

THE RESEARCH & TECHNICAL ACTIVITIES REPORT

Michael R. Vaughn, P.E.
Manager
Research and Technical Services

FOR TC/TG/MTG/SSPC CHAIRS, VICE CHAIRS &
RESEARCH SUBCOMMITTEE CHAIRS
July 2, 2015

2015 ANNUAL MEETINGS

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

NEW PROJECTS AWARDED

The following five projects were approved for award as follows:

- **1414-RP**, *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 4.5** (Fenestration); Proposer: Design Builder Software, d.o.o.(Ltd.) (Serbia). Estimated Duration: 15 months; Cost to ASHRAE: \$79,000
- **1696-RP**, *Thermal, Moisture and Air Transport Property Values for New Building and Insulating Materials*; Responsible Committee: **TC 4.4** (Building Materials and Building Envelope Performance); Proposer: Building Science Consulting, Inc. (Canada). Estimated Duration: 36 months; Cost to ASHRAE: \$197,075
- **1702-RP**, *Case Studies to Test Performance Measurement Protocols*; Responsible Committee: **TC 7.6** (Building Energy Performance); Proposer: University of Wyoming. Estimated Duration: 24 months; Cost to ASHRAE: \$160,701
- **1747-RP**, *Implementation of RP-1547 CO₂-based Demand Controlled Ventilation for Multiple Zone HVAC Systems in Direct Digital Control Systems*; Responsible Committee: **TC 4.3** (Ventilation Requirements and Infiltration) Co-Sponsor: TC 1.4 (Control Theory and Application); Proposer: University of Alabama. Estimated Duration: 18 months; Cost to ASHRAE: \$173,738
- **1767-URP**, *Moist Air Transport Properties Research*; Responsible Committee: **TC 1.1** (Thermodynamics and Psychrometrics); Proposer: Kretschmar Consulting Engineers; Estimated Duration: 18 months; Cost to ASHRAE: \$49,000

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

The following two projects, which are being led by other non-profits also focused on the built environment, were approved for ASHRAE co-funding:

- **CO-RP 2**, *Revised Guidance for Physical & Cyber HVAC Security*; Responsible Organization: **CIBSE** (Chartered Institution of Building Services Engineers – U.K.); Other Co-Funding Organizations: None Estimated Duration: 15 months; Total Cost: \$112,000, Cost to ASHRAE: \$25,000; ASHRAE Committees Supporting Effort: TC 1.4 (Control Theory and Application), TC 1.5 (Computer Applications), and TG2 (Heating Ventilation and Air-Conditioning Security) Summary of Effort:
The revised CIBSE guidance is intended to cover all aspects of the physical security of HVAC and associated systems, including integrated security solutions. The new guidance will address cyber resilience of HVAC, including cloud based systems. The update will fully revise all of the relevant original content with additional content focusing on new and emerging technologies to ensure the revised guidance is fully relevant today.

- **CO-RP 3**, *Evidence Based Research Project: Literature Review for ASHRAE Standard 170-2013*; Responsible Organization: FGI (Facility Guidelines Institute); Other Co-Funding Organizations: ASHE (American Society for Healthcare Engineering) Estimated Duration: 6 months; Total Cost: \$32,774, Cost to ASHRAE: \$16,387; ASHRAE Committees Supporting Effort: TC 9.6 (Healthcare Facilities), and SSPC 170 (Ventilation of Healthcare Facilities) Summary of Effort: ASHRAE Standard 170 is bundled within the FGI *Guidelines for Healthcare Design and Construction*. As such, it is adopted, in some form, as the licensing standard for health facilities in a majority of states in the US. The systems it regulates make up a large percentage of the construction and operation of a health facility. Therefore, its influence is substantial. With high levels of impact come high levels of responsibility.

FGI is currently performing a detailed substantiation exercise of all of its requirements – except for those found in ASHRAE Standard 170 - in order to ensure that its requirements are solidly based on credible evidence of benefit, so as to ensure it achieves the balance between excessive expense and needed prevention. FGI, in deference to its partnership with ASHRAE and ASHE, chose to approach this evidentiary exercise for ASHRAE Standard 170 in partnership.

