



TECHNOLOGY COUNCIL
Summer Virtual Meeting
Monday, June 29, 2020

NOTE: These are not the official minutes until approved by Technology Council

MOTIONS
 Technology Council
 Summer Virtual Meeting
 Monday, Jun 29, 2020

Motion	Description
M1	The minutes of the Technology Council's February 5, 2020 Orlando Winter meeting and April 13, 2020 Webinar be approved as distributed.
CM2	Consent Motions 1 and 2 of the OPS Report be approved as a consent agenda item.
CM3	Consent Motions 3 through 6 of the OPS Report be approved as a consent agenda item.
CM4	Consent Motions 1 through 3 for Tech Council and BOD Excom approval of the DRSC Report be approved as a consent agenda item.
CM5	Consent Motions 1 and 2 for Tech Council and BOD approval of the DRSC Report be approved as a consent agenda item.
CM6	Consent Motions 1 and 2 for Tech Council approval of the DRSC Report be approved as a consent agenda item.
M7	ASHRAE officially recognize and promote annually June 26th as World Refrigeration Day to serve as a means of raising awareness and understanding of the important contribution that refrigeration, air conditioning, and heat pumps make globally across many aspects of modern life and society.
M8	Technology Council recommends to CEC the long-range plan for the Building Conference Series as shown.
M9	Technology Council recommends to the BOD that SSPC 62.2 addendum a to 62.2-2019 on unvented combustion appliances be approved for publication.

ACTION ITEMS
 Technology Council
 Summer Virtual Meeting
 June 29, 2020

AI#	Responsibility	Status	Description
1	Pratt		Follow up with DOE on funding of the update to the IAQ guide (specifically Commercial Building Considerations).
2	RBC		Provide the Research Advisory Panel a list of prioritized items that they feel should be in the Research Strategic Plan.
3	Staff		Email the Planning MBO Tracking spreadsheet to current and incoming standing committee chairs and vice chairs.

MINUTES
Technology Council
Summer Virtual Meeting
June 29, 2020

Voting Members Present

Dennis Knight, Chair
Bill McQuade, Vice Chair
Van Baxter
Rick Hermans
Sarah Maston
Jaap Hogeling
Trent Hunt
Steve Emmerich
Art Giesler
Billy Austin
Mike Bilderbeck
Krishnan Gowri
Heather Platt Gullledge
Kishor Khankari

Non-Voting Members Present

Wayne Stoppelmoor
Jay Kohler
Paul Francisco
Pat Graef
David Yashar
Rajan Rajendran
Dustin Meredith
Wade Conlan
Dru Crawley
Wei Sun
Yunho Hwang

Absent

Chris Wilkins

Guests

Tim McGinn
Larry Schoen
Max Sherman
Adrienne Thomle
Tyler Glesne
Rick Heiden
Larry Smith
Michael Pouchak
Rick Karg,
Tom Lawrence
Craig Wray
Don Denton
Doug Cochrane
Bjarne Olesen
David Delaquila
Bill Klock

ASHRAE Staff

Connor Barbaree, Sr. MOS
Steve Hammerling, AMORTS
DD Latham, AA
Lilas Pratt, MOSP
Stephane Reiniche, DOT
Mike Vaughn, Sr. MORTS
Alice Yates, DOGA
Emily Porcari, MOSLGA

1. CALL TO ORDER

The Chair called the meeting to order at 9:00 a.m. Vice Chair, Bill McQuade, was asked to record any action items during the meeting. The Chair asked for any changes to the agenda. There being none, the agenda was accepted as presented.

Secretary's Note: Council roll call was taken, and staff further introduced the guest attendees listed above. Quorum was met with 13 voting members, plus Chair. All reports noted in the minutes can be found on Basecamp at [ASHRAE Technology Council/Docs and Files/Meetings / 06_29_20 TechC Summer Virtual Meeting](#)

2. REMARKS FROM THE CHAIR

Dennis Knight discussed this past year's Tech Council activities and thanked the Council members for their professional support of Tech Council and spoke of a positive future. Dennis remarked on the impact of Covid-19 and the transition to new ways of ASHRAE doing business as a result of that impact. He saluted the leaders and committee chairs for their dedication and flexibility in keeping things moving forward.

Luke Leung asked that the following questions raised during the discussion be passed on to everyone as ASHRAE finishes up this Society Year and move into next:

- What is the vision of a healthy built environment?
- What does this mean for your committee?
- What does your committee need to do to become stronger leaders in the industry?

Dennis Knight concluded by noting that the council should be present, be engaged, be active, nurture friendships, and bring their expertise to the table and remember to have fun.

3. MINUTES/ACTION ITEMS

It was moved by Trent Hunt and seconded by Heather Platt Gulledge that:

- M1** The minutes of the Technology Council's February 5, 2020 Orlando Winter meeting and April 13, 2020 Webinar be approved as distributed.

TechC Vote: 13-0-0, CNV

Technology Council Action Items were reviewed, updated and can be found on Basecamp listed as [ASHRAE/Docs & Files/Meetings/2020/06_29_2020 TechC Summer Virtual Meeting/03C ACTION ITEMS as of 6_2020](#). All action items were reported as completed.

