THE RESEARCH & TECHNICAL ACTIVITIES REPORT
Release 1

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FOR TC/TG/MTG/SSPC CHAIRS, VICE CHAIRS & RESEARCH SUBCOMMITTEE CHAIRS
July 7, 2017

2017 ANNUAL MEETINGS

The annual meetings of the Research Administration Committee (RAC), Technical Activities Committee (TAC), Technology Council, and the Board were recently completed in Long Beach, CA with the results below. This report also includes information for RAC's and TAC's upcoming fall meeting.

NEW PROJECTS AWARDED

The following **6** projects were approved for award as follows:

- **1614-RP**, *Developing a Test Method to Determine the Effectiveness of UVC Systems on Commercial Cooking Effluent;* Responsible Committee: **TC 5.10** (Kitchen Ventilation); Co-Sponsors: None; Proposer: Syracuse University; Duration: 18 months; Cost to ASHRAE: $199,292

- **1711-RP**, *Advanced Sequences of Operation for HVAC Systems – Phase II Central Plants and Hydronic Systems;* Responsible Committee: **TC 1.4** (Control Theory and Application); Co-Sponsors: None; Proposer: Taylor Engineering; Duration: 24 months; Cost to ASHRAE: $160,000

- **1720-RP**, *Validation of Gas-phase Air-cleaner Performance Test Method (Standard 145.2) by Laboratory Testing of Commercially Available Filtration Devices;* Responsible Committee: **TC 2.3** (Gaseous Air Contaminants and Gas Contaminant Removal Equipment); Co-Sponsors: SSPC 145, and SSPC 62.1; Proposer: RTI International; Duration: 24 months; Cost to ASHRAE: $149,832

- **1745-RP**, *Evaluation of Climate Re-analysis Data for use in ASHRAE Applications;* Responsible Committee: **TC 4.2** (Climatic Information); Co-Sponsors: None; Proposer: Klimaat Consulting & Innovations. Duration: 12 months; Cost to ASHRAE: $72,000

- **1756-RP**, *Evaluation of Particle Sensors for Indoor Air Quality Monitoring and Smart Building Systems;* Responsible Committee: **TC 2.4** (Particulate Air Contaminants and Particulate Contaminant Removal Equipment); Co-Sponsors: TC 7.5 (Smart Building Systems); Proposer: Ohio State University; Duration: 18 months; Cost to ASHRAE: $118,591

- **1764-RP**, *Determine the Absolute Roughness of Phenolic Duct;* Responsible Committee: **TC 5.2** (Duct Design); Co-Sponsors: None; Proposer: Tennessee Tech; Duration: 6 months; Cost to ASHRAE: $49,704

NEW RESEARCH GRANTS AWARDED

- **2017-2018 Innovative Research Grant (IRG)**
  The 2017-2018 Innovative Research Grant was awarded to Dr. Zheng O'Neill from the University of Alabama at Tuscaloosa. Dr. O'Neill will use the IRG grant funds to further develop a Building Infiltration Estimator with Ultrasonic Thermometry (BLAST). Potential funding from ASHRAE for this grant is $125,000 spread over a three-year period.

  To learn more about the IRG program, please go to the ASHRAE Research page www.ashrae.org/research

NEW PROJECTS LED BY OTHER NON-PROFITS THAT ARE CO-FUNDED BY ASHRAE

No new projects, which are being led by other non-profits also focused on the built environment, were approved for ASHRAE co-funding at this meeting.

PROJECTS THAT FAILED TO BE AWARDED

- **1759-RP**, *Impact of Air-Flow on Thermal Performance of Air-Spaces behind Cladding (Phase 1 of 2);* Responsible Committee: **TC 4.4** (Building Materials and Building Envelope Performance); Co-Sponsor: None; Estimated Duration: 18 months; Cost to ASHRAE: $100,000 – Status: RAC rejected the recommended contractor's bid for this project because the contractor's proposal was deemed insufficient to serve by reference as is the contract's statement of work. Instead, ASHRAE will rebid the project with a revised work statement in the near future. All potential bidders will be encouraged in the request for proposals to provide more detail on their proposed work in their proposal.

- **1766-URP**, *Development of a Unified Tool for Analysis of Room Loads and Conditions;* Responsible Committee: **TC 6.5** (Radiant Heating and Cooling); Co-Sponsor: None; Estimated Duration: 12 months; Cost to ASHRAE: $106,700 – Status: RAC rejected the contractor's request for an additional $20,000 in funding from ASHRAE to complete the project. Additional work is the contractor's responsibility.

- **1820-URP**, *Vertical Variations in Ambient Climatic and Air Quality Conditions near Tall Buildings;* Status: RAC rejected the contractor's unsolicited research proposal request for $99,776 in funding from ASHRAE. Total value of project $118,176.

PROJECTS STILL PENDING AWARD

- **1762-RP**, *Update the ASHRAE Design Guide for Combustion Turbine Inlet Air Cooling Systems Published in 1999;* Responsible Committee: **TC 1.10** (Cogeneration Systems); Co-Sponsors: TC 6.2 (District Energy) and TC 6.9 (Thermal Storage); Estimated Duration: 12 months; Cost to ASHRAE: $75,000 **–** Status: TC 1.10 did not provide a contractor recommendation in Long Beach. PES needs more time to review proposals received.

