



Shaping Tomorrow's
Built Environment Today

MINUTES

RESEARCH ADMINISTRATION COMMITTEE

**HILTON PALMER HOUSE
CHICAGO, IL**

JANUARY 19, 20 & JANUARY 24, 2018

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

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**PRINCIPAL MOTIONS
RESEARCH ADMINISTRATION COMMITTEE
JANUARY 19, 20 & JANUARY 24, 2018**

NO.	PAGE	MOTION
1	1	Draft minutes of the RAC October 6 th and November 3 rd 2017 fall meetings be approved as written
2	2	Increased Reserve Fund Transfer 6% instead of 4% for SY 18-19.
3	3	<u>1841-RTAR</u> , <i>Round Robin Testing to Validate ANSI/ASHRAE Standard 185.2-2014 – TC 2.9 (Ultraviolet Air and Surface Treatment)</i> , is <u>conditionally accepted</u> .
4	4	<u>1842-RTAR</u> , <i>Development of Cogen/Trigeneration Tools for Building Designers – TC 8.3, (Absorption and Heat Operated Machines)</i> , is <u>conditionally accepted</u> .
5	4	<u>1837-WS</u> , <i>The Effects of Ventilation in Sleeping Environments</i> ; sponsored by TC 2.1 (Physiology and Human Environment), be <u>returned</u> .
6	4	<u>1839-WS</u> , <i>Investigation into Sensible Temperatures for Potable Hot Water Temperatures to Maximize Public Safety, Water and Energy Conservation</i> ; sponsored by TC 3.6 (Water Treatment), be <u>returned</u> .
7	4	RAC approved a motion that the following IRG proposals be invited to submit full IRG proposals #009, #019, #024, #027, #034 and #040.
8	4	RAC approved a motion to award Alireza Behfar the 2018-19 Homer Addams award.
9	5	Marianne Touchie be awarded the 2018-2019 New Investigator Award.- via RAC Letter Ballot shortly after meeting
10	6	<u>1733-TRP</u> , <i>Develop Design Criteria for Psychrometric Air Sampler and Mixer Apparatus for Use in ASHRAE Test Standards</i> , be awarded to the Oklahoma State University, for a period of 20 months at a total cost to ASHRAE of \$144,249.
11	6	<u>1759-TRP</u> , <i>Impact of Air-Flow on Thermal Performance of Air-Spaces behind Cladding (Phase 1 of 2) (re-bid)</i> , be awarded to the Ecole Polytechnique, for a period of 12 months at a total cost to ASHRAE of \$23,498.
12	6	<u>1760-TRP</u> , <i>Update of Clothing Database for Existing and new Western Clothing Ensembles, including Effects of Posture, Body, and Air Movement</i> , be awarded to the Loughborough University, for a period of 15 months at a total cost to ASHRAE of \$168,669.
13	6	<u>Co-RP 5</u> , <i>Computer Modeling for Lighting Applications within the ANSI/ASHRAE/IES 90.1 STANDARD</i> , be co-fund in the amount of \$25,000.
14	6	<u>1840-URP</u> , “The verification of openings, the limitations of openings, air distribution and humidity conditions in naturally ventilated spaces to compliment section 6.4 or ASHRAE Standard 62.1”, not be funded by ASHRAE.

**New Action Items
Research Administration Committee (RAC)
Winter Meeting 2018
JANUARY 19, 20 & JANUARY 24, 2018**

Action #	Responsibility	Summary of Action	Page
1	MORTS	Add March 15 th deadline for RTAR and Work statement submissions to forms, website and Research manual.	3
2	MORTS	Add draft language to the Disposition form indicating consequences of TC if form is not submitted in a timely fashion to staff.	3
3	Wilkins, Yashar	Work on RTAR evaluation form for research projects resulting in publications. Have ready to review by spring.	4
4	Wilkins, Yashar	Work out mechanism to track 10% budget line for research to develop publications.	4
5	Staff	Make sure RL section reports are updated with past comments.	5
6	Abdelaziz, Gatlin, John, Eichelberger, Khankari	Review 1844-URP proposal. Deadline for the review is by the spring meeting.	7
7	Khankari	Review three years of history on TCs that submitted disposition forms.	7
8	Shonder	Remind RLs to submit section reports to staff.	7
9	John, Pouchak, Shonder	Work with staff and report in the spring on ways to get TCs to submit disposition forms.	7
10	Staff	Request to add link to the research page for suggested research.	7