4. SUBCOMMITTEE REPORTS

A. OPERATIONS

OPS Chair, Art Giesler, presented the Operations Subcommittee report. The full report with attachments can be found on Basecamp at [ASHRAE/Docs & Files/Meetings/2020/06_29_2020 TechC Summer Virtual Meeting/04A OPS Report to TechC 6-29-2020](#)

- CM2** It was moved by Art Geisler that Motions 1 and 2 of the OPS Report to Tech Council be approved as a consent agenda as shown below.

- a. Technology Council recommends to the Board of Directors that ROB 1.300, Position Documents and Public Policy Issue Briefs, be revised as shown below:

Definitions: An ASHRAE Position Document is a BOD-approved document expressing the views of the Society on a current issue of importance to ASHRAE and its members. It includes a concise summary statement as well as supporting documentation, analysis and/or rationale, and recommendations. Position Documents are automatically withdrawn if not reaffirmed or revised within 36 months of issue. Each version of a Position Document will contain the expiration date on the cover.

An ASHRAE Public Policy Issue Brief (PPIB) is a one-page brief on current relevant legislative/regulatory issues that are of interest to ASHRAE. An Issue Brief is developed by the Government Affairs Committee and approved by the Executive Committee (ExCom). Each version of an Issue Brief will contain the statement, "This version expires one year after the date of approval." (07-01-31-23B)

Initiation: Any ASHRAE officer, member, committee or council, or any responsible outside entity may suggest issues for which an ASHRAE Position Document or Public Policy Issue Brief should be developed or may suggest whether existing ASHRAE documents should be revised, withdrawn, or rescinded.

- a) Position Documents requests should be sent to the Technology Council chair for consideration. Position// Documents and ~~Public Policy Issue Briefs~~ are produced using the procedures and forms located in the Technology Council MOP. Position Documents are evaluated by Technology Council at intervals not to exceed 30 months.
- b) Public Policy Issue Brief requests are sent to Government Affairs Committee for consideration. Government Affairs Committee shall make recommendations to create a new PPIB; re-affirm, amend, or expire and remove existing PPIBs. PPIB's are developed using the procedures located in the Government Affairs Committee MOP. PPIBs are evaluated by Government Affairs Committee at intervals not to exceed 12 months.

1.300.003 Approval (14-07-02-29)

1.300.03.1 Technology Council recommends publication of Position Documents including changes, to the Board of Directors for approval.

1.300.03.2 Technology Council approves re-affirmation or withdrawal of Position Documents and reports to the Board of Directors for information.

1.300.03.3 The Board of Directors acts on Technology Council recommendations for publication of Position Documents) (14-07-02-29)

1.300.03.4 After review and approval by ~~With the recommendation of (or after satisfactory review by)~~ Technology Council, Public Policy Issue Briefs (PPIBs) shall be ~~approved by~~ sent to ExCom for approval. Upon with information approval, information copies shall be forwarded to the Board of Directors, Members Council and Technology Council.

1.300.04 **Archiving, Publication and Distribution** (12-06-27-19/12-10-26-11) 1.300.004.1 Position Documents

A. The Technology Department shall maintain information concerning the history of development and approval of Position Documents.

B. The Publications and Education Department shall be responsible for final editing, publication and distribution of Position Documents.

C. Current Position Documents will be posted on the ASHRAE website for free download.

D. Technology Council shall maintain the current list of Position Documents on the ASHRAE website.

1.300.004.2 Public Policy Issue Briefs (17-06-28-11)

A. Government Affairs Committee shall manage the current list of Public Policy Issue Briefs by evaluating each at least on an annual basis and formally decide to re-affirm, amend, or let expire and remove, each brief, subject to the approval of the Executive Committee.

B. ~~The Publications and Education Department~~ Government Affairs Committee shall be responsible for archiving, publication and distribution of Public Policy Issue Briefs.

(end of 1.300 and end of Volume 1)

BACKGROUND: Public Policy Issue Briefs (PPIB's) are one-page documents that succinctly explain ASHRAE's position on certain issues. They are used mainly for those involved in Government Activities to communicate important ASHRAE policy to lawmakers. Often, the PPIB's summarize positions found in ASHRAE Position Documents which have already followed a rigorous collaboration and approval process. The guidance currently found in the ROB divides the development, approval, and publication between GAC, Tech Council, ExCom and Pub Ed. The path for the initiation, development and approval process has unclear, time consuming gaps.

The proposed ROB change will clearly give GAC full responsibility for writing and renewing PPIB's and the approval process to Tech Council and ExCom. Considering that PPIB's must be reaffirmed, revised, or withdrawn one year after its approval date, it is very important to have a streamlined process. Technology Council Document Review Subcommittee coordinated with the Government Affairs Committee in revising these rules.