POTENTIAL PROJECTS FOR BID IN FALL 2017
All or a portion of the following twelve tentative research projects (TRPs) are expected to be released for bid or re-bid this fall:

Approved Work Statements Available for Bid in fall 2017

- **1683-TRP-C**, *Experimental Evaluation of the Two-Phase Pressure Drop and Flow Pattern in U-Bends with Ammonia*; Responsible Committee: TC 1.3 (Heat Transfer and Fluid Flow); Co-Sponsors: TC 8.4 (Air-to-Refrigerant Heat Transfer Equipment); Status: **Conditionally Accepted.** Work with Research Liaison (RL) to clear RAC's conditions so project can bid.

- **1733-TRP-C**, *Develop Design Criteria for Psychrometric Air Sampler and Mixer Apparatus for Use in ASHRAE Test Standards*; Responsible Committee: TC 8.11 (Unitary and Room Air Conditioners and Heat Pumps); Co-Sponsors: None; Status: **Conditionally Accepted.** Work with Research Liaison (RL) to clear RAC's conditions so project can bid.

- **1740-TRP-R**, *Hydrogen Fluoride Capacity of Desiccants*; Responsible Committee: TC 3.3 (Refrigerant Contaminant Control); Co-Sponsors: TC 3.2 (Refrigerant System Chemistry); Status: **Prepare for Rebid.** Work with Research Liaison (RL) to expand recommended bidders list and better clarify work statement.

- **1759-TRP-R**, *Impact of Air-Flow on Thermal Performance of Air-Spaces behind Cladding (Phase 1 of 2);* Responsible Committee: TC 4.4 (Building Materials and Building Envelope Performance); Co-Sponsor: None; Status: **Prepare for Rebid**. Work with Research Liaison (RL) to expand recommended bidders list and better clarify work statement. All potential bidders will also be encouraged in the request for proposals to provide more details on their proposed work scope in their proposal submission.

- **1760-TRP**, *Updating Clothing Insulation Database for Western Clothing Ensembles, Including Data on the Effect of Body and Air Movement on that Insulation*; Responsible Committee: TC 2.1 (Physiology and Human Environment); Co-Sponsors: None; Status: **Ready to Bid** - Work with ASHRAE staff to finalize Request for Proposals (RFP) so that project can bid.

- **1790-TRP-C**, *Distribution of Water between Vapor and Liquid Phases for LowGWP Refrigerants*; Responsible Committee: TC 3.3 (Refrigerant Contaminant Control); Co-Sponsors: None; Status: **Conditionally Accepted.** Work with Research Liaison (RL) to clear RAC's conditions so project can bid.

- **1794-TRP-C**, *White Paper Investigation Relating to the Use of Odorants in Flammable Refrigerants*; Responsible Committee: TC 3.1 (Refrigerants and Secondary Coolants); Co-Sponsors: None; Status: **Conditionally Accepted.** Work with Research Liaison (RL) to clear RAC's conditions so project can bid.

- **1800-TRP-C**, *Spray Evaporation on Enhanced Tubes Bundles with Low GWP Pure Refrigerants and Refrigerant/Miscible Oil Mixtures;* Responsible Committee: TC 1.3 (Heat Transfer and Fluid Flow); Co-Sponsors: MTG.LowGWP and TC 8.5 (Liquid-to-Refrigerant Heat Exchangers); Status: **Conditionally Accepted.** Work with Research Liaison (RL) to clear RAC's conditions so project can bid.

- **1814-TRP-C**, *Actual Energy Performance of Buildings Designed to Comply with ASHRAE Standard 90.1-2010*; Responsible Committee: TC 2.8 (Building Environmental Impacts and Sustainability); Co-Sponsors: None; Status: **Conditionally Accepted.** Work with Research Liaison (RL) to clear RAC's conditions so project can bid.

- **1819-TRP**, *CO_2 Demand Controlled Ventilation in Multiple Zone VAV Systems with Multiple Recirculation Paths*; Responsible Committee: TC 4.3 (Ventilation Requirements and Infiltration); Co-Sponsors: None; Status: **Bidding now for extended period.** Pending final results from RP-1747, which is projected to complete in August 2017.

- **1821-TRP-C**, *Design Guide for Low-to-Mid-Rise Multifamily Residential Buildings*; Responsible Committee: RBC (Residential Building Committee); Co-Sponsors: None; Status: **Conditionally Accepted**. Work with Research Liaison (RL) to clear RAC's conditions so project can bid. Potential candidate for special bid solicitation in summer 2017.

- **1823-TRP-C**, *Improved Exhaust-to-Intake Dilution (Concentration) Calculations*; Responsible Committee: TC 4.3 (Ventilation Requirements and Infiltration); Co-Sponsors: None; Status: **Conditionally Accepted.** Work with Research Liaison (RL) to clear RAC's conditions so project can bid.

WORK STATEMENTS REVIEWED AND APPROVED OR RETURNED WITH COMMENTS
A total of ten work statements were submitted by the TCs for review at the RAC Annual meeting. None were approved as-is, six were conditionally approved, four were returned with comments and none were rejected. See below for the status of each project after this review.

