

**Minutes (Draft – 6/30/2022)**

**ASHRAE TECHNICAL COMMITTEE 6.3  
RESIDENTIAL AND LIGHT COMMERCIAL CENTRAL FORCED AIR HEATING AND COOLING  
SYSTEMS**

**Tuesday, June 28, 2022  
1:00 p.m. – 3:00 p.m. EDT  
Sheraton, Peel (M)  
Hybrid Meeting**

**Link to Join:**

<https://ashrae.webex.com/ashrae/j.php?MTID=m784bf748143672b8b6f4836477cfe2bf>

Meeting number: 2335 711 8292 Password: TC6.3

Join by phone 18662994153 United States of America Toll Free +14702385742 US Toll

Access code: 2335 711 8292

**Voting Members Present**

Eric Berg, Chair (23)  
Paul Haydock, Sec (23)  
Nicolas Aouad (25)  
Craig Grider (25)  
Jon Winkler (22)

**Voting Members Absent**

Diane Jakobs, HB (22)  
Larry Brand (25)  
George Yaeger, Web (23)

**Corresponding Members Present**

Andrew Hjortland, VC  
(Michael) Scott Creamer, Prog  
Randy Palm  
Jeff Munk  
Roy Crawford, Res  
Andrew Shore  
Julia Hegarty  
Steve Kowalski  
Antonio Romeo  
David Yuill  
Lucas Adin

**Guests**

Anthony Cacciotti  
Jim VerShaw  
Wes Davis  
David Springer  
Joscha Mueller  
Jason LeRoy  
Ray Rite  
Austin Kim  
Shawn Ohara  
Wes Davis  
Payam Delgoshaei

## **1. Call to Order and Introductions – Review Scope and Purpose of TC 6.3 - Chair**

TC 6.3 is concerned with those central forced air systems used for residential and light commercial building comfort heating and cooling. Responsibility covers the design and performance of the entire system, including equipment, controls, ducts and the interactions of the system with building heating and cooling loads.

Introductions around the room and webinar participants.

## **2. ASHRAE Code of Ethics Commitment – Chair**

*In this and all other ASHRAE meetings, we will act with honesty, fairness, courtesy, competence, inclusiveness and respect for others, which exemplify our core values of excellence, commitment, integrity, collaboration, volunteerism and diversity, and we shall avoid all real or perceived conflicts of interests. (See full Code of Ethics: <https://www.ashrae.org/about-ashrae/ashrae-code-of-ethics>.)*

## **3. ASHRAE Commitment to Care – Mentioned by the Chair; included here for convenience**

The health and safety of all ASHRAE conference attendees is a top priority. Out of respect for our fellow attendees, we commit to wear masks indoors, monitor our health, seek medical attention if symptoms develop and adhere to all ASHRAE Commitment to Care protocols. We are committed to the well-being of one another.

## **4. Review Agenda**

Chair asked for additions and/or revisions to the agenda. None proposed.

## **5. Establish Quorum**

8 Total voting members, 5 needed for quorum. (Online participants indicate your presence in the chat.

Chair verified that at 1:10 pm, 5 voting members were present for quorum

## **6. Approval of previous minutes from Las Vegas Meeting**

Motion to approve: Paul Haydock

Second: Nicolas Aouad

Discussion: None

Vote: Approved 4-0-0 Chair not voting

## **7. Announcements – Updates from TC Chairs Breakfast and Meeting, if any.**

MOP changes (Chair will post the information on Basecamp)

- Require committee to maintain balance of industry interest. TC6.3 has balance compliance.
- Recommended for TC to have a strategic plan.
- Requires Chair, Vice-Chair and all VMs to be members of ASHRAE

## 8. Subcommittee Reports

A. Handbook (Diane Jakobs/Randy Palm) – Randy Palm (incoming HB SC Chair) reporting.

For 2024 HB, deadlines are given per the HB liaison. Chapter 10 revisions due June 2023. Chapter 33 (Furnaces) revisions due July 2023. Suggested to complete work on Ch 10 by Winter meeting for TC vote. Suggest having Ch 33 complete by Summer 2023 meeting for TC vote.

- Volunteers
  - Chapter 10 – Steve Kowalski, Eric Berg
  - Chapter 33 – Paul Haydock, Steve Kowalski

B. Program (Scott Creamer)

No programs at the Toronto meeting.

Suggestion by Roy Crawford: Air distribution systems for low-load homes.