**Carry-Over Action Items
Research Administration Committee (RAC)
Carry-Over Action Items
Research Administration Committee (RAC)
2017 Spring Meeting**

Action #	Responsibility	Summary of Action	Status
3	Wilkins, Yashar	Develop a new review form and editing for Technology Transfer classified projects at both RTAR and Work Statement stage.	On-going

**New Action Items
Research Administration Committee (RAC)
2017 Fall Meeting**

Action #	Responsibility	Summary of Action	Status
2	RAC Members	Send Kishor one line response on where ASHRAE Research should go in next 5 years.	On-going
4	RAS	Handle review of remaining Ws 1789 & 1801 via 2 nd meeting and provide feedback to TCs prior to Chicago.	Complete

**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) upon (Secondary)	Review and revise the Society's Research Implementation Plan based 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 URPs to RAS Chair to help identify a champion for the URP on RAC based on members background and experience. The RAC URP Champion will either help select a cognizant TC to review the URP or return the URP with a recommendation that it not be reviewed further as a possible ASHRAE research project.

**RECURRING ACTION ITEMS
(FALL MEETING)**

<u>Responsibility</u>	<u>Summary of Action</u>
RLs	Review "Service to ASHRAE Research Award" nominations submitted by TC chairs and select the best nomination for RAC consideration.

RECURRING ACTION ITEMS
(WINTER MEETING)

<u>Responsibility</u>	<u>Summary of Action</u>
RAS	Plan TC Research Subcommittee chair Training Workshop for Winter Meeting
RPS	Review Grant-In-Aid Applications
RPS	Review New Investigator Award Nominations
RPS	Review Homer Addams Award Nominations
Chair	Present Service to ASHRAE Research Award to this year's recipient
RAC	Decide if spring meeting is needed and set date for spring meeting.
MORTS	Prepare semi-annual report to RAC by December 15.

RECURRING ACTION ITEMS
(ANNUAL MEETING)

<u>Responsibility</u>	<u>Summary of Action</u>
RPS	Plan training workshop for new RAC members at the Annual meeting
Research Liaisons	Request nominations from TCs for Service to ASHRAE Research Award
Chair	Invite new members of RAC to the workshop for new RAC members scheduled for the Annual meeting.
MORTS	Prepare semi-annual report to RAC by May 15.

LIST OF ATTACHMENTS

ATTACHMENT 1: MORTS Report
ATTACHMENT 2: 1733-TRP Analysis Sheet
ATTACHMENT 3: 1759-TRP Analysis Sheet
ATTACHMENT 4: 1760-TRP Analysis Sheet



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Built Environment Today

MINUTES

RESEARCH ADMINISTRATION COMMITTEE REPORT TO TECHNOLOGY COUNCIL JANUARY 19, 20 & JANUARY 24, 2018

MEMBERS PRESENT:

Kishor Khankari, *Chair*
John Shonder, *Vice-chair*
David John, *Chair RAS*
David Yashar, *Chair RPS*
Shinsuke Kato, *RL Section 1.0*
Pawel Wargocki, *RL Section 2.0*
Stephen Kujak, *RL Section 3.0*
Michael Pouchak, *RL Section 4.0*
Dennis Loveday, *RL Section 5.0*
Omar Abdelaziz, *RL Section 6.0*
Christopher Wilkins, *RL Section 7.0*
Curtis Eichelberger, *RL Section 8.0*
Jeff Gatlin, *RL Section 9.0*
Ezzat Khalifa, *RL Section 10.0*
Xudong Wang, *Consultant AHRTI*
Hywel Davies, *Consultant CIBSE*
Ian Cull, *Consultant IAQA*
Douglas Fick, *BOD Ex-Officio*
Ginger Scoggins, *Coordinating Officer*

GUESTS:

Scott Peach
Eric Werling
Keith Rihl
Kristin Kelter
Michael Cooper
Andy Chung
Reinhard Radermacher

ASHRAE STAFF:

Michael Vaughn, *MORTS*
Steve Hammerling, *AMORTS*

MEMBER ABSENT:

A. CALL TO ORDER

Chair Khankari called the meeting of the committee to order at 3:00 PM.

B. ASHRAE CODE OF ETHICS

<https://www.ashrae.org/about-ashrae/ashrae-code-of-ethics>

C. ADDITIONS AND/OR CHANGES TO THE AGENDA

Chris Wilkins wished to discuss topic of TCs reviewing of Innovative research grant proposals.
Michael Pouchak wished to add a basecamp training or review for RAC members.