Approved Work Statements:

- **1683-WS**, *Experimental Evaluation of Two-Phase Pressure Drop and Flow Pattern in U-Bends with Ammonia*; Responsible Committee: TC 1.3 (Heat Transfer and Fluid Flow); Co-Sponsors: None; Estimated Duration: 30 months; Estimated Cost to ASHRAE: $150,000; Status: **Conditionally Accepted**. Work with Research Liaison (RL) to clear RAC's conditions so project can bid.

- **1733-WS**, *Develop Design Criteria for Psychrometric Air Sampler and Mixer Apparatus for Use in ASHRAE Test Standards;* Responsible Committee: TC 8.11 (Unitary and Room Conditioners and Heat Pumps); Co-Sponsors: None; Estimated Duration: 18 months; Estimated Cost to

ASHRAE: $150,000; Status: **Conditionally Accepted.** Work with Research Liaison (RL) to clear RAC's conditions so project can bid.

- **1760-WS**, *Update of Clothing Database for Existing and new Western Clothing Ensembles, including Effects of Posture, Body and Air Movement*; Responsible Committee: TC 2.1 (Physiology and Human Environment); Co-Sponsors: None; Estimated Duration: 15 months; Estimated Cost to ASHRAE: $170,000; Status: **Accepted.** Work with ASHRAE staff to finalize Request for Proposals (RFP) so that project can bid.

- **1790-WS**, *Water Solubility and the Distribution of Water between Vapor and Liquid Phases of Low GWP Refrigerants*; Responsible Committee: TC 3.3 (Refrigerant Contaminant Control); Co-Sponsors: None; Estimated Duration: 12 months; Estimated Cost to ASHRAE: $80,000-100,000; Status: **Conditionally Accepted.** Work with Research Liaison (RL) to clear RAC's conditions so project can bid.

- **1794-WS**, *White Paper Investigation Relating to the use of Odorants in Flammable Refrigerants*; Responsible Committee: TC 3.1 (Refrigerants and Secondary Coolants); Co-Sponsors: None; Estimated Duration: 4 months; Estimated Cost to ASHRAE: $25,000-40,000; Status: **Conditionally Accepted.** Work with Research Liaison (RL) to clear RAC's conditions so project can bid.

- **1800-WS**, *Spray Evaporation on Enhanced Tube Bundles with Low GWP pure Refrigerants and Refrigerant/Miscible Oil Mixture*; Responsible Committee: TC 1.3 (Heat Transfer and Fluid Flow); Co-Sponsors: MTG.LowGWP; Estimated Duration: 30 months; Estimated Cost to ASHRAE: $185,000; Status: **Conditionally Accepted.** Work with Research Liaison (RL) to clear RAC's conditions so project can bid.

- **1814-WS**, *Actual Energy Performance of Secondary Schools and Medium Offices Designed to Comply with ASHRAE Standard 90.1-2010*; Responsible Committee: TC 2.8 (Building Environmental Impacts and Sustainability); Co-Sponsors: None; Estimated Duration: 20 months; Estimated Cost to ASHRAE: $180,000; Status: **Conditionally Accepted.** Work with Research Liaison (RL) to clear RAC's conditions so project can bid.

- **1823-WS**, *Improved Exhaust-to-Intake Dilution (Concentration) Calculations*; Responsible Committee: TC 4.3 (Ventilation Requirements and Infiltration); Co-Sponsors: None; Estimated Duration: 12 months; Estimated Cost to ASHRAE: $75,000; Status: **Conditionally Accepted.** Work with Research Liaison (RL) to clear RAC's conditions so project can bid.

Work Statements Returned with Comments or Rejected:

- **1579-WS**, *Testing and Evaluation of Ozone Filters for Improving IAQ*; Responsible Committee: TC 2.3 (Gaseous Air Contaminants and Gas Contaminant Removal Equipment); Co-Sponsors: EHC (Environmental Health Committee) and SSPC 62.1; Estimated Duration: 18 months; Estimated Cost to ASHRAE: $191,000; Status: **Resubmit WS to RAC**. WS authors gave RAC briefing on WS in Long Beach. After briefing, RAC encouraged TC 2.3 to resubmit WS.

- **1703-WS**, *Performance of Vapor Retarder Systems Used on Mechanical Insulation*; Responsible Committee: TC 1.8 (Mechanical Systems Insulation); Co-Sponsors: None; Estimated Duration: 8 - 12 months; Estimated Cost to ASHRAE: $50,000 to $70,000; Status: **Returned with comments.** Work with Research Liaison (RL) to revise work statement before resubmitting it to RAC for review or notify MORTS if topic will be dropped by TC.

- **1780-WS**, *Test Method to Evaluate Cross-Contamination of Gaseous Contaminant within Total Energy Recovery Wheels;* Responsible Committee: **TC 9.10** (Laboratory Systems); Co-Sponsors: TC 2.3, TC 5.5, TC 9.6, and SSPC 62.1; Estimated Duration: 9 months; Estimated Cost to ASHRAE: $125,000; Status: **Returned with comments.** Work with Research Liaison (RL) to

revise work statement before resubmitting it to RAC for review or notify MORTS if topic will be dropped by TC.