- b. Technology Council recommends to the Board of Directors that the ASHRAE ROB 2.406.01, Membership, be revised as shown:

2.406.01 MEMBERSHIP

2.406.01.1 Composition

The members of this committee are as follows

- A. Maximum of fifteen (15) voting members, including a chair and vice chair.
- B. Voting members shall include at least:
1. a past member of the Standards Committee.
 2. One past member of the Research Administration Committee (Research Liaison for 2.0,4.0, or 5.0)
 - 3. one past chair of a technical committee involved in environmental health or indoor air quality issues.
 4. one member from outside the U.S. and Canada
 5. two Health Professional (such as an industrial hygienist, physician, an epidemiologist, or a public health official.)
 6. a past Society officer who has recently served in that capacity.
(85-06-27-58/86-06-22-22/98-01- 16-16/07-03-02-6B/18-06-27-20)
- C. Non-voting members include a Board ex-officio member, and a coordinating officer, ~~and immediate past chair.~~ (15-07-02-18)

BACKGROUND: Change removes requirement that the immediate past chair of EHC be included on the committee as a non-voting member.

TechC Vote: 13-0-0, CNV

CM3 It was moved by Art Geisler that Motions 3 through 6 of the OPS Report to Tech Council be approved as a consent agenda as shown below.

- a. Technology Council approve that the Procedures for Special Projects in the Technology Council MOP be moved to the Technology Council Reference Manual.
Fiscal Impact: None

Background: Special Projects Subcommittee believes that the Procedures more rightfully belong in the Technology Council Reference Manual than in the Manual of Procedures. Recent changes to the ROB will make this move possible.

- b. Technology Council approve the changes to the Procedures for Special Projects in the Technology Council MOP as shown in Attachment A.

Fiscal Impact: None

Background: At the request of Operations Subcommittee, Special Projects Subcommittee reviewed the Procedures Special Projects in the Technology Council MOP in order to streamline and simplify the information. A number of updates, clarifications, and corrections were also undertaken to bring the procedures in alignment with current practices. If SRC approves removal of the Special Projects Procedures from the Technology MOP, then these will be moved to the Technology Council Reference Manual.

- c. Technology Council consents that the following changes to the Technology Council MOP be approved (contingent upon BOD approval of the ROB change to 1.300) as shown in Attachment B.

BACKGROUND: If the proposed ROB change is approved by the Board, it will be necessary to change the Tech Council MOP. In the proposed change, the development process will be removed from the Tech Council MOP and picked up by GAC. The approval guidance by Tech Council will remain in the MOP as a responsibility of Document Review Subcommittee. A flow diagram that clarifies the streamlined process will be added to Attachment D in the Tech Council MOP in place of previous guidance.

- d. Technology Council approve changes to the Technology Council REF Manual as shown in Attachment C

BACKGROUND: The changes in these are mostly editorial and updated to reflect current practices in the Council.

TechC Vote: 13-0-0, CNV

Art Giesler reported on current OPS activities and highlights are provided below.

- 1. Tech Council referrals, noting that two new motions listed below from the Orlando Technology Council meeting were referred to PubEd Council for consideration. The full report can be found on Basecamp at [ASHRAE/Docs & Files/Meetings/2020/06_29_2020 TechC Summer Virtual Meeting/ 04A Technology Council Referrals updated 6_2020](#)

- A. Technology Council recommend to Publication & Education Council that they make the *Residential IAQ Guide* be made available for free download to the public.

6/26/2020: PubEd response: *The guide has now sold 133 copies since publication in April 2018 for revenue of \$10,102. In the last 12 months, it has sold 41 copies for \$3,741 revenue. Note that the guide was recently made available for free access in read-only format on the COVID-19 resources page of the ASHRAE website. PubEd staff has recommended and the council's consensus is that the guide be made available for free download in the same manner as the commercial IAQ guide, with registration information required from users seeking to download the publication, with an option for users to buy a print edition at a price that at a minimum covers production and administration costs. PubEd staff has been assigned an action item to implement this change.*

- B. Technology Council recommend to Publishing & Education Council that ASHRAE make all standards accessible for viewing over the internet at no cost.

6/26/2020: PubEd response: *The major standards (particularly those referenced in codes) from which ASHRAE derives most of its standards sales revenue have been posted on the ASHRAE website in read-only format for several years, and the impact of the read-only posting, although not precisely knowable, is deemed to be small, as sales of standards and guidelines in print and PDF remain strong.*

The remaining standards and guidelines that would be added comprise a relatively smaller revenue stream of print and PDF sales. However, sales of PDFs suggest that the PDF format represents a significant enough improvement over the read-only format that customers will continue to purchase PDFs at some level, and ASHRAE needs to maintain that revenue stream. Therefore, PubEd staff has been assigned an action item to study in detail and report to PubEd Council the potential revenue impact of allowing all remaining standards and guidelines to be added for free availability on the website in read-only format, while still offering print and PDFs for purchase, to provide access for potential increased examination and influence while staying true to PubEd Council's responsibility to obtain revenue to support ASHRAE'S mission.

AI #1: An action item was assigned to Lilas Pratt to follow up with DOE on funding of the update to the IAQ guide (specifically Commercial Building Considerations).

