

THE RESEARCH & TECHNICAL ACTIVITIES REPORT

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FOR TC/TG/SSPC CHAIRS, VICE CHAIRS &
RESEARCH SUBCOMMITTEE CHAIRS
February 11, 2011

ASHRAE 2011 WINTER MEETING

The winter meetings of the Research Administration Committee (RAC), Technical Activities Committee (TAC), Technology Council, and the Board were completed last week in Las Vegas, NV.

NEW PROJECTS AWARDED

The following three projects were approved for award as follows:

- **1580-RP**, “*Study of Input Parameters for Risk Assessment of 2L Flammable Refrigerants in Residential Air Conditioning and Small Commercial Refrigeration Applications;*” Responsible Committee: **TC 3.1** (Refrigerants and Secondary Coolants); Co-Sponsor (s): None; Contractor: Navigant Consulting, Inc.; Duration: 12 months; Cost to ASHRAE: \$250,000; Supports Research Strategic Goals: D2, D3 (05-10) Plan
- **1613-RP**, “*Update Climatic Design Data in Chapter 14 of the 2013 Handbook of Fundamentals;*” Responsible Committee: **TC 4.2** (Climatic Information); Co-Sponsor (s): None; Contractor: Numerical Logics Inc.; Duration: 18 months; Cost to ASHRAE: \$138,477; Supports Research Strategic Goals: A6, A7, B2, C7, D1 (05-10) Plan
- **1633-RP**, “*Data and Interfaces for Advanced Building Maintenance and Operation;*” Responsible Committee: **TC 1.4** (Control Theory and Application); Co-Sponsor (s): TC 7.5 (Smart Building Systems), TC 7.6 (Building energy Performance), and TC 7.9 (Building Commissioning); Contractor: KGS Buildings LLC.; Duration: 24 months; Cost to ASHRAE: \$266,570; Supports Research Strategic Goals: A7, B2, C6 (05-10) #1 (10-15) Plan

PROJECTS THAT FAILED TO BE FUNDED BY COMMITTEE VOTE - None

PROJECTS PENDING AWARD

Proposals for the following tentative research projects (TRP) and unsolicited research proposals (URP) were received prior to the Las Vegas meeting, but a funding decision could not be made at this meeting for the following reasons:

- **1632-URP**, “*Prediction Control PMC for Optimization and Control of HVAC Systems;*” Responsible Committee: **TC 1.4** (Control Theory and Application); Co-Reviewers: none. Status: Need recommendation from TC with vote to fund or not to fund this proposal or proposal clarification questions for proposer if additional information is needed.
- **1637-URP**, “*Development of an Energy and Exergy-based Model of Data Center HVAC Systems;*” Responsible Committee: **TC 4.7** (Energy Calculations); Co-Reviewers: TC 9.9 (Mission Critical Facilities, Technology spaces and Electronic Equipment) and possibly TC 7.4 (Exergy Analysis for Sustainable Buildings). Status: Need recommendation from TC with vote to fund or not to fund this proposal or proposal clarification questions for proposer if additional information is needed.

POTENTIAL PROJECTS FOR BID IN SPRING 2011

A portion (seventeen) of the following twenty-five tentative research projects that have been approved for bid are expected to be released for bid this spring.

Approved Work Statements to Release for Bid Spring 2011:

- **1399-TRP**, “*Survey of Particle Production Rates from Process Activities in Pharmaceutical and Biological Cleanrooms;*” Responsible Committee: TC 9.11 (Clean Spaces); Status: **Ready to Bid.**
- **1410-TRP**, “*Effect of System Chemicals toward the Breakdown of Lubricants and Refrigerants;*” Responsible Committee: TC 3.2 (Refrigerant System Chemistry). Status: **Ready to Bid.**
- **1413-TRP**, “*Developing Standard Procedures for Filling Climatic Data-Gaps for Use in Building Performance Monitoring and Analysis;*” Responsible Committee: TC 4.2 (Climatic Information); Status: **Ready to Bid.**
- **1458-TRP**, “*Modeling Person-to-Person Contaminant Transport in a Mechanical Ventilation Space;*” Responsible Committee: TC 4.10 (Indoor Environmental Modeling); Status: **Ready to Bid.**
- **1495-TRP**, “*Effect of Lubricant on the Distribution of Water Between the Vapor and Liquid Phases of Refrigerants;*” Responsible Committee: TC 3.3 (Refrigerant Contaminant Control); Status: **Ready to Bid.**
- **1499-TRP**, “*The Effect of Humidity on the Reliability of ICT Equipment in Data Centers;*” Responsible Committee: TC 9.9 (Mission Critical Facilities, Technology Spaces and Electronic Equipment); Status: **Ready to Bid.**
- **1504-TRP**, “*Extension of the Clothing Insulation Database for Standard 55 and ISO 7730 to Provide Data for Non-Western Clothing Ensembles, Including Data on the Effect of Posture and Air Movement on that Insulation;*” Responsible Committee: TC 2.1 (Physiology & Human Environment); Status: **Ready to Bid.**
- **1550-TRP**, “*Thermal Performance of Insulating Coating;*” Responsible Committee: TC 1.8 (Mechanical System Insulation); Status: **Ready to Bid.**
- **1557-TRP**, “*Lab Comparison of Relative Performance of Gas Phase Filtration Media at High and Low Challenge Concentrations;*” Responsible Committee: TC 2.3 (Gaseous Air Contaminants and Gas Contaminant Removal Equipment); Status: **Ready to Bid.**
- **1564-TRP**, “*Measurement of Oil Retention in the Microchannel Heat Exchanger;*” Responsible Committee: TC 8.4 (Air to Refrigerant Heat Transfer Equipment); Status: **Ready to Bid.**
- **1565-TRP**, “*Development of the ASHRAE Design Guide for Dedicated Outdoor-Air Systems;*” Responsible Committee: TC 8.10 (Mechanical Dehumidification Equipment and Heat Pipes); Status: **Ready to Bid.**
- **1581-TRP**, “*Develop Alternate Set-up Guidelines for Unitary Air Conditioner Test Configurations Which Cannot Adhere to ASHRAE 37 /ASHRAE 116 specified Duct Dimensions and External Pressure Tap Locations;*” Responsible Committee: TC 8.11 (Unitary and Room Air Conditioners and Heat Pumps) ; Status: **Ready to Bid. Potential \$10k in co-funding from AHRTI**
- **1584-TRP**, “*Assessment of Alternative Approaches to Predicting the Burning Velocity of a Refrigerant;*” Responsible Committee: TC 3.1 (Refrigerants and Secondary Coolants). Status: **Ready to Bid. Potential \$15k in co-funding from AHRTI**

The Research and Technical Activities Report – Las Vegas Meeting – February 11, 2011

- **1592-TRP**, “*CHP Design Guide – Update to the Cogeneration Design Guide (1996)*,” Responsible Committee: TC 1.10 (Cogeneration Systems); Status: **Ready to Bid**.
- **1603-TRP**, “*Role of HVAC Systems in the Transmission of Infectious Agents in Buildings and Intermodal Transportation*,” Responsible Committee: TC 9.3 (Transportation Air Conditioning); Status: **Ready to Bid**.
- **1604-TRP**, “*Demand Controlled Filtration for Clean Rooms*,” Responsible Committee: TC 9.11 (Clean Spaces); Status: **Ready to Bid**.
- **1606-TRP**, “*Laboratory Testing of Flat Oval Transitions to Determine Loss Coefficients*,” Responsible Committee: TC 5.2 (Duct Design); Status: **Ready to Bid**.

Approved Work Statements Still On-Hold for Bid:

- **1447-TRP**, “*Performance of Pressurized Stairwells with Open Doors*,” Responsible Committee: TC 5.6 (Control of Fire and Smoke); Status: **Ready to Bid**.
- **1462-TRP**, “*Active Mechanisms for Enhancing Heat and Mass Transfer in Sorption Fluids*,” Responsible Committee: TC 8.3 (Absorption and Heat Operated Machines); Status: **Ready to Bid**.
- **1491-TRP**, “*Literature and Product Review and Cost Benefit Analysis of Commercially Available Ozone Air Cleaning for HVAC Systems*,” Responsible Committee: EHC (Environmental Health Committee); Status: **Accepted for bid 11.01**. Work with MORTS to finalize RFP so project can possibly bid fall 2011.
- **1529-TRP**, “*Full-Frequency Numerical Modeling of Sound Transmission in and Radiation from Lined Ducts*,” Responsible Committee: TC 2.6 (Sound and Vibration Control); Status: **Ready to Bid**.
- **1535-TRP-C**, “*A Heat Transfer and Friction Factor Correlation for Low Air-side Reynolds Number Applications of Compact Heat Exchangers*,” Responsible Committee: TC 8.4 (Air-to-Refrigerant Heat Transfer Equipment); Status: **Conditionally accepted for bid 11.01**. Work with Research Liaison to resolve RAC’s approval conditions by so that project can possibly bid in fall 2011.
- **1546-TRP**, “*Expansion and Updating of the Air Diffusion Performance Index Method*,” Responsible Committee: TC 5.3 (Room Air Distribution); Status: **Accepted for bid 11.01**. Work with MORTS to finalize RFP by September 15th so project can possibly bid fall 2011.
- **1556-TRP**, “*Characterization of Liquid Refrigerant Flow Emerging from a Flooded Evaporator Tube Bundle*,” Responsible Committee: TC 1.3 (Heat Transfer and Fluid Flow); Status: **Ready to Bid**.
- **1602-TRP**, “*Thermal-Fluid Behavior of Mixed Refrigerants for Cryogenic Applications*,” Responsible Committee: TC 10.4 (Ultra-Low Temperature Systems and Cryogenics); Status: **Accepted for bid 10.10**. Work with MORTS to finalize RFP by September 15th so project can possibly bid fall 2011.

Work statements for the projects listed above without the status “Ready to Bid” require additional information or work from the TC on the draft RFP before they are eligible for possible bid in fall 2011. Revised work statements or approved RFPs for these projects must be submitted to the MORTS on or before September 15th, 2011 in order to be eligible and ready to possibly bid or rebid in fall 2011.

WORK STATEMENTS REVIEWED AND RETURNED WITH COMMENTS

A total of eight work statements were submitted by the TCs for review at the winter meeting. Two were approved as-is, one was conditionally approved, and the following five were returned with comments:

- **1450-WS**, “*Transport of Contaminants from Garage Attached or Integral to Low-Rise Residential Buildings;*” Responsible Committee: **SSPC 62.2** (Ventilation and Acceptable IAQ in Low-Rise Residential Buildings); Co-Sponsors: TC 4.3; Status: **Returned with comments.** Work with Research Liaison to resolve RAC’s comments before resubmitting.
- **1513-WS**, “*Liquid/Vapor Separating Velocities for Industrial Refrigeration Systems;*” Responsible Committee: **TC 10.3** (Refrigerant Piping); Co-Sponsors: TC 10.1; Status: **Returned with comments.** Work with Research Liaison to resolve RAC’s comments before resubmitting.
- **1514-WS**, “*Development of a Design Guide for System Integration of Thermal Energy Recovery in Industrial Refrigeration Systems;*” Responsible Committee: TC 10.1 (Custom Engineered Refrigeration Systems); Co-Sponsors: None; Status: Returned with comments. Work with Research Liaison to resolve RAC’s comments before resubmitting.
- **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; Status: **Returned with comments.** Work with Research Liaison to resolve RAC’s comments before resubmitting.
- **1624-WS**, “*Effective Energy-Efficient School Classroom Ventilation;*” Responsible Committee: **TC 2.1** (Physiology and Human Environment); Co-Sponsors: TC 2.3, TC 2.4, and TC 5.3; Status: **Returned with comments.** Work with Research Liaison to resolve RAC’s comments before resubmitting.

A revised work statement for the project listed above can be submitted to the MORTS on or before May 15, 2011 in order to be considered at RAC’s next meeting in Montreal, Canada. If it can’t be revised that quickly, the next deadline for RAC consideration of this work statement is August 15, 2011.

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 2010-2011 can also be found on the “Research” page 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 **May 15, 2011** to be considered at RAC’s June meeting.

