



Shaping Tomorrow's
Built Environment Today

MINUTES

RESEARCH ADMINISTRATION COMMITTEE

SEPTEMBER 18TH & SEPTEMBER 21ST, 2023

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 18TH & SEPTEMBER 21ST, 2023

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**PRINCIPAL MOTIONS
RESEARCH ADMINISTRATION COMMITTEE
SEPTEMEBR 18TH & SEPTEMEBR 21ST, 2023**

NO.	PAGE	MOTION
1	1	the draft minutes of the RAC 2023 annual meeting be approved RAC vote, 9-0-0-1 (10), CNV.
2	2	RAC approved a motion to release the following nine projects for bid in the fall: 1797-TRP, 1864-TRP, 1889-TRP, 1926-TRP, 1928-TRP, 1929-TRP and 1934-TRP. RAC vote, 10-0-0-1 (12) CNV
2	3	1919-TRP , The effects of duct size and aspect ratio on flow noise in elbow,” be awarded to Vibro Acoustics for a period of 15 months at a total cost to ASHRAE of \$95,000. RAC: 12-0-1-1, (14) Letter ballot CNV.
3	3	<u>1950-WS</u> – Effect of residential exhaust terminations on jet mechanics and resulting required intake separation - sponsored by; TC 4.03 (Ventilation Requirements & Infiltration), be <u>return w/comments</u> . RAS : 5-0-0-1, (6) CNV.
4	3	<u>1964-WS</u> – Optimizing Heating System Performance in Warmup and Setback Modes - sponsored by; TC 1.04 (Control Theory and Application), be return w/comments. RAS : 3-0-1-1, (5) CNV.
5	3	<u>1959-RTAR</u> , Update People Load Data for Cooling Load calculations – sponsored by TC 4.01, (Load Calculations Data and Procedures), be accepted w/comments. RAC 10-0-0-1 (11), CNV.
6	4	<u>1960-RTAR</u> , Operating Cost, Energy, and Carbon Saving Benefits of Pre-cooling in District Energy Systems – TC 6.02 – District Energy), be accepted w/comments. RAC 10-0-0-1 (11), CNV.
7	4	<u>1961-RTAR</u> , Updating Garage Ventilation Design for Current Populations of Vehicles – TC 4.03 (Ventilation and Infiltration), be accepted w/comments. RAC 10-0-0-1 (11), CNV.
8	4	<u>1963-RTAR</u> , Survey of Sources of Contamination in Laboratories to Create a Database to be used to right size the Ventilation needs – TC-9.10 (Laboratory Ventilation), be returned. RPS : 3-0-1-1 (5), CNV
9	4	<u>PTAR #0003</u> - Design Guide for Radiant Heating and Cooling Systems – TC 6.04 (Radiant Heating and Cooling), be accepted. RAC 10-0-0-1 (11), CNV.

**New Action Items
Research Administration Committee (RAC)
Fall Meeting 2023**

Action #	Responsibility	Summary of Action	Status
		None	

**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



Shaping Tomorrow's
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MINUTES

RESEARCH ADMINISTRATION COMMITTEE SEPTEMBER 18TH & SEPTEMBER 21ST, 2023

MEMBERS PRESENT:

William Murphy, *Chair*
Natascha Milesi-Ferretti, *Vice-chair*
Jin Wen, *Chair RPS*
Stefan Elbel, *Chair RAS*
Chris Gray, *RL Section 2.0*
Zheng O'Neill, *RL Section 3.0 (SEP 21st only)*
Dennis Landsberg, *RL Section 4.0 (SEP 21st only)*
Douglas Scott, *RL Section 5.0*
Matthew Mullen, *RL Section 6.0*
James Bogart, *RL Section 7.0*
Carl Huber, *RL Section 8.0*
Roland Charneux *RL Section 9.*
Drury Crawley, *BOD Ex-Officio*
Xudong Wang, *Consultant (SEP 21st only)*
Hywel Davies, *Consultant (SEP 18th only)*

ASHRAE STAFF

Stephanie Reiniche, *DIRECTOR*
Michael Vaughn, *MORTS*
Donna Daniel, *COORD*

MEMBERS ABSENT:

Srinivas Katipamula, *RL Section 1.0*
WenBin Ng, *RL Section 10.0*

A. CALL TO ORDER

Chair Murphy called the meeting of the committee to order at 9:00 am EDT, Monday, September 18, 2023, and reconvened the meeting to order at 9:00 am, EDT on Thursday, September 21, 2023.

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/adhraise-code-of-ethics>;

C. APPROVAL OF 2023 ANNUAL MEETING DRAFT MINUTES

It was moved and seconded that,

- (1) the draft minutes of the RAC 2023 annual meeting be approved.