2. OPS approved Changes to the Refrigeration Committee (REF) MOP, Technical Activities Committee (TAC) MOP and Environmental Health Committee (EHC) MOP.
3. Standing Committee MBOs for 2019-20 have been updated for the society year. The full report can be found on Basecamp at [ASHRAE/Docs & Files/Meetings/2020/06_29_2020 TechC Summer Virtual Meeting/ 04A 2019_20 Tech Council MBOs_6_2020 Final](#)

B. SPECIAL PROJECTS

Chair, Van Baxter reported on the Special Projects subcommittee activities. The full report can be found on Basecamp at [ASHRAE/Docs & Files/Meetings/2020/06_29_2020 TechC Summer Virtual Meeting/ 04B_SpcProj_Report_to_TechC_2020_06_27_F](#). The following items were highlighted:

1. The Special Project Subcommittee approved a special project for an epidemic preparedness document for residential buildings at their May 2020 meeting. The project was approved contingent upon 100% outside funding. The project was subsequently approved by Tech Council via letter ballot.
2. Special Projects Subcommittee completed the review of the Procedures for ASHRAE Special Projects that currently reside in the Technology Council MOP in order to better clarify the procedures and to streamline the information. The changes included the recommendation that the information be relocated from the Technology Council MOP to the Technology Council Reference Manual. The changes were approved by the subcommittee and Operations Subcommittee at this meeting.

C. DOCUMENT REVIEW (DRSC)

Chair, Bill McQuade reported on DRSC subcommittee activities. The full report can be found on Basecamp at [ASHRAE/Docs & Files/Meetings/ 2020/06_29_2020 TechC Summer Virtual Meeting/04C DRSC Rprt to TechC.20.A](#)

CM4 It was moved by Bill McQuade that Consent Motions 1 through 3 labeled for Tech Council and BOD Excom approval in the DRSC Report be approved as a consent agenda as shown below.

1. Technology Council recommend to BOD ExCom that a revision to the *Infectious Aerosols* Position Document (PD) be initiated.

BACKGROUND: No changes to the current title, purpose and scope (TPS), shown in Attachment DRSC-A, are requested at this time. EHC will recommend Walt Vernon serve as chair. This PD was approved in April 2020, but this request is to review the guidance with an expanded timeline and with the experiences gained during the current epidemic response.

2. Technology Council recommend to BOD ExCom that a revision to the *Filtration and Air Cleaning* Position Document (PD) be initiated.

BACKGROUND: No changes to the current title, purpose and scope (TPS), shown in Attachment DRSC-B, are requested at this time. EHC will recommend Pawel Wargocki serve as chair with appropriate representation on the PD committee from all cognizant ASHRAE committees. This PD is set to expire 1/23/2021.

3. DRSC recommends that Technology Council recommend to BOD ExCom that a revision to the *Limiting Indoor Mold and Dampness in Buildings* Position Document (PD) be initiated.

BACKGROUND: No changes to the current title, purpose and scope (TPS), shown in Attachment DRSC-C, are requested at this time. EHC and co-cognizant TC 1.12 support a revision of the PD and will recommend Lew Harriman serve as chair. This PD is set to expire 6/27/2021.

TechC Vote: 13-0-0 CNV

CM5 It was moved by Bill McQuade that Consent Motions 1 and 2 labeled for Tech Council and BOD approval in/ the DRSC Report be approved as a consent agenda as shown below.

1. Technology Council recommend to the BOD that they approve the revision to the *Environmental Tobacco Smoke* Position Document (PD).

BACKGROUND: The PD is included as Attachment DRSC-D. The BOD approved title, purpose and scope (TPS) is included as Attachment DRSC-E. This revised PD was sent to DRSC/Tech Council/BOD on May 31st and remains unchanged since then. The current PD expires 6/26/2021.

2. Technology Council recommend to the BOD that they approve the revision to the *Indoor Air Quality* Position Document (PD).

BACKGROUND: The PD is included as Attachment DRSC-F. The BOD approved title, purpose and scope (TPS) is included as Attachment DRSC-G. A version of this revised PD was initially sent to DRSC/Tech Council/BOD on May 28th and again with revisions to address review comments on June 23rd. The Attachment DRSC-F matches what was sent with one change highlighted in the Abstract. The current PD expires 6/28/2020.

TechC Vote: 13-0-0, CNV

CM6 It was moved by Bill McQuade that Consent Motions 1 and 2 labeled for Tech Council approval in the DRSC Report be approved as a consent agenda as shown below.

1. Technology Council reaffirm the *Refrigerants and their Responsible Use* Position Document (PD) with minor, editorial updates.

BACKGROUND: The PD with markups from the previous version are included in Attachment DRSC-H. This PD was changed to ensure it included a balanced view of all refrigerants, including ammonia and other natural refrigerants. The PD includes input from IIAR President Gary Schriff who reviewed the PD as well.

2. Technology Council reaffirm the *Unvented Combustion Devices and Indoor Air Quality* Position Document (PD).

BACKGROUND: The technical content of this PD is current and does not need to change. This PD is not in the latest ASHRAE PD format but EHC agreed to work to reformat the PD to get into current format PD. This PD expires 1/23/2021 if not reaffirmed.