REVIEW OF RESEARCH TOPIC ACCEPTANCE REQUESTS (RTARS)

RAC reviewed seven RTARs at their winter meeting and approved the following three for inclusion in the Society’s Research Implementation Plan and for further development into work statements:

- **1619-RTAR**, “*Data Center Gaseous Contamination Limits and Means of Monitoring;*” Responsible Committee: **TC 9.9** (Mission Critical Facilities, Technology Spaces and Electronic

The Research and Technical Activities Report – Las Vegas Meeting – February 11, 2011

- Equipment); Status: **Conditionally Accepted**. Work with Research Liaison to make minor revisions to RTAR and then proceed with development of work statement.
- **1634-RTAR**, “*Guide for Sustainable Refrigerated Facilities and Refrigeration Systems;*” Responsible Committee: **REF** (Refrigeration Committee); Status: **Conditionally Accepted**. Work with Research Liaison to make minor revisions to RTAR and then proceed with development of work statement.
 - **1635-RTAR**, “*Simplified Procedure for Calculating Exhaust/Intake Separation Distances;*” Responsible Committee: **TC 4.3** (Ventilation Requirements and Infiltration); Status: **Conditionally Accepted**. Work with Research Liaison to make minor revisions to RTAR and then proceed with development of work statement.

RTARs Returned or Rejected with Comments:

- **1520-RTAR**, “*Literature Search for Current HVAC Design Guidelines for Justice Facilities and/or Standards Worldwide as well as at Federal, State, County, and Local Levels;*” Responsible Committee: **TG9.JF** (Justice Facilities); Status: **Rejected**.
- **1630-RTAR**, “*Update the Scientific Evidence for Specifying Lower Limit Relative Humidity Levels for Comfort, Health, and IEQ in Occupied Spaces;*” Responsible Committee: **TC 5.11** (Humidifying Equipment); Status: **Returned**.
- **1636-RTAR**, “*Design Evaluation of High Accuracy relative Humidity (RH) Sensors for Psychrometric Testing;*” Responsible Committee: **TC 1.2** (Instruments and Measurements); Status: **Returned**.
- **1638-RTAR**, “*Absorption Refrigeration Cycle Training Simulator for Sustainable Resource Use;*” Responsible Committee: **TC 8.3** (Absorption and Heat Operated Machines); Status: **Returned**.

The RTAR form that is now in use by RAC for Society year 2010-2011 can be found on the “Research” page of the ASHRAE website, www.ashrae.org/research

The next deadline for submitting new or revised RTARs and WSs is **May 15, 2011** for consideration at the summer 2011 meeting of RAC.

SOCIETY RESEARCH IMPLEMENTATION PLAN

The Society Research Implementation Plan is now being updated following the winter 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 winter updates to the plan should be in place by March 1, 2011 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.

The Research and Technical Activities Report – Las Vegas Meeting – February 11, 2011

DEADLINES

The following deadlines apply for the next several months. Please recognize that 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 submissions should be sent to the Manager of Research and Technical Services (MORTS), Mike Vaughn, (morts@ashrae.net).

- February 14, 2011** Seminar and forum proposals due for 2011 Annual meeting in Montreal, Canada - Meeting theme is “*Net-Zero Buildings*” - Submission website open now.
- February 14, 2011** Advanced Energy Design Guide (AEDG) Broad Peer Review Opens for Energy Efficiency Guide for Existing Commercial Buildings: Technical Implementation – 60% Draft.
- February 21, 2011** Advanced Energy Design Guide (AEDG) Broad Peer Review Opens for 50% Advanced Energy Design Guide for K-12 School Buildings – 60% Draft.
- March 7, 2011** Final Technical Papers and Complete Conference papers due for 2011 Annual meeting in Montreal, Canada.
- March 9, 2011** Completed TC/TG/TRG Meeting room request form for 2011 Annual meeting due to Judy Marshall (jmarshall@ashrae.org) at ASHRAE HQ. Subcommittee meeting rooms must be requested each meeting or they will be dropped automatically. Also, consider hosting some subcommittee meetings prior to the meeting via conference call and/or web meeting if quorum is a concern to assure continued progress on critical items.
- March 15, 2011** Spring 2010 tentative research projects (TRPs) are released for bid.
- March 30, 2011** TC/TG/TRG meeting minutes from the Las Vegas meeting are posted on TC website and distributed to membership by this date or sooner.
- April 18, 2011** Chicago 2012 – *The Impact of HVAC&R on our Daily Lives* - Conference paper abstracts and full technical papers are due for approval or review, respectively.
- April 18, 2011** Advanced Energy Design Guide (AEDG) Broad Peer Review Opens for Performance Measurement Protocols: Best Practices Guide – 60% Draft.
- April 25, 2011** Advanced Energy Design Guide (AEDG) Broad Peer Review Opens for 50% Advanced Energy Design Guide for K-12 School Buildings – 90% Draft.
- May 15, 2011** New or revised Work Statements and RTARs with TC vote are due to MORTS for RAC consideration at the 2011 annual RAC meeting.
- May 15, 2011** Bids are due for all TRPs released in spring 2011.
- May 27, 2011** TC/TG/TRG meeting agenda for the Montreal meeting are posted on TC website and distributed to membership.
- June 3, 2011** Acceptance of Seminar and Forum Proposals for the 2012 Chicago Meeting start.
- June 28, 2011
Midnight** Contractor recommendations are due to MORTS for all TRPs bid in spring 2011 - Place the Proposal Evaluation Summary sheet in MORTS lockbox outside ASHRAE Headquarters Room in Montreal.

