



Shaping Tomorrow's
Built Environment Today

MINUTES

RESEARCH ADMINISTRATION COMMITTEE

SEPTEMBER 20^H & OCTOBER 6TH, 2021

Note: These draft minutes have not been approved and not the official, approved record until approved by the Research Administration Committee.

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SEPTEMBER 20TH & OCTOBER 6TH, 2021

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**PRINCIPAL MOTIONS
RESEARCH ADMINISTRATION COMMITTEE
SEPTEMBER 20^H & OCTOBER 6TH, 2021**

NO.	PAGE	MOTION
1	1	the draft minutes of the RAC 2021 Virtual annual meeting be approved with the correction the BOD Ex-Officio's name – WH/OA RAC vote, 12-0-0-1-(13) CNV
2	2	RAC approved a motion to release the following three projects for bid in the fall: 1874-TRP, 1900-TRP, and 1923-TRP. RAC vote 13-0-0-1-(14) CNV
3	3	<u>RTAR-1930, Investigation into sensible temperatures for potable hot water temperatures to maximize public safety, water, and energy conservation</u> – JW/RC <u>Accept with comments</u> – RAC vote: 12-0-0-1 (13) CNV
4	3	<u>1931-RTAR, Determination of the CO2 and Aerosol Generation and Metabolic Rates of Occupants for Selected Indoor Activities</u> - JW/RC <u>Return</u> – RPS vote: 5-0-0-1 (6) CNV
5	3	<u>1932-RTAR, Metrics that can predict IEQ effects on productivity</u> –JW/CS <u>Return</u> – RPS vote 5-0-0-1 (6) CNV
6	3	<u>1933-RTAR, Water-Energy Nexus RTAR: Utility Source Water and Source Energy Dataset-AK/WH</u> <u>Accept with comments</u> – RAC vote: 10-2-0-1 (13) CNV
7	3	<u>1934-RTAR, A Survey Study on the Development and Application of Data-driven Model Predictive Control for Buildings</u> - <u>Accept with comments</u> – RAC vote: 11-0-1-1 (13) CNV
8	4	<u>1936-RTAR, Approved via letter Ballot vote after fall meeting</u>
9	4	<u>WS-1793, Development of Method of Test for Motor Component Thermal Conductivity</u> – SE/NF <u>Return</u> – RAS vote: 4-0-0-1 (5) CNV
10	4	<u>1809-WS, Updating Reference Guide for Dynamic Models of HVAC Equipment – Phase 1 – CO/LC</u> – <u>Return</u> – RAS vote: 5-0-0-1 (6) CNV
11	4	<u>1864-WS, Investigating the applicability of Standard 62.1's Ventilation Rate Procedure for Healthcare Rooms</u> - NF/JB – <u>Return</u> – RAS vote: 5-0-0-1 (6) CNV
12	4	<u>1889-WS, Graywater use in healthcare facilities- determining risk and appropriate design responses</u> - SE/NF – <u>Return</u> – RAS vote: 5-0-0-1 (6) CNV
13	5	<u>1910-WS, (formally WS-1798) Evaluation of Standard 103 Transient Components and Thermostat Cycle Times on the Resulting AFUE.</u> - CO/NF – <u>Conditionally Accept</u> – RAC vote: 9-0-0-1 (10) CNV
14	5	RAC approved a motion to accept the ASHRAE Research Strategic Plan 2021 as presented by RAP – RAC vote: 9-0-0-1 (10) CNV

**New Action Items
Research Administration Committee (RAC)
Fall Meeting 2021**

Action #	Responsibility	Summary of Action	Status
1	Abdelaziz, Ow	Finalize conflict-of-interest text initiated by Wilkins for RAC members who bid on research projects while serving on RAC that could be added to RAC Reference Manual.	New

**Carried-over Action Items from Annual Meeting 2021
Research Administration Committee (RAC)**

Action #	Responsibility	Summary of Action	Status
2	Staff	Continue to collect project cost data for the new research project estimating guide.	On-going
7	MORTS	Recommend the SY19-20 Service to ASHRAE Research Award at the Annual meeting instead of Winter meeting because award recommendation needs to be endorsed by Honors and Awards and Members Council at winter meeting first.	On-going