TechC Vote: 13-0-0, CNV

Chair, Bill McQuade reviewed and reported on the current DRSC activities as highlighted below

1. DRSC is working with TAC to find TCs interested in participating or leading the development of Phase II of the ASHRAE Energy PDs, titled *On-Site Renewable Energy Generation*.
2. DRSC approved five Public Policy Issue Briefs (PPIBs) from the Government Activities Committee (GAC) in their spring meeting:
 - Environmental Tobacco Smoke
 - STEM Education & Workforce
 - Climate Change and the Built Environment
 - Utilizing Energy Metrics and Building Benchmarking to Improve Whole Building Energy Performance
 - Resiliency in the Built Environment
3. Status summary updates were made to following PD's and can be found on Basecamp at [ASHRAE/ Docs & Files/Meetings/ 2020/06_29_2020 TechC Summer Virtual Meeting/04C – DRSC Attachments](#)
 - On Site Energy Generation
 - Indoor Air Quality
 - Environmental Tobacco Smoke
 - Infectious Aerosols
 - Resiliency in the Built Environment
 - Limiting Indoor Mold Growth and Dampness in Buildings Systems
 - Filtration and Air Cleaning
 - Unvented Combustion Devices and Indoor Air Quality
 - Refrigerants and their Responsible Use
 - Climate Change
 - Indoor Carbon Dioxide

5. STANDING COMMITTEE REPORTS

A. STANDARDS

Chair, Wayne Stoppelmoor reported on the Standards Committee activities and the activities shown below were highlighted. No motions were presented at this time and the full report can be found on Basecamp at [ASHRAE/Docs & Files/Meetings/2020/ 06_29_2020 TechC Summer Virtual Meeting/05A_StdC Report to TC June 2020](#)

1. One new complaint for action/inaction was co-submitted in January 2020 by Mr. Waddell and Mr. Miller. The Chair of SSPC 62.1 responded and the individuals had until February 20, 2020 to indicate whether the chair's explanation resolved their concerns. Mr. Waddell and Mr. Miller indicated that this did not resolve their concerns. The Chair of Standards Committee responded to the individuals and they did not indicate that they had additional concerns. This complaint is considered resolved at this time.

2. Update on Report of the Presidential ad hoc Committee on ASHRAE's Role in the Globalization of Standards
 - a. In addition to recommending that Standards be made available for free over the internet, ILS/ISAS discussed the possibility of recommending the subcommittee report to Technology Council rather than Standards Committee in order to increase the visibility of International Standards Activities within the Society.
 - b. ILS/ISAS and ASHRAE staff have established a procedure for ASHRAE PCs/TCs to request copies of ISO Standards from the Manager of Standards- International for the purpose of harmonization with ASHRAE standards.
3. Revisions have successfully been made to PASA, PC Guide to PASA, Standards Committee MOP, and the Standards Committee Reference Manual. PASA was approved by ANSI in April 2020. One of the major PASA changes is related to clean policy level documents/addenda now being eligible for fast track processing and approval by staff for publication. These items will no longer come before Tech Council. This is an effort to speed up the standards development process. The Policy Procedures and Interpretation Subcommittee continues to review these items for additional improvements.
4. Mr. Stoppelmoor provided an update on 62.2 addendum *a* (*unvented combustion heaters*) and the Standards Committee Adhoc working group addressing the issues and concerns.

The Adhoc working group met twice and was able to use that time to work with the current and past chair of SSPC 62.2 and the objectors to addendum a to present a compromise proposal to the SSPC. The Chair of Standards Committee sent a letter to the Chair of SSPC 62.2 that was drafted with the help of the Adhoc group that made recommendations for potential next steps for SSPC 62.2 in reference to addendum a and included the potential compromise proposal. SSPC 62.2 considered a slightly modified version of the compromise proposal at their summer meeting and followed it up with a continuation letter ballot. In addition, SSPC 62.2 approved a letter to the Board of Directors that requested feedback on why addendum a was disapproved and requested that the Board reconsider its action on addendum a to Standard 62.2. While Standards Committee had not received the letter they were told about and had ample discussion on the matter. While no actions were taken by Standards Committee on this addendum nor the potential letter, the consensus of the Standards Committee was that the approval of a new revised addendum makes reconsideration a moot point and that there needs to be changes so that project committees understand the reasons the Board disapproves a Standards Committee Document for publication.

B. TECHNICAL ACTIVITIES (TAC)

Chair, Jay Kohler, presented the TAC Report to the Council. The full report can be found on Basecamp at [ASHRAE/Docs & Files/Meetings/2020/ 06_29_2020 TechC Summer Virtual Meeting/ 05C - TAC Rprt to TechC 20.A](#)

1. TAC Approved a new MTG because here may be some research coming out of the work by the Epidemic Task Force and this MTG will initiate that research.

MTG.VIC – Ventilation for Infection Control

Scope: MTG.VIC will coordinate efforts for the following TCs to support the work of The Epidemic Task Force (ETF) formed by the Environmental Health Committee: TCs 1.12, 2.1 2.4, 2.9, 4.3, TRG4, 5.3, 5.5, 5.11, 9.3, 9.6, 9.7, 9.8.