Other hot topics: Ratings changes in coming year, refrigerant changes in coming year, report on fuels blending (H2 blending) from GTI testing for H2 mixes. A suggestion (Berg) for a Debate on Furnaces vs. eHPs. Someone else suggested that seminar on Furnaces vs. eHPs would possibly be more informative. Another twist is a session on “all that’s going on” in US and in Europe; and similar session on “here’s the reality”. Suggestion (Crawford) for a seminar on dual fuel systems. Along the lines of decarbonization, Chair shared the following on the TFBD objectives:

### 2022-23 TFBD Objectives

- Below are major decarbonization resource projects for Board approval this afternoon

| Resource Development   | Duration  | Start  |
|--|-----------|--------|
| Building Decarbonization Retrofit Guide  | 18 months | Jul-22 |
| Heat Pump Application and Operation Guide  | 9 months  | Jul-22 |
| Healthcare Decarbonization Design Guide  | 12 months | Jul-22 |
| Building Performance Standard Resource Technical Guide                           | 6 months  | Jul-22 |
| Guide for Designing and Operating Grid-interactive Buildings for Decarbonization | 12 months | Jun-22 |
| Building Decarbonization Whole Life Design Guide                                 | 12 months | Jul-22 |

C. Research (Roy Crawford/Nicolas Aouad)

- WS-1910 - Evaluation of Standard 103 Transient Components and Thermostat Cycle Times on the Resulting AFUE

Update on 1910 – TRP (tentative Research Project). The PES was identified as:

| Member       | Position | E-mail   | Notes                                     |
|--------------|----------|--|---|
| Paul Haydock | Chair    | <a href="mailto:paul.haydock@carrier.com">paul.haydock@carrier.com</a>           | <b>PES Must consist of only 5 members</b> |
| Larry Brand  | Member   | <a href="mailto:lbrand@frontierenergy.com">lbrand@frontierenergy.com</a>         |   |
| Paul Sohler  | Member   | <a href="mailto:pauls@velocityboilerworks.com">pauls@velocityboilerworks.com</a> |   |
| Roy Crawford | Member   | <a href="mailto:roy.crawford@ici.com">roy.crawford@ici.com</a>                   |   |
| Xudong Wang  | Member   | <a href="mailto:xwang@ahrinet.org">xwang@ahrinet.org</a>                         |   |

Bid selection will responsible for PES. Instructions should be sent to PES chair who will copy others and TC 6.3 Research SC Chair (Nicolas). Only those on the PES are allow to be involved with selection.

- Res Strategic Plan – Paul to come up with a high-strategic plan concept for TC6.3.

#### D. Standards (Mark Olsen/Kevin Mercer) –

Chair will connect with Standards SC chair to insure that nothing is outstanding.

- SPC 103 - Method of Testing for Annual Fuel Utilization Efficiency of Residential Central Furnaces and Boilers – Published 01/01/2022
- SPC 152 - Method of Test for Determining the Design and Seasonal Efficiencies of Residential Thermal Distribution Systems – Published 01/01/2014
  - David Springer recommended keeping 152. Interest from TC6.5 to collaborate on adding content to 152.
- SPC 193 - Method of Test for Determining the Airtightness of HVAC Equipment - Published 01/01/2014

#### E. Web Site (George Yaeger)

No report

#### F. Economizer Subcommittee progress report (Andrew Hjortland)

TC8.11 committee proposed a new economizer testing standard for roof top units. The TC6.3 Economizer SC will convert to a SPC and move to TC8.11 as the cognizant committee. May eventually fold into ASHRAE 37. This TC 6.3 Economizer Subcommittee will be disbanded. (It was determined not necessary to have a vote on this transition. There were no negative opinions about disbanding.)

### 9. Liaison Reports

#### A. Low GWP – MTG report (Roy Crawford)

Liaison (Roy Crawford) – Main focus on research for low GWP refrigerants. The research is winding down with small amounts to be wrapping up. No new research is being proposed. A new standard focused on safety for refrigerant applications for Residential Systems (SSPC 15.2) is being developed by SSPC 15 as a subcommittee. The 15.2 standard (Res installation standard dealing with line sets and refrigerant charges with concern for leaks from A2Ls) is published now but needs to immediately address changes. Yet to be determined if 15.2 will become a stand-alone SSPC, but if son, TC8.11 would probably be cognizant, and TC 6.3 might be given co-cognizant authority because there are implications on the size of the house which is the tie to

central forced air systems. Recommend TC6.3 to give support for a standalone 15.2 SSPC.

Separating 15.2 from SSPC 15 has some resistance because of possible divergence with respect to harmonization. Residential perspective would not have a PE commissioning with equipment installations. Argue that both refer to the Safety Standard, UL 60335-2-40, to which equipment is certified to. Std 15.2 can build in reference to Standard 15 and there can be liaisons between SSPC committees.