D. APPROVAL OF MINUTES

It was moved and seconded that,

- (1) The draft minutes of the RAC fall 2017 meetings be approved as written.

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

E. CHAIR'S REPORT

a) Disposition of Motions from Last Meeting or Letter Ballots – All project funding motions (1746, 1807, 1821) were approved by TechC.

1. Letter ballot results since fall meetings:

- 1746-RP (Validation of RP-1455 Advanced Control Sequences for HVAC Systems – Air Distribution and Terminal Systems)
Motion: It is recommended that tentative research project 1746-RP (Validation of RP-1455 Advanced Control Sequences for HVAC Systems – Air Distribution and Terminal Systems) be terminated. **MOTION PASSED**
- 1807-RP (*Guidelines for Flammable Refrigerant Handling, Transporting, Storing and Equipment Servicing and Installation*) - *Funded Extension Motion*
Motion: That a funded extension in the amount of \$15,000 be approved for RP-1807 (*Guidelines for Flammable Refrigerant Handling, Transporting, Storing and Equipment Servicing, Installation and Dismantling*) so that information on Canadian best practices and requirements for flammable refrigerants can be added to the project's final report. **MOTION PASSED**
- 1821-RP (*Design Guide for Low-to-Mid-Rise Multifamily Residential Building*)
Motion: 1821-TRP, *Design Guide for Low-to-Mid-Rise Multifamily Residential Building*, be awarded to New Buildings Institute, for a period of 11 months at a total cost to ASHRAE of \$195,000. **MOTION PASSED**
- WS-1789 & WS-1801 RAS voted at 11/30/17 web meeting. RAC Approval votes via Letter Ballot

WS-1789 Optical and thermal performance of hollow glass blocks, sponsored by TC 4.5, Fenestration is conditionally accepted.

MOTION PASSED: 9-0-1-4 CNV

WS-1801 Standardizing and Utilizing ASHRAE Online BIM Data Exchange Protocols, sponsored by 1.5, Computer Applications is accepted.

MOTION PASSED: 9-0-1-4 CNV

b) New & On-going Action Items Assigned by Tech. Council

1. Better support Research Promotion in raising funds for ASHRAE research program

c) New Information Items:

1. Co-funding request from IES (Illuminating Engineers Society) & SSPC 90.1
2. Plan for ASHRAE Research Technology Transfer
3. Proposed Plan to Salvage RP-1675
4. RP-1720 terminated by contractor before started. TC 2.3 project now eligible for Re-bid.
5. Motion for Increased Reserve Fund Transfer (6% instead of 4%) for SY 18-19

d) MBO Status Report – Review with action items

It was moved and seconded that,

(2) Increase Reserve Fund Transfer 6% instead of 4% for SY 18-19.

MOTION #2 PASSED: 9-0-0, CNV

F. BOD EX-OFFICIO & COORDINATING OFFICER REPORTS

BOD- Ex-Officio, Douglas Fick gave a brief presentation.

G. DISCUSSION ITEMS

- a) Should we continue the Friday meeting?
- b) Frequency of RTAR & WS Reviews – **MBO 1.3**
- c) Dates and Frequency for PMS Training - **MBO 1.1**
- d) Disposition forms and follow-up?
- e) ASHRAE Research – collaboration with marketing, CTTC, and RP
- f) Follow up on the action items for the publications proposal evaluation – David Yashar **MBO 1.6**

H. ACTION ITEM TRACKING AND INITIAL REVIEW OF FALL ACTIONS & MBOs

**Carry-Over Action Items
Research Administration Committee (RAC)
Spring & Fall Teleconference Meetings 2017**

Action #	Responsibility	Summary of Action	Status
3	Wilkins, Yashar	Develop a new review form and editing for Technology Transfer classified projects at both RTAR and Work Statement stage.	On-going
2	RAC Members	Send Kishor one line response on where ASHRAE Research should go in next 5 years.	On-going
4	RAS	Handle review of remaining WSs 1789 & 1801 via 2 nd meeting and provide feedback to TCs prior to Chicago.	Complete

I. PROPOSED PROCEDURAL CHANGES

Action #1 <MORTS>: Add March 15th deadline for RTAR and Work statement submissions to forms, website and Research manual.

Action #2 <MORTS>: Add draft language to the Disposition form indicating consequences of TC if form is not submitted in a timely fashion to staff.