One member of each of these TCs shall constitute a Ventilation Board from which panels are created to perform typical TC duties in support of the ETF. Panels may use the membership of their respective TCs to perform these duties. The voting members of the MTG will select a panel from the Ventilation Board to form PES and PMS teams for conducting research, or to prepare special publications. Chair: Rick Hermans

2. TAC reported on additional mergers among TCs.

TC 7.3, Operation and Maintenance Management, and TC 7.8, Owning and Operating Costs, have decided to merge. The new title and scope is as follows:

TC 7.3, Operation, Maintenance and Cost Management

This TC is concerned with the operation, maintenance, and cost management of buildings and the use of life cycle cost analysis techniques for decision-making when considering investments in building performance

TCs have agreed to new leadership team and voting roster.

3. TAC's Ad Hoc on TC reorganization has completed their work and issued their final report. A subcommittee led by Larry Smith was appointed to implement the recommendations going forward.

C. ENVIRONMENTAL HEALTH (EHC)

Chair, Wade Conlan highlighted the following EHC activities. The full report can be found on Basecamp at [ASHRAE/Docs & Files/Meetings/2020/ 06_29_2020 TechC Summer Virtual Meeting/ 05D - EHC Rprt to TechC.20.A](#)

1. ASHRAE continues to participate in the IEQ-GA with Bill Bahnfleth as the ASHRAE representative. The IEQ-GA is now finalized as a legal entity and operates with seven full member organizations (ACGIH, AICARR, AIHA, AIVC, ASHRAE, ISHRAE, REHVA) with ASA joining soon. There are two other affiliate associations (A&WMA, IAQA). IEQ-GA (www.ieq-ga.net) has collected and posted COVID-19 related resources from the various member organizations.
2. The IAQ 2020 Conference, *IEQ Performance Approaches, Transitioning from IAQ to IEQ*, has been moved to September 2021. The conference will take place in Athens, Greece as a face to face meeting. Bill Bahnfleth and Max Sherman are chairing the event which will be co-organized by ASHRAE, AIVC and the IEQ-GA. Details on the conference can be found at www.ashrae.org/iaq2020.

Vice Chair, Bill McQuade thanked Wade for a great job well done.

B. REFRIGERATION (REF-CPCC)

Chair Rajan Rajendran presented one motion from REF-CPCC.

It was moved by Sarah Maston and seconded by Heather Platt Gullledge that:

- M7** ASHRAE officially recognize and promote annually June 26th as World Refrigeration Day to serve as a means of raising awareness and understanding of the important contribution that refrigeration, air conditioning, and heat pumps make globally across many aspects of modern life and society.
Fiscal impact: No additional impact

TechC Vote: 13-0-0, CNV

Chair Rajan Rajendran also updated the Council on the committee's activities. REF-CPCCs full report can be found on Basecamp at [ASHRAE/Docs & Files/Meetings/ 2020/06_29_2020 TechC Summer Virtual Meeting/ 5E-REF-CPCC Rprt to TechC.20_Release1](#)

1. Based upon a recommendation of the ASHRAE Honors and Awards Committee and the low number of nominations received over the past five years for the Comfort Cooling Award, the REF-CPCC Awards Subcommittee is taking steps now to combine aspects of the Board dropped Comfort Cooling Award with the current Milt Garland Award. The proposed new award will be called the *Milt Garland Commemorative Refrigeration & Comfort Cooling Award for Project Excellence*.
2. The new REF-CPCC subcommittee structure continues to grow in membership and participation as more members learn about the following new subcommittees for REF-CPCC:

New REF-CPCC Subcommittee Structure

1. **Program** - Chair: **Stephen Gill** – Members: Coulomb, Kazachki, Ravi, Miyara, Hwang
2. **Research** – Chair: **Yunho Hwang** – Members: Ayub, Chakroun, Nawaz
3. **HVAC** – Chair: **Walid Chakroun**– Members: Hourahan, Abdelaziz, Kujak
4. **Cold Chain** – Chair: **Dustin Lilya** – Members: Ayub, Saunders, Hon, Scott Olama, and Surange
5. **R in ASHRAE** – Chair: **Didier Coulomb** – Members: Rajan, Selbert, Walter, and Ayub
6. **Refrigeration Bi-Annual Technology Report** – Chair: **Martin Dieryckx** – Members: Eltalouny, Rajendran, Welter, Kazachki, Zha, Ayub, and Olama
7. **Award Subcs** – Chair: **Ayman Eltalouny** – Members: Dieryckx, Hon, and Mitroga

Now that ALL subcommittee Chair positions are filled, each chair will be asked to finalize the subcommittee scope statement and identify one or two objectives that they wish to accomplish this Society Year using the forms.

Lastly, we will share these completed forms for each subcommittee with the REF-CPCC Interested Parties list and with the Section 10 TCs to see if we can recruit additional members from outside REF-CPCC to serve on these new subcommittees. In order to make participation easy and inclusive, ALL REF-CPCC subcommittees will meet via web meetings only and all subcommittee members will have a vote at the subcommittee level. Subcommittee Chairs will then report in person to REF-CPCC on subcommittee activities at Society meetings.