OTHER NEWS

1. Multidisciplinary Task Group (MTG)

A new ASHRAE technical committee type under TAC entitled Multidisciplinary Task Group (MTG) has been created as follows to address emerging technical topics and goals of the Society that are broader in scope or can be handled by a single TC:

Multidisciplinary Task Group (MTG): a committee of technical experts appointed by TAC when the Society has determined a need for activity in a field of interest that encompasses the expertise of TCs from two or more sections and/or from non-TC groups such as SSPCs or outside organizations. Each TC and non-TC group whose field of interest falls within the MTG defined scope, or is added after the MTG starts, shall have a voting representative on the MTG. The functions of an MTG may include Handbook, Program, Publications, Research, and Standards as required by their specific charge, but the customary function of the MTG will be to coordinate those activities within the TCs and non-TC groups represented on the MTG

2. 2010-2011 Hightower Award Recipient – Gary Phetteplace, TCs 6.2 & 6.8

Dr. Phetteplace is being honored by TC 6.8 for recently chairing an ad hoc committee to help resolve a difference of opinion in content to the geothermal chapter of the Applications Handbook for 2011. Dr. Phetteplace supported TC 6.2 by completing a major restructure and edit of Chapter 11 of the 2008 Systems & Equipment handbook. He was also named as a significant contributor to the 1996-2008 editions of the HVAC Systems Handbook. He is a great example of a TC member going the extra mile by attending numerous district energy conferences in order to stay current and brief the TC and by attending all TC 6.2 subcommittee meetings.

3. 2010-2011 Service to ASHRAE Research Award Recipient – Steve Taylor, TC 4.3, 1.4

Steve is being honored for the extensive contributions that he has made to the ASHRAE research program for multiple TCs and the Society in general. Specifically, Steve served as a member of the Society's Research Advisory Panel for the 2010-15 plan, authored nine work statements, served on five Proposal Evaluation Subcommittees (chaired three), served on 10 project monitoring subcommittees (chaired three), and served as the research subcommittee chair for TCs 1.4 and 4.3.

4. Useful TC/TG/TRG Chair Information and forms on ASHRAE website

Information for TC/TG/TRG chairs can be found on the Technical Committee page of the ASHRAE website at the following link: <http://www.ashrae.org/technology/page/104>.

The TC/TG/TRG Manual of Procedures (MOP) has been revised to clarify the positions of "Voting Member" and "International Member". Voting Member is now "Member-Quorum" in the MOP and International Member is now "Non-Quorum Member" – In addition, Non-Quorum members no longer need to reside outside the U.S. and Canada in order to qualify for this designation on the roster and can be assigned to up to two members on the roster that have trouble attending meetings on a regular basis for other reasons (medical, recent job change, etc.) – The current rosters and the update workbooks for the 2010-2011 rosters still need to be revised to reflect this new terminology.

The current roster with contact information for the committees to which you are a member can be accessed at www.ashrae.org by logging into the "Members' Only" section. Once you log-in, go to update your bio and select the option "My Committees."