MOTION PASSED: 9-0-0-1 (10), CNV.

D. CHAIR'S REPORT

- 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 23-24 RAC MBOs
 - c) Discussion Items:
 - d) New Information Items:
 - e) 1. TBD
 - f) MBOs
- A. TRPs & URPs Still Pending a Funding Decision - (2 TRPs)
- a) **1566-TRP**, *Equations to estimate evaporation rates from heated water pools in indoor recreational aquatic facilities*; Responsible Committee: TC 8.10, (Mechanical and Desiccant Dehumidification Equipment, Heat Pipes and Components); Co-Sponsors: TC 9.8 (Large Building Air Conditioning); Co-funding: None; Estimated Duration: 24 months; Estimated Cost to ASHRAE: \$150,000. Status: RAC rejected the contractor recommendation. The TC must appoint a new PES to review proposals received. RL must be included in the discussions. Primary Reviewer: Huber – Secondary Reviewer: Charneux
 - b) **1919-TRP**, *The effects of duct size and aspect ratio on flow noise in elbow*, Responsible Committee: TC 2.6 (Sound and Vibration); Co-Sponsors: TC 5.2, (Duct Design) Potential Co-Sponsors: None; Estimated Duration: 15 months; Estimated Cost to ASHRAE: \$95,000 – Status: TC to letter ballot recommendation for contractor. That target start date right now for this project is September 2023 or later. Primary Reviewer: Gray – Secondary Reviewer: Wen
- B. TRPs that Could Potentially Bid Fall 2023

It was moved and seconded that,

- (2) The following seven TRPs be released for bid in the fall,

1797-TRP-C, *Assessment of the A/B Toxicity Classification Used in Standard 34*; Responsible Committee: TC 3.01 (Refrigerants and Secondary Coolants); Co-Sponsors: None; Estimated Duration: 18 months; Estimated Cost to ASHRAE: \$190,000; Status: Ready

TRP-1864 - *Investigating the applicability of Standard 62.1's Ventilation Rate Procedure for Healthcare Rooms*; Responsible Committee: SSPC 170 (Ventilation of Health Care Facilities); Co-Sponsors: TC 9.06 Healthcare Facilities & SSPC 62.1 (Ventilation for Acceptable Indoor Air Quality); Estimated Duration: 15 months; Estimated Cost to ASHRAE: \$70,000; Status: Ready

TRP-1889 - *Graywater use in healthcare facilities- determining risk and appropriate design responses*; Responsible Committee: TC 9.06 (Health Care Facilities); Co-Sponsors: None; Estimated Duration: 12 months; Estimated Cost to ASHRAE: \$50,000; Status: Need technical contact.

TRP-1926 - *Update of U-factors, Solar Heat Gain Coefficients and Visible Transmittances of Standard Fenestration Units made from Representative Fenestration Frame and Glazing Systems in the Fenestration Chapter of the Handbook of Fundamentals*; Responsible Committee: TC 4.05 (Fenestration); Co-Sponsors: None; Estimated Duration: 18 months; Estimated Cost to ASHRAE: \$100,000; Status: Need technical contact.

TRP-1928 - *Improving efficiency test methods to measure air cleaner performance against airborne particulate contaminants in a recirculating system*; Responsible Committee: TC 2.09 (Ultraviolet Air & Surface Treatment); Co-Sponsors: TC 2.03, (Gaseous Air Contaminants and Gas Contaminant Removal Equipment), TC 2.04 (Particulate Air Contaminant and Particulate Contaminant Removal Equipment); TC 9.06, (Health Care Facilities) & EHC, (Environmental Health Committee; Estimated Duration: 24 months; Estimated Cost to ASHRAE: \$199,000; Status: Need technical contact

TRP-1929 - *Evaluation of building life cycle analysis tools incorporating embodied carbon*; Responsible Committee: TC 2.08 (Building Environmental Impacts and Sustainability); Co-Sponsors: None; Estimated Duration: 24 months; Estimated Cost to ASHRAE: \$146,000; Status: Ready

TRP-1934 - *A Survey Study on the Development and Application of Data-Driven Model Predictive Control in Buildings*; Responsible Committee: TC 7.05 (Smart Building Systems); Co-Sponsors: None; Estimated Duration: 12 months; Estimated Cost to ASHRAE: \$100,000; Status: Ready

MOTION PASSED: 10-0-0-1 (12) CNV.