PROJECTS THAT FAILED TO BE AWARDED

- **1614-TRP**, *Developing a Test Method to Determine the Effectiveness of UVC Systems on Commercial Cooking Effluent*; Responsible Committee: **TC 5.10** (Kitchen Ventilation); Co-Sponsor: None; Estimated Duration: 24 months; Estimated Cost to ASHRAE: \$264,000 – Status: TC 5.10 (Kitchen Ventilation) rejected the two bids received for this project and instead will rebid the project with a revised and clarified work statement in the near future.
- **1740-TRP**, *Hydrogen Fluoride Capacity of Desiccants*; Responsible Committee: **TC 3.3** (Refrigerant Contaminant Control); Co-Sponsor: TC 3.2 (Refrigerant System Chemistry); Estimated Duration: 9 months; Estimated Cost to ASHRAE: \$120,000 – Status: TC 3.3 rejected the single bid received for this project and instead will rebid the project with a revised work statement in the near future.
- **1770-URP**, *Building-Integrated Photovoltaic/Thermal(BIPV/T) System Coupled to an Air-Source Heat Pump*; Responsible Committee: **RAC** (Research Administration Committee); Estimated Duration: 36 months; Estimated Cost to ASHRAE: \$555,501 – Status: RAC rejected this topic for funding as an unsolicited research proposal (URP) given the funding amount requested and instead will encourage proposer to work with appropriate ASHRAE TCs to develop the topic for solicitation and then to bid on the project with others.
- **1772-URP**, *Evaluation of Contaminants of Concern and Contaminant Removal Technologies in Commercial Buildings*; Responsible Committee: **RAC** (Research Administration Committee); Estimated Duration: 16 months; Cost to ASHRAE: \$49,288 – Status: RAC rejected this topic for funding as an unsolicited research proposal (URP) given the funding amount requested and instead will encourage proposer to work with appropriate ASHRAE TCs to develop the topic for solicitation and then to bid on the project with others.

PROJECTS STILL PENDING AWARD

- **1705-TRP**, *Investigation of Airside Fouling on Outdoor Heat Exchangers*; Responsible Committee: **TC 8.4** (Air-to-Refrigerant Heat Transfer Equipment); Co-Sponsors: TC 8.11 (Unitary and Room Air Conditioners and Heat Pumps); Co-funding: None; Estimated Duration: 24 months; Estimated Cost to ASHRAE: \$200,000 - Status: TC still evaluating bids received.
- **1746-TRP**, *Validation of RP-1455 Advanced Control Sequences for HVAC Systems – Air Distribution and Terminal Systems*; Responsible Committee: **TC 1.4** (Control Theory and Application); Co-Sponsors: None; Co-funding: None; Estimated Duration: 36 months; Estimated Cost to ASHRAE: \$200,000 - Status: TC still evaluating bids received.

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- **1766-URP**, *Additions to the Radiant Panel Evaluator Module for the Simulation and Analysis of Radiant Systems (RP-1383+)*; Responsible Committee: **TC 6.5** (Radiant Heating and Cooling); Co-Sponsors: None; Co-funding: None; Estimated Duration: 18 months; Estimated Cost to ASHRAE: \$106,700 - Status: TC still evaluating URP received.

POTENTIAL PROJECTS FOR BID IN FALL 2015

A portion of the following ten tentative research projects (TRPs) are expected to be released for bid or re-bid this fall:

Approved Work Statements Available for Bid in fall 2015

- **1649-TRP**, *IAQ and Energy Implications of High Efficiency Filters in Residential Buildings*; Responsible Committee: **TC 2.4** (Particulate Air Contaminants and Particulate Contaminant Removal Equipment); Co-Sponsors: None; Estimated Duration: 24 months; Estimated Cost to ASHRAE: \$200,000; Status: **Ready to Bid**. TC to work with ASHRAE Staff to finalize RFP, PES roster, and Technical Contact for bidder questions.
- **1650-TRP**, *Training Requirements for Sustainable, High Performance Building Operation*; Responsible Committee: **7.3** (Operations & Maintenance Management); Co-Sponsors: TC 7.6 (Building Energy Performance), TC 7.8 (Owning & Operating Costs); Estimated Duration: 18 months; Estimated Cost to ASHRAE: \$68,000; Status: **Ready to Bid**. TC to work with ASHRAE Staff to finalize RFP, PES roster, and Technical Contact for bidder questions.
- **1666-TRP**, *Experimental Evaluation of the Thermal and Ventilation Performance of Stratified Air Distribution Systems Coupled with Passive Chilled Beams*; Responsible Committee: **TC 5.3** (Room Air Distribution); Co-Sponsors: None; Co-funding: None; Estimated Duration: 24 months; Estimated Cost to ASHRAE: \$195,000; Status: **Ready to Bid**. TC to work with ASHRAE Staff to finalize RFP, PES roster, and Technical Contact for bidder questions.
- **1675-TRP**, *Guidance for CFD Modeling of Data Centers*; Responsible Committee: **TC 4.10** (Indoor Environmental Modeling); Co-Sponsors: TC 9.9 (Mission Critical Facilities, Data Centers, Technology Spaces and Electronic Equipment); Co-funding: None; Estimated Duration: 24 months; Estimated Cost to ASHRAE: \$150,000; Status: **Ready to Bid**. TC to work with ASHRAE Staff to finalize RFP, PES roster, and Technical Contact for bidder questions.
- **1710-TRP**, *Effects of Dynamic Shading Devices on Daylighting and Energy Performance of Perimeter Zones*; Responsible Committee: **TC 4.5** (Fenestration); Co-Sponsors: None; Estimated Duration: 24 months; Estimated Cost to ASHRAE: \$140,000; Status: **Ready to Bid**. TC to work with ASHRAE Staff to finalize RFP, PES roster, and Technical Contact for bidder questions.
- **1711-TRP**, *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; Co-funding: None; Estimated Duration: 24 months; Estimated Cost to ASHRAE: \$190,000; Status: **Ready to Bid**. TC to work with ASHRAE Staff to finalize RFP, PES roster, and Technical Contact for bidder questions.
- **1729-TRP-C**, *“Experimental Verification of Cooling Load Calculations for Spaces with Non-Uniform Temperature Radiant Surfaces”*; Responsible Committee: **TC 4.1** (Load Calculation Data and Procedures); Co-Sponsors: None; Estimated Duration: 24 months; Estimated Cost to ASHRAE: \$225,000; Status: **Conditionally Accepted**. Work with Research Liaison (RL) to clear RAC’s conditions so project can bid.
- **1742-TRP**, *“Update to Measurements of Office Equipment Heat Gain Data”*; Responsible Committee: **TC 4.1** (Load Calculation Data and Procedures); Co-Sponsors: None; Estimated Duration: 18 months; Estimated Cost to ASHRAE: \$95,000; Status: **Ready to Bid**. TC to work with ASHRAE Staff to finalize RFP, PES roster, and Technical Contact for bidder questions.

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- **1755-TRP-C**, “*Impact of Gaseous Contamination and High Humidity on the Reliable Operation of Information Technology Equipment in Data Centers*”; Responsible Committee: **TC 9.9** (Mission Critical Facilities, Data Centers, Technology Spaces, and Electronic Equipment); Co-Sponsors: TC 2.3 (Gaseous Air Contaminants and Gas Contaminant Removal Equipment); Estimated Duration: 24 months; Estimated Cost to ASHRAE: \$250,000; Status: **Conditionally Accepted**. Work with Research Liaison (RL) to clear RAC’s conditions so project can bid.
- **1771-TRP**, “*Energy Modeling of Typical Commercial Buildings in Support of ASHRAE Building Energy Quotient Energy Rating Program*”; Responsible Committee: **bEQ** (Building Energy Quotient Energy Rating Program); Co-Sponsors: TC 7.6 (Building Energy Performance), TC 4.7 (Energy Calculations); Estimated Duration: 18 months; Estimated Cost to ASHRAE: \$250,000; Status: **Ready to Bid**. TC to work with ASHRAE Staff to finalize RFP, PES roster, and Technical Contact for bidder questions.

WORK STATEMENTS REVIEWED AND APPROVED OR RETURNED WITH COMMENTS

A total of eight work statements were submitted by the TCs for review at the RAC Annual meeting. Four were approved as-is, one was conditionally approved, one was returned with comments and two were rejected. See below for the status of each project after this review.