**RECURRING ACTION ITEMS
(EACH MEETING)**

<u>Responsibility</u>	<u>Summary of Action</u>
Chair	Report to Technology Council on RAC's MBO Status.
Research Liaisons	Remind all TC chairs and research subcommittee chairs in section that a draft of all Work Statement and RTARs, and all later versions should be sent to their Research Liaison for review before information is passed on to the Manager of Research.
RPS (Primary) RAS (Secondary)	Review RTARs
RAS (Primary) RPS (Secondary)	Review Work Statements
RAS (Primary) RPS (Secondary)	Review TRPs and URPs
RPS (Primary) (Secondary)	Review and revise the Society's Research Implementation Plan based upon accepted RTARs.
Subcommittee Chairs	Report Status of assigned MBOs.
Staff	Distribute copies of Technology Council's Action Items and Motions affecting RAC.
BOD ExO	Report to the RAC Chair BOD's Actions and Motions affecting RAC.
Staff	Forward international URPs to RAS Chair in addition to the cognizant TC and Research Liaison.

**RECURRING ACTION ITEMS
(ANNUAL MEETING)**

<u>Responsibility</u>	<u>Summary of Action</u>
Chair	Invite new RAC members to meeting and any training sessions at meeting.
Incoming Chair	Finalize MBOs and roster assignments. Set date for fall meeting.

**RECURRING ACTION ITEMS
(WINTER MEETING)**

<u>Responsibility</u>	<u>Summary of Action</u>
RPS	Plan workshop for new RAC members at the Annual meeting.

RPS	Review Grant-In-Aid Applications
RPS	Review New Investigator Award Nominations
RPS	Review Homer Addams Award Nominations
MORTS	Prepare semi-annual report to RAC by May 15.
RAC	Decide if spring meeting is needed and set date for spring meeting.

RECURRING ACTION ITEMS
(FALL MEETING)

Responsibility Summary of Action

RAS	Plan Research Workshop for Winter Meeting
RLs	Review "Service to ASHRAE Research Award" nominations submitted TC chairs and select best nomination for RAC consideration.
MORTS	Prepare semi-annual report to RAC by December 15.

LIST OF ATTACHMENTS

None



Shaping Tomorrow's
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MINUTES

RESEARCH ADMINISTRATION COMMITTEE SEPTEMBER 20TH & OCTOBER 6TH, 2021

MEMBERS PRESENT:

Michael Pouchak, *Chair*
Omar Abdelaziz, *Vice-chair*
William Murphy, *Chair RAS*
Paolo Tronville, *Chair RPS, (09/20th only)*
Ahmed Kashef, *RL Section 1.0, (09/20th only)*
Chee Sheng Ow, *RL Section 2.0*
William Hutzler, *RL Section 3.0, (09/20th only)*
Natascha Ferretti, *RL Section 4.0*
Jin Wen, *RL Section 5.0*
Stefan Elbel, *RL Section 6.0*
James Bogart, *RL Section 7.0*
Christopher Seeton, *RL Section 8.0, (09/20th only)*
Roland Charneux *RL Section 9.0*
Lorenzo Cremaschi, *RL Section 10.0*
Tyler Glesne, *BOD Ex-Officio*

GUESTS:

ASHRAE STAFF

Michael Vaughn, *MORTS*
Donna Daniel, *COORD*

MEMBERS ABSENT:

A. CALL TO ORDER

Chair Pouchak called the meeting of the committee to order at 2:00 pm EDT, Monday, September 20, 2021, and reconvened the meeting to order at 1:00 pm, EDT on Wednesday, October 6, 2021.