J. RTAR REVIEW

RTAR reviewed two RTARs

It is moved and seconded that,

- (3) 1841-RTAR, Round Robin Testing to Validate ANSI/ASHRAE Standard 185.2-2014 – TC 2.9 (Ultraviolet Air and Surface Treatment), is conditionally accepted.

MOTION # PASSED: 11-0-0, CNV

It is moved and seconded that,

- (4) 1842-RTAR, *Development of Cogen/Trigeneration Tools for Building Designers – TC 8.3, (Absorption and Heat Operated Machines)*, is conditionally accepted.

MOTION #4 PASSED: 11-0-0 CNV

Action #3 <Wilkins, Yashar>: Work on RTAR evaluation form for publications research. Have ready to review by spring.

Action #4 <Wilkins, Yashar>: Work out mechanism to track 10% budget line for research to develop publications.

K. WORK STATEMENT REVIEW

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

It is moved and seconded that,

- (5) 1837-WS, *The Effects of Ventilation in Sleeping Environments*; sponsored by TC 2.1 (Physiology and Human Environment), be returned.

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

It is moved and seconded that,

- (6) 1839-WS, *Investigation into Sensible Temperatures for Potable Hot Water Temperatures to Maximize Public Safety, Water and Energy Conservation*; sponsored by TC 3.6 (Water Treatment), be returned.

MOTION # PASSED RAS: 4-1¹-0, CNV

L. INNOVATIVE RESEARCH GRANT

It is moved and seconded that,

- (7) RAC approved a motion that the following IRG proposals be invited to submit full IRG proposals; #009, #019, #024, #027, #034 and #040.

MOTION #10 PASSED: 13-0-0, CNV

M. HOMER ADAMS AWARD

It is moved and seconded that,

- (8) RAC approved a motion to award Alireza Behfar the 2018-19 Homer Addams award.

MOTION #11 PASSED: 11-0-2, CNV

N. NEW INVESTIGATOR AWARD

Twelve nominations were received for the 2018-2019 New Investigator Award.

¹ Chris Wilkins negative vote is because he felt this is not appropriate ASHRAE research.

It is moved and seconded that,

- (9) Marianne Touchie be awarded the 2018-2019 New Investigator Award.

MOTION # PASSED: 13-0-1 CNV, CNV – Letter Ballot Vote following meeting

O. RESEARCH SUBCOMMITTEE CHAIR'S BREAKFAST

- a) Proposed Announcements
1. Service to ASHRAE Research Award recipient this year – Brian Silveti – TC 6.7
Submission date for Service to ASHRAE Research Award Sep. 1st
 2. Importance of obtaining full TC votes on approvals of submitted RTARs and WSs for both sponsoring and co-sponsoring TCs
 3. WS based on conditionally approved RTAR must acknowledge how conditions were cleared.
 4. Be sure to include Milestones in WSs submitted to RAC
 5. March 15 deadline for RTAR/WS review
 6. Disposition of research results form – RAC thinking of ways to encourage TCs to submit
 7. PMS training in spring. Date (TBD)
 8. Additional Announcements (TBD)
- b) RL Reminders for TCs

P. TRPs to Potentially Bid Spring 2018 (15 TRPs)

- 1579-TRP, TC 2.3 (Gas Air Contaminants and Gas Contaminant Removal)
- 1707-TRP, TC 2.6 (Sound and Vibration)
- 1720-TRP-R, TC 2.3 (Gas Air Contaminants and Gas Contaminant Removal) – Rebid
- 1740-TRP-R, TC 3.3 (Refrigerant Contaminant Control) – Rebid if ready
- 1769-TRP, TC 5.1 (Fans)
- 1778-TRP, TC 5.10 (Kitchen Ventilation)
- 1784-TRP-C, TC 2.4 (Particulate Air Contaminants and Particulate Removal Equip.)
- 1789-TRP-C, TC 4.5 (Fenestration)
- 1790-TRP, TC 3.3 (Refrigerant Contaminant Control)
- 1794-TRP, TC 3.1, (Refrigerants and Secondary Coolants)
- 1800-TRP, TC 1.3, (Heat Transfer and Fluid Flow)
- 1801-TRP, TC 1.5, (Computer Applications)
- 1814-TRP, TC 2.8, (Bldg. Environmental Impacts and Sustainability)
- 1819-TRP, TC 4.3, (Ventilation Requirements and Infiltration)
- 1823-TRP, TC 4.3, (Ventilation Requirements and Infiltration)

Q. CONSULTANTS REPORTS

- a) AHRI – Xudong Wang – Co-funding commitment for 1728 & 1731 withdrawn.
- b) CIBSE – Hywel Davies – Not in meeting at this point. Request written report for minutes
- c) IAQA – Ian Cull - IAQA is subsidiary organization of ASHRAE. IAQA's 2500 members include practitioners, those that assess or diagnose issues vs. designers. Some do investigations/assessment and repairs, some design. Previously there was a small research budget (2-3 projects per year). Since IAQA is still re-evaluating research program no projects currently allocated.
RAC Chair invited Mr. Cull to review and evaluate ASHRAE research proposals.