- **1786-WS**, *Method of Test to Determine Refrigeration Load for a Remote Refrigerator in a Pumped Secondary CO2 System;* Responsible Committee: **TC 10.7** (Commercial Food and Beverage Refrigeration Equipment); Co-Sponsors: None; Estimated Duration: 12 months; Estimated Cost to ASHRAE: $80,000 to $100,000; Status: **Returned with comments.** Work with Research Liaison (RL) to revise work statement before resubmitting it to RAC for review or notify MORTS if topic will be dropped by TC.

- **1792-WS**, *ASHRAE 34 Toxicity Data Documentation and Mixture Calculation;* Responsible Committee: **TC 3.1** (Refrigerants and Secondary Coolants); Co-Sponsors: None; Estimated Duration: 6 months; Estimated Cost to ASHRAE: $30,000; Status: **Returned with comments.** Work with Research Liaison (RL) to revise work statement before resubmitting it to RAC for review or notify MORTS if topic will be dropped by TC.

A revised work statement for any of the returned projects listed above can be submitted to the MORTS on or before August 15, 2017 in order to be considered at RAC's fall meeting in September or October. If a work statement cannot be revised that quickly, the next scheduled deadline for RAC consideration is December 15, 2017.

WORK STATEMENTS PREVIOUSLY RETURNED TO TCs

TC/TGs should work with their Research Liaison to respond to written comments on the work statement provided by RAC via letter and revise the work statement appropriately. You can find a copy of the last draft submitted to RAC along with RAC's comments by clicking on the links in the Society's Research Implementation Plan posted on the "Research" page of the ASHRAE website. Please note that topics will be dropped from this plan if the work statement is not approved for bid after four years on the plan. RAC plans to switch work statement forms from PDF to MS-Word format. During this transition period, we will accept both formats for Society year 2017-2018. The current PDF forms can be found on the "Research" page at **www.ashrae.org/research**.

REVIEW OF RESEARCH TOPIC ACCEPTANCE REQUESTS (RTARs)
RAC reviewed a total of seven RTARs at its Annual meeting and one was accepted as-is, and three were accepted with comments for inclusion in the Society's Research Implementation Plan and for further development into work statements. The committee also rejected three RTARs. The following is a listing of all RTARs reviewed.

Approved RTARs:

- **1824-RTAR**, *Accounting for Barometric Pressure Impacts on Psychrometric Performance Testing of Unitary Air-Conditioning and Heat Pump Equipment;* Responsible Committee: **TC 8.11** (Unitary and Room Air Conditioners and Heat Pumps); Co-Sponsors: None; Status: **Accepted As-Is.** Proceed with the development of the project's work statement.

- **1825-RTAR**, *Quantifying Makeup Air Entering Hood and Impact of Supply Temperature on Hood Performance;* Responsible Committee: **TC 5.10** (Kitchen Ventilation); Co-Sponsors: None; Status: **Accepted with Comments.** Work with Research Liaison (RL) to address RAC comments on RTAR before proceeding with the development of the project's work statement.

- **1827-RTAR**, *Particle Inhalation Modeling of Aircraft Cabins as Sparse Non-uniform Spaces Phase I*; Responsible Committee: **TC 4.10** (Indoor Environmental Modeling); Co-Sponsors: None; Status: **Accepted with Comments.** Work with Research Liaison (RL) to address RAC comments on RTAR before proceeding with the development of the project's work statement.

- **1829-RTAR**, *Inlet and Outlet System Effects on Multiple Plenum Fans in a Parallel Arrangement (Fan Arrays) for Air and Sound Performance;* Responsible Committee: **TC 5.1** (Fans); Co-Sponsors: None; Status: **Accepted with Comments**. Work with Research Liaison (RL) to address RAC comments on RTAR before proceeding with the development of the project's work statement.

RTARs Returned or Rejected with Comments:

- **1822-RTAR**, *Alternate Expressions of Building EUI as Energy Performance Metrics;* Responsible Committee: **TC 7.6** (Building Energy Performance); Co-Sponsors: SSPC 100; Status: **Rejected.**

- **1826-RTAR**, *Bio-Inspired Liquid to Air Heat Exchanger for HVAC&R Applications;* Responsible Committee: **TC 8.4** (Air-to-Refrigerant Heat Transfer Equipment); Co-Sponsors: None; Status: **Rejected.**

- **1828-RTAR**, *Flow Characteristics of Installed Flex Ducts:* Responsible Committee: **TC 4.10** (Indoor Environmental Modeling); Co-Sponsors: None; Status: **Rejected.**

  By rejecting these topics, RAC is strongly suggesting to the TCs that these particular topics be dropped from the TC research plan based on the information provided.

RAC plans to switch RTAR form from PDF to MS-Word format. During this transition period, we will accept both formats for Society year 2017-2018. The current PDF forms can be found on the "Research" page at **www.ashrae.org/research**.

New or revised work statements and RTARs need to be received by the Manager of Research and Technical Services (MORTS), Mike Vaughn, morts@ashrae.net, no later than August 15, 2017 to be considered at RAC's fall meeting in either September or October. If RTARs cannot be revised that quickly, the next deadline for RAC consideration of RTARs is December 15, 2017.