It is expected that this new subcommittee structure will also make it easier to identify and recruit Board elected members for REF-CPCC by creating a large pool of interested volunteers that vote and work at the subcommittee level only, but don't receive transportation reimbursement from ASHRAE since all REF-CPCC subcommittees meetings will be held via web meetings.

C. RESIDENTIAL (RBC)

RBC Chair Paul Francisco presented one motion from RBC. The full report can be found on Basecamp at [ASHRAE/Docs & Files/Meetings/ 2020/06_29_2020 TechC Summer Virtual Meeting/ 05F_RBC_Report_to_TechC_2020-06-25_F](#)

It was moved by Van Baxter and seconded by Sarah Maston that:

- M8** Technology Council recommend to CEC the long-range plan for the Building Conference Series as shown below:

RBC should maintain an active role in the coordination and planning for the Buildings Conferences including RBC representation in the membership of the Buildings Conference Steering Committee. RBC should work with CEC to recommend and select the membership on the Steering Committee for the conference planning

Background: ASHRAE Rules of the Board for RBC section .423.003.1 requires that RBC maintain a long-range plan for ASHRAE's role in the Buildings Series Conferences and submit that plan to Technology Council at the Annual Meeting.

Fiscal Impact: None.

The Council discussed the impact of this motion. The following is a summary of the discussion:

CEC manages the conferences, similar to how EHC in getting the IAQ conference series in play. RBC should have same type of role since heavily residential. As one of only primary residential conferences, RBC should have that connection and Tech Council's support. Residential building type wasn't the primary focus of the conference, mostly envelope and long standing. Last year was the first year ASHRAE had a leading role. Although the intent was for this conference to be under RBC when ASHRAE took over. RBC should have the opportunity to make sure that the conference is well represented in residential interest and not preclude non-residential aspects in the conference.

Roll Call TechC Vote: 10-3¹-0, CNV

AI #2 – An action item was assigned to RBC to provide the Research Advisory Panel a list of prioritized items that they feel should be in the Research Strategic Plan'

Chair Paul Francisco then highlighted the following activities from the RBC report:

1. The Residential Building committee (RBC) completed interviews with ten residential stakeholders and organizations in early Spring 2020 as shown below.

Air-Conditioning, Heating, and Refrigeration Institute (AHRI)
American Institute of Architects (AIA)
Air Conditioning Contractors of America (ACCA)
Building Performance Institute (BPI)
Consortium for Energy Efficiency (CEE)
Department of Energy (DOE)
Department of Housing and Urban Development (HUD)
International Code Council (ICC)
National Association of Home Builders (NAHB)
National Association of the Remodeling Industry (NARI)
Residential Energy Services Network (RESNET)

The results from these calls have been summarized and five high-level recommendations have come out of the analysis of the interview information thus far. A full report including justifications for each recommendation is being prepared and will be provided by midsummer 2020. The recommendations are:

- Continue ASHRAE research with more emphasis on the residential sector.
- Continue publishing and maintaining ASHRAE Standards with relevance to the residential sector.
- Take a leadership and cooperative role in coordinating significant activities with selected stakeholder organizations.
- Explore techniques for marketing to stakeholders and associated members directly involved in the residential sector.

¹ Rick Hermans, Krishnan Gowri and Mike Bilderbeck voted against the motion.

- Continue to make structural changes in order to enable ASHRAE to take greater leadership position in the residential market
2. RESNET is currently looking at possibly conducting their 2021 conference as a virtual conference including a virtual trade show. They would like to once again offer space in that virtual trade show to ASHRAE. ASHRAE's participation in the 2020 conference was very well received by those attending the conference.
 3. RBC developed a list of potential liaisons to various ASHRAE committees with the goal of developing a better understanding of and coordination with TCs and Standard Project Committees with respect to residential. The list of committees was prioritized, and current or former RBC members were proposed as liaisons. Wherever possible, the liaison assigned was someone who was already a member of the targeted committee. The next step will be to reach out to the targeted committees and request their approval for assigning a liaison from RBC to their committee.
 4. RBC has put together a small working group to work on an update to the residential chapter in the Green Guide. The Green Guide project committee had reached out to RBC to ask for their help on this chapter. The first draft is due in August 2020.

6. SPECIAL COMMITTEE/LIAISON REPORTS

A. GAC Liaison Report

Chair, Mike Bilderbeck gave a verbal update report on GAC activities. Terry Townsend will become the new Chair of GAC. The committee is doing quite well with legislative visits and is keeping a close track of the Pandemic information. The GAC is trying to share ETF information as much as possible. Alice Yates thanked Tech Council for their work on streamlining PPIB process and to the ETF and their amazing work.

B. Finance Liaison Report

Art Geisler reported on ASHRAE Financial updates. While this Society year is ending on a surplus, the next Society year will be tight. RAC has an extremely tight budget and their funding is set as projects are under contract. The one unknown in the next Society's year budget is the show in Chicago. At the time of this meeting, Illinois is only allowing gatherings of 10 people or less.

C. SRC Liaison Report

Trent Hunt presented an update on Society Rules Committee. SRC was asked by the BOD to look at the diversity statement and place it in the ROB. A new section was created as a placeholder for the diversity statement in the ROB that would be a result of current initiatives.