Approved Work Statements:

- **1666-TRP**, *Experimental Evaluation of the Thermal and Ventilation Performance of Stratified Air Distribution Systems Coupled with Passive Chilled Beams*; Responsible Committee: **TC 5.3** (Room Air Distribution); Co-Sponsors: None; Co-funding: None; Estimated Duration: 24 months; Estimated Cost to ASHRAE: \$195,000; Status: **Accepted As-Is**.
- **1675-TRP**, *Guidance for CFD Modeling of Data Centers*; Responsible Committee: **TC 4.10** (Indoor Environmental Modeling); Co-Sponsors: TC 9.9 (Mission Critical Facilities, Data Centers, Technology Spaces and Electronic Equipment); Co-funding: None; Estimated Duration: 24 months; Estimated Cost to ASHRAE: \$150,000; Status: **Accepted As-Is**.
- **1711-TRP**, *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; Co-funding: None; Estimated Duration: 24 months; Estimated Cost to ASHRAE: \$190,000; Status: **Accepted As-Is**.
- **1729-TRP-C**, “*Experimental Verification of Cooling Load Calculations for Spaces with Non-Uniform Temperature Radiant Surfaces*”; Responsible Committee: **TC 4.1** (Load Calculation Data and Procedures); Co-Sponsors: None; Estimated Duration: 24 months; Estimated Cost to ASHRAE: \$225,000; Status: **Conditionally Accepted**. Work with Research Liaison (RL) to clear RAC’s conditions so project can bid.
- **1771-TRP**, “*Energy Modeling of Typical Commercial Buildings in Support of ASHRAE Building Energy Quotient Energy Rating Program*”; Responsible Committee: **bEQ** (Building Energy Quotient Energy Rating Program); Co-Sponsors: TC 7.6 (Building Energy Performance), TC 4.7 (Energy Calculations); Estimated Duration: 18 months; Estimated Cost to ASHRAE: \$250,000; Status: **Accepted As-Is**. TC to work with ASHRAE Staff to finalize RFP, PES roster, and Technical Contact for bidder questions.

Work Statements Returned with Comments or Rejected:

- **1734-WS**, *Reproducing the Typical Urban Atmospheric Aerosol in Laboratory for Air Filter Loading*; Responsible Committee: **TC 2.4** (Particulate Air Contaminants and Particulate Contaminant Removal Equipment); Co-Sponsors: None; Estimated Duration: 24 months; Estimated Cost to ASHRAE: \$250,000; Status: **Rejected**. By rejecting this topic, RAC is strongly

suggesting to the TC that this particular topic be dropped from the TC research plan based on the information provided.

- **1741-WS**, *Understanding Fan Coil Components and How they Related to Energy Consumption and Energy Modeling*; Responsible Committee: TC 5.3 (Room Air Distribution); Co-Sponsors: TC 7.7 (Testing and Balancing); Estimated Duration: 24 months; Estimated Cost to ASHRAE: \$250,000; Status: Returned with comments. Work with Research Liaison (RL) to revise work statement before resubmitting it to RAC for review.
- **1758-WS**, *CFD Modeling and Laboratory Testing of Flat Oval Diverging Flow Tees to Determine Loss Coefficients*; Responsible Committee: TC 5.2 (Duct Design); Co-Sponsors: None; Estimated Duration: 24 months; Estimated Cost to ASHRAE: \$165,000; Status: Rejected. By rejecting this topic, RAC is strongly suggesting to the TC that this particular topic be dropped from the TC research plan based on the information provided.

A revised work statement for any of the returned projects listed above can be submitted to the MORTS on or before August 15, 2015 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, 2015.

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. The work statement forms that are now in use by RAC for Society year 2015-2016 can also be found on the “Research” page at www.ashrae.org/research.

REVIEW OF RESEARCH TOPIC ACCEPTANCE REQUESTS (RTARs)

RAC reviewed a total of nine RTARs at its Annual meeting and two were accepted as-is, and four were accepted with comments for inclusion in the Society’s Research Implementation Plan and for further development into work statements. A vote on one RTAR was postponed until a TC vote issue is clarified. The committee also rejected two RTARs. The following is a listing of all RTARs reviewed:

Approved RTARs:

- **1703-RTAR**, *Performance of Vapor Retarder Systems used on Mechanical Insulation*; Responsible Committee: TC 1.8 (Mechanical Systems Insulation); Co-Sponsors: TC 4.4 (Building Materials and Building Envelope Performance), TC 10.3 (Refrigerant Piping, Controls and Accessories); 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.
- **1759-RTAR**, *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-Sponsors: SSPC 90.1?; Status: Accepted. Proceed with the development of the project’s work statement.
- **1762-RTAR**, *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 6.9 (Thermal Storage); Status: Accepted. Proceed with the development of the project’s work statement.
- **1763-RTAR**, *Development of an Improved Toolkit for Analyzing Building Energy Use from Times Series Data: Update to the Inverse Model Toolkit (RP-1050)*; Responsible Committee: TC 4.7

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(Energy Calculations); 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.