B. REVIEW OF AGENDA

The ASHRAE Code of Ethics is to be adhered to by those doing ASHRAE business whether or not they are an ASHRAE member. The link below will be provided in future agendas
<https://www.ashrae.org/about-ashrae/adhvae-code-of-ethics>;

C. APPROVAL OF 2021 VIRTUAL ANNUAL MEETING DRAFT MINUTES

It was moved and seconded that,

- (1) the draft minutes of the RAC 2021 annual meeting be approved with the correction of the BOD Ex-Officio's name. – WH/OA

MOTION PASSED: 12-0-0-1 (14), CNV

D. CHAIR'S REPORT – POUCHAK

- a) Disposition of RAC Motions from Last Meeting – No Motions were submitted for higher body approval at the June meeting.
- b) New and On-going Action Items Assigned by Tech. Council:
 1. Define success metric for SY 21-22 RAC MBOs

- c) Discussion Items:
 - 1. PTAR process update
 - 2. RAP Progress to date – Review and approve draft Research Strategic Plan Approved by RAP.
 - 3. Development of PES training module & 1st training session
- d) New Information Items:
- e) 1. TBD
- f) MBOs

E. STAFF SUGGESTED CHANGES TO THE RESEARCH PAGE OF ASHRAE WEBSITE

Given our objective this year to prioritize TC developed research projects over all other research expenditures, should we remove from the ASHRAE website information on the following RAC programs or update the website to indicate that submissions for these programs will not be accepted for SY 20-21 so that TC members and others don't invest a lot of time and effort in a project proposal or award application that we can't fund this year:

- Graduate Student Grant-in-Aid Program – Fiscal Impact \$250,000
- New Investigator Award – Fiscal Impact \$125,000
- Innovative Research Grant – Fiscal Impact \$125,000
- Unsolicited Research Proposals – Fiscal Impact TBD

Continue with the following RAC programs for SY 21-22:

- Homer Addams Award – Fiscal Impact \$3,500
- Service to ASHRAE Research Award - \$150

It is moved and seconded that,

- (2) The ASHRAE website be updated to include language that the Graduate Grant-in-Aid, New Investigator, Innovative Research Grant, and Unsolicited Research Proposals are suspended for the society year 2021-2022.

MOTION PASSED: 13-0-0-1 (14), CNV

F. TRPS & URPS STILL PENDING A FUNDING DECISION

TRPs & URPs Still Pending a Funding Decision - (3 TRPs)

1703-TRP, *Performance of Vapor Retarder Systems Used on Mechanical Insulation*; **Responsible Committee:** **TC 1.8** (Mechanical Systems Insulation); **Co-Sponsors:** TC 10.3 (Refrigerant Piping, Controls, & Accessories); **Co-funding:** None; **Estimated Duration:** 12 months; **Estimated Cost to ASHRAE:** \$107,412. **Status:** RAC approved the award of the project to R&D Services, but the start date of the project was delayed until ASHRAE has sufficient funds in its budget to carry-out the project.
Status: Project is now under contract with R&D Services.

1831-TRP, *Validation of a Test Method for Applying a Standardized Frost Load on a Test Evaporator in a Test Chamber with and Operating Conditioning System*; **Responsible Committee:** **TC 10.7** (Commercial Food and Beverage Refrigeration Equipment); **Estimated Duration:** 18 months; **Estimated Cost to ASHRAE:** \$148,500 – **Status:** RAC approved the award of the project to Creative Thermal Solutions, but the start date of the project was delayed until ASHRAE has sufficient funds in its budget to carry-out the project.
Status: Project is now under contract with Creative Thermal Solutions.

1865-TRP, *Optimizing Supply Air Temperature Control for Dedicated Air Systems*; **Responsible Committee:** TC 1.4 (Control Theory and Application); **Potential Co-Sponsors:** TC 8.10 (Mechanical Dehumidification Equipment and Heat Pipes); **Duration:** 24 months; **Cost to ASHRAE:** \$145,654 - **Status:** RAC approved the award of the project to Texas A&M University and Slipstream Group as a subcontractor in spring 2020, but the start date of the project was delayed until ASHRAE has sufficient funds in its budget to carry-out the

project.

Status: Project is now under contract with Texas A&M.

G. TRPs Potentially Bid Fall 2021

It was moved and seconded that,

- (3) the following (3) three TRPs listed be approved for release to bid in the fall 2021,
- **TRP-1923** - Prepare Climatic Design Conditions for the 2025 ASHRAE Fundamentals Handbook –ASHRAE Standard 169
 - **TRP-1874** - Addition of Roof Top Temperature Information to the Climatic Design Conditions Chapter of the ASHRAE 2025 Fundamentals Handbook
 - **TRP-1900** - Using Simulated Weather Data with Sparse Measured Data to Produce Hourly Weather Files and Calculate Design Conditions.