SOCIETY RESEARCH IMPLEMENTATION PLAN

The Society Research Implementation Plan is now being updated following the annual meeting of RAC. New RTARs will be added and tentative research project RFPs will be added or dropped depending on their bid status. This change to the way the implementation plan is updated necessitated that time limits be placed on how long a topic can remain on the plan without being approved for bid. The summer updates to the plan should be in place by **August 1, 2017** or sooner. Please review the latest draft of the Implementation Plan posted on the ASHRAE "Research" page to see if any topics your TC is sponsoring are in danger of being dropped from the plan.

DEADLINES

The following deadlines apply for the next several months. Please recognize they are not arbitrarily set, but are set to meet subsequent events. So if you miss them, your input may be delayed for six months or in some cases, for a year. All research submissions should be sent to the Manager of Research and Technical Services (MORTS), Mike Vaughn, (morts@ashrae.net).

July 7, 2017	Final Conference Papers (Includes Bio, Learning Objectives and Methods of Assessment) due to Conferences & Exposition Committee (CEC) for final review for the 2018 winter meeting in Chicago, IL.
July 24, 2017	Conference and Technical Paper Final Accept/Reject Notifications for 2018 winter meeting in Chicago, IL sent by CEC.
August 1, 2017	Submission deadline for program proposals (seminars and forums) for the 2018 winter meeting in Chicago, IL. Conference Website: www.ashrae.org/chicago/
August 15, 2017	New or revised Work Statements and RTARs are due to MORTS for RAC consideration at the 2017 Fall RAC meeting.
August 28, 2017	Full Technical paper drafts and Conference paper abstracts are due for the 2018 Annual Meeting in Houston, TX. Conference Website: www.ashrae.org/houston/
August 30, 2017	TC/TG/TRG meeting minutes from the Long Beach meeting are posted on TC website and distributed to membership by this date.
September 1, 2017	Nominations for the 2017-2018 *George B. Hightower Technical Achievement Award* for TC volunteer efforts over the past four years, in areas except research and standards, are due to TAC section heads.
September 1, 2017	Nominations for the 2017-2018 *Service to ASHRAE Research Award* for TC volunteer efforts in research over the past five years are due to the RAC research liaison.
September 6, 2017	Seminar, Forum, Workshop Accept/Reject Notifications for 2018 winter meeting in Chicago, IL sent by CEC.
September 28, 2017	Conference Paper Abstracts Accept/Reject Notifications for 2018 annual meeting in Houston, TX sent by CEC.
September 15, 2017	Conditionally approved tentative research projects that are approved for bid or re-bid must have all conditions satisfied with section Research Liaison and be in the hands of the MORTS by this date or sooner if they are to be eligible for possible bid in the fall 2017.
October 1, 2017	Completed TC/TG/TRG meeting room request form for 2018 Winter Conference in Chicago due to Lizzy Seymour (lseymour@ashrae.org) at ASHRAE HQ. Subcommittee meeting rooms must be requested for each meeting or they will be dropped automatically. Requests for Remote Participation Meeting (RPM) capability must now be requested using this form only if needed.
October 15, 2017	fall 2017 tentative research projects (TRPs) are released for bid.
November 1, 2017	Innovative Research Grant Solicitation for SY 17-18 announced through *RP Bidders* Listserv and Research page of ASHRAE website.

November 30, 2017	Ideal submission date for Unsolicited Research Proposals in order to most likely obtain a funding decision on the proposal at the ASHRAE 2018 winter meeting in Chicago.
November 30, 2017	TC/TG/MTG/TRG Chairs receive 2018-19 roster update web portal link information for roster update completion.
December 1, 2017	Applications for the ASHRAE New Investigator Award are due to MORTS.
December 8, 2017	Final Conference papers for 2018 Annual meeting in Houston are due for review (includes BIO, Learning Objectives and Methods of Assessment) – requires approved abstract; Request for Conference Paper Session are also due now.
December 15, 2017	Nominations for the ASHRAE Homer Addams Award, which is given to graduate students assisting in current or recently completed ASHRAE sponsored research projects, are due to MORTS. Award includes $5,000 honorium.
December 15, 2017	Bids are due for all Tentative Research Projects (TRPs) released in fall 2017.
December 15, 2017	New or revised Work Statements and RTARs are due to MORTS for RAC consideration at the 2018 winter meeting.
December 15, 2017	Innovative Research Grant (IRG) Pre-proposals are due to MORTS for RAC consideration at the 2018 winter meeting.
December 20, 2017	TC/TG/TRG meeting agenda for the Chicago meeting is posted to the TC website and distributed to membership by this date or sooner.
January 2, 2018	Website Opens for Seminar, Forum and Paper Proposals for the 2018 Annual Meeting in Houston, TX.
January 15, 2018	Conference Paper Accept/Revise/Reject Notifications for 2018 Annual meeting in Houston, TX sent by CEC.
January 24, 2018 Midnight	Online Roster update information for 2018-2019 TC/TG/MTG/TRG rosters must be complete and Section Head notified it is now ready for review.
January 24, 2018 Midnight	Contractor recommendations are due to MORTS for all TRPs that were bid in fall 2017 or before. Place the Proposal Evaluation Summary sheet in MORTS' lockbox outside ASHRAE Headquarters Room in Chicago or e-mail MORTS at morts@ashrae.net.
February 9, 2018	Submission deadline for program proposals (seminars and forums) for the 2018 annual meeting in Houston, TX. Conference Website: www.ashrae.org/houston/ .
February 19, 2018	Conference & Technical Paper Final Accept/Reject Notifications for 2018 Annual meeting in Houston, TX sent by CEC.
March 1, 2018 (New Date)	Applications for ASHRAE Graduate Student Grant in Aid program are due to MORTS.