D. Society Planning Liaison Report

Tom Lawrence, member of the Society Planning Committee and official liaison to Tech Council, addressed the council. The Society Planning Committee is implementing the strategic plan and trying to make sure that the MBOs reflect this in the coming year.

Sarah Maston recapped that no changes were made to the spreadsheet that tracks MBOs. The Planning Committee wants to monitor the progress of the MBOs. If MBOs have any kind of fiscal impact, this also needs to be brought to the committee's attention as there is currently nothing in the budget to implement MBOs that address the Society's strategic plan.

Kishor Khankari believes there is a need for a continuous reminder and education with the Strategic Plan, not just with the standing committees but also other technical committees with research/webinars etc.

Al#3 An action item was assigned to Staff to email the Planning MBO Tracking spreadsheet to current and incoming standing committee chairs and vice chairs.

7. DOT REPORT

DOT, Stephanie Reiniche reported on the Technology Department's activities. The full report can be found on Basecamp at [ASHRAE/Docs & Files/Meetings/ 2020/06_29_2020 TechC Summer Virtual Meeting/07 DOT Report](#).

8. OLD BUSINESS

A. Postponed EHC motion on 62.2

The following motion was postponed from the Orlando Winter Conference until the Summer meeting. It was put back on the table for discussion and vote.

M9 EHC recommends that Technology Council recommend to the BOD that SSPC 62.2 addendum a to 62.2-2019 on unvented combustion appliances be approved for publication.

BACKGROUND: Contamination from unvented combustion appliances is an important factor in indoor air quality. The Society has taken positions on this topic which are supported by this proposed change. The Board of Directors has previously approved this addendum, but it was returned on appeal. Standards Committee has certified that those deficiencies have been resolved and EHC believes the publication of this addendum should be expedited to achieve Society policy.

This motion had been postponed in Orlando because Standards Committee had created an Adhoc to look at the issue. Tech Council discussed this motion. A summary, not verbatim and not all inclusive, of the issues discussed prior to the vote was as follows:

1. A compromise position is going through the process that should be completed prior to taking this motion to the Board.
2. There is a letter from SSPC 62.2 that was sent to the Board asking the Board to reconsider its actions on the addendum.
3. Tech Council should instead support the letter from 62.2.
4. While the Ad hoc did come up with a compromise recommendation there are still negative votes with reason on the addendum.
5. This addendum did go through the process before. The addendum was already approved by Standards and the Board once and was appealed. The finding was that there was insufficient documentation on the committees attempt to resolve commenters. The committee invited the commenters to another meeting to discuss their concerns and attempt to resolve them. The addendum then went back to Standards and was approved again and rejected by the Board without reason.
6. The Boards rejection without reason has caused a chilling effect on the committee and volunteers. A request for reason was sent to the Board but no reasons were provided to the committee to take corrective action.
7. From a process standpoint the committee followed process. The vote to approve was 19-2-1.
8. What happens if the compromise addendum is approved for public review and we move forward with addendum a?
9. This aligns with the position document on unvented combustion.

After these discussions, a roll call vote was taken.

TechC Vote: 11-1²-1³, CNV

9. NEW BUSINESS

A. Outgoing Council Members

Dennis Knight thanked the entire Council, especially the outgoing members for their outstanding performance, service and lasting contributions to the Technology Council and wished them well. The following members rolling off the Tech Council are: Dennis Knight, Trent Hunt, Sarah Maston, Mike Bilderbeck, Van Baxter, Art Giesler, Paul Francisco, David Yashar, Jay Kohler, Wayne, Stoppelmoor, Wade Conlan and Rajan Rajendran.

B. Updates on ETF Task Force

Wade Conlan commented on the ETF Task Force noting that they are working diligently with 120 plus SPC and TC members.

10. EXECUTIVE SESSION

A. Research Administration (RAC)

At this time the meeting was moved into Executive Session and all non-voting members and guests were asked to leave the webinar. RAC presented their report to Tech Council. No motions were brought forward.

There being no further business to come before the Council, the meeting was adjourned at 12:55 PM.

² Rick Hermans voted against the reconsideration of this publication because the objectors to the addendum and negative votes at the Standard Committee were, in my mind, persuasive. The effect of this addendum is to outlaw an entire class of heating product in residences and this is not the purview of our Society. The PC has worked a long time on this subject but has, again in my opinion, not given serious consideration to the offers of compromise by the objectors throughout the long process in developing this addendum. This is in violation of PASA 7.6.1 h.v. The BOD is included in the approval process of publishing standards and addenda for important reasons. Those reasons are varied and may not always be succinct but will consider what is best for this Society. The fact that there is now a compromise addendum going through the approval process thanks to the efforts of the Standards Committee since the Orlando meetings is proof that such a compromise has been possible and should have been given a chance previously. Having said all that, I should say that I find the science behind the addendum to be solid and commendable. I am not among those designers who approves of this type of product. However, I feel the PC did not follow the spirit of the rule requiring serious considerations of objections.

³ Bill McQuade abstained due to his affiliation with AHRI