Action #5 < Staff>: Make sure RL section reports are updated with past comments.

R. MORTS Report

Semi-Annual Report, highlights from the report were discussed and the full report is included as (**Attachment #1**).

S. UNFINISHED OR OUT-OF-SEQUENCE BUSINESS

Unsolicited research proposal 1844-URP.

T. Upcoming ASHRAE Research Summit in Houston & STBE

ASHRAE is the only professional organization that funds its own research. However, this fact is not much appreciated, although a unique strength of the organization. What can we do to strengthen ASHRAE's research and stature? One step is a stronger research track at the summer conference. Does RAC have any suggestions how to increase visibility of ASHRAE research in general and at the annual conference in particular?

U. TENTATIVE RESEARCH PROJECTS

It is moved and seconded that,

- (10) 1733-TRP, *Develop Design Criteria for Psychrometric Air Sampler and Mixer Apparatus for Use in ASHRAE Test Standards*, be awarded to the Oklahoma State University, for a period of 20 months at a total cost to ASHRAE of \$144,249. (**Attachment #2**)

MOTION # PASSED: 12-0-0 CNV, CNV

It is moved and seconded that,

- (11) 1759-TRP, *Impact of Air-Flow on Thermal Performance of Air-Spaces behind Cladding (Phase 1 of 2) (re-bid)*, be awarded to the Ecole Polytechnique, for a period of 12 months at a total cost to ASHRAE of \$23,498. (**Attachment #3**)

MOTION # PASSED: 11-0-0 CNV

It is moved and seconded that,

- (12) 1760-TRP, *Update of Clothing Database for Existing and New Western Clothing Ensembles, including Effects of Posture, Body, and Air Movement*, be awarded to the Loughborough University, for a period of 15 months at a total cost to ASHRAE of \$168,669. (**Attachment #4**)

MOTION # PASSED: 9-0-0 CNV

It is moved and seconded that,

- (13) Co-RP 5, *Computer Modeling for Lighting Applications within the ANSI/ASHRAE/IES 90.1 STANDARD*, be co-fund in the amount of \$25,000.

MOTION # PASSED: 9-0-0 CNV

NOTE: No action was taken on 1683-TRP, TC needed more time to evaluate all proposals received.

V. UNSOLICITED RESEARCH PROPOSALS

Unsolicited Research Proposals

It is moved and seconded that,

- (14) 1840-URP, “The verification of openings, the limitations of openings, air distribution and humidity conditions in naturally ventilated spaces to compliment section 6.4 or ASHRAE Standard 62.1”, not be funded by ASHRAE.

MOTION # PASSED: 11-0-0 CNV

NOTE: No action was taken on 1844-URP. RAC will review the proposal and make a Recommendation prior to the spring meeting.

Action #6 <Abdelaziz, Gatlin, John, Eichelberger, Khankari >: Review 1844-URP proposal. The deadline for the review is set by the spring 2018 meeting.

W. RESEARCH LIAISON SECTION REPORTS

RLs were asked to send reports to staff

Action # 7 < Khankari>: Review three years of history on TCs that submitted disposition forms. .

Action # 8 < Shonder>: Remind RLs to submit section reports to staff.

X. UNFINISHED BUSINESS

Paul Francisco addressed RAC on behalf of Residential Committee on a project for low to mid rise multifamily design guide. Developing as special project but, may seek research funds. There is a very aggressive timeline to get as far along as possible during Olesen’s term. Aim for work statement by spring to bid shortly after.

Pawel Wargocki and Harvey Sachs offered to help review to help prepare for RAC review.

Y. REVIEW NEW ACTION ITEMS

Action # 9 < John, Pouchak, Shonder >: Work with staff and report in the spring on ways to get TCs to submit disposition forms.

Action # 10 < Staff>: Request to add suggested research links to the research page.

ADJOURNED

The meeting of the Research Administration Committee adjourned at 11:00 AM, Wednesday, January 24, 2018.