OTHER NEWS:

A. ANNOUNCEMENTS

1. **TAC Members Volunteered to Help Review TC program submissions for Chicago**
   Ten members of TAC have volunteered to work with CEC track chairs to review TC program submissions for the upcoming winter meeting in Chicago. It is hoped that by walking in the shoes of CEC members, TAC members will gain a better understanding of the Program development process and its challenges so that they can better advise TCs in their section on how best to navigate this process effectively. CEC will also benefit from this effort by having a TAC member that can help to identify suitable technical experts to provide informal feedback on some program submissions.

2. **TAC Approved Disbanding the following Committees in Long Beach**

   - **Disbanded MTG.ISPAQE – Indoor Swimming Pool Air Quality and Evaporation**
     The original intent of the MTG was to bring together experts from SSPC 62.1, TC 8.10 Dehumidifiers and TC 9.8 Large Building Air-Conditioning Applications as well as representatives from the Centers for Disease Control (CDC) sponsored Model Aquatic Health Code (MAHC) for indoor pools to recommend changes to the ASHRAE 62.1 ventilation rate and update the evaporation formula in the HVAC Applications ASHRAE Handbook. Unfortunately, after two years of effort, the group has not unable to come together in order to convene their first meeting. TAC is open to reforming this MTG in the future when the conditions are right if requested.

   - **Disbanded MTG.O&MEE – Operations and Maintenance Activities that Impact Energy Efficiency**
     The MTG requested that they be disbanded now.

   - **Disbanded TC 5.8 - Industrial Ventilation**
     The TC requested that they be disbanded now so that they can merge with TC 9.2 under a new title and scope.

3. **TAC Approved the formation of MTG.EBO – Title and New Scope is as follows:**

   Title: Effective Building Operations

   Scope: MTG.EBO will coordinate the activities of multiple TC/TG/TRG and other stakeholders in the area of training and tools to support the operation of buildings to enhance the indoor environment and use energy effectively. Responsibility will include suggestions for research as well as development of technical programs and special publications on effective building operation for energy management.

   The initial MTG roster includes Voting Representatives and Alternates for TCs 1.4 (Control Theory and Application), 7.3 (Operation and Maintenance Management) 7.8 (Owning and Operating Costs) and GPC 1.3 (Building Operation and Maintenance Training for the HVAC&R Commissioning Process)

   Other TCs GPCs, and SPCs may also now wish to participate in this MTG with a Voting Representative and Alternate(s) given its scope and charge.

   If your committee wishes to join MTG.EBO, please contact the ASHRAE Manager of Research and Technical Services, Mike Vaughn, at MORTS@ashrae.net as soon as possible.

4. TAC Approved the Following TC Title and Scope Changes in Long Beach

Title: TC 2.7, Seismic, Wind and Flood Resistant Design

Scope: Technical Committee 2.7 is concerned with fundamental scientific and engineering design principles for the resilient ~~seismic and wind resistant~~ design of HVACR equipment and ~~building~~ mechanical/electrical/plumbing service systems for resistance to natural hazards including seismic, wind and flooding.

Title: TC 2.8, Building Environmental Impacts and Sustainability

Scope: Technical Committee 2.8 is concerned with the environmental, social and economic impacts of buildings ~~on the local, regional and global environment; means for identifying and reducing these impacts; and enhancing ASHRAE member awareness of the impacts. The impacts of concern affect long term sustainability of our environment and the quality of life for current and future generations.~~ , including effects on ecosystem sustainability and the well-being of building occupants. The committee works to enhance awareness of these issues and the resiliency needed to adapt to a changing climate. ~~These building~~ Building impacts of concern include, but are not limited to, ~~biological and mineral resource depletion;~~ environmental impacts of energy and water production, conversion, delivery and use; availability of ~~future~~ energy ~~and other~~ resources; pollution of air, water, and soil; and encroachment on sensitive habitats ~~and ecosystems~~.

Title: TC 6.7, Solar ~~Energy Utilization~~ and Other Renewable Energies

Scope: Technical Committee 6.7 is concerned with all equipment, processes and systems which collect, convert, store and utilize solar energy or ~~dissipate energy by nocturnal radiation~~ other renewable energy sources. Overlap with other TCs is recognized where specific systems are included to utilize or distribute energy as heat or electricity.

Title: TC 9.2, Industrial Air Conditioning and Ventilation

Scope: Technical Committee 9.2 is concerned with ~~industrial air conditioning, including process air conditioning, nuclear facilities, engine test facilities, computer and data processing areas, photographic materials facilities, printing plants, textile plants, waste disposal plants, paper products facilities, and underground mines.~~ The environment that supports reliable operation of manufacturing and industrial processes and equipment, and strives to ensure the safety of personnel working in industrial facilities. It provides guidance and recommendations regarding the design, installation, operation and maintenance of heating, air conditioning, supply and exhaust ventilation, pressurization and air filtration systems where harmful chemical, physical, nuclear, biological contaminants or hazardous atmospheres have an increased potential to exist.

