

**Residential Building Committee  
Meeting Minutes  
September 16, 2016 Interim Meeting  
Stakeholders Workshop, Alexandria, VA**

**Attendance**

**Members Present:** Max Sherman (Chair), Chris Mathis (Vice-chair), Costas Balaras, Robert Bean, Charlie Culp, Philip Fairey, Paul Francisco, Chris Gray, Glenn Hourahan, David Lee, Neil Leslie, Dan Pettway, Iain Walker, David Weishuhn, Theresa Weston, Dan Int-Hout (BOD ExO)

**Members Not Available:** Jeff Inks, Chris Van Rite, Pat Graef (CO)

**ASHRAE Staff:** Lilas Pratt (staff liaison), Jodi Scott

**Guests:** Stephanie Mages, Lance McNevin, President-Elect Bjarne Olesen

**Principal Motions<sup>1</sup>**

**Motion 1:** Sherman brought the minutes to the floor for approval.

**Vote:** Motion passed without objection.

**New and Open Action Items**

**January 25, 2015 Chicago Winter Meeting**

6	Publications SubC (Francisco)	Develop a recommendation for improving general building science education by June 2015 Atlanta meeting	On-going
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**January 25, 2016 Orlando Winter Meeting**

2	Mark Ames	Send Pratt a link to the coalition for distribution to the RBC Committee	Open
3	Mark Ames & Jim Scarborough	Provide information to Max Sherman for possible inclusion on the RBC website.	Open

**March 18, 2016 Conference Call Web Meeting**

1	Chris Mathis	Update the DL presentation and send to RBC members by March 25 for their review and feedback	Complete
2	RBC Members	Provide feedback on the DL presentation to Chris Mathis by COB on Friday, April 1, 2016	New
3	Neil Leslie	Create an approach for outreach to the chapters and RVCs with help from Jodi Scott, Lilas Pratt, and Chris Mathis	On-going

<sup>1</sup> All motion votes are listed as yes-no-abstain.

<b>June 27, 2016 St Louis Annual Meeting</b>			
1	Chris Mathis	Develop several slides on RBC and/or residential issues to send to CTTC and/or the DL list.	
7	Journal Article Lead Authors	Develop abstracts by July 30, 2016. Authors: Sherman, Leslie/Gray, Bean/ Hourahan/Bailes/Werling, Culp/Walker/Van Rite, Mathis/Lstiburek/LaFrance, Francisco, Weston/Karagiozis	
9	Lilas Pratt	Look into the rules for listing non-ASHRAE sponsored conferences on the RBC web page on the ASHRAE website.	
10	RBC Members	Review the list of conferences and provide feedback to the conferences subcommittee	
11	Lilas Pratt	Combine the Program and Conferences subcommittees into one meeting as a two hour block for future meetings	
12	RBC Members	Provide feedback on RBC webpage to the Programs and Conferences subcommittee (cc: Pratt) by July 30, 2016.	
13	RBC Members	Send requests for new committee programs to Max Sherman and include justification for why they should be funded.	

<b>September 16, 2016 Interim Meeting at Stakeholders Workshop</b>			
1	Workshop facilitators/recorders	Send workshop break-out session notes to Mathis and Pratt	New
2	RBC Members	Send "lessons learned" from workshop t Mathis and Pratt	New
3	Dan Int-Hout	Write one page summary of the workshop (Note: Summary emailed Chair on 9/22/16)	New
4	Publications Subcommittee	Develop a plan and approach for creating an index of residential content in the Handbooks.	New
5	Publications Subcommittee	Develop an initial scoping draft for a residential design guide.	New
6	Stakeholders Subcommittee	Create a list of potential organizations to collaborate on a residential design guide	New
7	Conferences Subcommittee	Investigate who currently owns the Buildings Conference and what is included in a transfer of ownership	New
8	Conferences Subcommittee	Create a summary of what the existing Buildings Conference consists of currently	New
9	David Lee	Investigate DOE funding possibilities if ASHRAE takes over the Buildings Conference	New
10	RBC Members	Send relevant conferences, symposiums, and events to Theresa Weston for listing on the RBC webpage	New
11	RBC Members	Review Active House materials ( <a href="http://www.activehouse.info">www.activehouse.info</a> )	New
12	Technical Subcommittee	Conduct conference call to discuss Active House and ASHRAE's possible participation. (Note: Call held on 10/12/2016)	New

September 16, 2016 Interim Meeting at Stakeholders Workshop			
13	Lilas Pratt	Send copy of latest version of the MOP to Charlie Culp, Max Sherman, and David Weishuhn	