MOTION PASSED: 13-0-0-1 (14), CNV

H. SERVICE TO ASHRAE AWARD NOMINATIONS

Service to ASHRAE Research Award Nominations – Under our proposed new procedures, one award certificate for each TC section will be presented to the most effective TC Research Subcommittee Chair in each section and the certificate will be presented by the Section RL at the Research Subcommittee Chair's meeting at the in-person Annual meeting or virtual Annual meeting.

I. WORK STATEMENT REVIEW

Five work statements were submitted by the TCs for review. Two were conditionally accepted, and two were returned, and one, 1915, was tabled until the next RAC meeting.

It is moved and seconded that,

- (4) **1793-WS**, Development of Method of Test for Motor Component Thermal Conductivity, sponsored by; TC 8.2 (Centrifugal Machines), be return w/comments.

MOTION PASSED RAS: 4-0-0-1, CNV

It is moved and seconded that,

- (5) **1809-WS**, *Updating Reference Guide for Dynamic Models of HVAC Equipment – Phase I*, sponsored by; TC 7.5, (Smart Building Systems), be return w/comments.

MOTION PASSED RAS: 5-0-0-1, CNV

It is moved and seconded that,

- (6) **1864-WS**, *Investigating the applicability of Standard 62.1's Ventilation Rate Procedure for Healthcare Rooms*, sponsored by; SSPC 170, (Ventilation of Healthcare Facilities) co-sponsored by: TC 9.6, (Healthcare Facilities), be returned w/comments.

MOTION PASSED RAS: 5-0-0-1, CNV

It is moved and seconded that,

- (7) **1889-WS**, *Graywater use in healthcare facilities- determining risk and appropriate design responses*, Sponsored by SSPC 170, (Ventilation of Healthcare Facilities), be returned w/comments.

MOTION PASSED RAS: 5-0-0-1, CNV

It is moved and seconded that,

- (8) **1910-WS**, *Evaluation of Standard 103 Transient Components and Thermostat Cycle Times on the Resulting AFUE (Part 1), Sponsored by TC 6.3 (Central Forced Air Heating and Cooling Systems)* be conditionally accepted.

MOTION PASSED RAS: 9-0-0-1, CNV

Meeting recessed at 4:00 pm on Monday September 6th, 2021

RECONVENE – 1:00 PM, October 6, 2021

J. SENSITIVE NEW BUSINESS

None

K. BOD EX-OFFICIO & COORD. OFFICER

BOD-Officio Tyler J. Glesne

L. RTARS

RAC reviewed a total of five RTARs submitted by TC/TGs for addition to the Society's Research Implementation Plan. Three were accepted w/comments and two were returned.

It is moved and seconded that,

- (9) **1930-RTAR**, *Investigation into sensible temperatures for potable hot water temperatures to maximize public safety, water, and energy conservation*– TC 3.06 (Water Treatment); Co-sponsor: SSPC 188 (Legionellosis: Risk Management for Building Water Systems), be accepted w/comments.

MOTION PASSED: 12-0-0-1 (13), CNV

It is moved and seconded that,

- (10) **1931-RTAR**, *Determination of the CO₂ and Aerosol Generation and Metabolic Rates of Occupants for Selected Indoor Activities* – TC 2.1 (Physiology and Human Environment), be returned.

MOTION PASSED RPS: 4-1-0-1 (6), CNV

It is moved and seconded that,

- (11) **1932-RTAR**, *Metrics that can predict IEQ effects on productivity* – TC 2.1 (Physiology and Human Environment), be accepted w/comments.

MOTION PASSED RPS: 5-0-0-1 (6), CNV

It is moved and seconded that,

- (12) **1933-RTAR**, *Water-Energy Nexus RTAR: Utility Source Water and Source Energy Dataset* – TC 2.8 (Building Environmental Impacts and Sustainability), be accepted w/comments.

MOTION PASSED: 10-2¹²-0-1 (13), CNV

¹ James Bogart voted against because he feels the budget needs co-sponsorship.

² Jen Wen voted against because she feels the objectives are not clear and timeline is questionable.