For more information on MTGs, please go to the MTG section on the following web page: http://www.ashrae.org/tcs.

If your TC would like to have a voting representative on a particular MTG, please contact the ASHRAE Manager of Research and Technical Services, Mike Vaughn, at MORTS@ashrae.net.

5. Provisional Corresponding Member (PCM) Process

The process for adding new PCMs to TC rosters and notifying all affected parties (chair, staff, etc.) has now been automated through the ASHRAE website. Potential new TC members now just need to click on the **JOIN A TC** button at the top of the TC page (www.ashrae.org/tcs) on the ASHRAE website to get started.

6. **Coming Soon! 17-18 Society Year TC Email Position Aliases**
   Due to a large number of emergency roster and management team changes during the Long Beach meeting, the 17-18 position alias document is not yet available. The deadline for emergency changes was July 8th. We expect to have all requested changes updated and the alias list available for distribution by July 28, 2017. The Email Alias list will be accessible on the TC webpage under the heading Procedures, Forms & Information for TCs/TGs/MTGs and TRGs. The list includes name and position e-mail aliases for all required TC positions for all TCs plus position e-mail aliases for most standing committees and ASHRAE staff liaisons.

7. **RAC Continues to Prioritize Research Topics Related to the Residential Sector**
   RAC will be prioritizing in SY 17-18 for bid accepted research topics that support Goal #3 below from the Research Strategic Plan.

   Goal #3: *To reduce significantly the energy consumption for HVAC&R, water heating and lighting in existing homes*.

B. REMINDERS & REQUESTS

1. 17-18 Roster Access & Distribution

By now, each TC, TG and MTG chair should have received a PDF of their new 2017-2018 roster from their Section Head or staff for distribution to the committee. In addition, each member can view all of the rosters of their committees on the ASHRAE Website. Log-in to the ASHRAE website at http://www.ashrae.org/myactivecommittees, (if you have not logged in lately, you might need to set up a new username and password). Click on the "blue" "roster" text on the right side of the committee page to reveal the roster in various file formats. Make sure everyone on your committee also knows how to access the roster online

2. Option for TC Subcommittee Meetings via Conference Calls and Web Meetings

More and more TCs are taking advantage of a new Society service that allows TCs to hold subcommittee meetings by phone and/or web. Many TCs are finding this to be a more efficient way for them to conduct subcommittee business and it also allows TC members that can't travel to meetings on a regular basis a way to still contribute to the TC. Such a change can also eliminate potential conflicts with the TC's program sessions at Society meetings. Please pass your conference call/web meeting/webinar requests on to the Manager of Research and Technical Services, Mike Vaughn, at mvaughn@ashrae.org or MORTS@ashrae.net .

3. CEC Standing Request for Program Track Suggestions for Future Society Meetings

The Conferences and Expositions Committee (CEC) oversees ASHRAE's annual and winter conferences and other specialty conferences and expositions globally. The CEC continually works to improve the conference experience for all attendees. To help keep a "pulse" on the technical issues facing professionals in the HVAC&R marketplace, and to create meetings that reach all of ASHRAE's constituencies, the CEC seeks ideas for tracks for the Atlanta 2019 winter meeting and annual and winter conferences beyond as well as topics for specialty conferences from TC members.

Please submit your suggestions to ASHRAE Staff member Tony Giometti (Giometti@ashrae.org).

Program Focus at Chicago Winter Conference – January 20 –24, 2018

- Track 1: Systems and Equipment
  Track Chair: Carrie Crawford
  Email: crawford.ashrae@gmail.com
  Selection of equipment and systems is paramount to HVAC&R design. Papers and programs in this track will assist designers, engineers, and operators in the design, selection, and operation of HVAC&R systems and equipment.

- Track 2: Fundamentals and Applications
  Track Chair: Kevin Marple
  Email: kmarple@benzco.com
  Fundamentals are the foundation for understanding applications in engineering. Key components of ASHRAE fundamentals include thermodynamics, psychrometrics, fluid and mass flow, IAQ, and building envelope. This track provides opportunities for papers and presentations of varying levels across a large topic base. Concepts, design elements and shared experiences for theoretical and applied concepts of HVAC&R design are included.

- Track 3: Standards, Guidelines and Codes
  Track Chair: Corey Metzger
  Email: corey.metzger@resourcece.com
  ASHRAE is known for its standards and design guidelines – and they are constantly evolving with the intent on improving the built environment and its systems. Designers, Contractors, Architects and Owners must be able to keep up with the continuing changes in the current cycle but to also be prepared for the future changes. In addition, there is a large interaction of ASHRAE with the code authorities and government to incorporate these

standards and guidelines. The series of sessions in this track highlight the changes to the standards and guidelines, their projected path and optimum design techniques to meet or exceed the standards.