- **1764-RTAR**, *Determine the Absolute Roughness for Phenolic Duct Board and Loss Coefficient for a Rectangular Radius Elbow*; Responsible Committee: **TC 5.2** (Duct Design); 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.
- **1768-RTAR**, *Assessment of HVAC Equipment Idle Power Consumption as a Percentage of Built Environment Energy Load*; Responsible Committee: **TC 1.11** (Electric Motors and Motor Control); 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.

Postponed RTARs:

- **1760-RTAR**, *Updating Clothing Insulation Database for Western Clothing Ensembles, including Data on the Effect of Body and Air Movement on that Insulation*; Responsible Committee: **TC 4.2** (Climatic Information); Co-Sponsors: None; Status: **RAC Vote Postponed**. TC to work with ASHRAE staff to clarify TC vote count.

RTARs Returned or Rejected with Comments:

- **1761-RTAR**, *Modeling Heat and Moisture Transport in Mechanical Insulation Systems on Below Ambient Insulated Pipes*; Responsible Committee: **TC 1.8** (Mechanical Systems Insulation); Co-Sponsors: TC 1.12 (Moisture Management in Buildings); Status: **Rejected**.
- **1769-RTAR**, *Experimental Evaluation of the Efficiency of V-Belt Drives used on Fans*; Responsible Committee: **TC 5.1** (Fans); Co-Sponsors: None; Status: **Rejected**.

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

The RTAR form that is now in use by RAC for Society year 2015-2016 can be found on the "Research" page of the ASHRAE website 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, 2015 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, 2015.

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, 2015** 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.

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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).

- August 10, 2015** Submission deadline for program proposals (seminars and forums) for the 2016 winter meeting in Orlando, FL. Conference Website: www.ashrae.org/orlando/
- August 15, 2015** New or revised Work Statements and RTARs are due to MORTS for RAC consideration at the 2015 Fall RAC meeting.
- August 21, 2015** Revised Conference Papers/Final Technical Papers due to Conferences & Exposition Committee (CEC) for final review for the 2016 winter meeting in Orlando, FL.
- August 28, 2015** Conference and Technical Paper Final Accept/Reject Notifications for 2016 winter meeting in Orlando, FL sent by CEC.
- August 30, 2015** TC/TG/TRG meeting minutes from the Atlanta meeting are posted on TC website and distributed to membership by this date.
- September 1, 2015** Nominations for the 2015-2016 *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, 2015** Nominations for the 2015-2016 *Service to ASHRAE Research Award* for TC volunteer efforts in research over the past five years are due to the RAC research liaison.
- September 11, 2015** Seminar, Forum, Workshop Accept/Reject Notifications for 2016 winter meeting in Orlando, FL sent by CEC.
- September 14, 2015** Full Technical paper drafts and Conference paper abstracts are due for the 2016 Annual Meeting in St. Louis, MO. Conference Website: www.ashrae.org/stlouis/
- September 15, 2015** Conditionally approved tentative research projects that are approved for bid or re-bids 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 2015.
- October 1, 2015** Completed TC/TG/TRG meeting room request form for 2016 Winter Conference in Orlando due to Judy Marshall (jmarshall@ashrae.org) at ASHRAE HQ. Subcommittee meeting rooms must be requested for each meeting or they will be dropped automatically.
- October 5, 2015** Conference Paper Abstracts Accept/Reject Notifications for 2016 annual meeting in St. Louis, MO sent by CEC.
- October 15, 2015** Fall 2015 tentative research projects (TRPs) are released for bid.
- November 30, 2015** TC/TG/MTG/TRG Chairs receive 2016-17 roster update workbook for completion.
- December 1, 2015** Applications for the ASHRAE New Investigator Award are due to MORTS.