5. Upcoming Advanced Energy Design Guide (AEDG) Broad Peer Reviews

The following four reviews are planned between now and the annual meeting:

- February 14 through Feb 25
Energy Efficiency Guide for Existing Commercial Buildings: Technical Implementation – 60% Draft
- February 21 through March 4

The Research and Technical Activities Report – Las Vegas Meeting – February 11, 2011

50% Advanced Energy Design Guide for K-12 School Buildings – 60% Draft

- April 18 through April 29
Performance Measurement Protocols: Best Practices Guide – 60% Draft
- April 25 through May 6
50% Advanced Energy Design Guide for K-12 School Buildings – 90% Draft

All dates listed above are subject to slight adjustment. Please check the AEDG section of the ASHRAE website at the following link for the latest information:

<http://www.ashrae.org/technology/page/938>

6. New “Help Wanted” section for TCs to be Added to ASHRAE Website

A new “Help Wanted” section will be added to the Technical Committee page of the ASHRAE website so that TCs can advertise requests for help. Requests could include calls for new members, a webmaster, reviewers and contributors for a handbook chapter or special publication, special expertise that resides outside the TC, equipment donors for a research project, etc. Requests should be for opportunities that need to be fulfilled within the next 6-12 months. Chapter Technology Transfer Committee (CTTC) will assist in this effort by making sure ASHRAE chapters are aware of this request list. Please pass on any requests for your TC to the Manager of Research and Technical Services, Mike Vaughn, at mvaughn@ashrae.org or MORTS@ashrae.net Option for TC

7. 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

8. CEC Proposed or Recently Implemented Technical Program Changes

- All Society technical programs going forward will include the following two broad tracks in order to provide space for almost any high-quality TC program submitted:
 - HVAC&R Fundamentals & Applications
 - HVAC&R Systems and Equipment
- The eight tentative tracks for the 2012 Annual Meeting in San Antonio are as follows:
 - Alternate Technologies
 - Integrated Energy Systems
 - Indoor Environmental Applications
 - Building Modeling Applications
 - Specialized Applications – Archival Museum & Assembly Spaces
 - Refrigeration Applications
 - HVAC&R Fundamentals & Applications
 - HVAC&R Systems and Equipment
- CEC has offered to work with TC Program Chairs to help improve the quality of their abstracts prior to their formal submission to CEC in order to improve its chances for acceptance. Please encourage your Program Chair to stop by the Speaker's Lounge at any Society meeting to meet with CEC members for this purpose.

9. Upcoming Program Dates:

Montreal Meeting - June 25-29, 2011

- Theme: Net-Zero Buildings
- Montreal Seminar and Forum Sessions are due February 14, 2011
- Full Technical Papers & Conf. Paper abstracts are due March 7, 2011
- Conference Website with Track Grid:www.ashrae.org/montreal

The Research and Technical Activities Report – Las Vegas Meeting – February 11, 2011

Chicago Meeting - January 21-25, 2012

- Theme: The Impact of HVAC&R on our Daily Lives
- Full Technical Papers & Conf. Paper abstracts are due April, 18, 2011
- Chicago Seminar and Forum Proposal accepted starting June 3, 2011
- Conference Website: www.ashrae.org/chicago

San Antonio Meeting - June 23-28, 2012

- Theme: Program themes have been eliminated starting with this conference
- Full Technical Papers & Conf. Paper abstracts are due TBD
- San Antonio Seminar and Forum Proposals are due TBD
- Conference Website: TBD

10. Upcoming Workshops and Conferences

- Energy Modeling: Tools for Designing High Performance Buildings, April 4-6 2011, Atlanta, GA: <http://www.ashrae.org/energymodeling>
- 10th IEA Heat Pump Conference 2011, May 16-19 2011, Tokyo, Japan, www.hpc2011.org
- XIV European Conference, Part 2: Latest Technologies in Renewable Energy and Applications in Heating & Cooling, June 10-11, 2011, Milan, Italy - <http://www.EUenergycentre.org>
- ECOS 2011 (24th Intl Conference on Efficiency, Cost, Organization, Simulation & Environmental Impact of Energy Systems), July 4-7, 2011, Novi Sad, Serbia - <http://www.ecos2011.com>

11. Border Entry/Exit Requirements for 2011 annual Meeting in Montreal, Canada

Entry/Exit requirements for Canada have changed since the 2006 Annual meeting in Quebec City, Canada. Please encourage all members of your TC/TG or TRG that may attend the next Society meeting to check now the latest entry/exit requirements for Canada using the following link and to make sure their passport or other entry paperwork is up-to-date with these new requirements: http://www.travel.state.gov/travel/cis_pa_tw/cis/cis_1082.html#entry_requirements

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

Sincerely,
Mike Vaughn