- Track 4: Earth, Wind & Fire
  Track Chair: Ashish Rakheja
  Email: ashish.rakheja@aeonconsultants.in
  Designing for natural elements and other possible disasters often requires specific elements of building design and construction. From materials to stabilizing elements and simulations to specifications, these options must be incorporated. This track will deliver on modern strategies to address all of these conditions. Be prepared to be blown away by industry practices to prevent disastrous results.

- Track 5: Transportation IAQ and Air Conditioning
  Track Chair: Dimitris Charalambopoulos
  Email: dimitris@ashrae.gr
  Often considered boutique engineering, both enclosed vehicular facilities and transportation design, construction, operation, and maintenance needs to be elevated to equal status with other HVAC applications. These systems require the same design approach as other system designed but usually have special technical requirements that mandate close velocity capture/control, air quality control, etc. that can be overlooked but the more traditional building system design engineer. This track will seek case studies and trouble-shooting projects highlighting the opportunities and pitfalls associated with these unique applications.

- Track 6: Tall Buildings
  Track Chair: Letcia Neves
  Email: leneves@gmail.com
  Chicago is home to one of the tallest buildings in the world. One that stood the tallest in the world for nearly 25 years. However, today, more and more tall buildings are being designed and constructed. This track will draw upon "larger than life" case studies, as well as large building HVAC systems that can be classified as "innovative and/or 21st century" that highlight the opportunities presented and achieved by the designer, builder, and operator for facility HVAC systems throughout the world.

- Track 7: Modeling Throughout the Building Life Cycle
  Track Chair: Joseph Firrantello
  Email: j.firrantello@gmail.com
  Given the critical importance of energy efficiencies and reliability of HVAC systems, new heat and mass transfer HVAC & R equipment and advanced systems have been developed. Bringing non-traditional technologies to the actual field is not trivial task and how to design the equipment and characterize the performance of new HVAC &R technologies under real field type conditions are still open questions. The papers and programs in this track will inform designers, engineers, building energy simulation modelers, and energy consultants and practitioners in the use of non-traditional heat exchange equipment and advanced HVAC &R systems under real field type conditions. The track will focus on fundamentals and applied aspects, on current challenges and recent advancements for managing frost growth, water condensate, fouling, corrosion, and mitigation of mold growth and bacteria that are often encountered in heat exchange equipment when working under real field type conditions.

- Track 8: Heat Exchange Equipment
  Track Chair: Vikant Aute
  Email: vikrant@umd.edu
  Given the critical importance of energy efficiencies and reliability of HVAC systems, new heat and mass transfer HVAC & R equipment and advanced systems have been developed. Bringing non-traditional technologies to the actual field is not trivial task and how to design

the equipment and characterize the performance of new HVAC &R technologies under real field type conditions are still open questions. The papers and programs in this track will inform designers, engineers, building energy simulation modelers, and energy consultants and practitioners in the use of non-traditional heat exchange equipment and advanced HVAC &R systems under real field type conditions. The track will focus on fundamentals and applied aspects, on current challenges and recent advancements for managing frost growth, water condensate, fouling, corrosion, and mitigation of mold growth and bacteria that are often encountered in heat exchange equipment when working under real field type conditions.

- Track 9: Refrigerant Mini Track @ Expo
  Track Chair: Gary Debes
  Email: gcdebes@verizon.net
  Section 3 TCs will determine topics, speakers, session types, etc.

- Track 10: Residential Mini Track @ Expo
  Track Chair: Gary Debes
  Email: gcdebes@verizon.net
  Topics, speakers, session types, etc. will be determined by the cognizant committee.

5. Upcoming TC Award Nomination Submission Deadlines

2017-2018 Hightower Award Nomination Process and Deadline
Nominations for the 2017-2018 George B. Hightower Technical Achievement Award are due to you Section Head by **September 1, 2017**. The award recognizes outstanding technical leadership and contributions on a TC/TG/TRG during the past four years, excluding research and standards activities. Please go to the Technical Committee page of the ASHRAE website at the following link under the "Procedures and Forms…" heading: http://www.ashrae.org/tcs.

2017-2018 Service to ASHRAE Research Award Nomination Process and Deadline
Nominations for the 2017-2018 Service to ASHRAE Research Award for TC volunteer efforts in research are due to RAC research liaison by **September 1, 2017**. Please go to the Research page of the ASHRAE website at the following link under the "Research Grants and Awards" heading: http://www.ashrae.org/research.

6. Upcoming Webcasts, Workshops and Conferences:

2017

- **Building Simulation 2017** – Aug. 7 – Aug. 9, 2017 – San Francisco, CA USA – Contact: http://www.buildingsimulation2017.org/

- **ISHPC2017** – Aug. 7 – Aug. 10, 2017 – Tokyo, JAPAN – Contact: http://biz.knt.co.jp/tour/2017/ISHPC2017/congress.html

- **ASHRAE Building Performance Analysis Conference** – September 27-29, 2017 – Atlanta GA, USA – Contact: https://ashraem.confex.com/ashraem/bpa17/cfp.cgi

- **2nd ASHRAE Developing Economies Conference** – Nov. 10-11, 2017, Delhi, INDIA – Contact: https://ashraem.confex.com/ashraem/de17/cfp.cgi

Please let me know if I can be of any other assistance.

Sincerely,
Mike Vaughn