It is moved and seconded that,

- (13) **1934-RTAR**, *Metrics that can predict IEQ effects on productivity* – TC 2.1 (Physiology and Human Environment), be accepted w/comments.

MOTION PASSED: 11-0-1-1 (13), CNV

- (14) It is moved and seconded that,

1936-RTA R, *Evaluating the impact of ACH on ventilation effectiveness for indoor spaces – MTG.ACR (Air Change Rates)*, be accepted w/comments.

MOTION PASSED: 6-5-0-3, (14), CNV

Note:

1935-RTAR, *Effects of increased use of surface disinfectants and hand sanitizers on indoor air quality*– TC 2.3 (Gaseous Air Contaminants and Gas Contaminant Removal Equipment) be tabled until the next RAC meeting. RPS did not have quorum during the meeting.

M. PTARs REVIEW

RAC received a total of three PTARs submitted by TC/TGs for addition to the Society's Research Implementation Plan. The three are tabled until the next RAC meeting.

PTAR #1 - Update of ASHRAE Publication: Application of Manufacturers' Sound Data, © 1998 – TC 2.6, (Sound and Vibration)

PTAR #2 - Publication - Guidelines for State Codes on Secondary Water Treatment Systems for Buildings – TC 3.6, (Water Treatment)

PTAR #3 - Design Guide for Radiant Heating and Cooling Systems – TC 6.5, (Radiant Heating and Cooling)

N. REVIEW OF ACTION ITEMS

None

O. UNFINISHED BUSINESS

RTARs, 1935-RTAR and 1936-RTAR are carried over until the next meeting.
PTARs are carried over until the next RAC meeting.

P. NEW BUSINESS

None

Q. REVIEW OF NEW ACTION ITEMS

ADJOURN

The meeting of the Research Administration Committee adjourned at 3:00 PM, Monday, October 6, 2021.

ATTACHMENT # 1
Research Administration Committee MBOs 2021-2022
Mike Pouchak, RAC Chair

MBO #	MBO	Status	Date Due	Assigned To	Applicable initiative #	MBO Comments & Metric	Strategic Direction Specific Comments	Completion Date	Fiscal Impact
1	Initiative 4: Improve Chapter Engagement, Capacity, and Support RAC Initiative: Improve visibility of research results and member contributions to research								
1.1	Improve dissemination of research results through effective creation of research-based publications.	<u>New</u>	January 31 2021	RAC Chair, Ow & Staff	3,4	PES has a critical crucial role in launching ASHRAE research projects. It is important all PES members clearly understand their roles and responsibilities.	Goal 1b, 2b, 3b,3c	1/31/2021	None
1.2	Establish and implement a process allow RAC to better support the efforts of Research Promotion (RP).	<u>Ongoing</u>	June 30 2021	RAC Chair, Vice-Chair & Staff	4	This is an ongoing joint effort between RAC and Publication Committee; has yet to be institutionalized.	Goal 2b and 3c	6/30/2021	Minor
1.3	Elevate Profile of Service to ASHRAE Research Award.	<u>New</u>	June 30 2021	RAC Chair, RPS Chair	4	Will update award criteria (continue Yashar effort) and nominating process. Also seek to have award part of society honors awarded at plenary session (currently awarded at RAC breakfast at 6:30a on Sunday morning) – Photo of presentation & sidebar article in Oct. Edition of ASHRAE Journal is also another way to highlight the award to all ASHRAE members.	Goal 2a and 3c	6/30/2021	None
2	Initiative 3: Organizational Streamlining RAC Initiative: Improve and Streamline RAC processes to generate maximum value for all research efforts								
2.1	Establish and implement a process to coordinate efforts between RAC and Research Promotion.	<u>New</u>	January 2020	RAC Chair and Vice Chair	3	Research Promotion has been raising funds for ASHRAE research without much insight as to how RAC operates. The aim of this MBO is to establish a regularly occurring forum to provide information that will enhance their effectiveness.	Goal 2b and 3c	6/1/2021	Yes, positive
2.2	Determine requirements and establish a framework for forms and a web-based process that could be used to submit, and track research projects start to finish	<u>New</u>	June 2020	RAC Chair and RAS Chair	3	This is a first step towards a longer-term vision of process improvement. This effort will culminate in a value proposition for ASHRAE to determine whether or not to make an investment towards the ultimate goal of building a web-based project tracking tool	Goal 2c and 3b	6/30/2021	none