## Meeting Minutes

**Friday, September 16, 2016, 12:30pm-4:00pm**

1. Call to Order (Sherman) – Meeting convened at 12:27pm EDT
  - a. ASHRAE Code of Ethics [www.ashrae.org/codeofethics](http://www.ashrae.org/codeofethics)
  - b. Committee Structure – [Roster and Subcommittees](#)
  - c. Introductions
2. Review of Agenda
  - Active House will be added to New Business.
  - The workshop debriefing will be done last.
3. Approval of minutes (Sherman)
  - a. June 27, 2016 Annual Meeting

**Motion 1:** Sherman brought the minutes to the floor for approval.

**Vote:** Motion passed without objection.

4. Announcements (Sherman)
  - None at this time.
5. Liaison Reports
  - a. Marketing and Communications (Jodi Scott)
    - No updates at this time.
  - b. Staff Report (Pratt)
    - No updates at this time.
6. Old Business
  - Review of [Action Items](#)
7. Subcommittee Reports
  - a. Stakeholders (Pettway)
    - Stakeholder Workshop Debriefing
    - Attendance
      - The committee noted that attendance was down slightly from the first workshop.
      - One explanation is that procedures for government employees to get permission differ for different kinds of meetings/conferences and for

different departments. The procedures have also become more onerous over time.

- Other factors that might have affected attendance were meeting fatigue (due to latching onto the backend of IAQ 2016), being on Friday, and competition with the Deep Retrofit meeting.
- Stakeholders List
  - The committee agreed that staff will maintain the list moving forward.
- Breakout session notes
  - Facilitators/recorders were asked to forward their notes and impressions to Chris Mathis and Lilas Pratt.
- Final Report
  - The first report will not have value judgments; but rather will just report what was said and any consensus that came out of the conference.
  - There will also be a report with recommendations for RBC and other bodies that will go to Tech Council.
  - A report is also needed on what happened, the sense of the conference.
  - ExCom will be looking for a report on the conference from Dan Int-Hout. It was suggested that he write a conference summary to be used both for his report to ExCom and in the main Workshop report.
- Thoughts/Impressions:
  - Concerns were noted about comments from the participants that there was not enough focus to the workshop. However, rather than focusing on that concern, the committee should focus on getting outcomes from the workshop.
  - One suggestion was that the break out groups shouldn't have been changed as the input from Day 2 seemed disconnected from Day 1. If the groups stay the same for both sessions, the participants can pick up the discussion where they left off.
  - An alternative suggestion was that if the groups are changed in future workshops, the top 3 to 5 consensus items from the Day 1 sessions should be the focus for all groups in the Day 2 sessions.
  - It would be worthwhile to write up lessons learned from a procedural stand point.
  - Outcomes included the identification of the first 3 design guides to pursue along with suggested standards actions/activities including co-branding.
  - One suggestion from the workshop was to map existing standards and identify gaps. There is a report from ANSI on this topic which would good to use as a starting point. RBC might wish to reach out to Standards committee to see if they want to participate in this effort.
  - One concern is that the market follows consumer preference/value and is not driven by technology, logic, etc. The committee will need to keep that in mind moving forward and look to do the marketing up front.

- This is not the case in Europe where even a small house requires an engineer, and they are looking for technical guidance. Europe has been using ASHRAE residential resources and will do so even more moving forward.
  - If ASHRAE wants to have an impact, they have to be just one of a set of organizations involved in this. ASHRAE can use their strength and size to be a convener and facilitator.
  - One issue: how do you put information out there so that it can be found? There is already some work being done on the ASHRAE website so that there are different layers for different audiences.
  - In additions, organizations exist that have figured out how to get information in front of people.
  - Contractors are not always the most trusty worthy source, but that is where consumers get most of their information. Utilities are more trusted and could be a good source.
- Organizations to collaborate with:
  - RESNET has 109,000 ratings.
  - DOE Weatherization has 100,000 homes per year.
  - BPI has 16,000 raters.
  - White House middle class task force, RMI, PATH, and Clinton Climate Foundation are all working in the same area, trying to address the same thing, asking the same questions.
  - ACEEE and NRDC in order to be active on the hill.
  - National Gas Association and CEE in order to connect with utilities.
  - Better Business Bureau.
  - NASEO when working with states.
  - Weatherization group within DOE.
  - The suggestion is to build a relationship with these organizations individually ahead of trying to organize their participation in a workshop type activity.
  - This should be done as specific actions are identified.
  - ASHRAE should have a convener role beyond just technical issues.
  - It would also make sense to create a coalition to begin looking at these issues with a long term view of where things need to go. That coalition should be assembled not at the highest level, but rather at a level where the work is done but still high enough to understand the policy issues.
  - Home Performance Coalition might be the first group to talk with.
  - RBC would probably want to engage GGAC in any advocacy work. Jim Wolf as co-chair of that committee has taken on residential as a priority.