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- December 15, 2015** Applications for ASHRAE Graduate Student Grant in Aid program are due to MORTS.
- December 15, 2015** 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.
- December 15, 2015** Bids are due for all Tentative Research Projects (TRPs) released in fall 2015.
- December 15, 2015** New or revised Work Statements and RTARs are due to MORTS for RAC consideration at the 2016 winter meeting.
- December 23, 2015** TC/TG/TRG meeting agenda for the Orlando meeting is posted to the TC website and distributed to membership by this date or sooner.
- January 4, 2016** Website Opens for Seminar, Forum and Paper Proposals for the 2016 Annual Meeting in St. Louis, MO.
- January 4, 2016** Final Conference papers for 2016 Annual meeting in St. Louis are due for review (includes BIO, Learning Objectives and Methods of Assessment) – requires approved abstract; Request for Conference Paper Session are also due now.
- January 27, 2016
Midnight** Roster update workbooks for 2016-2017 TC/TG/MTG/TRG rosters are due to section head.
- January 27, 2016
Midnight** Contractor recommendations are due to MORTS for all TRPs that were bid in fall 2015 or before. Place the Proposal Evaluation Summary sheet in MORTS' lockbox outside ASHRAE Headquarters Room in Orlando or e-mail MORTS at morts@ashrae.net.
- January 26, 2016** Conference Paper Accept/Revise/Reject Notifications for 2016 Annual meeting in St. Louis, MO sent by CEC.
- February 8, 2016** Submission deadline for program proposals (seminars and forums) for the 2016 annual meeting in St. Louis. Conference Website: www.ashrae.org/stlouis/ .
- February 26, 2016** Conference & Technical Paper Final Accept/Reject Notifications for 2016 Annual meeting in St. Louis, MO sent by CEC.
- March 23, 2016** Seminar, Forum, Workshop Accept/Reject Notifications for 2016 Annual meeting in St. Louis, MO sent by CEC.

OTHER NEWS:

A. ANNOUNCEMENTS

1. TAC approved the formation of the following two new multidisciplinary task groups (MTG):

MTG.ISPAQE – Indoor Swimming Pool Air Quality and Evaporation

Scope: MTG.ISPAQE will coordinate the research project which will assess/identify the factors affecting air quality problems at indoor swimming pools including: air handling/air distribution system design and operation; water quality/water chemistry; pool water treatment operation and maintenance; pool types(flat water, agitated water, hot water); bather load; and evaporation rates of indoor pools to recommend changes to the ASHRAE Standard 62.1 (Ventilation for Acceptable Indoor Air Quality) indoor pool & deck ventilation rate and update the evaporation formula in the ASHRAE *HVAC Applications Handbook* volume.

This MTG will have a direct impact on the activities of the SSPC 62.1 and technical committees: TC 8.10 (Mechanical Dehumidification Equipment and Heat Pipes) and TC 9.8 (Large Building Air-Conditioning Applications), as well as, the Center for Disease Control (CDC) sponsored Model Aquatic Health Code (MAHC) code for design and operation of indoor pools.

The chair of this MTG is Keith Coursin.

MTG.ASEC – Avoided Source Energy Consumption Due to Waste Heat Recovery and Heat Pump Technologies

Scope: MTG.ASEC will coordinate development of credible quantification methodologies of the avoided electric power generation and/or primary energy consumptions resulting from the application of heat pump and waste energy recovery technologies. Responsibilities of the MTG include the development of research and/or tool needs, and development of technical programs.

Ability to quantify avoided source energy reduction or recovery potentially impacts any building efficiency analysis. This MTG has the potential to significantly impact a number of other TCs including 1.5, 2.5, 2.8, 4.7, 5.5, 6.2, 6.8, 6.9, 7.4, 7.6, 8.7, 8.11 and potentially more. Efforts have been made to interface with all of these TCs to discuss the potential development in this MTG.

The chair of this MTG is Cary Smith.

For more information on these two new MTGs and the seven other existing 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.

2. TAC Approved a New Title and Scope for TC 10.5 – New Title and Scope is as follows:

Title: Refrigerated Processing and Storage

Scope: TC 10.5 is concerned with the application of packaged and customized refrigeration systems for the industrial processing, packaging and storage of foods, beverages and other products. This scope excludes all refrigerated storage facilities less than 3,000 ft² and systems used in the transport of refrigerated products.

3. A Proposed Title and Scope Change for TC 5.2 was NOT Approved by TAC

TC 5.2 proposed the following new title and scope to help better address and account for dynamic pressure losses throughout duct system.