2.3	Clarify Conflict of Interest guidance for those serving on RAC through revision to MOP and Reference Manual.	New	01/Jul/2021	RAC Chair, RAS Chair	3	RAC has a unique challenge where members can be bidders or WS authors. Our guidance needs to be crystal clear as to the expectations of RAC members.	Goal 2a and 3c	7/1/2021	None
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Goals and Initiatives for 2019-2024 Society Strategic Plan

**STRATEGIC INITIATIVES:
FOCUSING OUR EFFORTS**

To achieve its four goals, ASHRAE will embark on the following initiatives. Each initiative includes a series of cross-functional programs and activities designed to provide maximum force toward reaching the goals and objectives outlined above.

**INITIATIVE 1: Market
Prioritization – Member
Passion and Core Market**

A. Volunteerism is the lifeblood of ASHRAE and can only be accomplished with the support of our members’ employers. ASHRAE will meet with top employers to gain continued time and financial support of ASHRAE volunteers.

B. Only through close communication with its key constituencies can ASHRAE deliver relevant and timely products and services. ASHRAE will research the true impact of its standards and technology and share the results with the world. ASHRAE will actively reach out to its key constituencies to achieve open, two-way dialogue. The dialogue will be used to validate programs and identify new opportunities.

C. Students and young engineers are the future of ASHRAE. ASHRAE will work with universities to develop HVAC&R-related courses for university credit, use ASHRAE publications for education, and continue to strengthen our student branches.

**INITIATIVE 2: ASHRAE
Efficiency – Organizational
Assessment**

A. ASHRAE must become more agile so that it can deliver products and services in a timely manner while respecting the value of volunteer time. ASHRAE will review all aspects of the organization to identify and

remove encumbrances to agility and the respectful use of volunteer time.

B. The technical committees are the engine that drives ASHRAE technology. They must operate at full efficiency for ASHRAE to meet its desired goals. ASHRAE will review all aspects of the technical committee organization to ensure it is ready for today's and tomorrow's needs.

C. Alignment with other existing organizations may be the fastest way to achieve success. ASHRAE will consider all arrangements on working with other existing organizations, including consolidation, partnerships, and joint ventures.

INITIATIVE 3: Applied Product Development

A. ASHRAE must deliver its technology to its members in effective and meaningful ways. ASHRAE will develop software tools and mobile apps focused on applications of its technology to assist its members in their daily professional activities.

B. True building performance is heavily influenced by owners and operators. ASHRAE can assist in these groups achieving the performance they desire. ASHRAE will meet with owners and operators to ascertain how ASHRAE can best assist in achieving optimal building operation. ASHRAE will focus on developing and delivering operator training that achieves optimal building performance.

INITIATIVE 3: Applied Product Development - Continued

C. The world of prescriptive and performance-based standards is changing. ASHRAE will work with other standards development organizations (SDOs) to map a course through this changing environment that will deliver the most positive impact to the market place.

D. Professional development is a keystone of ASHRAE that can be delivered through our grassroots organization. ASHRAE will develop a comprehensive portfolio of practical applications courses intended to be delivered through our grassroots organization.

INITIATIVE 4: ASHRAE's Role in the Global Community

A. ASHRAE has already had significant impact in many countries around the world, but there is more that can be done. ASHRAE will conduct a detailed analysis of the needs of its global members and opportunities to work with organizations outside North America. ASHRAE will develop a strategy to serve its international members and participate in international markets. These strategies will be added to this strategic plan once approved by the Board of Directors.

B. ASHRAE can learn from others about how to be effective in the global community. ASHRAE will work with consultants and other organizations to discover best practices and develop an approach to serve its members in the global community.

**INITIATIVE 5: ASHRAE's
Role in the Residential
Sector**

A. The residential building sector represents a significant portion of the built environment, and ASHRAE has a role to play in the continued success of residential buildings. ASHRAE will create partnerships and collaboration with key organizations in the residential sector. ASHRAE will work with its new partners to develop technology, perform research, and educate owners, builders, and designers to improve the residential built environment.

