zarembo
Toledo, OH 43604

Rollac Shutter of Texas, Inc.

Stefan Poetsch
Pearland, TX 77581

Royal Group Technologies

Marvin Stover
Surprise, AZ 85379

Royal Window and Door Profiles

Michel Pépin
Laval, QC H7L 4C3
Canada

Sage Electrochromics, Inc.

Chuck Hayes
Faribault, MN 55021-5081

Seattle Dept. of Planning & Dev.

John Hogan
Seattle, WA 98124-4019

Serious Materials, Inc.

Brandon Tinianov
Sunnyvale, CA 94089

Simonton Windows

Tina Jenkins
Parkersburg, WV 26102

Soladigm

Namrata Vora
Milpitas, CA 95035

Solatube International, Inc.

Dan State
Vista, CA 92083-8341

Solutia, Inc.

Lisa Winckler
Fieldale, VA 24089

Somfy Systems

Margaret Cook
Dayton, NJ 8810

Somfy Systems

Serge NEUMAN
CLUSES, Other 74308
FRANCE

Southwall Technologies

John Meade
Palo Alto, CA 94303

Stanek Vinyl Windows, Corp.

Ty B. Burin
Cuyahoga Heights, OH 44125

Stork Twin City Testing

Matt Botz
St. Paul, MN 55114

Stork Twin City Testing

Edward L. Peterson
St. Paul, MN 55114

Sunergy Consulting

William C. duPont
Annapolis, MD 21403

SunPine Consulting

Dr. Ross McCluney
Chattanooga, TN 37419

Sunrise Windows, LLC

Steven D. Haubert
Temperance, OH 48182-9500

SWITCH Materials

Caleb Willis
Burnaby, BC V5G 4W8
Canada

Technoform

Vincent "Bart" Hensley
Twinsburg, OH 44087

TRACO

Sneh Kumar
Cranberry Township, PA 16066

TruSeal Technologies, Inc.

Werner Lichtenberger
Hamilton, Ontario L8P 1M5
Canada

Twitchell Corporation

Gena Webb
Dothan, AL 36304

VELUX-America Inc.

Roger LeBrun
Greenwood, SC 29648-5001

WESTLab

Jeff Baker
Penetang, Ontario L9M 2H3
Canada

WESTLab

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Meeting Notes:

Use box below to type any meeting notes you would like to capture

Welcome NFRC

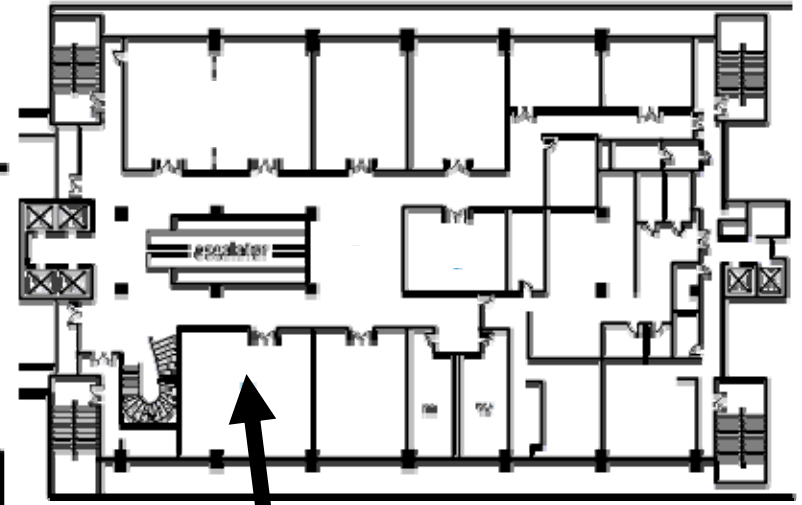
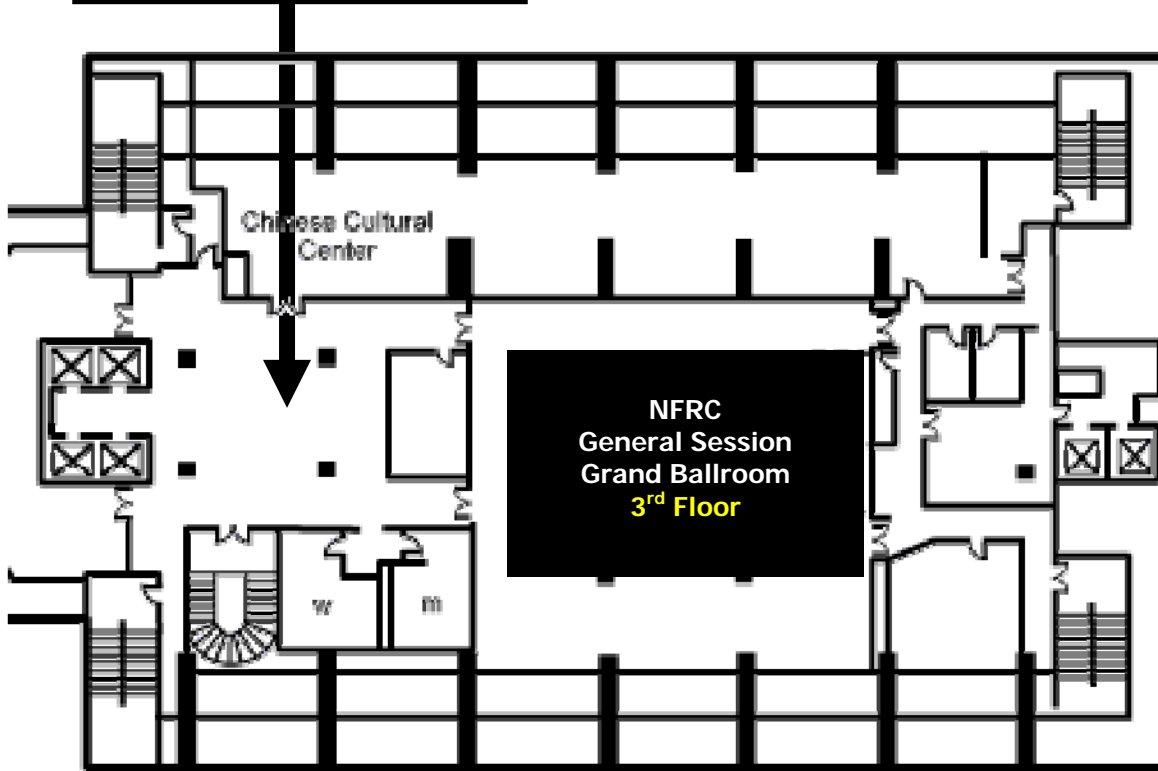
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MAP

Registration Area

Opens 6:30 a.m. 11/08/2010



Breakout Session
11/8/2010 – Jackson Room
2nd FLOOR

Continental Breakfast will be served in the Grand Ballroom Foyer

Monday through Thursday mornings complimentary for all NFRC Meeting Registrants.

Hilton Financial District, San Francisco

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San Francisco, California 94108

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