Title: ~~Duct Design~~ Systems

Scope: Technical Committee 5.2 is concerned with the design, construction, and operating characteristics, ~~and construction of ductwork~~ duct systems for the handling air and other gases, ~~but does not include chimneys.~~ This includes consideration of duct system materials and sizes, air velocities, and air leakage, as well as pressure changes and energy use related to ducted flows.

During the past several months, TAC solicited input from all TCs on this change and it was controversial. TAC reviewed the comments received along with testimony from TCs at the Atlanta annual meeting and rejected the proposal as submitted. TC 5.2 was asked to work with the other TCs and members to come up with an acceptable alternate. In the meantime, it is also expected that TC 5.2 will introduce the topic of system dynamic pressure losses and related performance issues in the new ASHRAE Duct Design Guide publication that they are developing and once this publication is complete it may be appropriate then to revisit a possible title and scope change for the TC.

4. 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.

5. New Easier to Use Standard Website Template in Development - We are working with the Society's Electronic Communication Committee (ECC), staff, and a consultant to modernize and streamline the template for TC websites. This will include WIZYWIG editing, automatic rosters and simplified document uploading. There will be no more HTML editing. We have a preliminary design and will be working with several volunteer beta testers from various TCs to finalize the design and operation. Anticipate release sometime in the fall of 2015.

6. Coming Soon! - New TC Email Position Aliases for 15-16 Society Year - We are in the process of creating new position e-mail alias addresses for each of the remaining mandatory positions of the Technical Committee management team (Secretary, Standards Sub. Chair, Program Sub. Chair, Handbook Sub. Chair, and Webmaster). The process will take 4-6 weeks. In the meantime, we ask that you review your membership profile to ensure that your email address is up-to-date. Your profile can be accessed by logging onto the "Member's Only" section at www.ashrae.org. The 15-16 Email Alias list will then be distributed to the TCs once this work is complete.

7. RAC Prioritizing Research Topics Related to the Residential Sector

Starting in the 2015-2016, RAC will be prioritizing 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. 15-16 Rosters Access & Distribution

By now, each TC, TG and MTG chair should have received a PDF & MS-Excel file of their new 2015-2016 roster from their Section Head for distribution to the committee. In addition, each member can view all of the rosters of their committees on the ASHRAE Website. Go to www.ashrae.org <<http://www.ashrae.org>>, click on the "Membership & Conferences" tab in the header, click on "My Membership" text in the left sidebar, and log in (if you have not logged in lately, you might need to set up a new username and password). Click on the "Update Your Bio / View or Edit Your Profile" link. Now, you should see your current "bio info". Click on "Committees" on the left sidebar; all of the committees you are a member of will appear. Click on the "blue" roster text at the left hand side of a committee to reveal the roster with linked contact information. Make sure everyone on your committee also knows how to access the roster.

The Provisional Corresponding Member (PCM) position is a relatively new position on TC/TG/TRG rosters. This position allows potential new members to be added by staff to the committee roster any time a request for membership is made by an individual. The position has a two-year term on the committee. Staff will notify the chair and reissue a new roster to the committee chair any time a provisional member is added. The TC/TG/TRG chair has the option each year during the regular roster update process to convert provisional CMs that have been active participants on the committee the past year into regular CMs or voting members or drop them. If no action is taken, they will time expire from the roster and be removed by staff.

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. Employment Discipline added to ASHRAE BIO Online Input Form

A new input field titled *Employment Discipline* has been added to the ASHRAE online member biographical input form (BIO) and TAC would like TC members to self-declare their employment discipline by going to the *Members Only* section of the website and enter their employment discipline information.

Thus far, approximately 30.6% (up 2.6% since Seattle meeting) of TC Members have declared their discipline.

4. CEC 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 Las Vegas 2017 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). You can also add your track suggestion in the "Comment" section of the TC Activity form for the Atlanta meeting.

The Research and Technical Activities Report – Annual Meetings – 2015

Program Focus at St. Louis Annual Conference (Most recent tracks set by CEC)