**AI 1: Facilitators and Recorders for break-out sessions to send their notes to Mathis and Pratt.**

**AI 2: RBC members to send “lessons learned” to Mathis and Pratt.**

**AI 3: Dan Int-Hout to write one page summary of the workshop (Note: Summary emailed Chair on 9/22/16)**

b. Publications (Francisco)

- Other resources/publications
  - Glenn Hourahan is currently working on the Handbook Residential Resources List. (Secretary's note: This work was completed and sent to the Publications Subcommittee on 9/28.)
  - This work may identify a number of relevant guides/resources as part of the scoping process for the residential guide.
  
- Residential Green Guide
  - This is not intended to be a design guide for the ASHRAE Engineer; rather, it is for everyone else: utilities, building engineers and managers, etc.
  - RBC needs to decide if they should first undertake the project that is more likely to utilize an engineer or the one that is more likely to have the biggest impact.
  - The first guide should be for low- to mid-rise multi-family construction which is still primarily wood construction up to 5 stories. There is virtually nothing in existence serving this area – it is grossly underserved.
  - It is more likely that an ASHRAE designer would be involved in multi-family homes than with single family homes.
  - If ASHRAE undertakes this project alone, it would only reach about 10% of the target audience. So ASHRAE needs to collaborate with and engage with building operators, utilities, contractor organizations, and then market the final guide through those organizations.
  - There is virtually nothing in existence serving this area – grossly underserved.
  - Residential construction has been dumbed down with engineers and architects systematically removed from the process. These skills need to be introduced back into the process.
  - Questions to be answered include:
    - Existing or new construction?
    - What is mid-rise, up to 6 stories
    - What about single story?
  - In the plumbing world, a design guide for residential building was developed that looked at four different types of residence construction. If the ASHRAE guide uses those same four residencies, it would be scalable and could be applied to almost any kind of construction.
  - The suggest process (following Special Projects Procedures) is:
    - Assemble a Steering Committee with the proposed involved organizations that can then be solicited for their involvement.
    - Limit the SC to about five organizations
    - Develop a scope and definition.
    - Create a first draft or an intent document.
  - RBC may want to approach HUD Office of Policy Development and Research and Office of Multi-family. However, they are suffering funding issues.
  - There is a strong interest in multi-family as well as a Presidential task force centered in HUD.

- Stakeholder subcommittee needs to identify possible organizations to approach for this project.
- Publications Subcommittee will do further work on this for review by the full committee at a webinar in early November.

**AI 4: Publications Subcommittee to develop a plan and approach for creating an index of residential content in the Handbooks.**

**AI 5: Publications Subcommittee to develop an initial scoping draft for a residential guide.**

**AI 6: Stakeholders Subcommittee to create a list of potential organizations to collaborate on a residential guide.**

c. Conferences (Weston)

- Buildings Conference Series
  - Thermal Performance of the Exterior Envelopes of Whole Buildings International Conference
  - Website: <http://web.ornl.gov/sci/buildings/2016/>
  - Buildings XIII Conference will be held December 4-8, 2016 in Clearwater, FL
  - The conference focuses on envelope dominated buildings, so the focus tends to be on the envelope rather than systems. It is not technically a residential conference, but since residential buildings tend to be envelope dominated, it is about half residential.
  - This is an international, peer-reviewed paper conference. The conference acts as one outlet for the presentation of ASHRAE research projects.
  - It is unclear who owns this conference. The website suggests that ORNL owns it; however, DOE is no longer interested in funding/sponsoring the conference.
  - ASHRAE is interested in running a residential conference without adding/starting a brand new conference. The idea is to take over the conference and adapt it moving forward.
  - The conference committee will debrief at the Las Vegas meeting and make a recommendation on how to proceed moving forward.
  - This conference has market momentum and many repeat customers, so taking that over would allow ASHRAE to capture that value. One suggestion was to move away from only allowing peer-reviewed papers, and instead allow presentations without papers. This would open the conference to a wider audience of interested parties and participants.
  - It has traditionally been at the same place and time every year 3 years; however, if ASHRAE takes over, the conference would not have to be conducted in North America or the US.
  - This subcommittee needs to determine if the current sponsors are interested in ASHRAE taking this over. ASHRAE would like to continue to get support from DOE, BTEC, and others.
  - The committee has access to the budgets for the conferences from the last decade or more. This would be useful information for ASHRAE.
  - Possible sources of funding are DOE/EPA/Emerging Technologies.