The following TRPs are near ready to bid in Spring 2024

TRP-R-1873 - *Upper-Air Ultraviolet Germicidal Irradiation (UVGI) for Tall Spaces*; Responsible Committee: TC 2.09 (Ultraviolet Air and Surface Treatment); Co-Sponsors: TC 9.06 (Healthcare Facilities); Estimated Duration: 18 months; Estimated Cost to ASHRAE: \$190,000; Status: Need expanded bidders list.

TRP-R-1910 - *Evaluation of Standard 103 Transient Components and Thermostat Cycle Times on the Resulting AFUE*; Responsible Committee: TC 6.03 (Residential and Light Commercial forced Air Heating and Cooling Systems); Co-Sponsors: None; Estimated Duration: 36 months; Estimated Cost to ASHRAE: \$235,000; Status: TBD budget, clarifications bidders list? TC to submit a revised WS w/increased budget. General inflation reason for the increased budget.

TRP-1918 - *The Verification of openings, the limitations of openings, air distribution and humidity (conditions in Naturally Ventilated spaces to compliment Section 6.4 of ASHRAE Standard 62.1*; Responsible Committee: SSPC 62.1, (Ventilation and Acceptable Indoor Air Quality) Co-Sponsors: None; Estimated Duration: 10 months; Estimated Cost to ASHRAE: \$104,940; Status: Need revised work statement and expanded bidders list.

It is moved and seconded that,

- (3) **1919-TRP**, "The effects of duct size and aspect ratio on flow noise in elbow," be awarded to Vibro Acoustics for a period of 15 months at a total cost to ASHRAE of \$95,000.

MOTION PASSED RAC: 12-0-1-1, (14) Letter ballot CNV.

I. WORK STATEMENT REVIEW

RAC reviewed two work statements submitted by the TCs for review.

It is moved and seconded that,

- (4) **1950-WS** – *Effect of residential exhaust terminations on jet mechanics and resulting required intake separation - sponsored by*; **TC 4.03** (Ventilation Requirements & Infiltration), be return w/comments.

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

It is moved and seconded that,

- (5) **1964-WS** – *Optimizing Heating System Performance in Warmup and Setback Modes - sponsored by*; **TC 1.04** (Control Theory and Application), be return w/comments.

MOTION PASSED RAS: 3-0-1-1, (5) CNV.

Meeting recessed at 11:00 am on Monday September 18th, 2023.

RECONVENE – 9:00 AM, September 21, 2023

J. SENSITIVE NEW BUSINESS

None

K. BOD EX-OFFICIO & COORD. OFFICER

BOD-Officio Drury Crawley

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,

- (6) 1959-RTAR, Update People Load Data for Cooling Load calculations – sponsored by TC 4.01, (Load Calculations Data and Procedures), be accepted w/comments.

MOTION PASSED: 10-0-0-1 (11), CNV.

It is moved and seconded that,

- (7) 1960-RTAR, Operating Cost, Energy, and Carbon Saving Benefits of Pre-cooling in District Energy Systems – TC 6.02 – District Energy), be accepted w/comments.

MOTION PASSED: 10-0-0-1 (11), CNV.

It is moved and seconded that,

- (8) 1961-RTAR, Updating Garage Ventilation Design for Current Populations of Vehicles – TC 4.03 (Ventilation and Infiltration), be accepted w/comments.

MOTION PASSED: 10-0-0-1 (11), CNV.

It is moved and seconded that,

- (9) 1963-RTAR, Survey of Sources of Contamination in Laboratories to Create a Database to be used to right size the Ventilation needs – TC-9.10 (Laboratory Ventilation), be returned.

MOTION PASSED RPS: 3-0-1-1 (5), CNV.

NOTE: 1962-RTAR The Impact of Facade Penetrations (e.g., ERV / HRV, exhausts) on Residential Building Pressurization and Ventilation Air Distribution– TC 4.03 (Ventilation and Infiltration). Status: No action taken; TC vote did not meet quorum.

1965-RTAR, Addition of Web Service Capabilities to “data.ashrae.org” Website to Foster Innovation in the Industry – TC 1.5, Emerging Computing Applications). Status: Tabled until further discussion with ASHRAE web team.

M. PTARs REVIEW

It is moved and seconded that,

- (10) PTAR #0003 - Design Guide for Radiant Heating and Cooling Systems – TC 6.04 (Radiant Heating and Cooling), be accepted.

MOTION PASSED: 10-0-0-1 (11), CNV.

N. REVIEW OF ACTION ITEMS

None

O. UNFINISHED BUSINESS

None

P. NEW BUSINESS

ASHRAE 2024 conference in Chicago meeting will be held in a new location, Marriott Marquis McCormick Place.

Q. REVIEW OF NEW ACTION ITEMS

None

ADJOURN

The meeting of the Research Administration Committee adjourned at 11:00AM Thursday, September 21, 2023.