- i. Track 1: Advances in Refrigeration Systems and Alternative Refrigerants**
Track Chair: Frank Schambach
Email: frankschambach@mindspring.com
This track seeks papers and programs that explore the wide range of refrigeration systems under development with special emphasis on the use of alternative refrigerants in vapor compression machines to address environmental concerns.
- ii. Track 2: Research Summit**
Track Chair: Jeffrey Spitler
Email: spitler@okstate.edu
The fourth annual Research Summit seeks papers that report results on any aspect of ASHRAE-related research including heating, cooling, ventilation, other energy uses in the engineered environment and associated environmental aspects.
- iii. Track 3: Fundamentals and Application**
Track Chair: David E. Claridge
Email: dclaridge@tamu.edu
Fundamental information and applications of fundamentals related to all aspects of HVAC&R are welcome. This can range from psychrometric properties and processes to combustion, controls, HVAC system and envelope fundamentals and beyond.
- iv. Track 4: HVAC Systems and Equipment**
Track Chair: Alan Neely
Email: alan_neely@pghcorning.com
This track will include presentations on best practices to implement traditional, non-traditional, and hybrid approaches to achieve successful HVAC&R systems design. Objectives include high performance systems and equipment, LEED certified designs and sustainable buildings.
- v. Track 5: Smart Building Systems/Remote Monitoring and Diagnostics**
Track Chair: Samir Traboulsi
Email: traboulsi.samir@gmail.com
Smart buildings address HVAC&R equipment operation (chiller sequencing, soft start), integration into complete systems and can potentially interface with multiple building complexes and micro grid operation. This track includes papers on advanced communication protocols, system integration, BMS tools, data management and analysis.
- vi. Track 6: Indoor Environment: Health, Comfort, Productivity**
Track Chair: Dennis Alejandro
Email: denzjac@yahoo.com
Buildings and other enclosed spaces are increasingly required to provide safe, healthy environments in an energy efficient manner. Papers in this track will review the balance between environmental health and energy efficiency in buildings and help define future education, policy and research directions.
- vii. Track 7: Professional Skills Beyond Engineering**
Track Chair: Rachel Romero
Email: rachel.romero@nrel.gov
This track seeks to ensure professional skills are being developed and maintained beyond engineering essentials. Emphasis will be placed on meeting the professional development and business needs of today and converting them into the building blocks of tomorrow's success.
- viii. Track 8: Renewable Energy Systems and Net Zero Buildings**
Track Chair: Kevin Gallen

Email: kevin@gallenengineering.com

Wind, hydroelectric and solar are just a few of the alternative and/or renewable energy sources that are being used in HVAC design as we strive for Net-zero and high efficiency buildings. This track will address recent advances in alternative energy systems and equipment and new design strategies for achieving Net-zero buildings.

5. Upcoming TC Award Nomination Submission Deadlines

2015-2016 Hightower Award Nomination Process and Deadline

Nominations for the 2015-2016 George B. Hightower Technical Achievement Award are due to you Section Head by **September 1, 2015**. 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>.

2015-2016 Service to ASHRAE Research Award Nomination Process and Deadline

Nominations for the 2015-2016 Service to ASHRAE Research Award for TC volunteer efforts in research are due to RAC research liaison by **September 1, 2015**. 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:

2015

- ISHVAC-COBEE 2015: 9th International Symposium on Heating, Ventilation and Air Conditioning (ISHVAC) and 3rd Conference on Building Energy and Environment (COBEE) - July 12 – 15, 2015 - Tianjin, CHINA – Contact: <http://www.cobee.org/>
- ICR2015 (24th IIR International Congress of Refrigeration) - August 16 – 22, 2015 - Yokohama, JAPAN – Contact: <http://www.icr2015.org/index.html>
- Cold Climate 2015 - October 20 – 23, 2015 - Dalian, CHINA – Contact: <http://www.coldclimate2015.org/>
- 11th International Conference on Industrial Ventilation - October 26 – 28, 2015 - Shanghai, CHINA – Contact: <http://www.ventilation2015.org/>
- IBPSA 2015 (14th International Conference of the International Building Simulation Conference) – December 7 – 9, 2015 - Hyderabad, INDIA – Contact: <http://www.bs2015.in/>

2016

- International Air-Conditioning, Heating, Refrigerating Exposition (AHR Expo) – 2016 - January 25 – 27, 2016 - Orlando, FL – Contact: <http://www.ahrexpo.com/>
- CLIMA 2016 - May 22 – 25, 2016 - Aalborg, DENMARK – Contact: <http://www.clima2016.org/welcome.aspx>
- IAQVEC 2016 (9th International Conference on Indoor Air Quality Ventilation & Energy Conservation in Buildings) – Oct. 17 – 19, 2016 - Seoul, SOUTH KOREA – Contact: <http://iaqvec2016.org/>

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

Sincerely,
Mike Vaughn