- IAQ 2016
  - This conference was well attended with a lot of residential content.
  - The goal was for it to be relevant and different.
  
- RESNET, EEBA, ACI
  - The subcommittee is putting together a calendar of meetings and events for listing on the RBC website. This list will need to be kept up to date.
  - All RBC members should send relevant conferences, symposiums, and events to Theresa Weston for this list.
  
- Energy in Buildings and Energy in Transportation
  - ASHRAE sponsored event in Greece.

**AI 7: Conferences Subcommittee to investigate who currently owns the Building Conference and what is included in a transfer of ownership.**

**AI 8: Conferences Subcommittee to create a summary of what the existing Buildings Conference consists of currently.**

**AI 9: David Lee to investigate DOE funding possibilities if ASHRAE takes over the Buildings Conference.**

**AI 10: RBC members to send relevant conferences, symposiums, and events to Theresa Weston for listing on the RBC webpage.**

d. Programs (Leslie)

- Las Vegas Meeting Sessions
  - Four residential sessions will be put into an AHR Expo track (sequentially) on Tuesday, January 31:
    - Did it really work? Theory vs. Practice
    - ASHRAE Residential Initiative – why we care?
    - Flex duct, Hard Duct, and No Ducts: Migration Patterns for Duct Hunters
    - International Experience and Contractor’s perspective ....
  - Other sessions included in the regular Technical Sessions include a session related to metrics and a renewables workshop (TC 2.8)
  - Several residential related submissions did not get accepted including: Habitat for Humanity, Indoor Air Quality, and others. Believe that they just ran out of slots.
  
- Long Beach Meeting Technical program relevant tracks include:
  - Net Zero Energy Buildings: The race to 2030 (Track 7)
  - Residential Buildings: Standards, Guidelines, and Codes (Track 8)
  - The deadline for papers has now passed (Aug 29)

e. Technical (Fairy)

- No report at this time.

8. New Business

a. Active House ([www.activehouse.info](http://www.activehouse.info))

- President-Elect Olesen would like a residential guide, a residential conference, and a residential evaluation tool. Active House could be the evaluation tool.
- It is not like a label, but it can be used to evaluate residential buildings.
- The Target audience is builders. There is an Active House design guide on their website.
- This rating for residential that takes into account comfort, energy, and environmental – much like a LEED for residential.
- The criteria for each area are mainly based on European standards. But they are expanding to Canada and the US. The criteria can differ from country to country.
- There is a spider diagram with a series of circles, representing the possible scores for each of the different criteria. The performance of the house being rated in each of the criteria is represented by lines radiating from the center.
- The criteria are color coded by the three main areas (comfort, energy, environmental).



- There is an active House alliance which includes some manufacturers, universities, and others. A major sponsor is a Danish window manufacturer.
- It is unclear who owns the intellectual property. Some research is needed.
- If ASHRAE joins into this, it is unclear whether there can be an “Active House by ASHRAE”.
- ExCom is receptive to exploring the product, but they have not talked about what ASHRAE’s role would be. They talked about ASHRAE writing an overall guideline, but President-Elect Olesen feels that ASHRAE should have a bigger role.
- ASHRAE is a partner in ICC 700 which covers a lot of this and is potentially a conflicting document to the Active House criteria. The criteria should not violate any ASHRAE standards.

- There is definitely interest if the criteria are linked to appropriate ASHRAE Standards such as Standards 90.2, 55, 62.2, etc.
- Feedback is requested from RBC to make a recommendation to ExCom as to whether or not to further pursue this.
- The committee needs to review, discuss, and make a recommendation.
- There is an Active House Board meeting in mid-October and ASHRAE ExCom is meeting in early October, but RBC won't be able to respond those dates.

**AI 11: RBC members to review Active House materials ([www.activehouse.info](http://www.activehouse.info))**

**AI 12: Technical Subcommittee to conduct a conference call to discuss Active House and ASHRAE's possible participation. (Note: Call held on 10/12/2016)**

- b. Manual of Procedures (Chris Mathis)
  - If anyone on the committee wishes to review, ask Lilas Pratt for the latest version of the document.