Motion: Craig Grider - TC6.3 to inform the Chair of SSPC 15 (Rusty Tharp) that TC 6.3 is willing to be a cognizant TCs of 15.2 if it were to become an SSPC.

Second: Paul Haydock

Discussion:

Vote: 5-0-0 Chair voting

B. MTG.VIC (Kevin Mercer) – No update

C. TC 8.11 Load Based Testing subcommittee report (Eric Berg) –

Chair provided update on the work (modeling approach for mapping to determine performance along any point and to determine which points provide the optimal performance)

D. Task Force on Building Decarbonization (Mercer)

## 10. Review Voting Membership

### Voting Members for Toronto

| First Name | Last Name | Position                              | Start Date | End Date   | Voting |
|------------|-----------|---------------------------------------|------------|------------|--------|
| Eric       | Berg      | Chair – Lennox                        | 07/01/2021 | 06/30/2023 | Yes    |
| Andrew     | Hjortland | Vice Chair – JCI                      | 07/01/2021 | 6/30/22    |        |
| Paul       | Haydock   | Secretary – Carrier                   | 07/01/2019 | 06/30/2023 | Yes    |
| Diane      | Jakobs    | Handbook Subcommittee Chair – Rheem   | 07/01/2018 | 06/30/2022 | Yes    |
| Michael    | Creamer   | Program Subcommittee Chair – Rheem    | 07/01/2018 | 6/30/22    |        |
| Roy        | Crawford  | Research Subcommittee Chair – JCI     | 07/01/2021 | 6/30/22    |        |
| Mark       | Olsen     | Standards Subcommittee Chair – Lennox | 07/01/2018 | 6/30/22    |        |
| Kevin      | Mercer    | Subcommittee Chair – Rheem            | 07/01/2021 | 6/30/22    |        |
| George     | Yaeger    | Webmaster – none                      | 07/01/2019 | 06/30/2023 | Yes    |
| Nicolas    | Aouad     | Member – Xnrgy                        | 07/01/2021 | 06/30/2025 | Yes    |
| Lawrence   | Brand     | Member – Frontier Energy              | 07/01/2021 | 06/30/2025 | Yes    |
| Craig      | Grider    | Member – Intertek                     | 07/01/2021 | 06/30/2025 | Yes    |
| Jon        | Winkler   | Member - NREL                         | 07/01/2018 | 06/30/2022 | Yes    |

8 Voting Members, 5 needed for quorum. July 2022 end of term for D Jakobs and J Winkler.

### Voting Members as of 7/1/22

| First Name | Last Name | Position            | Start Date | End Date   | Voting |
|------------|-----------|---------------------|------------|------------|--------|
| Eric       | Berg      | Chair – Lennox      | 07/01/2021 | 06/30/2023 | Yes    |
| Andrew     | Hjortland | Vice Chair – JCI    | 07/01/2021 |            | Yes    |
| Paul       | Haydock   | Secretary – Carrier | 07/01/2019 | 06/30/2023 | Yes    |

|          |         |  |            |            |     |
|----------|---------|--|------------|------------|-----|
| Randy    | Palm    | Handbook Subcommittee Chair – Allied Air | 07/01/2018 | 06/30/2022 | Yes |
| Michael  | Creamer | Program Subcommittee Chair – Rheem       | 07/01/2018 |            | Yes |
| Kevin    | Mercer  | Standards Subcommittee Chair – Rheem     | 07/01/2018 |            |     |
| George   | Yaeger  | Webmaster – None                         | 07/01/2019 | 06/30/2023 | Yes |
| Nicolas  | Aouad   | Research Subcommittee Chair – Xnrgy      | 07/01/2021 | 06/30/2025 | Yes |
| Lawrence | Brand   | Member – Frontier                        | 07/01/2021 | 06/30/2025 | Yes |
| Craig    | Grider  | Member – Intertek                        | 07/01/2021 | 06/30/2025 | Yes |
| Jeffery  | Munk    | Member – NREL                            | 07/01/2018 |            | Yes |

10 Voting Members, 6 needed for quorum. Added Andy Hjortland, Andy Palm, Scott Creamer, Jeff Munk

Balance as of 7/1/22

| Category                          | Number of VM's | % of VM's |
|-----------------------------------|----------------|-----------|
| Users                             | 3              | 30.0%     |
| Contractors                       | 1              | 10.0%     |
| Product Manufacturers             | 5              | 50.0%     |
| Academics                         |                |           |
| Consulting Engineers              |                |           |
| Government Agencies               |                |           |
| Independent Sales Representatives |                |           |
| Trade Organizations               |                |           |
| Research Organizations            | 1              | 10.0%     |

**11. Old Business - None**

**12. New Business - None**

**13. Adjourn**

Motion – Paul Haydock