**AI 13: Lilas Pratt to send copy of latest version of the MOP to Charlie Culp, Max Sherman, and David Weishuhn**

- c. RBC Webpage (Jodi Scott)
  - <https://www.ashrae.org/society-groups/committees/residential-building-committee-rbc>
  - Some changes have been made to the website to make it look less like a standing committee page and to have more of a marketing perspective.
  - The list of conferences/symposiums/events will be added when available.
  - The report from this workshop will also go on website.
- d. RBC PowerPoint / Distinguished Lecturers for Residential (Chris Mathis)
  - No report at this time.

9. Next Meeting

- a. Las Vegas Winter Meeting, Monday, January 30, 9:00am-12:00pm
- b. Interim Subcommittee meetings - TBD

10. Adjourn – **Meeting adjourned at 3:56pm EDT**

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**Residential Building Committee  
Roster & Subcommittees**

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**201-2017 Committee**

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**Voting Members:** Max H Sherman (Chair), R Christopher Mathis (Vice chair), Constantinos A Balaras, Robert Bean, Charles H Culp III, Philip W Fairey, Paul Francisco, Chris Gray, Jeff Inks, David F. Lee, Neil P Leslie, Chris Van Rite, Iain S Walker, Theresa A Weston,

**Non-Voting Members:** Glenn C. Hourahan (Consultant), Daniel C Pettway (Consultant), Pat Graef (Coordinating Officer), Dan Int-Hout, III (BOD Ex-Officio)

**2016-2017 Subcommittees:**

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- Conferences: Weston (Chair), Balaras, Lee, Walker
- Programs: Leslie (Chair), Balaras, Inks, Walker
- Publications: Francisco (Chair), Bean, Gray, Hourahan, (Haydock)
- Stakeholders: Mathis (Chair), Culp, Hourahan, Lee, Pettway
- Technical: Fairey (Chair), Bean, Culp, Gray, Lee, Inks

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## RULES OF THE BOARD – 2.423 RESIDENTIAL BUILDINGS COMMITTEE

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### 2.423.001 SCOPE AND PURPOSE

This committee shall be responsible for identifying major residential trends impacting the practice of HVAC&R, informing the ASHRAE leadership and membership of these trends and their potential impacts, and making recommendations on new activities and policies in response to these trends. In addition, this committee shall serve as a resource to the Society on activities and issues that relate to residential impacts of building technologies including but not limited to ventilation, and thermal organizations that focus on residential buildings. The committee will be responsible for implementation of the residential aspects of the Strategic Plan.

### 2.423.002 MEMBERSHIP

#### 2.423.002.1 Composition

The members of this committee are as follow

- A. Maximum of fifteen (15) voting members, including a chair and a vice chair;
- B. Voting members shall include:
  - 1. a past member of Standards Committee
  - 2. a past member of Research Administration Committee
  - 3. a past member of Members Council
  - 4. a past member of Environmental Health Committee
  - 5. a home builder or someone representing the home building industry
  - 6. a past chair or other committee officer of a technical committee involved in residential issues
  - 7. a member from outside the U.S. and Canada
  - 8. a representative of at least one major residential stakeholder such as ACCA or RESNET
  - 9. a past Society officer
- C. Non-voting members include a Board ex-officio member and coordinating officer.

#### 2.423.002.2 Qualifications

- A. The chair and vice chair shall hold the grade of Member or higher in the Society.
- B. The majority of the voting members of the committee must be ASHRAE members of Associate Grade or higher.

#### 2.423.002.3 Term of Service

The term of service for voting members is intended to be three (3) years, subject to ROB 3.300 *Election and Appointment Procedures*.

### 2.423.003 OPERATIONS

#### 2.423.003.1 General Requirements

This committee shall maintain a long-range plan for ASHRAE's role in the "Buildings" conferences (sponsored by BETEC and ASHRAE) and submit this plan to Technology Council at the Annual Meeting.

#### 2.423.003.2 Transportation Expenses

Transportation costs to bring members of other societies/groups with needed expertise to meet with this committee may be paid if approved by the chair of Technology Council.

### 2.423.004 STRATEGIC PLAN

This committee shall develop procedures for recommending updates to the strategic plan on a continuous basis. As a minimum the committee shall submit a report to the council prior to the Annual Meeting that includes the current status of each activity which supports the fulfillment of the committee's assignments under the strategic plan. The committee shall report to the council all recommendations for changes to the strategic plan as provided by the committee's constituents prior to the Annual Meeting.

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